ACOUSTIC EMISSION AND ENVIRONMENTAL MONITORING OF TWO NATURAL GRANITE BOULDERS: SEMI-ARID VS. TEMPERATE ENVIRONMENT

by

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ABSTRACT

SUZANNE SADLER CHING. Acoustic emission and environmental monitoring of two natural granite boulders: semi-arid vs. temperate environment. (Under the direction of DR. MARTHA CARY EPPES).

The role of insolation as an instigator for crack initiation in rock is still a continuously perplexing topic. An immense amount of data has been collected on the influence of insolation on cracking – however, ongoing questions arise regarding the role this process plays in physical weathering. A study conducted by Dr. Martha Cary Eppes (2016) focused on the role of insolation in the initiation of cracking on a granite boulder in a temperate climate (North Carolina, USA), where 11 months of continuously recorded acoustic emissions (AE) data were used as a proxy for cracking. When these data were compared with simultaneously collected climate and rock surface data, it was found that insolation is a preliminary and contributing factor of crack initiation. However, this comprehensive data set was only representative of one climate zone – therefore, it was necessary to evaluate this relationship in other climates to support these conclusions. The following is a comparative study involving a similar granite boulder placed for an unprecedented three-year period in a semi-arid climate (New Mexico, USA). Utilizing the instrumentation of the Eppes 2016 study, acoustic emission sensors, strain gages, thermocouples, moisture sensors, and a site-located scientific weather station were deployed and monitored. During the 3-year study, 303,912 AE events (avg. 101,304 per year) occurred over a total 14,853 individual minutes over 713 days. A total 212,856 events occurred between 12:58 p.m. and 9:04 p.m. accounting for 70% of the overall deployment period. Comparable to the results of the Eppes 2016 study, high-event days

(≥50 events) accounted for 98% of total events. Both boulders experienced the majority of events in the northern hemisphere and eastern position of the rock and no trends were indicated concerning the timing of events with precipitation. The results of this study 1) support the hypotheses that diurnal insolation contributes to the initiation and continuation of physical rock weathering and cracking whether alone or combined with temperature variations, and 2) suggest that this is characteristic of variable global locations, climates, and rock types.

DEDICATION

This thesis is dedicated to my husband, Albert Ching. The saintly man he has always been and still IS, who put up with more than a few years of disruption, always supported me when I needed a “rock” to lean on and was there every day offering to do whatever he could to assist in the completion of my research and thesis. I could never have started, continued, or completed this without him.

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- Albert Ching, my husband, for being my computer technician and systems troubleshooter, resident chef, stand-in data downloader, sounding board, and for always being there with a laugh and/or a shoulder to cry on.

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INTRODUCTION

Granite has been widely utilized as a construction stone for centuries, from the Red Pyramid of Egypt (circa 26th century BC) and the Mount Rushmore Monument in the Black Hills of South Dakota to cemetery headstones and even modern kitchen countertops. Naturally exposed granite domes and outcrops, such as Half Dome in Yosemite National Park, California, U.S.A., are also prized as popular destinations for rock climbers (Figure 1). Stone is not only globally used for decorative structures, but it is also extensively present in civil and urban infrastructure. However, very little is understood about the factors that contribute to the overall mechanical weathering of and subsequent initiation of the creation of fractures and cracks in rock. The overwhelming number of field observations and amount of related data can make the clarification of such factors difficult - specifically, the contribution of solar insolation to such weathering.

Figure 1. **Examples of natural granite dome and granite construction stone.** A: Yosemite Valley, California. B: Mount Rushmore, Black Hills, South Dakota. C: Texas State Capitol Building, Austin, Texas.

To better understand the contribution of solar insolation to mechanical weathering and the initiation of cracking, it is necessary to observe cracking as it happens while documenting the corresponding environmental and rock surface changes in temperature, moisture, barometric pressure, wind, and rainfall. Several previous studies made such

observations for a single boulder deployed in a temperate climate setting in North Carolina, U.S.A. (e.g., Eppes et al., 2016; Garbini, 2009; Shi, 2011; Swami, 2011). A thorough analysis of the data obtained from the North Carolina boulder was completed, but the data related to only one climate: a humid mid-latitude location. It was unclear as to what extent these observations would apply in different climate zones globally.

Consequently, a second granite boulder of similar size and composition was deployed for approximately 36 months in the semi-arid climate of New Mexico, U.S.A. using the same established process followed for the placement of the North Carolina (NC) boulder. At the end of the 11-month deployment period for the NC boulder, the instrumentation was removed and installed on the New Mexico (NM) boulder. This consisted of eight rectangular strain gage rosettes, eight thermocouples, six acoustic emission (AE) sensors, and a surface moisture indicator. A Campbell Scientific weather station was also installed adjacent to the boulder deployment to obtain environmental data from the surrounding area.

Since no other dataset of this nature or duration of continuous sensor monitoring exists, a review and comparison of the New Mexico data to the North Carolina data (Eppes et al., 2016) should support and further explain the role played by insolation in the initiation of a cracking event. As such, the objective of this study was to collect and compile the remaining nine months of data for the NM boulder and compare and contrast the NM dataset to the NC dataset using the tables and graphs from the NC boulder (Eppes et al., 2016) as a template. A major contribution of the work described herein was the quality control of the NM dataset, whereby the dataset was cleaned of erroneous entries

(duplicate entries, sensor errors, etc.) and organized using the same Excel templates utilized during the initial processing of the NC boulder's data.

PREVIOUS STUDIES

Granite has been used in many studies regarding the influence of various environmental factors on physical weathering and mechanical breakdown of rock (e.g., Begonha and Braga, 2002; Braga et al., 2002; Ehlen, 2002; Gómez-Heras et al., 2006; Griggs, 1936; Hall et al., 2005; López-Arce et al., 2010; Shao et al., 2015; Viles and Goudie, 2007). These influences include insolation variation (e.g., Aldred, 2016; Blackwelder, 1933; Eppes et al., 2010 and 2016; Hall, 1999; Hall et al., 2005; Jenkins and Smith, 1990; McFadden et al., 2005; Moores et al. 2008; Smith et al., 2011), moisture (e.g., Nara et al., 2012; Sass, 2005), freeze/thaw (e.g., Hall, 2004; Kim et al., 2014), salt weathering (e.g., Lopez-Arce, 2010; Viles and Goudie, 2007), and lichen development (Scarciglia et al., 2012). Most of these investigations have highlighted arid, desert, and/or cold regions (e.g., Hall, 1999; Hall et al, 2003; Hall, 2004; McFadden et al., 2005; Moores et al., 2008; Viles and Goudie, 2007), with only a few having directed their attention to humid and/or temperate regions (e.g., Aldred et al., 2016; Eppes et al., 2016; Matsukura and Hirose, 1999; Nara et al., 2012).

Research into mechanical weathering and cracking in rocks has been conducted using a number of standard and inventive techniques, such as manual evaluation of naturally occurring outcrops and clasts (e.g., Ehlen, 2002; Jenkins and Smith, 1990; McFadden et al., 2005), predictive modeling of directional solar insolation (e.g., Moores et al., 2008; Shi, 2011), painting of bricks to simulate albedo (Hall et al., 2005), chemical and mineralogical classification of samples using x-ray diffraction (e.g., Braga et al., 2002; Begonha and Braga, 2002; Hall et al., 2005), and even artificial weathering of samples induced by Na_2SO_4 crystallization cycles (López-Arce et al., 2010), just to name

a few. In addition to the variability in climate, these previous studies have used multiple rock types as their subjects, including claystone (Nara et al., 2012), sandstone (Warke and Smith, 1998), limestone (e.g., Smith, 1977; Smith et al., 2011; Warke and Smith, 1998), marble (Viles and Goudie, 2007), granodiorite (e.g., Matsukura and Hirose, 1999; Scarciglia et al., 2012), and granite (e.g., Begonha and Braga, 2002; Braga et al., 2002; Ehlen, 2002; Eppes et al., 2016; Gómez-Heras et al., 2006; Griggs, 1936; Hall et al., 2005; López-Arce et al., 2010; Shao et al., 2015; Viles and Goudie, 2007).

The influence of insolation on the initiation and perpetuation of cracking and subsequent mechanical weathering of rock remains a compelling topic for researchers (e.g., Aldred et al., 2016; Blackwelder, 1933; Eppes et al., 2010 and 2016; McFadden et al., 2005; Moores et al., 2008). The magnitude of insolation-related thermal stresses, timing of peak stresses, and the effects of topographic shading on the preferred orientation of cracks were all suggested as catalysts to future mechanical weathering processes over time in humid mid-latitudes (Aldred et al., 2016). This work compared crack characteristics in a humid climate with those in an arid, desert southwest environment. It was hypothesized that additional mechanical weathering processes could take advantage of initial thermal-related cracking, multiplying the effects (Aldred et al., 2016).

The focus of the current investigation is to further clarify the role diurnal insolation plays in generating the thermal stresses incurred during the differential heating of a boulder (31.2 cm long x 25.9 cm wide x 21.0 cm high) and how it relates to the creation of crack propagation. Because the instrumentation utilized on the NC boulder was already successfully established (e.g., Garbini, 2009; Warren et al., 2013) and had

yielded a fully analyzed eleven-month data set (Eppes et al., 2016), that procedure and analysis was replicated in this study. Eight rectangular strain gage rosettes, eight thermocouples, six acoustic emission (AE) sensors, and a surface moisture indicator were affixed to the NM boulder in a manner to closely replicate that of the NC boulder (Figure 2).

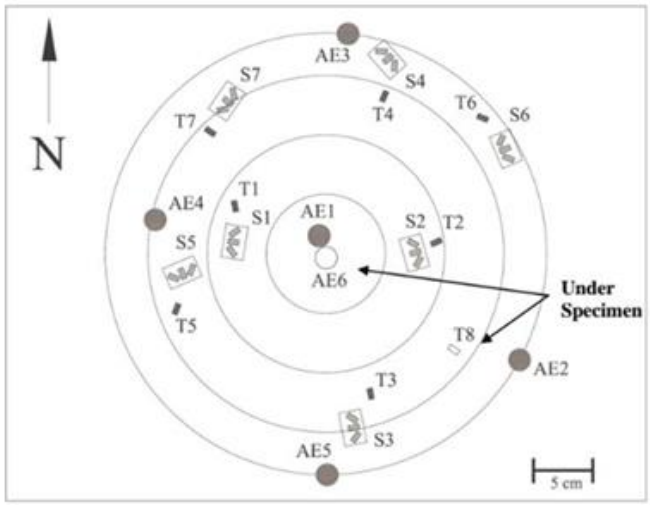

Figure 2. **Placement of sensors on the North Carolina boulder.** Sensor location were replicated for the New Mexico boulder (Garbini, 2009).

The analysis of the NC boulder focused on the factors responsible for mechanical weathering by observing a granite boulder deployed on an unvegetated soil surface in an unprotected, open environment exposed to natural environmental factors (sun, wind, rain, freezing temperatures, etc.). When registering the sensor information, it is important to distinguish between a "hit" and an "event". If the elastic wave registers above a pre-set level and only by one sensor, it qualifies as a "hit". However, if a “hit” is also registered by at least four sensors simultaneously, then it qualifies as an "event" and can be considered as possibly rock damaging (Warren et al., 2013). Hereafter, AE events will be referred to as “events” in both text and graphics.

The majority of events for the NC boulder occurred in intervals that varied in frequency from a few minutes to one hour every few days. Strong correlations ($r^2 = 1.0$) were not found between the rate of events and changes in rock surface temperatures, or rate of events and timing of occurrences. No event trends were observed during moist morning hours, or during the late evening or early morning hours with extreme cold temperatures (+/- 5 ºC). In a review of the NC boulder's high event days, it was determined that the main clustering of events occurred during abrupt cooling or heating of the rock surface and were directly related to a sudden temperature change (Eppes et al., 2016). Events were clustered at mid-day and within three hours before or after sunset (Figure 3). A calculated probability density function (PDF) line was included (Figure 3) to show the likelihood of events to follow the registered distribution. The PDF, indicating the probability that the number of events per minute would peak at 13:06 p.m. and 18:36 p.m., coincided with the registered peak event occurrences for 18:36 p.m. and low event occurrences from 3:00 a.m. to 9:00 a.m.

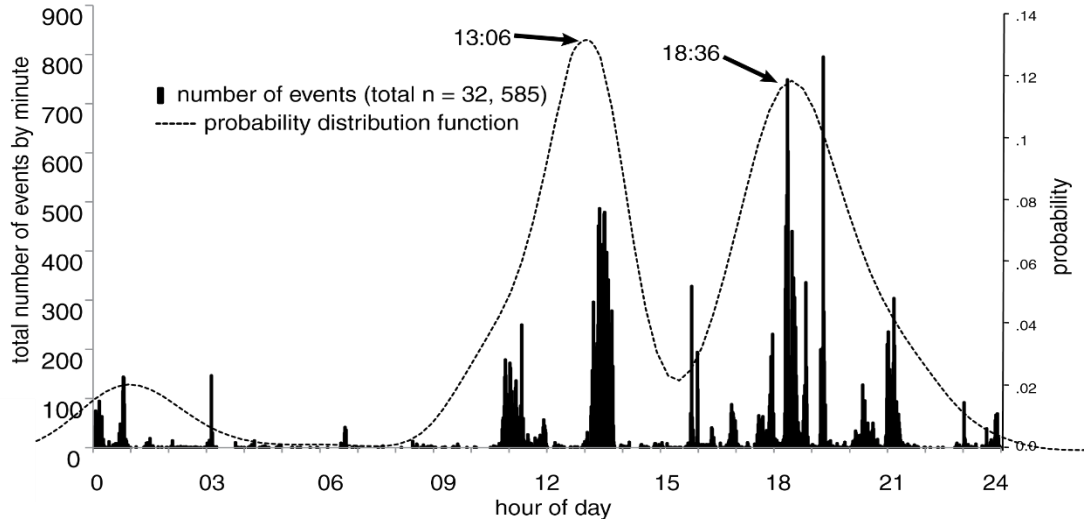

Figure 3. **Total number of events occurring each minute of the day for NC boulder.** Histogram of the total number of events that occurred in each minute of the day for the entire period of record (n = 32,585 total events). For example, there were 805 events that occurred between 8:18 p.m. and 8:19 p.m. (tallest bar on the graph). The dashed line is the calculated probability density function for the histogram. Used by permission of Dr. Martha C. Eppes (Eppes et al., 2016).

Surface strain data provided a direct correlation between the expansion and contraction of the rock surface and temperature - responding by rising as the rock surface heated and falling when the rock surface cooled - thus confirming a relationship to the diurnal temperature cycle. However, inconsistencies among strain measurements also

Table 1. **Summary statistics of rock surface and environmental conditions of NC boulder, aka: "Pebbles."** Number of Minutes event data available over entire record = 416,680 minutes; minutes in which events occurred = 1201 minutes. Statistics were calculated based on bivariate correlations between the stated measurement versus the number of events that occurred in each of the 1201 individual minutes where total events > 0. All temperatures reported in ºC. Surface temperatures are based on all thermocouples for which data available (typically 8). Used by permission of Dr. Martha C. Eppes (Eppes et al., 2016)

Measurement	Entire Record	Event Times Only	R^2 measurement vs #events	Pearson r measurement vs #events	2-tailed Pearson p-value measurement vs #events
Environmental Data					
Avg. Ambient Temperature	13.4 +/-7.3	13.0 +/-5.6	0.003	-0.06	0.04
Avg. Wind Speed (m/sec)	1.2	2.25 +/-1.9	0.003	-0.05	0.08
Avg. Relative Humidity (%)	70.9 +/-22.7	82.9 +/-14.8	0.000	-0.01	0.72
Total Precipitation (mm)	504.8	41.3	0.001	-0.02	0.49
Avg. Barametric Pressure (mm Hg)	765.1 +/-4.6	763.7 +/-4.6	0.003	0.05	0.08
Avg. Insolation (kW/m^2)	0.18 +/-0.28	0.05 +/-0.10	0.008	-0.09	0.001
Rock Surface Temperatures (°C)					
Avg Rock Surface Temperature	16.7 +/-12.8	16.0°C +/-13.5	0.003	-0.05	0.08
Max Rock Surface Temperature	65.0	51.0	0.003	-0.05	0.08
Min Rock Surface Temperature	-15.1	-11.7	0.002	-0.04	0.17
Average Daily Surface Temperature Max -Min	26.1 ± 8.3	22.2 ± 9.6	0.038	-0.19	0.06
Maximum Daily Surface Temperature Max -Min	46.8	46.8	na	na	na
Avgerage within-minute (Max -Min) Surface Temperature	4.43 +/-3.44	3.07 +/-3.02	0.003	-0.05	0.08
Max within-minute (Max -Min) Surface Temperature	23.6	16.09	na	na	na
Rock Surface Temperature Change					
Calculated per minute					
Avg. $\lvert \Delta T/min \rvert$	0.08 ± .04	0.14 ± .05	0.018	0.13	<0.001
Max $\Delta T/min$	15.5	2.1	0.006	-0.08	0.01
Minimum $\Delta T/min$	-14.2	-6.4	0.010	-0.11	<0.001
# of minutes (events) recorded where $\lvert \Delta T/min \rvert$ >2/min	3,911	22 (902 events)	na	na	na
# of minutes (events) recorded where $\lvert \Delta T/min \rvert$ >.3/min	104,851	467 (14,900 events)	na	na	na
Calculated for a -5 minute window					
Avg. $\lvert \Delta T/5min \rvert$	0.05 +/-0.08	0.1 +/-0.16	0.030	0.17	<0.001
Max $\lvert \Delta T/5min \rvert$	5.3	1.91	0.01	0.12	<0.001
Calculated for a -10 minute window					
Avg. $\lvert \Delta T/10min \rvert$	0.044 +/-0.05	0.083 +/-0.01	0.020	0.13	<0.001
Max $\lvert \Delta T/10min \rvert$	2.7	1.21	0.009	0.09	0.001
Calculated for a -30 minute window					
# of minutes (events) recorded where $\lvert \Delta T/min \rvert$ >2/min > 10 times	6	2 (8 events)	na	na	na
# of minutes (events) recorded where $\lvert \Delta T/min \rvert$ >.3/min > 10 times	118,283	240 (3044 events)	na	na	na

occurred during extreme temperature changes when no events were registered, indicating that the relationship between cracking activity and strain measurements is multifaceted and in need of further research into its expression of rock surface deformation.

Events were detected in the upper hemisphere of the NC boulder and occurred either at the surface, or within six to ten centimeters to the rock's interior. Since the AEwin software location data has an accuracy error of ±25 millimeters, the parameters for surface location consideration, five centimeters were added to the exterior measurements (31.2 cm long x 25.9 cm wide x 21.0 cm high) of the boulder when considering the local event coordinates; No correlation was found between time of day and event position.

The connection between intense rainfall and the occurrence of events was reviewed for rainfall rates of ≥ 0.3 mm/minute. Since the capacity of the rain collection tipping bucket was 0.1 mm, this equates to a calculated intensity minimum of 12 mm per hour for the evaluated minute. An overwhelming majority (97%) of the events occurred during increased rainfall and within only a few minutes after rainfall began. When the same rainfall intensity occurred in the early to afternoon part of the day (midday ± 3 hours), events did not always accompany them. Considered with previous NC data regarding event timings, locations, and surface strain, this could indicate that intense meteorological conditions (wind or rain) encourage cracking in response and considerable changes in surface temperature in the latter half of the day (Table 1).

The research pertaining to the NC boulder provided new insights regarding the relationship of direct insolation and the associated thermal stresses that encourage mechanical weathering in rock: solar-induced thermal stresses, in relation to diurnal

insolation and the surrounding intensified tensile stresses, encourage and perpetuate the occurrence and propagation of cracking. This is even more evident when abrupt weather-related temperature changes occurred at specific times of the day when insolation was at peak intensity. Diurnal insolation lays the foundation for cracking and encourages mechanical weathering by repeatedly creating thermal stresses that weaken the outer envelope of the rock. This makes the rock susceptible to other stressors, thus exposing the rock to potential further cracking and additional weathering. Though there is an increased likelihood of mechanical weathering during intense weather events, the incidence of cracking could not be predicted based on temperature or moisture indicators alone.

METHODS

Boulder Deployment

Two coarse-grained, non-foliated, and non-porphyritic granodiorite boulders were chosen from the Santa Ana Wash on the southern flank of the San Bernardino Mountains in southern California. An unvegetated, active gravel bed is suggestive of periodic transport for the boulders. This process would have worn down any protruding edges and caused any large cracks to fully break and be subsequently smoothed. Though the boulders were obtained from a relatively dry, arid portion of the wash, they were stored in climate-controlled laboratory conditions for one year prior to deployment to ensure similar preliminary environmental exposure with minimal disturbance.

The boulder placed in North Carolina is approximately 34 centimeters long, 25 centimeters wide, and 24 centimeters high and of an ellipsoid shape (Figure 4). It was installed on a defoliated, partially cleared portion of a cow pasture in the Redlair Research Preserve in Gaston County, North Carolina, for the period June 9, 2010 to May 18, 2011. The environment was bare red sandy clay loam soil, with full sun, and no natural obstructions (35.2986° N, -81.0880° W) at an elevation of approximately 831 meters (Figure 5). According to the National Climate Data Center, this area has an average annual precipitation of 114 centimeters, mean

Figure 4. **NC boulder, "Pebbles."** Close-up view with sensors, deployed at Redlair Research Preserve, Gaston County, North Carolina. Photo courtesy of Dr. Martha C. Eppes.

annual temperature of 15°C, and an average monthly temperature ranging from 3.8°C in January to 26°C in July (with an average minimum of -2°C and an average maximum of 32°C). The NC boulder was placed with the same north-south and east-west orientation of axes utilized for the attachment of the sensors.

Figure 5. **View of NC site.** Deployment at on-site environmental weather station. Photo courtesy of Dr. Martha C. Eppes.

The boulder placed in New Mexico (NM) is approximately 31.2 centimeters long, 25.9 centimeters wide, and 21.0 centimeters high and is also of an ellipsoid shape (Figure 6). The NM boulder was installed at the University of New Mexico Sevilleta National Wildlife Refuge and Field Station directly on sandy soil in full sun from August 1, 2011 to September 21, 2014.

Figure 6. **NM boulder, "BamBam."** Close-up view with attached markers for sensor placement. Photo courtesy of Dr. Martha C. Eppes.

Adjacent vegetation to the site was desert grasslands, shrub lands, and savanna (34.3379° N, -106.7414° W) (Figure 7) at an elevation of approximately 1603 meters. According to the NOAA National Climatic Data Center, this area has an average annual precipitation of 26.1 centimeters, mean annual temperature of 14.5°C, and an average monthly temperature ranging from 2.5°C in January to 25°C in July (with an average minimum of 5°C and average maximum of 22°C) and is considered a cool semi-arid climate. As with the NC boulder, the placement of the NM boulder was with the same north-south and east-west orientation of axes utilized for the attachment of the sensors.

Distance to roads or power lines for both boulders was greater than one kilometer. This was important to minimize background vibration and noise which could accidentally be registered erroneously on the AE sensors. The nearest trees to the NC boulder were at 81.4 meters and the NM boulder at 400 meters, maximizing the daylight exposure experienced by each of the boulders. The local National Weather Service Cooperative Observer (COOP) station number 298387 was approximately 80.55 kilometers southwest of the NM boulder. Historical average daily normal temperature data (1951 – 1981) from this COOP location #298387 was used for comparison purposes to that of the NC boulder and is included in graphs in the Methods - Section, Data Acquisition and Compilation - subsection.

Figure 7. **View of NM site.** Deployment at on-site environmental weather station at University of New Mexico, Sevilleta Field Station. Photo courtesy of Dr. Martha C. Eppes.

Instrumentation

Sensors were attached to the NM boulder: eight rectangular strain gage rosettes, eight thermocouples, six acoustic emission (AE) sensors, and a surface moisture indicator. The following is a brief description of the sensors.

- Surface strain gages - Vishay Micro-Measurement rectangular strain gage rosettes (CEA-00-250UR-350) were utilized. Each consisting of three uniaxial foil strain gages calibrated to register both magnitude and direction of the principal strains. Electrical integrity of the strain gages was protected by paraffin and Room Temperature-Vulcanizing (RTV) silicone. Foil strain gages are used to measure resistance. A known voltage is supplied to the gage, then the return voltage is measured, and, subsequently, the resistance is calculated and converted to microstrain. Strain is a deformation of material in response to force and is dimensionless due to the cancellation of units. (Note: Because the boulder is a rounded surface and the calculations assume that the gage is attached to a smooth, flat surface, the strain calculations cannot be considered as actual measurements of true strain, but merely used as representative estimates) (Warren et al., 2013).
- Temperature sensors - Standard T-Type thermocouples (Omega SA1XL-T-120) were installed adjacent to each strain gage. This temperature sensor is well known to the engineering field as a durable, responsive, and consistent provider of repeatable measurements of surface temperatures on a wide variety of materials. Accurate to $\pm$1°C, this sensor can function within a temperature range of -200°C to 350°C. Temperature error, between full sun and shade, was measured at a range of 1.1°C to 1.4°C and deemed an acceptable range.

- Acoustic emission sensors - Physical Acoustics Corporation (PAC) PK151, pre-amplified, low power consumption sensors were chosen due to their moderate-high frequency sensitivity of 100-450kHz and monitored on a continuous basis.

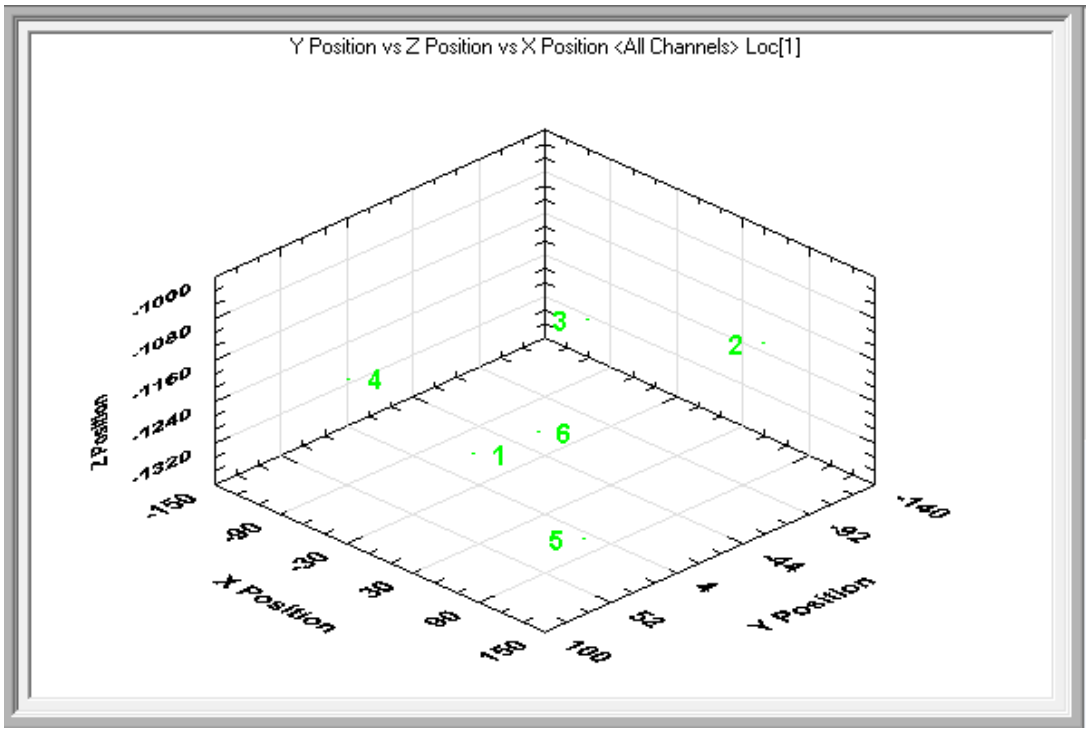

Figure 8. **Schematic of Acoustic Emission Sensor locations.** Approximate locations determined by the AEwin software package utilized for this investigation.

- Moisture sensor - A Campbell Scientific 237F moisture sensing grid of a flexible polyamide film circuit with interlaced gold-plated copper fingers was utilized. When the sensor comes in contact with moisture, the resistance is lowered between the copper fingers. The fingers are placed 0.25 mm apart so that a change in resistance will occur in response to fine droplets. The sensitivity of the sensor ranged from >0 to 200 kΩ in response to a single droplet of water, establishing limit parameters of >200 kΩ = dry conditions, and <200 kΩ = moisture is present.

The eight strain gage and temperature sensor measurement locations: 1) top of the rock, 2) bottom of rock, 3) north side equator, 4) east side equator, 5) south side equator, 6) west side equator, 7) just above equator in the northeast quadrant, and 8) just below equator in southwest quadrant (Figures 2 and 8). While acoustic emissions were monitored and registered on a continuous basis, all other sensor data were registered once every minute.

A Campbell Scientific weather station was established near each boulder to gather site ambient temperature, relative humidity, wind speed, wind direction, barometric pressure, insolation, and precipitation (to within 0.1 mm) (Figures 5 and 7). A soil moisture indicator, Campbell Scientific (CS) Model C616 water content reflectometer, was also installed to measure the water content of the soil (e.g., Garbini, 2009; Eppes et al., 2016; McFadden et al., 2005; Swami, 2011) under the boulder. An additional temperature sensor, for the NM boulder, was attached to a smaller rock approximately two meters from the installed boulder to corroborate the temperature information.

Data Acquisition & Compilation

Overview

In summary, the following operations were completed for this project on the raw NM dataset:

1) Conversion of three years of raw acoustic emission (AE) sensor and thermocouple sensor data to daily Excel spreadsheet format.
2) Overall data conversion from Excel to MySQL programming (via HeidiSQL) to facilitate ease of correction to collected data.
3) Overall removal of noted erroneous entries ("What to Delete" file) from analysis consideration.

More details regarding these tasks are provided below. Then, using the exported full dataset imported into Excel, all data analyses completed for the NC boulder (Eppes et al., 2016) were replicated for the NM dataset.

Conversion of Raw Data to Excel Format

Acoustic emission data is a widely accepted indicator of micro-cracking in rocks (e.g., Amitrano et al., 2012; Boelhouwers and Jonsson, 2013; Chmel, 2012; Eppes et al., 2016; Girard, 2012; Warren et al., 2013), and is most valued for being able to provide both precise timing as well as specific location information of an acoustic emission event. Acoustic emissions are transient elastic waves generated by the rapid release of energy produced when a brittle material cracks (Lockner, 1993). An AE sensor takes this energy and converts it to an electrical signal that is then used as a "stand-in" for microcracking.

The PAC SH-II data acquisition system uses two software programs for monitoring and analysis of detected inputs. Conversion from the data-logger files (.dta files) to text file formats (.txt files), and subsequent creation of monthly Excel data files for reference was completed each day of the collection period following the previously established process detailed in Appendix A (e.g., Eppes et al., 2016; Garbini, 2009; Warren et al., 2013).

Numerous sensor issues (temperature and AE sensors) occurred during both the NC and NM deployments, along with power malfunctions for the NC boulder, and system server issues for the NM boulder (Figure 9). These problems led to a reduction in

Date	NOTES	S1A	S1B	S1C	T1	S2A	S2B	S2C	T2	S3A	S3B
11/15/2011		10:30-12:30	10:30-12:30	10:30-12:30		10:30-12:30	10:30-12:30	10:30-12:30		10:30-12:30	10:30-12:30
11/16/2011		11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data	11:45-15:22 missing CS Data, **All Day??**
11/17/2011		11:00-13:00	11:00-13:00	11:00-13:00		11:00-13:00	11:00-13:00	11:00-13:00		11:00-1300 **0:00-13:00?**	11:00-13:00
11/18/2011											
11/19/2011											All Day?

Figure 9. **Portion of "What to delete" Excel spreadsheet.** A portion of the "What to Delete" file used to record and then edit the final data. Example is of 11-12-2011 through 11-19-2011, Columns: Date, Notes, Strain Sensors 1A/B/C, 2A/B/C, 3A/B, and Temperature Sensors 1 and 2.

the overall data available for evaluation. Data reported for each boulder recorded the local time: Eastern Standard Time for the NC boulder and Mountain Standard Time for the NM boulder and were adjusted for Daylight Savings Time when necessary. Data for the NC boulder were collected from June 19, 2010 to May 18, 2011 for an overall total of 334 days, but adjusted to 289 days, 9 hours, and 36 minutes of data due to sensor and

power issues (Eppes et al., 2016). The data for the NM boulder were collected from August 1, 2011 through July 31, 2014, a total of 1,096 days, but adjusted to 976 days 17 hours and 50 minutes of available AE/Temperature/Strain gauge data due to various sensor and server issues.

Conversion of Data in Excel Format to MySQL Format

Due to the expansive nature of the original raw Excel 2016 files (2.2 GB, 1.7 million lines, and 126 columns of data), data conversion for evaluation was completed using MySQL, an open-source relational database management system version of Structured Query Language (SQL). This was facilitated and simplified with HeidiSQL, a free and open-source database administration tool at www.heidisql.com, released under GPL (GNU GENERAL PUBLIC LICENSE). Prior to the data upload to MYSQL/HeidiSQL, the monthly raw Excel data files (Excel 2016) were adjusted to remove error codes: #N/A, #NULL, #REF!, #DIV/0, #VALUE, #NAME?, and #NUM! to ensure those cells would upload as blank, non-data containing cells. After creating the column headers in HeidiSQL to correspond with the initial established NC boulder file for "Pebbles" Excel files format (Eppes et al., 2016) (Figure 10), each Excel data file for 2011 through 2014 was uploaded to HeidiSQL via add-on programming available within Excel 2016 (Figure 11). Adjustments were then made to the HeidiSQL interface in response to data acquisition server issues, weather interruptions, maintenance processing, etc., logged in a "What to Delete" spreadsheet (Figure 9). For example, for May 4, 2012, a review of the original strain gage data indicated inconsistent strain data for the day (Figure 12). As such, this data was then removed from analysis consideration.

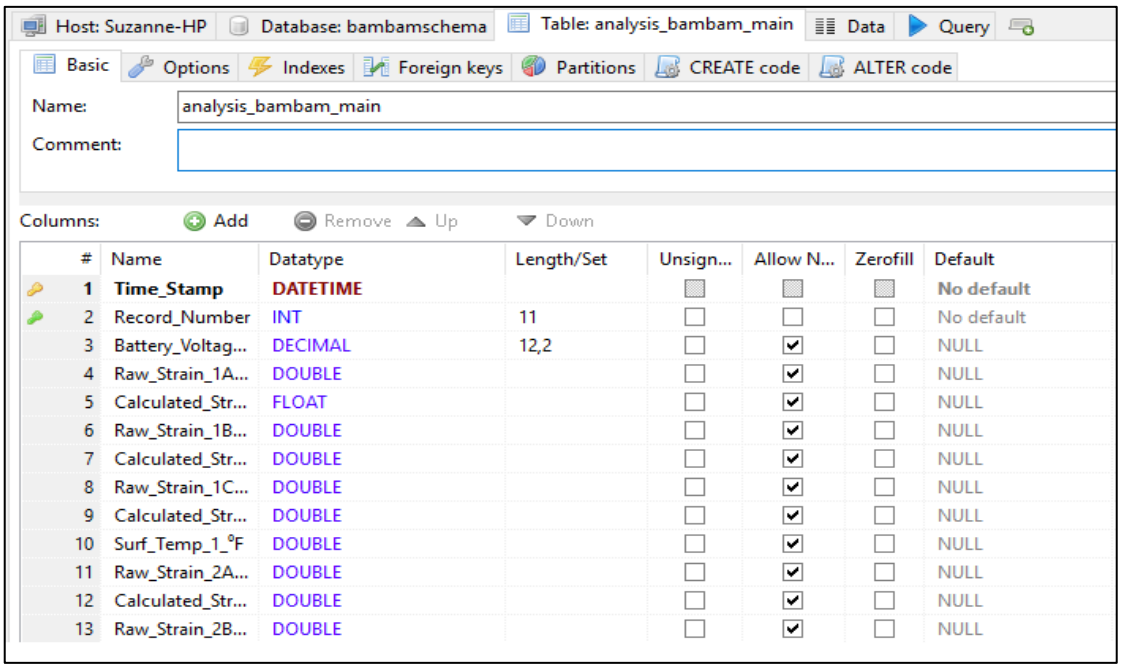

Figure 10. **HeidiSQL-Column setup.** Portion of the initial 126 column header setup to coincide with the previously established Pebbles dataset headers.

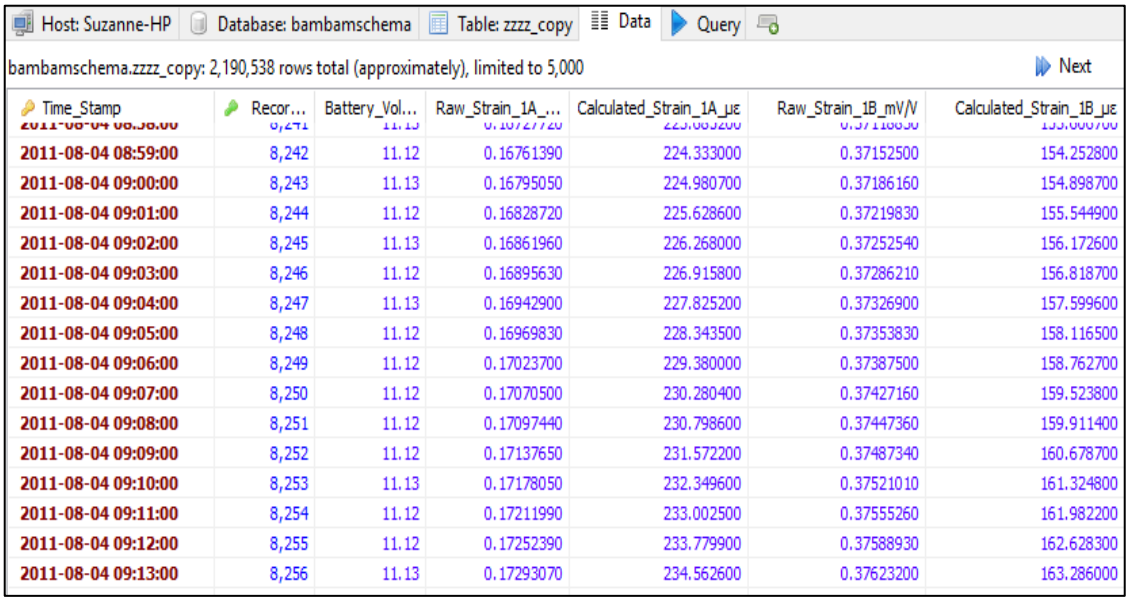

Figure 11. **HeidiSQL – Example of uploaded data.** Portion of the uploaded .txt file indicating column headers and data for Time Stamp, Raw Strain and Calculated Strain readings for sensors 1A and 1B.

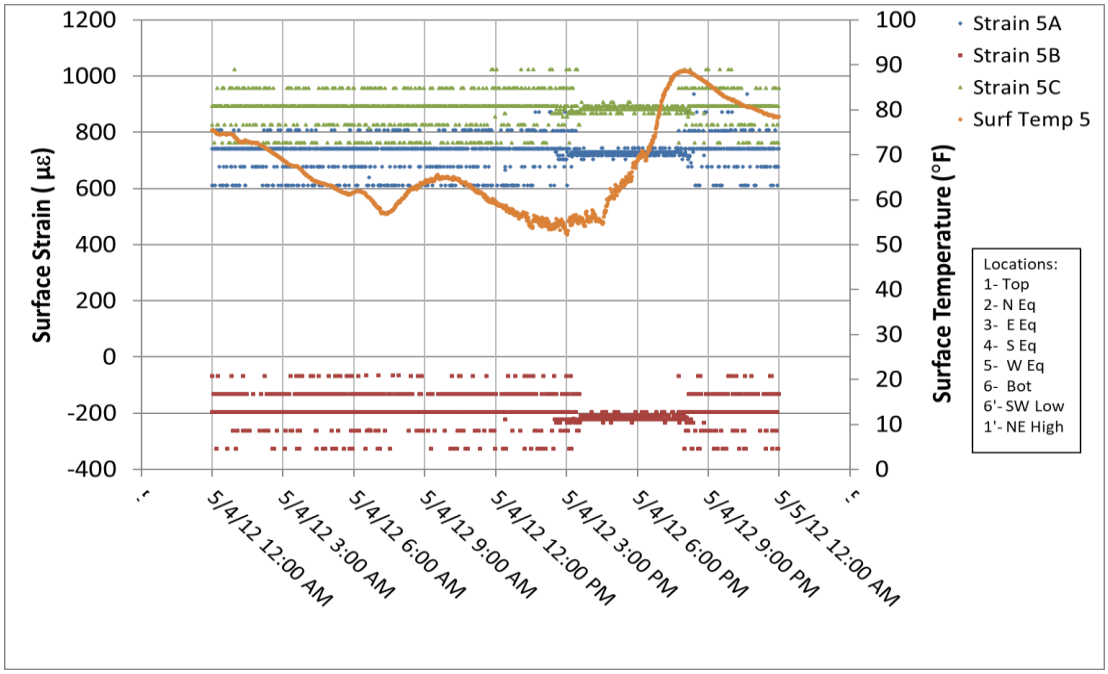

Figure 12. **Surface strain gage 5 - inconsistencies.** Representative example of strain gage 5 and the other strain gages for the same day. Indication of inconsistencies noted in the "What to Delete" file of "All Day", necessitating the removal of the strain gage information for strain gages 1-6, 1', and 6'.

Corrections were also made to the reported data (Figure 13) for surface temperature sensors Temp 1 through Temp 6' using the following formula due to a reversed surface temperature sensor for August 1, 2011 through January 2, 2013: *New Temp = (- (Surf Temp – Reference Temp)) + Reference Temp.* A change from Fahrenheit (°F) to Celsius (°C) was completed for the same dates and sensors, including the additional temperature sensors titled as Ambient Temp, T9 Surface Soil Temperature, Thermocouples 1-8 MIN Surf Temp, Thermocouples 1-8 MAX Surf Temp, Thermocouples 1-8 AVG Surf Temp, and Thermocouples 1-8 MAX-MIN Surf Temp using the following formula and related coding (Figure 14) detailed in Appendix B: *[°Celsius] = ([°Fahrenheit] - 32) × 5/9.*

Adjustments to remove issues noted in a "What to Delete" file were made within the HeidiSQL program due to the ability of the program to handle repeated coding requests easily and for a large number of selected entries (Figure 15). Issues included data captured by sensors that was incomplete or skewed due to server issues, adhesive failure of attachments, maintenance issues, etc. (Appendix C).

```
update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_5_°F`= ((-(`Surf_Temp_5_°F`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,850  Found rows: 0  Warnings: 0  Duration for 1 query:
00:01:13 */
```

Figure 13. **MySQL coding in HeidiSQL to correct temperature sensors**. MySQL coding used in HeidiSQL to correct the reported temperatures for Surface Temperature Sensors 1 through 6' due to a reversed node from August 1, 2011 through January 2, 2013. Formula used: New Temp = (-(Surf Temp-Reference Temp)) + Reference Temp. Example is for Surface Temperature Sensor 5 and indicates number of rows completed and processing time.

```
update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_5_°F`= ((`Surf_Temp_5_°F`-32) * .5556);
/* Affected rows: 1,545,544  Found rows: 0  Warnings: 65,535  Duration for 1
query: 00:02:21 */
```

Figure 14. **MySQL coding in HeidiSQL converting Fahrenheit (°F) to Celsius (°C).** MySQL coding used in HeidiSQL to convert the reported temperatures from °F to °C for Surface Temperature Sensors 1 through 6' from August 1, 2011 through January 2, 2013. Example is for Surface Temperature Sensor 5 and indicates number of rows completed and completion time.

```
update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με`= NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V`= NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-02-05 06:45:00' and '2012-02-05 07:15:00' OR
Time_Stamp between '2012-02-06 07:30:00' and '2012-02-06 07:45:00' OR
Time_Stamp between '2012-02-07 04:30:00' and '2012-02-07 05:00:00' OR
Time_Stamp between '2012-02-08 04:30:00' and '2012-02-08 05:00:00' OR
Time_Stamp between '2012-02-10 03:45:00' and '2012-02-10 04:15:00' OR
Time_Stamp between '2012-02-11 05:45:00' and '2012-02-11 06:30:00' OR
Time_Stamp between '2012-02-15 06:15:00' and '2012-02-15 07:00:00';
/* Affected rows: 232  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063
sec. */
```

Figure 15. **Sample MySQL coding within HeidiSQL for "What to Delete" items.** Example is of the deletion of numerous strain gages entries for various dates.

RESULTS

Event Timing

The monitored period for the NM boulder was August 1, 2011 through July 31, 2014 (total of 1,095 days). Due to various instrumentation issues, available evaluation data was reduced to 976 days 17 hours and 50 minutes for any one sensor. AE events totaled 303,912 during 14,853 individual minutes over 713 days, and is further broken down as follows: 141,260 AE events, during 5,857 minutes, in 239 days, from August 1, 2011 through July 31, 2012; 68,088 AE events, during 4,550 minutes, in 210 days, from August 1, 2012 through July 31, 2013; and 94,564 AE events, during 4,446 minutes, in 264 days, from August 1, 2013 through July 31, 2014 (Figures 16-18, and Tables 2 and 3). These graphs were created to match the original NC graph (Eppes et al., 2016) (Figure 19).

Event clusters occurred at various times of the day for the entire dataset around significant spikes at 1:04 p.m., 3:58 p.m., 4:26 p.m., and 6:04 p.m. (Figures 20 and 21). The 1:04 p.m. and 6:04 p.m. clusters coincide with the local solar noon and sunset, respectively. A total of 212,856 events occurred between 12:58 p.m. and 9:04 p.m. (a period of +/- three hours before and after the two highest event spikes of 3:58 p.m. and 6:04 p.m.) and accounted for 70% of all the events occurring during the deployment period (Figures 20 and 21). Similar patterns are recorded for the NC boulder (Eppes et.al., 2016) (Figure 3).

During the 3-year period, a total of 231 days experienced event totals of 50 or more events during the day (Appendix D), broken down as follows: 84 days for 2011-

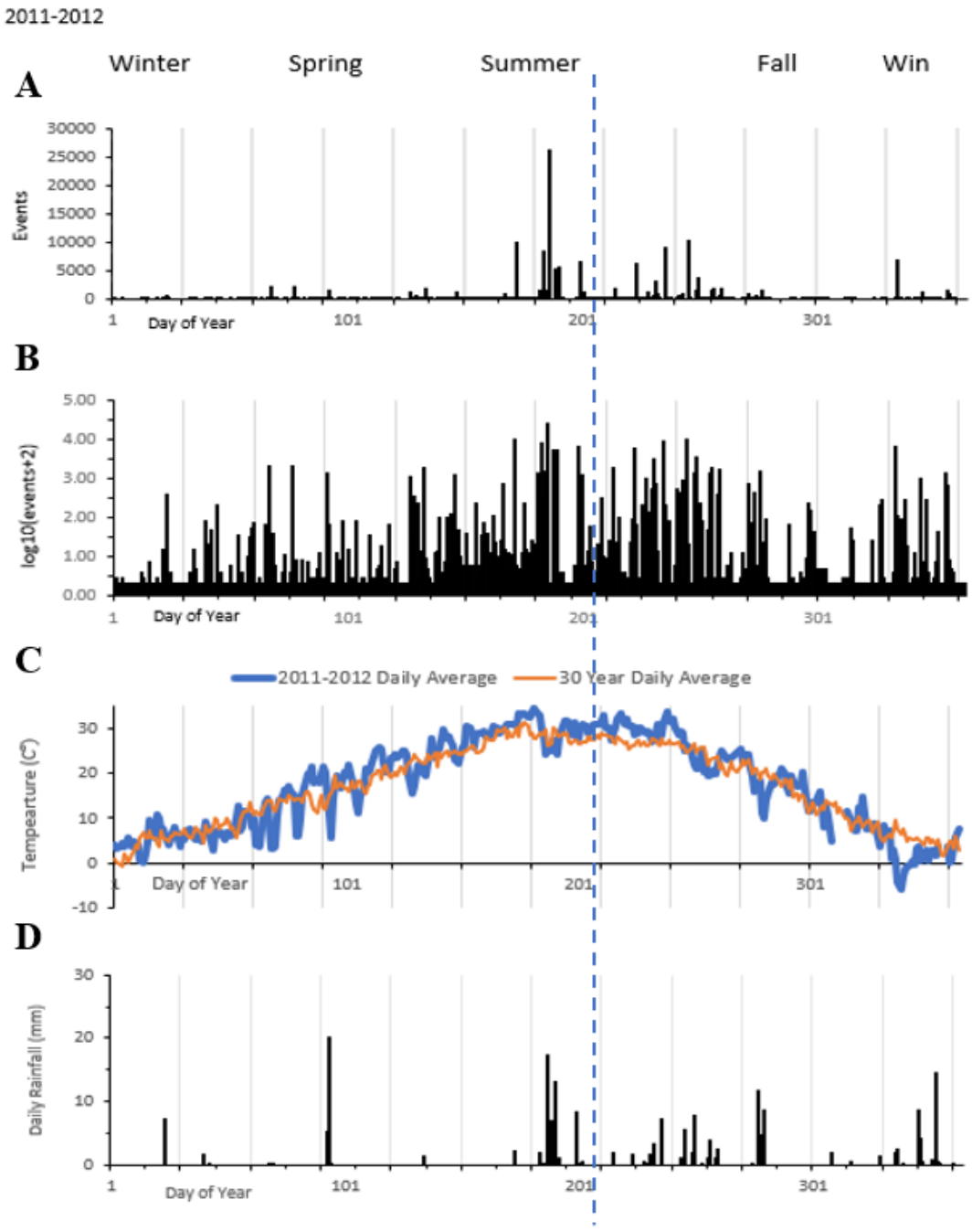

Figure 16. **After Figure 2, Eppes et al., 2016. NM boulder time series for monitoring period by day of year (1 = 1 January 2012; 365 = 31 December 2011).** Any blank spaces represent times for which we were unable to collect data due to equipment malfunction. Dotted line approximately indicates ending July 31, 2012/beginning August 1, 2011. (A) Total numbers of events 141,260. (B) Log_{10} (numbers of events +2) per day; depicting the data as log_{10} (n+2) allows visualization of the overall occurrence of events throughout the year with less emphasis on total numbers. 0 events plotted as 0.2. (C) Average daily temperature measured at the rock site (thick/blue line) and average daily temperature obtained from climate normal values (1951-1980; thin/orange line) from a nearby National Weather Service (NWS) Cooperative Observer (COOP) station #298387. (D) Total daily precipitation measured at the rock site.

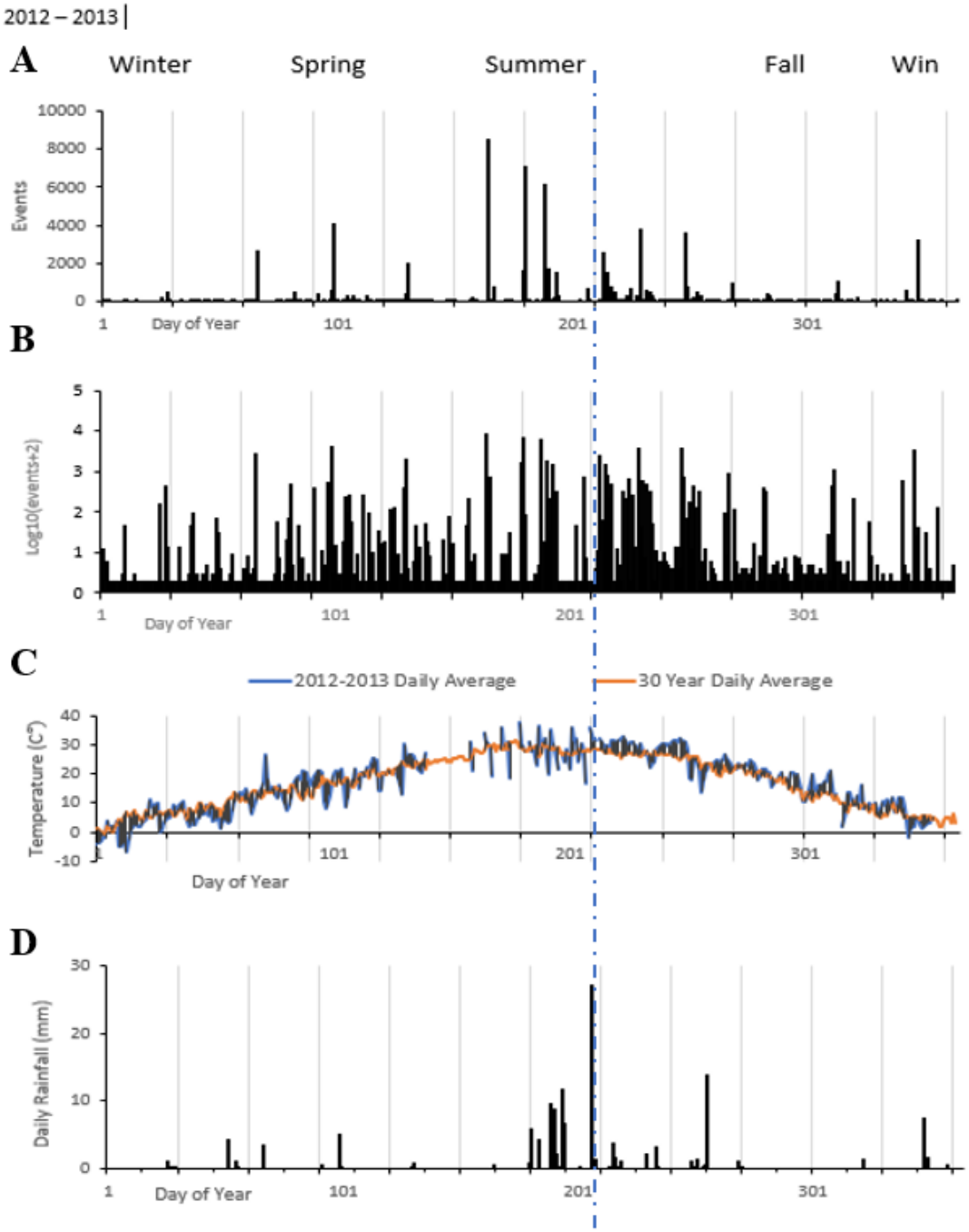

Figure 17. **After Figure 2, Eppes et al., 2016. NM boulder time series for monitoring period by day of year (1 = 1 January 2013; 365 = 31 December 2012).** Any blank spaces represent times for which we were unable to collect data due to equipment malfunction. Dotted line approximately indicates ending July 31, 2013/beginning August 1, 2012. (A) Total numbers of events 68,088. (B) Log_{10} (numbers of events +2) per day; depicting the data as $\log_{10}(n+2)$ allows visualization of the overall occurrence of events throughout the year with less emphasis on total numbers. 0 events plotted as 0.2. (C) Average daily temperature measured at the rock site (thick/blue line) and average daily temperature obtained from climate normal values (1951-1980; thin/orange line) from a nearby National Weather Service (NWS) Cooperative Observer (COOP) station #298387. (D) Total daily precipitation measured at the rock site.

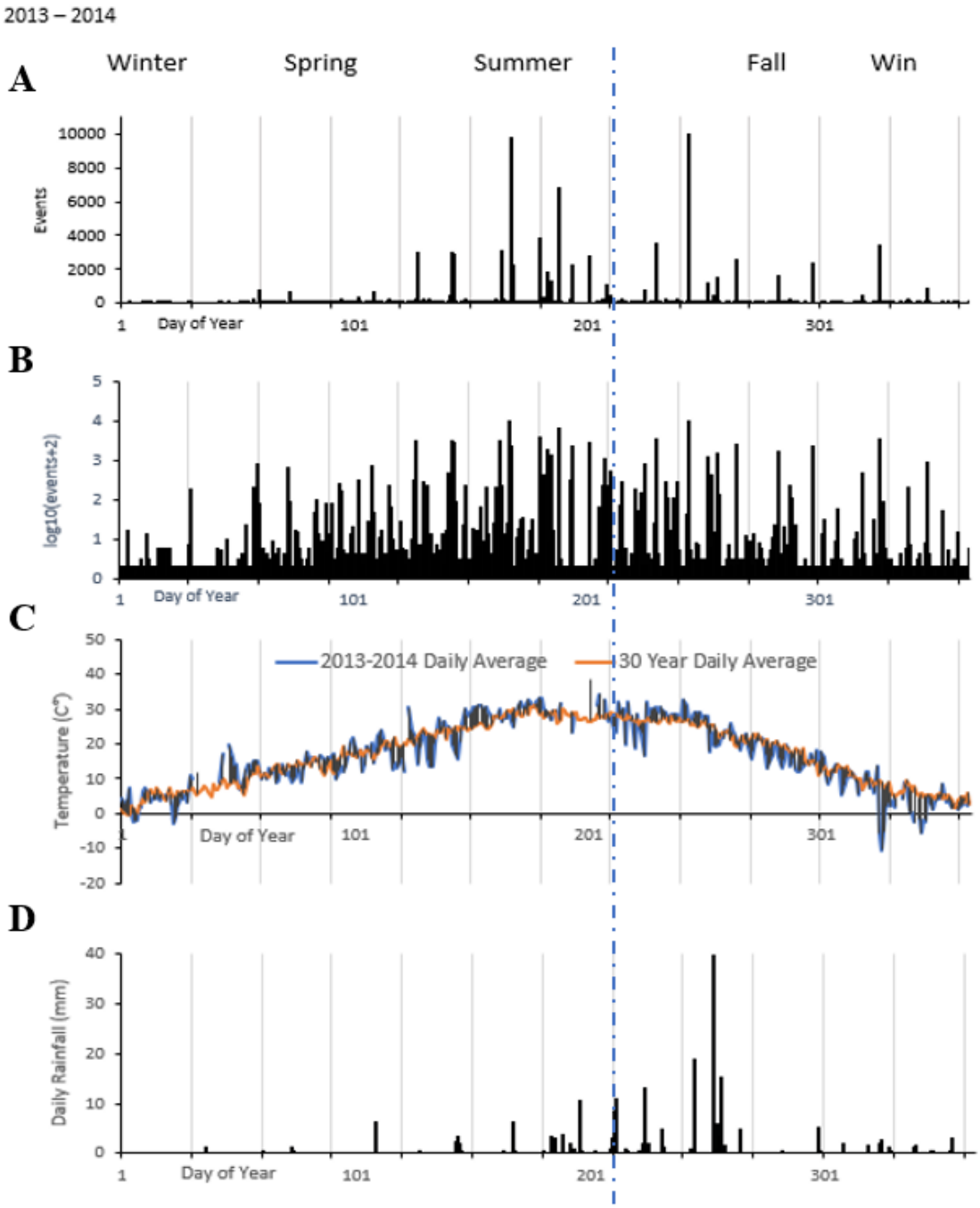

Figure 18. **After Figure 2, Eppes et al., 2016. NM boulder time series for monitoring period by day of year (1 = 1 January 2014; 365 = 31 December 2013).** Any blank spaces represent times for which we were unable to collect data due to equipment malfunction. Dotted line approximately indicates ending July 31, 2014/beginning August 1, 2013. (A) Total numbers of events 94,564. (B) Log_{10} (numbers of events +2) per day; depicting the data as log_{10} (n+2) allows visualization of the overall occurrence of events throughout the year with less emphasis on total numbers. 0 events plotted as 0.2. (C) Average daily temperature measured at the rock site (thick/blue line) and average daily temperature obtained from climate normal values (1951-1980; thin/orange line) from a nearby National Weather Service (NWS) Cooperative Observer (COOP) station #298387. (D) Total daily precipitation measured at the rock site.

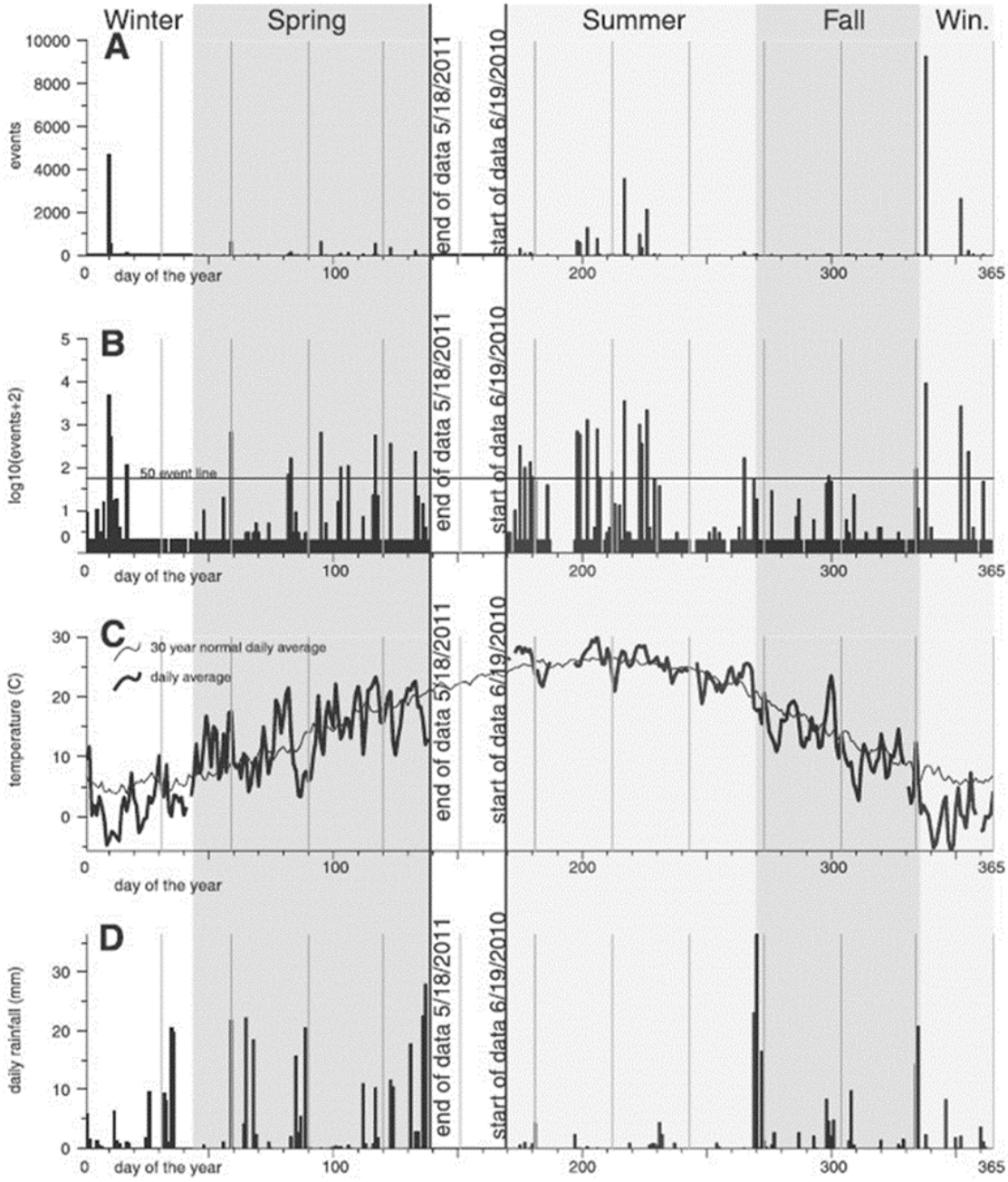

Figure 19. **NC boulder time series for entire monitoring period by day of year (1 = 1 January 2011; 360 = 31 December 2010).** Any blank spaces represent times for which we were unable to collect data due to equipment malfunction. (A) Total numbers of daily events (total of 32,585 events). (B) Log_{10} (numbers of events +2) per day; depicting the data as log_{10} (n+2) allows visualization of the overall occurrence of events throughout the year with less emphasis on total numbers. 0 events plotted as 0.2. (C) Average daily temperature measured at the rock site (heavy black line) and average daily temperature derived from climate normal values (1951-1980; light black line) from a nearby National Weather Service (NWS) Cooperative Observer (COOP) station. (D) Total daily precipitation measured at the rock site. Figure and caption used with permission (e.g. Eppes et al., 2016, p. 1319, Figure 2).

Table 2. **Summary statistics of rock surface temperature and environmental conditions data.** Data for both NC boulder "Pebbles" (Eppes, et.al., 2016) and NM boulder "BamBam" for entire respective records and event times.

Measurement	Time Period	Entire Record	Event Times Only	R^2 measurement vs #events	Pearson r-measurement vs #events	2-tailed Pearson p-value measurement vs #events
Environmental Data						
Avg. Ambient Temperature (˚C)	Pebbles	13.4 +/- 7.3	13.0 +/- 5.6	0.003	-0.06	0.04
	BamBam 8/2011 - 7/2012	14.7 +/- 11.1	17.2 +/- 10.3	0.004	0.06	0.00
	BamBam 8/2012 - 7/2013	12.7 +/- 11.0	17.4 +/- 8.5	0.001	0.04	0.02
	BamBam 8/2013 - 7/2014	13.8 +/- 10.7	18.1 +/- 9.3	0.004	0.06	0.02
Avg. Wind Speed (m/sec)	Pebbles	1.2	2.25 +/- 1.9	0.003	-0.05	0.08
	BamBam 8/2011 - 7/2012	2.6	6.94 +/- 3.8	0.000	0.00	0.00
	BamBam 8/2012 - 7/2013	2.6	6.08 +/- 3.1	0.001	-0.04	0.00
	BamBam 8/2013 - 7/2014	2.6	5.52 +/- 3.2	0.002	-0.05	0.00
Avg. Relative Humidity (%)	Pebbles	70.9 +/- 22.7	82.9 +/- 14.8	0.000	0.01	0.72
	BamBam 8/2011 - 7/2012	39.6 +/- 24.2	45.7 +/- 26.1	0.019	0.14	0.00
	BamBam 8/2012 - 7/2013	36.0 +/- 20.3	45.8 +/- 26.9	0.001	0.09	0.00
	BamBam 8/2013 - 7/2014	39.0 +/- 22.7	44.9 +/- 27.5	0.002	0.05	0.00
Total Precipitation (mm)	Pebbles	504.8	41.3	0.001	-0.02	0.49
	BamBam 8/2011 - 7/2012	191.9	95.1	0.187	0.43	0.00
	BamBam 8/2012 - 7/2013	138.0	79.0	0.027	0.16	0.00
	BamBam 8/2013 - 7/2014	208.1	90.0	0.084	0.29	0.00
Avg. Barometric Pressure (mm Hg)	Pebbles	765.1 +/- 4.6	763.7 +/- 4.6	0.003	0.05	0.08
	BamBam 8/2011 - 7/2012	653.2 +/- 3.3	651.4 +/- 5.0	0.009	0.09	0.00
	BamBam 8/2012 - 7/2013	653.3 +/- 3.9	651.3 +/- 4.9	0.003	0.06	0.00
	BamBam 8/2013 - 7/2014	653.2 +/- 3.9	651.7 +/- 5.9	0.001	0.03	0.00
Avg. Insolation (kW/m^2)	Pebbles	0.18 +/- 0.28	0.05 +/- 0.10	0.008	-0.09	0.00
	BamBam 8/2011 - 7/2012	0.23 +/- 0.32	0.23 +/- 0.32	0.016	-0.13	0.00
	BamBam 8/2012 - 7/2013	0.22 +/- 0.30	0.20 +/- 0.30	0.011	-0.11	0.00
	BamBam 8/2013 - 7/2014	0.21 +/- 0.30	0.21 +/- 0.30	0.001	0.03	0.00
Rock Surface Temperatures (˚C)						
Avg. Rock Surface Temperature (˚C)	Pebbles	16.7 +/- 12.8	16.0 +/- 3.5	0.003	-0.05	0.08
	BamBam 8/2011 - 7/2012	17.8 +/- 14.0	21.9 +/- 12.6	0.006	0.08	0.00
	BamBam 8/2012 - 7/2013	17.2 +/- 13.9	22.6 +/- 10.3	0.000	0.02	0.00
	BamBam 8/2013 - 7/2014	16.4 +/- 13.7	21.8 +/- 11.5	0.001	0.03	0.68
Max Rock Surface Temperature (˚C)	Pebbles	65.0	51.0	0.003	-0.05	0.08
	BamBam 8/2011 - 7/2012	58.4	55.7	0.014	0.12	0.00
	BamBam 8/2012 - 7/2013	57.1	55.5	0.008	0.09	0.00
	BamBam 8/2013 - 7/2014	58.0	55.6	0.005	0.07	0.01
Min Rock Surface Temperature (˚C)	Pebbles	-15.1	-11.7	0.002	-0.04	0.17
	BamBam 8/2011 - 7/2012	-18.3	-18.1	0.003	0.06	0.00
	BamBam 8/2012 - 7/2013	-18.7	-13.2	0.007	0.08	0.01
	BamBam 8/2013 - 7/2014	-22.1	-17.4	0.001	0.04	0.70
Average Daily Surface Temperature Max - Min (˚C)	Pebbles	26.1 +/- 8.3	22.2 +/- 9.6	0.038	-0.19	0.06
	BamBam 8/2011 - 7/2012	6.58 +/- 1.7	6.36 +/- 3.5	0.006	0.08	0.00
	BamBam 8/2012 - 7/2013	7.03 +/- 1.9	6.66 +/- 3.0	0.001	0.03	0.00
	BamBam 8/2013 - 7/2014	7.18 +/- 2.05	7.24 +/- 3.8	0.003	-0.06	0.00
Maximum Daily Surface Temperature Max - Min (˚C)	Pebbles	46.8	46.8	NA	NA	NA
	BamBam 8/2011 - 7/2012	20.0	18.3	NA	NA	NA
	BamBam 8/2012 - 7/2013	20.1	17.3	NA	NA	NA
	BamBam 8/2013 - 7/2014	42.3	19.6	NA	NA	NA
Average Within-Minute (Max - Min) Surface Temperature (˚C)	Pebbles	4.43 +/- 3.44	3.07 +/- 3.02	0.003	-0.05	0.08
	BamBam 8/2011 - 7/2012	6.59 +/- 4.55	5.78 +/- 3.60	0.066	0.26	0.00
	BamBam 8/2012 - 7/2013	7.07 +/- 4.49	6.26 +/- 3.37	0.003	0.06	0.00
	BamBam 8/2013 - 7/2014	7.24 +/- 4.60	5.52 +/- 3.43	0.013	0.11	0.00
Max Within-Minute (Max - Min) Surface Temperature (˚C)	Pebbles	23.6	16.09	NA	NA	NA
	BamBam 8/2011 - 7/2012	20.0	18.27	NA	NA	NA
	BamBam 8/2012 - 7/2013	20.1	19.00	NA	NA	NA
	BamBam 8/2013 - 7/2014	42.3	19.62	NA	NA	NA

Note: Statistics calculated as follows: For entire period when data available (NC boulder = 416,680 min; NM boulder = 1,406,510 min) and for only minutes with corresponding event occurrences (NC boulder = 1201 min; NM boulder = 14,853 min). Bi-variate R-squared, Pearson r-measurement, and 2-tailed Pearson p-value were calculated between data in left column versus data for minutes with corresponding events (NC boulder = 1201 min; NM boulder = 14,853 min). Temperatures are reported in Celsius. Rock surface temperature calculations based on available thermocouple data per minute (Minimum of 2).

Table 3. **Summary statistics of rock surface temperature changes.** Data for both NC boulder, "Pebbles", (Eppes et.al., 2016) and NM boulder, "BamBam", for entire respective records and event times only.

Measurement	Time Period	Entire Record	Event Times Only	R^2 measurement vs. #events	Pearson r-measurement vs. #events	2-tailed Pearson p-value measurement vs. #events
Rock Surface Temperature Change (°C) Calculated Per Minute						
Avg. |ΔT/min|	Pebbles	0.08 +/- 0.04	0.14 +/- 0.05	0.018	0.13	<0.001
	BamBam 8/2011 - 7/2012	0.09 +/- 0.17	0.19 +/- 0.38	0.116	0.34	0.000
	BamBam 8/2012 - 7/2013	0.10 +/- 0.20	0.19 +/- 0.37	0.046	0.64	0.000
	BamBam 8/2013 - 7/2014	0.42 +/- 1.01	0.32 +/- 0.70	0.010	0.10	0.000
Max. ΔT/min	Pebbles	15.5	2.1	0.006	-0.08	0.01
	BamBam 8/2011 - 7/2012	7.9	7.9	0.004	0.06	0.00
	BamBam 8/2012 - 7/2013	34.3	7.0	0.004	0.06	0.00
	BamBam 8/2013 - 7/2014	20.9	10.3	0.001	0.03	0.00
Min. ΔT/min	Pebbles	-14.2	-6.4	0.010	-0.11	<0.001
	BamBam 8/2011 - 7/2012	-12.6	-12.6	0.101	-0.32	0.000
	BamBam 8/2012 - 7/2013	-31.6	-6.3	0.054	-0.23	0.000
	BamBam 8/2013 - 7/2014	-20.9	-9.4	0.050	-0.22	0.000
No. of minutes (events) recorded where |ΔT/min|>2°C/min	Pebbles	3,911	22 (902 events)	NA	NA	NA
	BamBam 8/2011 - 7/2012	1,884	228 (32,934)	NA	NA	NA
	BamBam 8/2012 - 7/2013	2,456	197 (12,413)	NA	NA	NA
	BamBam 8/2013 - 7/2014	28,381	253 (22,684)	NA	NA	NA
No. of minutes (events) recorded where |ΔT/min|>0.3°C/min	Pebbles	104,851	467 (14,900 events)	NA	NA	NA
	BamBam 8/2011 - 7/2012	107,613	2,250 (111,669)	NA	NA	NA
	BamBam 8/2012 - 7/2013	116,253	2,082 (47,789)	NA	NA	NA
	BamBam 8/2013 - 7/2014	202,092	2,020 (61,163)	NA	NA	NA
Rock Surface Temperature Change (°C) Calculated for a 5-Minute Window						
Avg. |ΔT/5 min|	Pebbles	0.05 +/- 0.08	0.1 +/- 0.16	0.030	0.17	<0.001
	BamBam 8/2011 - 7/2012	0.05 +/- 0.07	0.1 +/- 0.17	0.192	0.44	0.000
	BamBam 8/2012 - 7/2013	0.05 +/- 0.07	0.1 +/- 0.15	0.069	0.26	0.000
	BamBam 8/2013 - 7/2014	0.11 +/- 0.21	0.1 +/- 0.21	0.078	0.28	0.000
Max. |ΔT/5 min|	Pebbles	5.3	1.91	0.010	0.12	<0.001
	BamBam 8/2011 - 7/2012	3.1	3.06	0.175	0.42	0.000
	BamBam 8/2012 - 7/2013	7.2	1.94	0.060	0.25	0.000
	BamBam 8/2013 - 7/2014	4.2	2.55	0.111	0.33	0.000
Rock Surface Temperature Change (°C) Calculated for a 10-Minute Window						
Avg. |ΔT/10 min|	Pebbles	0.044 +/- 0.05	0.083 +/- 0.01	0.020	0.13	<0.001
	BamBam 8/2011 - 7/2012	0.045 +/- 0.05	0.086 +/- 0.13	0.200	0.45	0.000
	BamBam 8/2012 - 7/2013	0.047 +/- 0.05	0.079 +/- 0.10	0.052	0.23	0.000
	BamBam 8/2013 - 7/2014	0.073 +/- 0.11	0.092 +/- 0.14	0.139	0.37	0.000
Max. |ΔT/10 min|	Pebbles	2.7	1.21	0.009	0.09	0.001
	BamBam 8/2011 - 7/2012	1.8	1.56	0.193	0.44	0.000
	BamBam 8/2012 - 7/2013	3.6	1.16	0.051	0.23	0.000
	BamBam 8/2013 - 7/2014	2.3	1.65	0.138	0.37	0.000
Rock Surface Temperature Change (°C) Calculated for a 30-Minute Window						
No. of minutes (events) recorded where |ΔT/min|>2°C/min> 10 Times	Pebbles	6	2 (8 events)	NA	NA	NA
	BamBam 8/2011 - 7/2012	0	0	NA	NA	NA
	BamBam 8/2012 - 7/2013	0	0	NA	NA	NA
	BamBam 8/2013 - 7/2014	0	0	NA	NA	NA
No. of minutes (events) recorded where |ΔT/min|>0.3°C/min> 10 Times	Pebbles	118,283	240 (3,044 events)	NA	NA	NA
	BamBam 8/2011 - 7/2012	32	0	NA	NA	NA
	BamBam 8/2012 - 7/2013	37	0	NA	NA	NA
	BamBam 8/2013 - 7/2014	53	0	NA	NA	NA

Note: Statistics calculated as follows: For entire period when data available (NC boulder = 416,680 min; NM boulder = 1,406,510 min) and for only minutes with corresponding event occurrences (NC boulder = 1201 min; NM boulder = 14,853 min). Bi-variate R-squared, Pearson r-measurement, and 2-tailed Pearson p-value were calculated between data in left column versus data for minutes with corresponding events (NC boulder = 1201 min; NM boulder = 14,853 min). Temperatures are reported in Celsius. Rock surface temperature calculations based on available thermocouple data per minute (Minimum of 2).

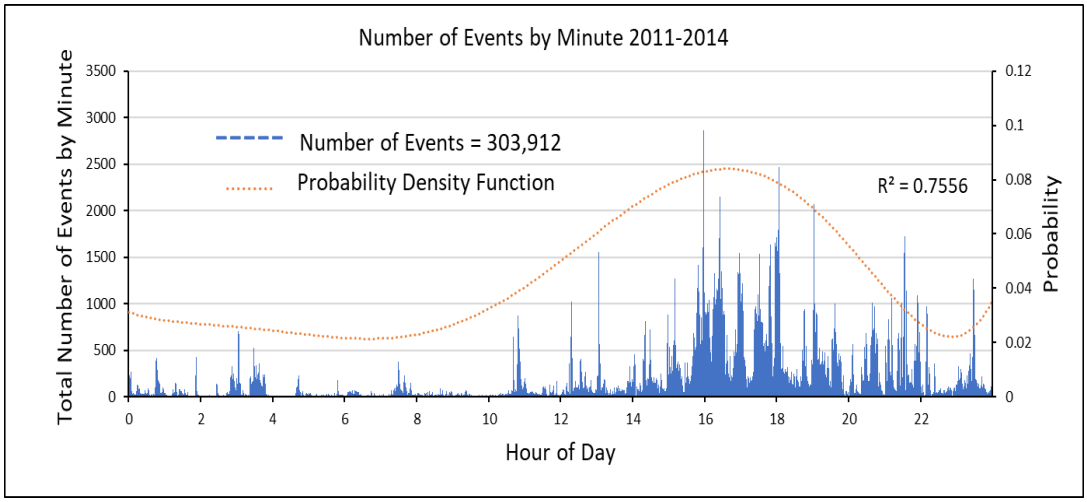

Figure 20. **Histogram of all events registered by minute of day for August 1, 2011 through July 31, 2014.** Total number of overall events is 303,912. The dotted line is the calculated probability density function for the graph. R-squared of 0.7556 indicates a good fit probability curve.

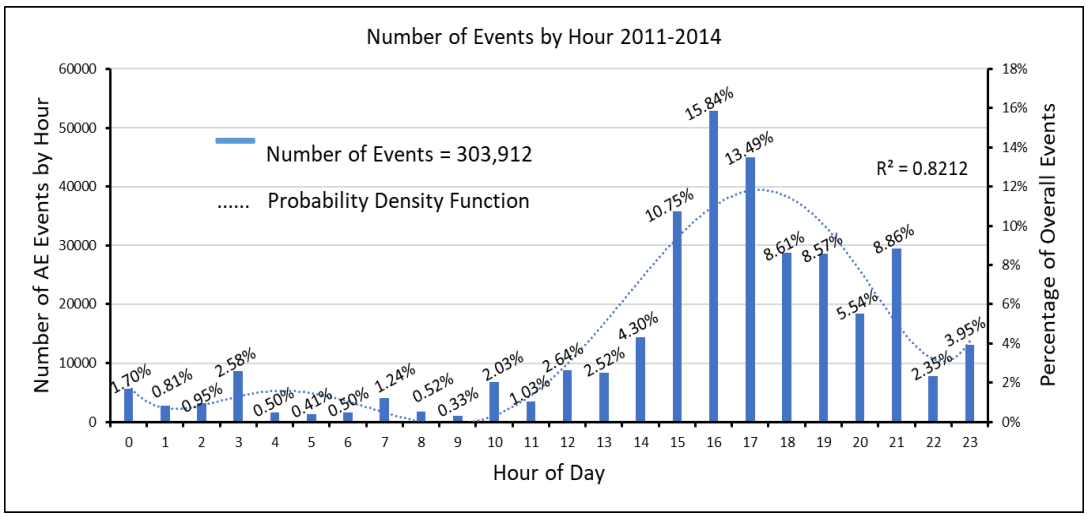

Figure 21. **Histogram – Percentage of all events registered by hour of day for August 1, 2011 through July 31, 2014.** Total number of overall events is 303,912. Large occurrences denoted by data labels at peaks. The dotted line is the calculated probability density function for the graph. R-squared of 0.8212 is a good fit probability curve.

2012; 70 days for 2012-2013; and 78 days for 2013-2014. To facilitate comparison with the NC boulder data, this was reduced to the top 30 of those high event days (Figure 22).

A total of 190,151 events occurred during these 30 high event days, representing 62.57% of the overall total events registered during the 3-year deployment. The timing of event clusters was reviewed as it related to the diurnal cycle (before, during, or after

	Twilight Start	Sunrise	Sunset	Twilight end	Solar noon
	2011 - 2012	2011-2012	2011-2012	2011-2012	2011-2012
Fall Equinox	6:30:30 a.m.	6:55:24 a.m.	7:05:20 p.m.	7:30:15 p.m.	1:00:22 p.m.
Winter Solstice	6:41:49 a.m.	7:08:30 a.m.	5:02:33 p.m.	5:30:14 p.m.	12:06:01 p.m.
Spring Equinox	6:42:47 a.m.	7:07:42 a.m.	7:20:54 p.m.	7:45:48 p.m.	1:14:18 p.m.
Summer Solstice	5:27:41 a.m.	5:56:52 a.m.	8:22:28 p.m.	8:51:39 p.m.	1:09:40 p.m.

	Twilight Start	Sunrise	Sunset	Twilight end	Solar noon
	2012-2013	2012-2013	2012-2013	2012-2013	2012-2013
Fall Equinox	6:31:02 a.m.	6:55:56 a.m.	7:04:17 p.m.	7:29:10 p.m.	1:00:06 p.m.
Winter Solstice	6:42:10 a.m.	7:09:51 a.m.	5:02:56 p.m.	5:30:37 p.m.	12:06:24 p.m.
Spring Equinox	6:43:07 a.m.	7:08:01 a.m.	7:20:43 p.m.	7:45:37 p.m.	1:14:22 p.m.
Summer Solstice	5:27:37 a.m.	5:56:48 a.m.	8:22:26 p.m.	8:51:36 p.m.	1:09:37 p.m.

	Twilight Start	Sunrise	Sunset	Twilight end	Solar noon
	2013-2014	2013-2014	2013-2014	2013-2014	2013-2014
Fall Equinox	6:30:52 a.m.	6:55:46 a.m.	7:04:37 p.m.	7:29:31 p.m.	1:00:11 p.m.
Winter Solstice	6:42:03 p.m.	7:09:44 p.m.	5:02:48 p.m.	5:30:29 p.m.	12:06:16 p.m.
Spring Equinox	6:43:27 a.m.	7:08:21 p.m.	7:20:31 p.m.	7:45:26 p.m.	1:14:26 p.m.
Summer Solstice	5:27:34 a.m.	5:56:45 a.m.	8:22:23 p.m.	8:51:34 p.m.	1:09:34 p.m.

Table 4. **Timing for sun occurrence for Socorro, NM.** Twilight start, sunrise, sunset, twilight end, and solar noon for Socorro, NM. (https://sunrise-sunset.org). MDT- Mountain Daylight Time: 2011) 3-13-11 to 11-06-11; 2012) 3-11-12 to 11-04-12; 2013) 3-10-13 to 11-03-13; 2014) 3-09-14 to 11-02-14 (greenwichmeantime.com/ time-zone/rules/usa).

sunset) (Table 4, and Figure 22). Nearly 89% of events occurred between the hours of 2:00 p.m. and 11:59 p.m., accounting for 175,885 (57.87%) of the overall total number of events for the 3-year period (Figure 22).

Bivariate correlation graphs were created to evaluate any statistical preferences between event rates, environmental conditions, and rock surface temperature measurements (Appendix E). However, no trending was observed. Both the overall event rate and number of data points used for calculation of the average number of events decreased as precipitation rates increased. No positive correlation between precipitation intensity and event rates was observed, therefore, raindrop impacts were not the cause for events (Eppes et al., 2016) (Figure 23). Events did not show a tendency to occur during instances of increased surface moisture in the morning or overnight hours; but rather, an increase in event occurrences correspondent to a decrease in surface moisture occurrences between the hours of 9:00 a.m. and 9:00 p.m. (Figures 24 and 25, and

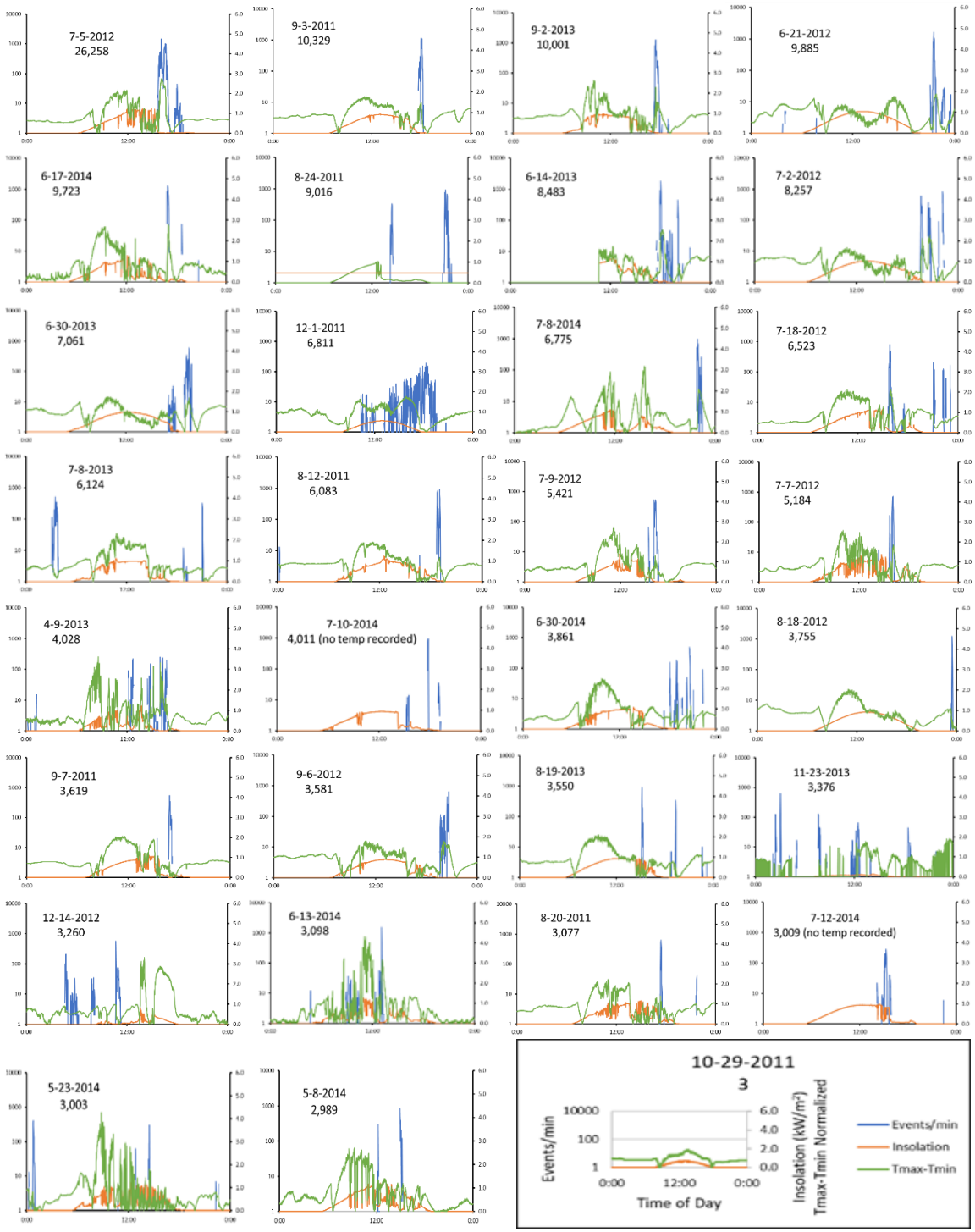

Figure 22. **Top 30 days with ≥ 50 events, entire period 2011-2014.** Daily time series (1440 min) of data for the top 30 days (of 3-year period) with 50 or more events for the day (in descending event totals order; 62.57% of all events occurred during these days. Date and total number of events (format: mm-dd-yyyy, total events -black/dark blue color) depicted on each graph. The left *y*-axis is a log-scale of event rate from 0 to 10000 (top tic) events/min. The right y-axis is both insolation data (kW/m^2, orange/gray color) and the difference between the temperature of hottest and coldest thermocouples in each minute, normalized by daily maximum difference (white/green color). The key depicts a typical relatively cloudless day.

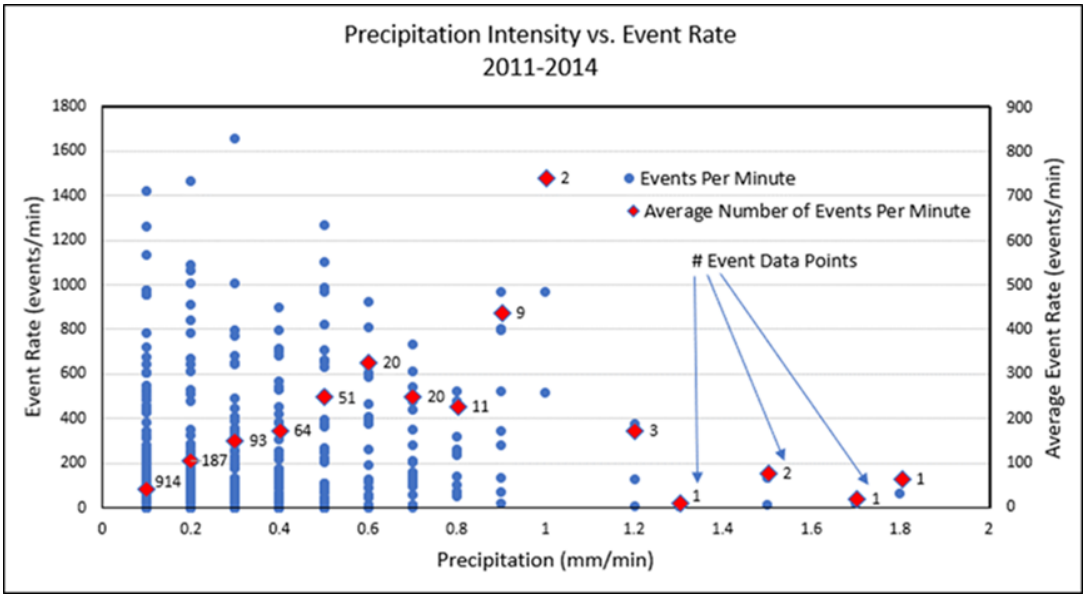

Figure 23. **Bivariate correlation of precipitation intensity vs. event rate for entire period of 2011-2014 (includes average event rate per minute, average number of events, and # event data points considered for average calculation).** Data is for only those minutes registering both tipping bucket capacity minimum of 0.1 mm and AE events (n =114,139). R^2 = 0.122; Pearson r = 0.35, Pearson p-value = 0.000. Based on these calculations, no trending is evident. A total of 114,139 events occurred during 1,379 minutes when rainfall was registered.

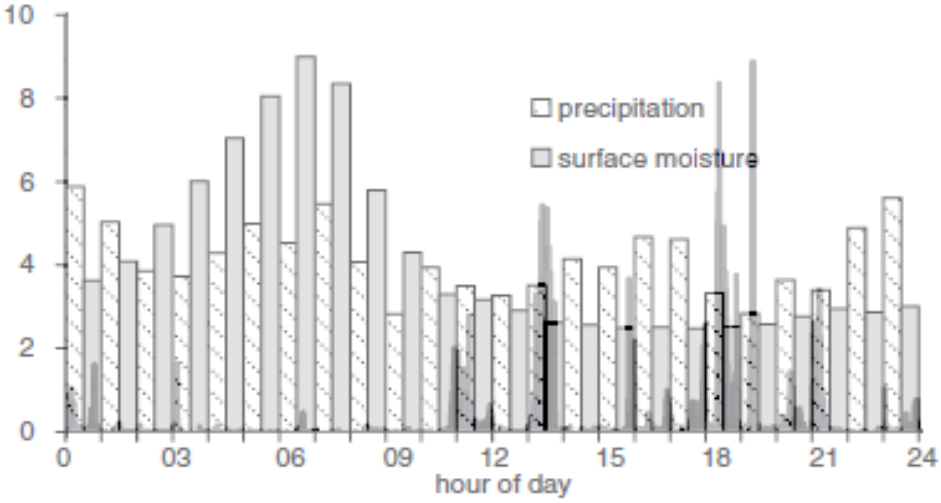

Figure 24. **Histogram for North Carolina boulder by hour of day of instances of precipitation and times when rock surface moisture indicators registered as "wet."** Instances for precipitation were measured on site and rock surface moisture measurement was by sensor attached to boulder. (As shown in Eppes et al., 2016).

Appendix F). Similar to the NC boulder, extreme thermocouple ranges for the NM boulder (0°C to -20°C) yielded fewer event occurrences than temperature ranges when cracking generally occurred (9:00 a.m. to 9:00 p.m.) (Figure 26, and Appendix G).

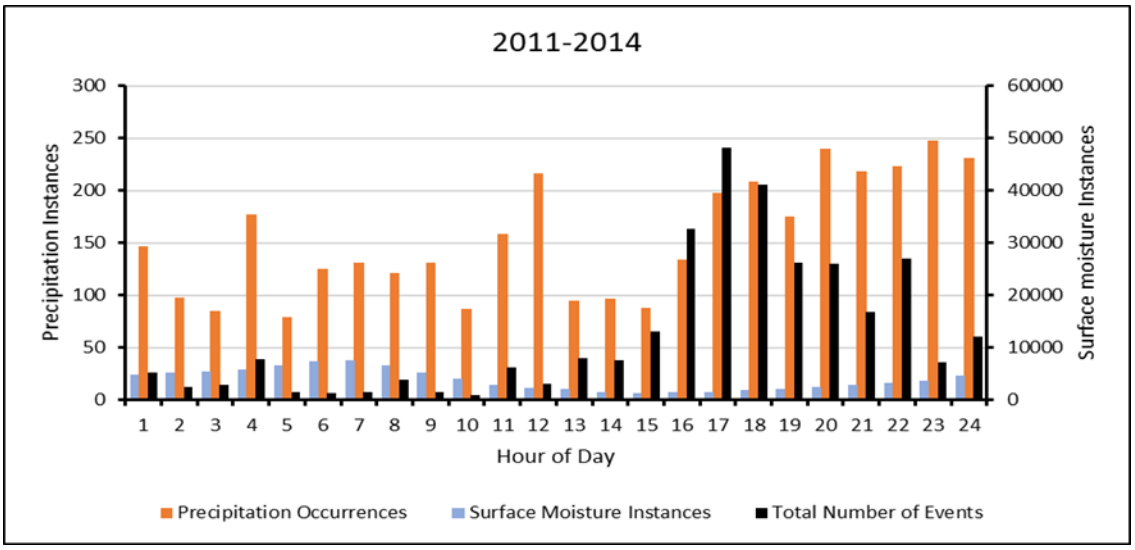

Figure 25. **2011-2014: Rainfall and surface moisture instances for NM boulder**. Total instances, by hour of day, when 1) precipitation was measured at the NM site, 2) rock surface moisture sensor registered as "wet", and 3) total number of events registered.

A more detailed review of the environmental conditions and rock surface data for the top 30 days with 50 or more event occurrences was done to determine if any trends were apparent. In 27 of the 30 days, the main event occurrences corresponded with a noticeable decrease or increase in the rock surface temperature (as indicated by the white/green lines within each graph in Figure 22). These occurrences accounted for 91.5% of the total 190,151 events registered for the overall top 30 days and directly corroborate the numerous arguments raised in support of the relationship between rapid temperature change and mechanical weathering (e.g., Eppes et al., 2016; Garbini, 2009; McKay et al., 2009).

In two out of the three years of deployment, the one-minute rock surface average temperature changes for the NM boulder exhibited a change rate nearly twice that of the

entire period (Table 3) for all events. When considering the 3-year deployment, the NM boulder experienced averages nearly the same for all event times (.23℃) as that of the

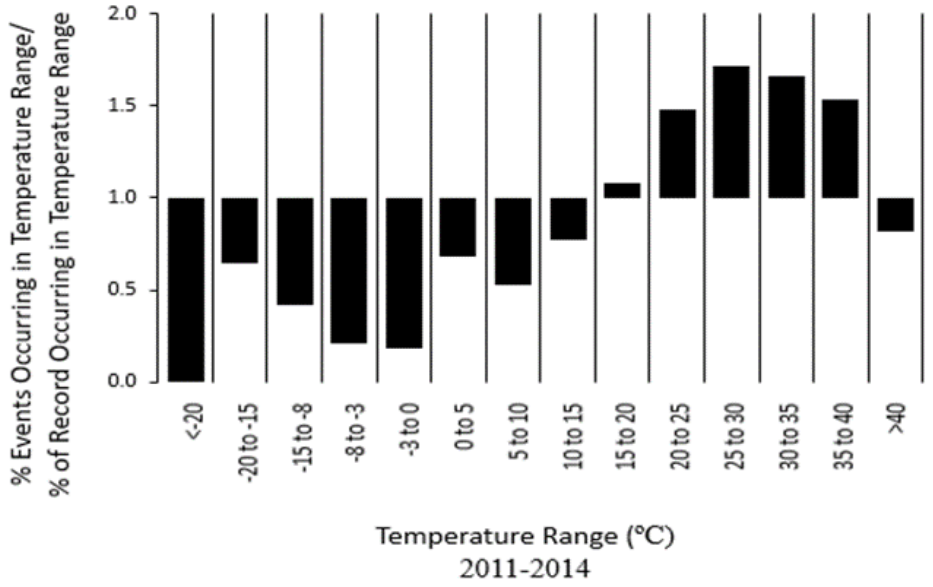

Figure 26. **Proportion of event occurrences when at least one thermocouple registered within a given temperature range.** Proportion of all events (n=291,470) when at least one thermocouple registered within a given temperature range divided by the proportion of minutes for the entire period (n=1,406,510) when at least one thermocouple registered within a given temperature range. Reading of 1.0 = random occurrences; >1=preferred occurrences; <1=less occurrences than expected.

entire 3-year deployment (.20℃). Observations made for the NM boulder were consistent with the NC boulder, registering rapid temperature changes during times outside of the noon hour or sunset where no events occurred (Figure 22: 4-9-2013, 9-2-2013, and 7-8-2014). However, there were four high-event-day clusters when events occurred, but not at the same time as a significant temperature change. The high-event clusters on 8-24-2011, 4-9-2013, 7-8-2013, 7-8-2014, and 7-10-2014 (Figure 22) were still coincident with rain/thunderstorm events occurring on site and/or noted at the KNOM weather station located at the Socorro Municipal Airport approximately 38.11 km from the site (Figure 27). An exception is noted for 7-10-2014 (26 events), which has both no temperature

readings (due to an AE server issue) and an indication of zero precipitation at the site (Appendix H).

In relation to the occurrence of events, the heating and cooling of the rock surface did not occur uniformly throughout the deployment period. Of the total 303,912 events registered over the course of the 3-year period, 88,246 occurred when all eight thermocouples were cooling, and 8,178 when all eight thermocouples were warming – accounting for 31.7% of the overall events total. Thus, the remaining 207,488 events, 68.3% of the overall total, occurred during individual minutes when thermocouples registered both cooling and warming temperatures for various points on the surface of the rock.

Figure 27. **Location of Socorro Municipal Airport weather station (KONM).** Google Maps location of KONM station indicated by red mark with no black dot 38.11 km distance slightly northeast of the Sevilleta National Wildlife Refuge location of the NM boulder. (Google maps and www.movable-type.co.uk/scripts/latlong.html)

Detailed Look at the Five Highest Event Days 2011-2014

Observations of events occurring in response to environmental changes (temperature changes, precipitation occurrences, humidity percentages, etc.) for the NC boulder surface temperature suggested a more intricate relationship between the registration of events and environmental changes (Eppes et al., 2016). Since the NM boulder research has yielded similar findings, a more detailed review is needed to further elaborate on those relationships and make a comparison. The 66,196 events, occurring during the five highest event days for the NM boulder, account for nearly 22% of the overall 303,912 occurring over the entire 3-year deployment period. Whereas, the NC boulder total of 22,364 events registered for the five highest event days is nearly 70% of the 32,585 events overall (Table 5). These five days are a prime example of the relationships between weather occurrences, temperature changes, time of day, and event occurrences.

Table 5. **Comparison of event totals for the North Carolina and New Mexico boulders.**

	North Carolina Boulder	New Mexico Boulder
Deployment Period (Months)	11	36
Number of Days With Event Data	99	713
Events Total (Entire Deployment)	32,585	303,912
Number of Days with Over 50 Events	34	231
Events Total (Days Over 50 Events)	31,790	299,902
% of Overall Events (Days Over 50 Events)	97.56%	98.68%
Events Total (Top 5 Events Days)	22,364	66,196
% of Overall Events (Top 5 Events Days)	68.63%	21.78%

On July 5, 2012, a total of 26,258 AE events were registered, accounting for nearly 9% of the total of events counted for the entire 3-year period. This event day is a representative example of the top 30 days experiencing high events. Specifically, the main event cluster occurred after midday, in the afternoon around 3:30 p.m., and was accompanied by rapid changes in surface temperatures and a sharp increase in relative humidity (Figure 28A). these occurrences were possibly brought on by the arrival of a rain event.

The primary event grouping totaled 25,938 events, accounted for nearly 99% of all the events for that day, and occurred over the course of 82 minutes from 3:31 p.m. through 4:52 p.m. (only one minute of this monitored period exhibited zero events) (Figure 28B). The average rock surface temperature had begun a steady decline at 3:12 p.m. - an occurrence likely related to the steady decrease in ambient air temperature from the thunderstorm reported by the Weather Underground Station (KONM) at the Socorro Municipal Airport, registered at 3:15 p.m. (Figure 28A). Insolation also began a steady decline as of 3:12 p.m., indicating the accumulation of clouds and a limitation of sun exposure (Figures 28C - arrow 1). Because of this, the top and west thermocouples did not exhibit as quick a decline in temperature as the remaining six (Figure 28B - circle 1). This temperature fluctuation and the coincident initiation, increase, and decrease of events was typical of most of the high-event days (Figure 22).

Similar to observations made regarding the NC boulder (Eppes et al., 2016), events began to occur shortly before moisture was detected on the rock surface. Here, moisture was detected on the rock surface ten minutes after the beginning of the event cluster (Figures 28B and C, grayish blue background). Precipitation was not enough to

register in the tipping bucket until 3:51 p.m., a full ten minutes after moisture detection and 20 minutes after events began (Figures 28B and C - arrow 2). However, the Socorro Municipal Airport weather station KONM (Figure 27), 38.11 kilometers away from the

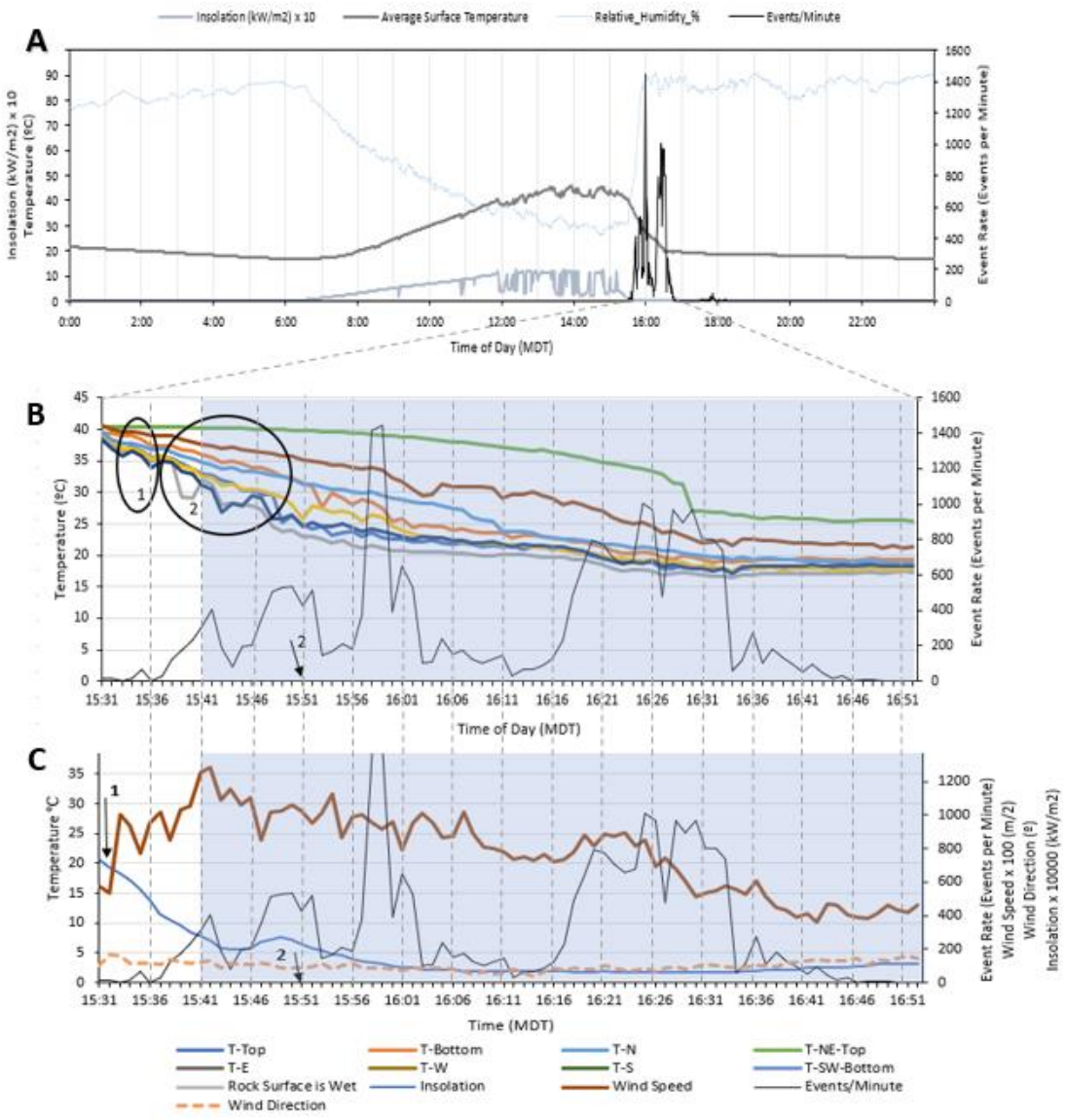

Figure 28. **Time series of various data for highest event day: July 5, 2012. (**A) Midnight to 11:59 p.m. indicating insolation, rock surface temperature, event rate and time of day. (B) Rock surface condition indicators for main event cluster of day from 3:31 p.m. to 4:52 p.m. (C) Same time frame as B indicating event rate, wind speed and direction, and insolation for time of day. Please see text for explanation of arrows, circles, and legend nomenclature. Times are noted and either MST – Mountain Standard Time or MDT – Mountain Daylight Time.

NM boulder, registered a short thunderstorm at 2:35 p.m. followed by a longer lasting rain event/thunderstorm from 3:15 p.m. to 7:15 p.m. which probably contributed to the elevated level of moisture in the air and on the surface of the boulder.

Because of the scattered clouds and overcast skies reported by the local station (KONM) beginning at 2:15 p.m., and the abrupt decline in registered insolation at 3:12 p.m., the average rock surface temperature declined. Over the course of the 19 minutes preceding the onset of events, erratic wind speeds declined by 2.5 meters per second and rock surface temperatures also declined - most notable was that the top thermocouple declining by 6.65ºC (Figure 28B - circle 1). At the onset of events at 3:31 p.m., relative humidity increased rapidly (Figure 28A). Initially, all but one thermocouple (NE-Top) showed a marked decrease (Figure 28B - circle 1), wind speed increased, insolation dropped to a negligible amount (Figure 28C), and event occurrences increased from 19 per minute to 537 per minute.

On September 3, 2011, 10,329 events occurred, making it the second highest high event day (Figure 29). It is another typical example of many of the NM high-event days given that the main event grouping occurred after midday and was accompanied by both an abrupt change (increasing or decreasing) in temperature and a rapid increase in relative humidity (Figure 29A). Events occurred from 5:38 p.m. to 6:17 p.m., began within two hours of sunset, when both ambient temperature and insolation were already declining, and were accompanied by mostly cloudy to overcast skies (noted by the Socorro Municipal Airport (KONM) as beginning at 5:15 p.m.). The event grouping of 10,324 events lasted 45 minutes, with only a single minute registering zero events. At 5:49 p.m. and 5:58 p.m., event peaks occurred when six thermocouples and then three

thermocouples, respectively, registered a temperature increase while the others indicated no change or a decrease. Comparable temperature difference occurrences were also noted at other times (Figure 29B - circles 1 and 2).

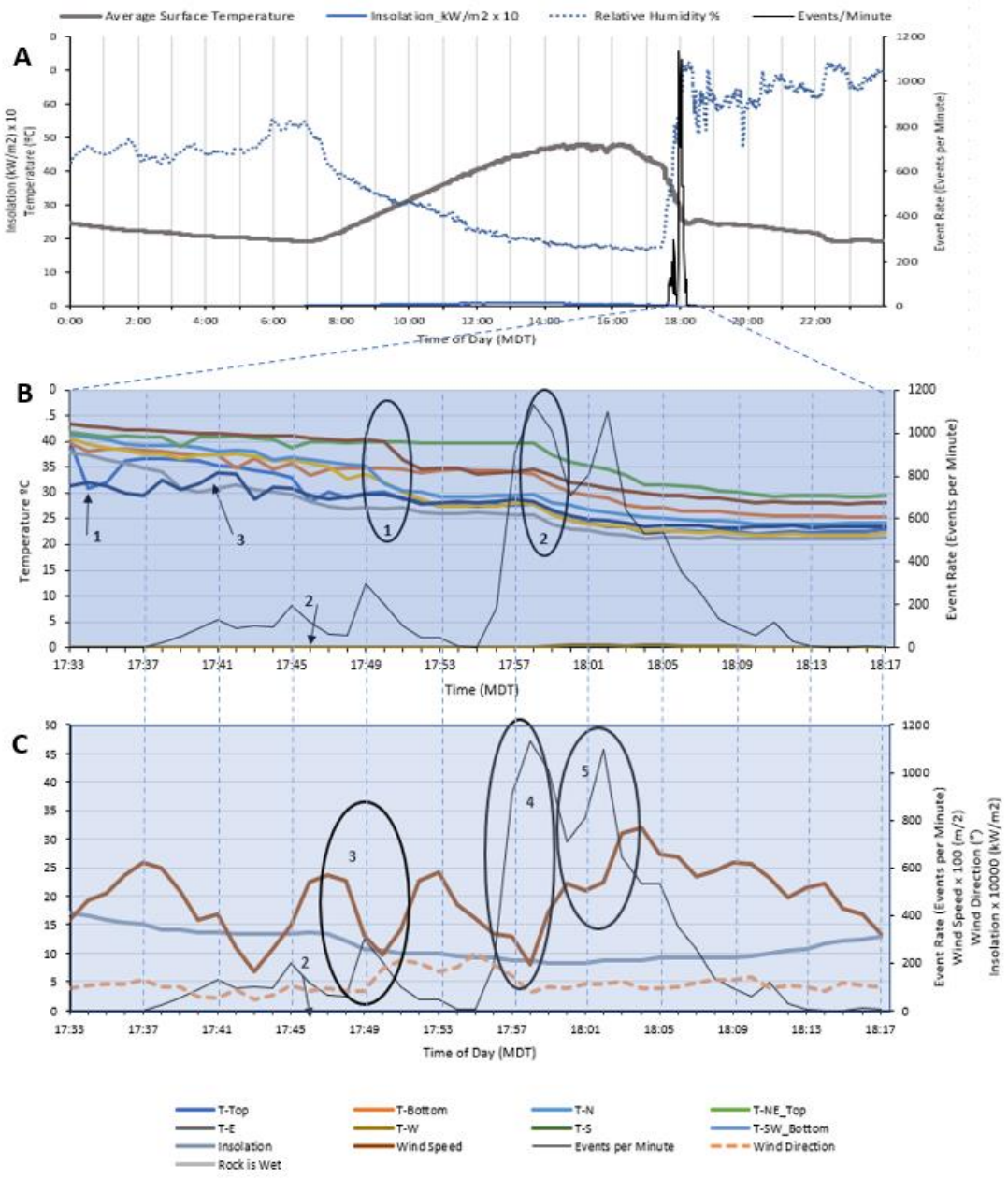

Figure 29. **Time series of various data for 2nd highest event day: September 3, 2011. (**A) Midnight to 11:59 p.m. indicating insolation, rock surface temperature, event rate and time of day. (B) Rock surface condition indicators for main event cluster of day from 5:33 p.m. to 6:17 p.m. (C) Same time frame as B indicating event rate, wind speed and direction, and insolation for time of day. Please see text for explanation of arrows, circles, and legend nomenclature. Times are noted and either MST – Mountain Standard Time or MDT – Mountain Daylight Time.

Unlike the event occurrence for July 5, 2012, the highest event day of the 3-year deployment, moisture was registered for this second highest day before events began. Here, moisture was detected at 5:33 p.m. with events beginning five minutes later (Figure 29B and C - grayish blue background). Rain was abundant enough to register in the tipping bucket 12 minutes later at 5:46 pm (Figure 29B and C - arrow 2), though the readings from the local weather station (KONM) indicated no precipitation until light rain was registered at 9:15 p.m. Reported increased cloudiness could have been a contributor to the high relative humidity and moisture on the surface of the boulder.

At 5:33 p.m., when moisture was detected, all eight thermocouples registered a significant temperature decrease with the northeast-top thermocouple immediately dropping 7.6ºC. In the five minutes that followed, rock surface temperature readings decreased by 1.9ºC to 9.4ºC, most notable of which was a 9.1ºC decrease registered by the top (T-Top) of the rock (Figure 29B - arrow 1). Other environmental changes occurring during this abrupt temperature change were an increase in wind speed by 4.0 meters per second, an increase in relative humidity by 8.2%, and a decrease in ambient temperature by 3ºC.

Events began at 5:38 p.m., followed by the continued increase in relative humidity (Figure 29A), decrease in ambient temperature, and decrease in rock surface temperature. At 5:41 p.m., the event rate had increased from 24 per minute to 127 per minute. This coincided with an increase in temperature for four out of eight thermocouples (north, east, west, and NE-Top) (Figure 29B - arrow 3). At 5:46 p.m., when precipitation is registered in the tipping bucket (Figures 29B and C - arrow 2), event rate decreases as wind speed increases, followed by an increase in event rate as

wind speed declines. This pattern is repeated numerous times over the course of the event cluster (Figure 29C - circles 3, 4, and 5).

The next three highest event days of the deployment period, September 2, 2013, June 21, 2012, and June 17, 2014 are further examples illustrating the tendency of event clusters to occur in response to changes in surface temperatures, either increasing or

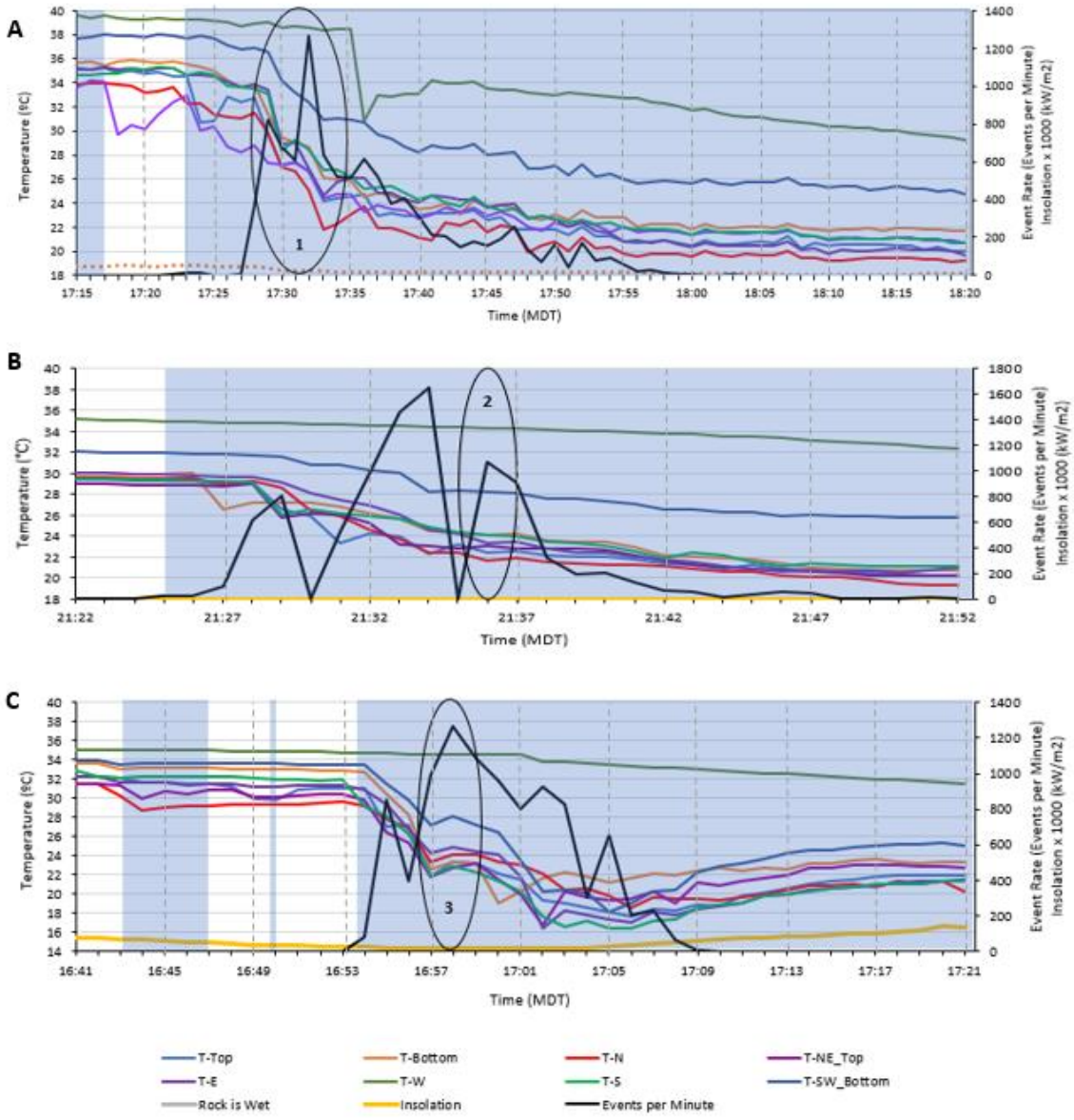

Figure 30. **Time series of various data for main event clusters of (A) September 2, 2013, (B) June 21, 2012, and (C) June 17, 2014.** Please see text for explanation of circles and legend nomenclature. Times are noted and either MST – Mountain Standard Time or MDT – Mountain Daylight Time.

decreasing, no matter what temperatures other surface areas of the rock were experiencing. These event peaks occurred (Figure 30) when surface temperature changes, whether heating or cooling, were simultaneously speeding up (Figure 30A - circle 1), slowing down (Figure 30B - circle 2), or reversing direction (Figure 30C - circle 3). Similar to occurrences on other high-event days, the onset of each of these three event clusters corresponds to a weather-related event, either reported by the local weather station at the Socorro Municipal Airport (KONM) or indicated by the registration of precipitation in the onsite tipping bucket.

Rock Surface Strain

Surface strain was monitored as a proxy for deformation of the boulders' surface because strain is directly related to ambient temperature. As the boulders' temperatures increase, the related strain also increases, which indicates expansion of the boulder. Inversely, strain decreases as the temperature decreases, driving contraction. The expanding and contracting of the rock surface was registered by a combination of the eight strain gages accompanied by temperatures captured by the adjacent thermocouples. Strain and temperature data registered for the NM boulder follows a pattern similar to that of the NC boulder (Figure 31A) and indicates a strong relationship with diurnal

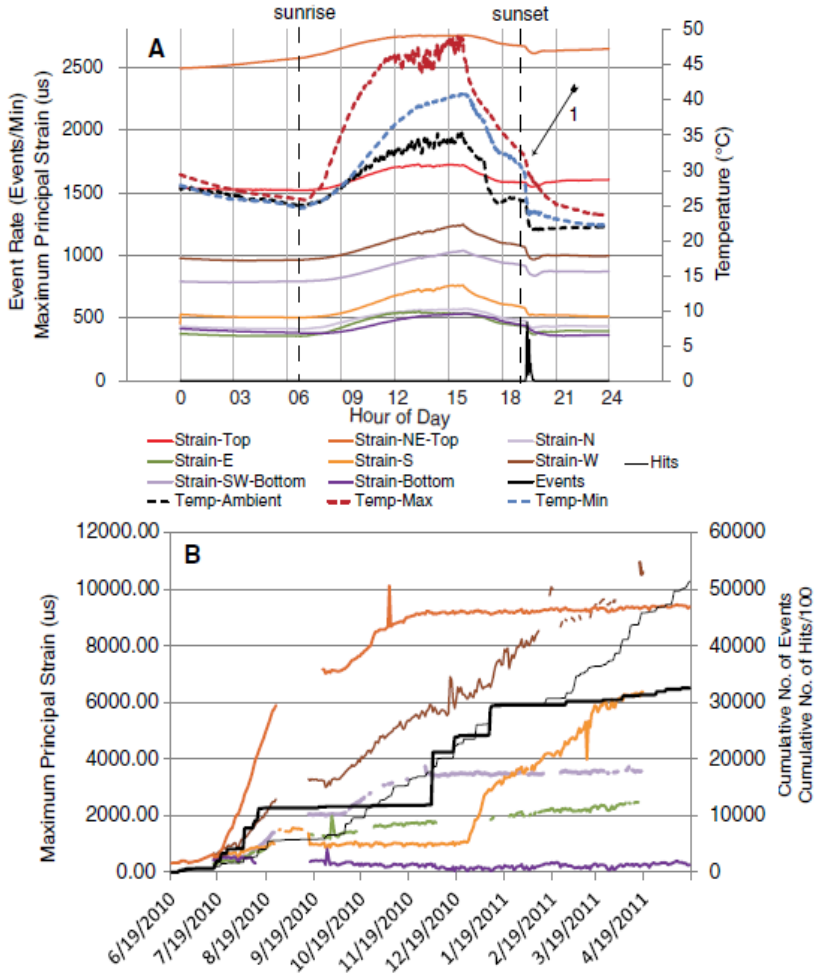

Figure 31. **Maximum principal strain calculated for surface strain gauges plotted with events for August 5, 2010.** (A) Calculated strain plotted with ambient remperature, maximum and minimum temperature and events per minute. (B) Average daily maximum principal strain plotted with cumulative AE events (bold black line) and cumulative AE hits (thin black line) for entire deployment preiod (Eppes et al., 2016, Warren et al., 2013).

temperature changes generally occurring at sunrise, mid-day, and sunset (Eppes et al., 2016). The dates of August 24, 2011, and related deployment period of August 1, 2011, through July 31, 2012, and September 6, 2012, and related deployment period of August 1, 2012, through July 31, 2012, are provided for further reference (Figures 32 and 33).

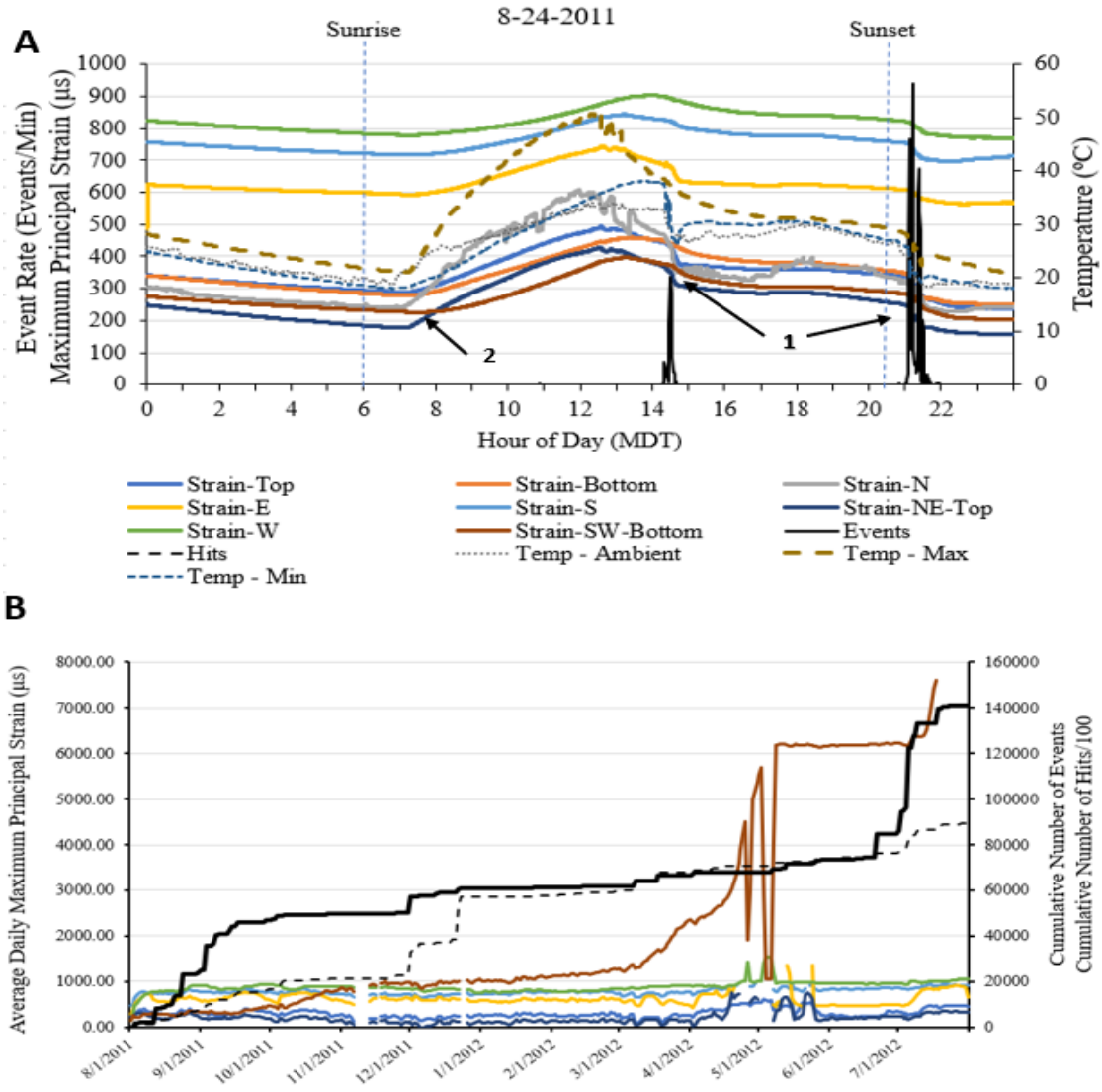

Figure 32. **Maximum principal calculated strain, temperature, and events August 24, 2011. (**A) August 24, 2011; Hourly totals for calculated maximum principal strain, event rates per minute, with maximum, minimum, and ambient temperatures registered by sensors on the rock surface. (B) 2011-2012: Average daily maximum principal strain data and cumulative Acoustic Emission (AE) event totals (thick black line) and hits (dashed black line).

Insolation data was not available for August 24, 2011, but the strain gage and temperature data (Figures 32A and 33A) follow similar patterns exhibited by the insolation data registered in many of the other high-event days from the NM boulder (Figure 22) and the NC boulder (Figure 31).

Event clusters often occurred in conjunction with a decrease or increase in strain level, which also tended to occur in direct relation to abrupt changes in temperature (Arrow 1 - Figures 31A, 32A and 33A). However, changes in strain corresponding with changes in temperature did not always produce event occurrences (Arrow 2 – Figures

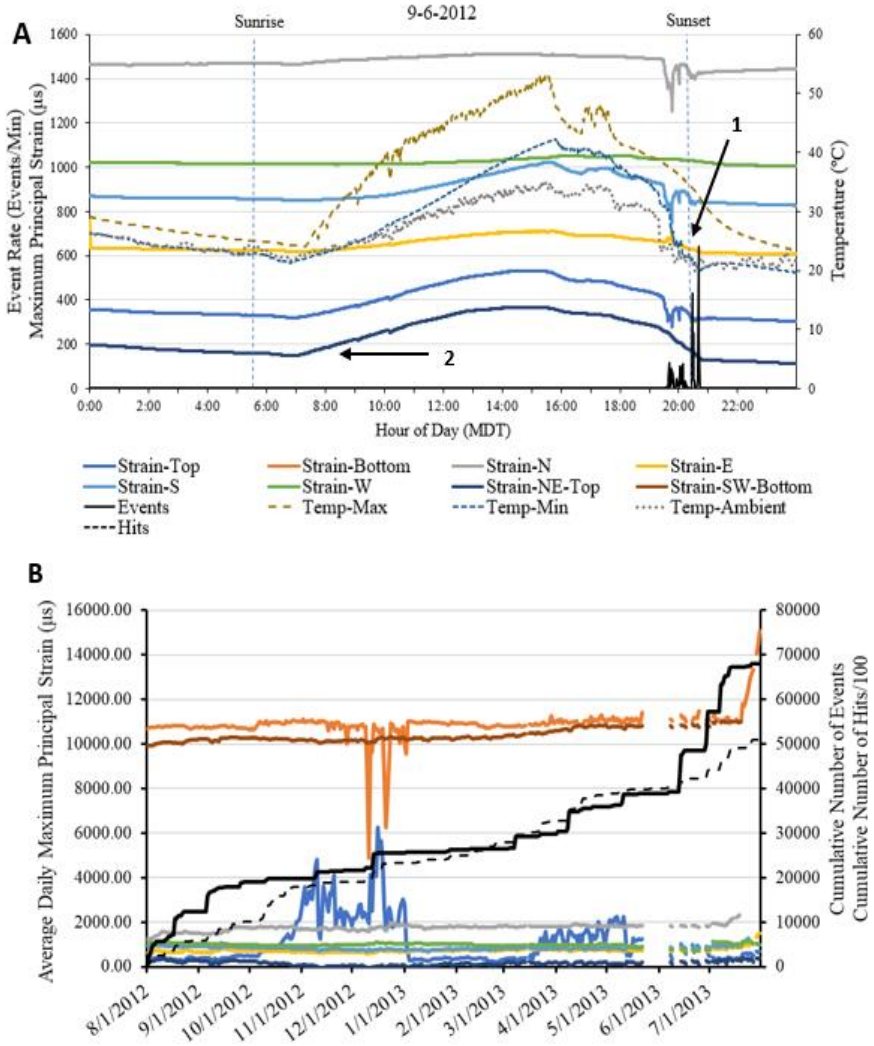

Figure 33. **Maximum principal calculated strain, temperature, and events September 6, 2012.** (A) September 6, 2012; Hourly totals for calculated maximum principal strain, event rates per minute, with maximum, minimum, and ambient temperatures registered by sensors on the rock surface. (B) 2012-2013: Average daily maximum principal strain data and cumulative Acoustic Emission (AE) event totals (thick black line) and hits (dashed black line).

32A and 33A). Both the detection and measurement of strain data was even more ambiguous due to sensor inaccuracies and complicated strain calculations. Thus, the relationship between rock deformation and temperature change is intricate, and the accompanying events may not always be produced or even detectable.

During the deployment year of 2011-2012, a positive average daily maximum principal strain is registered for nearly the entire period for the Southwest-Bottom (#8) strain gage located under the specimen. Due to numerous sensor inaccuracies, data for strain gages Bottom (#S2) and North (#S3) were removed from consideration during this period. Each of the remaining strain gages exhibited only slight periods of increased activity and far less accumulation of strain, if any (Figure 32B). Although, the 2012-2013 year has a slight increase in strain accumulation indicated for the Bottom (#2) and Top (#1) sensors with all strain sensor readings plotted (Figure 33B).

The data considered here were gathered from an extended (3-year) deployment of a "used" sensor equipment setup, surpassing even the previous "long-term" deployment of eleven months for the NC boulder. The numerous temperature, strain, moisture, and acoustic emission sensors were exposed to a range of both continuous and extreme weather-related conditions of rain, snow, freezing temperatures, intense heat, etc. As such, the initial establishment of the instrumentation plan, and subsequent deployments of the same equipment, included warnings as to the inherent need for consideration and review regarding the interpretation of resultant data (e.g., Eppes et al., 2016; Warren et al., 2013). This warning is still relevant due to the increased deployment period and additional stress incurred by aging equipment, gauges, and connections.

Cracking Locations

While a generalized volume of event data was utilized for time and weather focused comparisons, more localized event information was needed to assist in improving the visualization of rock damage patterns. The AEwin software provided location (x-, y-, and z-) coordinates of event occurrences using the NM boulder's surface measurements along with a 3-dimensional grid pattern (Figure 8). Since the x-, y-, and z-location data has an accuracy error of +/- 25 millimeters and nearly 50% of those total events can fall outside of this parameter (Warren et al., 2013), five centimeters were added to the exterior measurements (31.2 cm long x 25.9 cm wide x 21.0 cm high) of the boulder when considering the local event coordinates (Figure 8). Similar to findings from the NC boulder (e.g., Eppes et al., 2016; Garbini, 2009), the majority of the registered AE events occurred in the northern hemisphere (Table 6). Calibrations of the equipment with the boulder indicate that the occurrences were not related to the rock surface location of the strain gages (Warren et al., 2013). Strain gages placed in the northern hemisphere of the rock exhibited some intense activity with some periods of sustained growth during the 2011-2012, and 2012-2013 monitoring period.

Table 6. **Local event totals for x-, y-, and z-coordinates.** Total number of events by hemisphere and direction given the 3-dimensional coordinates provided by the AEwin software program.

Northern Hemisphere				Southern Hemisphere			
West	North	South	East	West	North	South	East
13447	19221	20709	53642	5930	27168	10610	35036
Total Events		185763			West	19377	10%
					North	46389	25%
Northern Hemisphere		107019	58%		South	31319	17%
Southern Hemisphere		78744	42%		East	88678	48%

In reviewing the locations of the 185,763 events falling within the established limits, a calculation from the center of the boulder outward again yielded results similar to the NC boulder: that events tend to fall near the surface of the boulder or within 6-10 centimeters below the surface. There was no preference for a specific time of day in the occurrences of interior versus exterior events (Figure 34). Both the NC and NM boulders show a preference for events occurring in the northern and eastern portions of the rock.

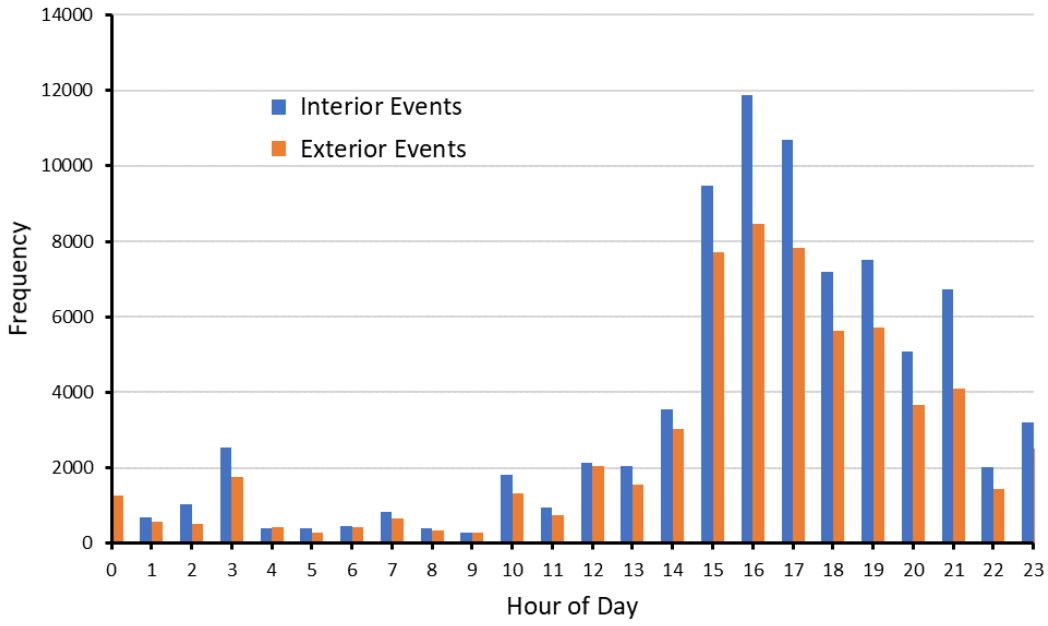

Figure 34. **Timing of number of events versus hour of day.** Interior events are within 6-10 cm from surface of boulder (Total 82,737); Exterior events fall between 6 cm from surface to +5 cm outside of surface of boulder (62,378).

It was decided that rain instances of ≥0.3 millimeters per minute would be viewed as intense rainfall due to the 0.1-millimeter minimum amount of rainfall required to trigger the tipping bucket of the on-site weather station. During the overall 3-year deployment period, intense rainfall of ≥0.3 millimeters per minute occurred during 360 individual minutes on 47 different days (Figure 35). A total of 57,799 events occurred during 278 minutes coincident with intense precipitation; 50,501 of those events occurred

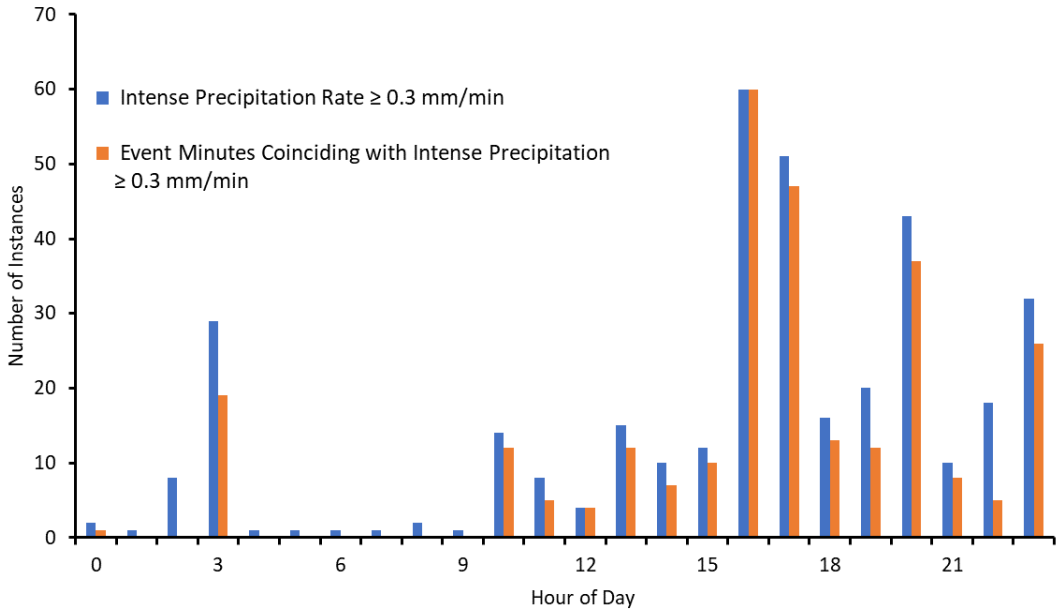

Figure 35. **Instances of intense rainfall of ≥0.3 mm/mm vs. coincident event occurrences.** Instances of events coincident with instances of intense rainfall of ≥0.3 mm/mm by hour of day.

during 161 minutes on 19 days. The intense precipitation related events of those 19 days, included in the "Top 30 Over 50 Events" days previously mentioned in this research, account for 35% of the events occurring for those days. As an example, on September 2, 2013, the third highest (10,001) events day of the 3-year deployment, 8,494 events

occurred during 24 minutes of intense rainfall. The rock had already registered 1,239 events in the 9 minutes preceding the abrupt trigger of rain in the tipping bucket of 0.3 millimeters at 5:30 p.m. This event occurrence was accompanied by a drop in the average rock surface temperature of 8.8℃, a fluctuating wind speed of +/-2 meters per second, and a decrease in ambient temperature of 3℃. As the instance of rain in the tipping bucket decreased in intensity so did the number of events.

On July 5, 2013, the highest (26,258) event day of the 3-year deployment, 12,723 events occurred during 20 minutes of intense rainfall. A total of 8,887 events had already occurred prior to the registration of intense, though sporadic, rain. This event occurrence was accompanied by a drop in the average rock surface temperature of 9.8℃, a wind speed fluctuation and drop of 6.4 meters per second, and a decrease in the ambient temperature of 2.4℃. Again, as the rain amount decreased, so did the events.

Of the 47 individual days of intense rainfall with coincident event occurrences, only eleven had occurrences before noon (Figure 35). Of those eleven days, eight days registered a total of 23 events and occurred between midnight and 11:00 a.m. Three days, with occurrences from midnight to 11:00 a.m., registered a total of 3.399 events, with one day registering 2,465 events over 16 continuous minutes from 3:31 a.m. to 3:48 a.m. With respect to the lack of events during intense morning rainfall and the frequent occurrence of events during intense evening rainfall, the data from the NM boulder concur with the findings and suggestions made regarding the NC boulder (Eppes et al., 2016).

DISCUSSION AND CONCLUSIONS

To facilitate a comparison of solar-induced rock weathering of boulders in a temperate climate and an arid climate, a virtually identical experiment was devised based on the research by Eppes (2016). A similar boulder (hereafter NM boulder), acquired from the same location and composed of the same Santa Ana Granite, was deployed in a semi-arid desert location in New Mexico. The data from this boulder was compared to that of the previously published data on the North Carolina boulder (hereafter NC boulder).

Overall there were striking similarities between the two datasets, but with some differences. The number of measured (AE) events for both boulders were sizeable, but different: an average of 101,304 events per year for the NM boulder and 32,585 for the NC boulder. This difference appears to persist throughout the dataset. For example, the number of days with ≥50 events were considerably higher for the NM boulder at an average of 77 per year (total 231) compared with the 34 for the NC boulder (Figure 22, Appendix D). The timing of AE events was also somewhat different between the two locations: around 1:00 p.m. and 6:00 p.m. for the NC boulder (~noon and sunset, respectively) while occurring mainly around sunset only (6:30 pm) for the NM boulder.

Despite the overall differences between the timing and numbers of events in the two datasets - as well as the differences in overall climate between the two sites, such as an average of 179.3 millimeters of rainfall per year, for a total of 538 millimeters over the course of the entire 3-year deployment period for the NM boulder compared with 504.8 millimeters of rainfall in the 11-month deployment period for the NC boulder - however, there were remarkable similarities in the environmental conditions that were associated

with high-event days. Overall, for both rocks, events were: 1) clustered during the late-afternoon and early evening hours around sunset (± 3 hours of sunset); 2) coincident with periods of intense rainfall of ≥0.3 mm per minute; and/or 3) coincident with abrupt increases or decreases in rock surface temperature.

Cracking tended to occur after the detection of moisture, but before the onset of rainfall sufficient enough to trigger the tipping bucket (Figures 27-29). As with the NC boulder, no trends were observed in the timing or frequency of cracking in response to wind speed or precipitation. However, all but three of the 30 highest event days for the NM boulder occurred in conjunction with rain, with one registering a trace of snow; whereas, the second highest event day for the NC boulder was a day of below-freezing temperatures and snow (Appendix H).

Another example of how the two datasets were similar was concerning moisture. Moisture is an important factor in the weathering of rock (e.g., Nara et al., 2012; Sass, 2005). The NC boulder registered "wet" status more often between the hours of 3:00 a.m. and 10:00 a.m. and registered the fewest events for the deployment period. The NM boulder registered the highest surface moisture from midnight to 9:00 a.m. and experienced the fewest total events (28,964) recorded over the 3-year deployment period, just 9.5% of the overall total. Just like the NC boulder, the NM boulder registered no events during over 99% of the times when rock surface moisture was "wet" and AE hits were registered. While the NC boulder experienced no events for 45% of the registered "wet" days, the NM boulder had no events for 36% of the "wet" days. Since events do not primarily occur during "wet" instances, then it is possible that moisture by itself is not a principal factor in whether AE hits or events will occur, however, clearly moisture

plays a role in affecting the thermal state of the rock and does lead to events in that sense.

The ultimate purpose of this experiment was the field placement in NM of a nearly identical boulder to the one in NC, outfitted with the same instrumentation, to collect data for comparison of the two climate zones. The NM data supports and reinforces the findings in NC that diurnal insolation contributes to both the beginning and continuation of physical rock weathering and the occurrence of events (cracking) whether alone or combined with temperature, moisture, and thermal related strain (Figures 24 and 34, and Appendix H), because cracking is associated with repeated thermal stresses created by rapidly changing weather conditions that cause abrupt fluctuations in diurnal insolation at specific times of the day. Thus, it might be predicted that cracking – and mechanical weathering rates – would increase if the occurrence of intense, late-afternoon weather instances (storms) were to become more frequent. Overall, given the similarities of results for both locations, this study provides evidence that the influence of the sun is possibly universal, characteristic of other global locations, climates, and rock types.

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APPENDIX A: DOWNLOAD OF SENSOR DATA

Step 1. Downloading AE/CS Data

Create a new download folder in the "Raw Data" directory using the following naming convention: C:\ Eppes-Warren Research Bambam\Field Data\Raw Data\"MM_DD_YY download. Once inside the folder, create two additional folders: 1st folder named "AE Raw Data", 2nd folder named "CS Raw Data". Open windows of the FileZilla program. This permits the simultaneous downloads of both the AE and CS raw data.

Step 2. Merging Data

After signing on to the server site for the respective boulder location and downloading the .DTA files for AE data and the .dat files for CS data, the AE data would then require that the coded information be re-formatted to a readable form, whereas the CS data was simply imported into a Microsoft Excel spreadsheet. The AE data, which could involve numerous files each day, was merged into one file before being imported into the AEwin software. A "merged" file is an exact copy of the incremental files that are connected end to end into a single very large continuous file.

Step 3. Producing a Hits File

This process involves input files and output files. The process uses the merged file in AEwin to generate an ASCII output file. Then that ASCII output file is input into a program written in Dev C++. Finally, the program in Dev C++ takes the ASCII output file from AEwin and makes it into a file that Excel can read.

Step 4. Producing an Events File

A second instance of Dev C++ is opened, the general process is followed again, except the file, "AE Event Analysis," is opened, then the AEwin program is opened. After the Line Display Setup is selected, uncheck the box titled "Enable Hit Data Display," then make sure the "Enable Event Display" box is the only one checked in the "Select Messages to Display" Section. Instead of taking the data and converting it into an Excel file, the data selected is copied and pasted into the Dev C++ file, dates of the file origination is verified/corrected, then the program is compiled and run. This is automatically saved to an AE Event Time Stamp Output File.txt which is then converted to an Excel file. The line items for the day are then copied and placed into the spreadsheet file that the CS, and AE Hits and Events information have been copied to for further processing.

Step 5. Inputting Zeros

There are times when no information/data is registered by the data loggers for AE Hits or Events. This is since when a new file is created, time-stamps are logged but no data is recorded until the first hit or event occurs. Thus, times between file start-up and that first hit record null when they should record "0". Upon realizing this, when viewing the Excel file line items for AE Hits and Events, highlight the line items, select the lines, and then replace the empty line items with "0". Now there are zeros where there were only blank spaces.

Step 6. Resetting Timing to Ensure Comparable Data

There are two clocks running that need to be synchronized. As time passes the clocks get farther out of sync, making the data incomparable and much less meaningful. After opening the Loggernet Program, PuTTy-shortcut, and Timing spreadsheet, connect to the remote access program link. Within the CR1000_Remote Station, "connect" the program and note the time in the location "Station Date/Time". Sign in to the PuTTy shortcut, manually enter the Sevilleta server username and password, and then also the telnet IP address. This is signing into the onsite computer via the server used at the University of New Mexico. Since the University of New Mexico took over the daily download process, access to the system cannot be handled unless this process is followed. Once the clocks are synchronized, the discrepancy (date of reset, time of reset, time elapsed since last reset, and amount of time difference) is registered into an Excel spreadsheet. These entries will be used to correct the data prior to processing of the overall final spreadsheet. In general, the average difference between the two clocks was 78.7375 seconds for the NM boulder data; but sometimes was as high as 1063 seconds.

Step 7. Backup of All Collected Data

To safeguard the raw data and the lengthy process just completed to convert the data to a readable format, it is necessary to backup that data to an external hard drive. Using the Western Digital My Passport, copy the folders that were just created from the school provided laptop to the Passport: Analysis Data, Merged Data, Pre-Analysis Files, and Raw Data.

Step 8. Update of Power Graph File and "What to Delete Final BamBam" File

It is necessary to review the battery power to verify that it remains not only in a positive level, but also at a consistent level. Any discrepancies in the power level were noted immediately and reported to Dr. Eppes for correction. Also, after reviewing the graphs created from the input of the CS and AE Hits and Events Data into the Excel Spreadsheet, enter the sections of the graph lines that are not smooth, missing, and not registering at all (Fig. 9). Any information received regarding issues experienced at the site that may interfere or negatively influence the collection or registration of data should also be registered here. For example, it was noted if people were on site because their footsteps were knocking boots may have produced AE. This file will be referenced again prior to the data being evaluated to remove the "erroneous" items from the dataset.

APPENDIX B: TEMPERATURE CORRECTIONS IN HEIDISQL

A) MySQL coding entered in HeidiSQL to correct the temperature readings due to reversed high and low wires on each of 8 surface temperature thermocouples 1-6, 1', and 6'. Adjust using formula from August 1, 2011 through January 2, 2013. (Colors of text is from HeidiSQL program). Formula: New Temp = (- (Surf Temp – Reference Temp)) + Reference Temp

```
update bambamschema. zanalysis_copy_copy_2
set `Surf_Temp_1_ºF`= ((-(`Surf_Temp_1_ºF`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,421  Found rows: 0  Warnings: 0  Duration for 1 query: 00:02:22 */

update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_2_ºF`= ((-(`Surf_Temp_2_ºF`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,858  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:19 */

update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_3_ºF`= ((-(`Surf_Temp_3_ºF`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,858  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:17 */

update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_4_ºF`= ((-(`Surf_Temp_4_ºF`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,858  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:13 */

update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_5_ºF`= ((-(`Surf_Temp_5_ºF`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,850  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:13 */

update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_6_°F`= ((-(`Surf_Temp_6_°F`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,810  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:14 */
```

```
update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_1'_°F`= ((-(`Surf_Temp_1'_°F`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,857  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:15 */

update bambamschema.zanalysis_copy_copy_2
set `Surf_Temp_6'_°F`= ((-(`Surf_Temp_6'_°F`-
Reference_Temp_Usedto_Calculate_Surface_Temps)) +
Reference_Temp_Usedto_Calculate_Surface_Temps)
where Time_Stamp between '2011-08-01 00:00:00' and '2013-01-03 00:00:00';
/* Affected rows: 734,842  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:13 */
```

B) MySQL coding in HeidiSQL to change °F to °C: [°C] = ([°F] - 32) × 5/9

```
update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_1_ºF`= ((`Surf_Temp_1_ºF`-32) * .5556);
/* Affected rows: 1,544,016  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:35
*/

update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_2_ºF`= ((`Surf_Temp_2_ºF`-32) * .5556);
/* Affected rows: 1,545,544  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:29
*/

update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_3_ºF`= ((`Surf_Temp_3_ºF`-32) * .5556);
/* Affected rows: 1,545,547  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:26
*/

update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_4_ºF`= ((`Surf_Temp_4_ºF`-32) * .5556);
/* Affected rows: 1,545,546  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:26
*/

update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_5_ºF`= ((`Surf_Temp_5_ºF`-32) * .5556);
/* Affected rows: 1,545,544  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:21
*/

update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_6_°F`= ((`Surf_Temp_6_°F`-32) * .5556);
/* Affected rows: 1,545,538  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:27
*/

update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_1'_°F`= ((`Surf_Temp_1'_°F`-32) * .5556);
/* Affected rows: 1,420,919  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:19
*/
```

```
update bambamschema.zanalysis_copy_copy_3
set `Surf_Temp_6'_°F`= ((`Surf_Temp_6'_°F`-32) * .5556);
/* Affected rows: 1,545,544  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:26
*/
```

Copied file to zanalysis_copy_copy_4 to continue work….

```
update bambamschema.zanalysis_copy_copy_4
set Reference_Temp_Usedto_Calculate_Surface_Temps=
((Reference_Temp_Usedto_Calculate_Surface_Temps-32) * .5556);

update bambamschema.zanalysis_copy_copy_4
set `Ambient_Temp_°F`= ((`Ambient_Temp_°F`-32) * .5556);
/* Affected rows: 1,557,848  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:27
*/

update bambamschema.zanalysis_copy_copy_4
set `T9_Surface_Soil_Temperature_deg.F_`= ((`T9_Surface_Soil_Temperature_deg.F_`-32) *
.5556);
/* Affected rows: 1,544,822  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:26
*/

update bambamschema.zanalysis_copy_copy_4
set `Thermocouples_1-8_MIN_Surf_Temp_°F`= ((`Thermocouples_1-8_MIN_Surf_Temp_°F`-
32) * .5556);
/* Affected rows: 1,561,736  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:36
*/

update bambamschema.zanalysis_copy_copy_4
set `Thermocouples_1-8_MAX_Surf_Temp_°F`= ((`Thermocouples_1-
8_MAX_Surf_Temp_°F`-32) * .5556);
/* Affected rows: 1,561,736  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:23
*/

update bambamschema.zanalysis_copy_copy_4
set `Thermocouples_1-8_AVG_Surf_Temp_°F`= ((`Thermocouples_1-8_AVG_Surf_Temp_°F`-
32) * .5556);
/* Affected rows: 1,542,383  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:26
*/

update bambamschema.zanalysis_copy_copy_4
set `Thermocouples_1-8_MAX_-_MIN_Surf_Temp_°F`= ((`Thermocouples_1-8_MAX_-
_MIN_Surf_Temp_°F`-32) * .5556);
/* Affected rows: 1,561,736  Found rows: 0  Warnings: 65,535  Duration for 1 query: 00:02:30
*/
```

APPENDIX C: HEIDISQL CODING TO REMOVE "WHAT TO DELETE" ITEMS

Verified 1,656,000 rows of data prior to adjusting the file for the "What to Delete" items.

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-08-01 11:30:00' and '2011-08-01 16:00:00';
/* Affected rows: 271  Found rows: 0  Warnings: 0  Duration for 1 query: 0.093 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-08-02 00:00:00' and '2011-08-02 00:04:00';
/* Affected rows: 5  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-05 15:00:00' and '2011-08-05 19:00:00';
/* Affected rows: 241  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2011-08-07 13:44:00' and '2011-08-07 13:44:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-08-08 04:20:00' and '2011-08-08 06:30:00';
/* Affected rows: 131  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-08-13 03:30:00' and '2011-08-13 07:00:00';
/* Affected rows: 211  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-08-13 10:15:00' and '2011-08-13 18:00:00';
/* Affected rows: 466  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
```

```
where Time_Stamp between '2011-08-16 13:45:00' and '2011-08-16 15:15:00';
/* Affected rows: 91  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-08-21 19:00:00' and '2011-08-21 21:15:00';
/* Affected rows: 136  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-22 12:45:00' and '2011-08-22 19:30:00';
/* Affected rows: 406  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-23 13:00:00' and '2011-08-23 15:30:00';

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-23 17:30:00' and '2011-08-23 20:30:00';
/* Affected rows: 181  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-24 00:00:00' and '2011-08-24 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.156 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-25 13:00:00' and '2011-08-25 17:00:00';
/* Affected rows: 241  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-26 00:00:00' and '2011-08-26 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.204 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-27 00:00:00' and '2011-08-27 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-28 00:00:00' and '2011-08-28 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.172 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-29 05:00:00' and '2011-08-29 06:30:00';
/* Affected rows: 91  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-29 15:15:00' and '2011-08-29 23:59:00';
/* Affected rows: 525  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-08-30 00:00:00' and '2011-08-30 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-08-31 05:00:00' and '2011-08-31 05:15:00';
/* Affected rows: 9  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-08-31 18:15:00' and '2011-08-31 23:59:00';
/* Affected rows: 29  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-01 00:00:00' and '2011-09-01 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.172 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-01 00:00:00' and '2011-09-01 10:30:00';
/* Affected rows: 15  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
```

```
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-01 21:15:00' and '2011-09-01 23:59:00';
/* Affected rows: 32  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-02 00:00:00' and '2011-09-02 03:15:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-03 00:00:00' and '2011-09-03 23:59:00';
/* Affected rows: 209  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-04 00:00:00' and '2011-09-04 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-04 03:45:00' and '2011-09-04 04:30:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-05 00:00:00' and '2011-09-05 23:59:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-05 05:30:00' and '2011-09-05 06:30:00';
/* Affected rows: 61  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-06 00:00:00' and '2011-09-11 23:59:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.234 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-07 05:15:00' and '2011-09-07 05:30:00';
```

```
/* Affected rows: 16  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-09 00:00:00' and '2011-09-09 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-10 00:00:00' and '2011-09-10 01:30:00';
/* Affected rows: 91  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-12 03:11:00' and '2011-09-12 03:11:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-12 00:00:00' and '2011-09-12 11:15:00';
/* Affected rows: 11  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-13 00:00:00' and '2011-09-13 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-14 09:30:00' and '2011-09-14 17:45:00';
/* Affected rows: 496  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-14 00:00:00' and '2011-09-17 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.156 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-16 03:28:00' and '2011-09-16 03:28:00';
```

```
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-17 04:51:00' and '2011-09-17 04:51:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-17 04:51:00' and '2011-09-17 04:51:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-18 15:00:00' and '2011-09-18 23:59:00';
/* Affected rows: 540  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-18 00:00:00' and '2011-09-18 07:30:00';
/* Affected rows: 23  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-19 00:00:00' and '2011-09-19 02:00:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-09-19 09:00:00' and '2011-09-19 12:15:00';
/* Affected rows: 196  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-21 09:15:00' and '2011-09-21 09:45:00';
/* Affected rows: 31  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-22 10:50:00' and '2011-09-22 10:54:00';
/* Affected rows: 5  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-23 00:00:00' and '2011-09-23 02:09:00';
/* Affected rows: 130  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-23 00:00:00' and '2011-09-23 23:59:00';
/* Affected rows: 951  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-09-24 00:07:00' and '2011-09-24 00:07:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-24 00:00:00' and '2011-09-24 11:00:00';
/* Affected rows: 64  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-24 21:30:00' and '2011-09-24 23:59:00';
/* Affected rows: 36  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-25 00:00:00' and '2011-09-25 12:45:00';
/* Affected rows: 12  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-25 22:45:00' and '2011-09-25 23:59:00';
/* Affected rows: 50  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-26 00:00:00' and '2011-09-26 14:15:00';
/* Affected rows: 2  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
```

```
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-26 23:00:00' and '2011-09-26 23:59:00';
/* Affected rows: 26  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-09-27 00:00:00' and '2011-09-27 03:00:00';
/* Affected rows: 181  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-27 00:00:00' and '2011-09-27 13:15:00';
/* Affected rows: 5  Found rows: 0  Warnings: 0  Duration for 1 query: 0.219 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-27 21:30:00' and '2011-09-27 23:59:00';
/* Affected rows: 24  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-28 00:00:00' and '2011-09-28 15:45:00';
/* Affected rows: 3  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-09-29 00:00:00' and '2011-10-01 23:59:00';
/* Affected rows: 43  Found rows: 0  Warnings: 0  Duration for 1 query: 0.390 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-02 00:00:00' and '2011-10-02 13:15:00';
/* Affected rows: 10  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-02 19:30:00' and '2011-10-02 23:59:00';
/* Affected rows: 35  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-03 00:00:00' and '2011-10-03 11:30:00';
```

```
/* Affected rows: 8  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-04 07:00:00' and '2011-10-04 23:59:00';
/* Affected rows: 25  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-05 00:00:00' and '2011-10-06 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-07 11:00:00' and '2011-10-07 23:59:00';
/* Affected rows: 780  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-07 00:00:00' and '2011-10-07 23:59:00';
/* Affected rows: 661  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-08 01:31:00' and '2011-10-08 10:40:00';
/* Affected rows: 550  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-09 00:00:00' and '2011-10-09 05:30:00';
/* Affected rows: 331  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-09 00:00:00' and '2011-10-09 04:00:00';
/* Affected rows: 196  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-10 04:09:00' and '2011-10-10 04:09:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL
where Time_Stamp between '2011-10-10 01:14:00' and '2011-10-10 01:14:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL
where Time_Stamp between '2011-10-10 06:27:00' and '2011-10-10 06:27:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-11 07:30:00' and '2011-10-11 23:59:00';
/* Affected rows: 990  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-10-12 23:35:00' and '2011-10-12 23:35:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-12 00:00:00' and '2011-10-12 15:00:00';
/* Affected rows: 901  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema. zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-12 06:30:00' and '2011-10-12 06:45:00';
/* Affected rows: 10 Found rows: 0 Warnings: 0 Duration for 1 query: 0.000 sec. */

update bambamschema. zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-10-13 12:24:00' and '2011-10-13 12:24:00';
/* Affected rows: 1 Found rows: 0 Warnings: 0 Duration for 1 query: 0.016 sec. */

update bambamschema. zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-13 00:00:00' and '2011-10-13 23:59:00';
/* Affected rows: 1,440 Found rows: 0 Warnings: 0 Duration for 1 query: 0.140 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
```

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`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-13 05:30:00' and '2011-10-13 05:45:00';
/* Affected rows: 15  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-14 00:00:00' and '2011-10-14 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-10-15 04:58:00' and '2011-10-15 04:58:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-15 06:00:00' and '2011-10-15 09:00:00';
/* Affected rows: 112  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-10-16 06:07:00' and '2011-10-16 06:07:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-16 00:00:00' and '2011-10-16 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-16 07:00:00' and '2011-10-16 08:30:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-18 02:00:00' and '2011-10-18 05:30:00';
/* Affected rows: 25  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-19 05:57:00' and '2011-10-19 05:57:00';
```

```
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-21 03:15:00' and '2011-10-21 04:30:00';
/* Affected rows: 28  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-10-22 03:02:00' and '2011-10-22 03:02:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-22 02:00:00' and '2011-10-22 05:30:00';
/* Affected rows: 189  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-23 03:30:00' and '2011-10-23 09:30:00';
/* Affected rows: 228  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-10-24 00:00:00' and '2011-10-24 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.079 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-24 00:00:00' and '2011-10-24 23:59:00';
/* Affected rows: 1,355  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-25 00:00:00' and '2011-10-25 23:59:00';
/* Affected rows: 704  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-26 23:30:00' and '2011-10-26 23:59:00';
/* Affected rows: 18  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-27 00:00:00' and '2011-10-27 23:59:00';
/* Affected rows: 1,426  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2011-10-28 08:45:00' and '2011-10-28 13:00:00';
/* Affected rows: 256  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-10-28 08:45:00' and '2011-10-28 13:00:00';
/* Affected rows: 256  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2011-10-29 09:30:00' and '2011-10-29 12:30:00';
/* Affected rows: 181  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
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`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2011-10-30 09:30:00' and '2011-10-30 11:45:00';
/* Affected rows: 136  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-10-28 00:00:00' and '2011-10-31 23:59:00';
/* Affected rows: 5,158  Found rows: 0  Warnings: 0  Duration for 1 query: 0.282 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-10-29 09:30:00' and '2011-10-29 12:30:00';
/* Affected rows: 181  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2011-10-29 16:18:00' and '2011-10-29 16:18:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-10-30 09:30:00' and '2011-10-30 11:45:00';
/* Affected rows: 136  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
```

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`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-10-31 10:15:00' and '2011-10-31 11:45:00';
/* Affected rows: 91  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-01 04:00:00' and '2011-11-01 11:00:00';
/* Affected rows: 219  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-02 00:00:00' and '2011-11-02 23:59:00';
/* Affected rows: 1,031  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-03 00:00:00' and '2011-11-06 23:59:00';
/* Affected rows: 4,002  Found rows: 0  Warnings: 0  Duration for 1 query: 0.640 sec. */
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
```

```
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-11-03 09:15:00' and '2011-11-03 11:15:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-11-05 08:30:00' and '2011-11-05 23:59:00';
/* Affected rows: 930  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-11-06 09:30:00' and '2011-11-06 13:15:00';
/* Affected rows: 226  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-11-06 14:34:00' and '2011-11-06 23:59:00';
```

```
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Surf_Temp_3_ºC` = NULL
where Time_Stamp between '2011-11-06 14:34:00' and '2011-11-06 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` =NULL,
`Calculated_Strain_3C_με`=NULL
where Time_Stamp between '2011-11-06 00:00:00' and '2011-11-06 23:59:00';
/* Affected rows: 874  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` =NULL,
`Calculated_Strain_3C_με`=NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
```

```
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-11-07 00:00:00' and '2011-11-12 23:59:00';
/* Affected rows: 15  Found rows: 0  Warnings: 0  Duration for 1 query: 0.203 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` =NULL,
`Calculated_Strain_3C_με`=NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
```

```
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-11-13 00:00:00' and '2011-11-13 10:02:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-11-13 10:03:00' and '2011-11-13 12:00:00';
/* Affected rows: 118  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-14 00:00:00' and '2011-11-14 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. *

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
```

```
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-11-15 10:30:00' and '2011-11-15 12:30:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-15 00:00:00' and '2011-11-15 23:59:00';
/* Affected rows: 658  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
```

```
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` =NULL,
`Calculated_Strain_3C_με`=NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-11-16 11:45:00' and '2011-11-16 15:22:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
```

```
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` =NULL,
`Calculated_Strain_3C_με`=NULL
where Time_Stamp between '2011-11-17 11:00:00' and '2011-11-17 13:00:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` =NULL,
`Calculated_Strain_3C_με`=NULL
where Time_Stamp between '2011-11-18 00:00:00' and '2011-11-18 23:59:00';
/* Affected rows: 1,288  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με`= NULL
where Time_Stamp between '2011-11-19 00:00:00' and '2011-11-19 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με`= NULL
where Time_Stamp between '2011-11-20 00:00:00' and '2011-11-21 23:59:00';
/* Affected rows: 2,880  Found rows: 0  Warnings: 0  Duration for 1 query: 0.203 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-11-21 11:15:00' and '2011-11-21 13:30:00';
/* Affected rows: 136  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
```

```
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-11-22 10:30:00' and '2011-11-22 12:30:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-22 00:00:00' and '2011-11-22 23:59:00';
/* Affected rows: 1,008  Found rows: 0  Warnings: 0  Duration for 1 query: 3.265 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
```

```
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2011-11-23 10:45:00' and '2011-11-23 12:45:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-11-23 00:00:00' and '2011-11-23 13:30:00';
/* Affected rows: 681  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-11-23 12:30:00' and '2011-11-23 15:45:00';
/* Affected rows: 180  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-23 00:00:00' and '2011-11-23 23:59:00';
/* Affected rows: 993  Found rows: 0 Warnings: 0  Duration for 1 query: 0.109 sec. *

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-24 00:00:00' and '2011-11-24 23:59:00';
/* Affected rows: 1,053  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-25 21:00:00' and '2011-11-25 23:59:00';
/* Affected rows: 18  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
```

```
where Time_Stamp between '2011-11-26 01:15:00' and '2011-11-26 03:30:00';
/* Affected rows: 136  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-26 00:00:00' and '2011-11-28 23:59:00';
/* Affected rows: 3,402  Found rows: 0  Warnings: 0  Duration for 1 query: 0.328 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-29 11:54:00' and '2011-11-29 11:54:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-30 00:00:00' and '2011-12-11 23:59:00';
/* Affected rows: 13,066  Found rows: 0  Warnings: 0  Duration for 1 query: 1.266 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-01 00:00:00' and '2011-12-11 23:59:00';
/* Affected rows: 11,984  Found rows: 0  Warnings: 0  Duration for 1 query: 1.079 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-01 06:15:00' and '2011-12-01 09:45:00';
/* Affected rows: 211  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-01 18:00:00' and '2011-12-01 22:00:00';
/* Affected rows: 241  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-03 22:30:00' and '2011-12-03 23:59:00';
/* Affected rows: 90  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-04 00:00:00' and '2011-12-04 01:45:00';
/* Affected rows: 106  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-08 00:00:00' and '2011-12-08 07:45:00';
/* Affected rows: 466  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-10 00:00:00' and '2011-12-10 04:45:00';
/* Affected rows: 286  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-10 20:30:00' and '2011-12-10 23:59:00';
/* Affected rows: 210  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2011-12-11 09:30:00' and '2011-12-11 10:45:00';
/* Affected rows: 76  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-12 02:15:00' and '2011-12-12 04:45:00';
/* Affected rows: 64  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-12 13:00:00' and '2011-12-12 14:00:00';
/* Affected rows: 48  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-13 13:44:00' and '2011-12-13 13:44:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-14 13:30:00' and '2011-12-14 23:59:00';
/* Affected rows: 23  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
```

```
where Time_Stamp between '2011-12-15 00:00:00' and '2011-12-21 23:59:00';
/* Affected rows: 3,166  Found rows: 0  Warnings: 0  Duration for 1 query: 0.703 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-19 02:00:00' and '2011-12-19 15:45:00';
/* Affected rows: 826  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-20 16:30:00' and '2011-12-20 19:30:00';
/* Affected rows: 181  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-21 02:30:00' and '2011-12-21 23:59:00';
/* Affected rows: 1,290  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2011-12-21 00:00:00' and '2011-12-21 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.110 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` =NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με`=NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
```

```
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V`= NULL,
`Calculated_Strain_5B_με`= NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V`= NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` =NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-12-22 17:05:00' and '2011-12-22 23:59:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2011-12-22 00:00:00' and '2011-12-22 02:00:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-22 00:00:00' and '2011-12-22 23:59:00';
/* Affected rows: 1,025  Found rows: 0  Warnings: 0  Duration for 1 query: 0.110 sec. */
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-22 16:30:00' and '2011-12-22 17:05:00';
/* Affected rows: 13  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` =NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με`=NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V`= NULL,
`Calculated_Strain_5B_με`= NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V`= NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
```

```
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` =NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-12-23 00:00:00' and '2011-12-25 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` =NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με`=NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V`= NULL,
`Calculated_Strain_5B_με`= NULL,
`Raw_Strain_5C_mV/V` = NULL,
```

```
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V`= NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` =NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2011-12-26 00:00:00' and '2011-12-26 09:54:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V`= NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-26 17:30:00' and '2011-12-26 19:30:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V`= NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-26 00:00:00' and '2011-12-26 23:59:00';
/* Affected rows: 219  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3C_mV/V`= NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-12-27 00:00:00' and '2011-12-31 23:59:00';
/* Affected rows: 3,861  Found rows: 0  Warnings: 0  Duration for 1 query: 0.422 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-27 00:47:00' and '2011-12-27 00:47:00' OR
Time_Stamp between '2011-12-27 01:56:00' and '2011-12-27 01:56:00' OR
Time_Stamp
```

```
update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-27 00:45:00' and '2011-12-27 04:15:00';
/* Affected rows: 211  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_5
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-12-27 08:08:00' and '2011-12-27 08:08:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-01-01 00:30:00' and '2012-01-01 02:00:00' or
Time_Stamp between '2012-01-01 23:00:00' and '2012-01-01 23:45:00';
/* Affected rows: 137  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-01-01 00:00:00' and '2012-01-01 23:59:00';
/* Affected rows: 1,365  Found rows: 0  Warnings: 0  Duration for 1 query: 0.281 sec. */
```

```
update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-01-02 00:00:00' and '2012-01-15 23:59:00';
/* Affected rows: 15,941  Found rows: 0  Warnings: 0  Duration for 1 query: 1.718 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-01-17 00:00:00' and '2012-01-18 23:59:00';
/* Affected rows: 2,653  Found rows: 0  Warnings: 0  Duration for 1 query: 0.313 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-01-21 00:00:00' and '2012-01-21 23:59:00';
/* Affected rows: 1,396  Found rows: 0  Warnings: 0  Duration for 1 query: 0.188 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-01-28 00:00:00' and '2012-01-29 23:59:00';
/* Affected rows: 2,334  Found rows: 0  Warnings: 0  Duration for 1 query: 0.375 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
```

```
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V`= NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-01-02 23:30:00' and '2012-01-02 23:59:00';
/* Affected rows: 30  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-02-03 00:00:00' and '2012-02-03 23:59:00';
/* Affected rows: 479  Found rows: 0  Warnings: 0  Duration for 1 query: 0.187 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-02-05 00:00:00' and '2012-02-05 23:59:00' OR
Time_Stamp between '2012-02-07 00:00:00' and '2012-02-07 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.328 sec. */
update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V`= NULL,
```

```
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL
where Time_Stamp between '2012-01-04 00:45:00' and '2012-01-04 01:30:00' OR
Time_Stamp between '2012-01-04 23:45:00' and '2012-01-04 23:59:00';
/* Affected rows: 61  Found rows: 0  Warnings: 0  Duration for 1 query: 0.172 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_4A_mV/V` =NULL,
`Calculated_Strain_4A_με`= NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL
where Time_Stamp between '2012-01-04 00:45:00' and '2012-01-04 01:30:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V`= NULL,
`Calculated_Strain_1'C_με` = NULL,
```

```
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-01-06 00:00:00' and '2012-01-06 00:30:00';
/* Affected rows: 31  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2012-01-02 00:00:00' and '2012-01-02 23:59:00';
/* Affected rows: 1,410  Found rows: 0  Warnings: 0  Duration for 1 query: 0.766 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V`= NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL
where Time_Stamp between '2012-01-07 01:30:00' and '2012-01-07 01:45:00';
/* Affected rows: 16  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
```

```
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με`= NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με`= NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` =NULL
where Time_Stamp between '2012-01-08 02:00:00' and '2012-01-08 02:45:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με`= NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με`= NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL
where Time_Stamp between '2012-01-09 01:45:00' and '2012-01-09 03:30:00';
/* Affected rows: 106  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με`= NULL,
```

```
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2012-01-10 00:00:00' and '2012-01-10 00:30:00' OR
Time_Stamp between '2012-01-11 01:00:00' and '2012-01-11 01:45:00' OR
Time_Stamp between '2012-01-12 00:15:00' and '2012-01-12 00:30:00' OR
Time_Stamp between '2012-01-12 22:15:00' and '2012-01-12 22:15:00' OR
Time_Stamp between '2012-01-13 21:45:00' and '2012-01-13 22:15:00' OR
Time_Stamp between '2012-01-15 00:00:00' and '2012-01-15 00:15:00' OR
Time_Stamp between '2012-01-17 05:15:00' and '2012-01-17 05:45:00' OR
Time_Stamp between '2012-01-18 02:00:00' and '2012-01-18 02:15:00' OR
Time_Stamp between '2012-01-21 07:00:00' and '2012-01-21 07:30:00' OR
Time_Stamp between '2012-01-23 02:45:00' and '2012-01-23 03:15:00' OR
Time_Stamp between '2012-01-28 03:45:00' and '2012-01-28 04:15:00' OR
Time_Stamp between '2012-01-28 23:30:00' and '2012-01-28 23:59:00' OR
Time_Stamp between '2012-01-30 01:15:00' and '2012-01-30 01:45:00' OR
Time_Stamp between '2012-02-01 04:15:00' and '2012-02-01 04:45:00' OR
Time_Stamp between '2012-02-03 06:15:00' and '2012-02-03 06:45:00' OR
Time_Stamp between '2012-02-04 06:00:00' and '2012-02-04 06:30:00' OR
Time_Stamp between '2012-02-05 06:45:00' and '2012-02-05 07:15:00' OR
Time_Stamp between '2012-02-06 07:30:00' and '2012-02-06 07:45:00' OR
Time_Stamp between '2012-02-07 04:30:00' and '2012-02-07 05:00:00' OR
Time_Stamp between '2012-02-08 04:30:00' and '2012-02-08 05:00:00' OR
Time_Stamp between '2012-02-10 03:45:00' and '2012-02-10 04:15:00' OR
Time_Stamp between '2012-02-11 05:45:00' and '2012-02-11/* large SQL query (2.6 KiB),
snipped at 2,000 characters */
/* Affected rows: 1,005  Found rows: 0  Warnings: 0  Duration for 1 query: 2.844 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με`= NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V`= NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-01-10 00:00:00' and '2012-01-10 00:30:00' OR
Time_Stamp between '2012-01-11 01:00:00' and '2012-01-11 01:45:00' OR
Time_Stamp between '2012-01-12 00:15:00' and '2012-01-12 00:30:00' OR
Time_Stamp between '2012-01-12 22:15:00' and '2012-01-12 22:15:00' OR
```

```
Time_Stamp between '2012-01-13 21:45:00' and '2012-01-13 22:15:00' OR
Time_Stamp between '2012-01-15 00:00:00' and '2012-01-15 00:15:00' OR
Time_Stamp between '2012-01-17 05:15:00' and '2012-01-17 05:45:00' OR
Time_Stamp between '2012-01-18 02:00:00' and '2012-01-18 02:15:00' OR
Time_Stamp between '2012-01-21 07:00:00' and '2012-01-21 07:30:00' OR
Time_Stamp between '2012-01-23 02:45:00' and '2012-01-23 03:15:00' OR
Time_Stamp between '2012-01-28 03:45:00' and '2012-01-28 04:15:00' OR
Time_Stamp between '2012-01-28 23:30:00' and '2012-01-28 23:59:00' OR
Time_Stamp between '2012-01-30 01:15:00' and '2012-01-30 01:45:00' OR
Time_Stamp between '2012-02-01 04:15:00' and '2012-02-01 04:45:00' OR
Time_Stamp between '2012-02-03 06:15:00' and '2012-02-03 06:45:00';
/* Affected rows: 404  Found rows: 0  Warnings: 0  Duration for 1 query: 0.157 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με`= NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V`= NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-02-05 06:45:00' and '2012-02-05 07:15:00' OR
Time_Stamp between '2012-02-06 07:30:00' and '2012-02-06 07:45:00' OR
Time_Stamp between '2012-02-07 04:30:00' and '2012-02-07 05:00:00' OR
Time_Stamp between '2012-02-08 04:30:00' and '2012-02-08 05:00:00' OR
Time_Stamp between '2012-02-10 03:45:00' and '2012-02-10 04:15:00' OR
Time_Stamp between '2012-02-11 05:45:00' and '2012-02-11 06:30:00' OR
Time_Stamp between '2012-02-15 06:15:00' and '2012-02-15 07:00:00';
/* Affected rows: 232  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
```

```
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-01-10 00:00:00' and '2012-01-10 00:30:00' OR
Time_Stamp between '2012-01-11 01:00:00' and '2012-01-11 01:45:00' OR
Time_Stamp between '2012-01-12 00:15:00' and '2012-01-12 00:30:00' OR
Time_Stamp between '2012-01-12 22:15:00' and '2012-01-12 22:15:00' OR
Time_Stamp between '2012-01-13 21:45:00' and '2012-01-13 22:15:00' OR
Time_Stamp between '2012-01-15 00:00:00' and '2012-01-15 00:15:00' OR
Time_Stamp between '2012-01-17 05:15:00' and '2012-01-17 05:45:00' OR
Time_Stamp between '2012-01-18 02:00:00' and '2012-01-18 02:15:00' OR
Time_Stamp between '2012-01-21 07:00:00' and '2012-01-21 07:30:00' OR
Time_Stamp between '2012-01-23 02:45:00' and '2012-01-23 03:15:00' OR
Time_Stamp between '2012-01-28 03:45:00' and '2012-01-28 04:15:00' OR
Time_Stamp between '2012-01-28 23:30:00' and '2012-01-28 23:59:00';
/* Affected rows: 311  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-02-03 06:15:00' and '2012-02-03 06:45:00' OR
Time_Stamp between '2012-02-04 06:00:00' and '2012-02-04 06:30:00' OR
Time_Stamp between '2012-02-05 06:45:00' and '2012-02-05 07:15:00' OR
Time_Stamp between '2012-02-06 07:30:00' and '2012-02-06 07:45:00' OR
Time_Stamp between '2012-02-07 04:30:00' and '2012-02-07 05:00:00' OR
Time_Stamp between '2012-02-08 04:30:00' and '2012-02-08 05:00:00' OR
Time_Stamp between '2012-02-10 03:45:00' and '2012-02-10 04:15:00' OR
Time_Stamp between '2012-02-11 05:45:00' and '2012-02-11 06:30:00' OR
Time_Stamp between '2012-02-15 06:15:00' and '2012-02-15 07:00:00';
/* Affected rows: 294  Found rows: 0  Warnings: 0  Duration for 1 query: 0.078 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
```

```
`Calculated_Strain_1B_με`= NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2012-02-10 03:45:00' and '2012-02-10 04:15:00' OR
Time_Stamp between '2012-02-11 05:45:00' and '2012-02-11 06:30:00' OR
Time_Stamp between '2012-02-15 06:15:00' and '2012-02-15 07:00:00' OR
Time_Stamp between '2012-02-16 06:45:00' and '2012-02-16 07:15:00' OR
Time_Stamp between '2012-02-21 01:15:00' and '2012-02-21 01:45:00' OR
Time_Stamp between '2012-02-24 05:30:00' and '2012-02-24 06:15:00' OR
Time_Stamp between '2012-02-25 03:00:00' and '2012-02-25 03:30:00' OR
Time_Stamp between '2012-02-29 04:30:00' and '2012-02-29 05:30:00' OR
Time_Stamp between '2012-03-02 04:00:00' and '2012-03-02 04:45:00' OR
Time_Stamp between '2012-03-04 03:00:00' and '2012-03-04 03:45:00' OR
Time_Stamp between '2012-03-05 05:45:00' and '2012-03-05 06:30:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.469 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2012-04-18 16:15:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-04-19 00:00:00' and '2012-05-06 23:59:00';
/* Affected rows: 26,384  Found rows: 0  Warnings: 0  Duration for 1 query: 3.219 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-08 15:15:00' and '2012-05-08 15:30:00' OR
Time_Stamp between '2012-05-09 15:30:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-10 15:30:00' and '2012-05-10 23:59:00' OR
Time_Stamp between '2012-05-11 00:00:00' and '2012-05-14 23:59:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-19 00:00:00' and '2012-05-19 23:59:00' OR
Time_Stamp between '2012-05-20 12:15:00' and '2012-05-20 23:59:00';
/* Affected rows: 10,398  Found rows: 0  Warnings: 0  Duration for 1 query: 1.656 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2012-05-21 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-05-25 00:00:00' and '2012-05-25 14:15:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
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Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00';
/* Affected rows: 6,768  Found rows: 0  Warnings: 0  Duration for 1 query: 2.797 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2012-11-12 19:45:00' and '2012-11-12 20:30:00' OR
Time_Stamp between '2012-12-10 11:00:00' and '2012-12-10 13:15:00' OR
Time_Stamp between '2012-12-15 10:30:00' and '2012-12-15 11:15:00' OR
Time_Stamp between '2012-12-18 11:00:00' and '2012-12-18 12:15:00' OR
Time_Stamp between '2012-12-20 11:45:00' and '2012-12-20 13:30:00' OR
Time_Stamp between '2012-12-20 19:15:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-22 23:59:00' OR
Time_Stamp between '2012-12-23 00:00:00' and '2012-12-23 03:00:00' OR
Time_Stamp between '2012-12-23 10:00:00' and '2012-12-23 11:30:00' OR
Time_Stamp between '2012-12-25 11:30:00' and '2012-12-25 11:45:00' OR
Time_Stamp between '2012-12-26 11:30:00' and '2012-12-26 12:15:00' OR
Time_Stamp between '2012-12-27 10:45:00' and '2012-12-27 11:45:00' OR
Time_Stamp between '2012-12-28 11:15:00' and '2012-12-28 12:00:00' OR
Time_Stamp between '2012-12-29 10:15:00' and '2012-12-29 12:30:00' OR
Time_Stamp between '2012-12-30 10:30:00' and '2012-12-30 12:00:00' OR
Time_Stamp between '2013-01-01 10:15:00' and '2013-01-01 12:30:00' OR
Time_Stamp between '2013-01-02 00:00:00' and '2013-01-03 23:59:00' OR
Time_Stamp between '2013-01-04 09:37:00' and '2013-01-04 10:37:00';
/* Affected rows: 7,319  Found rows: 0  Warnings: 0  Duration for 1 query: 8.828 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL
where Time_Stamp between '2012-04-26 00:00:00' and '2012-04-27 23:59:00' OR
Time_Stamp between '2012-05-03 00:00:00' and '2012-05-06 23:59:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-22 11:15:00' and '2012-05-22 11:45:00' OR
Time_Stamp between '2012-05-25 00:00:00' and '2012-05-25 14:15:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00' OR
Time_Stamp between '2012-06-25 10:45:00' and '2012-06-25 12:15:00' OR
Time_Stamp between '2012-11-12 19:45:00' and '2012-11-12 20:30:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2012-11-20 09:45:00' and '2012-11-20 11:00:00' OR
Time_Stamp between '2012-12-05 10:30:00' and '2012-12-05 11:00:00' OR
Time_Stamp between '2012-12-08 10:30:00' and '2012-12-08 11:00:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 23:59:00' OR
Time_Stamp between '2012-12-11 11:30:00' and '2012-12-11 19:30:00' OR
Time_Stamp between '2012-12-11 23:00:00' and '2012-12-11 23:59:00' OR
Time_Stamp between '2012-12-12 09:45:00' and '2012-12-12 12:00:00' OR
Time_Stamp between '2012-12-12 23:00:00' and '2012-12-12 23:59:00' OR
Time_Stamp between '2012-12-13 00:00:00' and '2012-12-13 23:59:00' OR
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Time_Stamp between '2012-12-15 10:30:00' and '2012-12-15 11:15:00' OR
Time_Stamp between '2012-12-16 05:19:00' and '2012-12-16 05:19:00' OR
Time_Stamp between '2012-12-18 11:00:00' and '2012-12-18 12:15:00' OR
Time_Stamp between '2012-12-20 11:45:00' and '2012-12-20 13:30:00' OR
Time_Stamp between '2012-12-20 19:15:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 /* large SQL query (2.7 KiB), snipped at 2,000 characters */
/* Affected rows: 21,549  Found rows: 0  Warnings: 0  Duration for 1 query: 10.015 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL
where Time_Stamp between '2012-12-20 11:45:00' and '2012-12-20 13:30:00' OR
Time_Stamp between '2012-12-20 19:15:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-22 23:59:00' OR
Time_Stamp between '2012-12-23 00:00:00' and '2012-12-23 03:00:00' OR
Time_Stamp between '2012-12-23 10:00:00' and '2012-12-23 11:30:00' OR
Time_Stamp between '2012-12-25 11:30:00' and '2012-12-25 11:45:00' OR
Time_Stamp between '2012-12-26 11:30:00' and '2012-12-26 12:15:00' OR
Time_Stamp between '2012-12-27 10:45:00' and '2012-12-27 11:45:00' OR
Time_Stamp between '2012-12-28 11:15:00' and '2012-12-28 12:00:00' OR
Time_Stamp between '2012-12-29 10:15:00' and '2012-12-29 12:30:00' OR
Time_Stamp between '2012-12-30 10:30:00' and '2012-12-30 12:00:00' OR
Time_Stamp between '2013-01-01 10:15:00' and '2013-01-01 12:30:00' OR
Time_Stamp between '2013-01-02 00:00:00' and '2013-01-03 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.219 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με`= NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
```

```
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V`= NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2013-01-04 09:37:00' and '2013-01-04 10:37:00';
/* Affected rows: 60  Found rows: 0  Warnings: 0  Duration for 1 query: 1.047 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
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`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με`= NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V`= NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2013-01-04 09:37:00' and '2013-01-04 10:37:00';
/* Affected rows: 61  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL
where Time_Stamp between '2012-04-06 19:00:00' and '2012-04-06 19:15:00' OR
Time_Stamp between '2012-04-08 19:15:00' and '2012-04-08 20:15:00' OR
Time_Stamp between '2012-04-09 00:00:00' and '2012-04-13 23:59:00' OR
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Time_Stamp between '2012-04-14 00:00:00' and '2012-04-14 10:15:00' OR
Time_Stamp between '2012-04-15 00:00:00' and '2012-04-15 23:59:00' OR
Time_Stamp between '2012-04-16 00:00:00' and '2012-04-16 10:15:00' OR
Time_Stamp between '2012-04-16 16:45:00' and '2012-04-16 23:59:00' OR
Time_Stamp between '2012-04-17 00:00:00' and '2012-04-17 10:30:00' OR
Time_Stamp between '2012-04-17 15:00:00' and '2012-04-17 24:00:00' OR
Time_Stamp between '2012-04-18 00:00:00' and '2012-05-14 10:15:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-17 12:00:00' and '2012-05-17 23:59:00' OR
Time_Stamp between '2012-05-18 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-05-25 00:00:00' and '2012-05-25 14:15:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00' OR
Time_Stamp between '2012-11-12 19:45:00' and '2012-11-12 20:30:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 10:30:00' OR
Time_Stamp between '2012-11-15 02:30:00' and '2012-11-15 09:30:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2012-11-20 04:15:00' and '2012-11-20 10:45:00' OR
Time_Stamp between '2012-11-22 06:45:00' and '2012-11-22 09:30:00' OR
Time_Stamp between '2012-11-24 02:15:00' and '2012-11-24 10:15:00' OR
Time_Stamp between '2012-11-25 02:00:00' and '2012-11-25 10:30:00' OR
Time_Stamp between '2012-11-27 0/* large SQL query (3.1 KiB), snipped at 2,000 characters */
/* Affected rows: 79,610  Found rows: 0  Warnings: 18  Duration for 1 query: 42.500 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL
where Time_Stamp between '2012-04-06 19:00:00' and '2012-04-06 19:15:00' OR
Time_Stamp between '2012-04-08 19:15:00' and '2012-04-08 20:15:00' OR
Time_Stamp between '2012-04-09 00:00:00' and '2012-04-13 23:59:00' OR
Time_Stamp between '2012-04-14 00:00:00' and '2012-04-14 10:15:00' OR
Time_Stamp between '2012-04-15 00:00:00' and '2012-04-15 23:59:00' OR
Time_Stamp between '2012-04-16 00:00:00' and '2012-04-16 10:15:00' OR
Time_Stamp between '2012-04-16 16:45:00' and '2012-04-16 23:59:00' OR
Time_Stamp between '2012-04-17 00:00:00' and '2012-04-17 10:30:00' OR
Time_Stamp between '2012-04-17 15:00:00' and '2012-04-17 23:59:00' OR
Time_Stamp between '2012-04-18 00:00:00' and '2012-05-14 10:15:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-17 12:00:00' and '2012-05-17 23:59:00' OR
Time_Stamp between '2012-05-18 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-05-25 00:00:00' and '2012-05-25 14:15:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00' OR
Time_Stamp between '2012-11-12 19:45:00' and '2012-11-12 20:30:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 10:30:00' OR
Time_Stamp between '2012-11-15 02:30:00' and '2012-11-15 09:30:00' OR
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Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2012-11-20 04:15:00' and '2012-11-20 10:45:00' OR
Time_Stamp between '2012-11-22 06:45:00' and '2012-11-22 09:30:00' OR
Time_Stamp between '2012-11-24 02:15:00' and '2012-11-24 10:15:00' OR
Time_Stamp between '2012-11-25 02:00:00' and '2012-11-25 10:30:00' OR
Time_Stamp between '2012-11-27 0/* large SQL query (3.1 KiB), snipped at 2,000 characters */
/* Affected rows: 540  Found rows: 0  Warnings: 0  Duration for 1 query: 5.203 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL
where Time_Stamp between '2012-04-06 19:00:00' and '2012-04-06 19:15:00' OR
Time_Stamp between '2012-04-08 19:15:00' and '2012-04-08 20:15:00' OR
Time_Stamp between '2012-04-09 00:00:00' and '2012-04-13 23:59:00' OR
Time_Stamp between '2012-04-14 00:00:00' and '2012-04-14 10:15:00' OR
Time_Stamp between '2012-04-15 00:00:00' and '2012-04-15 23:59:00' OR
Time_Stamp between '2012-04-16 00:00:00' and '2012-04-16 10:15:00' OR
Time_Stamp between '2012-04-16 16:45:00' and '2012-04-16 23:59:00' OR
Time_Stamp between '2012-04-17 00:00:00' and '2012-04-17 10:30:00' OR
Time_Stamp between '2012-04-17 15:00:00' and '2012-04-17 23:59:00' OR
Time_Stamp between '2012-04-18 00:00:00' and '2012-05-14 10:15:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-17 12:00:00' and '2012-05-17 23:59:00' OR
Time_Stamp between '2012-05-18 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-05-25 00:00:00' and '2012-05-25 14:15:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 1.766 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL
where Time_Stamp between '2012-11-12 19:45:00' and '2012-11-12 20:30:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 10:30:00' OR
Time_Stamp between '2012-11-15 02:30:00' and '2012-11-15 09:30:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2012-11-20 04:15:00' and '2012-11-20 10:45:00' OR
Time_Stamp between '2012-11-22 06:45:00' and '2012-11-22 09:30:00' OR
Time_Stamp between '2012-11-24 02:15:00' and '2012-11-24 10:15:00' OR
Time_Stamp between '2012-11-25 02:00:00' and '2012-11-25 10:30:00' OR
Time_Stamp between '2012-11-27 03:30:00' and '2012-11-27 11:30:00' OR
Time_Stamp between '2012-11-28 02:00:00' and '2012-11-28 10:30:00' OR
Time_Stamp between '2012-11-29 06:00:00' and '2012-11-29 10:00:00' OR
Time_Stamp between '2012-11-30 05:00:00' and '2012-11-30 10:15:00' OR
Time_Stamp between '2012-12-02 05:30:00' and '2012-12-02 09:45:00' OR
Time_Stamp between '2012-12-04 06:30:00' and '2012-12-04 10:00:00' OR
Time_Stamp between '2012-12-05 07:30:00' and '2012-12-05 11:15:00' OR
Time_Stamp between '2012-12-08 03:30:00' and '2012-12-08 11:15:00' OR
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Time_Stamp between '2012-12-09 17:30:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-13 23:59:00' OR
Time_Stamp between '2012-12-15 10:30:00' and '2012-12-15 11:15:00' OR
Time_Stamp between '2012-12-16 05:19:00' and '2012-12-16 05:19:00' OR
Time_Stamp between '2012-12-17 05:00:00' and '2012-12-17 12:15:00' OR
Time_Stamp between '2012-12-18 11:00:00' and '2012-12-18 12:15:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-23 23:59:00' OR
Time_Stamp between '2012-12-24 10:45:00' and '2012-12-24 11:00:00' OR
Time_Stamp between '2012-12-25 11:30:00' and '2012-12-25 11:45:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.469 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL
where Time_Stamp between '2012-12-26 06:00:00' and '2012-12-26 10:45:00' OR
Time_Stamp between '2012-12-26 11:30:00' and '2012-12-26 12:15:00' OR
Time_Stamp between '2012-12-27 10:45:00' and '2012-12-27 11:45:00' OR
Time_Stamp between '2012-12-28 11:15:00' and '2012-12-28 12:00:00' OR
Time_Stamp between '2012-12-28 23:00:00' and '2012-12-28 23:59:00' OR
Time_Stamp between '2012-12-29 00:00:00' and '2012-12-29 23:59:00' OR
Time_Stamp between '2012-12-30 10:30:00' and '2012-12-30 12:00:00' OR
Time_Stamp between '2013-01-01 07:45:00' and '2013-01-01 12:30:00' OR
Time_Stamp between '2013-01-02 00:00:00' and '2013-01-03 23:59:00';
/* Affected rows: 5,188  Found rows: 0  Warnings: 0  Duration for 1 query: 0.438 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Surf_Temp_1_ºC` = NULL,
`Surf_Temp_1_ºC` = NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:30:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00';
/* Affected rows: 8,535  Found rows: 0  Warnings: 0  Duration for 1 query: 7.343 sec. */

update bambamschema.zanalysis_copy_copy_6_2012
set `Surf_Temp_1_ºC` = NULL,
`Surf_Temp_1_ºC` = NULL
where Time_Stamp between '2012-11-19 05:30:00' and '2012-11-17 12:30:00' OR
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Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 13:15:00' OR
Time_Stamp between '2012-12-15 09:15:00' and '2012-12-15 17:00:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2013-01-03 23:59:00';
/* Affected rows: 21,975  Found rows: 0  Warnings: 0  Duration for 1 query: 9.687 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-02-28 05:00:00' and '2013-02-28 08:20:00' OR
Time_Stamp between '2013-03-02 06:00:00' and '2013-03-02 09:00:00' OR
Time_Stamp between '2013-03-09 04:30:00' and '2013-03-09 09:01:00' OR
Time_Stamp between '2013-03-11 03:36:00' and '2013-03-11 08:30:00' OR
Time_Stamp between '2013-03-17 03:00:00' and '2013-03-17 09:00:00' OR
Time_Stamp between '2013-03-18 06:00:00' and '2013-03-18 09:00:00' OR
Time_Stamp between '2013-03-23 00:00:00' and '2013-03-28 23:59:00';
/* Affected rows: 10,131  Found rows: 0  Warnings: 0  Duration for 1 query: 2.672 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-03-29 09:00:00' and '2013-03-29 09:20:00' OR
Time_Stamp between '2013-03-29 21:44:00' and '2013-03-29 21:58:00' OR
Time_Stamp between '2013-03-30 00:00:00' and '2013-03-30 10:30:00' OR
Time_Stamp between '2013-03-31 01:38:00' and '2013-03-31 09:20:00' OR
Time_Stamp between '2013-03-17 03:00:00' and '2013-03-17 09:00:00' OR
Time_Stamp between '2013-04-02 00:00:00' and '2013-04-03 23:59:00';
/* Affected rows: 4,010  Found rows: 0  Warnings: 0  Duration for 1 query: 9.000 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-04-04 07:41:00' and '2013-04-04 11:29:00' OR
Time_Stamp between '2013-04-04 23:21:00' and '2013-04-04 23:59:00' OR
Time_Stamp between '2013-04-09 10:07:00' and '2013-04-09 10:28:00' OR
Time_Stamp between '2013-04-09 14:48:00' and '2013-04-09 15:11:00' OR
Time_Stamp between '2013-04-24 08:51:00' and '2013-04-24 10:58:00' OR
Time_Stamp between '2013-04-25 00:00:00' and '2013-04-26 23:59:00' OR
Time_Stamp between '2013-04-29 07:40:00' and '2013-04-29 07:46:00' OR
Time_Stamp between '2013-04-29 21:02:00' and '2013-04-29 21:23:00';
/* Affected rows: 3,351  Found rows: 0  Warnings: 0  Duration for 1 query: 3.469 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-05-08 08:11:00' and '2013-05-08 08:19:00' OR
Time_Stamp between '2013-07-13 00:00:00' and '2013-07-13 04:44:00' OR
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Time_Stamp between '2014-01-17 02:50:00' and '2014-01-17 03:30:00' OR
Time_Stamp between '2014-01-17 06:00:00' and '2014-01-17 08:10:00' OR
Time_Stamp between '2014-01-17 08:30:00' and '2014-01-17 09:30:00' OR
Time_Stamp between '2014-01-17 12:00:00' and '2014-01-17 13:30:00' OR
Time_Stamp between '2014-02-17 00:00:00' and '2014-02-17 23:59:00';
/* Affected rows: 978  Found rows: 0  Warnings: 0  Duration for 1 query: 1.344 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2014-02-20 01:20:00' and '2014-02-20 07:12:00' OR
Time_Stamp between '2014-02-20 13:29:00' and '2014-02-20 16:00:00' OR
Time_Stamp between '2014-03-04 00:00:00' and '2014-03-14 23:59:00' OR
Time_Stamp between '2014-03-16 00:00:00' and '2014-03-18 23:59:00';
/* Affected rows: 20,665  Found rows: 0  Warnings: 0  Duration for 1 query: 3.047 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2014-03-29 09:15:00' and '2014-03-29 11:20:00' OR
Time_Stamp between '2014-04-21 19:25:00' and '2014-04-21 19:25:00' OR
Time_Stamp between '2014-05-27 20:14:00' and '2014-05-27 21:08:00' OR
Time_Stamp between '2014-05-28 08:56:00' and '2014-05-28 09:51:00' OR
Time_Stamp between '2014-05-30 09:31:00' and '2014-05-30 10:15:00' OR
Time_Stamp between '2014-05-30 19:38:00' and '2014-05-30 19:49:00' OR
Time_Stamp between '2014-05-30 23:07:00' and '2014-05-30 23:27:00' OR
Time_Stamp between '2014-05-30 19:21:00' and '2014-05-30 19:21:00' OR
Time_Stamp between '2014-05-31 20:00:00' and '2014-05-31 20:00:00';
/* Affected rows: 318  Found rows: 0  Warnings: 0  Duration for 1 query: 1.093 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-03-19 00:00:00' and '2013-03-19 09:00:00' OR
Time_Stamp between '2013-03-19 21:00:00' and '2013-03-19 23:59:00';
/* Affected rows: 721  Found rows: 0  Warnings: 0  Duration for 1 query: 1.125 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-03-22 00:00:00' and '2013-03-22 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 2.375 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V`= NULL,
`Calculated_Strain_1B_με`= NULL
where Time_Stamp between '2013-04-05 00:00:00' and '2013-04-05 23:59:00';
/* Affected rows: 1,416  Found rows: 0  Warnings: 0  Duration for 1 query: 2.578 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-02-21 13:30:00' and '2014-02-21 14:00:00';
/* Affected rows: 31  Found rows: 0  Warnings: 0  Duration for 1 query: 0.485 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL
where Time_Stamp between '2014-03-15 00:00:00' and '2014-03-15 01:00:00' OR
Time_Stamp between '2014-03-15 04:00:00' and '2014-03-15 06:00:00';
/* Affected rows: 182  Found rows: 0  Warnings: 0  Duration for 1 query: 2.125 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
```

```
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
```

```
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2014-05-02 13:00:00' and '2014-05-04 12:44:00';
/* Affected rows: 2  Found rows: 0  Warnings: 0  Duration for 1 query: 6.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2014-05-28 08:20:00' and '2014-05-28 09:37:00' OR
Time_Stamp between '2014-05-28 19:19:00' and '2014-05-28 20:11:00';
/* Affected rows: 131  Found rows: 0  Warnings: 0  Duration for 1 query: 0.110 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2014-05-31 20:00:00' and '2014-05-31 20:00:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2014-06-01 19:30:00' and '2014-06-01 22:20:00';
/* Affected rows: 171  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2014-06-02 19:00:00' and '2014-06-02 22:00:00' OR
Time_Stamp between '2014-06-03 08:40:00' and '2014-06-03 09:49:00' OR
Time_Stamp between '2014-06-03 19:12:00' and '2014-06-03 22:18:00' OR
Time_Stamp between '2014-06-04 19:48:00' and '2014-06-04 20:14:00' OR
Time_Stamp between '2014-07-28 18:26:00' and '2014-07-28 18:36:00' OR
Time_Stamp between '2014-09-15 18:40:00' and '2014-09-15 20:00:00';
/* Affected rows: 546  Found rows: 0  Warnings: 0  Duration for 1 query: 1.437 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
```

```
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2014-09-11 00:00:00' and '2014-09-11 01:00:00' OR
Time_Stamp between '2014-09-11 07:40:00' and '2014-09-11 08:20:00';
/* Affected rows: 102  Found rows: 0  Warnings: 0  Duration for 1 query: 0.531 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2014-06-01 19:30:00' and '2014-06-01 21:30:00';
/* Affected rows: 121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2014-06-02 19:00:00' and '2014-06-02 22:00:00';
/* Affected rows: 181  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
```

```
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2014-06-03 08:40:00' and '2014-06-03 09:49:00' OR
Time_Stamp between '2014-06-03 19:12:00' and '2014-06-03 22:18:00';
/* Affected rows: 257  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL
where Time_Stamp between '2014-06-04 20:00:00' and '2014-06-04 20:34:00';
/* Affected rows: 35  Found rows: 0  Warnings: 0  Duration for 1 query: 0.203 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Surf_Temp_1_ºC` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
```

```
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Surf_Temp_6_°C` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2014-07-28 18:26:00' and '2014-07-28 18:36:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2014-08-24 02:30:00' and '2014-08-24 07:00:00' OR
Time_Stamp between '2014-08-22 03:30:00' and '2014-08-22 06:00:00' OR
Time_Stamp between '2014-08-23 00:30:00' and '2014-08-23 01:30:00' OR
Time_Stamp between '2014-08-25 04:30:00' and '2014-08-25 06:00:00';
/* Affected rows: 574  Found rows: 0  Warnings: 0  Duration for 1 query: 1.594 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL
where Time_Stamp between '2014-06-18 10:45:00' and '2014-06-18 10:50:00';
/* Affected rows: 6  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1_ºC` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Surf_Temp_3_ºC` = NULL,
`Surf_Temp_4_ºC` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Surf_Temp_6_°C` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2013-12-08 00:00:00' and '2013-12-08 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 6.063 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1_ºC` = NULL
where Time_Stamp between '2014-01-17 06:28:00' and '2014-01-17 06:28:00' OR
Time_Stamp between '2014-01-17 12:41:00' and '2014-01-17 12:41:00' OR
Time_Stamp between '2014-02-01 00:00:00' and '2014-02-01 23:59:00' OR
Time_Stamp between '2014-02-02 00:00:00' and '2014-02-02 07:00:00' OR
Time_Stamp between '2014-02-02 19:00:00' and '2014-02-02 23:59:00' OR
Time_Stamp between '2014-02-03 00:00:00' and '2014-02-08 23:59:00';
/* Affected rows: 9,272  Found rows: 0  Warnings: 0  Duration for 1 query: 28.750 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1_ºC` = NULL
where Time_Stamp between '2014-02-09 00:00:00' and '2014-02-11 23:59:00' OR
Time_Stamp between '2014-02-12 00:00:00' and '2014-02-12 03:00:00' OR
Time_Stamp between '2014-02-12 18:00:00' and '2014-02-12 23:59:00' OR
Time_Stamp between '2014-02-13 00:00:00' and '2014-02-17 23:59:00' OR
Time_Stamp between '2014-02-27 12:00:00' and '2014-02-27 15:00:00' OR
Time_Stamp between '2014-03-15 11:23:00' and '2014-03-15 13:40:00' OR
Time_Stamp between '2014-04-03 10:00:00' and '2014-04-03 16:40:00' OR
Time_Stamp between '2014-07-06 05:28:00' and '2014-07-06 05:28:00' OR
Time_Stamp between '2014-07-06 08:21:00' and '2014-07-06 08:21:00' OR
Time_Stamp between '2014-07-06 08:38:00' and '2014-07-06 08:38:00' OR
Time_Stamp between '2014-07-06 09:04:00' and '2014-07-06 11:49:00' OR
Time_Stamp between '2014-07-06 22:07:00' and '2014-07-06 23:59:00' OR
Time_Stamp between '2014-07-07 00:00:00' and '2014-07-08 23:59:00' OR
Time_Stamp between '2014-07-11 00:00:00' and '2014-07-12 23:59:00';
/* Affected rows: 12,922  Found rows: 0  Warnings: 0  Duration for 1 query: 00:01:45 */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1_ºC` = NULL
where Time_Stamp between '2014-07-13 10:00:00' and '2014-07-13 10:06:00' OR
Time_Stamp between '2014-07-13 15:33:00' and '2014-07-14 15:36:00' OR
```

```
Time_Stamp between '2014-07-14 20:20:00' and '2014-07-14 20:34:00' OR
Time_Stamp between '2014-07-15 00:00:00' and '2014-07-23 23:59:00' OR
Time_Stamp between '2014-07-24 08:32:00' and '2014-07-24 08:33:00' OR
Time_Stamp between '2014-07-25 04:51:00' and '2014-07-25 04:58:00' OR
Time_Stamp between '2014-07-26 00:00:00' and '2014-07-26 23:59:00';
/* Affected rows: 11,273  Found rows: 0  Warnings: 0  Duration for 1 query: 1.313 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL
where Time_Stamp between '2012-04-17 17:30:00' and '2012-04-17 20:45:00';
/* Affected rows: 196  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2012-04-18 18:00:00' and '2012-04-18 19:45:00' OR
Time_Stamp between '2012-04-19 19:00:00' and '2012-04-19 19:15:00' OR
Time_Stamp between '2012-04-20 17:15:00' and '2012-04-20 20:45:00' OR
Time_Stamp between '2012-04-21 16:00:00' and '2012-04-21 20:45:00' OR
Time_Stamp between '2012-04-22 15:00:00' and '2012-04-21 23:59:00' OR
Time_Stamp between '2012-04-23 00:00:00' and '2012-04-27 23:59:00' OR
Time_Stamp between '2012-04-28 16:00:00' and '2012-04-28 20:30:00' OR
Time_Stamp between '2012-04-29 13:30:00' and '2012-04-29 23:59:00' OR
Time_Stamp between '2012-04-30 14:00:00' and '2012-04-30 23:59:00' OR
Time_Stamp between '2012-05-01 00:00:00' and '2012-05-07 23:59:00';
/* Affected rows: 19,399  Found rows: 0  Warnings: 0  Duration for 1 query: 1.765 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2012-05-10 17:00:00' and '2012-05-10 19:45:00' OR
Time_Stamp between '2012-05-11 14:30:00' and '2012-05-11 18:45:00' OR
Time_Stamp between '2012-05-12 14:43:00' and '2012-05-12 21:00:00' OR
Time_Stamp between '2012-05-13 14:00:00' and '2012-05-13 16:45:00' OR
Time_Stamp between '2012-05-14 16:30:00' and '2012-05-14 19:15:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-20 15:30:00' and '2012-05-20 20:30:00' OR
Time_Stamp between '2012-05-21 12:00:00' and '2012-05-21 23:59:00' OR
Time_Stamp between '2012-05-22 09:45:00' and '2012-05-22 22:00:00' OR
Time_Stamp between '2012-05-23 17:30:00' and '2012-05-23 21:15:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00';
/* Affected rows: 4,121  Found rows: 0  Warnings: 0  Duration for 1 query: 0.610 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
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```
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-11-15 10:45:00' and '2012-11-15 11:00:00' OR
Time_Stamp between '2012-11-20 10:00:00' and '2012-11-20 10:45:00' OR
Time_Stamp between '2012-11-24 10:00:00' and '2012-11-24 11:00:00' OR
Time_Stamp between '2012-11-25 10:15:00' and '2012-11-25 13:45:00' OR
Time_Stamp between '2012-11-27 10:30:00' and '2012-11-27 11:30:00' OR
Time_Stamp between '2012-11-28 10:15:00' and '2012-11-28 12:45:00' OR
Time_Stamp between '2012-11-29 10:00:00' and '2012-11-29 13:00:00' OR
Time_Stamp between '2012-12-05 10:30:00' and '2012-12-05 11:00:00' OR
Time_Stamp between '2012-12-08 10:30:00' and '2012-12-08 11:00:00' OR
Time_Stamp between '2012-12-10 11:30:00' and '2012-12-10 13:30:00' OR
Time_Stamp between '2012-12-10 18:45:00' and '2012-12-10 23:59:00' OR
Time_Stamp between '2012-12-11 11:30:00' and '2012-12-11 19:30:00' OR
Time_Stamp between '2012-12-11 23:00:00' and '2012-12-11 23:59:00' OR
Time_Stamp between '2012-12-12 09:45:00' and '2012-12-12 12:00:00' OR
Time_Stamp between '2012-12-12 23:00:00' and '2012-12-10 23:59:00' OR
Time_Stamp between '2012-12-13 09:45:00' and '2012-12-13 13:30:00' OR
Time_Stamp between '2012-12-15 10:30:00' and '2012-12-15 11:15:00' OR
Time_Stamp between '2012-12-16 05:19:00' and '2012-12-16 05:19:00' OR
Time_Stamp between '2012-12-17 10:30:00' and '2012-12-17 12:15:00' OR
Time_Stamp between '2012-12-18 11:00:00' and '2012-12-18 12:15:00';
/* Affected rows: 2,357  Found rows: 0  Warnings: 0  Duration for 1 query: 0.500 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
```

```
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-12-20 11:45:00' and '2012-12-20 13:30:00' OR
Time_Stamp between '2012-12-20 19:15:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-22 23:59:00' OR
Time_Stamp between '2012-12-23 00:00:00' and '2012-12-23 03:00:00' OR
Time_Stamp between '2012-12-23 10:00:00' and '2012-12-23 11:30:00' OR
Time_Stamp between '2012-12-24 10:45:00' and '2012-12-24 11:00:00' OR
Time_Stamp between '2012-12-25 11:30:00' and '2012-12-25 11:45:00' OR
Time_Stamp between '2012-12-26 11:30:00' and '2012-12-26 12:15:00' OR
Time_Stamp between '2012-12-27 10:45:00' and '2012-12-27 11:45:00' OR
Time_Stamp between '2012-12-28 11:15:00' and '2012-12-28 12:00:00' OR
Time_Stamp between '2012-12-29 10:15:00' and '2012-12-29 12:30:00' OR
Time_Stamp between '2012-12-30 10:30:00' and '2012-12-30 12:00:00' OR
Time_Stamp between '2013-01-01 10:15:00' and '2013-01-01 12:30:00' OR
Time_Stamp between '2013-01-02 09:45:00' and '2013-01-02 13:30:00';
/* Affected rows: 4,317  Found rows: 0  Warnings: 0  Duration for 1 query: 0.500 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2012-03-15 03:26:00' and '2012-03-15 03:26:00' OR
Time_Stamp between '2012-03-17 04:32:00' and '2012-03-17 04:32:00' OR
Time_Stamp between '2012-04-08 12:45:00' and '2012-04-08 12:45:00' OR
Time_Stamp between '2012-04-10 18:15:00' and '2012-04-10 23:59:00' OR
Time_Stamp between '2012-04-11 00:00:00' and '2012-04-12 23:59:00' OR
Time_Stamp between '2012-04-13 02:59:00' and '2012-04-13 02:59:00' OR
Time_Stamp between '2012-04-13 18:45:00' and '2012-04-13 23:59:00' OR
Time_Stamp between '2012-04-14 00:00:00' and '2012-04-14 09:30:00' OR
Time_Stamp between '2012-04-16 18:00:00' and '2012-04-16 23:59:00' OR
Time_Stamp between '2012-04-17 00:00:00' and '2012-05-07 23:59:00' OR
Time_Stamp between '2012-05-08 14:00:00' and '2012-05-08 23:00:00' OR
Time_Stamp between '2012-05-09 00:00:00' and '2012-05-14 23:59:00' OR
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Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-17 15:00:00' and '2012-05-17 20:15:00' OR
Time_Stamp between '2012-05-18 15:00:00' and '2012-05-18 21:45:00' OR
Time_Stamp between '2012-05-19 11:15:00' and '2012-05-19 23:30:00' OR
Time_Stamp between '2012-05-20 09:00:00' and '2012-05-20 23:59:00' OR
Time_Stamp between '2012-05-21 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00';
/* Affected rows: 53,015  Found rows: 0  Warnings: 0  Duration for 1 query: 4.656 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με`= NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-28 08:15:00' and '2012-05-28 09:00:00' OR
Time_Stamp between '2012-05-29 07:30:00' and '2012-05-29 08:45:00' OR
Time_Stamp between '2012-05-30 08:00:00' and '2012-05-30 08:30:00' OR
Time_Stamp between '2012-05-31 05:30:00' and '2012-05-31 06:00:00';
/* Affected rows: 1,006  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1A_mV/V` = NULL,
`Calculated_Strain_1A_με` = NULL,
`Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL,
`Raw_Strain_1C_mV/V` = NULL,
`Calculated_Strain_1C_με` = NULL,
`Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
```

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`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL,
`Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL,
`Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL
where Time_Stamp between '2012-05-25 00:00:00' and '2012-05-25 14:15:00';
/* Affected rows: 828  Found rows: 0  Warnings: 0  Duration for 1 query: 0.859 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5A_mV/V` = NULL,
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`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-04-19 00:00:00' and '2012-05-06 23:59:00';
/* Affected rows: 25,919  Found rows: 0  Warnings: 0  Duration for 1 query: 5.266 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.453 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-05-10 00:00:00' and '2012-05-14 23:59:00';
/* Affected rows: 7,200  Found rows: 0  Warnings: 0  Duration for 1 query: 2.203 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2C_mV/V` = NULL,
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`Calculated_Strain_2C_με` = NULL,
`Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL,
`Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-05-19 00:00:00' and '2012-05-24 23:59:00';
/* Affected rows: 8,640  Found rows: 0  Warnings: 0  Duration for 1 query: 2.875 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2012-05-05 15:03:00' and '2012-06-05 15:03:00' OR
Time_Stamp between '2012-06-07 15:22:00' and '2012-06-07 15:22:00' OR
Time_Stamp between '2012-06-12 16:49:00' and '2012-06-12 16:49:00' OR
Time_Stamp between '2012-06-12 17:56:00' and '2012-06-12 17:56:00' OR
Time_Stamp between '2012-06-13 20:44:00' and '2012-06-13 20:44:00' OR
Time_Stamp between '2012-06-17 17:46:00' and '2012-06-17 17:46:00' OR
Time_Stamp between '2012-06-18 06:26:00' and '2012-06-18 06:26:00' OR
Time_Stamp between '2012-06-18 21:24:00' and '2012-06-18 21:24:00' OR
Time_Stamp between '2012-06-20 01:30:00' and '2012-06-20 01:30:00' OR
Time_Stamp between '2012-06-30 05:48:00' and '2012-06-30 05:48:00' OR
Time_Stamp between '2012-07-03 05:14:00' and '2012-07-03 05:14:00' OR
Time_Stamp between '2012-07-04 12:34:00' and '2012-07-04 12:34:00' OR
Time_Stamp between '2012-07-06 19:04:00' and '2012-07-06 19:04:00' OR
Time_Stamp between '2012-07-09 00:23:00' and '2012-07-09 00:23:00' OR
Time_Stamp between '2012-07-09 17:37:00' and '2012-07-09 17:37:00' OR
Time_Stamp between '2012-07-11 23:55:00' and '2012-07-11 23:55:00' OR
Time_Stamp between '2012-07-12 06:28:00' and '2012-07-12 06:28:00' OR
Time_Stamp between '2012-07-16 04:03:00' and '2012-07-16 04:03:00' OR
Time_Stamp between '2012-07-16 04:58:00' and '2012-07-16 04:58:00' OR
Time_Stamp between '2012-07-16 06:36:00' and '2012-07-16 06:36:00' OR
Time_Stamp between '2012-07-16 11:24:00' and '2012-07-16 11:24:00' OR
Time_Stamp between '2012-07-16 14:25:00' and '2012-07-16 14:25:00' OR
Time_Stamp between '2012-07-16 18:40:00' and '2012-07-16 18:40:00' OR
Time_Stamp between '2012-07-16 20:43:00' and '2012-07-16 20:43:00' OR
Time_Stamp between '2012-07-16 21:20:00' and '2012-07-16 21:20:00' OR
Time_Stamp between '2012-07-17 02:47:00' and '2012-07-17 02:47:00' OR
Time_Stamp between '2012-07-17 06:34:00' and '2012-07-17 06:34:00' OR
Time_Stamp between '2012-07-17 16:06:00' and '2012-07-17 16:06:00' OR
Time_Stamp between '2012-07-20 12:21:00' and '2012-07-20 12:21:00' OR
Time_Stamp between '2012-07-20 16:09:00' and '2012-07-20 16:09:00' OR
Time_Stamp between '2012-07-20 01:31:00' and '2012-07-20 01:31:00' OR
Time_Stamp between '2012-07-23 05:17:00' and '2012-07-23 05:17:00' OR
Time_Stamp between '2012-07-23 09:53:00' and '2012-07-23 09:53:00' OR
Time_Stamp between '2012-07-25 05:28:00' and '2012-07-25 05:28:00' OR
Time_Stamp between '2012-07-25 08:25:00' and '2012-07-25 08:25:00' OR
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Time_Stamp between '2012-07-25 08:34:00' and '2012-07-25 08:34:00' OR
Time_Stamp between '2012-07-25 09:08:00' and '2012-07-25 09:08:00' OR
Time_Stamp between '2012-07-27 09:00:00' and '2012-07-27 09:00:00' OR
Time_Stamp between '2012-09-20 08:47:00' and '2012-09-20 08:47:00' OR
Time_Stamp between '2012-09-25 09:07:00' and '2012-07-25 09:07:00' OR
Time_Stamp between '2012-09-29 13:25:00' and '2012-09-29 13:25:00' OR
Time_Stamp between '2012-10-05 08:09:00' and '2012-10-05 08:09:00' OR
Time_Stamp between '2012-10-06 08:38:00' and '2012-10-06 08:38:00' OR
Time_Stamp between '2012-10-09 09:11:00' and '2012-10-09 09:11:00' OR
Time_Stamp between '2012-10-10 08:19:00' and '2012-10-10 08:19:00' OR
Time_Stamp between '2012-10-11 07:45:00' and '2012-10-11 11:45:00' OR
Time_Stamp between '2012-10-13 01:58:00' and '2012-10-13 01:58:00' OR
Time_Stamp between '2012-10-13 10:27:00' and '2012-10-13 10:27:00' OR
Time_Stamp between '2012-10-14 16:21:00' and '2012-10-14 16:21:00' OR
Time_Stamp between '2012-10-15 21:48:00' and '2012-10-15 21:48:00' OR
Time_Stamp between '2012-10-16 01:25:00' and '2012-10-16 01:25:00' OR
Time_Stamp between '2012-10-16 23:01:00' and '2012-10-16 23:01:00' OR
Time_Stamp between '2012-10-17 09:12:00' and '2012-10-17 09:12:00' OR
Time_Stamp between '2012-10-18 04:53:00' and '2012-10-18 04:53:00' OR
Time_Stamp between '2012-10-19 08:18:00' and '2012-10-19 08:18:00' OR
Time_Stamp between '2012-10-21 05:03:00' and '2012-10-21 05:03:00' OR
Time_Stamp between '2012-10-22 04:30:00' and '2012-10-22 06:00:00' OR
Time_Stamp between '2012-10-23 02:00:00' and '2012-10-23 03:30:00' OR
Time_Stamp between '2012-10-24 00:00:00' and '2012-10-24 23:59:00' OR
Time_Stamp between '2012-10-25 03:33:00' and '2012-10-25 03:33:00' OR
Time_Stamp between '2012-10-25 16:00:00' and '2012-10-25 16:00:00' OR
Time_Stamp between '2012-10-25 17:09:00' and '2012-10-25 17:09:00' OR
Time_Stamp between '2012-10-27 15:24:00' and '2012-10-27 15:24:00' OR
Time_Stamp between '2012-11-01 23:09:00' and '2012-11-01 23:09:00' OR
Time_Stamp between '2012-11-02 12:52:00' and '2012-11-02 12:52:00' OR
Time_Stamp between '2012-11-02 16:25:00' and '2012-11-02 16:25:00' OR
Time_Stamp between '2012-11-02 23:53:00' and '2012-11-02 23:53:00' OR
Time_Stamp between '2012-11-03 02:07:00' and '2012-11-03 02:07:00' OR
Time_Stamp between '2012-11-03 07:10:00' and '2012-11-03 07:10:00' OR
Time_Stamp between '2012-11-07 16:34:00' and '2012-11-07 16:34:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 14:00:00';
/* Affected rows: 24,195  Found rows: 0  Warnings: 0  Duration for 1 query: 3.688 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2013-02-08 11:16:00' and '2013-02-08 11:16:00' OR
Time_Stamp between '2013-02-08 12:44:00' and '2013-02-08 12:44:00' OR
Time_Stamp between '2013-02-09 09:07:00' and '2013-02-09 09:07:00' OR
Time_Stamp between '2013-02-09 09:27:00' and '2013-02-09 09:27:00' OR
Time_Stamp between '2013-02-09 09:31:00' and '2013-02-09 09:32:00' OR
Time_Stamp between '2013-02-09 09:37:00' and '2013-02-09 09:37:00' OR
Time_Stamp between '2013-02-09 09:40:00' and '2013-02-09 09:40:00' OR
Time_Stamp between '2013-02-09 11:04:00' and '2013-02-09 11:04:00' OR
Time_Stamp between '2013-02-09 11:14:00' and '2013-02-09 11:14:00' OR
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Time_Stamp between '2013-02-12 17:05:00' and '2013-02-12 17:05:00' OR
Time_Stamp between '2013-02-12 18:02:00' and '2013-02-12 18:03:00' OR
Time_Stamp between '2013-02-12 18:40:00' and '2013-02-12 18:40:00' OR
Time_Stamp between '2013-02-12 18:44:00' and '2013-02-12 18:44:00' OR
Time_Stamp between '2013-02-12 19:12:00' and '2013-02-12 19:12:00' OR
Time_Stamp between '2013-03-04 01:21:00' and '2013-03-04 01:21:00' OR
Time_Stamp between '2013-03-12 12:26:00' and '2013-03-12 12:26:00' OR
Time_Stamp between '2013-03-18 19:15:00' and '2013-03-18 19:15:00' OR
Time_Stamp between '2013-03-27 14:11:00' and '2013-03-27 14:11:00' OR
Time_Stamp between '2013-03-28 21:19:00' and '2013-03-28 21:19:00' OR
Time_Stamp between '2013-03-29 13:23:00' and '2013-03-29 13:23:00' OR
Time_Stamp between '2013-03-29 13:36:00' and '2013-03-29 13:36:00' OR
Time_Stamp between '2013-03-29 19:35:00' and '2013-03-29 20:09:00' OR
Time_Stamp between '2013-03-30 07:10:00' and '2013-03-30 07:10:00' OR
Time_Stamp between '2013-03-30 13:51:00' and '2013-03-30 13:51:00' OR
Time_Stamp between '2013-03-31 05:36:00' and '2013-03-31 05:36:00' OR
Time_Stamp between '2013-03-31 07:11:00' and '2013-03-31 07:11:00' OR
Time_Stamp between '2013-03-31 12:22:00' and '2013-03-31 12:22:00' OR
Time_Stamp between '2013-04-02 02:22:00' and '2013-04-02 02:22:00' OR
Time_Stamp between '2013-04-02 18:21:00' and '2013-04-02 18:21:00' OR
Time_Stamp between '2013-04-02 20:21:00' and '2013-04-02 20:21:00' OR
Time_Stamp between '2013-04-04 15:23:00' and '2013-04-04 15:23:00' OR
Time_Stamp between '2013-04-04 15:44:00' and '2013-04-04 15:44:00' OR
Time_Stamp between '2013-04-04 20:36:00' and '2013-04-04 20:36:00' OR
Time_Stamp between '2013-04-05 16:43:00' and '2013-04-05 16:43:00' OR
Time_Stamp between '2013-04-06 14:37:00' and '2013-04-06 14:37:00' OR
Time_Stamp between '2013-04-06 15:23:00' and '2013-04-06 15:23:00' OR
Time_Stamp between '2013-04-06 20:34:00' and '2013-04-06 20:34:00' OR
Time_Stamp between '2013-04-07 19:47:00' and '2013-04-07 19:47:00' OR
Time_Stamp between '2013-04-07 21:59:00' and '2013-04-07 21:59:00' OR
Time_Stamp between '2013-04-13 00:48:00' and '2013-04-13 00:48:00' OR
Time_Stamp between '2013-04-13 17:28:00' and '2013-04-13 17:28:00' OR
Time_Stamp between '2013-04-13 17:41:00' and '2013-04-13 17:41:00' OR
Time_Stamp between '2013-04-13 19:16:00' and '2013-04-13 19:16:00' OR
Time_Stamp between '2013-04-14 17:45:00' and '2013-04-14 17:45:00' OR
Time_Stamp between '2013-04-15 10:54:00' and '2013-04-15 10:54:00' OR
Time_Stamp between '2013-04-16 12:38:00' and '2013-04-16 12:38:00' OR
Time_Stamp between '2013-04-16 23:10:00' and '2013-04-16 23:10:00' OR
Time_Stamp between '2013-04-19 22:32:00' and '2013-04-19 22:32:00' OR
Time_Stamp between '2013-04-20 07:04:00' and '2013-04-20 07:04:00' OR
Time_Stamp between '2013-04-20 10:53:00' and '2013-04-20 10:53:00' OR
Time_Stamp between '2013-04-21 14:17:00' and '2013-04-21 14:17:00' OR
Time_Stamp between '2013-04-21 17:38:00' and '2013-04-21 17:38:00' OR
Time_Stamp between '2013-04-24 00:50:00' and '2013-04-24 00:50:00' OR
Time_Stamp between '2013-04-25 07:17:00' and '2013-04-25 07:17:00' OR
Time_Stamp between '2013-04-25 12:09:00' and '2013-04-25 12:09:00' OR
Time_Stamp between '2013-04-25 16:45:00' and '2013-04-25 16:45:00' OR
Time_Stamp between '2013-04-26 01:33:00' and '2013-04-26 01:33:00' OR
Time_Stamp between '2013-04-26 22:13:00' and '2013-04-26 22:13:00' OR
Time_Stamp between '2013-04-27 03:27:00' and '2013-04-27 03:27:00' OR
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Time_Stamp between '2013-04-27 06:46:00' and '2013-04-27 06:46:00' OR
Time_Stamp between '2013-04-27 14:15:00' and '2013-04-27 14:15:00' OR
Time_Stamp between '2013-04-27 21:07:00' and '2013-04-27 21:07:00' OR
Time_Stamp between '2013-04-28 00:25:00' and '2013-04-28 00:25:00' OR
Time_Stamp between '2013-04-28 13:58:00' and '2013-04-28 13:58:00' OR
Time_Stamp between '2013-04-28 22:15:00' and '2013-04-28 22:15:00' OR
Time_Stamp between '2013-04-29 06:36:00' and '2013-04-29 06:36:00' OR
Time_Stamp between '2013-04-29 18:59:00' and '2013-04-29 18:59:00' OR
Time_Stamp between '2013-04-29 21:38:00' and '2013-04-29 21:38:00' OR
Time_Stamp between '2013-04-30 03:37:00' and '2013-04-30 03:37:00' OR
Time_Stamp between '2013-04-30 21:38:00' and '2013-04-30 21:38:00' OR
Time_Stamp between '2013-05-01 00:40:00' and '2013-05-01 00:40:00' OR
Time_Stamp between '2013-05-01 11:44:00' and '2013-05-01 11:44:00' OR
Time_Stamp between '2013-05-01 18:47:00' and '2013-05-01 18:47:00' OR
Time_Stamp between '2013-05-02 00:00:00' and '2013-05-02 23:59:00' OR
Time_Stamp between '2013-05-03 20:34:00' and '2013-05-03 20:34:00' OR
Time_Stamp between '2013-05-04 21:48:00' and '2013-05-04 21:48:00' OR
Time_Stamp between '2013-05-05 02:26:00' and '2013-05-05 02:26:00' OR
Time_Stamp between '2013-05-05 22:53:00' and '2013-05-05 22:53:00' OR
Time_Stamp between '2013-05-05 23:09:00' and '2013-05-05 23:09:00' OR
Time_Stamp between '2013-05-06 16:08:00' and '2013-05-06 16:08:00' OR
Time_Stamp between '2013-05-06 20:02:00' and '2013-05-06 20:02:00' OR
Time_Stamp between '2013-05-07 09:18:00' and '2013-05-07 09:18:00' OR
Time_Stamp between '2013-05-07 09:51:00' and '2013-05-07 09:51:00' OR
Time_Stamp between '2013-05-09 09:21:00' and '2013-05-09 09:21:00' OR
Time_Stamp between '2013-05-09 22:27:00' and '2013-05-09 22:27:00' OR
Time_Stamp between '2013-05-10 10:09:00' and '2013-05-10 10:09:00' OR
Time_Stamp between '2013-05-11 14:28:00' and '2013-05-11 14:28:00' OR
Time_Stamp between '2013-05-12 09:25:00' and '2013-05-12 09:25:00' OR
Time_Stamp between '2013-05-13 18:20:00' and '2013-05-13 18:20:00' OR
Time_Stamp between '2013-05-14 11:01:00' and '2013-05-14 11:01:00' OR
Time_Stamp between '2013-05-14 11:49:00' and '2013-05-14 11:49:00' OR
Time_Stamp between '2013-05-14 18:26:00' and '2013-05-14 18:26:00' OR
Time_Stamp between '2013-05-16 05:16:00' and '2013-05-16 05:16:00' OR
Time_Stamp between '2013-05-16 13:15:00' and '2013-05-16 13:15:00' OR
Time_Stamp between '2013-05-16 13:27:00' and '2013-05-16 13:27:00' OR
Time_Stamp between '2013-05-16 13:44:00' and '2013-05-16 13:44:00' OR
Time_Stamp between '2013-05-17 05:47:00' and '2013-05-17 05:47:00' OR
Time_Stamp between '2013-05-17 06:53:00' and '2013-05-17 06:53:00' OR
Time_Stamp between '2013-05-17 21:12:00' and '2013-05-17 21:12:00' OR
Time_Stamp between '2013-05-18 04:30:00' and '2013-05-18 04:30:00' OR
Time_Stamp between '2013-05-18 06:18:00' and '2013-05-18 06:18:00' OR
Time_Stamp between '2013-05-18 23:11:00' and '2013-05-18 23:11:00' OR
Time_Stamp between '2013-05-19 02:08:00' and '2013-05-19 02:08:00' OR
Time_Stamp between '2013-05-19 20:26:00' and '2013-05-19 20:26:00' OR
Time_Stamp between '2013-05-19 20:22:00' and '2013-05-19 20:22:00' OR
Time_Stamp between '2013-05-20 00:54:00' and '2013-05-20 00:54:00' OR
Time_Stamp between '2013-05-21 18:46:00' and '2013-05-21 18:46:00' OR
Time_Stamp between '2013-05-22 00:47:00' and '2013-05-22 00:47:00' OR
Time_Stamp between '2013-05-22 09:28:00' and '2013-05-22 09:28:00' OR
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Time_Stamp between '2013-05-22 10:45:00' and '2013-05-22 10:45:00' OR
Time_Stamp between '2013-05-22 11:50:00' and '2013-05-22 11:50:00' OR
Time_Stamp between '2013-05-22 20:12:00' and '2013-05-22 20:12:00' OR
Time_Stamp between '2013-06-07 19:50:00' and '2013-06-07 19:50:00' OR
Time_Stamp between '2013-06-08 10:48:00' and '2013-06-08 10:48:00' OR
Time_Stamp between '2013-06-09 01:16:00' and '2013-06-09 01:16:00' OR
Time_Stamp between '2013-06-09 02:53:00' and '2013-06-09 02:53:00' OR
Time_Stamp between '2013-06-09 03:40:00' and '2013-06-09 03:40:00' OR
Time_Stamp between '2013-06-14 12:58:00' and '2013-06-14 12:58:00' OR
Time_Stamp between '2013-06-14 18:22:00' and '2013-06-14 18:22:00' OR
Time_Stamp between '2013-06-14 20:33:00' and '2013-06-14 20:33:00' OR
Time_Stamp between '2013-06-15 09:10:00' and '2013-06-15 09:10:00' OR
Time_Stamp between '2013-06-15 11:21:00' and '2013-06-15 11:21:00' OR
Time_Stamp between '2013-06-16 05:36:00' and '2013-06-16 05:36:00' OR
Time_Stamp between '2013-06-16 22:06:00' and '2013-06-16 22:06:00' OR
Time_Stamp between '2013-06-16 22:55:00' and '2013-06-16 22:55:00' OR
Time_Stamp between '2013-06-21 21:43:00' and '2013-06-21 21:43:00' OR
Time_Stamp between '2013-06-21 22:00:00' and '2013-06-21 22:00:00' OR
Time_Stamp between '2013-06-22 09:46:00' and '2013-06-22 09:46:00' OR
Time_Stamp between '2013-06-22 12:31:00' and '2013-06-22 12:31:00' OR
Time_Stamp between '2013-06-23 02:11:00' and '2013-06-23 02:11:00' OR
Time_Stamp between '2013-06-23 03:12:00' and '2013-06-23 03:12:00' OR
Time_Stamp between '2013-06-23 12:49:00' and '2013-06-23 12:49:00' OR
Time_Stamp between '2013-06-24 22:34:00' and '2013-06-24 22:34:00' OR
Time_Stamp between '2013-06-25 01:25:00' and '2013-06-25 01:25:00' OR
Time_Stamp between '2013-06-29 12:13:00' and '2013-06-29 12:13:00' OR
Time_Stamp between '2013-06-29 12:59:00' and '2013-06-29 12:59:00' OR
Time_Stamp between '2013-06-29 15:18:00' and '2013-06-29 15:18:00' OR
Time_Stamp between '2013-06-30 03:29:00' and '2013-06-30 03:29:00';
/* Affected rows: 1,570  Found rows: 0  Warnings: 0  Duration for 1 query: 2.531 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2013-07-01 04:10:00' and '2013-07-01 04:10:00' OR
Time_Stamp between '2013-07-01 07:04:00' and '2013-07-01 07:04:00' OR
Time_Stamp between '2013-07-01 10:19:00' and '2013-07-01 10:19:00' OR
Time_Stamp between '2013-07-03 22:34:00' and '2013-07-03 22:34:00' OR
Time_Stamp between '2013-07-04 13:26:00' and '2013-07-04 13:26:00' OR
Time_Stamp between '2013-07-04 14:21:00' and '2013-07-04 14:21:00' OR
Time_Stamp between '2013-07-05 03:49:00' and '2013-07-05 03:49:00' OR
Time_Stamp between '2013-07-07 19:15:00' and '2013-07-07 19:15:00' OR
Time_Stamp between '2013-07-09 00:42:00' and '2013-07-09 00:42:00' OR
Time_Stamp between '2013-07-09 10:51:00' and '2013-07-09 10:51:00' OR
Time_Stamp between '2013-07-09 22:27:00' and '2013-07-09 22:27:00' OR
Time_Stamp between '2013-07-10 08:44:00' and '2013-07-10 08:44:00' OR
Time_Stamp between '2013-07-10 12:12:00' and '2013-07-10 12:12:00' OR
Time_Stamp between '2013-07-10 13:28:00' and '2013-07-10 13:28:00' OR
Time_Stamp between '2013-07-12 11:37:00' and '2013-07-12 11:37:00' OR
Time_Stamp between '2013-07-12 15:21:00' and '2013-07-12 15:21:00' OR
```

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Time_Stamp between '2013-07-13 03:34:00' and '2013-07-13 03:34:00' OR
Time_Stamp between '2013-07-14 06:45:00' and '2013-07-14 06:45:00' OR
Time_Stamp between '2013-07-14 07:15:00' and '2013-07-14 07:15:00' OR
Time_Stamp between '2013-07-17 23:53:00' and '2013-07-17 23:53:00';
/* Affected rows: 20  Found rows: 0  Warnings: 0  Duration for 1 query: 1.422 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με` = NULL
where Time_Stamp between '2014-02-17 00:00:00' and '2014-02-17 23:59:00';
/* Affected rows: 361  Found rows: 0  Warnings: 0  Duration for 1 query: 0.547 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2014-05-07 04:25:00' and '2014-05-07 06:00:00';
/* Affected rows: 96  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V` = NULL,
`Calculated_Strain_2B_με` = NULL,
`Raw_Strain_2C_mV/V` = NULL,
`Calculated_Strain_2C_με` = NULL
where Time_Stamp between '2014-05-27 20:00:00' and '2014-05-27 21:15:00' OR
Time_Stamp between '2014-05-28 08:56:00' and '2014-05-28 09:50:00' OR
Time_Stamp between '2014-05-31 19:46:00' and '2014-05-31 19:46:00';
/* Affected rows: 132  Found rows: 0  Warnings: 0  Duration for 1 query: 0.156 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2014-06-07 04:54:00' and '2014-06-07 05:32:00';
/* Affected rows: 39  Found rows: 0  Warnings: 0  Duration for 1 query: 0.188 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2014-06-17 05:28:00' and '2014-06-17 05:46:00' OR
Time_Stamp between '2014-06-17 18:25:00' and '2014-06-17 18:35:00';
/* Affected rows: 30  Found rows: 0  Warnings: 0  Duration for 1 query: 0.172 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2014-06-18 10:52:00' and '2014-06-18 10:53:00';
/* Affected rows: 2  Found rows: 0  Warnings: 0  Duration for 1 query: 0.093 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με` = NULL,
`Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με`= NULL,
`Raw_Strain_2C_mV/V`= NULL,
`Calculated_Strain_2C_με`= NULL,
`Raw_Strain_3A_mV/V`= NULL,
`Calculated_Strain_3A_με` = NULL,
`Surf_Temp_3_ºC`= NULL,
`Surf_Temp_1'_°C`= NULL
where Time_Stamp between '2014-08-01 00:00:00' and '2014-08-01 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 2.438 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με`= NULL
where Time_Stamp between '2014-09-04 18:26:00' and '2014-09-04 18:26:00' OR
Time_Stamp between '2014-09-04 20:50:00' and '2014-09-04 20:50:00' OR
Time_Stamp between '2014-09-05 06:19:00' and '2014-09-05 06:19:00' OR
Time_Stamp between '2014-09-05 07:30:00' and '2014-09-05 07:30:00' OR
Time_Stamp between '2014-09-05 09:06:00' and '2014-09-05 09:06:00' OR
Time_Stamp between '2014-09-05 09:56:00' and '2014-09-05 09:56:00' OR
Time_Stamp between '2014-09-06 09:03:00' and '2014-09-06 09:04:00' OR
Time_Stamp between '2014-09-06 09:11:00' and '2014-09-06 09:11:00' OR
Time_Stamp between '2014-09-06 09:26:00' and '2014-09-06 09:26:00' OR
Time_Stamp between '2014-09-07 11:56:00' and '2014-09-07 11:56:00' OR
Time_Stamp between '2014-09-13 12:25:00' and '2014-09-13 12:25:00';
/* Affected rows: 12  Found rows: 0  Warnings: 0  Duration for 1 query: 0.234 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V`= NULL,
`Calculated_Strain_2A_με`= NULL,
`Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με`= NULL,
`Raw_Strain_2C_mV/V`= NULL,
`Calculated_Strain_2C_με`= NULL
where Time_Stamp between '2013-05-02 18:26:00' and '2013-05-02 18:26:00';
/* Affected rows: 12  Found rows: 0  Warnings: 0  Duration for 1 query: 0.234 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με`= NULL
where Time_Stamp between '2013-04-22 10:09:00' and '2013-04-22 10:09:00' OR
Time_Stamp between '2013-04-23 18:43:00' and '2013-04-23 18:43:00';
/* Affected rows: 2  Found rows: 0  Warnings: 0  Duration for 1 query: 0.141 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2B_mV/V`= NULL,
`Calculated_Strain_2B_με`= NULL
```

```
where Time_Stamp between '2011-10-29 09:30:00' and '2011-10-29 09:30:00' OR
Time_Stamp between '2011-10-29 12:30:00' and '2011-10-29 12:30:00' OR
Time_Stamp between '2011-10-29 16:18:00' and '2011-10-29 16:18:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2C_mV/V`= NULL,
`Calculated_Strain_2C_με`= NULL
where Time_Stamp between '2012-02-18 12:45:00' and '2012-02-18 21:30:00' OR
Time_Stamp between '2012-02-19 10:45:00' and '2012-02-19 20:30:00' OR
Time_Stamp between '2012-02-23 00:00:00' and '2012-02-23 23:59:00' OR
Time_Stamp between '2012-03-03 07:00:00' and '2012-00-03 07:30:00' OR
Time_Stamp between '2012-02-23 00:00:00' and '2012-02-23 23:59:00' OR
Time_Stamp between '2012-04-06 19:00:00' and '2012-04-06 19:15:00' OR
Time_Stamp between '2012-04-08 20:00:00' and '2012-04-08 20:15:00' OR
Time_Stamp between '2012-04-09 00:00:00' and '2012-04-19 23:59:00' OR
Time_Stamp between '2012-05-08 00:00:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-17 11:00:00' and '2012-05-17 23:59:00' OR
Time_Stamp between '2012-05-18 08:45:00' and '2012-05-18 23:59:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 14:00:00';
/* Affected rows: 21,724  Found rows: 0  Warnings: 0  Duration for 1 query: 10.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_2_ºC`= NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:30:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-09 14:45:00' and '2012-11-09 17:00:00' OR
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00' OR
Time_Stamp between '2012-11-19 05:00:00' and '2012-11-19 12:30:00' OR
Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
Time_Stamp between '2012-11-22 00:00:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 01:15:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2012-12-30 23:59:00' OR
Time_Stamp between '2013-01-01 00:00:00' and '2013-01-02 23:59:00' OR
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Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 14:00:00' OR
Time_Stamp between '2014-01-17 06:28:00' and '2014-01-17 06:28:00' OR
Time_Stamp between '2014-01-17 12:41:00' and '2014-01-17 12:41:00' OR
Time_Stamp between '2014-02-01 00:00:00' and '2014-02-01 23:59:00' OR
Time_Stamp between '2014-02-02 00:00:00' and '2014-02-02 07:00:00' OR
Time_Stamp between '2014-02-02 19:00:00' and '2014-02-02 23:59:00' OR
Time_Stamp between '2014-02-03 00:00:00' and '2014-02-08 23:59:00' OR
Time_Stamp between '2014-02-09 00:00:00' and '2014-02-09 12:00:00' OR
Time_Stamp between '2014-02-10 00:00:00' and '2014-02-11 23:59:00' OR
Time_Stamp between '2014-02-12 00:00:00' and '2014-02-12 03:00:00' OR
Time_Stamp between '2014-02-12 18:00:00' and '2014-02-12 23:59:00' OR
Time_Stamp between '2014-02-13 00:00:00' and '2014-02-16 23:59:00' OR
Time_Stamp between '2014-07-06 05:28:00' and '2014-07-06 05:28:00' OR
Time_Stamp between '2014-07-06 08:21:00' and '2014-07-06 08:21:00' OR
Time_Stamp between '2014-07-06 08:42:00' and '2014-07-06 08:42:00' OR
Time_Stamp between '2014-07-06 09:04:00' and '2014-07-06 11:49:00' OR
Time_Stamp between '2014-07-06 22:07:00' and '2014-07-06 23:59:00' OR
Time_Stamp between '2014-07-07 00:00:00' and '2014-07-08 23:59:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-07-12 23:59:00' OR
Time_Stamp between '2014-07-13 10:00:00' and '2014-07-13 10:06:00' OR
Time_Stamp between '2014-07-13 15:33:00' and '2014-07-13 15:36:00' OR
Time_Stamp between '2014-07-14 20:20:00' and '2014-07-14 20:34:00' OR
Time_Stamp between '2014-07-15 00:00:00' and '2014-07-20 23:59:00' OR
Time_Stamp between '2014-07-21 00:00:00' and '2014-07-21 09:15:00' OR
Time_Stamp between '2014-07-22 00:00:00' and '2014-07-23 23:59:00' OR
Time_Stamp between '2014-07-24 08:32:00' and '2014-07-24 08:32:00' OR
Time_Stamp between '2014-07-25 04:51:00' and '2014-07-25 06:38:00' OR
Time_Stamp between '2014-07-26 00:00:00' and '2014-07-26 23:59:00';
/* Affected rows: 85,274  Found rows: 0  Warnings: 0  Duration for 1 query: 37.234 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V`= NULL,
`Calculated_Strain_3A_με`= NULL
where Time_Stamp between '2012-01-02 04:30:00' and '2012-01-02 06:41:00' OR
Time_Stamp between '2012-01-10 00:00:00' and '2012-01-10 00:30:00' OR
Time_Stamp between '2012-01-12 05:30:00' and '2012-01-12 05:45:00' OR
Time_Stamp between '2012-01-18 02:00:00' and '2012-01-18 02:15:00' OR
Time_Stamp between '2012-01-28 03:45:00' and '2012-01-28 04:15:00';
/* Affected rows: 226  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V`= NULL,
`Calculated_Strain_3A_με`= NULL,
`Raw_Strain_3B_mV/V_`= NULL,
`Calculated_Strain_3B_με`= NULL
where Time_Stamp between '2012-02-06 07:30:00' and '2012-02-06 07:45:00' OR
Time_Stamp between '2012-02-07 04:30:00' and '2012-02-07 05:00:00' OR
Time_Stamp between '2012-02-08 04:30:00' and '2012-02-08 05:00:00' OR
Time_Stamp between '2012-02-10 03:45:00' and '2012-02-10 04:15:00' OR
Time_Stamp between '2012-02-11 05:45:00' and '2012-02-11 06:30:00' OR
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Time_Stamp between '2012-02-15 06:15:00' and '2012-02-15 07:00:00' OR
Time_Stamp between '2012-02-16 06:45:00' and '2012-02-16 07:15:00' OR
Time_Stamp between '2012-02-21 01:15:00' and '2012-02-21 01:45:00' OR
Time_Stamp between '2012-04-11 00:00:00' and '2012-04-12 23:59:00' OR
Time_Stamp between '2012-04-16 00:00:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-08 00:00:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-17 00:00:00' and '2012-05-18 23:59:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2013-07-13 00:00:00' and '2013-07-13 04:44:00' OR
Time_Stamp between '2014-02-10 00:00:00' and '2014-02-10 23:59:00' OR
Time_Stamp between '2014-03-05 00:00:00' and '2014-03-05 23:59:00' OR
Time_Stamp between '2014-03-11 00:00:00' and '2014-03-12 23:59:00' OR
Time_Stamp between '2014-03-16 00:00:00' and '2014-03-16 23:59:00' OR
Time_Stamp between '2014-03-27 00:00:00' and '2014-03-28 23:59:00' OR
Time_Stamp between '2014-04-02 00:00:00' and '2014-04-02 23:59:00' OR
Time_Stamp between '2014-04-15 00:00:00' and '2014-04-15 23:59:00' OR
Time_Stamp between '2014-04-24 00:00:00' and '2014-04-24 23:59:00' OR
Time_Stamp between '2014-05-05 00:00:00' and '2014-05-05 23:59:00' OR
Time_Stamp between '2014-05-08 00:00:00' and '2014-05-09 23:59:00' OR
Time_Stamp between '2014-05-14 00:00:00' and '2014-05-15 23:59:00';
/* Affected rows: 35,184  Found rows: 0  Warnings: 0  Duration for 1 query: 8.969 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V`= NULL,
`Calculated_Strain_3A_με`= NULL
where Time_Stamp between '2012-03-10 16:30:00' and '2012-03-10 23:59:00' OR
Time_Stamp between '2012-03-11 00:00:00' and '2012-03-15 23:59:00' OR
Time_Stamp between '2012-03-16 18:30:00' and '2012-03-16 22:15:00' OR
Time_Stamp between '2012-03-17 19:00:00' and '2012-03-17 23:59:00' OR
Time_Stamp between '2012-03-18 00:00:00' and '2012-03-18 10:01:00' OR
Time_Stamp between '2012-03-21 19:00:00' and '2012-03-21 19:45:00' OR
Time_Stamp between '2012-03-22 00:00:00' and '2012-03-23 23:59:00' OR
Time_Stamp between '2012-03-24 00:00:00' and '2012-03-24 10:00:00' OR
Time_Stamp between '2012-03-24 17:30:00' and '2012-03-24 23:59:00' OR
Time_Stamp between '2012-03-25 00:00:00' and '2012-03-26 23:59:00' OR
Time_Stamp between '2012-03-27 00:00:00' and '2012-03-27 00:30:00' OR
Time_Stamp between '2012-03-27 18:00:00' and '2012-03-27 23:59:00' OR
Time_Stamp between '2012-03-28 00:00:00' and '2012-04-01 23:59:00' OR
Time_Stamp between '2012-04-02 00:00:00' and '2012-04-02 12:45:00' OR
Time_Stamp between '2012-04-03 00:00:00' and '2012-04-03 19:00:00' OR
Time_Stamp between '2012-04-04 00:00:00' and '2012-04-10 23:59:00' OR
Time_Stamp between '2012-04-13 00:00:00' and '2012-04-15 23:59:00' OR
Time_Stamp between '2012-05-16 13:15:00' and '2012-05-16 20:15:00' OR
Time_Stamp between '2012-11-10 06:00:00' and '2012-11-10 08:30:00' OR
Time_Stamp between '2012-12-25 07:22:00' and '2012-12-25 07:22:00' OR
Time_Stamp between '2012-12-25 11:30:00' and '2012-12-25 11:45:00' OR
Time_Stamp between '2012-12-30 10:30:00' and '2012-12-30 12:00:00' OR
Time_Stamp between '2012-12-30 19:00:00' and '2012-12-30 23:59:00' OR
Time_Stamp between '2012-12-31 00:00:00' and '2012-12-31 02:00:00' OR
Time_Stamp between '2013-02-28 00:00:00' and '2013-02-28 07:25:00' OR
```

```
Time_Stamp between '2013-02-28 18:52:00' and '2013-02-28 23:59:00' OR
Time_Stamp between '2013-03-01 00:00:00' and '2013-03-01 06:00:00' OR
Time_Stamp between '2013-03-01 09:00:00' and '2013-03-01 13:00:00' OR
Time_Stamp between '2013-03-01 19:00:00' and '2013-03-01 23:59:00' OR
Time_Stamp between '2013-03-21 01:50:00' and '2013-03-21 03:20:00' OR
Time_Stamp between '2013-05-03 20:31:00' and '2013-05-03 20:41:00' OR
Time_Stamp between '2013-05-22 16:46:00' and '2013-05-22 20:58:00' OR
Time_Stamp between '2013-06-08 14:42:00' and '2013-06-08 21:26:00' OR
Time_Stamp between '2013-06-16 14:33:00' and '2013-06-16 21:13:00' OR
Time_Stamp between '2013-06-24 15:43:00' and '2013-06-24 19:00:00' OR
Time_Stamp between '2013-06-30 16:40:00' and '2013-06-30 17:57:00' OR
Time_Stamp between '2013-07-01 14:49:00' and '2013-07-01 19:45:00' OR
Time_Stamp between '2013-07-10 17:44:00' and '2013-07-10 18:25:00' OR
Time_Stamp between '2013-07-10 21:08:00' and '2013-07-10 21:08:00' OR
Time_Stamp between '2013-07-10 22:10:00' and '2013-07-10 22:10:00' OR
Time_Stamp between '2014-02-25 11:09:00' and '2014-02-25 11:09:00' OR
Time_Stamp between '2014-02-25 11:16:00' and '2014-02-25 11:16:00' OR
Time_Stamp between '2014-03-24 02:00:00' and '2014-03-24 04:30:00' OR
Time_Stamp between '2014-03-24 09:00:00' and '2014-03-24 12:00:00' OR
Time_Stamp between '2014-03-25 00:00:00' and '2014-03-25 01:45:00' OR
Time_Stamp between '2014-04-05 22:30:00' and '2014-04-05 23:59:00' OR
Time_Stamp between '2014-04-16 07:30:00' and '2014-04-16 11:30:00' OR
Time_Stamp between '2014-04-17 01:30:00' and '2014-04-17 03:30:00' OR
Time_Stamp between '2014-04-18 03:30:00' and '2014-04-18 03:45:00' OR
Time_Stamp between '2014-04-18 07:30:00' and '2014-04-18 08:00:00' OR
Time_Stamp between '2014-04-18 09:41:00' and '2014-04-18 09:42:00' OR
Time_Stamp between '2014-04-18 15:30:00' and '2014-04-18 15:30:00' OR
Time_Stamp between '2014-04-21 02:02:00' and '2014-04-21 02:02:00' OR
Time_Stamp between '2014-04-21 02:30:00' and '2014-04-21 02:30:00' OR
Time_Stamp between '2014-04-21 05:52:00' and '2014-04-21 05:52:00' OR
Time_Stamp between '2014-04-21 08:48:00' and '2014-04-21 08:48:00' OR
Time_Stamp between '2014-04-21 11:41:00' and '2014-04-21 11:42:00' OR
Time_Stamp between '2014-04-23 18:05:00' and '2014-04-23 18:12:00' OR
Time_Stamp between '2014-04-23 20:17:00' and '2014-04-23 20:35:00' OR
Time_Stamp between '2014-04-23 21:32:00' and '2014-04-23 21:32:00' OR
Time_Stamp between '2014-04-23 23:49:00' and '2014-04-23 23:49:00' OR
Time_Stamp between '2014-04-25 01:40:00' and '2014-04-25 02:30:00' OR
Time_Stamp between '2014-04-25 06:00:00' and '2014-04-25 07:00:00' OR
Time_Stamp between '2014-04-27 01:41:00' and '2014-04-27 07:03:00' OR
Time_Stamp between '2014-04-28 04:25:00' and '2014-04-28 04:37:00' OR
Time_Stamp between '2014-04-28 22:03:00' and '2014-04-28 22:54:00' OR
Time_Stamp between '2014-04-28 01:08:00' and '2014-04-28 01:08:00' OR
Time_Stamp between '2014-04-28 01:11:00' and '2014-04-28 01:12:00' OR
Time_Stamp between '2014-04-28 01:38:00' and '2014-04-28 01:38:00' OR
Time_Stamp between '2014-04-28 03:43:00' and '2014-04-28 03:43:00' OR
Time_Stamp between '2014-04-28 03:55:00' and '2014-04-28 03:55:00' OR
Time_Stamp between '2014-04-28 13:27:00' and '2014-04-28 13:27:00' OR
Time_Stamp between '2014-04-28 20:30:00' and '2014-04-28 20:30:00' OR
Time_Stamp between '2014-04-29 00:29:00' and '2014-04-29 02:35:00' OR
Time_Stamp between '2014-04-29 23:17:00' and '2014-04-29 23:26:00' OR
```

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Time_Stamp between '2014-04-29 10:34:00' and '2014-04-29 10:34:00' OR
Time_Stamp between '2014-04-29 10:36:00' and '2014-04-29 10:36:00' OR
Time_Stamp between '2014-04-29 20:53:00' and '2014-04-29 20:53:00' OR
Time_Stamp between '2014-04-29 21:08:00' and '2014-04-29 21:09:00' OR
Time_Stamp between '2014-04-29 22:04:00' and '2014-04-29 22:04:00' OR
Time_Stamp between '2014-04-29 22:31:00' and '2014-04-29 22:31:00' OR
Time_Stamp between '2014-05-16 05:06:00' and '2014-05-16 12:03:00' OR
Time_Stamp between '2014-05-16 22:43:00' and '2014-05-16 22:43:00' OR
Time_Stamp between '2014-05-17 04:34:00' and '2014-05-17 04:51:00' OR
Time_Stamp between '2014-05-17 09:43:00' and '2014-05-17 09:59:00' OR
Time_Stamp between '2014-05-17 13:45:00' and '2014-05-17 13:56:00' OR
Time_Stamp between '2014-05-17 23:23:00' and '2014-05-17 23:44:00' OR
Time_Stamp between '2014-05-18 00:00:00' and '2014-05-18 16:02:00' OR
Time_Stamp between '2014-05-20 00:00:00' and '2014-05-20 13:00:00' OR
Time_Stamp between '2014-05-21 21:34:00' and '2014-05-21 22:28:00' OR
Time_Stamp between '2014-05-22 08:40:00' and '2014-05-22 10:22:00' OR
Time_Stamp between '2014-05-22 12:10:00' and '2014-05-22 12:23:00' OR
Time_Stamp between '2014-05-22 17:04:00' and '2014-05-22 20:35:00' OR
Time_Stamp between '2014-05-25 02:35:00' and '2014-05-25 12:08:00' OR
Time_Stamp between '2014-05-27 14:40:00' and '2014-05-27 16:46:00' OR
Time_Stamp between '2014-05-28 22:08:00' and '2014-05-28 22:22:00' OR
Time_Stamp between '2014-05-28 21:54:00' and '2014-05-28 21:54:00' OR
Time_Stamp between '2014-05-28 22:21:00' and '2014-05-28 22:21:00' OR
Time_Stamp between '2014-05-28 23:50:00' and '2014-05-28 23:50:00' OR
Time_Stamp between '2014-05-28 23:52:00' and '2014-05-28 23:52:00' OR
Time_Stamp between '2014-05-31 13:00:00' and '2014-05-31 23:59:00' OR
Time_Stamp between '2014-06-01 02:22:00' and '2014-06-01 02:22:00' OR
Time_Stamp between '2014-06-01 13:05:00' and '2014-06-01 13:05:00' OR
Time_Stamp between '2014-06-01 23:03:00' and '2014-06-01 23:03:00' OR
Time_Stamp between '2014-06-01 23:36:00' and '2014-06-01 23:36:00' OR
Time_Stamp between '2014-06-02 12:28:00' and '2014-06-02 12:29:00' OR
Time_Stamp between '2014-06-02 12:32:00' and '2014-06-02 12:32:00' OR
Time_Stamp between '2014-06-02 12:34:00' and '2014-06-02 12:34:00' OR
Time_Stamp between '2014-06-05 06:38:00' and '2014-06-05 06:40:00' OR
Time_Stamp between '2014-06-05 07:35:00' and '2014-06-05 07:43:00' OR
Time_Stamp between '2014-06-06 11:17:00' and '2014-06-06 12:34:00' OR
Time_Stamp between '2014-06-06 12:35:00' and '2014-06-06 12:41:00' OR
Time_Stamp between '2014-06-06 15:27:00' and '2014-06-06 15:29:00' OR
Time_Stamp between '2014-06-07 14:51:00' and '2014-06-07 15:10:00' OR
Time_Stamp between '2014-06-07 17:00:00' and '2014-06-07 17:58:00' OR
Time_Stamp between '2014-06-07 21:43:00' and '2014-06-07 21:57:00' OR
Time_Stamp between '2014-06-10 12:25:00' and '2014-06-10 12:40:00' OR
Time_Stamp between '2014-06-10 14:45:00' and '2014-06-10 14:53:00' OR
Time_Stamp between '2014-06-11 03:26:00' and '2014-06-11 03:27:00' OR
Time_Stamp between '2014-06-12 09:25:00' and '2014-06-12 12:31:00' OR
Time_Stamp between '2014-06-13 00:56:00' and '2014-06-13 00:57:00' OR
Time_Stamp between '2014-06-20 12:14:00' and '2014-06-20 14:21:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-09-21 23:59:00';
/* Affected rows: 154,625  Found rows: 0  Warnings: 0  Duration for 1 query: 56.047 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2012-01-09 00:00:00' and '2012-01-09 23:59:00' OR
Time_Stamp between '2012-01-10 00:00:00' and '2012-01-10 00:30:00' OR
Time_Stamp between '2012-01-11 00:00:00' and '2012-01-12 23:59:00' OR
Time_Stamp between '2012-01-18 02:00:00' and '2012-01-18 02:15:00' OR
Time_Stamp between '2012-01-28 03:45:00' and '2012-01-28 04:15:00' OR
Time_Stamp between '2012-04-10 18:00:00' and '2012-04-10 23:59:00' OR
Time_Stamp between '2012-04-13 21:00:00' and '2012-04-13 21:00:00' OR
Time_Stamp between '2012-04-15 05:45:00' and '2012-04-15 06:15:00' OR
Time_Stamp between '2013-03-19 00:00:00' and '2013-03-19 23:59:00' OR
Time_Stamp between '2014-02-06 00:00:00' and '2014-02-06 23:59:00' OR
Time_Stamp between '2014-02-08 00:00:00' and '2014-02-17 23:59:00' OR
Time_Stamp between '2014-02-19 00:00:00' and '2014-02-19 23:59:00' OR
Time_Stamp between '2014-02-22 09:00:00' and '2014-02-22 17:30:00' OR
Time_Stamp between '2014-02-23 08:23:00' and '2014-02-23 15:34:00' OR
Time_Stamp between '2014-02-24 10:53:00' and '2014-02-24 17:30:00' OR
Time_Stamp between '2014-02-25 11:20:00' and '2014-02-25 17:19:00' OR
Time_Stamp between '2014-02-26 00:00:00' and '2014-02-26 23:59:00' OR
Time_Stamp between '2014-02-27 10:00:00' and '2014-02-27 10:20:00' OR
Time_Stamp between '2014-02-28 00:00:00' and '2014-02-28 23:59:00' OR
Time_Stamp between '2014-03-01 00:00:00' and '2014-03-01 23:59:00' OR
Time_Stamp between '2014-03-03 00:00:00' and '2014-03-06 23:59:00' OR
Time_Stamp between '2014-03-08 00:00:00' and '2014-03-08 23:59:00' OR
Time_Stamp between '2014-03-10 00:00:00' and '2014-03-10 23:59:00' OR
Time_Stamp between '2014-03-13 00:00:00' and '2014-03-15 23:59:00' OR
Time_Stamp between '2014-03-17 00:00:00' and '2014-03-18 23:59:00' OR
Time_Stamp between '2014-03-20 00:00:00' and '2014-03-21 23:59:00' OR
Time_Stamp between '2014-03-23 00:00:00' and '2014-03-23 23:59:00' OR
Time_Stamp between '2014-03-24 07:30:00' and '2014-03-24 09:00:00' OR
Time_Stamp between '2014-03-24 18:30:00' and '2014-03-24 23:59:00' OR
Time_Stamp between '2014-03-25 00:00:00' and '2014-03-26 23:59:00' OR
Time_Stamp between '2014-03-29 00:00:00' and '2014-04-01 23:59:00' OR
Time_Stamp between '2014-04-03 00:00:00' and '2014-04-05 23:59:00' OR
Time_Stamp between '2014-04-08 00:00:00' and '2014-04-11 23:59:00' OR
Time_Stamp between '2014-04-12 00:00:00' and '2014-04-12 17:00:00' OR
Time_Stamp between '2014-04-16 00:00:00' and '2014-04-16 23:59:00' OR
Time_Stamp between '2014-04-17 00:00:00' and '2014-04-17 08:00:00' OR
Time_Stamp between '2014-04-18 04:06:00' and '2014-04-18 04:06:00' OR
Time_Stamp between '2014-04-18 17:09:00' and '2014-04-18 17:09:00' OR
Time_Stamp between '2014-04-22 00:00:00' and '2014-04-22 00:50:00' OR
Time_Stamp between '2014-04-22 14:20:00' and '2014-04-22 23:59:00' OR
Time_Stamp between '2014-04-25 00:00:00' and '2014-04-25 23:59:00' OR
Time_Stamp between '2014-04-30 00:00:00' and '2014-04-30 23:59:00' OR
Time_Stamp between '2014-05-06 00:00:00' and '2014-05-06 23:59:00' OR
Time_Stamp between '2014-05-07 00:20:00' and '2014-05-07 00:52:00' OR
Time_Stamp between '2014-05-07 07:36:00' and '2014-05-07 08:36:00' OR
Time_Stamp between '2014-05-07 19:36:00' and '2014-05-07 23:59:00' OR
Time_Stamp between '2014-05-10 00:00:00' and '2014-05-11 23:59:00' OR
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Time_Stamp between '2014-05-16 00:00:00' and '2014-05-20 13:00:00' OR
Time_Stamp between '2014-05-21 10:40:00' and '2014-05-21 13:03:00' OR
Time_Stamp between '2014-05-21 21:54:00' and '2014-05-21 23:59:00' OR
Time_Stamp between '2014-05-27 00:00:00' and '2014-05-28 23:59:00' OR
Time_Stamp between '2014-05-29 19:30:00' and '2014-05-29 21:30:00' OR
Time_Stamp between '2014-05-30 00:00:00' and '2014-05-31 23:59:00' OR
Time_Stamp between '2014-06-02 00:00:00' and '2014-06-09 23:59:00' OR
Time_Stamp between '2014-06-10 14:59:00' and '2014-06-10 15:02:00' OR
Time_Stamp between '2014-06-10 22:36:00' and '2014-06-10 22:37:00' OR
Time_Stamp between '2014-06-10 02:23:00' and '2014-06-10 02:23:00' OR
Time_Stamp between '2014-06-10 21:12:00' and '2014-06-10 21:15:00' OR
Time_Stamp between '2014-06-12 00:00:00' and '2014-06-12 23:59:00' OR
Time_Stamp between '2014-06-13 03:30:00' and '2014-06-13 03:41:00' OR
Time_Stamp between '2014-06-13 09:57:00' and '2014-06-13 11:30:00' OR
Time_Stamp between '2014-06-13 14:11:00' and '2014-06-13 14:13:00' OR
Time_Stamp between '2014-06-15 00:00:00' and '2014-06-17 23:59:00';
/* Affected rows: 105,400  Found rows: 0  Warnings: 0  Duration for 1 query: 38.969 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2012-01-19 01:45:00' and '2012-01-19 11:45:00' OR
Time_Stamp between '2012-01-20 21:30:00' and '2012-01-20 23:59:00' OR
Time_Stamp between '2012-01-22 07:00:00' and '2012-01-22 13:30:00' OR
Time_Stamp between '2012-01-23 00:45:00' and '2012-01-23 12:00:00' OR
Time_Stamp between '2012-01-24 08:00:00' and '2012-01-24 09:00:00' OR
Time_Stamp between '2012-01-26 00:30:00' and '2012-01-26 11:15:00' OR
Time_Stamp between '2012-01-27 23:15:00' and '2012-01-27 23:59:00' OR
Time_Stamp between '2012-01-31 03:15:00' and '2012-01-31 13:30:00' OR
Time_Stamp between '2012-02-01 00:00:00' and '2012-02-01 13:00:00' OR
Time_Stamp between '2012-02-04 10:00:00' and '2012-02-04 21:00:00' OR
Time_Stamp between '2012-02-06 00:00:00' and '2012-02-06 12:15:00' OR
Time_Stamp between '2012-02-08 00:00:00' and '2012-02-08 13:45:00' OR
Time_Stamp between '2012-02-09 12:45:00' and '2012-02-09 13:00:00' OR
Time_Stamp between '2012-02-10 00:00:00' and '2012-02-10 10:00:00' OR
Time_Stamp between '2012-02-11 00:00:00' and '2012-02-11 10:45:00' OR
Time_Stamp between '2012-02-11 23:00:00' and '2012-02-11 23:59:00' OR
Time_Stamp between '2012-02-12 00:00:00' and '2012-02-12 23:59:00' OR
Time_Stamp between '2012-02-14 23:00:00' and '2012-02-14 23:59:00' OR
Time_Stamp between '2012-02-15 00:00:00' and '2012-02-16 23:59:00' OR
Time_Stamp between '2012-02-17 00:00:00' and '2012-02-17 15:30:00' OR
Time_Stamp between '2012-02-19 06:30:00' and '2012-02-19 12:30:00' OR
Time_Stamp between '2012-02-20 00:00:00' and '2012-02-22 23:59:00' OR
Time_Stamp between '2012-02-23 00:00:00' and '2012-02-23 10:15:00' OR
Time_Stamp between '2012-02-23 20:00:00' and '2012-02-23 23:59:00' OR
Time_Stamp between '2012-02-25 00:00:00' and '2012-02-25 11:00:00' OR
Time_Stamp between '2012-02-26 00:00:00' and '2012-02-26 23:59:00' OR
Time_Stamp between '2012-02-27 10:30:00' and '2012-02-27 21:30:00' OR
Time_Stamp between '2012-02-28 00:00:00' and '2012-02-29 23:59:00' OR
Time_Stamp between '2012-03-01 00:00:00' and '2012-03-01 09:30:00' OR
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Time_Stamp between '2012-03-02 00:00:00' and '2012-03-05 23:59:00' OR
Time_Stamp between '2012-03-06 00:00:00' and '2012-03-06 15:00:00' OR
Time_Stamp between '2012-03-08 00:00:00' and '2012-03-08 13:30:00' OR
Time_Stamp between '2012-03-09 00:00:00' and '2012-03-10 23:59:00' OR
Time_Stamp between '2012-03-11 00:00:00' and '2012-03-11 13:30:00' OR
Time_Stamp between '2012-03-12 00:00:00' and '2012-03-15 23:59:00' OR
Time_Stamp between '2012-03-16 05:45:00' and '2012-03-16 15:15:00' OR
Time_Stamp between '2012-03-17 00:00:00' and '2012-03-20 23:59:00' OR
Time_Stamp between '2012-03-21 00:00:00' and '2012-03-21 11:30:00' OR
Time_Stamp between '2012-03-22 00:00:00' and '2012-03-23 23:59:00' OR
Time_Stamp between '2012-03-24 00:00:00' and '2012-03-24 11:15:00' OR
Time_Stamp between '2012-03-25 00:00:00' and '2012-03-25 23:59:00' OR
Time_Stamp between '2012-03-26 08:00:00' and '2012-03-26 09:00:00' OR
Time_Stamp between '2012-03-27 00:00:00' and '2012-03-27 23:59:00' OR
Time_Stamp between '2012-03-28 00:00:00' and '2012-03-28 09:00:00' OR
Time_Stamp between '2012-03-29 00:00:00' and '2012-03-29 12:00:00' OR
Time_Stamp between '2012-03-30 00:00:00' and '2012-03-30 06:00:00' OR
Time_Stamp between '2012-04-01 12:00:00' and '2012-04-01 12:15:00' OR
Time_Stamp between '2012-04-02 03:00:00' and '2012-04-02 09:15:00' OR
Time_Stamp between '2012-04-03 12:00:00' and '2012-04-03 13:15:00' OR
Time_Stamp between '2012-04-04 00:00:00' and '2012-04-04 11:45:00' OR
Time_Stamp between '2012-04-05 00:00:00' and '2012-04-05 09:45:00' OR
Time_Stamp between '2012-04-07 00:00:00' and '2012-04-07 08:45:00' OR
Time_Stamp between '2012-04-08 05:00:00' and '2012-04-08 15:45:00' OR
Time_Stamp between '2012-04-10 00:00:00' and '2012-04-14 23:59:00' OR
Time_Stamp between '2012-04-15 09:15:00' and '2012-04-15 09:45:00' OR
Time_Stamp between '2012-04-16 00:00:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-08 00:00:00' and '2012-05-08 01:15:00' OR
Time_Stamp between '2012-05-09 15:30:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-18 01:00:00' and '2012-05-18 01:30:00' OR
Time_Stamp between '2012-05-19 04:30:00' and '2012-05-19 05:00:00' OR
Time_Stamp between '2012-05-20 14:15:00' and '2012-05-20 20:45:00' OR
Time_Stamp between '2012-05-21 09:30:00' and '2012-05-21 23:59:00' OR
Time_Stamp between '2012-05-22 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-05-26 00:00:00' and '2012-06-02 23:59:00' OR
Time_Stamp between '2012-06-03 05:30:00' and '2012-06-03 07:30:00' OR
Time_Stamp between '2012-06-03 22:03:00' and '2012-06-03 22:03:00' OR
Time_Stamp between '2012-06-04 00:00:00' and '2012-06-04 23:59:00' OR
Time_Stamp between '2012-06-05 03:45:00' and '2012-06-05 09:30:00' OR
Time_Stamp between '2012-06-06 00:00:00' and '2012-06-18 23:59:00' OR
Time_Stamp between '2012-06-23 19:30:00' and '2012-06-23 23:59:00' OR
Time_Stamp between '2012-06-24 00:00:00' and '2012-06-25 23:59:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2014-01-15 02:31:00' and '2014-01-15 02:31:00' OR
Time_Stamp between '2014-01-17 06:25:00' and '2014-01-17 06:25:00' OR
Time_Stamp between '2014-03-07 07:09:00' and '2014-03-07 07:09:00' OR
Time_Stamp between '2014-03-09 04:36:00' and '2014-03-09 04:36:00' OR
Time_Stamp between '2014-04-17 05:10:00' and '2014-04-17 05:10:00' OR
Time_Stamp between '2014-04-28 05:17:00' and '2014-04-28 05:19:00' OR
Time_Stamp between '2014-05-24 22:17:00' and '2014-05-24 22:17:00' OR
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Time_Stamp between '2014-05-28 08:56:00' and '2014-05-28 08:57:00' OR
Time_Stamp between '2014-05-28 19:05:00' and '2014-05-28 20:12:00' OR
Time_Stamp between '2014-05-31 19:48:00' and '2014-05-31 19:48:00' OR
Time_Stamp between '2014-06-04 10:32:00' and '2014-06-04 10:39:00' OR
Time_Stamp between '2014-06-04 11:28:00' and '2014-06-04 12:24:00' OR
Time_Stamp between '2014-06-14 02:31:00' and '2014-06-14 02:31:00' OR
Time_Stamp between '2014-06-18 03:29:00' and '2014-06-18 03:32:00';
/* Affected rows: 75,734  Found rows: 0  Warnings: 0  Duration for 1 query: 27.734 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_3_ºC` = NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:30:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-09 14:45:00' and '2012-11-09 17:00:00' OR
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00' OR
Time_Stamp between '2012-11-19 05:00:00' and '2012-11-19 12:30:00' OR
Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
Time_Stamp between '2012-11-22 00:00:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 01:15:00' OR
Time_Stamp between '2012-12-15 09:15:00' and '2012-12-15 17:00:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2013-01-02 23:59:00' OR
Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 07:00:00' OR
Time_Stamp between '2014-01-17 06:28:00' and '2014-01-17 06:28:00' OR
Time_Stamp between '2014-01-17 12:41:00' and '2014-01-17 12:41:00' OR
Time_Stamp between '2014-02-01 00:00:00' and '2014-02-01 23:59:00' OR
Time_Stamp between '2014-02-02 00:00:00' and '2014-02-02 07:00:00' OR
Time_Stamp between '2014-02-02 19:00:00' and '2014-02-02 23:59:00' OR
Time_Stamp between '2014-02-03 00:00:00' and '2014-02-08 23:59:00' OR
Time_Stamp between '2014-02-09 00:00:00' and '2014-02-09 12:00:00' OR
Time_Stamp between '2014-02-10 00:00:00' and '2014-02-11 23:59:00' OR
Time_Stamp between '2014-02-12 00:00:00' and '2014-02-12 03:00:00' OR
Time_Stamp between '2014-02-12 18:00:00' and '2014-02-12 23:59:00' OR
Time_Stamp between '2014-02-13 00:00:00' and '2014-02-17 23:59:00' OR
Time_Stamp between '2014-02-27 11:00:00' and '2014-02-27 15:00:00' OR
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Time_Stamp between '2014-03-02 12:00:00' and '2014-03-02 15:00:00' OR
Time_Stamp between '2014-03-07 08:00:00' and '2014-03-07 14:51:00' OR
Time_Stamp between '2014-03-08 09:00:00' and '2014-03-08 12:00:00' OR
Time_Stamp between '2014-03-15 11:00:00' and '2014-03-15 12:30:00' OR
Time_Stamp between '2014-04-03 00:00:00' and '2014-04-03 23:59:00' OR
Time_Stamp between '2014-07-06 05:28:00' and '2014-07-06 05:28:00' OR
Time_Stamp between '2014-07-06 08:21:00' and '2014-07-06 08:21:00' OR
Time_Stamp between '2014-07-06 08:38:00' and '2014-07-06 08:38:00' OR
Time_Stamp between '2014-07-06 09:04:00' and '2014-07-06 11:44:00' OR
Time_Stamp between '2014-07-06 22:07:00' and '2014-07-06 23:59:00' OR
Time_Stamp between '2014-07-07 00:00:00' and '2014-07-08 23:59:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-07-31 23:59:00' OR
Time_Stamp between '2014-08-02 00:00:00' and '2014-09-21 23:59:00';
/* Affected rows: 176,787  Found rows: 0  Warnings: 0  Duration for 1 query: 33.375 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με`= NULL
where Time_Stamp between '2012-02-04 06:00:00' and '2012-02-04 06:30:00' OR
Time_Stamp between '2012-02-24 05:30:00' and '2012-02-24 06:15:00' OR
Time_Stamp between '2012-02-25 03:00:00' and '2012-02-25 03:30:00' OR
Time_Stamp between '2012-02-29 04:30:00' and '2012-02-29 05:30:00' OR
Time_Stamp between '2012-03-04 03:00:00' and '2012-03-04 03:45:00' OR
Time_Stamp between '2012-10-17 10:30:00' and '2012-10-17 11:45:00' OR
Time_Stamp between '2012-12-25 11:30:00' and '2012-12-25 11:45:00';
/* Affected rows: 291  Found rows: 0  Warnings: 0  Duration for 1 query: 0.125 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_4A_mV/V` = NULL,
`Calculated_Strain_4A_με` = NULL
where Time_Stamp between '2012-03-23 19:00:00' and '2012-03-23 20:00:00' OR
Time_Stamp between '2012-03-24 19:15:00' and '2012-03-24 19:30:00' OR
Time_Stamp between '2012-03-25 18:30:00' and '2012-03-25 19:30:00' OR
Time_Stamp between '2012-04-05 19:00:00' and '2012-04-05 20:00:00' OR
Time_Stamp between '2012-04-06 18:45:00' and '2012-04-06 20:30:00' OR
Time_Stamp between '2012-04-07 17:00:00' and '2012-04-07 23:59:00' OR
Time_Stamp between '2012-04-09 00:00:00' and '2012-04-09 05:00:00' OR
Time_Stamp between '2012-04-09 16:00:00' and '2012-04-09 16:30:00' OR
Time_Stamp between '2012-04-10 16:00:00' and '2012-04-10 23:59:00' OR
Time_Stamp between '2012-04-11 00:00:00' and '2012-04-11 23:59:00' OR
Time_Stamp between '2012-04-12 00:00:00' and '2012-04-12 04:30:00' OR
Time_Stamp between '2012-04-12 19:00:00' and '2012-04-12 23:59:00' OR
Time_Stamp between '2012-04-13 17:30:00' and '2012-04-13 22:45:00' OR
Time_Stamp between '2012-04-14 06:30:00' and '2012-04-14 06:45:00' OR
Time_Stamp between '2012-04-14 14:15:00' and '2012-04-14 14:45:00' OR
Time_Stamp between '2012-04-15 05:45:00' and '2012-04-15 06:15:00' OR
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Time_Stamp between '2012-04-15 17:45:00' and '2012-04-15 18:00:00' OR
Time_Stamp between '2012-04-16 17:00:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-08 12:00:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-17 10:15:00' and '2012-05-18 23:59:00' OR
Time_Stamp between '2014-05-20 23:00:00' and '2014-05-20 23:59:00' OR
Time_Stamp between '2014-05-21 06:00:00' and '2014-05-21 23:59:00' OR
Time_Stamp between '2014-05-23 00:54:00' and '2014-05-23 02:20:00' OR
Time_Stamp between '2014-05-23 07:34:00' and '2014-05-23 07:51:00' OR
Time_Stamp between '2014-06-03 00:00:00' and '2014-06-03 03:45:00' OR
Time_Stamp between '2014-06-03 10:20:00' and '2014-06-03 11:53:00' OR
Time_Stamp between '2014-06-05 10:33:00' and '2014-06-05 12:00:00' OR
Time_Stamp between '2014-06-05 12:42:00' and '2014-06-05 12:42:00' OR
Time_Stamp between '2014-06-05 13:24:00' and '2014-06-05 13:24:00' OR
Time_Stamp between '2014-06-05 14:54:00' and '2014-06-05 14:54:00' OR
Time_Stamp between '2014-06-05 15:48:00' and '2014-06-05 15:48:00' OR
Time_Stamp between '2014-06-05 16:42:00' and '2014-06-05 16:42:00' OR
Time_Stamp between '2014-06-05 17:09:00' and '2014-06-05 17:09:00' OR
Time_Stamp between '2014-06-05 22:40:00' and '2014-06-05 22:40:00' OR
Time_Stamp between '2014-06-05 23:33:00' and '2014-06-05 23:33:00' OR
Time_Stamp between '2014-06-05 23:36:00' and '2014-06-05 23:36:00' OR
Time_Stamp between '2014-06-10 03:41:00' and '2014-06-10 06:18:00' OR
Time_Stamp between '2014-06-13 07:31:00' and '2014-06-13 18:56:00' OR
Time_Stamp between '2014-06-13 01:54:00' and '2014-06-13 01:54:00' OR
Time_Stamp between '2014-06-13 22:41:00' and '2014-06-13 22:41:00';
/* Affected rows: 14,191  Found rows: 0  Warnings: 0  Duration for 1 query: 2.422 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL
where Time_Stamp between '2012-04-22 18:00:00' and '2012-04-22 20:30:00' OR
Time_Stamp between '2012-04-23 17:00:00' and '2012-04-23 21:30:00' OR
Time_Stamp between '2012-04-24 17:00:00' and '2012-04-24 21:30:00' OR
Time_Stamp between '2012-04-25 14:30:00' and '2012-04-25 23:59:00' OR
Time_Stamp between '2012-04-26 00:00:00' and '2012-04-27 23:59:00' OR
Time_Stamp between '2012-04-30 17:00:00' and '2012-04-30 21:30:00' OR
Time_Stamp between '2012-05-01 16:30:00' and '2012-05-01 21:00:00' OR
Time_Stamp between '2012-05-02 16:15:00' and '2012-05-02 23:59:00' OR
Time_Stamp between '2012-05-03 00:00:00' and '2012-05-06 23:59:00' OR
Time_Stamp between '2012-05-22 11:15:00' and '2012-05-22 11:45:00' OR
Time_Stamp between '2013-04-05 06:04:00' and '2013-04-05 06:04:00' OR
Time_Stamp between '2013-04-06 01:01:00' and '2013-04-06 01:01:00' OR
Time_Stamp between '2013-04-06 06:03:00' and '2013-04-06 06:03:00' OR
Time_Stamp between '2013-04-06 06:29:00' and '2013-04-06 06:29:00' OR
Time_Stamp between '2013-04-06 06:48:00' and '2013-04-06 06:48:00' OR
Time_Stamp between '2013-04-16 06:13:00' and '2013-04-16 06:13:00' OR
Time_Stamp between '2013-04-18 08:42:00' and '2013-04-18 10:34:00' OR
Time_Stamp between '2013-04-18 20:58:00' and '2013-04-18 20:58:00' OR
Time_Stamp between '2013-04-19 08:37:00' and '2013-04-19 10:10:00' OR
Time_Stamp between '2013-04-20 06:58:00' and '2013-04-20 06:58:00' OR
Time_Stamp between '2013-04-21 06:41:00' and '2013-04-21 06:43:00' OR
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Time_Stamp between '2013-04-23 16:44:00' and '2013-04-23 16:44:00' OR
Time_Stamp between '2013-04-24 08:06:00' and '2013-04-24 10:16:00' OR
Time_Stamp between '2013-04-26 06:00:00' and '2013-04-26 06:21:00' OR
Time_Stamp between '2013-04-28 01:56:00' and '2013-04-28 01:56:00' OR
Time_Stamp between '2013-04-28 07:00:00' and '2013-04-28 07:00:00' OR
Time_Stamp between '2013-04-28 07:05:00' and '2013-04-28 07:05:00' OR
Time_Stamp between '2013-04-28 22:05:00' and '2013-04-28 22:05:00' OR
Time_Stamp between '2013-04-29 04:51:00' and '2013-04-29 04:51:00' OR
Time_Stamp between '2013-04-29 06:27:00' and '2013-04-29 06:28:00' OR
Time_Stamp between '2013-04-29 06:30:00' and '2013-04-29 06:31:00' OR
Time_Stamp between '2013-04-29 06:39:00' and '2013-04-29 06:39:00' OR
Time_Stamp between '2013-05-03 00:52:00' and '2013-05-03 00:53:00' OR
Time_Stamp between '2013-05-04 04:44:00' and '2013-05-04 04:44:00' OR
Time_Stamp between '2013-05-04 04:54:00' and '2013-05-04 06:12:00' OR
Time_Stamp between '2013-05-05 05:39:00' and '2013-05-05 05:39:00' OR
Time_Stamp between '2013-05-05 05:43:00' and '2013-05-05 05:43:00' OR
Time_Stamp between '2013-05-05 05:57:00' and '2013-05-05 05:58:00' OR
Time_Stamp between '2013-05-07 02:09:00' and '2013-05-07 02:09:00' OR
Time_Stamp between '2013-05-08 05:12:00' and '2013-05-08 05:12:00' OR
Time_Stamp between '2013-05-08 05:57:00' and '2013-05-08 05:57:00' OR
Time_Stamp between '2013-05-08 05:59:00' and '2013-05-08 05:59:00' OR
Time_Stamp between '2013-05-08 06:03:00' and '2013-05-08 06:03:00' OR
Time_Stamp between '2013-05-11 02:09:00' and '2013-05-11 02:09:00' OR
Time_Stamp between '2013-05-21 02:56:00' and '2013-05-21 02:57:00' OR
Time_Stamp between '2013-05-21 06:32:00' and '2013-05-21 06:32:00' OR
Time_Stamp between '2013-05-22 01:39:00' and '2013-05-22 01:39:00' OR
Time_Stamp between '2014-05-29 18:55:00' and '2014-05-29 18:55:00';
/* Affected rows: 11,303  Found rows: 0  Warnings: 0  Duration for 1 query: 1.890 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_4C_mV/V` = NULL,
`Calculated_Strain_4C_με` = NULL
where Time_Stamp between '2012-04-17 17:15:00' and '2012-04-17 23:59:00' OR
Time_Stamp between '2012-04-18 00:00:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-08 14:00:00' and '2012-05-08 19:30:00' OR
Time_Stamp between '2012-05-09 09:15:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-19 13:00:00' and '2012-05-19 21:00:00' OR
Time_Stamp between '2012-05-20 12:15:00' and '2012-05-20 23:59:00' OR
Time_Stamp between '2012-05-21 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2014-04-26 10:39:00' and '2014-04-26 14:31:00' OR
Time_Stamp between '2014-05-09 13:20:00' and '2014-05-09 14:00:00' OR
Time_Stamp between '2014-05-09 19:00:00' and '2014-05-09 19:30:00' OR
Time_Stamp between '2014-05-22 19:01:00' and '2014-05-22 19:02:00' OR
Time_Stamp between '2014-05-24 00:00:00' and '2014-05-24 06:33:00' OR
Time_Stamp between '2014-05-24 22:49:00' and '2014-05-24 22:51:00' OR
Time_Stamp between '2014-05-25 08:37:00' and '2014-05-25 10:41:00' OR
Time_Stamp between '2014-05-26 05:29:00' and '2014-05-26 05:31:00' OR
Time_Stamp between '2014-06-01 12:11:00' and '2014-06-01 14:27:00' OR
Time_Stamp between '2014-06-02 03:40:00' and '2014-06-02 06:00:00' OR
Time_Stamp between '2014-06-02 23:20:00' and '2014-06-02 23:59:00' OR
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Time_Stamp between '2014-06-06 04:08:00' and '2014-06-06 04:34:00' OR
Time_Stamp between '2014-06-06 18:30:00' and '2014-06-06 23:59:00' OR
Time_Stamp between '2014-06-07 00:00:00' and '2014-06-07 00:15:00' OR
Time_Stamp between '2014-06-07 18:18:00' and '2014-06-07 23:59:00' OR
Time_Stamp between '2014-06-08 00:00:00' and '2014-06-08 01:15:00' OR
Time_Stamp between '2014-06-14 00:00:00' and '2014-06-14 11:16:00' OR
Time_Stamp between '2014-06-15 22:54:00' and '2014-06-15 23:59:00' OR
Time_Stamp between '2014-06-16 00:00:00' and '2014-06-16 01:08:00' OR
Time_Stamp between '2014-06-16 10:07:00' and '2014-06-16 15:11:00' OR
Time_Stamp between '2014-06-17 09:10:00' and '2014-06-17 09:35:00' OR
Time_Stamp between '2014-06-18 00:00:00' and '2014-06-18 10:52:00';
/* Affected rows: 13,732  Found rows: 0  Warnings: 0  Duration for 1 query: 2.954 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2014-04-30 00:00:00' and '2014-04-30 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.406 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1_ºC` = NULL
where Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 09:00:00';
/* Affected rows: 541  Found rows: 0  Warnings: 0  Duration for 1 query: 0.422 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 13:00:00';
/* Affected rows: 781  Found rows: 0  Warnings: 0  Duration for 1 query: 0.109 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3B_mV/V_` = NULL,
`Calculated_Strain_3B_με` = NULL
where Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 23:59:00';
/* Affected rows: 1,439  Found rows: 0  Warnings: 0  Duration for 1 query: 0.156 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_5_ºC` = NULL
where Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 12:00:00';
/* Affected rows: 721  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-01-14 00:00:00' and '2014-01-16 23:59:00';
/* Affected rows: 1,368  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */
/* Affected rows: 2,753  Found rows: 0  Warnings: 0  Duration for 1 query: 0.375 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3C_mV/V` = NULL,
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`Calculated_Strain_3C_με` = NULL,
`Raw_Strain_4B_mV/V` = NULL,
`Calculated_Strain_4B_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL
where Time_Stamp between '2014-01-17 00:00:00' and '2014-01-17 04:44:00';
/* Affected rows: 290  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_4_ºC` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Surf_Temp_6_°C` = NULL
where Time_Stamp between '2014-01-17 06:28:00' and '2014-01-17 06:28:00' OR
Time_Stamp between '2014-01-17 12:41:00' and '2014-01-17 12:41:00';
/* Affected rows: 2  Found rows: 0  Warnings: 0  Duration for 1 query: 0.015 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-01-17 00:00:00' and '2014-01-17 00:00:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.000 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_4_ºC` = NULL,
`Surf_Temp_5_ºC` = NULL,
`Surf_Temp_6_°C` = NULL,
`Surf_Temp_1'_°C` = NULL,
`Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2014-02-01 00:00:00' and '2014-02-01 23:59:00' OR
Time_Stamp between '2014-02-02 00:00:00' and '2014-02-02 07:00:00' OR
Time_Stamp between '2014-02-02 19:00:00' and '2014-02-02 23:59:00' OR
Time_Stamp between '2014-02-03 00:00:00' and '2014-02-08 23:59:00' OR
Time_Stamp between '2014-02-09 00:00:00' and '2014-02-09 23:59:00' OR
Time_Stamp between '2014-02-10 00:00:00' and '2014-02-11 23:59:00' OR
Time_Stamp between '2014-02-12 00:00:00' and '2014-02-12 03:00:00' OR
Time_Stamp between '2014-02-12 18:00:00' and '2014-02-12 23:59:00' OR
Time_Stamp between '2014-02-13 19:00:00' and '2014-02-15 23:59:00';
/* Affected rows: 14,788  Found rows: 0  Warnings: 0  Duration for 1 query: 2.016 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1_ºC` = NULL,
`Surf_Temp_2_ºC` = NULL,
`Surf_Temp_3_ºC` = NULL,
`Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-02-09 00:00:00' and '2014-02-09 23:59:00';
/* Affected rows: 1,423  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
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`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-02-06 00:00:00' and '2014-02-08 23:59:00' OR
Time_Stamp between '2014-02-10 00:00:00' and '2014-02-14 23:59:00' OR
Time_Stamp between '2014-02-16 12:00:00' and '2014-02-16 21:00:00' OR
Time_Stamp between '2014-02-17 00:00:00' and '2014-02-17 23:59:00' OR
Time_Stamp between '2014-02-18 10:00:00' and '2014-02-18 19:00:00' OR
Time_Stamp between '2014-02-19 00:00:00' and '2014-02-19 23:59:00' OR
Time_Stamp between '2014-02-20 09:28:00' and '2014-02-20 11:18:00' OR
Time_Stamp between '2014-02-20 19:00:00' and '2014-02-20 20:00:00' OR
Time_Stamp between '2014-02-23 12:00:00' and '2014-02-20 19:00:00' OR
Time_Stamp between '2014-02-24 14:30:00' and '2014-02-24 19:30:00' OR
Time_Stamp between '2014-02-25 19:34:00' and '2014-02-25 20:37:00' OR
Time_Stamp between '2014-02-27 11:21:00' and '2014-02-27 11:22:00' OR
Time_Stamp between '2014-02-27 16:03:00' and '2014-02-27 16:56:00' OR
Time_Stamp between '2014-02-28 13:01:00' and '2014-02-28 13:01:00' OR
Time_Stamp between '2014-02-28 15:37:00' and '2014-02-28 17:22:00' OR
Time_Stamp between '2014-03-01 11:42:00' and '2014-03-01 11:42:00' OR
Time_Stamp between '2014-03-01 14:57:00' and '2014-03-01 14:57:00' OR
Time_Stamp between '2014-03-01 16:21:00' and '2014-03-01 16:21:00' OR
Time_Stamp between '2014-03-02 12:50:00' and '2014-03-02 12:50:00' OR
Time_Stamp between '2014-03-02 16:30:00' and '2014-03-02 16:30:00' OR
Time_Stamp between '2014-03-02 16:46:00' and '2014-03-02 16:46:00' OR
Time_Stamp between '2014-03-02 17:02:00' and '2014-03-02 17:02:00' OR
Time_Stamp between '2014-03-03 10:20:00' and '2014-03-03 10:20:00' OR
Time_Stamp between '2014-03-03 19:09:00' and '2014-03-03 19:09:00' OR
Time_Stamp between '2014-03-04 10:30:00' and '2014-03-04 10:30:00' OR
Time_Stamp between '2014-03-04 14:36:00' and '2014-03-04 14:36:00' OR
Time_Stamp between '2014-03-04 14:39:00' and '2014-03-04 14:40:00' OR
Time_Stamp between '2014-03-04 14:45:00' and '2014-03-04 14:45:00' OR
Time_Stamp between '2014-03-05 10:25:00' and '2014-03-05 10:25:00' OR
Time_Stamp between '2014-03-05 11:59:00' and '2014-03-05 11:59:00' OR
Time_Stamp between '2014-03-06 10:05:00' and '2014-03-06 10:05:00' OR
Time_Stamp between '2014-03-06 13:10:00' and '2014-03-06 13:10:00' OR
Time_Stamp between '2014-03-07 15:30:00' and '2014-03-07 16:40:00' OR
Time_Stamp between '2014-03-07 18:12:00' and '2014-03-07 23:59:00' OR
Time_Stamp between '2014-03-08 00:00:00' and '2014-03-08 23:59:00' OR
Time_Stamp between '2014-03-09 16:14:00' and '2014-03-09 16:14:00' OR
Time_Stamp between '2014-03-09 16:30:00' and '2014-03-09 18:30:00' OR
Time_Stamp between '2014-03-10 13:00:00' and '2014-03-10 23:59:00' OR
Time_Stamp between '2014-03-11 09:59:00' and '2014-03-11 09:59:00' OR
Time_Stamp between '2014-03-11 11:18:00' and '2014-03-11 11:18:00' OR
Time_Stamp between '2014-03-11 17:42:00' and '2014-03-11 17:42:00' OR
Time_Stamp between '2014-03-12 16:02:00' and '2014-03-12 16:02:00' OR
Time_Stamp between '2014-03-13 00:00:00' and '2014-03-13 23:59:00' OR
Time_Stamp between '2014-03-14 00:00:00' and '2014-03-18 23:59:00' OR
Time_Stamp between '2014-03-19 13:11:00' and '2014-03-19 13:11:00' OR
Time_Stamp between '2014-03-19 14:06:00' and '2014-03-19 14:06:00' OR
Time_Stamp between '2014-03-20 00:00:00' and '2014-03-20 23:59:00' OR
Time_Stamp between '2014-03-21 12:16:00' and '2014-03-21 12:16:00' OR
Time_Stamp between '2014-03-21 12:23:00' and '2014-03-21 12:23:00' OR
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Time_Stamp between '2014-03-21 20:36:00' and '2014-03-21 20:37:00' OR
Time_Stamp between '2014-03-21 20:46:00' and '2014-03-21 20:46:00' OR
Time_Stamp between '2014-03-22 22:05:00' and '2014-03-22 22:06:00' OR
Time_Stamp between '2014-03-22 22:51:00' and '2014-03-22 22:51:00' OR
Time_Stamp between '2014-03-23 10:20:00' and '2014-03-23 10:20:00' OR
Time_Stamp between '2014-03-23 20:20:00' and '2014-03-23 20:20:00' OR
Time_Stamp between '2014-03-24 00:00:00' and '2014-03-25 23:59:00' OR
Time_Stamp between '2014-03-26 11:30:00' and '2014-03-26 19:45:00' OR
Time_Stamp between '2014-03-27 00:00:00' and '2014-04-01 23:59:00';
/* Affected rows: 31,524  Found rows: 0  Warnings: 0  Duration for 1 query: 4.047 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-04-02 12:41:00' and '2014-04-02 12:41:00' OR
Time_Stamp between '2014-04-02 12:44:00' and '2014-04-02 12:44:00' OR
Time_Stamp between '2014-04-02 12:52:00' and '2014-04-02 12:53:00' OR
Time_Stamp between '2014-04-02 22:33:00' and '2014-04-02 22:33:00' OR
Time_Stamp between '2014-04-02 22:42:00' and '2014-04-02 22:42:00' OR
Time_Stamp between '2014-04-02 23:05:00' and '2014-04-02 23:05:00' OR
Time_Stamp between '2014-04-03 00:00:00' and '2014-04-04 23:59:00' OR
Time_Stamp between '2014-04-07 00:00:00' and '2014-04-11 23:59:00' OR
Time_Stamp between '2014-04-12 05:37:00' and '2014-04-12 05:37:00' OR
Time_Stamp between '2014-04-12 07:25:00' and '2014-04-12 07:25:00' OR
Time_Stamp between '2014-04-13 00:00:00' and '2014-04-16 23:59:00' OR
Time_Stamp between '2014-04-17 00:30:00' and '2014-04-17 00:30:00' OR
Time_Stamp between '2014-04-17 10:15:00' and '2014-04-17 10:15:00' OR
Time_Stamp between '2014-04-17 10:22:00' and '2014-04-17 10:22:00' OR
Time_Stamp between '2014-04-17 10:24:00' and '2014-04-17 10:24:00' OR
Time_Stamp between '2014-04-17 10:51:00' and '2014-04-17 10:51:00' OR
Time_Stamp between '2014-04-17 11:22:00' and '2014-04-17 11:22:00' OR
Time_Stamp between '2014-04-17 19:16:00' and '2014-04-17 19:16:00' OR
Time_Stamp between '2014-04-17 19:30:00' and '2014-04-17 19:30:00' OR
Time_Stamp between '2014-04-17 22:57:00' and '2014-04-17 22:57:00' OR
Time_Stamp between '2014-04-18 01:37:00' and '2014-04-18 01:37:00' OR
Time_Stamp between '2014-04-18 02:30:00' and '2014-04-18 03:30:00' OR
Time_Stamp between '2014-04-18 07:15:00' and '2014-04-18 07:15:00' OR
Time_Stamp between '2014-04-18 09:21:00' and '2014-04-18 09:21:00' OR
Time_Stamp between '2014-04-18 10:03:00' and '2014-04-18 10:03:00' OR
Time_Stamp between '2014-04-18 10:40:00' and '2014-04-18 10:40:00' OR
Time_Stamp between '2014-04-18 20:20:00' and '2014-04-18 20:40:00' OR
Time_Stamp between '2014-04-19 01:29:00' and '2014-04-19 01:29:00' OR
Time_Stamp between '2014-04-19 02:27:00' and '2014-04-19 02:27:00' OR
Time_Stamp between '2014-04-19 03:42:00' and '2014-04-19 03:42:00' OR
Time_Stamp between '2014-04-19 04:22:00' and '2014-04-19 04:22:00' OR
Time_Stamp between '2014-04-19 09:38:00' and '2014-04-19 09:38:00' OR
Time_Stamp between '2014-04-19 11:00:00' and '2014-04-19 11:20:00' OR
Time_Stamp between '2014-04-19 14:21:00' and '2014-04-19 14:21:00' OR
Time_Stamp between '2014-04-19 17:46:00' and '2014-04-19 17:46:00' OR
Time_Stamp between '2014-04-19 19:25:00' and '2014-04-19 19:25:00' OR
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Time_Stamp between '2014-04-19 20:08:00' and '2014-04-19 20:08:00' OR
Time_Stamp between '2014-04-19 20:59:00' and '2014-04-19 20:59:00' OR
Time_Stamp between '2014-04-20 09:30:00' and '2014-04-20 10:30:00' OR
Time_Stamp between '2014-04-20 14:00:00' and '2014-04-20 18:15:00' OR
Time_Stamp between '2014-04-20 19:30:00' and '2014-04-20 20:00:00' OR
Time_Stamp between '2014-04-21 00:00:00' and '2014-04-21 23:59:00' OR
Time_Stamp between '2014-04-23 00:00:00' and '2014-04-24 23:59:00' OR
Time_Stamp between '2014-04-25 09:30:00' and '2014-04-25 11:20:00' OR
Time_Stamp between '2014-04-25 13:02:00' and '2014-04-25 13:03:00' OR
Time_Stamp between '2014-04-25 16:00:00' and '2014-04-25 19:00:00' OR
Time_Stamp between '2014-04-25 19:30:00' and '2014-04-25 19:30:00' OR
Time_Stamp between '2014-04-26 04:59:00' and '2014-04-26 04:59:00' OR
Time_Stamp between '2014-04-26 05:58:00' and '2014-04-26 05:58:00' OR
Time_Stamp between '2014-04-26 06:13:00' and '2014-04-26 06:13:00' OR
Time_Stamp between '2014-04-26 06:15:00' and '2014-04-26 06:16:00' OR
Time_Stamp between '2014-04-26 06:49:00' and '2014-04-26 06:49:00' OR
Time_Stamp between '2014-04-26 07:19:00' and '2014-04-26 07:19:00' OR
Time_Stamp between '2014-04-26 09:08:00' and '2014-04-26 09:08:00' OR
Time_Stamp between '2014-04-26 11:47:00' and '2014-04-26 11:47:00' OR
Time_Stamp between '2014-04-26 13:39:00' and '2014-04-26 13:39:00' OR
Time_Stamp between '2014-04-26 14:43:00' and '2014-04-26 14:43:00' OR
Time_Stamp between '2014-04-26 15:37:00' and '2014-04-26 15:38:00' OR
Time_Stamp between '2014-04-26 16:04:00' and '2014-04-26 16:04:00' OR
Time_Stamp between '2014-04-27 11:52:00' and '2014-04-27 13:19:00' OR
Time_Stamp between '2014-04-27 13:42:00' and '2014-04-27 13:42:00' OR
Time_Stamp between '2014-04-27 17:03:00' and '2014-04-27 17:03:00' OR
Time_Stamp between '2014-04-27 17:37:00' and '2014-04-27 17:37:00' OR
Time_Stamp between '2014-04-27 17:54:00' and '2014-04-27 17:54:00' OR
Time_Stamp between '2014-04-27 18:07:00' and '2014-04-27 18:07:00' OR
Time_Stamp between '2014-04-27 18:10:00' and '2014-04-27 18:10:00' OR
Time_Stamp between '2014-04-27 18:16:00' and '2014-04-27 18:16:00' OR
Time_Stamp between '2014-04-28 05:48:00' and '2014-04-28 05:56:00' OR
Time_Stamp between '2014-04-28 08:41:00' and '2014-04-28 08:41:00' OR
Time_Stamp between '2014-04-28 08:58:00' and '2014-04-28 08:58:00' OR
Time_Stamp between '2014-04-28 09:00:00' and '2014-04-28 09:00:00' OR
Time_Stamp between '2014-04-28 11:19:00' and '2014-04-28 11:19:00' OR
Time_Stamp between '2014-04-28 12:44:00' and '2014-04-28 12:44:00' OR
Time_Stamp between '2014-04-28 14:18:00' and '2014-04-28 14:18:00' OR
Time_Stamp between '2014-04-28 16:52:00' and '2014-04-28 16:52:00' OR
Time_Stamp between '2014-04-28 18:26:00' and '2014-04-28 18:26:00' OR
Time_Stamp between '2014-04-28 20:06:00' and '2014-04-28 20:06:00' OR
Time_Stamp between '2014-04-28 20:57:00' and '2014-04-28 20:57:00' OR
Time_Stamp between '2014-04-28 21:09:00' and '2014-04-28 21:09:00' OR
Time_Stamp between '2014-04-29 08:57:00' and '2014-04-29 13:08:00' OR
Time_Stamp between '2014-04-29 13:21:00' and '2014-04-29 13:21:00' OR
Time_Stamp between '2014-04-29 14:32:00' and '2014-04-29 14:32:00' OR
Time_Stamp between '2014-04-29 15:15:00' and '2014-04-29 15:15:00' OR
Time_Stamp between '2014-04-29 15:37:00' and '2014-04-29 15:37:00' OR
Time_Stamp between '2014-04-29 15:48:00' and '2014-04-29 15:48:00' OR
Time_Stamp between '2014-04-29 15:55:00' and '2014-04-29 15:55:00' OR
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Time_Stamp between '2014-04-29 16:18:00' and '2014-04-29 16:18:00' OR
Time_Stamp between '2014-04-29 17:12:00' and '2014-04-29 17:12:00' OR
Time_Stamp between '2014-04-29 17:26:00' and '2014-04-29 17:26:00' OR
Time_Stamp between '2014-04-29 18:33:00' and '2014-04-29 18:33:00' OR
Time_Stamp between '2014-04-29 18:42:00' and '2014-04-29 18:42:00' OR
Time_Stamp between '2014-04-29 19:01:00' and '2014-04-29 19:01:00' OR
Time_Stamp between '2014-04-30 07:59:00' and '2014-04-30 10:00:00' OR
Time_Stamp between '2014-04-30 17:00:00' and '2014-04-30 18:00:00' OR
Time_Stamp between '2014-04-30 18:17:00' and '2014-04-30 18:17:00' OR
Time_Stamp between '2014-04-30 19:10:00' and '2014-04-30 19:10:00' OR
Time_Stamp between '2014-04-30 19:46:00' and '2014-04-30 19:46:00' OR
Time_Stamp between '2014-04-30 19:53:00' and '2014-04-30 19:53:00' OR
Time_Stamp between '2014-04-30 19:56:00' and '2014-04-30 19:56:00' OR
Time_Stamp between '2014-04-30 21:25:00' and '2014-04-30 21:25:00' OR
Time_Stamp between '2014-04-30 21:31:00' and '2014-04-30 21:31:00' OR
Time_Stamp between '2014-04-30 22:18:00' and '2014-04-30 22:18:00' OR
Time_Stamp between '2014-04-30 23:09:00' and '2014-04-30 23:46:00' OR
Time_Stamp between '2014-05-05 00:00:00' and '2014-05-06 23:59:00' OR
Time_Stamp between '2014-05-07 20:00:00' and '2014-05-07 23:59:00' OR
Time_Stamp between '2014-05-08 00:00:00' and '2014-05-09 23:59:00';
/* Affected rows: 22,771  Found rows: 0  Warnings: 0  Duration for 1 query: 3.297 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-05-10 03:05:00' and '2014-05-010 03:05:00' OR
Time_Stamp between '2014-05-10 09:20:00' and '2014-05-10 09:20:00' OR
Time_Stamp between '2014-05-10 12:14:00' and '2014-05-10 12:14:00' OR
Time_Stamp between '2014-05-10 20:13:00' and '2014-05-10 23:20:00' OR
Time_Stamp between '2014-05-11 00:00:00' and '2014-05-11 23:59:00' OR
Time_Stamp between '2014-05-12 14:39:00' and '2014-05-12 14:40:00' OR
Time_Stamp between '2014-05-12 14:48:00' and '2014-05-12 14:48:00' OR
Time_Stamp between '2014-05-12 19:08:00' and '2014-05-12 19:08:00';
/* Affected rows: 1,487  Found rows: 0  Warnings: 0  Duration for 1 query: 0.407 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-05-10 03:05:00' and '2014-05-10 03:05:00' OR
Time_Stamp between '2014-05-14 06:45:00' and '2014-05-14 07:00:00' OR
Time_Stamp between '2014-05-14 11:32:00' and '2014-05-14 11:32:00' OR
Time_Stamp between '2014-05-14 13:23:00' and '2014-05-14 13:23:00' OR
Time_Stamp between '2014-05-14 13:40:00' and '2014-05-14 13:40:00' OR
Time_Stamp between '2014-05-14 19:51:00' and '2014-05-14 19:51:00' OR
Time_Stamp between '2014-05-14 19:52:00' and '2014-05-14 19:52:00' OR
Time_Stamp between '2014-05-15 10:28:00' and '2014-05-15 10:28:00' OR
Time_Stamp between '2014-05-15 10:36:00' and '2014-05-15 10:37:00' OR
Time_Stamp between '2014-05-15 10:57:00' and '2014-05-15 10:57:00' OR
Time_Stamp between '2014-05-15 19:05:00' and '2014-05-15 19:05:00' OR
Time_Stamp between '2014-05-15 19:38:00' and '2014-05-15 19:38:00' OR
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Time_Stamp between '2014-05-15 20:33:00' and '2014-05-15 20:34:00' OR
Time_Stamp between '2014-05-15 20:48:00' and '2014-05-15 20:48:00' OR
Time_Stamp between '2014-05-16 07:58:00' and '2014-05-16 07:58:00' OR
Time_Stamp between '2014-05-16 09:17:00' and '2014-05-16 09:17:00' OR
Time_Stamp between '2014-05-16 10:13:00' and '2014-05-16 10:13:00' OR
Time_Stamp between '2014-05-16 13:29:00' and '2014-05-16 13:29:00' OR
Time_Stamp between '2014-05-16 19:40:00' and '2014-05-16 19:40:00' OR
Time_Stamp between '2014-05-16 20:08:00' and '2014-05-16 20:09:00' OR
Time_Stamp between '2014-05-16 20:55:00' and '2014-05-16 20:55:00' OR
Time_Stamp between '2014-05-16 21:55:00' and '2014-05-16 21:56:00' OR
Time_Stamp between '2014-05-17 08:51:00' and '2014-05-17 08:51:00' OR
Time_Stamp between '2014-05-17 22:06:00' and '2014-05-17 22:06:00' OR
Time_Stamp between '2014-05-17 23:40:00' and '2014-05-17 23:40:00' OR
Time_Stamp between '2014-05-18 00:00:00' and '2014-05-18 23:59:00' OR
Time_Stamp between '2014-05-19 00:02:00' and '2014-05-19 00:02:00' OR
Time_Stamp between '2014-05-19 00:14:00' and '2014-05-19 00:14:00' OR
Time_Stamp between '2014-05-19 00:45:00' and '2014-05-19 00:45:00' OR
Time_Stamp between '2014-05-19 04:20:00' and '2014-05-19 04:20:00' OR
Time_Stamp between '2014-05-19 04:24:00' and '2014-05-19 04:24:00' OR
Time_Stamp between '2014-05-19 04:31:00' and '2014-05-19 04:31:00' OR
Time_Stamp between '2014-05-19 08:03:00' and '2014-05-19 08:03:00' OR
Time_Stamp between '2014-05-19 08:37:00' and '2014-05-19 08:37:00' OR
Time_Stamp between '2014-05-19 09:04:00' and '2014-05-19 09:04:00' OR
Time_Stamp between '2014-05-19 09:43:00' and '2014-05-19 09:43:00' OR
Time_Stamp between '2014-05-19 15:29:00' and '2014-05-19 15:29:00' OR
Time_Stamp between '2014-05-19 22:25:00' and '2014-05-19 22:25:00' OR
Time_Stamp between '2014-05-20 08:39:00' and '2014-05-20 08:39:00' OR
Time_Stamp between '2014-05-20 08:47:00' and '2014-05-20 08:47:00' OR
Time_Stamp between '2014-05-20 20:00:00' and '2014-05-20 20:00:00' OR
Time_Stamp between '2014-05-20 20:02:00' and '2014-05-20 20:02:00' OR
Time_Stamp between '2014-05-20 20:05:00' and '2014-05-20 20:05:00' OR
Time_Stamp between '2014-05-20 20:57:00' and '2014-05-20 20:57:00' OR
Time_Stamp between '2014-05-20 20:59:00' and '2014-05-20 20:59:00';
/* Affected rows: 1,142  Found rows: 0  Warnings: 0  Duration for 1 query: 1.406 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-05-21 08:24:00' and '2014-05-21 08:25:00' OR
Time_Stamp between '2014-05-21 09:47:00' and '2014-05-21 09:47:00' OR
Time_Stamp between '2014-05-21 10:08:00' and '2014-05-21 10:08:00' OR
Time_Stamp between '2014-05-21 19:42:00' and '2014-05-21 19:42:00' OR
Time_Stamp between '2014-05-21 19:44:00' and '2014-05-21 19:44:00' OR
Time_Stamp between '2014-05-21 19:48:00' and '2014-05-21 19:48:00' OR
Time_Stamp between '2014-05-21 20:13:00' and '2014-05-21 20:13:00' OR
Time_Stamp between '2014-05-21 22:37:00' and '2014-05-21 22:37:00' OR
Time_Stamp between '2014-05-21 22:47:00' and '2014-05-21 22:47:00' OR
Time_Stamp between '2014-05-21 23:08:00' and '2014-05-21 23:08:00' OR
Time_Stamp between '2014-05-22 04:03:00' and '2014-05-22 04:03:00' OR
Time_Stamp between '2014-05-22 06:37:00' and '2014-05-22 06:37:00' OR
```

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Time_Stamp between '2014-05-22 08:24:00' and '2014-05-22 08:24:00' OR
Time_Stamp between '2014-05-22 09:14:00' and '2014-05-22 09:14:00' OR
Time_Stamp between '2014-05-22 10:43:00' and '2014-05-22 10:43:00' OR
Time_Stamp between '2014-05-22 13:55:00' and '2014-05-22 13:55:00' OR
Time_Stamp between '2014-05-22 15:33:00' and '2014-05-22 15:33:00' OR
Time_Stamp between '2014-05-22 19:21:00' and '2014-05-22 19:21:00' OR
Time_Stamp between '2014-05-22 23:57:00' and '2014-05-22 23:57:00' OR
Time_Stamp between '2014-05-23 02:10:00' and '2014-05-23 02:10:00' OR
Time_Stamp between '2014-05-23 03:46:00' and '2014-05-23 03:46:00' OR
Time_Stamp between '2014-05-23 05:12:00' and '2014-05-23 10:25:00' OR
Time_Stamp between '2014-05-23 22:45:00' and '2014-05-23 23:59:00' OR
Time_Stamp between '2014-05-23 14:04:00' and '2014-05-23 14:04:00' OR
Time_Stamp between '2014-05-23 14:32:00' and '2014-05-23 14:32:00' OR
Time_Stamp between '2014-05-23 16:55:00' and '2014-05-23 16:55:00' OR
Time_Stamp between '2014-05-23 17:51:00' and '2014-05-23 17:51:00' OR
Time_Stamp between '2014-05-23 18:51:00' and '2014-05-23 18:51:00' OR
Time_Stamp between '2014-05-24 08:50:00' and '2014-05-24 08:50:00' OR
Time_Stamp between '2014-05-24 09:19:00' and '2014-05-24 09:19:00' OR
Time_Stamp between '2014-05-24 10:47:00' and '2014-05-24 10:47:00' OR
Time_Stamp between '2014-05-24 10:55:00' and '2014-05-24 10:55:00' OR
Time_Stamp between '2014-05-24 10:57:00' and '2014-05-24 10:59:00' OR
Time_Stamp between '2014-05-24 11:02:00' and '2014-05-24 11:03:00' OR
Time_Stamp between '2014-05-24 11:24:00' and '2014-05-24 11:24:00' OR
Time_Stamp between '2014-05-24 11:45:00' and '2014-05-24 11:45:00' OR
Time_Stamp between '2014-05-24 11:56:00' and '2014-05-24 11:56:00' OR
Time_Stamp between '2014-05-24 14:57:00' and '2014-05-24 14:59:00' OR
Time_Stamp between '2014-05-24 15:51:00' and '2014-05-24 15:54:00' OR
Time_Stamp between '2014-05-24 17:22:00' and '2014-05-24 17:22:00' OR
Time_Stamp between '2014-05-24 20:01:00' and '2014-05-24 20:01:00' OR
Time_Stamp between '2014-05-24 20:27:00' and '2014-05-24 20:27:00' OR
Time_Stamp between '2014-05-24 20:35:00' and '2014-05-24 20:35:00' OR
Time_Stamp between '2014-05-24 21:00:00' and '2014-05-24 21:00:00';
/* Affected rows: 435  Found rows: 0  Warnings: 0  Duration for 1 query: 1.094 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2014-05-25 04:01:00' and '2014-05-25 18:06:00' OR
Time_Stamp between '2014-05-26 09:39:00' and '2014-05-26 09:39:00' OR
Time_Stamp between '2014-05-26 13:27:00' and '2014-05-26 13:27:00' OR
Time_Stamp between '2014-05-26 15:32:00' and '2014-05-26 15:32:00' OR
Time_Stamp between '2014-05-27 00:34:00' and '2014-05-27 00:34:00' OR
Time_Stamp between '2014-05-27 00:39:00' and '2014-05-27 00:39:00' OR
Time_Stamp between '2014-05-27 00:47:00' and '2014-05-27 00:47:00' OR
Time_Stamp between '2014-05-27 01:17:00' and '2014-05-27 01:17:00' OR
Time_Stamp between '2014-05-27 01:35:00' and '2014-05-27 01:35:00' OR
Time_Stamp between '2014-05-27 01:43:00' and '2014-05-27 01:44:00' OR
Time_Stamp between '2014-05-27 19:06:00' and '2014-05-27 19:06:00' OR
Time_Stamp between '2014-05-27 19:10:00' and '2014-05-27 19:10:00' OR
Time_Stamp between '2014-05-27 19:15:00' and '2014-05-27 19:15:00' OR
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Time_Stamp between '2014-05-27 20:41:00' and '2014-05-27 20:43:00' OR
Time_Stamp between '2014-05-27 22:10:00' and '2014-05-27 22:10:00' OR
Time_Stamp between '2014-05-28 15:00:00' and '2014-05-28 18:03:00' OR
Time_Stamp between '2014-05-29 04:19:00' and '2014-05-29 04:19:00' OR
Time_Stamp between '2014-05-29 04:23:00' and '2014-05-29 04:25:00' OR
Time_Stamp between '2014-05-29 04:54:00' and '2014-05-29 04:54:00' OR
Time_Stamp between '2014-05-29 23:39:00' and '2014-05-29 23:42:00' OR
Time_Stamp between '2014-05-30 08:22:00' and '2014-05-30 08:22:00' OR
Time_Stamp between '2014-05-30 17:26:00' and '2014-05-30 17:26:00' OR
Time_Stamp between '2014-05-30 18:07:00' and '2014-05-30 18:07:00' OR
Time_Stamp between '2014-05-30 21:39:00' and '2014-05-30 21:39:00' OR
Time_Stamp between '2014-05-30 23:06:00' and '2014-05-30 23:06:00' OR
Time_Stamp between '2014-05-31 10:21:00' and '2014-05-31 10:21:00' OR
Time_Stamp between '2014-05-31 15:09:00' and '2014-05-31 15:09:00' OR
Time_Stamp between '2014-05-31 15:15:00' and '2014-05-31 15:15:00' OR
Time_Stamp between '2014-05-31 15:22:00' and '2014-05-31 15:23:00' OR
Time_Stamp between '2014-05-31 16:10:00' and '2014-05-31 16:10:00' OR
Time_Stamp between '2014-06-01 00:00:00' and '2014-06-01 23:59:00' OR
Time_Stamp between '2014-06-02 00:14:00' and '2014-06-02 00:14:00' OR
Time_Stamp between '2014-06-02 01:06:00' and '2014-06-02 01:06:00' OR
Time_Stamp between '2014-06-02 03:05:00' and '2014-06-02 03:05:00' OR
Time_Stamp between '2014-06-02 07:07:00' and '2014-06-02 07:07:00' OR
Time_Stamp between '2014-06-02 07:40:00' and '2014-06-02 07:40:00' OR
Time_Stamp between '2014-06-02 07:49:00' and '2014-06-02 07:49:00' OR
Time_Stamp between '2014-06-02 07:57:00' and '2014-06-02 07:57:00' OR
Time_Stamp between '2014-06-02 08:56:00' and '2014-06-02 08:56:00' OR
Time_Stamp between '2014-06-02 08:58:00' and '2014-06-02 08:58:00' OR
Time_Stamp between '2014-06-02 10:34:00' and '2014-06-02 10:34:00' OR
Time_Stamp between '2014-06-02 11:11:00' and '2014-06-02 11:11:00' OR
Time_Stamp between '2014-06-02 14:13:00' and '2014-06-02 14:13:00' OR
Time_Stamp between '2014-06-02 14:49:00' and '2014-06-02 14:49:00' OR
Time_Stamp between '2014-06-02 15:22:00' and '2014-06-02 15:22:00' OR
Time_Stamp between '2014-06-02 17:37:00' and '2014-06-02 17:37:00' OR
Time_Stamp between '2014-06-02 17:50:00' and '2014-06-02 17:50:00' OR
Time_Stamp between '2014-06-02 17:54:00' and '2014-06-02 17:54:00' OR
Time_Stamp between '2014-06-02 18:52:00' and '2014-06-02 18:52:00' OR
Time_Stamp between '2014-06-02 19:01:00' and '2014-06-02 19:02:00' OR
Time_Stamp between '2014-06-03 00:00:00' and '2014-06-03 23:59:00' OR
Time_Stamp between '2014-06-04 08:59:00' and '2014-06-04 11:27:00' OR
Time_Stamp between '2014-06-04 00:56:00' and '2014-06-04 00:56:00' OR
Time_Stamp between '2014-06-04 21:02:00' and '2014-06-04 21:02:00' OR
Time_Stamp between '2014-06-06 01:23:00' and '2014-06-06 01:23:00' OR
Time_Stamp between '2014-06-06 09:17:00' and '2014-06-06 09:17:00' OR
Time_Stamp between '2014-06-06 09:22:00' and '2014-06-06 09:22:00' OR
Time_Stamp between '2014-06-06 10:01:00' and '2014-06-06 10:01:00' OR
Time_Stamp between '2014-06-06 10:14:00' and '2014-06-06 10:14:00' OR
Time_Stamp between '2014-06-06 12:22:00' and '2014-06-06 12:22:00' OR
Time_Stamp between '2014-06-06 12:41:00' and '2014-06-06 12:41:00' OR
Time_Stamp between '2014-06-06 22:15:00' and '2014-06-06 22:15:00' OR
Time_Stamp between '2014-06-06 23:40:00' and '2014-06-06 23:40:00' OR
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Time_Stamp between '2014-06-06 23:44:00' and '2014-06-06 23:44:00' OR
Time_Stamp between '2014-06-07 11:39:00' and '2014-06-07 11:39:00' OR
Time_Stamp between '2014-06-07 11:59:00' and '2014-06-07 11:59:00' OR
Time_Stamp between '2014-06-07 14:06:00' and '2014-06-07 14:06:00' OR
Time_Stamp between '2014-06-07 15:27:00' and '2014-06-07 15:28:00' OR
Time_Stamp between '2014-06-07 15:30:00' and '2014-06-07 15:30:00' OR
Time_Stamp between '2014-06-07 15:37:00' and '2014-06-07 15:37:00' OR
Time_Stamp between '2014-06-07 15:45:00' and '2014-06-07 15:46:00' OR
Time_Stamp between '2014-06-07 16:13:00' and '2014-06-07 16:13:00' OR
Time_Stamp between '2014-06-07 17:15:00' and '2014-06-07 17:15:00' OR
Time_Stamp between '2014-06-07 17:48:00' and '2014-06-07 17:48:00' OR
Time_Stamp between '2014-06-07 18:11:00' and '2014-06-07 18:11:00' OR
Time_Stamp between '2014-06-07 19:50:00' and '2014-06-07 19:50:00' OR
Time_Stamp between '2014-06-07 21:19:00' and '2014-06-07 21:19:00' OR
Time_Stamp between '2014-06-08 11:20:00' and '2014-06-08 11:22:00' OR
Time_Stamp between '2014-06-08 11:34:00' and '2014-06-08 11:34:00' OR
Time_Stamp between '2014-06-08 11:39:00' and '2014-06-08 11:40:00' OR
Time_Stamp between '2014-06-08 12:21:00' and '2014-06-08 12:21:00' OR
Time_Stamp between '2014-06-08 15:38:00' and '2014-06-08 15:38:00' OR
Time_Stamp between '2014-06-08 15:45:00' and '2014-06-08 15:45:00' OR
Time_Stamp between '2014-06-08 16:17:00' and '2014-06-08 16:17:00' OR
Time_Stamp between '2014-06-08 20:52:00' and '2014-06-08 20:52:00' OR
Time_Stamp between '2014-06-08 21:16:00' and '2014-06-08 21:16:00' OR
Time_Stamp between '2014-06-08 21:55:00' and '2014-06-08 21:56:00' OR
Time_Stamp between '2014-06-09 06:14:00' and '2014-06-09 06:00:00' OR
Time_Stamp between '2014-06-09 12:47:00' and '2014-06-09 12:47:00' OR
Time_Stamp between '2014-06-09 12:50:00' and '2014-06-09 12:50:00' OR
Time_Stamp between '2014-06-09 13:35:00' and '2014-06-09 13:35:00' OR
Time_Stamp between '2014-06-09 14:09:00' and '2014-06-09 14:09:00' OR
Time_Stamp between '2014-06-09 14:16:00' and '2014-06-09 14:16:00' OR
Time_Stamp between '2014-06-09 16:04:00' and '2014-06-09 16:04:00' OR
Time_Stamp between '2014-06-09 16:35:00' and '2014-06-09 16:35:00' OR
Time_Stamp between '2014-06-09 17:00:00' and '2014-06-09 17:00:00' OR
Time_Stamp between '2014-06-09 17:20:00' and '2014-06-09 17:20:00' OR
Time_Stamp between '2014-06-09 18:00:00' and '2014-06-09 18:00:00' OR
Time_Stamp between '2014-06-09 18:08:00' and '2014-06-09 18:08:00' OR
Time_Stamp between '2014-06-09 19:36:00' and '2014-06-09 19:36:00' OR
Time_Stamp between '2014-06-10 00:00:00' and '2014-06-10 23:59:00' OR
Time_Stamp between '2014-06-11 06:44:00' and '2014-06-11 11:43:00' OR
Time_Stamp between '2014-06-11 02:24:00' and '2014-06-11 02:24:00' OR
Time_Stamp between '2014-06-11 21:05:00' and '2014-06-11 21:05:00' OR
Time_Stamp between '2014-06-11 21:55:00' and '2014-06-11 21:55:00' OR
Time_Stamp between '2014-06-11 22:01:00' and '2014-06-11 22:01:00' OR
Time_Stamp between '2014-06-11 22:52:00' and '2014-06-11 22:52:00' OR
Time_Stamp between '2014-06-11 23:03:00' and '2014-06-11 23:03:00' OR
Time_Stamp between '2014-06-11 23:52:00' and '2014-06-11 23:52:00' OR
Time_Stamp between '2014-06-12 00:00:00' and '2014-06-12 23:59:00' OR
Time_Stamp between '2014-06-14 00:00:00' and '2014-06-18 23:59:00';
/* Affected rows: 12,056  Found rows: 0  Warnings: 0  Duration for 1 query: 21.141 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2012-02-24 05:30:00' and '2012-02-24 06:15:00' OR
Time_Stamp between '2012-02-25 03:00:00' and '2012-02-25 03:30:00' OR
Time_Stamp between '2012-02-29 04:30:00' and '2012-02-29 05:30:00' OR
Time_Stamp between '2012-03-04 03:00:00' and '2012-03-04 03:45:00' OR
Time_Stamp between '2012-03-05 05:45:00' and '2012-03-05 06:30:00' OR
Time_Stamp between '2012-04-25 17:00:00' and '2012-04-25 21:00:00' OR
Time_Stamp between '2012-04-26 00:00:00' and '2012-04-26 23:59:00' OR
Time_Stamp between '2012-04-27 00:00:00' and '2012-04-27 23:59:00' OR
Time_Stamp between '2012-05-01 18:00:00' and '2012-05-01 19:15:00' OR
Time_Stamp between '2012-05-03 00:00:00' and '2012-05-06 23:59:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-07-10 17:45:00' and '2012-07-10 17:45:00' OR
Time_Stamp between '2012-07-10 19:46:00' and '2012-07-10 19:46:00' OR
Time_Stamp between '2012-07-11 17:02:00' and '2012-07-11 17:02:00' OR
Time_Stamp between '2012-07-18 02:00:00' and '2012-07-18 02:00:00' OR
Time_Stamp between '2012-08-03 20:00:00' and '2012-08-03 20:00:00' OR
Time_Stamp between '2012-08-04 13:58:00' and '2012-08-04 13:58:00' OR
Time_Stamp between '2012-09-15 02:55:00' and '2012-09-15 02:55:00' OR
Time_Stamp between '2012-09-15 10:58:00' and '2012-09-15 10:58:00' OR
Time_Stamp between '2012-09-16 04:43:00' and '2012-09-16 04:44:00' OR
Time_Stamp between '2012-09-16 11:16:00' and '2012-09-16 11:16:00' OR
Time_Stamp between '2012-09-16 22:33:00' and '2012-09-16 22:33:00' OR
Time_Stamp between '2012-09-17 11:22:00' and '2012-09-17 11:22:00' OR
Time_Stamp between '2012-09-25 14:00:00' and '2012-09-25 14:30:00' OR
Time_Stamp between '2012-09-26 10:50:00' and '2012-09-26 10:50:00' OR
Time_Stamp between '2012-09-30 09:30:00' and '2012-09-30 10:30:00' OR
Time_Stamp between '2012-10-04 04:43:00' and '2012-10-04 04:43:00' OR
Time_Stamp between '2012-10-04 09:11:00' and '2012-10-04 09:11:00' OR
Time_Stamp between '2012-10-05 03:25:00' and '2012-10-05 03:25:00' OR
Time_Stamp between '2012-10-06 22:27:00' and '2012-10-06 22:27:00' OR
Time_Stamp between '2012-10-07 15:22:00' and '2012-10-07 15:22:00' OR
Time_Stamp between '2012-10-07 16:47:00' and '2012-10-07 16:47:00' OR
Time_Stamp between '2012-10-09 14:29:00' and '2012-10-09 14:29:00' OR
Time_Stamp between '2012-10-16 10:23:00' and '2012-10-16 10:24:00' OR
Time_Stamp between '2012-10-16 18:24:00' and '2012-10-16 18:24:00' OR
Time_Stamp between '2012-10-18 02:50:00' and '2012-10-18 02:50:00' OR
Time_Stamp between '2012-10-18 09:30:00' and '2012-10-18 10:15:00' OR
Time_Stamp between '2012-10-18 13:55:00' and '2012-10-18 13:55:00' OR
Time_Stamp between '2012-10-19 12:30:00' and '2012-10-19 13:00:00' OR
Time_Stamp between '2012-10-20 10:45:00' and '2012-10-20 12:00:00' OR
Time_Stamp between '2012-10-21 22:34:00' and '2012-10-21 22:34:00' OR
Time_Stamp between '2012-10-21 23:51:00' and '2012-10-21 23:51:00' OR
Time_Stamp between '2012-10-22 00:00:00' and '2012-10-22 23:59:00' OR
Time_Stamp between '2012-10-23 02:14:00' and '2012-10-23 02:14:00' OR
Time_Stamp between '2012-10-24 00:00:00' and '2012-10-24 23:59:00' OR
Time_Stamp between '2012-10-25 14:32:00' and '2012-10-25 14:32:00' OR
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Time_Stamp between '2012-10-26 14:03:00' and '2012-10-26 14:03:00' OR
Time_Stamp between '2012-10-26 15:59:00' and '2012-10-26 15:59:00' OR
Time_Stamp between '2012-10-28 12:12:00' and '2012-10-28 12:12:00' OR
Time_Stamp between '2012-10-29 11:00:00' and '2012-10-29 12:15:00' OR
Time_Stamp between '2012-10-29 18:15:00' and '2012-10-29 23:59:00' OR
Time_Stamp between '2012-10-30 11:02:00' and '2012-10-30 11:02:00' OR
Time_Stamp between '2012-10-30 20:30:00' and '2012-10-30 20:30:00' OR
Time_Stamp between '2012-10-31 19:30:00' and '2012-10-31 23:30:00';
/* Affected rows: 14,422  Found rows: 0  Warnings: 0  Duration for 1 query: 5.375 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2012-11-01 11:00:00' and '2012-11-01 11:30:00' OR
Time_Stamp between '2012-11-01 19:30:00' and '2012-11-01 21:30:00' OR
Time_Stamp between '2012-11-02 01:26:00' and '2012-11-02 01:26:00' OR
Time_Stamp between '2012-11-02 15:41:00' and '2012-11-02 15:41:00' OR
Time_Stamp between '2012-11-02 15:49:00' and '2012-11-02 15:49:00' OR
Time_Stamp between '2012-11-03 07:00:00' and '2012-11-03 23:59:00' OR
Time_Stamp between '2012-11-04 00:00:00' and '2012-11-05 23:59:00' OR
Time_Stamp between '2012-11-06 13:30:00' and '2012-11-06 14:45:00' OR
Time_Stamp between '2012-11-08 16:14:00' and '2012-11-08 16:14:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 23:59:00' OR
Time_Stamp between '2012-11-15 14:30:00' and '2012-11-15 18:30:00' OR
Time_Stamp between '2012-11-17 13:30:00' and '2012-11-17 14:00:00' OR
Time_Stamp between '2012-11-18 15:30:00' and '2012-11-18 23:59:00' OR
Time_Stamp between '2012-11-19 00:00:00' and '2012-11-20 23:59:00' OR
Time_Stamp between '2012-11-21 04:42:00' and '2012-11-21 04:42:00' OR
Time_Stamp between '2012-11-21 20:19:00' and '2012-11-21 20:19:00' OR
Time_Stamp between '2012-11-22 00:00:00' and '2012-11-22 23:59:00' OR
Time_Stamp between '2012-11-23 13:08:00' and '2012-11-23 13:08:00' OR
Time_Stamp between '2012-11-25 00:00:00' and '2012-11-27 23:59:00' OR
Time_Stamp between '2012-11-29 18:27:00' and '2012-11-29 18:27:00' OR
Time_Stamp between '2012-11-30 00:00:00' and '2012-11-30 23:59:00' OR
Time_Stamp between '2012-12-01 12:44:00' and '2012-12-01 12:44:00' OR
Time_Stamp between '2012-12-02 14:26:00' and '2012-12-02 14:26:00' OR
Time_Stamp between '2012-12-03 14:15:00' and '2012-12-03 19:45:00' OR
Time_Stamp between '2012-12-05 18:15:00' and '2012-12-05 19:00:00' OR
Time_Stamp between '2012-12-06 00:00:00' and '2012-12-07 23:59:00' OR
Time_Stamp between '2012-12-08 01:17:00' and '2012-12-08 01:17:00' OR
Time_Stamp between '2012-12-09 14:01:00' and '2012-12-09 14:01:00' OR
Time_Stamp between '2012-12-12 11:42:00' and '2012-12-12 11:42:00' OR
Time_Stamp between '2012-12-13 12:27:00' and '2012-12-13 12:27:00' OR
Time_Stamp between '2012-12-13 12:46:00' and '2012-12-13 12:46:00' OR
Time_Stamp between '2012-12-21 17:55:00' and '2012-12-21 17:55:00' OR
Time_Stamp between '2012-12-23 12:19:00' and '2012-12-23 12:19:00' OR
Time_Stamp between '2012-12-24 13:02:00' and '2012-12-24 13:02:00' OR
Time_Stamp between '2012-12-28 13:45:00' and '2012-12-28 14:00:00' OR
Time_Stamp between '2012-12-31 15:45:00' and '2012-12-31 16:45:00';
/* Affected rows: 19,628  Found rows: 0  Warnings: 0  Duration for 1 query: 2.859 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_με` = NULL
where Time_Stamp between '2013-02-20 17:25:00' and '2013-02-20 21:30:00' OR
Time_Stamp between '2013-02-22 02:54:00' and '2013-02-22 02:54:00' OR
Time_Stamp between '2013-02-22 03:02:00' and '2013-02-22 03:02:00' OR
Time_Stamp between '2013-02-22 03:07:00' and '2013-02-22 03:07:00' OR
Time_Stamp between '2013-02-22 03:11:00' and '2013-02-22 03:11:00' OR
Time_Stamp between '2013-02-22 03:30:00' and '2013-02-22 03:30:00' OR
Time_Stamp between '2013-02-22 03:53:00' and '2013-02-22 03:53:00' OR
Time_Stamp between '2013-02-22 04:15:00' and '2013-02-22 04:15:00' OR
Time_Stamp between '2013-02-22 05:31:00' and '2013-02-22 05:31:00' OR
Time_Stamp between '2013-02-23 00:00:00' and '2013-02-23 02:40:00' OR
Time_Stamp between '2013-02-23 18:00:00' and '2013-02-23 21:00:00' OR
Time_Stamp between '2013-02-24 12:17:00' and '2013-02-24 12:17:00' OR
Time_Stamp between '2013-02-24 03:31:00' and '2013-02-24 03:31:00' OR
Time_Stamp between '2013-02-24 03:47:00' and '2013-02-24 03:47:00' OR
Time_Stamp between '2013-02-24 20:50:00' and '2013-02-24 21:50:00' OR
Time_Stamp between '2013-02-25 09:07:00' and '2013-02-25 09:07:00' OR
Time_Stamp between '2013-02-26 16:36:00' and '2013-02-26 16:36:00' OR
Time_Stamp between '2013-02-27 21:27:00' and '2013-02-27 21:27:00' OR
Time_Stamp between '2013-02-28 11:14:00' and '2013-02-28 11:14:00' OR
Time_Stamp between '2013-02-28 11:46:00' and '2013-02-28 11:46:00' OR
Time_Stamp between '2013-02-28 12:36:00' and '2013-02-28 12:36:00' OR
Time_Stamp between '2013-02-28 13:44:00' and '2013-02-28 13:44:00' OR
Time_Stamp between '2013-02-28 13:53:00' and '2013-02-28 13:53:00' OR
Time_Stamp between '2013-03-01 09:00:00' and '2013-03-01 09:30:00' OR
Time_Stamp between '2013-03-01 16:30:00' and '2013-03-01 18:40:00' OR
Time_Stamp between '2013-03-02 11:40:00' and '2013-03-02 12:40:00' OR
Time_Stamp between '2013-03-05 19:21:00' and '2013-03-05 19:21:00' OR
Time_Stamp between '2013-03-05 23:44:00' and '2013-03-05 23:44:00' OR
Time_Stamp between '2013-03-06 11:27:00' and '2013-03-06 11:27:00' OR
Time_Stamp between '2013-03-06 11:45:00' and '2013-03-06 11:46:00' OR
Time_Stamp between '2013-03-07 09:47:00' and '2013-03-07 09:47:00' OR
Time_Stamp between '2013-03-09 03:29:00' and '2013-03-09 03:29:00' OR
Time_Stamp between '2013-03-09 19:02:00' and '2013-03-09 19:02:00' OR
Time_Stamp between '2013-03-09 19:25:00' and '2013-03-09 19:25:00' OR
Time_Stamp between '2013-03-09 19:28:00' and '2013-03-09 19:28:00' OR
Time_Stamp between '2013-03-09 19:35:00' and '2013-03-09 19:35:00' OR
Time_Stamp between '2013-03-09 19:38:00' and '2013-03-09 19:38:00' OR
Time_Stamp between '2013-03-10 19:13:00' and '2013-03-10 19:13:00' OR
Time_Stamp between '2013-03-10 19:53:00' and '2013-03-10 19:53:00' OR
Time_Stamp between '2013-03-10 21:07:00' and '2013-03-10 21:08:00' OR
Time_Stamp between '2013-03-12 21:21:00' and '2013-03-12 21:21:00' OR
Time_Stamp between '2013-03-12 22:04:00' and '2013-03-12 22:04:00' OR
Time_Stamp between '2013-03-13 10:08:00' and '2013-03-13 10:08:00' OR
Time_Stamp between '2013-03-14 11:02:00' and '2013-03-14 11:02:00' OR
Time_Stamp between '2013-03-17 15:28:00' and '2013-03-17 15:28:00' OR
Time_Stamp between '2013-03-17 15:31:00' and '2013-03-17 15:31:00' OR
Time_Stamp between '2013-03-17 18:22:00' and '2013-03-17 18:22:00' OR
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Time_Stamp between '2013-03-17 18:24:00' and '2013-03-17 18:24:00' OR
Time_Stamp between '2013-03-17 18:31:00' and '2013-03-17 18:31:00' OR
Time_Stamp between '2013-03-17 20:31:00' and '2013-03-17 20:31:00' OR
Time_Stamp between '2013-03-17 20:38:00' and '2013-03-17 20:38:00' OR
Time_Stamp between '2013-03-17 20:48:00' and '2013-03-17 20:48:00' OR
Time_Stamp between '2013-03-17 20:55:00' and '2013-03-17 20:55:00' OR
Time_Stamp between '2013-03-18 15:03:00' and '2013-03-18 15:04:00' OR
Time_Stamp between '2013-03-19 12:29:00' and '2013-03-19 12:29:00' OR
Time_Stamp between '2013-03-19 15:34:00' and '2013-03-19 15:34:00' OR
Time_Stamp between '2013-03-19 16:28:00' and '2013-03-19 16:28:00' OR
Time_Stamp between '2013-03-19 17:19:00' and '2013-03-19 17:19:00' OR
Time_Stamp between '2013-03-19 17:34:00' and '2013-03-19 17:34:00' OR
Time_Stamp between '2013-03-19 17:52:00' and '2013-03-19 17:53:00' OR
Time_Stamp between '2013-03-19 18:00:00' and '2013-03-19 18:00:00' OR
Time_Stamp between '2013-03-21 11:28:00' and '2013-03-21 11:28:00' OR
Time_Stamp between '2013-03-21 11:33:00' and '2013-03-21 11:33:00' OR
Time_Stamp between '2013-03-22 12:45:00' and '2013-03-22 14:45:00' OR
Time_Stamp between '2013-03-23 08:57:00' and '2013-03-23 14:13:00' OR
Time_Stamp between '2013-03-24 10:56:00' and '2013-03-24 10:56:00' OR
Time_Stamp between '2013-03-25 00:00:00' and '2013-03-25 23:59:00' OR
Time_Stamp between '2013-03-26 21:05:00' and '2013-03-26 23:59:00' OR
Time_Stamp between '2013-03-27 06:11:00' and '2013-03-27 10:00:00' OR
Time_Stamp between '2013-03-28 11:20:00' and '2013-03-28 12:19:00' OR
Time_Stamp between '2013-03-30 09:03:00' and '2013-03-30 09:03:00' OR
Time_Stamp between '2013-03-31 09:30:00' and '2013-03-31 10:25:00';
/* Affected rows: 2,652  Found rows: 0  Warnings: 0  Duration for 1 query: 0.781 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6B_mV/V` = NULL,
`Calculated_Strain_6B_µe` = NULL
where Time_Stamp between '2013-04-01 04:46:00' and '2013-04-01 04:46:00' OR
Time_Stamp between '2013-04-01 09:00:00' and '2013-04-01 10:31:00' OR
Time_Stamp between '2013-04-02 00:27:00' and '2013-04-02 00:27:00' OR
Time_Stamp between '2013-04-02 09:40:00' and '2013-04-02 09:40:00' OR
Time_Stamp between '2013-04-02 09:47:00' and '2013-04-02 09:47:00' OR
Time_Stamp between '2013-04-02 09:53:00' and '2013-04-02 09:53:00' OR
Time_Stamp between '2013-04-02 11:39:00' and '2013-04-02 11:39:00' OR
Time_Stamp between '2013-04-02 11:48:00' and '2013-04-02 11:48:00' OR
Time_Stamp between '2013-04-02 12:18:00' and '2013-04-02 12:18:00' OR
Time_Stamp between '2013-04-02 14:43:00' and '2013-04-02 14:43:00' OR
Time_Stamp between '2013-04-02 19:01:00' and '2013-04-02 19:01:00' OR
Time_Stamp between '2013-04-03 19:30:00' and '2013-04-03 19:30:00' OR
Time_Stamp between '2013-04-04 10:14:00' and '2013-04-04 10:14:00' OR
Time_Stamp between '2013-04-04 10:19:00' and '2013-04-04 10:19:00' OR
Time_Stamp between '2013-04-09 01:12:00' and '2013-04-09 01:12:00' OR
Time_Stamp between '2013-04-09 01:14:00' and '2013-04-09 01:15:00' OR
Time_Stamp between '2013-04-09 01:34:00' and '2013-04-09 01:34:00' OR
Time_Stamp between '2013-04-09 02:34:00' and '2013-04-09 02:34:00' OR
Time_Stamp between '2013-04-09 03:10:00' and '2013-04-09 03:10:00' OR
Time_Stamp between '2013-04-09 14:56:00' and '2013-04-09 14:56:00' OR
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Time_Stamp between '2013-04-13 08:31:00' and '2013-04-13 08:31:00' OR
Time_Stamp between '2013-04-13 08:34:00' and '2013-04-13 08:34:00' OR
Time_Stamp between '2013-04-13 09:14:00' and '2013-04-13 09:14:00' OR
Time_Stamp between '2013-04-17 16:15:00' and '2013-04-17 16:16:00' OR
Time_Stamp between '2013-04-17 16:24:00' and '2013-04-17 16:24:00' OR
Time_Stamp between '2013-04-17 16:29:00' and '2013-04-17 16:29:00' OR
Time_Stamp between '2013-04-18 12:23:00' and '2013-04-18 12:23:00' OR
Time_Stamp between '2013-04-18 12:45:00' and '2013-04-18 12:45:00' OR
Time_Stamp between '2013-04-18 18:40:00' and '2013-04-18 18:41:00' OR
Time_Stamp between '2013-04-19 21:19:00' and '2013-04-19 21:19:00' OR
Time_Stamp between '2013-04-19 21:31:00' and '2013-04-19 21:31:00' OR
Time_Stamp between '2013-04-19 22:41:00' and '2013-04-19 22:41:00' OR
Time_Stamp between '2013-04-20 07:30:00' and '2013-04-20 07:30:00' OR
Time_Stamp between '2013-04-20 07:55:00' and '2013-04-20 07:55:00' OR
Time_Stamp between '2013-04-20 08:03:00' and '2013-04-20 08:03:00' OR
Time_Stamp between '2013-04-20 09:04:00' and '2013-04-20 09:04:00' OR
Time_Stamp between '2013-04-20 09:09:00' and '2013-04-20 09:10:00' OR
Time_Stamp between '2013-04-20 11:08:00' and '2013-04-20 11:08:00' OR
Time_Stamp between '2013-04-20 11:11:00' and '2013-04-20 11:11:00' OR
Time_Stamp between '2013-04-21 09:51:00' and '2013-04-21 11:17:00' OR
Time_Stamp between '2013-04-22 10:00:00' and '2013-04-22 10:00:00' OR
Time_Stamp between '2013-04-22 10:15:00' and '2013-04-22 10:15:00' OR
Time_Stamp between '2013-04-22 10:41:00' and '2013-04-22 10:41:00' OR
Time_Stamp between '2013-04-24 12:04:00' and '2013-04-24 19:35:00' OR
Time_Stamp between '2013-04-26 18:28:00' and '2013-04-26 18:28:00' OR
Time_Stamp between '2013-04-26 20:55:00' and '2013-04-26 20:57:00' OR
Time_Stamp between '2013-04-26 21:04:00' and '2013-04-26 21:04:00' OR
Time_Stamp between '2013-04-26 21:23:00' and '2013-04-26 21:23:00' OR
Time_Stamp between '2013-04-26 21:29:00' and '2013-04-26 21:30:00' OR
Time_Stamp between '2013-04-27 05:32:00' and '2013-04-27 05:32:00' OR
Time_Stamp between '2013-04-27 09:31:00' and '2013-04-27 10:03:00' OR
Time_Stamp between '2013-04-27 23:20:00' and '2013-04-27 23:21:00' OR
Time_Stamp between '2013-04-28 19:56:00' and '2013-04-28 19:56:00' OR
Time_Stamp between '2013-04-28 20:12:00' and '2013-04-28 20:12:00' OR
Time_Stamp between '2013-04-29 08:01:00' and '2013-04-29 08:01:00' OR
Time_Stamp between '2013-04-29 08:15:00' and '2013-04-29 10:07:00' OR
Time_Stamp between '2013-04-29 20:21:00' and '2013-04-29 20:21:00' OR
Time_Stamp between '2013-05-01 19:42:00' and '2013-05-01 19:42:00' OR
Time_Stamp between '2013-05-02 12:54:00' and '2013-05-02 12:54:00' OR
Time_Stamp between '2013-05-02 13:16:00' and '2013-05-02 13:16:00' OR
Time_Stamp between '2013-05-02 13:33:00' and '2013-05-02 13:33:00' OR
Time_Stamp between '2013-05-02 18:17:00' and '2013-05-02 18:17:00' OR
Time_Stamp between '2013-05-05 10:02:00' and '2013-05-05 10:02:00' OR
Time_Stamp between '2013-05-05 10:30:00' and '2013-05-05 10:30:00' OR
Time_Stamp between '2013-05-05 10:40:00' and '2013-05-05 10:40:00' OR
Time_Stamp between '2013-05-05 10:52:00' and '2013-05-05 10:52:00' OR
Time_Stamp between '2013-05-05 11:39:00' and '2013-05-05 11:39:00' OR
Time_Stamp between '2013-05-05 11:55:00' and '2013-05-05 12:26:00' OR
Time_Stamp between '2013-05-07 09:26:00' and '2013-05-07 09:26:00' OR
Time_Stamp between '2013-05-07 10:03:00' and '2013-05-07 10:03:00' OR
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Time_Stamp between '2013-05-07 10:13:00' and '2013-05-07 10:13:00' OR
Time_Stamp between '2013-05-08 01:24:00' and '2013-05-08 01:45:00' OR
Time_Stamp between '2013-05-08 07:32:00' and '2013-05-08 07:32:00' OR
Time_Stamp between '2013-05-08 07:41:00' and '2013-05-08 09:22:00' OR
Time_Stamp between '2013-05-08 20:16:00' and '2013-05-08 20:16:00' OR
Time_Stamp between '2013-05-08 20:39:00' and '2013-05-08 20:39:00' OR
Time_Stamp between '2013-05-09 01:22:00' and '2013-05-09 12:12:00' OR
Time_Stamp between '2013-05-10 01:44:00' and '2013-05-10 08:55:00' OR
Time_Stamp between '2013-05-11 17:38:00' and '2013-05-11 20:45:00' OR
Time_Stamp between '2013-05-12 08:35:00' and '2013-05-12 11:27:00' OR
Time_Stamp between '2013-05-16 09:58:00' and '2013-05-16 09:58:00' OR
Time_Stamp between '2013-05-16 10:14:00' and '2013-05-16 10:14:00' OR
Time_Stamp between '2013-05-16 10:16:00' and '2013-05-16 10:16:00' OR
Time_Stamp between '2013-05-16 10:19:00' and '2013-05-16 10:21:00' OR
Time_Stamp between '2013-05-17 10:29:00' and '2013-05-17 10:29:00' OR
Time_Stamp between '2013-05-17 23:36:00' and '2013-05-17 23:36:00' OR
Time_Stamp between '2013-05-17 23:49:00' and '2013-05-17 23:50:00' OR
Time_Stamp between '2013-05-18 00:55:00' and '2013-05-18 03:37:00' OR
Time_Stamp between '2013-05-18 15:22:00' and '2013-05-18 23:21:00' OR
Time_Stamp between '2013-05-19 00:00:00' and '2013-05-21 23:59:00' OR
Time_Stamp between '2013-05-22 11:16:00' and '2013-05-22 11:16:00' OR
Time_Stamp between '2013-05-22 12:03:00' and '2013-05-22 12:03:00' OR
Time_Stamp between '2013-06-09 04:13:00' and '2013-06-09 04:13:00' OR
Time_Stamp between '2013-06-15 21:50:00' and '2013-06-15 21:50:00' OR
Time_Stamp between '2013-06-16 02:56:00' and '2013-06-16 02:56:00' OR
Time_Stamp between '2013-06-22 08:17:00' and '2013-06-22 10:31:00' OR
Time_Stamp between '2013-06-23 01:52:00' and '2013-06-23 01:52:00' OR
Time_Stamp between '2013-06-23 07:43:00' and '2013-06-23 07:43:00' OR
Time_Stamp between '2013-06-23 09:46:00' and '2013-06-23 09:46:00' OR
Time_Stamp between '2013-06-23 09:48:00' and '2013-06-23 09:49:00' OR
Time_Stamp between '2013-06-23 10:19:00' and '2013-06-23 10:19:00' OR
Time_Stamp between '2013-06-23 10:22:00' and '2013-06-23 10:23:00' OR
Time_Stamp between '2013-07-01 08:13:00' and '2013-07-01 08:13:00' OR
Time_Stamp between '2013-07-01 08:19:00' and '2013-07-01 08:28:00' OR
Time_Stamp between '2013-07-05 21:27:00' and '2013-07-05 21:37:00' OR
Time_Stamp between '2013-07-13 11:40:00' and '2013-07-13 11:40:00' OR
Time_Stamp between '2013-07-14 20:14:00' and '2013-07-14 20:14:00';
/* Affected rows: 7,081  Found rows: 0  Warnings: 0  Duration for 1 query: 1.844 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL
where Time_Stamp between '2012-01-02 03:15:00' and '2012-01-02 03:15:00' OR
Time_Stamp between '2012-01-03 03:30:00' and '2012-01-03 05:15:00' OR
Time_Stamp between '2012-01-04 06:00:00' and '2012-01-04 07:15:00' OR
Time_Stamp between '2012-01-05 03:00:00' and '2012-01-05 04:45:00' OR
Time_Stamp between '2012-01-06 04:00:00' and '2012-01-06 05:45:00' OR
Time_Stamp between '2012-01-07 06:00:00' and '2012-01-07 07:30:00' OR
Time_Stamp between '2012-01-10 00:00:00' and '2012-01-10 00:30:00' OR
Time_Stamp between '2012-01-10 03:45:00' and '2012-01-10 04:15:00' OR
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Time_Stamp between '2012-01-11 05:00:00' and '2012-01-11 05:30:00' OR
Time_Stamp between '2012-01-12 02:45:00' and '2012-01-12 03:45:00' OR
Time_Stamp between '2012-01-13 00:15:00' and '2012-01-13 00:45:00' OR
Time_Stamp between '2012-01-13 21:45:00' and '2012-01-13 22:15:00' OR
Time_Stamp between '2012-01-14 00:15:00' and '2012-01-14 01:15:00' OR
Time_Stamp between '2012-01-15 00:00:00' and '2012-01-15 00:15:00' OR
Time_Stamp between '2012-01-15 02:30:00' and '2012-01-15 03:00:00' OR
Time_Stamp between '2012-01-17 05:15:00' and '2012-01-17 05:45:00' OR
Time_Stamp between '2012-01-18 02:00:00' and '2012-01-18 02:15:00' OR
Time_Stamp between '2012-01-18 04:45:00' and '2012-01-18 05:15:00' OR
Time_Stamp between '2012-01-21 07:00:00' and '2012-01-18 07:30:00' OR
Time_Stamp between '2012-01-23 02:45:00' and '2012-01-23 03:15:00' OR
Time_Stamp between '2012-01-28 03:45:00' and '2012-01-28 04:15:00' OR
Time_Stamp between '2012-01-28 23:30:00' and '2012-01-28 23:59:00' OR
Time_Stamp between '2012-01-29 03:15:00' and '2012-01-29 03:30:00' OR
Time_Stamp between '2012-01-30 05:00:00' and '2012-01-30 05:30:00';
/* Affected rows: 1,027  Found rows: 0  Warnings: 0  Duration for 1 query: 0.297 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V`= NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-02-24 05:30:00' and '2012-02-24 06:15:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V`= NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
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`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-02-25 03:00:00' and '2012-02-25 03:30:00';
/* Affected rows: 31  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V`= NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-02-29 04:30:00' and '2012-02-29 05:30:00';
/* Affected rows: 61  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'A_mV/V`= NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL
where Time_Stamp between '2012-03-02 04:00:00' and '2012-03-02 04:45:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.032 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V`= NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-03-04 03:00:00' and '2012-03-04 03:45:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'A_mV/V`= NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL
where Time_Stamp between '2012-03-05 05:45:00' and '2012-03-05 06:30:00';
/* Affected rows: 46  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-10 18:00:00' and '2012-04-10 23:59:00';
/* Affected rows: 360  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-11 00:00:00' and '2012-04-11 23:59:00';
/* Affected rows: 1,440  Found rows: 0  Warnings: 0  Duration for 1 query: 0.219 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-13 20:45:00' and '2012-04-13 23:59:00';
/* Affected rows: 195  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-14 02:00:00' and '2012-04-14 03:30:00';
/* Affected rows: 91  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-16 18:00:00' and '2012-04-16 23:59:00';
/* Affected rows: 360  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-17 00:00:00' and '2012-05-07 23:59:00';
/* Affected rows: 30,239  Found rows: 0  Warnings: 0  Duration for 1 query: 2.406 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-05-10 00:00:00' and '2012-05-14 23:59:00' OR
Time_Stamp between '2012-05-21 00:00:00' and '2012-05-24 23:59:00';
/* Affected rows: 12,960  Found rows: 0  Warnings: 0  Duration for 1 query: 1.344 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-01-30 01:15:00' and '2012-01-30 01:45:00';
/* Affected rows: 31  Found rows: 0  Warnings: 0  Duration for 1 query: 0.016 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-12 00:00:00' and '2012-04-12 03:30:00' OR
Time_Stamp between '2012-04-12 21:00:00' and '2012-04-12 21:15:00';
/* Affected rows: 227  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6C_mV/V` = NULL,
`Calculated_Strain_6C_με` = NULL
where Time_Stamp between '2012-05-08 14:00:00' and '2012-05-08 23:59:00' OR
Time_Stamp between '2012-05-09 10:45:00' and '2012-05-09 16:00:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-17 14:15:00' and '2012-05-17 21:45:00' OR
Time_Stamp between '2012-05-18 13:30:00' and '2012-05-18 23:59:00' OR
```

```
Time_Stamp between '2012-05-19 10:30:00' and '2012-05-19 23:59:00' OR
Time_Stamp between '2012-05-20 00:00:00' and '2012-05-20 23:59:00';
/* Affected rows: 5,073  Found rows: 0  Warnings: 0  Duration for 1 query: 0.812 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_6_°C` = NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:00:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-09 14:45:00' and '2012-11-09 17:00:00' OR
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00' OR
Time_Stamp between '2012-11-19 05:00:00' and '2012-11-19 12:30:00' OR
Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
Time_Stamp between '2012-11-22 00:00:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 01:15:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2013-01-02 23:59:00' OR
Time_Stamp between '2014-01-14 00:00:00' and '2014-01-14 12:00:00' OR
Time_Stamp between '2014-01-15 09:44:00' and '2014-01-15 10:00:00' OR
Time_Stamp between '2014-02-16 00:00:00' and '2014-02-17 23:59:00' OR
Time_Stamp between '2014-07-06 05:28:00' and '2014-07-06 05:28:00' OR
Time_Stamp between '2014-07-06 08:21:00' and '2014-07-06 08:21:00' OR
Time_Stamp between '2014-07-06 08:38:00' and '2014-07-06 08:38:00' OR
Time_Stamp between '2014-07-06 09:04:00' and '2014-07-06 11:49:00' OR
Time_Stamp between '2014-07-06 22:02:00' and '2014-07-06 23:59:00' OR
Time_Stamp between '2014-07-07 00:00:00' and '2014-07-07 23:59:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-07-12 23:59:00' OR
Time_Stamp between '2014-07-13 10:00:00' and '2014-07-13 10:06:00' OR
Time_Stamp between '2014-07-13 15:33:00' and '2014-07-13 15:36:00' OR
Time_Stamp between '2014-07-14 20:20:00' and '2014-07-14 20:34:00' OR
Time_Stamp between '2014-07-15 00:00:00' and '2014-07-20 23:59:00' OR
Time_Stamp between '2014-07-21 00:00:00' and '2014-07-21 09:15:00' OR
Time_Stamp between '2014-07-22 00:00:00' and '2014-07-23 23:59:00' OR
Time_Stamp between '2014-07-24 08:32:00' and '2014-07-24 08:32:00' OR
Time_Stamp between '2014-07-25 04:51:00' and '2014-07-25 06:38:00' OR
Time_Stamp between '2014-07-26 00:00:00' and '2014-07-26 23:59:00';
```

```
/* Affected rows: 70,533  Found rows: 0  Warnings: 0  Duration for 1 query: 14.265 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL,
`Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL,
`Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL,
`Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-01-01 01:15:00' and '2012-01-01 02:00:00' OR
Time_Stamp between '2012-01-01 23:15:00' and '2012-01-01 23:45:00';
/* Affected rows: 77  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'A_mV/V` = NULL,
`Calculated_Strain_1'A_με` = NULL
where Time_Stamp between '2012-04-18 16:30:00' and '2012-04-18 17:00:00' OR
Time_Stamp between '2012-04-19 13:30:00' and '2012-04-19 16:00:00' OR
Time_Stamp between '2012-04-20 16:00:00' and '2012-04-20 16:30:00' OR
Time_Stamp between '2012-04-21 14:30:00' and '2012-04-21 23:59:00' OR
Time_Stamp between '2012-04-22 00:00:00' and '2012-04-27 23:59:00' OR
Time_Stamp between '2012-04-28 21:15:00' and '2012-04-28 23:59:00' OR
Time_Stamp between '2012-04-29 00:00:00' and '2012-05-06 23:59:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-04-07 10:30:00' OR
Time_Stamp between '2012-05-09 15:45:00' and '2012-05-09 16:00:00' OR
Time_Stamp between '2012-05-10 16:00:00' and '2012-05-10 16:30:00' OR
Time_Stamp between '2012-05-12 18:00:00' and '2012-05-12 20:15:00' OR
Time_Stamp between '2012-05-13 15:15:00' and '2012-05-13 21:15:00' OR
Time_Stamp between '2012-05-14 00:00:00' and '2012-05-14 23:59:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-19 13:00:00' and '2012-05-19 21:00:00' OR
Time_Stamp between '2012-05-21 14:30:00' and '2012-05-21 20:30:00' OR
Time_Stamp between '2012-05-22 11:00:00' and '2012-05-22 16:45:00' OR
Time_Stamp between '2012-05-23 15:45:00' and '2012-05-23 16:45:00' OR
Time_Stamp between '2012-05-24 10:37:00' and '2012-05-24 16:46:00' OR
Time_Stamp between '2012-10-14 10:24:00' and '2012-10-14 10:24:00' OR
Time_Stamp between '2014-01-17 06:28:00' and '2014-01-17 06:28:00' OR
Time_Stamp between '2014-01-17 12:41:00' and '2014-01-17 12:41:00' OR
Time_Stamp between '2014-08-09 00:00:00' and '2014-09-14 23:59:00' OR
Time_Stamp between '2014-09-15 18:40:00' and '2014-09-15 20:00:00' OR
Time_Stamp between '2014-09-16 00:00:00' and '2014-09-21 23:59:00';
/* Affected rows: 87,523  Found rows: 0  Warnings: 0  Duration for 1 query: 15.500 sec. */
```

```
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-05-12 14:00:00' and '2012-05-08 23:59:00' OR
Time_Stamp between '2012-05-09 00:00:00' and '2012-05-14 23:59:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-18 14:45:00' and '2012-05-18 21:45:00' OR
Time_Stamp between '2012-05-19 11:00:00' and '2012-05-19 23:59:00' OR
Time_Stamp between '2012-05-20 09:00:00' and '2012-05-20 23:59:00' OR
Time_Stamp between '2014-09-10 00:00:00' and '2014-09-21 23:59:00';
/* Affected rows: 21,647  Found rows: 0  Warnings: 0  Duration for 1 query: 1.656 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'C_mV/V` = NULL,
`Calculated_Strain_1'C_με` = NULL
where Time_Stamp between '2012-04-21 17:15:00' and '2012-04-21 23:59:00' OR
Time_Stamp between '2012-04-22 00:00:00' and '2012-04-26 23:59:00' OR
Time_Stamp between '2012-04-27 00:00:00' and '2012-04-27 11:45:00' OR
Time_Stamp between '2012-04-29 15:00:00' and '2012-04-29 23:59:00' OR
Time_Stamp between '2012-04-30 16:00:00' and '2012-04-30 22:50:00' OR
Time_Stamp between '2012-05-01 00:00:00' and '2012-05-06 23:59:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-14 18:00:00' and '2012-05-14 20:00:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00' OR
Time_Stamp between '2012-05-21 14:30:00' and '2012-05-21 20:00:00' OR
Time_Stamp between '2012-05-22 11:15:00' and '2012-05-22 11:45:00' OR
Time_Stamp between '2014-09-10 00:00:00' and '2014-09-21 23:59:00';
/* Affected rows: 37,121  Found rows: 0  Warnings: 0  Duration for 1 query: 2.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_1'_°C` = NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:30:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-09 14:45:00' and '2012-11-09 17:00:00' OR
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00' OR
Time_Stamp between '2012-11-19 05:00:00' and '2012-11-19 12:30:00' OR
Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
```

```
Time_Stamp between '2012-11-22 00:00:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 01:15:00' OR
Time_Stamp between '2012-12-15 09:15:00' and '2012-12-15 17:00:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2013-01-02 23:59:00' OR
Time_Stamp between '2014-02-16 00:00:00' and '2014-02-16 12:00:00' OR
Time_Stamp between '2014-02-17 00:00:00' and '2014-02-17 07:00:00' OR
Time_Stamp between '2014-03-02 12:00:00' and '2014-03-02 15:00:00' OR
Time_Stamp between '2014-03-15 11:00:00' and '2014-03-15 11:30:00' OR
Time_Stamp between '2014-04-03 10:00:00' and '2014-04-03 16:40:00' OR
Time_Stamp between '2014-06-18 18:28:00' and '2014-06-18 18:28:00' OR
Time_Stamp between '2014-06-22 00:00:00' and '2014-07-07 23:59:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-07-12 23:59:00' OR
Time_Stamp between '2014-07-13 10:00:00' and '2014-07-13 10:06:00' OR
Time_Stamp between '2014-07-13 15:33:00' and '2014-07-13 15:36:00' OR
Time_Stamp between '2014-07-14 20:20:00' and '2014-07-14 20:34:00' OR
Time_Stamp between '2014-07-15 00:00:00' and '2014-09-21 23:59:00';
/* Connection to 127.0.0.1 closed at 2016-04-15 14:30:21 */
/* Affected rows: 57,767  Found rows: 0  Warnings: 0  Duration for 1 query: 28.969 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL,
`Raw_Strain_6'B_mV/V` = NULL,
`Calculated_Strain_6'B_με` = NULL,
`Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-04-26 00:00:00' and '2012-04-26 23:59:00' OR
Time_Stamp between '2012-04-27 00:00:00' and '2012-04-27 11:45:00' OR
Time_Stamp between '2012-05-03 00:00:00' and '2012-05-06 23:58:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00';
/* Affected rows: 9,361  Found rows: 0  Warnings: 0  Duration for 1 query: 6.875 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_6'_°C` = NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:30:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-09 14:45:00' and '2012-11-09 17:00:00' OR
```

```
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00' OR
Time_Stamp between '2012-11-19 05:00:00' and '2012-11-19 12:30:00' OR
Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
Time_Stamp between '2012-11-22 00:00:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 01:15:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-12-15 09:15:00' and '2012-12-15 17:00:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2013-01-02 23:59:00' OR
Time_Stamp between '2014-02-16 00:00:00' and '2014-02-16 12:00:00' OR
Time_Stamp between '2014-02-17 00:00:00' and '2014-02-17 07:00:00' OR
Time_Stamp between '2014-07-06 05:28:00' and '2014-07-06 05:28:00' OR
Time_Stamp between '2014-07-06 08:21:00' and '2014-07-06 08:21:00' OR
Time_Stamp between '2014-07-06 08:38:00' and '2014-07-06 08:38:00' OR
Time_Stamp between '2014-07-06 09:04:00' and '2014-07-06 11:49:00' OR
Time_Stamp between '2014-07-06 22:02:00' and '2014-07-06 23:59:00' OR
Time_Stamp between '2014-07-07 00:00:00' and '2014-07-07 23:59:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-07-12 23:59:00' OR
Time_Stamp between '2014-07-13 10:00:00' and '2014-07-13 10:06:00' OR
Time_Stamp between '2014-07-13 15:33:00' and '2014-07-13 15:36:00' OR
Time_Stamp between '2014-07-14 20:20:00' and '2014-07-14 20:34:00' OR
Time_Stamp between '2014-07-15 00:00:00' and '2014-07-21 09:15:00' OR
Time_Stamp between '2014-07-22 00:00:00' and '2014-07-23 23:59:00' OR
Time_Stamp between '2014-07-24 08:32:00' and '2014-07-24 08:32:00' OR
Time_Stamp between '2014-07-25 04:51:00' and '2014-07-25 06:38:00' OR
Time_Stamp between '2014-07-26 00:00:00' and '2014-07-26 23:59:00';
/* Affected rows: 69,573  Found rows: 0  Warnings: 0  Duration for 1 query: 13.515 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL,
`Raw_Strain_3C_mV/V` = NULL,
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-17 11:00:00' and '2011-11-17 13:00:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.672 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-11-17 00:00:00' and '2011-11-17 13:00:00';
/* Affected rows: 660  Found rows: 0  Warnings: 0  Duration for 1 query: 0.937 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3C_mV/V` = NULL,
```

```
`Calculated_Strain_3C_με` = NULL
where Time_Stamp between '2011-11-17 00:00:00' and '2011-11-17 23:59:00';
/* Affected rows: 1,229  Found rows: 0  Warnings: 0  Duration for 1 query: 0.266 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_2A_mV/V` = NULL,
`Calculated_Strain_2A_με` = NULL
where Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 14:00:00';
/* Affected rows: 211  Found rows: 0  Warnings: 0  Duration for 1 query: 0.500 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-02-24 05:30:00' and '2012-02-24 06:15:00' OR
Time_Stamp between '2012-02-25 03:00:00' and '2012-02-25 03:30:00' OR
Time_Stamp between '2012-02-29 04:30:00' and '2012-02-29 05:30:00' OR
Time_Stamp between '2012-03-04 03:00:00' and '2012-03-04 03:45:00';
/* Affected rows: 184  Found rows: 0  Warnings: 0  Duration for 1 query: 1.984 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2012-04-10 17:00:00' and '2012-04-10 20:30:00' OR
Time_Stamp between '2012-04-11 17:00:00' and '2012-04-11 23:59:00' OR
Time_Stamp between '2012-04-12 19:00:00' and '2012-04-12 20:00:00' OR
Time_Stamp between '2012-04-13 18:30:00' and '2012-04-13 20:30:00' OR
Time_Stamp between '2012-04-16 17:45:00' and '2012-04-16 19:30:00' OR
Time_Stamp between '2012-04-17 16:00:00' and '2012-04-17 23:59:00' OR
Time_Stamp between '2012-04-18 00:00:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-08 13:30:00' and '2012-05-08 23:59:00' OR
Time_Stamp between '2012-05-09 10:15:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-17 12:30:00' and '2012-05-17 22:45:00' OR
Time_Stamp between '2012-05-18 10:30:00' and '2012-05-18 23:59:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00';
/* Affected rows: 5,758  Found rows: 0  Warnings: 0  Duration for 1 query: 4.343 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL
where Time_Stamp between '2012-04-11 18:45:00' and '2012-04-11 20:15:00';
/* Affected rows: 91  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL
where Time_Stamp between '2012-04-17 17:15:00' and '2012-04-17 23:59:00' OR
```

```
Time_Stamp between '2012-04-18 00:00:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-08 14:30:00' and '2012-05-08 20:15:00' OR
Time_Stamp between '2012-05-09 10:15:00' and '2012-05-09 23:59:00' OR
Time_Stamp between '2012-05-17 17:30:00' and '2012-05-17 18:15:00' OR
Time_Stamp between '2012-05-18 17:15:00' and '2012-05-18 19:45:00' OR
Time_Stamp between '2012-05-19 13:00:00' and '2012-05-19 21:30:00' OR
Time_Stamp between '2012-05-20 11:30:00' and '2012-05-20 23:59:00' OR
Time_Stamp between '2012-05-21 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00';
/* Affected rows: 10,941  Found rows: 0  Warnings: 0  Duration for 1 query: 31.812 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL
where Time_Stamp between '2012-04-18 15:30:00' and '2012-04-18 23:59:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-10 17:15:00' and '2012-05-10 23:59:00' OR
Time_Stamp between '2012-05-11 00:00:00' and '2012-05-12 23:59:00' OR
Time_Stamp between '2012-05-20 17:00:00' and '2012-05-20 21:00:00' OR
Time_Stamp between '2012-05-21 11:30:00' and '2012-05-21 23:59:00' OR
Time_Stamp between '2012-05-22 00:00:00' and '2012-05-22 23:59:00' OR
Time_Stamp between '2012-05-23 00:00:00' and '2012-05-23 03:30:00' OR
Time_Stamp between '2012-05-24 00:00:00' and '2012-05-24 23:59:00' OR
Time_Stamp between '2012-11-17 10:30:00' and '2012-11-17 11:45:00' OR
Time_Stamp between '2014-02-17 04:30:00' and '2014-02-17 12:00:00' OR
Time_Stamp between '2014-02-26 10:48:00' and '2014-02-26 10:58:00' OR
Time_Stamp between '2014-05-07 08:17:00' and '2014-05-07 08:37:00';
/* Affected rows: 8,686  Found rows: 0  Warnings: 0  Duration for 1 query: 5.000 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_4_ºC` = NULL,
`Surf_Temp_5_ºC` = NULL
where Time_Stamp between '2012-10-28 05:15:00' and '2012-10-28 15:15:00' OR
Time_Stamp between '2012-10-30 00:00:00' and '2012-10-30 08:00:00' OR
Time_Stamp between '2012-11-02 03:30:00' and '2012-11-02 03:45:00' OR
Time_Stamp between '2012-11-02 06:00:00' and '2012-11-02 07:00:00' OR
Time_Stamp between '2012-11-03 06:45:00' and '2012-11-03 07:15:00' OR
Time_Stamp between '2012-11-04 02:00:00' and '2012-11-04 08:30:00' OR
Time_Stamp between '2012-11-05 04:00:00' and '2012-11-05 10:30:00' OR
Time_Stamp between '2012-11-06 00:00:00' and '2012-11-06 08:00:00' OR
Time_Stamp between '2012-11-07 01:30:00' and '2012-11-07 11:30:00' OR
Time_Stamp between '2012-11-08 10:00:00' and '2012-11-08 13:15:00' OR
Time_Stamp between '2012-11-09 00:00:00' and '2012-11-09 02:45:00' OR
Time_Stamp between '2012-11-09 14:45:00' and '2012-11-09 17:00:00' OR
Time_Stamp between '2012-11-10 00:00:00' and '2012-11-11 23:59:00' OR
Time_Stamp between '2012-11-13 05:00:00' and '2012-11-13 11:45:00' OR
Time_Stamp between '2012-11-14 00:00:00' and '2012-11-14 13:00:00' OR
Time_Stamp between '2012-11-15 00:00:00' and '2012-11-15 14:00:00' OR
Time_Stamp between '2012-11-16 10:30:00' and '2012-11-16 14:00:00' OR
```

```
Time_Stamp between '2012-11-19 05:00:00' and '2012-11-19 12:30:00' OR
Time_Stamp between '2012-11-20 00:00:00' and '2012-11-20 14:00:00' OR
Time_Stamp between '2012-11-22 00:00:00' and '2012-12-09 23:59:00' OR
Time_Stamp between '2012-12-10 00:00:00' and '2012-12-10 01:15:00' OR
Time_Stamp between '2012-12-15 09:15:00' and '2012-12-15 17:00:00' OR
Time_Stamp between '2012-12-20 00:00:00' and '2012-12-20 23:59:00' OR
Time_Stamp between '2012-12-21 00:00:00' and '2012-12-21 08:30:00' OR
Time_Stamp between '2012-12-21 19:00:00' and '2012-12-21 23:59:00' OR
Time_Stamp between '2012-12-22 00:00:00' and '2013-01-02 23:59:00' OR
Time_Stamp between '2014-02-16 00:00:00' and '2014-02-16 12:00:00' OR
Time_Stamp between '2014-02-17 00:00:00' and '2014-02-17 07:30:00' OR
Time_Stamp between '2014-03-02 12:00:00' and '2014-03-02 15:00:00' OR
Time_Stamp between '2014-04-03 10:00:00' and '2014-04-03 16:40:00' OR
Time_Stamp between '2014-07-06 05:28:00' and '2014-07-06 05:28:00' OR
Time_Stamp between '2014-07-06 08:21:00' and '2014-07-06 08:21:00' OR
Time_Stamp between '2014-07-06 08:38:00' and '2014-07-06 08:38:00' OR
Time_Stamp between '2014-07-06 09:04:00' and '2014-07-06 11:44:00' OR
Time_Stamp between '2014-07-06 22:07:00' and '2014-07-06 23:59:00' OR
Time_Stamp between '2014-07-07 00:00:00' and '2014-07-07 23:59:00' OR
Time_Stamp between '2014-07-10 00:00:00' and '2014-07-12 23:59:00' OR
Time_Stamp between '2014-07-13 10:00:00' and '2014-07-13 10:06:00' OR
Time_Stamp between '2014-07-13 15:33:00' and '2014-07-13 15:36:00' OR
Time_Stamp between '2014-07-14 20:20:00' and '2014-07-14 20:34:00' OR
Time_Stamp between '2014-07-15 00:00:00' and '2014-07-20 23:59:00' OR
Time_Stamp between '2014-07-21 00:00:00' and '2014-07-21 09:15:00' OR
Time_Stamp between '2014-07-22 00:00:00' and '2014-07-23 23:59:00' OR
Time_Stamp between '2014-07-24 08:32:00' and '2014-07-24 08:32:00' OR
Time_Stamp between '2014-07-25 04:51:00' and '2014-07-25 06:38:00' OR
Time_Stamp between '2014-07-26 00:00:00' and '2014-07-26 23:59:00';
/* Affected rows: 70,148  Found rows: 0  Warnings: 0  Duration for 1 query: 00:03:38 */

update bambamschema.zanalysis_copy_copy_7_2012
set `Surf_Temp_5_ºC` = NULL
where Time_Stamp between '2014-02-27 13:40:00' and '2014-02-27 14:00:00' OR
Time_Stamp between '2014-03-07 12:02:00' and '2014-03-07 15:38:00';
/* Affected rows: 238  Found rows: 0  Warnings: 0  Duration for 1 query: 0.094 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_5A_mV/V` = NULL,
`Calculated_Strain_5A_με` = NULL,
`Raw_Strain_5B_mV/V` = NULL,
`Calculated_Strain_5B_με` = NULL,
`Raw_Strain_5C_mV/V` = NULL,
`Calculated_Strain_5C_με` = NULL
where Time_Stamp between '2014-05-27 20:10:00' and '2014-05-27 21:15:00' OR
Time_Stamp between '2014-05-28 08:56:00' and '2014-05-28 08:57:00' OR
Time_Stamp between '2014-05-28 19:00:00' and '2014-05-28 20:12:00' OR
Time_Stamp between '2014-05-31 19:46:00' and '2014-05-31 19:46:00' OR
Time_Stamp between '2014-06-01 19:37:00' and '2014-06-01 21:31:00' OR
Time_Stamp between '2014-06-02 19:00:00' and '2014-06-02 22:12:00' OR
```

```
Time_Stamp between '2014-06-03 08:40:00' and '2014-06-03 09:48:00' OR
Time_Stamp between '2014-06-03 19:00:00' and '2014-06-03 22:17:00';
/* Affected rows: 717  Found rows: 0  Warnings: 0  Duration for 1 query: 0.516 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6A_mV/V` = NULL,
`Calculated_Strain_6A_με` = NULL
where Time_Stamp between '2012-02-24 05:30:00' and '2012-02-24 06:15:00' OR
Time_Stamp between '2012-02-25 03:00:00' and '2012-02-25 03:30:00' OR
Time_Stamp between '2012-02-29 04:30:00' and '2012-02-29 05:30:00' OR
Time_Stamp between '2012-03-04 03:00:00' and '2012-03-04 03:45:00' OR
Time_Stamp between '2012-03-05 05:45:00' and '2012-03-05 06:30:00' OR
Time_Stamp between '2012-04-25 16:45:00' and '2012-04-25 22:15:00' OR
Time_Stamp between '2012-04-26 00:00:00' and '2012-04-26 23:59:00' OR
Time_Stamp between '2012-04-27 00:00:00' and '2012-04-27 11:45:00' OR
Time_Stamp between '2012-05-01 17:00:00' and '2012-05-01 21:00:00' OR
Time_Stamp between '2012-05-02 17:00:00' and '2012-05-02 23:00:00' OR
Time_Stamp between '2012-05-03 00:00:00' and '2012-05-06 23:59:00' OR
Time_Stamp between '2012-05-07 00:00:00' and '2012-05-07 10:30:00' OR
Time_Stamp between '2012-05-15 00:00:00' and '2012-05-15 13:45:00';
/* Affected rows: 10,356  Found rows: 0  Warnings: 0  Duration for 1 query: 1.141 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_6'A_mV/V` = NULL,
`Calculated_Strain_6'A_με` = NULL
where Time_Stamp between '2014-01-17 06:28:00' and '2014-01-17 06:28:00' OR
Time_Stamp between '2014-01-17 12:41:00' and '2014-01-17 12:41:00';
/* Affected rows: 2  Found rows: 0  Warnings: 0  Duration for 1 query: 0.062 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain6'C_mV/V` = NULL,
`Calculated_Strain_6'C_με` = NULL
where Time_Stamp between '2012-05-22 11:15:00' and '2012-05-22 11:45:00';
/* Affected rows: 31  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
where Time_Stamp between '2011-11-17 00:00:00' and '2011-11-17 13:00:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.063 sec. */

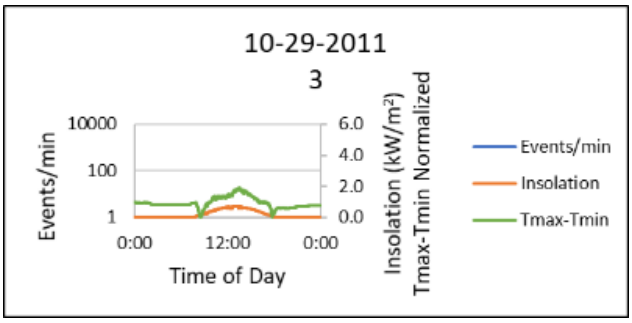
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1B_mV/V` = NULL,
`Calculated_Strain_1B_με` = NULL
where Time_Stamp between '2012-03-17 10:08:00' and '2012-03-17 10:14:00';
/* Affected rows: 7  Found rows: 0  Warnings: 0  Duration for 1 query: 0.031 sec. */

update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_3A_mV/V` = NULL,
`Calculated_Strain_3A_με` = NULL
```

```
where Time_Stamp between '2014-05-19 15:36:00' and '2014-05-19 15:36:00';
/* Affected rows: 1  Found rows: 0  Warnings: 0  Duration for 1 query: 0.172 sec. */

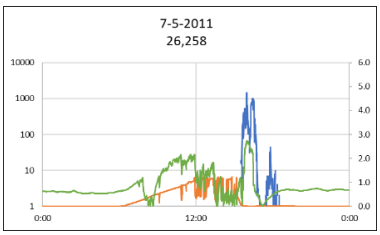
update bambamschema.zanalysis_copy_copy_7_2012
set `Raw_Strain_1'B_mV/V` = NULL,
`Calculated_Strain_1'B_με` = NULL
where Time_Stamp between '2012-04-17 16:45:00' and '2012-04-17 23:59:00';
/* Affected rows: 0  Found rows: 0  Warnings: 0  Duration for 1 query: 0.047 sec.  */
```

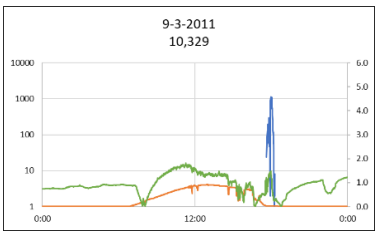
APPENDIX D: DAILY TIME DATA FOR DAYS OF 50 OR MORE EVENTS

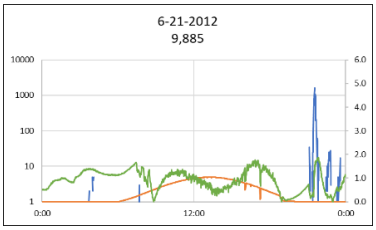


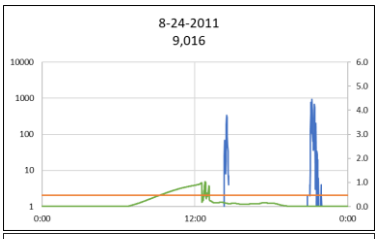
Key: Graph is based on an average day with little to no precipitation, minimal average wind and very few events. This day was used to validate the graphical models below.

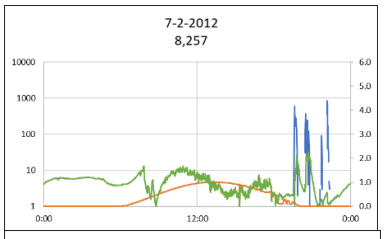
2011-2012

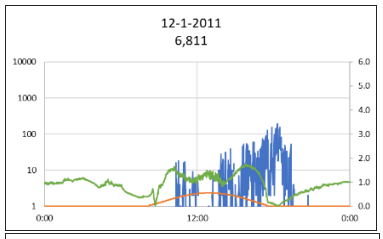


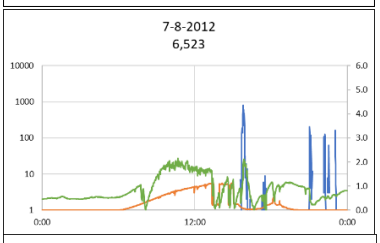


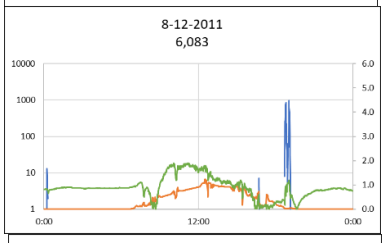


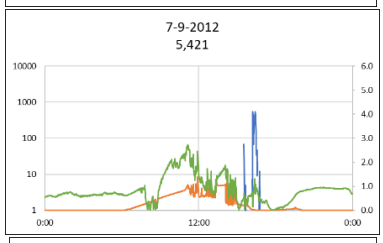


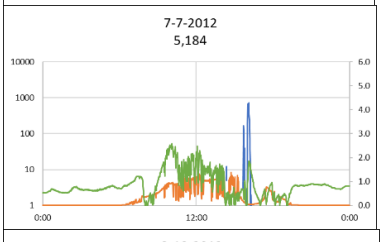


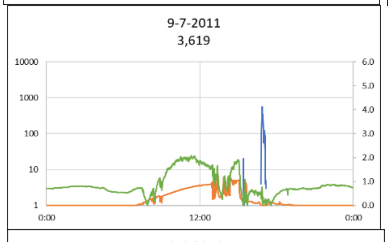


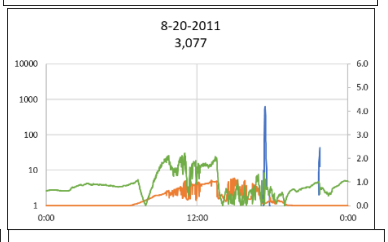


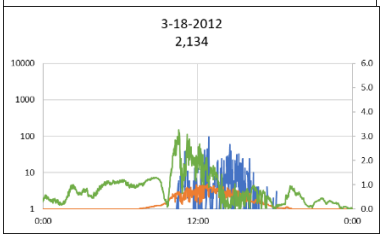


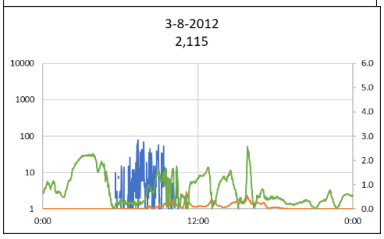


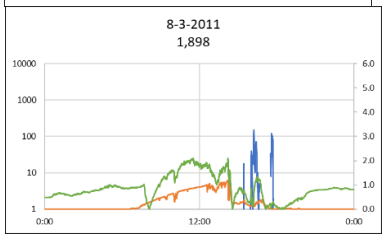


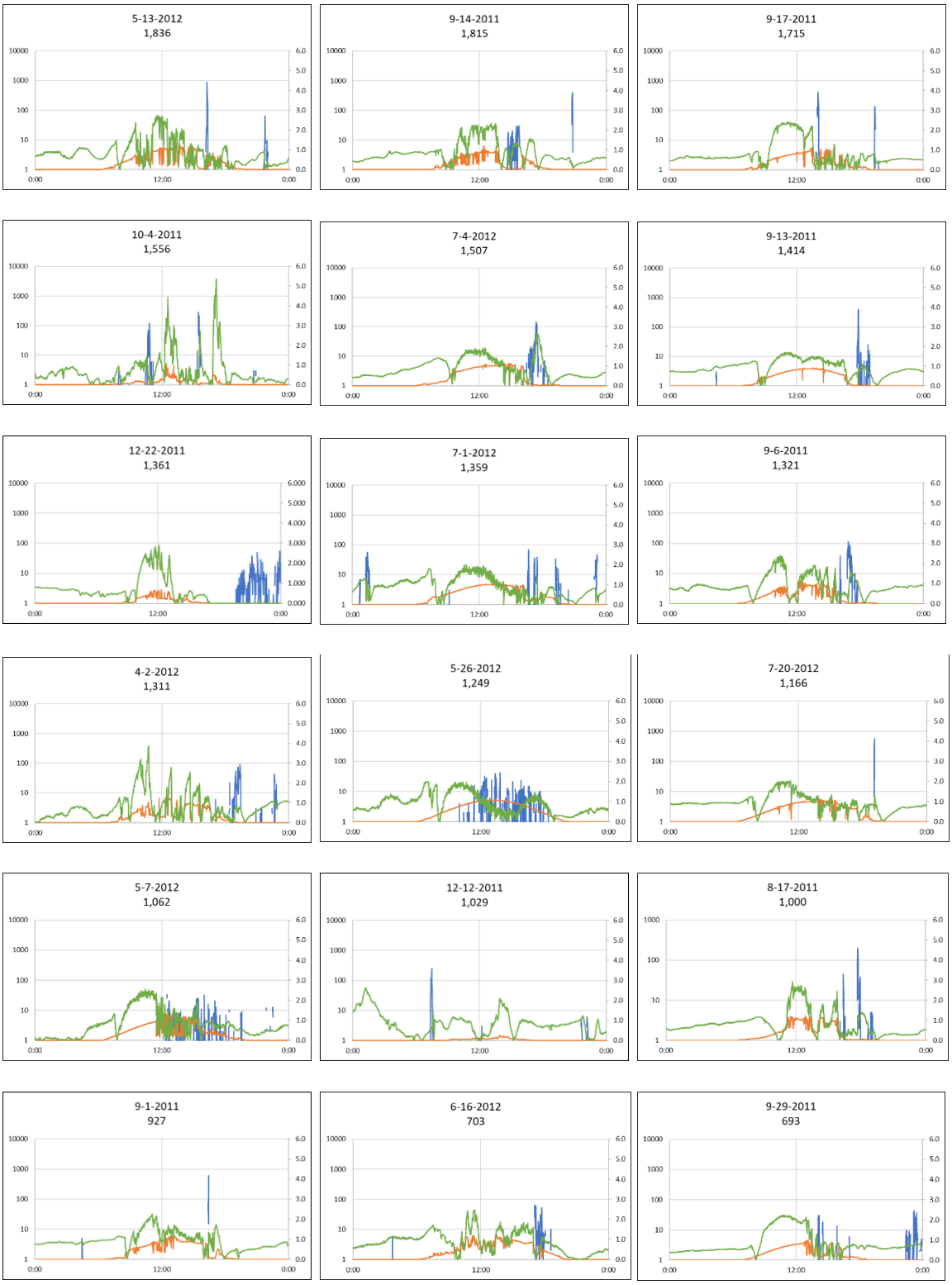











5-13-2012
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9-14-2011
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6-16-2012
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9-29-2011
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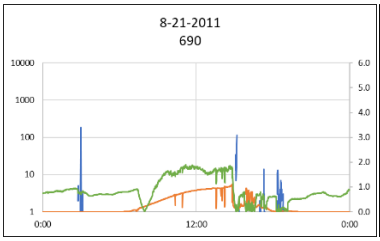
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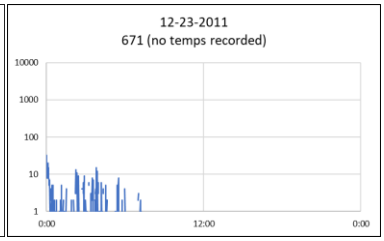
690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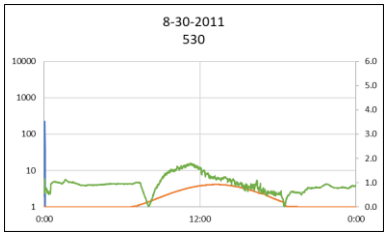
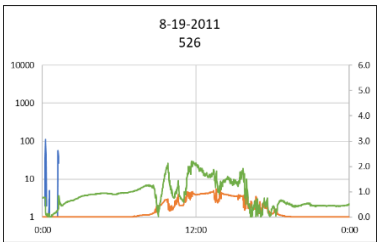
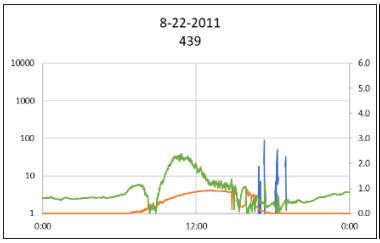
671 (no temps recorded)


8-30-2011
530


8-19-2011
526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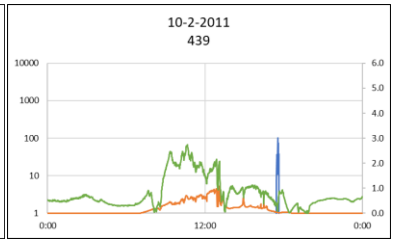
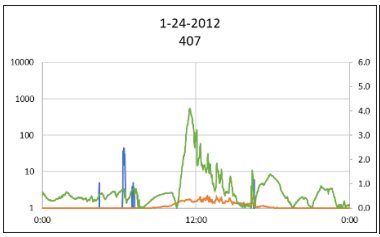
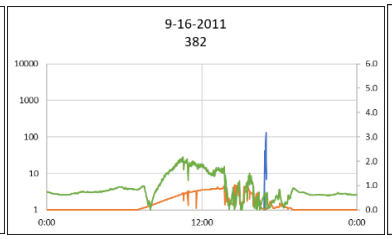
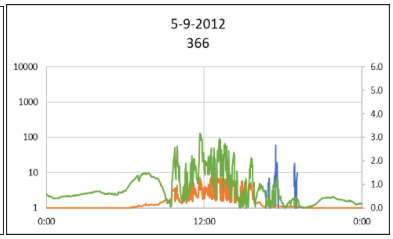
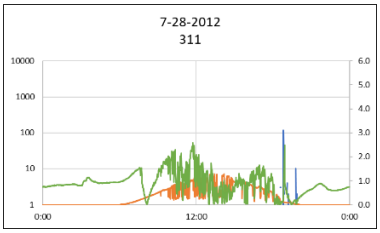
439

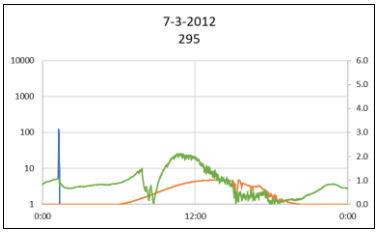

10-2-2011
439


1-24-2012
407


9-16-2011
382


5-9-2012
366


7-28-2012
311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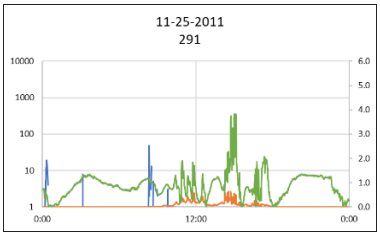
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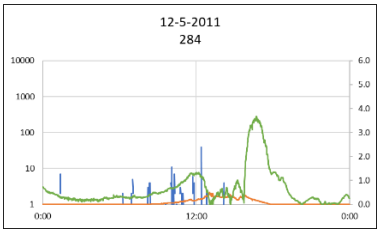
291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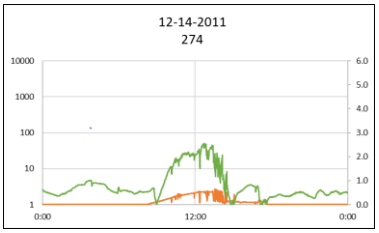
284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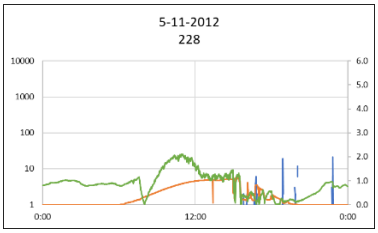
274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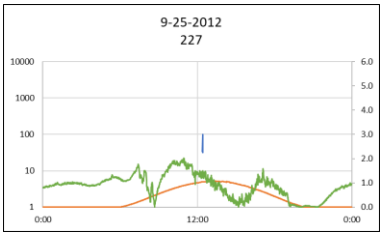
228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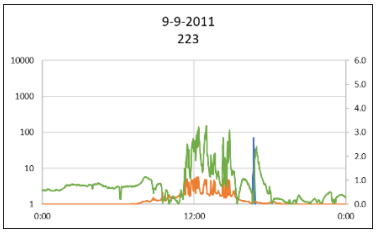
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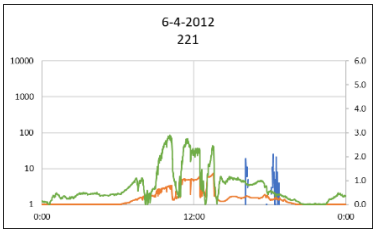
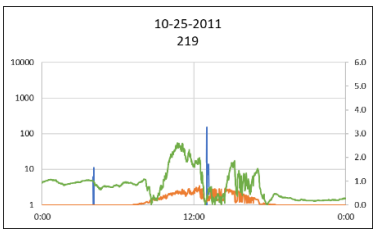

6-4-2012
221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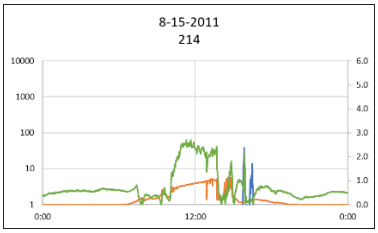
219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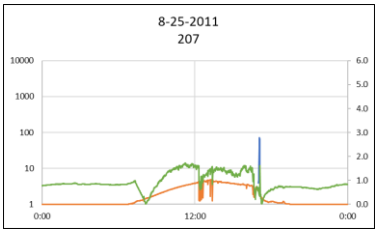
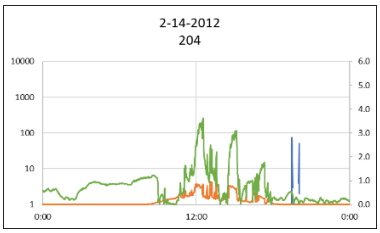
214


8-25-2011
207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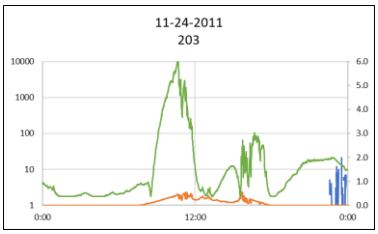
204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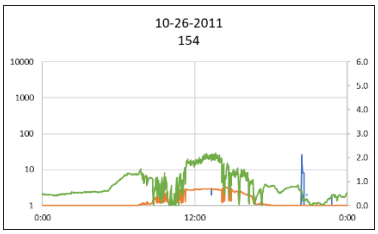
203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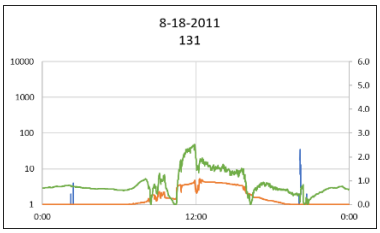
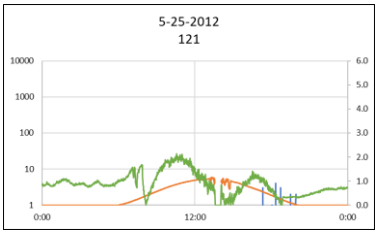
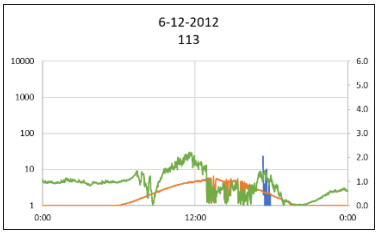
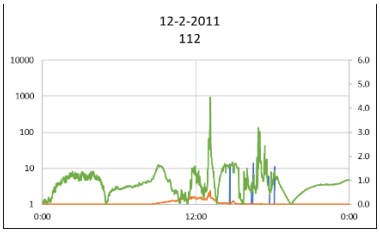
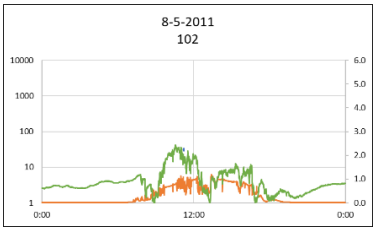
154

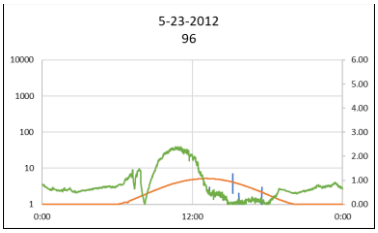

8-18-2011
131

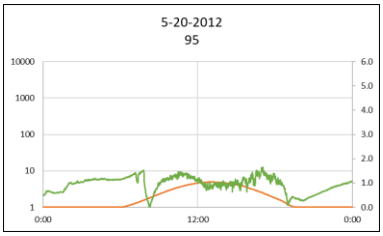

5-25-2012
121

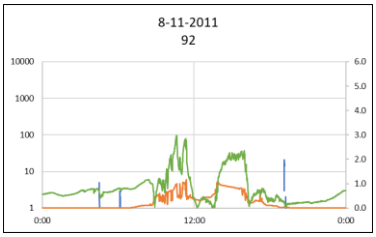

6-12-2012
113

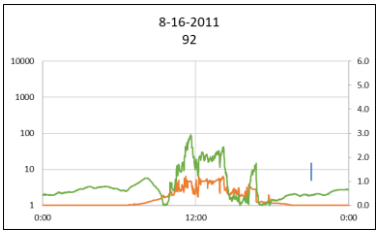

12-2-2011
112

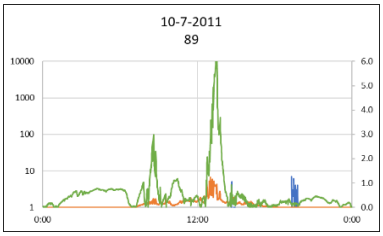

8-5-2011
102

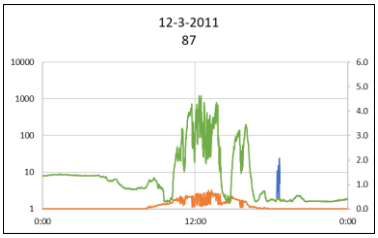

5-23-2012
96

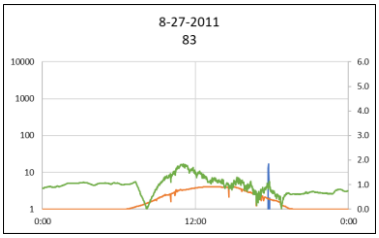

5-20-2012
95

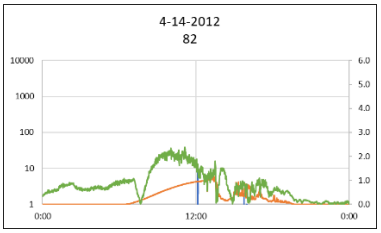

8-11-2011
92


8-16-2011
92


10-7-2011
89


12-3-2011
87


8-27-2011
83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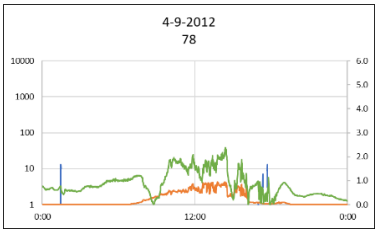
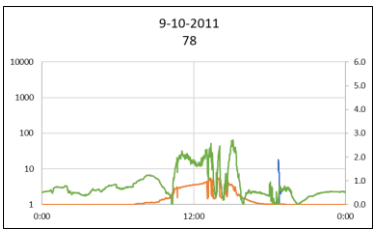
82


4-9-2012
78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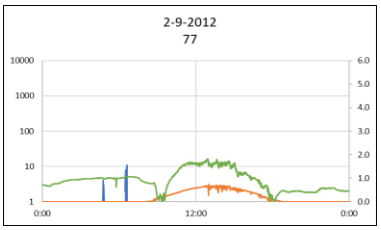
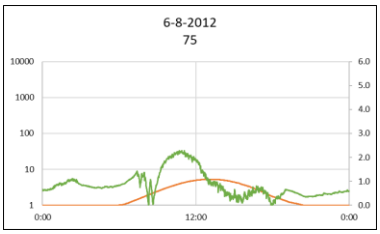
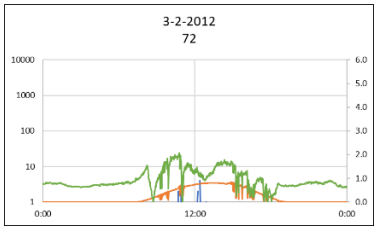
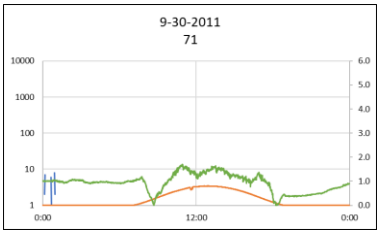
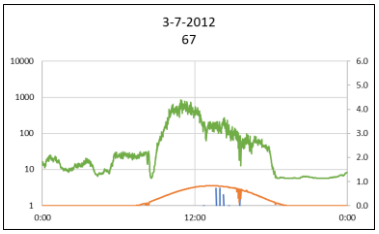
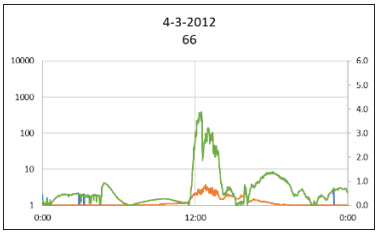

2-9-2012
77

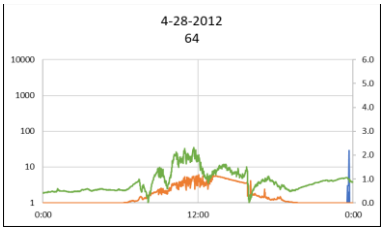

6-8-2012
75

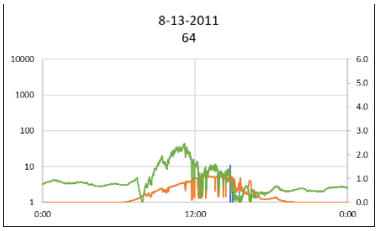

3-2-2012
72

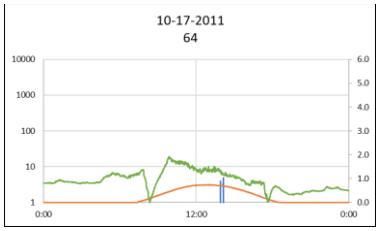

9-30-2011
71

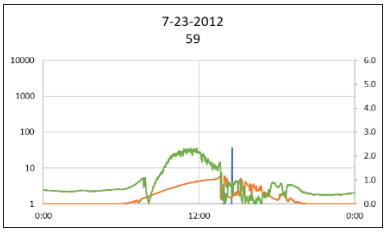

3-7-2012
67


4-3-2012
66


4-28-2012
64


8-13-2011
64


10-17-2011
64


7-23-2012
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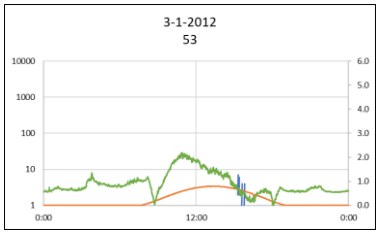
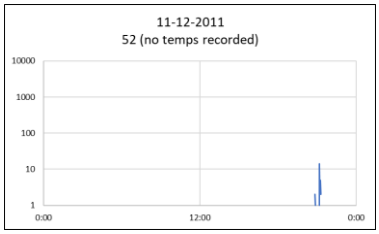
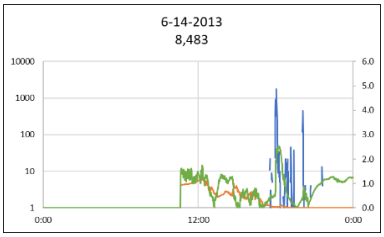
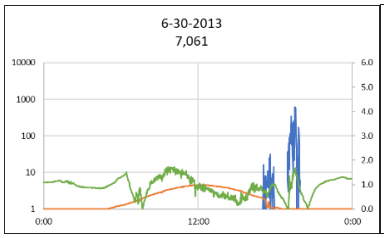
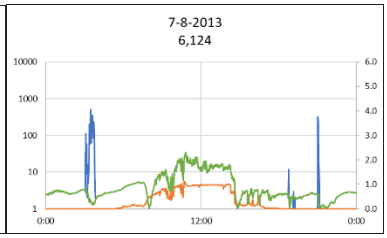

3-1-2012
53

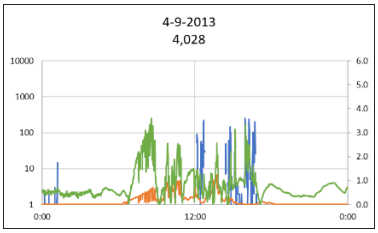

11-12-2011
52 (no temps recorded)

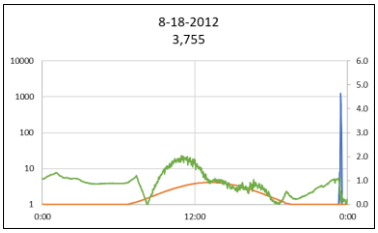
2012-2013

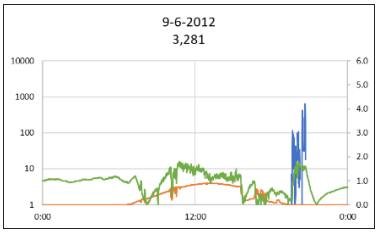

6-14-2013
8,483

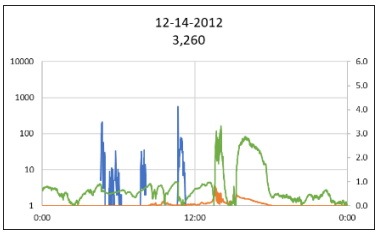

6-30-2013
7,061

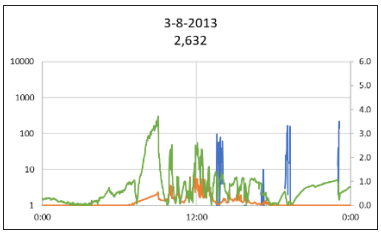

7-8-2013
6,124


4-9-2013
4,028


8-18-2012
3,755


9-6-2012
3,281


12-14-2012
3,260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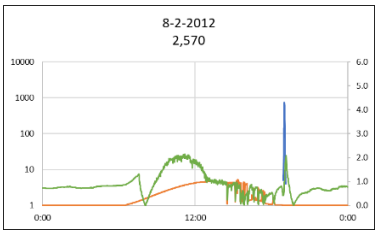
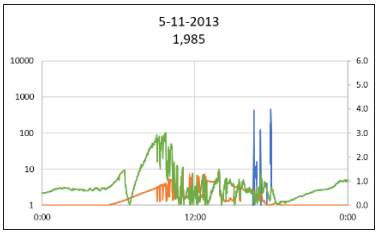
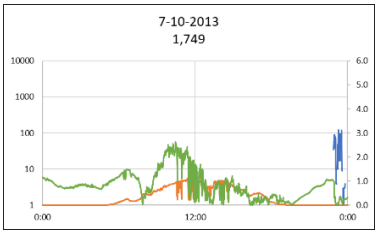
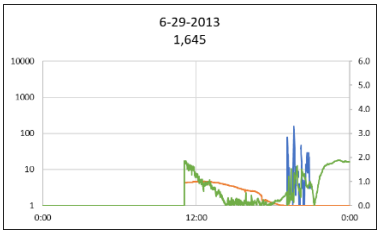

8-2-2012
2,570


5-11-2013
1,985


7-10-2013
1,749


6-29-2013
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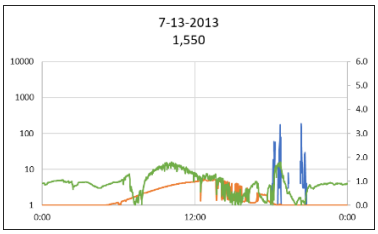
7-13-2013
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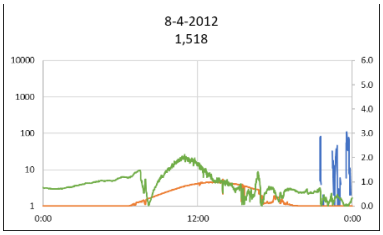
8-4-2012
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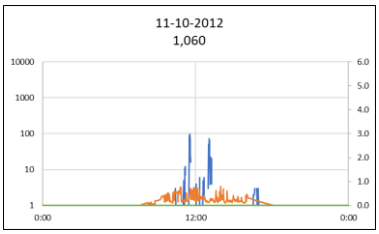
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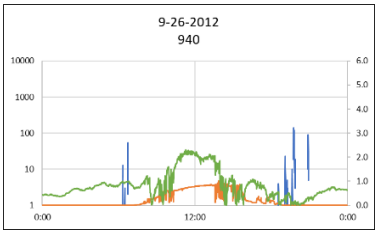
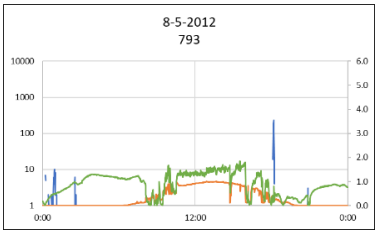
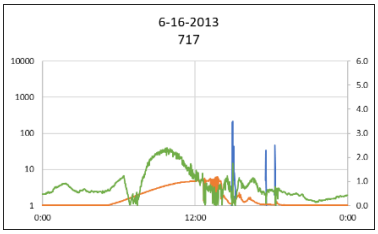
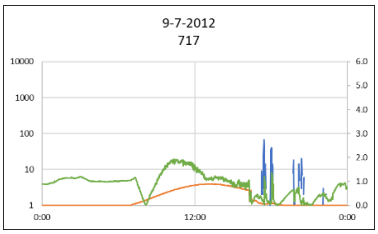
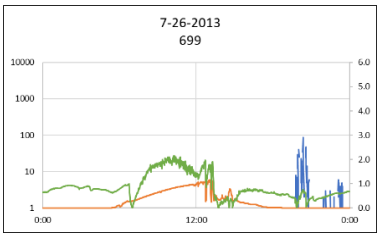
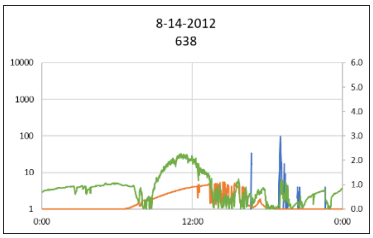

9-26-2012
940

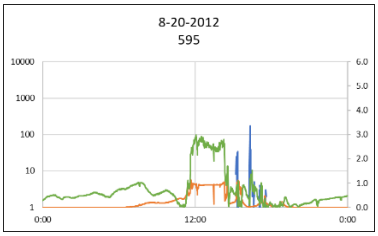

8-5-2012
793

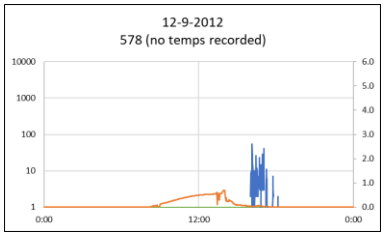

6-16-2013
717

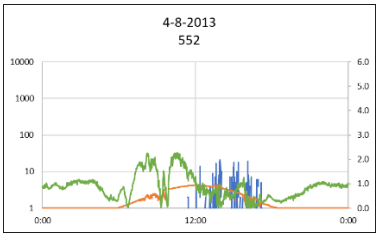

9-7-2012
717


7-26-2013
699


8-14-2012
638


8-20-2012
595


12-9-2012
578 (no temps recorded)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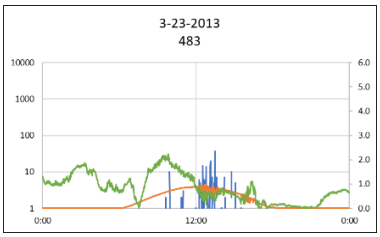
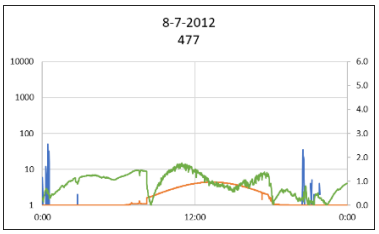
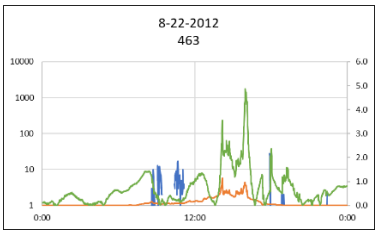
552


3-23-2013
483


8-7-2012
477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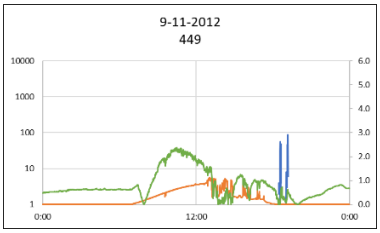
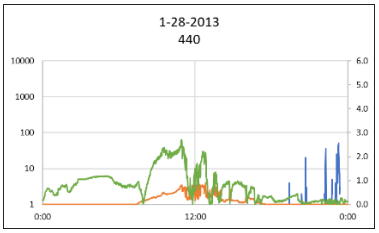
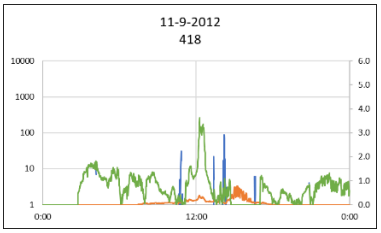
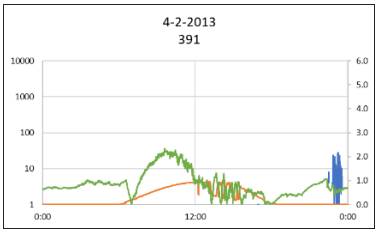
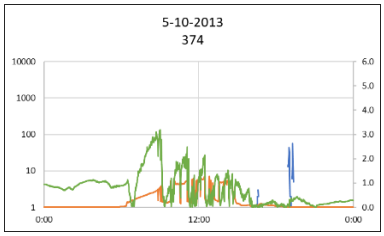
463

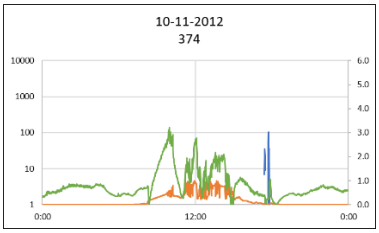

9-11-2012
449

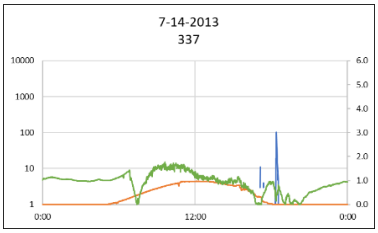

1-28-2013
440

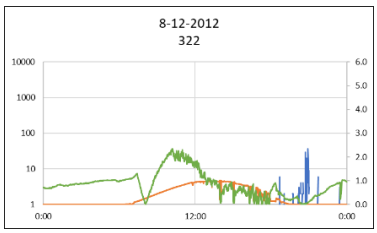

11-9-2012
418


4-2-2013
391


5-10-2013
374


10-11-2012
374


7-14-2013
337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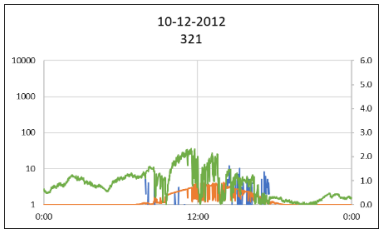
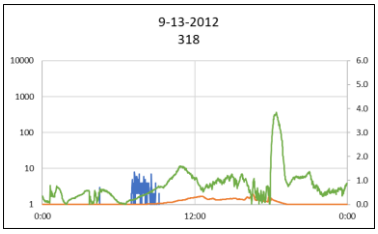
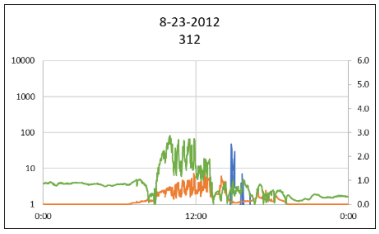
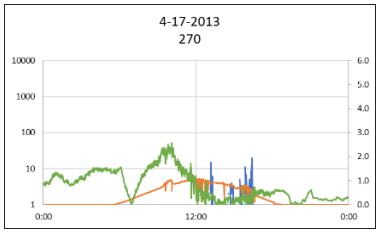
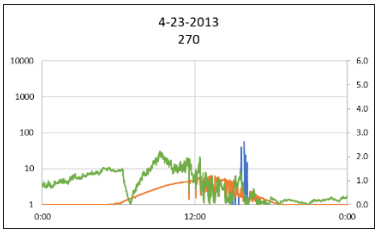
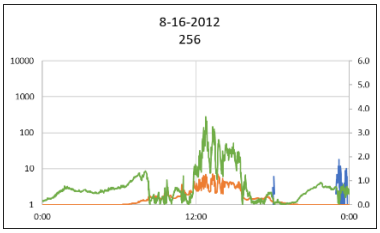

10-12-2012
321

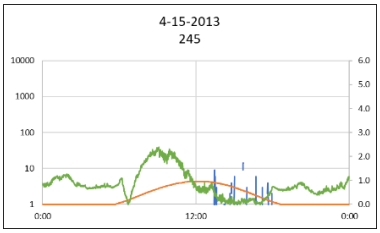

9-13-2012
318

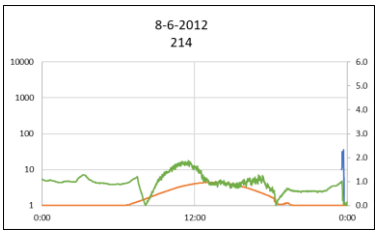

8-23-2012
312

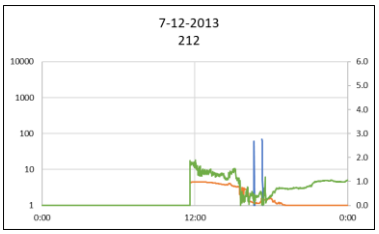

4-17-2013
270

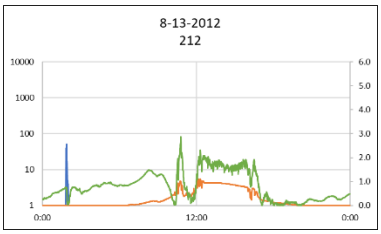

4-23-2013
270

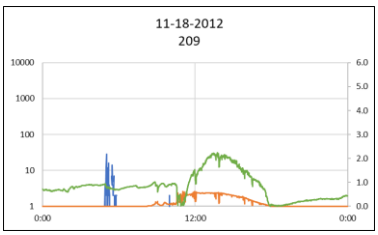

8-16-2012
256

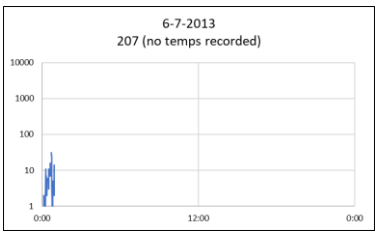

4-15-2013
245

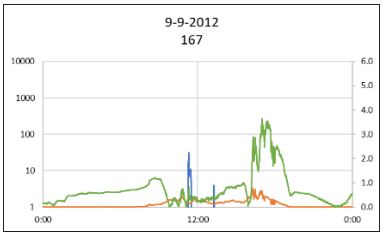

8-6-2012
214

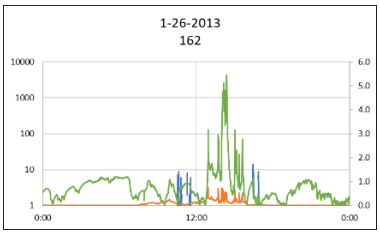

7-12-2013
212

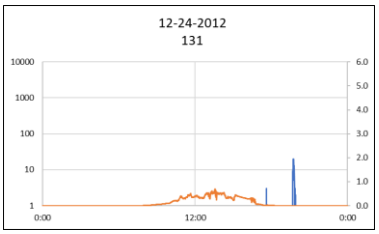

8-13-2012
212

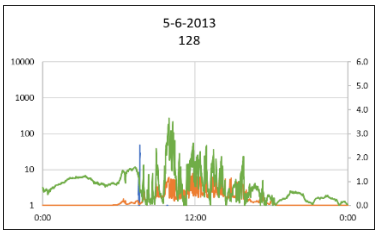

11-18-2012
209

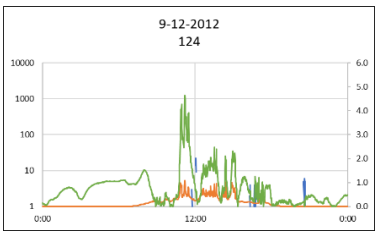

6-7-2013
207 (no temps recorded)

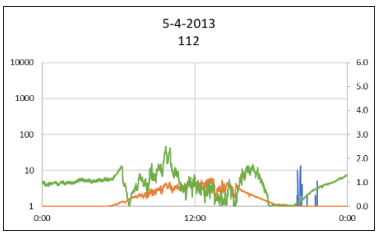

9-9-2012
167

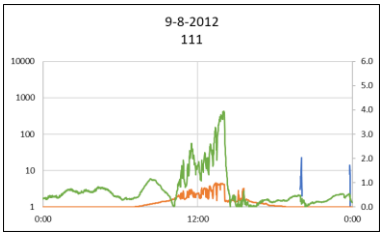

1-26-2013
162

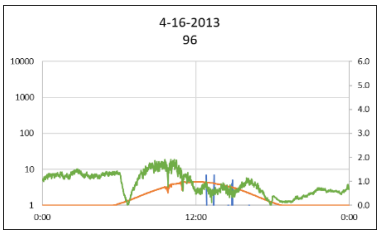

12-24-2012
131

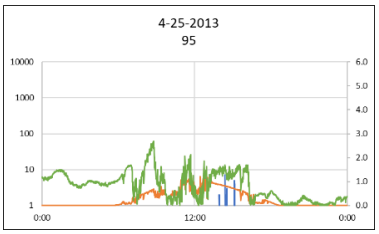

5-6-2013
128

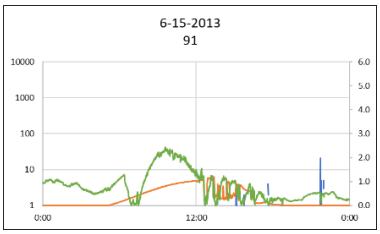

9-12-2012
124

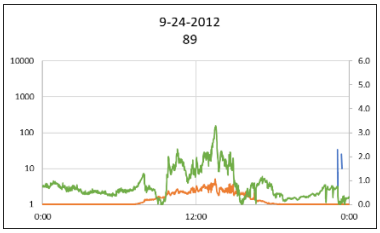

5-4-2013
112

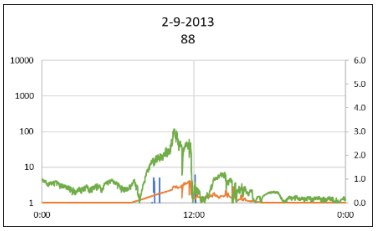

9-8-2012
111

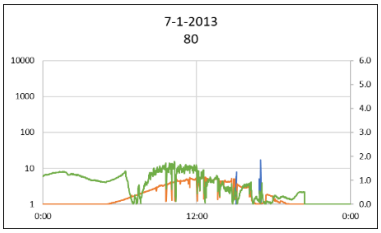

4-16-2013
96


4-25-2013
95


6-15-2013
91


9-24-2012
89


2-9-2013
88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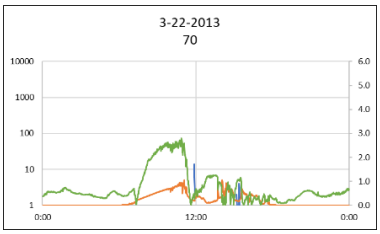
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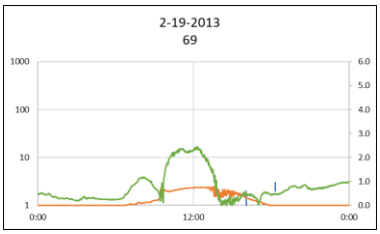
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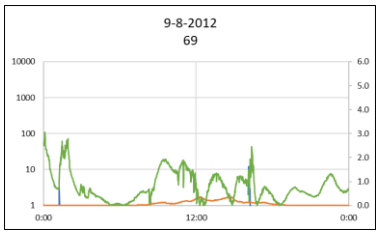
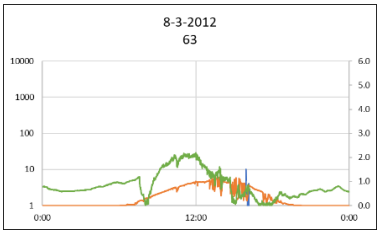
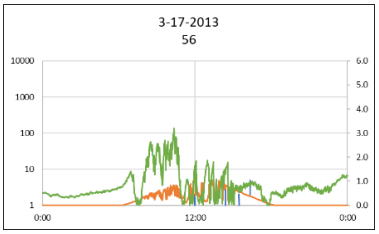

9-8-2012
69


8-3-2012
63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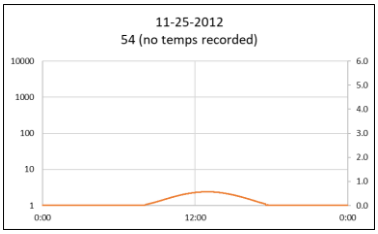
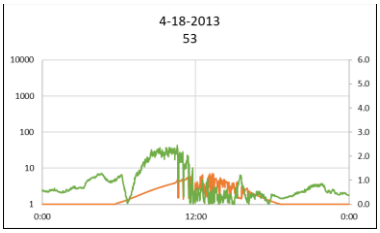

11-25-2012
54 (no temps recorded)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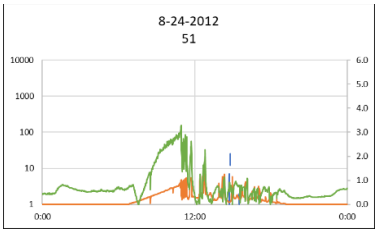
8-24-2012
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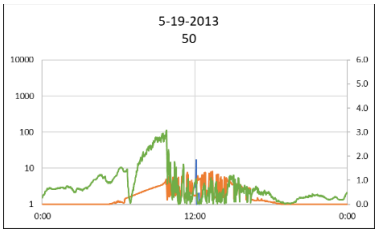
5-19-2013
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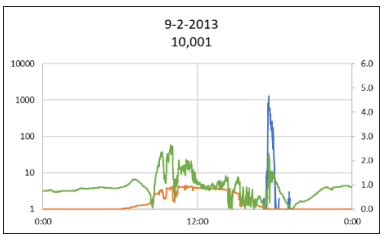
2013-2014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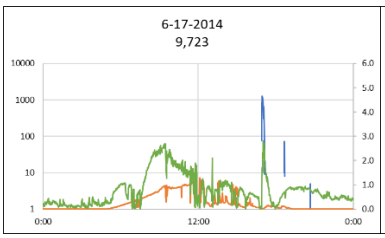
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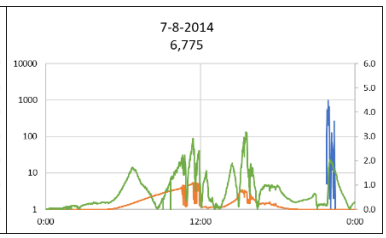
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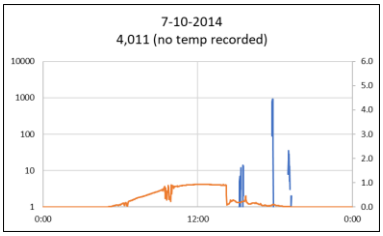
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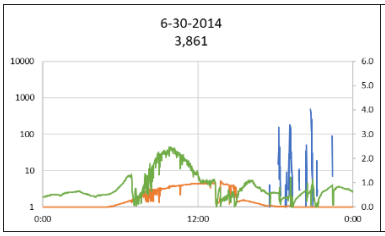
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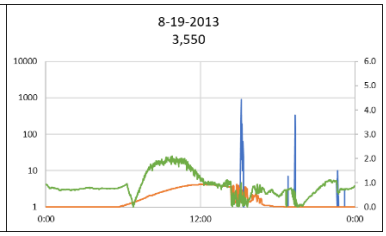
8-19-2013
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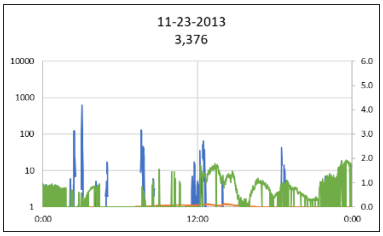
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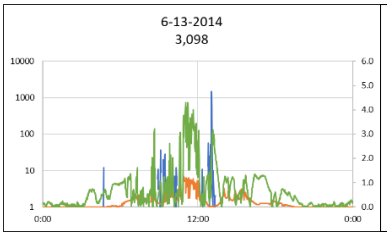
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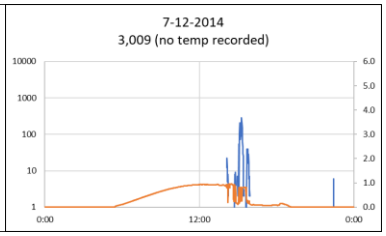
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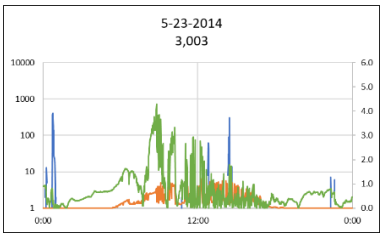
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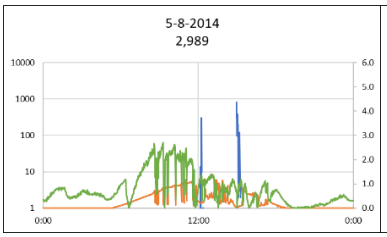
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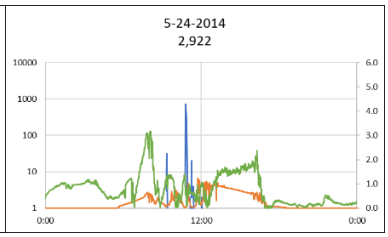
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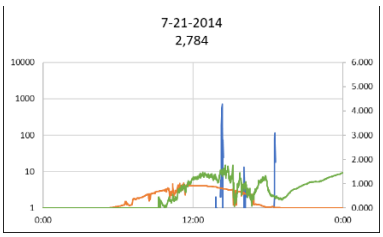
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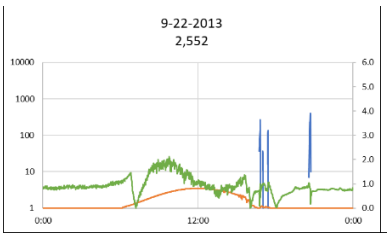
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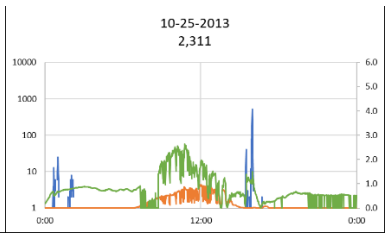
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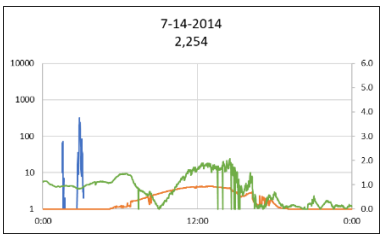
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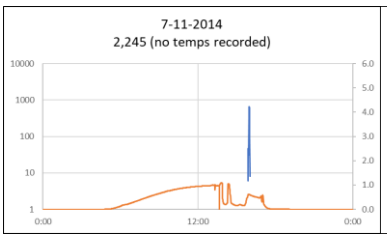
7-11-2014
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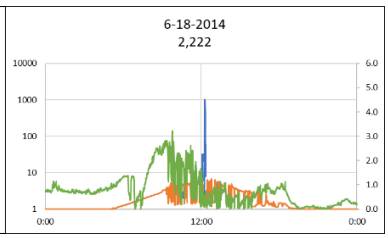
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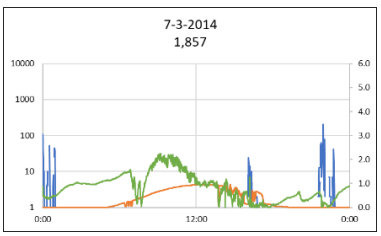
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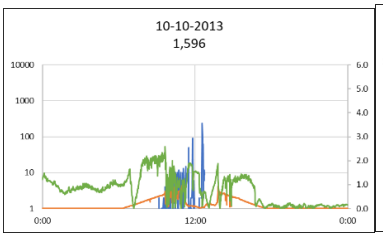
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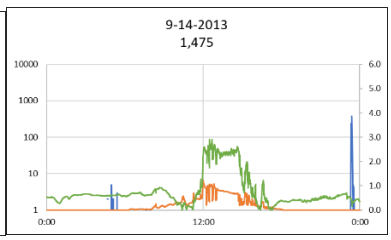
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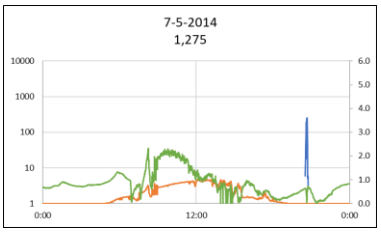
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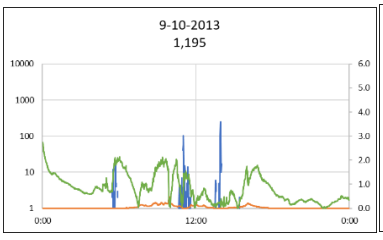
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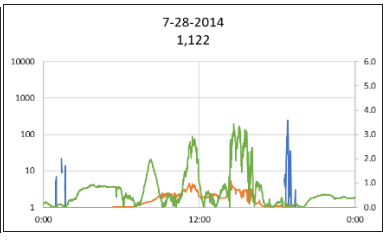
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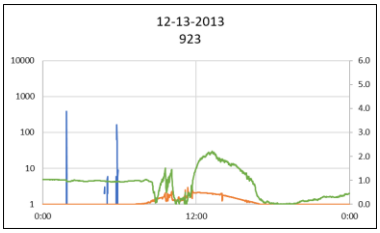
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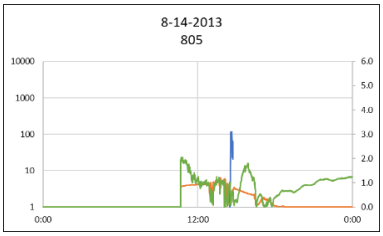
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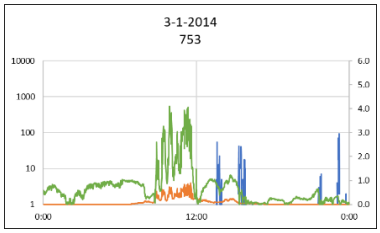
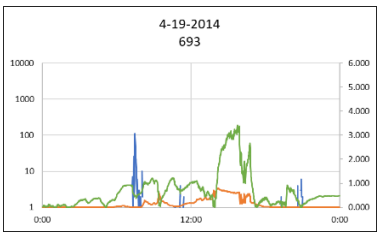

3-1-2014
753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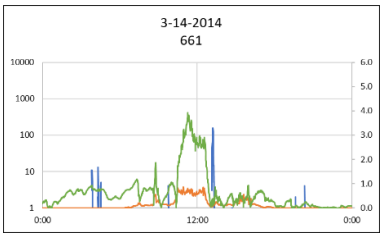
693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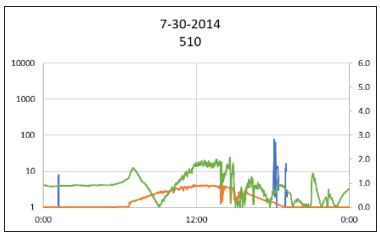
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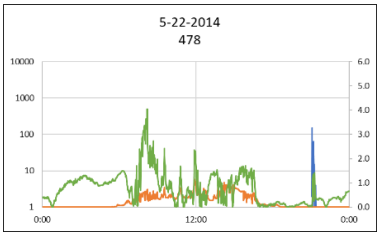
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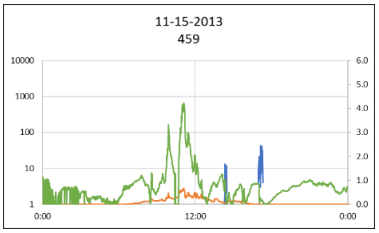
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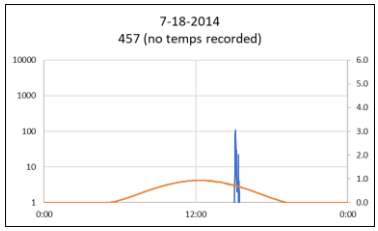
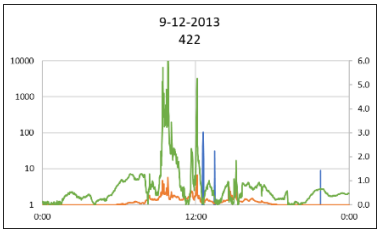

7-18-2014
457 (no temps recorded)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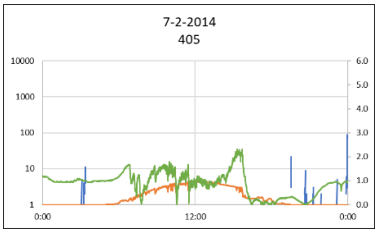
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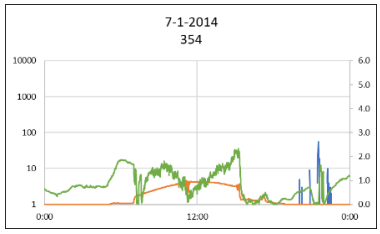
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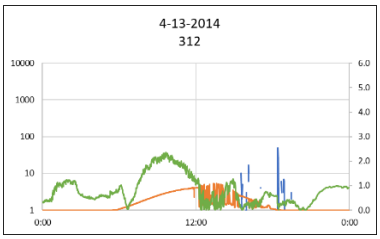
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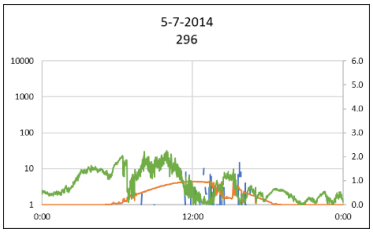
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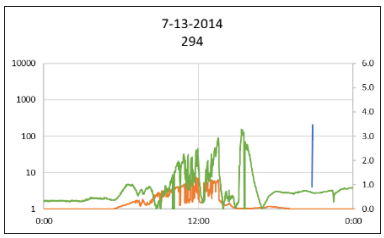
296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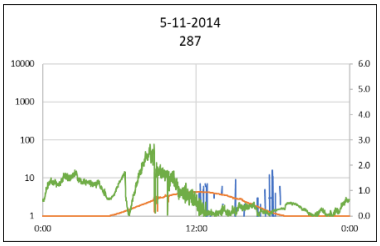
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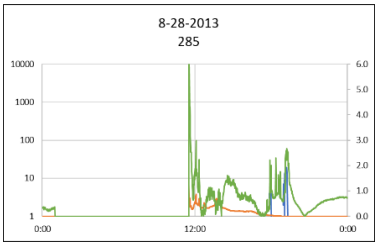
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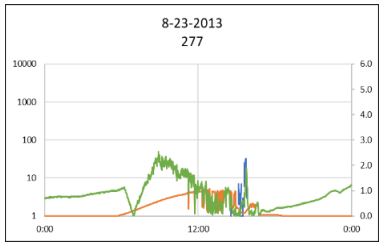
8-23-2013
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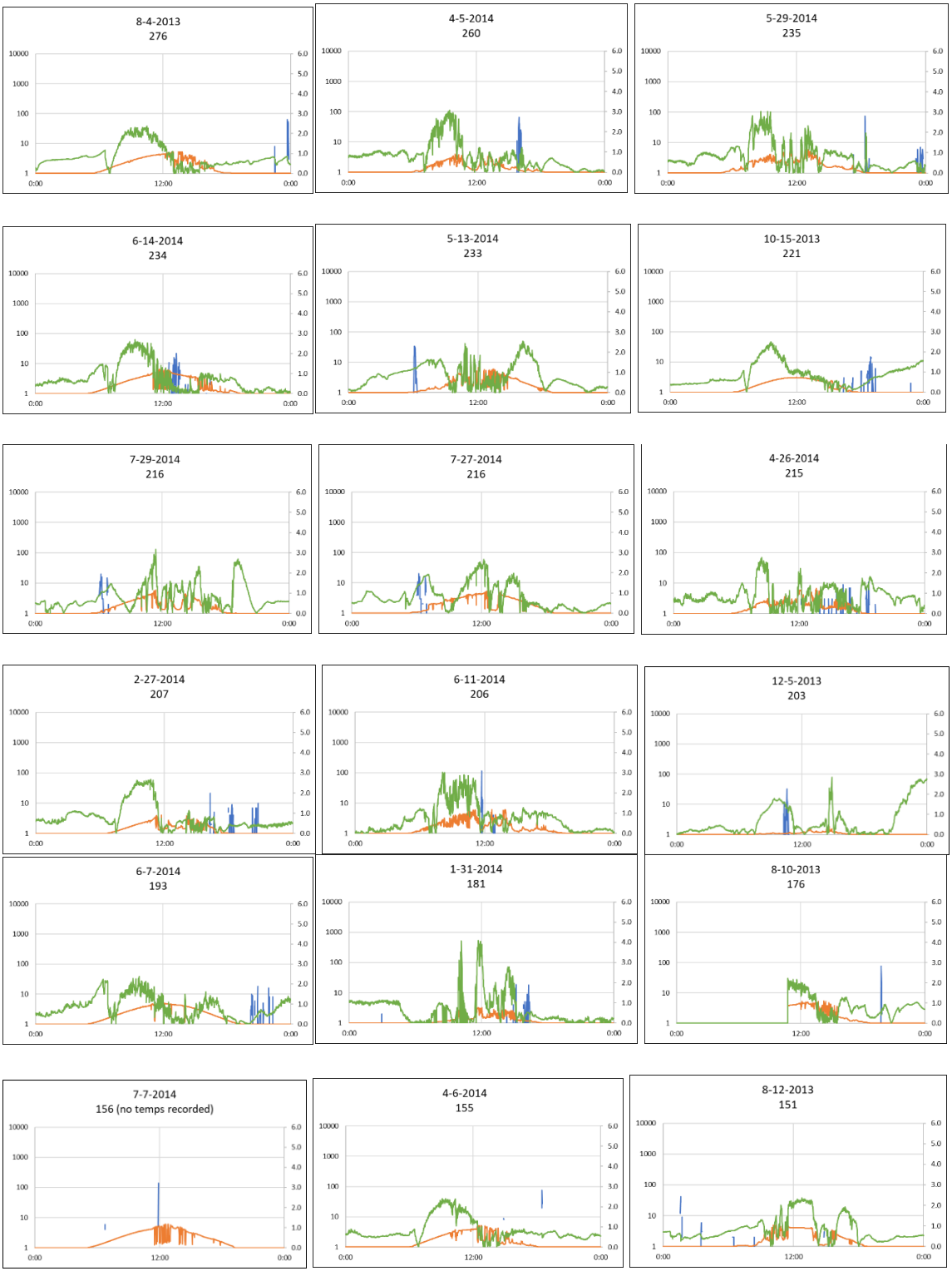
8-4-2013
276
4-5-2014
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6-14-2014
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10-15-2013
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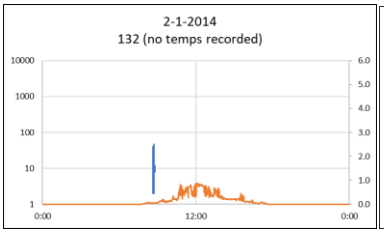
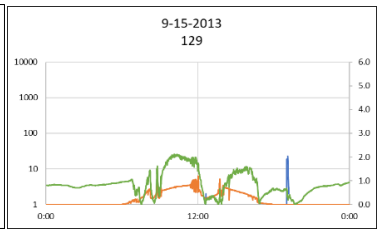
216
7-27-2014
216
4-26-2014
215
2-27-2014
207
6-11-2014
206
12-5-2013
203
6-7-2014
193
1-31-2014
181
8-10-2013
176
7-7-2014
156 (no temps recorded)
4-6-2014
155
8-12-2013
151


2-1-2014
132 (no temps recorded)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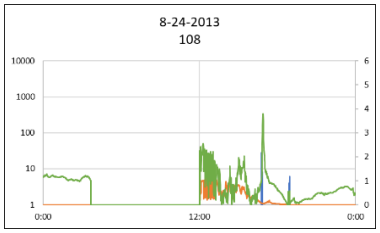
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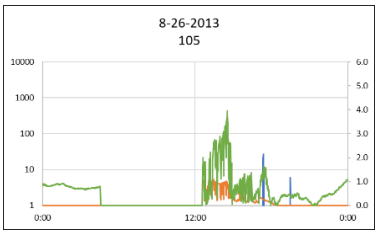
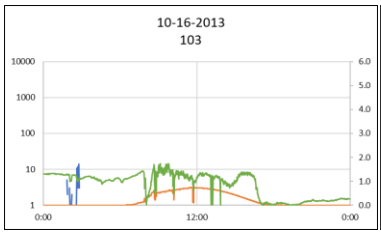

8-26-2013
105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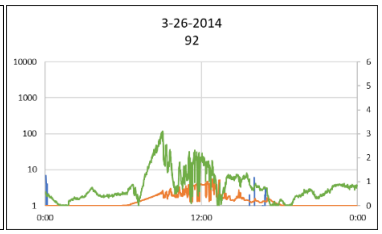
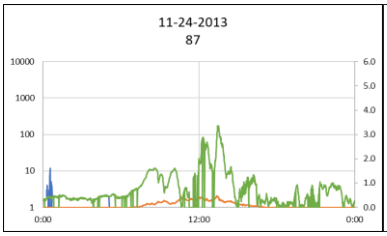
103


3-26-2014
92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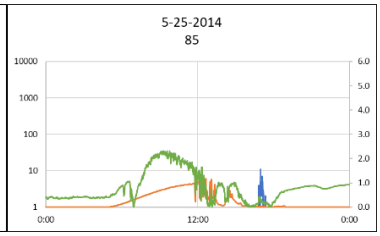
87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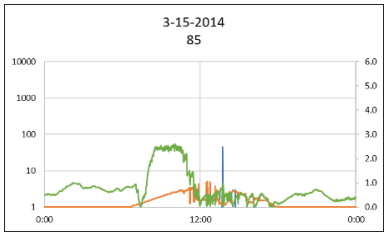
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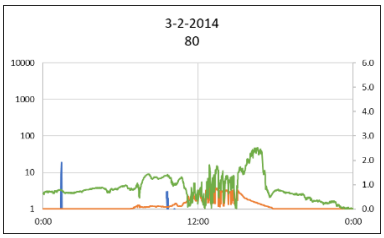
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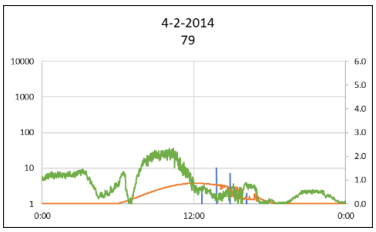
80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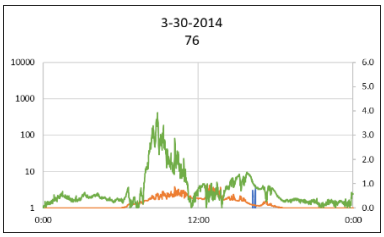
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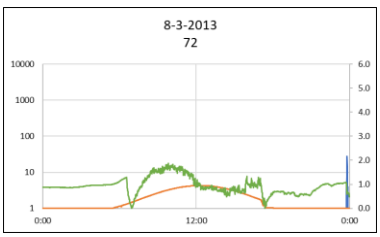
76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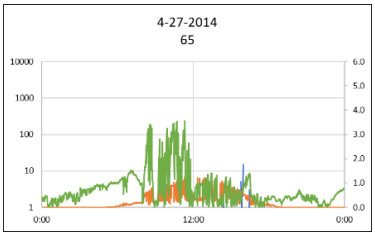
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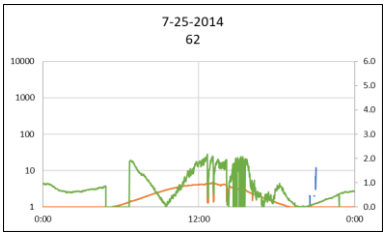
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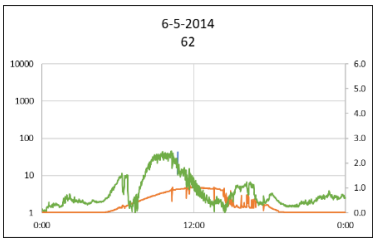
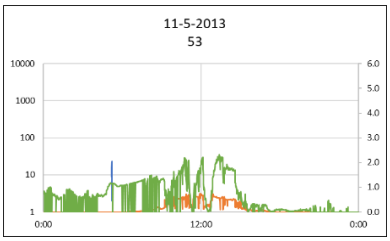
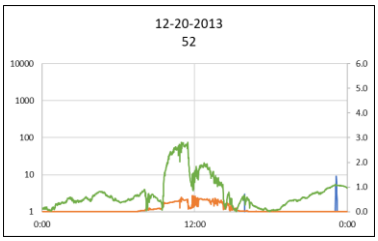
62


6-5-2014
62


11-5-2013
53


12-20-2013
52

APPENDIX E: BIVARIATE CORRELATION GRAPHS

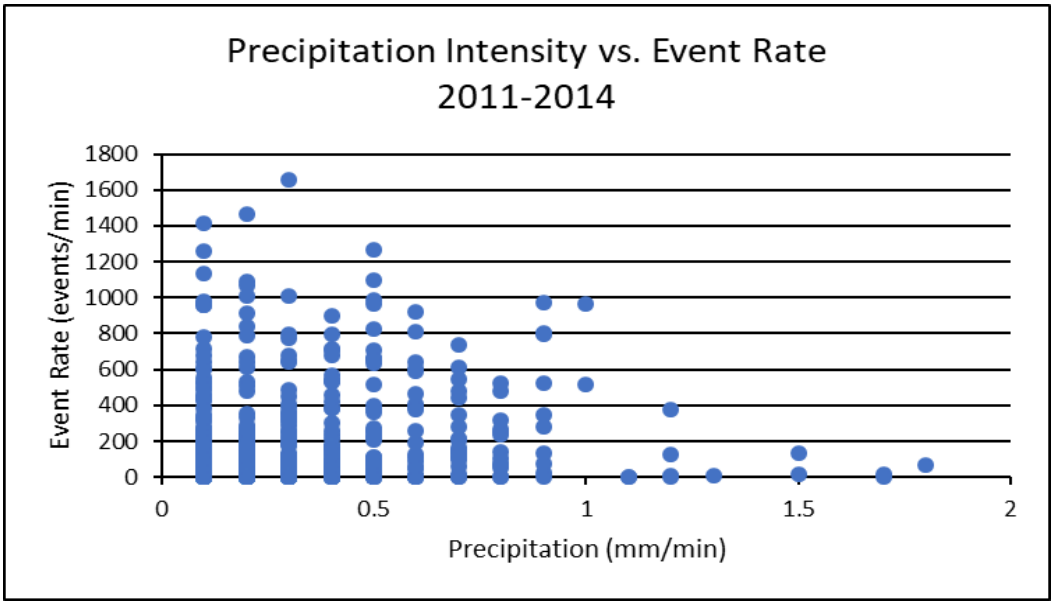


Figure E-1. **Precipitation intensity vs. event rate for entire period of 2011-2014.** Data is for only those minutes registering both tipping bucket capacity minimum of 0.1 mm and AE events (n =114,139). R^2 = 0.122; Pearson r = 0.35, Pearson p-value = 0.000. Based on these calculations, no trending is evident. A total of 114,139 events occurred during 1,379 minutes when rainfall was registered.

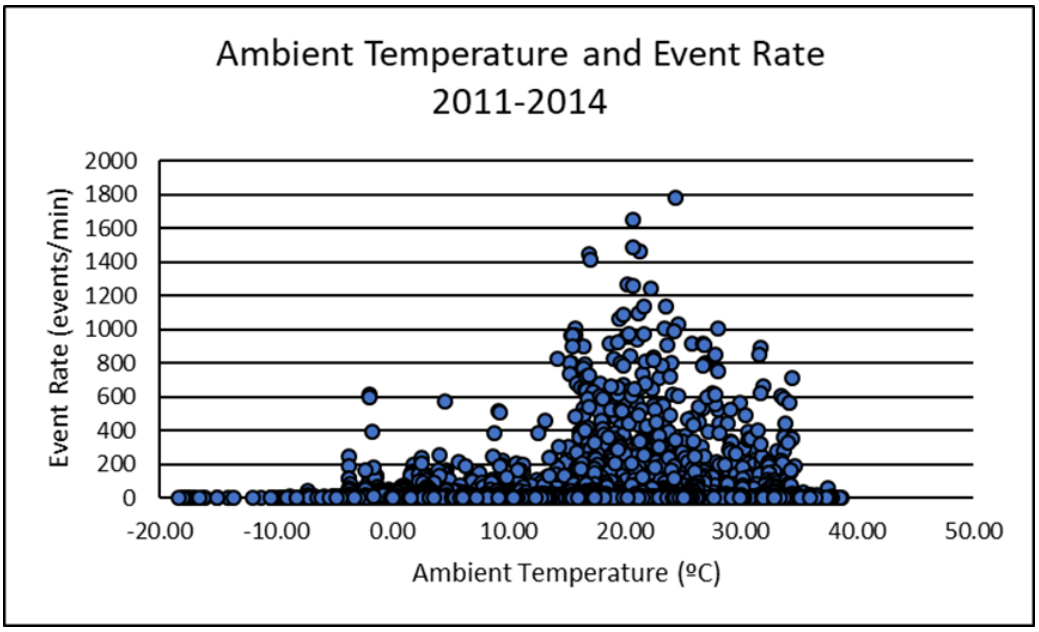


Figure E-2. **Bivariate correlation ambient temperature vs. event rate.** Ambient air temperature of minutes which have events registered (Statistical data available in Table 1.).

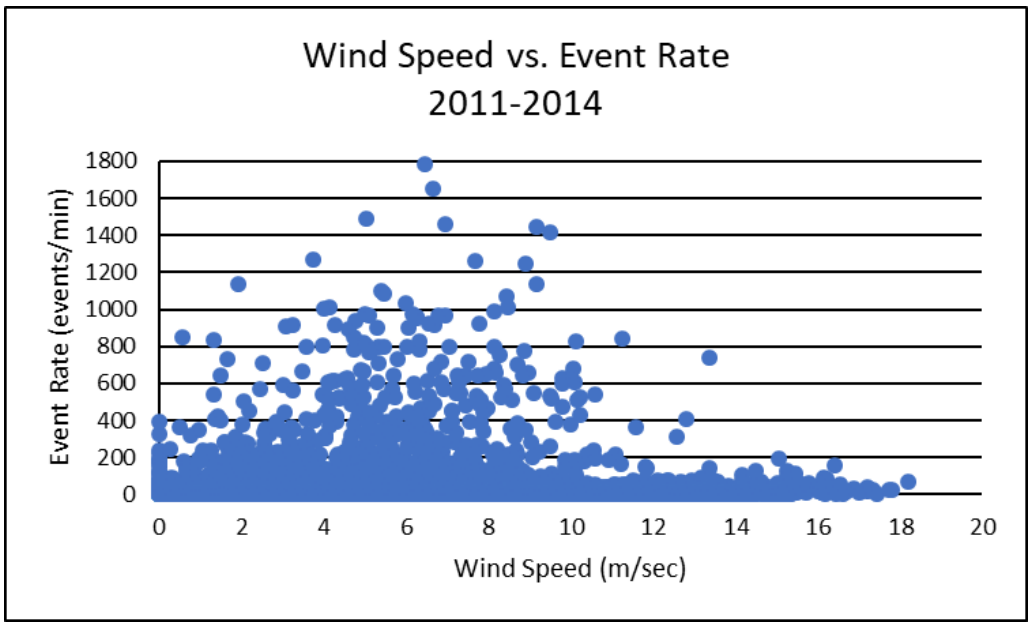


Figure E-3. **Bivariate wind speed vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). See statistics in Table 1.

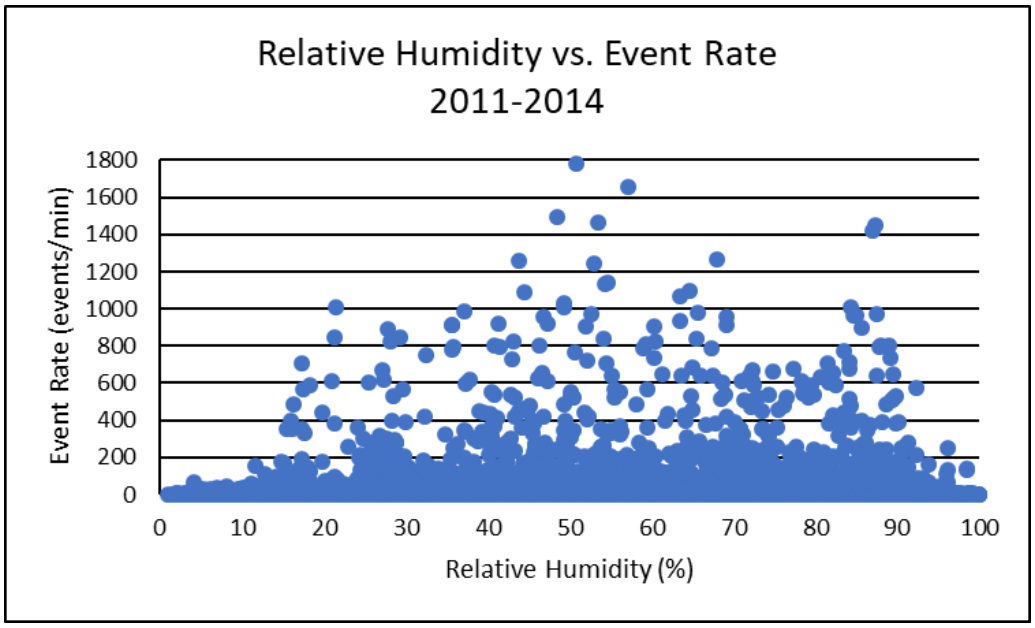


Figure E-4. **Bivariate comparison relative humidity vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

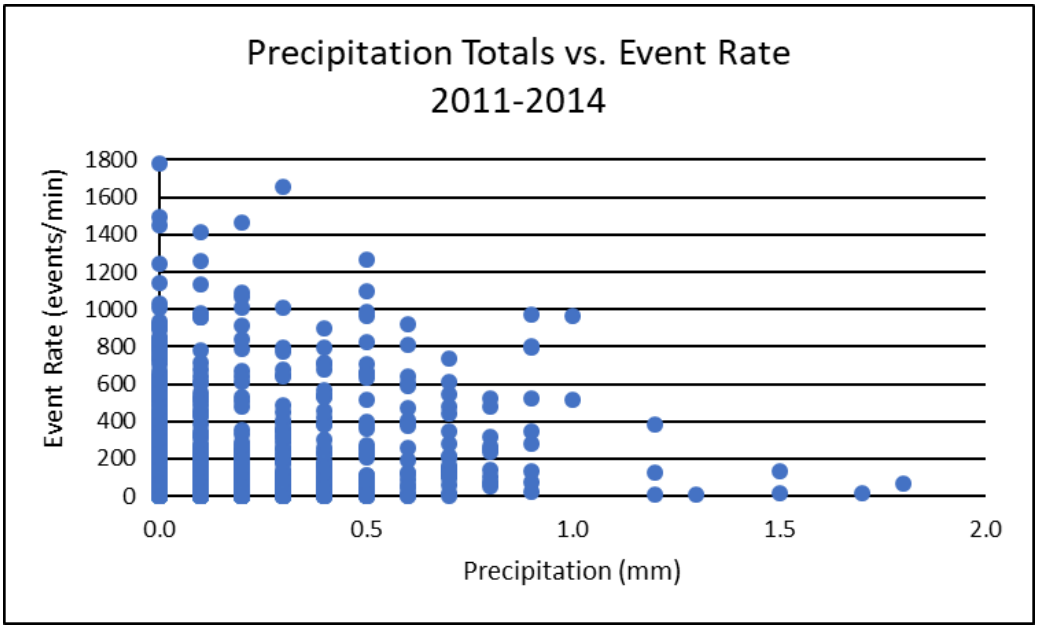


Figure E-5. **Bivariate comparison precipitation rate vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

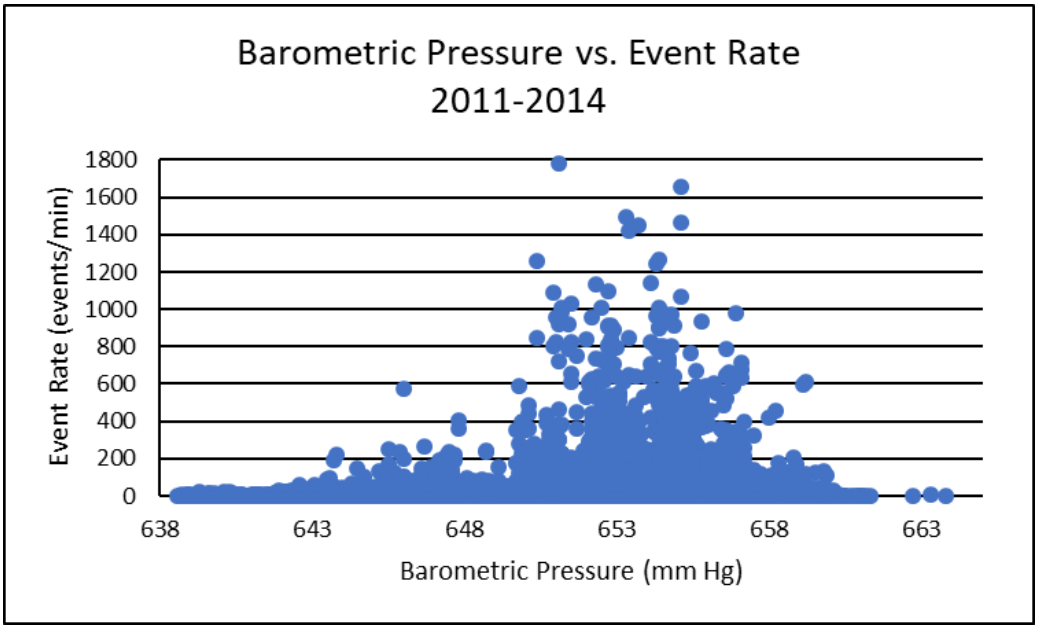


Figure E-6. **Bivariate comparison barometric pressure vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

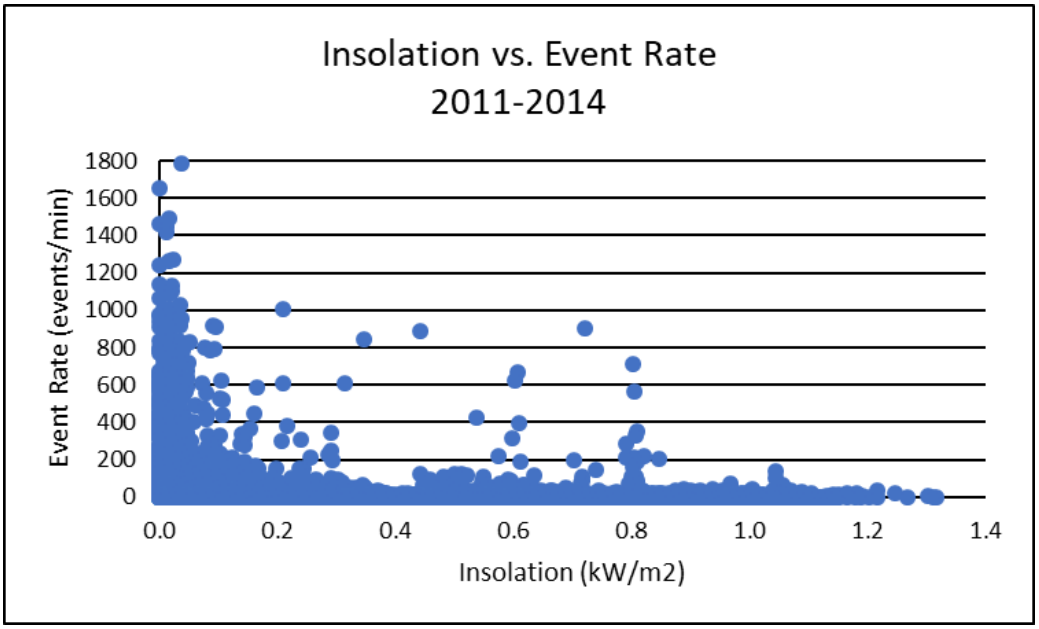


Figure E-7. **Bivariate comparison insolation vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

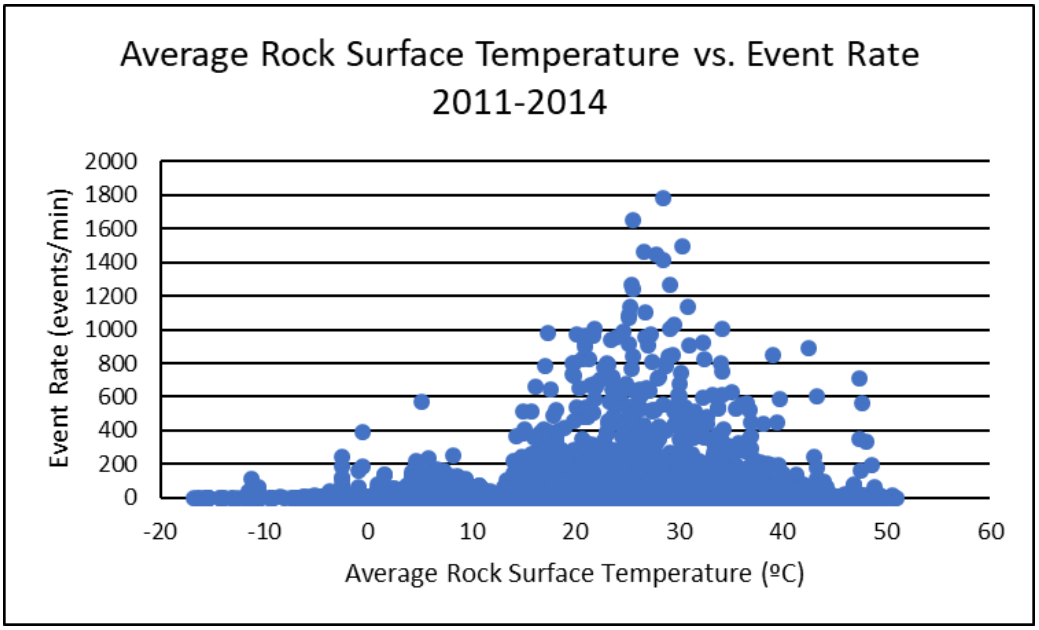


Figure E-8. **Bivariate comparison average rock surface temperature (thermocouples 1-8) vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

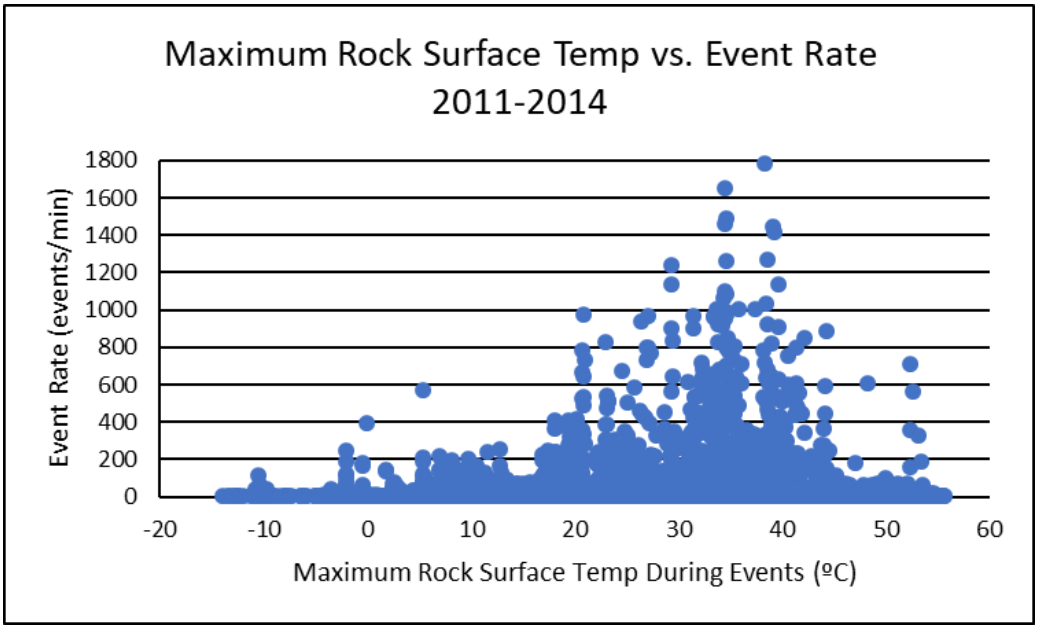


Figure E-9. **Bivariate comparison maximum rock surface temperature for a minute (any of thermocouples 1-8) vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

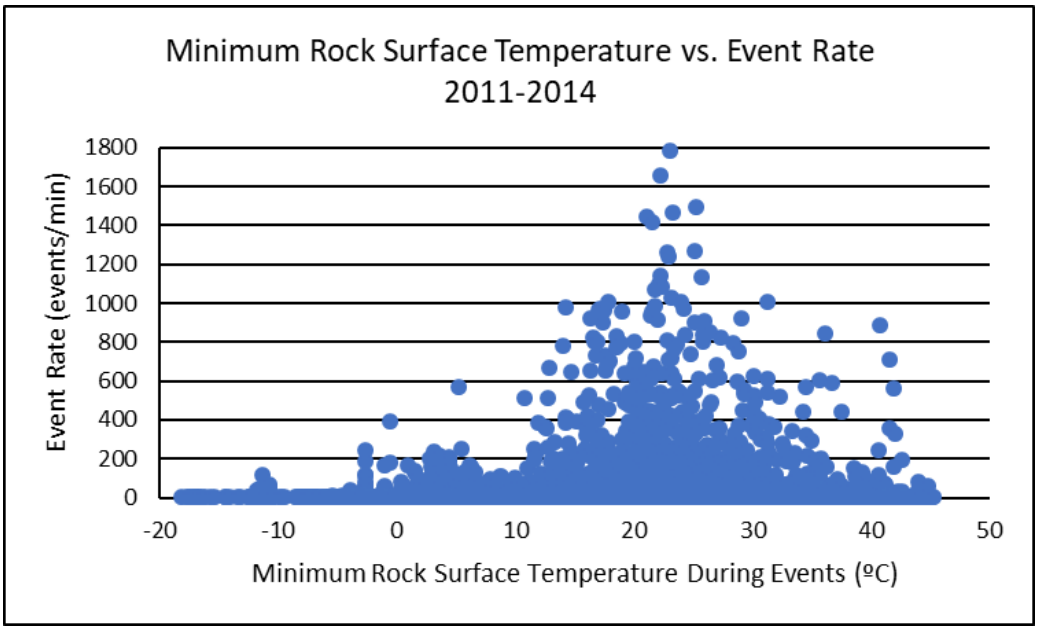


Figure E-10. **Bivariate comparison minimum rock surface temperature for a minute (any of thermocouples 1-8) vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

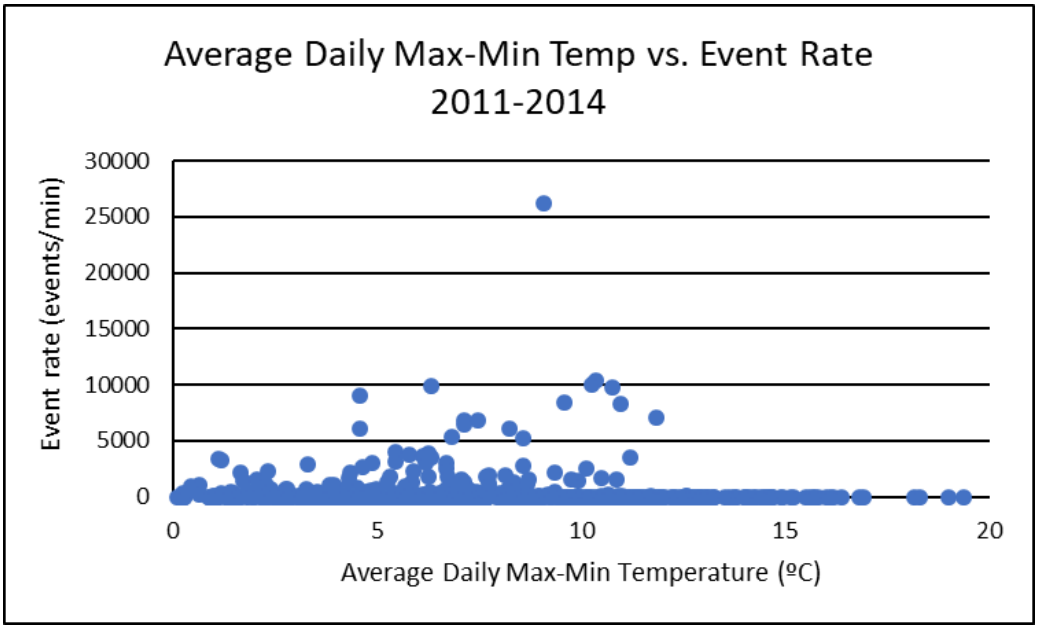


Figure E-11. **Bivariate comparison average daily maximum-minimum rock surface temperature (average for each thermocouple (1-8) maximum-minimum) vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

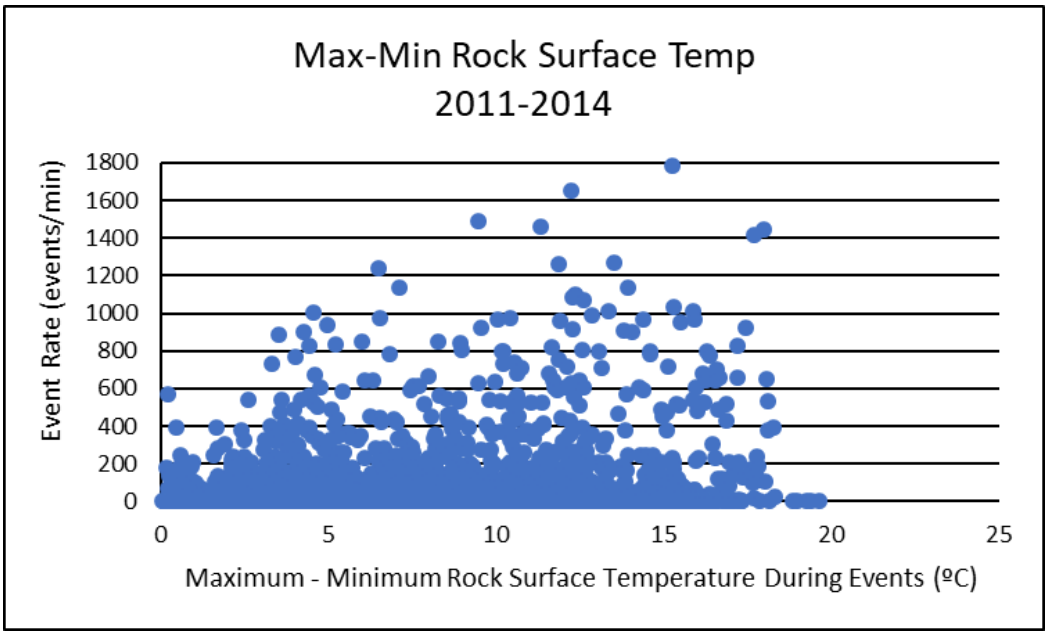


Figure E-12. **Bivariate comparison maximum-minimum rock surface temperature (average for all thermocouples (1-8) maximum-minimum) vs. event rate.** Data is for only those minutes which events were registered (n = 14,853). Statistics available in Table 1.

APPENDIX F: ROCK SURFACE MOISTURE HISTOGRAM

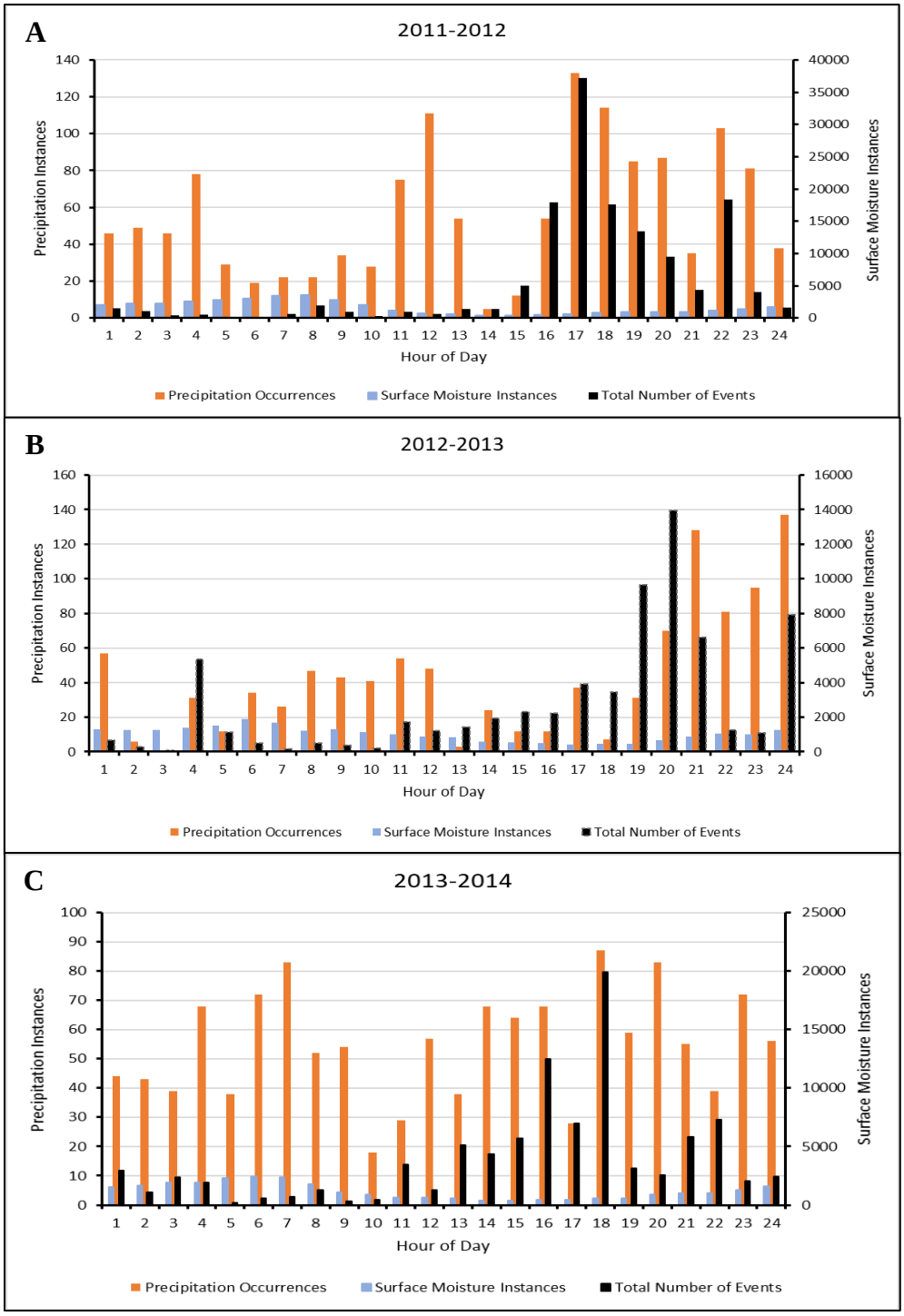


Figure F-1. **2011-2014 - Total instances, by hour of day, when precipitation was measured at site and total instances when rock surface moisture sensor registered as "wet" in NM.** A) Period 2011-2012; B) 2012-2013; C) 2013-2014. Expectations were that events would occur during morning hours when dew was present. However, this trending did not occur. 2011-2014 graph included in body of document.

APPENDIX G: PROPORTION EVENTS VS. TEMPERATURE RANGES

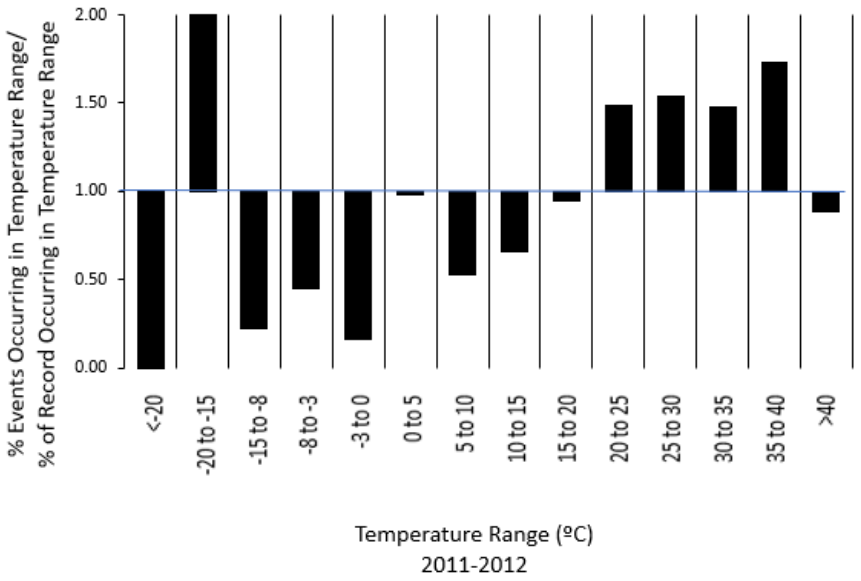


Figure G-1. **AE Events Proportions vs. temperature range occurrences 2011-2012**

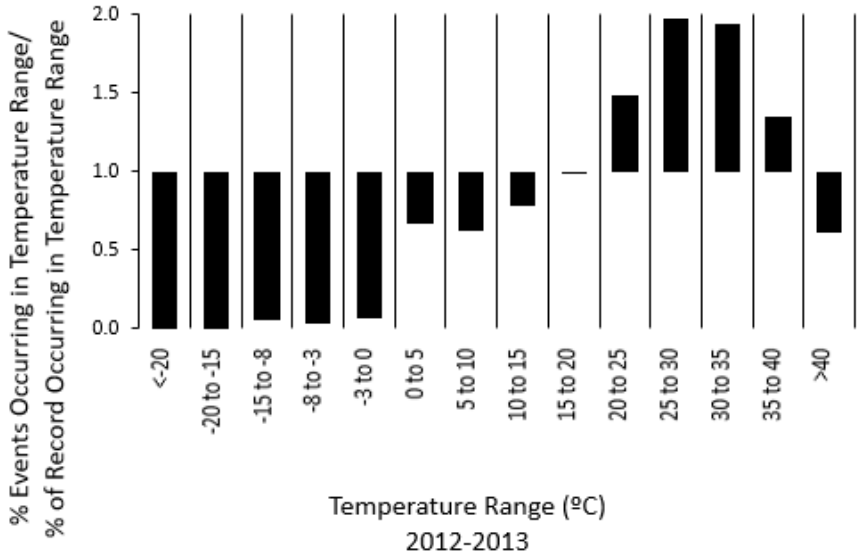


Figure G-2. **AE Events Proportions vs. temperature range occurrences 2012-2013**

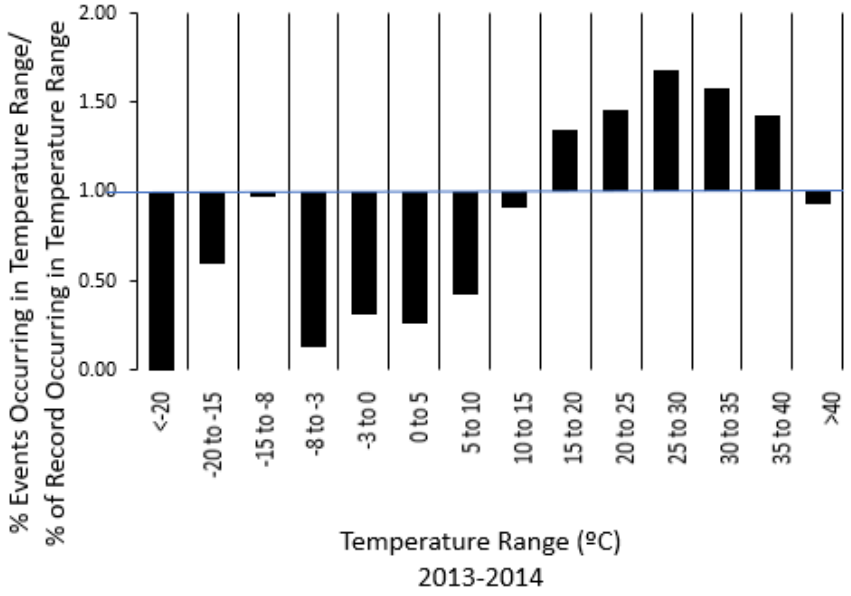


Figure G-3. **AE Events Proportions vs. temperature range occurrences 2013-2014**

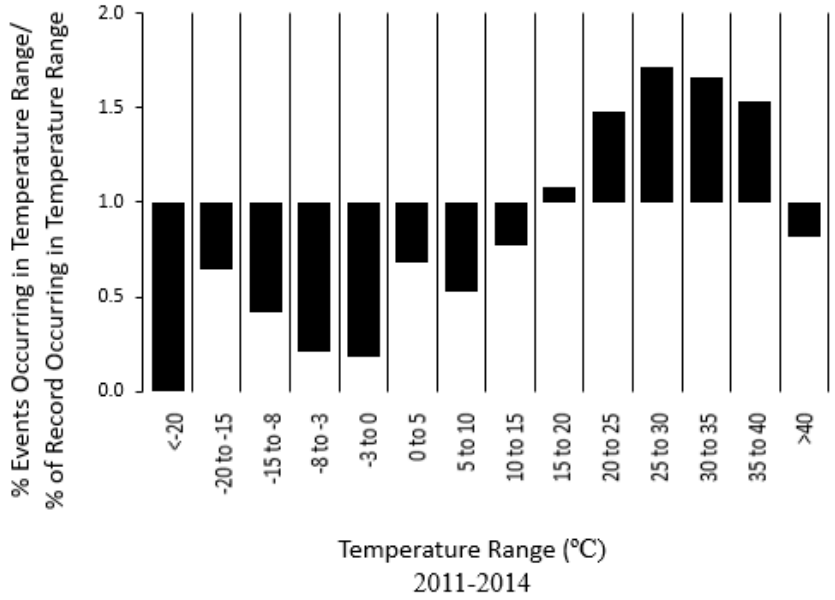


Figure G-4. **AE Events Proportions vs. temperature range occurrences 2011-2014**

APPENDIX H: WEATHER DATA

Table H-1: **Weather information for the top 30 days of high events (first 24 days listed up to black line total 90.3% of AE events for the top 30 high event days).**

Date			Total Events	NCDC #USW00023050, Albuquerque International Airport (79.12 km from site)	Weather Events Socorro Municipal Airport KONM (38.11 km from site)	Onsite Environmental Weather Information (Precipitation mm)
05	July	2012	26,258		Rain, Thunderstorms	17.20
03	September	2011	10,329		Rain	5.60
02	September	2013	10,001		Rain, Thunderstorms	18.70
21	June	2012	9,885		Rain, Thunderstorms	2.10
17	June	2014	9,723	Trace of Precipitation	Rain, Thunderstorms	6.10
24	August	2011	9,016		Rain, Thunderstorms	7.10
14	June	2013	8,483		Rain	0.60
02	July	2012	8,257		Rain, Thunderstorms	2.00
30	June	2013	7,061	Trace of Precipitation	Rain, Thunderstorms	5.80
01	December	2011	6,811		None	None
08	July	2014	6,775		Rain, Thunderstorms	3.60
18	July	2012	6,523		Rain, Thunderstorms	8.20
08	July	2013	6,124		Rain, Thunderstorms	9.50
12	August	2011	6,083		Rain, Thunderstorms	1.60
09	July	2012	5,421		Rain, Thunderstorms	13.00
07	July	2012	5,184		Thunderstorm	6.80
09	April	2013	4,028	Trace of Snow	Thunderstorm	5.00
10	July	2014	4,011	Trace of Precipitation	Rain, Thunderstorms	None
30	June	2014	3,861		Thunderstorm	0.10
18	August	2012	3,755		Thunderstorm	2.00
07	September	2011	3,619		Rain, Thunderstorms	7.70
06	September	2012	3,581	Trace of Precipitation	Thunderstorm	1.20
19	August	2013	3,550	Trace of Precipitation	Rain, Thunderstorms	4.70
23	November	2013	3,376	Trace Snow, (5mm)	Snow	None
14	December	2012	3,260	Trace of Snow	Rain	7.30
13	June	2014	3,098		Rain, Thunderstorms	0.30
20	August	2011	3,077	Trace of Precipitation	Thunderstorm (10:15 p.m.)	1.40
12	July	2014	3,009	Trace of Precipitation	Rain, Thunderstorms	0.50
23	May	2014	3,003		Rain, Thunderstorms	2.30
08	May	2014	2,989	Trace of Precipitation	None	0.50

Weather conditions were reviewed for each of the top 30 high event days (90% of events occurred during the top 24 high event days). Environmental conditions reported by weather locations noting rain, thunderstorms and snow are listed. Weather monitor locations: Socorro boulder location (34.3379, -106.7414), NCDC location at Abuquerque International Airport, 79.12 km from site (34.0224, -106.9031), Socorro Municipal Airport (KONM), 38.11 km from site (35.0419, -106.6155). Distances calculated on website www.movable-type.co.uk/scripts/latlong.html using signed decimal degrees, using negative to indicate west/south.

APPENDIX I: INTENSE WEATHER VS. EVENTS

Table I-1: **Intense precipitation vs. event occurrences.**

Date	Total Precipitation (mm)	Number of Events	Number of Event Minutes	Hour of Day
8/3/2011	0.3	83	1	17
8/12/2011	0.3	450	1	19
8/19/2011	0.3	0	0	1
8/21/2011	1.1	2	2	3
8/24/2011	3.8	1276	6	21
9/3/2011	3	4582	7	18
9/7/2011	7.3	2047	18	17
9/14/2011	1.5	61	2	20
9/17/2011	1.3	9	3	14
10/4/2011	5	341	10	15
10/5/2011	1.6	0	0	3
11/5/2011	0.6	0	0	8
6/21/2012	0.6	1654	1	21
7/2/2012	0.3	41	1	22
7/5/2012	10.9	12723	20	16
7/7/2012	5.9	3163	11	16
7/9/2012	10	3495	17	16
7/18/2012	2.6	945	7	23
8/18/2012	1.5	152	4	23
12/14/2012	0.3	18	1	10
3/8/2013	0.3	2	1	19
6/30/2013	3	2073	8	19
7/3/2013	1.7	0	0	22
7/8/2013	6.9	2465	16	3
7/10/2013	5.3	553	10	23
7/11/2013	0.3	0	0	0
7/13/2013	7.9	596	19	20
7/26/2013	7.2	166	15	20
8/12/2013	0.9	3	1	3
8/14/2013	1	158	3	14
8/19/2013	0.9	361	3	19
9/2/2013	15.8	8494	24	17
9/10/2013	18.7	839	17	14
9/12/2013	2.3	181	5	13
9/14/2013	5.4	972	9	23
9/22/2013	3	1084	6	20
10/25/2013	2.1	1171	5	16
5/23/2014	0.3	120	1	0
5/24/2014	3.1	814	5	10
6/17/2014	5.2	5396	11	17
7/5/2014	1.1	263	3	20
7/8/2014	1.6	1046	4	22
7/11/2014	1.4	0	0	17
7/15/2014	6	0	0	3
7/29/2014	0.6	0	0	18
7/30/2014	5.3	0	0	22
7/31/2014	3.2	0	0	19
Grand Total	168.7	57799	278	23