December 4, 2008

To:
Dr Dennis Baldocchi
University of California-Berkeley
Berkeley Atmospheric Science Center
151 Hilgard Hall
Berkeley, CA 94720

From:
Dr Hongyan Luo
Department of Forest Ecosystem Society
Oregon State University
Corvallis, OR 97331

Dear Dr Baldocchi,

Thank you for making possible a comparison between your eddy covariance (EC) system at Sherman Island, California and the AmeriFlux Portable EC system, April 7th, 2008 through April 17th, 2008. I humbly apologize for the delay in processing and reporting your comparison. The delay was mainly due to multiple trainings, personnel change and transition in our lab, and the distractions from multiple tasks. Our processing software was upgraded and now includes an objective QA/QC protocol based on the experience in the CarboEurope network. Now, our flux estimates are automatically flagged depending on stationarity and developed turbulent conditions for the comparison period. Furthermore, plausibility limits for all sensor readings were developed further and also now filter the data. As a result of the objective QA/QC routines , you may see some 'gaps' occurring in our time series as low-quality data were automatically excluded from the comparison. Obvious outliers and abnormal readings were also excluded from both data sets. Both your data and our data were lost for the period of 04/12/08 17:00 to 04/13/08 13:00 PST due to power failure. Your data acquisition system froze and your data were lost from 04/15/08 12:30 to the end of comparison at 04/17/08 8:00 PST. During the comparison period, there was a bush fire near Sherman Island. Our sensor detected that CO_2 concentration in the air was increased to approximately 700ppm. It may be out of the DAC range of your sensor, thus some data points between 04/11/08 and 04/12/08 were lost/filtered from your data set during this period. The average number of available 30-min intervals for the comparison was approx. 230 and 360 for the flux estimates and meteorological variables, respectively. The AmeriFlux portable system instrumentation were setup at the same measurement heights as your sensors, at a reasonable distance to foster comparability of the results while also minimizing flow distortion caused by the additional sensors.

Some results of a quick comparison were presented to you and Dr Matteo Detto at site using data from first three days. We found that your H_2O vapor mean concentration was 30 min behind your flux data and met data. We also found abnormal lower CO_2 ppm readings in your data set, periodic spikes in some of your met data, unlikely large PPFD readings, and large offsets of your CNR1 measurements at that time. In the current data set, obviously, Dr Matteo Detto has fixed the data process program to correct the water vapor lag, recalculated the CO_2 conversion using correct DAC settings, and removed most spikes from your met data set, which likely caused by the multiplexer. Please review your archived data, remove above water vapor lag in the affected data files, and resubmit your data files to AmeriFlux database by contacting Thomas A. Boden at bodenta@ornl.gov. The large discrepancies in 4 components of radiation measurements can be found in Observation section. If the problems of CNR1 and PPFD haven't been resolved yet, please see my recommendation below.

In general, the comparisons yielded a reasonable agreement between the two systems. Considering the different type and class of sonic anemometers used for the eddy-covariance measurements, the derived flux estimates agreed within 2 to 12%. Please do not hesitate to ask if there are additional analyses you wish done. The regression analyses and the time series comparison of the measured variables have been included in this report. Below you will find the details of the comparison and my suggested interpretation.

Summary of recommendations that we require feedback

- Adjust your wind direction for geomagnetic declination.
- Aspirate your HMP temperature sensor. Cross calibrate your HMP sensor with a well-calibrated temperature sensor.
- Verify the calibration coefficient applied to PPFD calculation. Conduct a side-by-side comparison and recalculate your PPFD values against AmeriFlux standard. Consider a factory diagnosis and calibration if necessary.
- Verify the calibration coefficient and temperature applied to CNR1 radiation components calculation, or send this CNR1 unit back for factory diagnosis and calibration as necessary.
- Recalibrate your NR-Lite net radiometer
- Remove spikes from your barometric pressure data
- Examine your archived data sets, remove spikes from your barometric pressure and other meteorological data, adjust your wind direction for geomagnetic declination, remove the 30-min lag of water vapor in all affected files, and contact Thomas A. Boden at bodenta@ornl.gov to resubmit your data sets to AmeriFlux database with explanation notes.

I will be looking forward to your interpretation of the data. Please clarify and report back to us how the problems are resolved before March 2009, so that we can officially close this intercomparison and report to funding agency DOE. Thanks again for your collaboration.

Yours truly,

Hongyan Luo

Observations:

Wind Statistics (Figs. 1-3)

Wind direction calculated from the your Gill Master Pro sonic anemometer and AmeriFlux CSAT3 sonic anemometer generally compared well, except for a constant offset of approx. 9.5° (Fig. 1). Your data wasn't adjusted for magnetic declination (per communication with Dr Matteo Detto). The magnetic declination was 14°29′ E during the comparison period and could, in part, explain the observed offset. **Mean horizontal wind speed** determined by your sonic anemometers was 9% higher than those of ours, especially at high wind speed end (Fig. 2). Your **variance of vertical wind speed** (var_w) was 23% lower than our measurements (Fig. 3). The variance of vertical wind measured by Gill or RM Young 3 axis sonic anemometer has been observed lower than the measurements from CSAT3, but not as much as 23%. By looking at your mean vertical wind speed, the values are not near to zero. Are the mean vertical wind speed and variance you report here non-rotated values? The differences in the flux comparison below are not as large as the vertical wind variance, which make me wonder if you use different w′ for the flux calculations. Do you have any suggestion?

Temperature (Figs. 4-6)

The comparison of **mean sonic temperatures** (Ts) revealed discrepancies and a nonlinear relationship between your Gill Windmaster Pro sonic anemometer and AmeriFlux CSAT3 sonic anemometer (Fig. 4). The response of speed of sound from Gill sonic anemometers is often non-linear with aspirated air temperature, which is particularly apparent at lower temperatures. The degree of the offset and non-linearity vary with each sonic. Your **fluctuations of sonic temperature** (var T_s) were 11% lower than those of AmeriFlux (Fig. 5). However, considering the different types of sonic anemometers, the perturbations of temperature from its mean were relatively small, 1 to 1.5 K. So the non-linearity in the perturbations did not cause large disagreements in sensible heat fluxes (see Fig. 8 below), and are thus not expected to adversely affecting your flux measurements. **Mean air temperature** from your HMP sensor was 11% lower than our aspirated PT100 temperature sensor with an offset of ~1 ºC (Fig. 6). I usually see better comparison results. The difference was more profound during midday hours. I am not sure why this large difference happened. Several possible reasons were: 1. Calibration issue. Our PT100 sensor is calibrated annually in lab. When was the last time that your HMP sensor was calibrated? Out of calibration could lead to either higher or lower readings for the measurements. 2. Aspiration issue. If I remember correctly, your HMP temperature sensor wasn't aspirated, which could trap heat inside the radiation shield during the midday hours, especially when the temperature sensor is close to ground surface on short tower and in calm wind conditions. However, it was windy at midday during our comparison period. Heat trapping was not likely to occur. In addition, your temperature readings showed lower values than those of AmeriFlux, which was opposite to typical non-aspirated temperature pattern. 3. Heating by tower structure. I reviewed the photos taken during comparison and noticed that my temperature sensor was mounted on the south side of your tower structure and touched on a big piece of aluminum, while your sensor was about 0.5m apart. I suspect that the reflected radiation by and the heat conducted from the aluminum metal piece heated up my PT100 temperature sensor, thus resulted in higher air temperature readings than yours. If this was the case, our temperature comparison is invalid. I suggest you to bring another well-calibrated temperature sensor to Sherman Island site to cross calibrate your HMP sensor to make sure it functions well. Please let us know if you want us to send a calibrated temperature sensor with aspirated radiation shield to you for an internal cross comparison.

Flux estimates and trace gas concentrations (Figs. 7-16)

Friction velocity (u_*) flux compared well within 2% (Fig. 7), the scatter was surprisingly small considering the different sonic types and the observed underestimation in the fluctuation of vertical wind (var_w, Fig. 3). **Sensible heat flux** from your system was in good agreement with that of ours within 4% with a small offset of ~2 W m^{-2} (Fig. 8). **Latent heat flux** (λE) comparison was within 8% (Fig. 9). **Fluctuations in water vapor concentrations** (var H_2O) were dampened by about 7 % compared to our system (Fig. 10) which might have led to the smaller latent heat fluxes observed earlier (Fig.9). WPL corrected **carbon flux** (FCO_2) and **raw carbon flux** (FCO_2 uncorr) tracked well with AmeriFlux estimates, but 12% and 11% lower, respectively (Fig. 11 and Fig. 12). Given the fact that the comparison of fluctuation of CO_2 concentration (var CO_2) agreed well within 5% (Fig. 13), the observed difference between your carbon flux and AmeriFlux carbon flux was likely contributed by the discrepancy in the fluctuation in vertical wind component (Fig. 3) measured by different types of sonic anemometer. Our **mean CO_2 concentration** agreed well within 2% with an offset of ~6ppm (Fig. 14). Some mean CO_2 concentration data points were filtered in both your data set and my data set in this comparison due to abnormally large CO_2 variance during fire period of April 11 to April 12. The peak CO_2 observed was approximately ~700ppm. Offsets were observed between your **mean water vapor concentration** and those of AmeriFlux due to multiple calibrations of AmeriFlux systems (Fig. 15). The consistent slopes were found for all periods (Fig. 15). The absolute water vapor concentration agreed well after offset correction (y=1.00x-0.77, R^2=0.99, Fig. 16), which indicated that the offsets did not adversely affect our flux estimates.

Radiation and pressure (Figs. 17-25)

Your **incoming photosynthetic photo flux density (PPFD)** measurements were 20% higher than those of AmeriFlux (Fig. 17). The discrepancy was especially large at noon. The peak values >2000 μmol m^{-2} s^{-1} were unlikely to happen in April at California. This issue could be due to sensor out of calibration, or using wrong calibration coefficient for calculation. We are confident about our PPFD sensors because we carefully calibrate our PPFD sensors annually against a LICOR 1800-02 calibration unit with NIST traceable lamp. I suggest you check the date of the last calibration of your sensor, and check if right coefficient was applied to the calculation. I also suggest you do a side-by-side comparison and recalculate your PPFD values against our standard (the Kipp&Zonen PAR lite sensor that was calibrated annually and sent to you in spring). If the right coefficient was used, I recommend you send your PPFD sensor back for a factory diagnosis and/or calibration. **Incoming short-wave radiation** agreed well within 2 % with AmeriFlux (R^2=1.00, Fig. 18). However, the comparison between your **outgoing short-wave radiation** and AmeriFlux was very poor (y=0.17x-8.43, R^2=0.73, Fig. 19). Your **incoming long-wave radiation** showed similar trend with that of AmeriFlux but ~12 W/m^2 lower (y=0.99x-12.35, R^2=0.99, Fig. 20). Your **outgoing long-wave radiation** also demonstrated large difference with that of AmeriFlux (y=1.90x-297.29, R^2=0.97,

Fig. 21). Please verify if right calibration coefficient was applied on the calculation for each of your radiation component, and examine if the KZ temperature applied correctly for long-wave radiation components (pay attention to temperature units). If calculation was not an issue, I suggest you send this CNR1 back for a factory diagnosis and calibration. I am highly confident in our CNR1 for a factory calibration was done a week prior to this intercomparison. Because the dominant component of incoming short-wave radiation agreed well and the errors of other components cancel each other, **net radiation** from your CNR1 compared well with that of AmeriFlux within 3% with an offset of ~24W/m^2 (y=0.97x-23.83, R^2=1.00, Fig. 22). The net radiation from your K&Z NRlite was 10% lower than that of AmeriFlux (Fig. 23). You may consider sending it back for a factory calibration as well if it hasn't been calibrated in past two years. There were many spikes in your **barometric pressure** data set (Fig. 24). After removed the spikes, barometric pressure measurements were tracking each other within 2% with an offset of ~2kPa (Fig. 25). The spikes were possibly caused by the function multiplexer (per communication with Dr Metteo Datto). Please consult Campbell Scientific Inc. for troubleshooting if this problem hasn't been fixed. Please also examine your archived data sets and remove spikes in the affected files, and contact Thomas A. Boden at bodenta@ornl.gov to resubmit your data sets with explanation notes.

Observations: plots

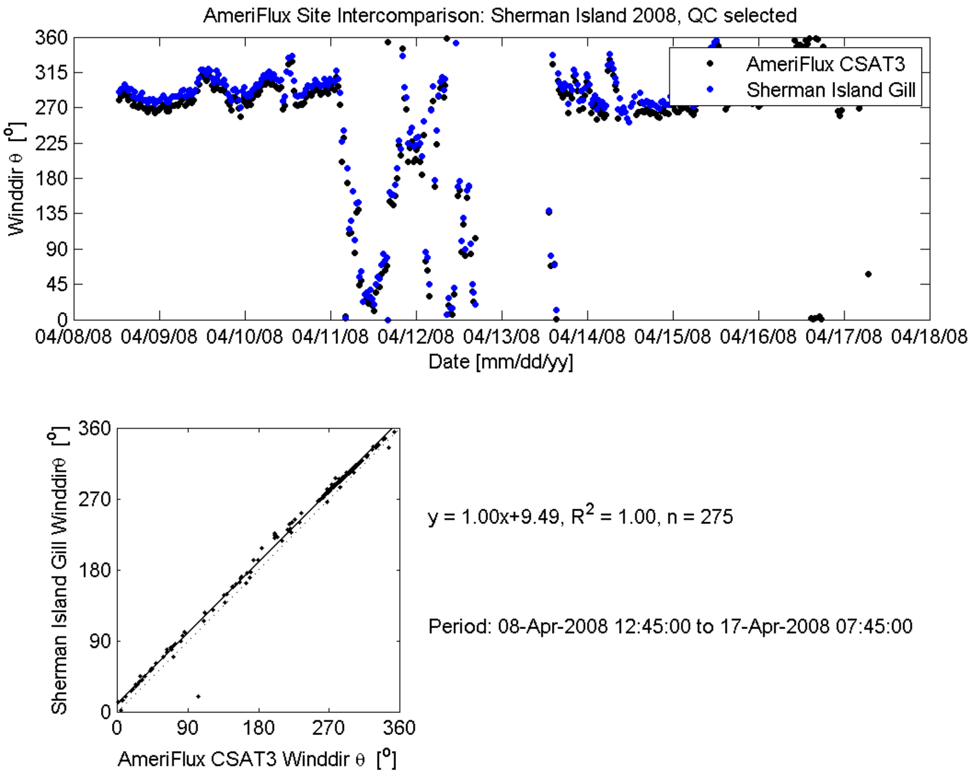


Fig. 1

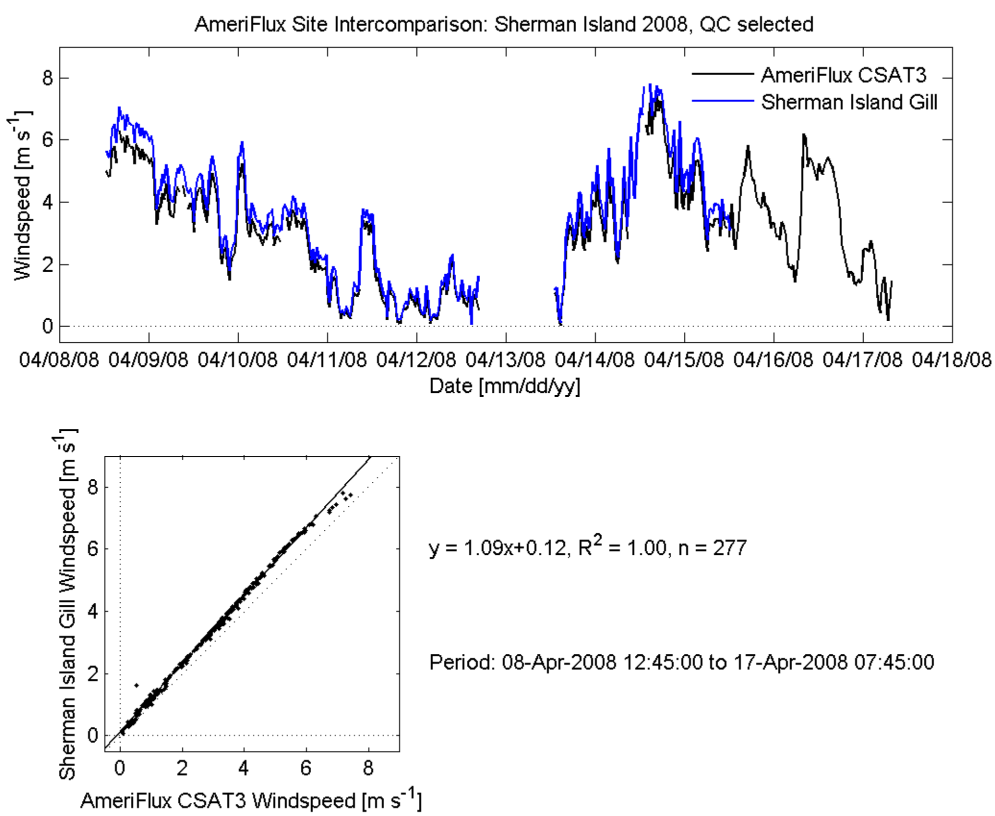


Fig. 2

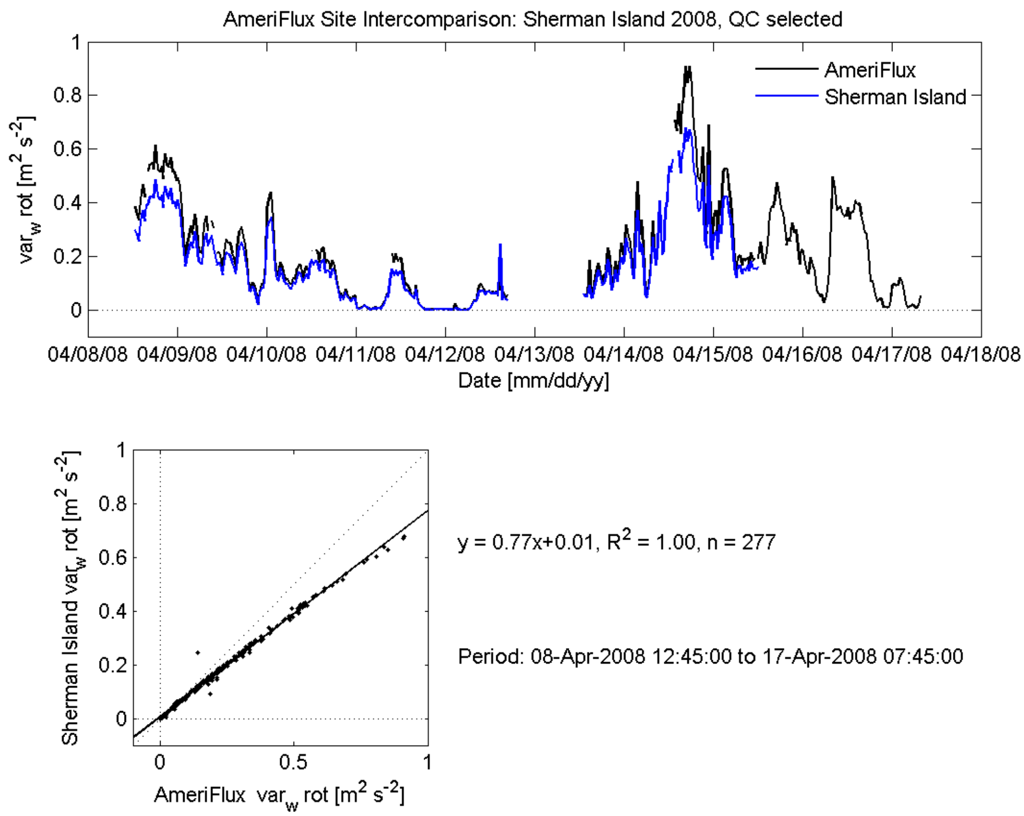

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
var$_w$ rot [m^2 s^{-2}]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island var$_w$ rot [m^2 s^{-2}]
AmeriFlux var$_w$ rot [m^2 s^{-2}]
y = 0.77x+0.01, R^2 = 1.00, n = 277
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 3

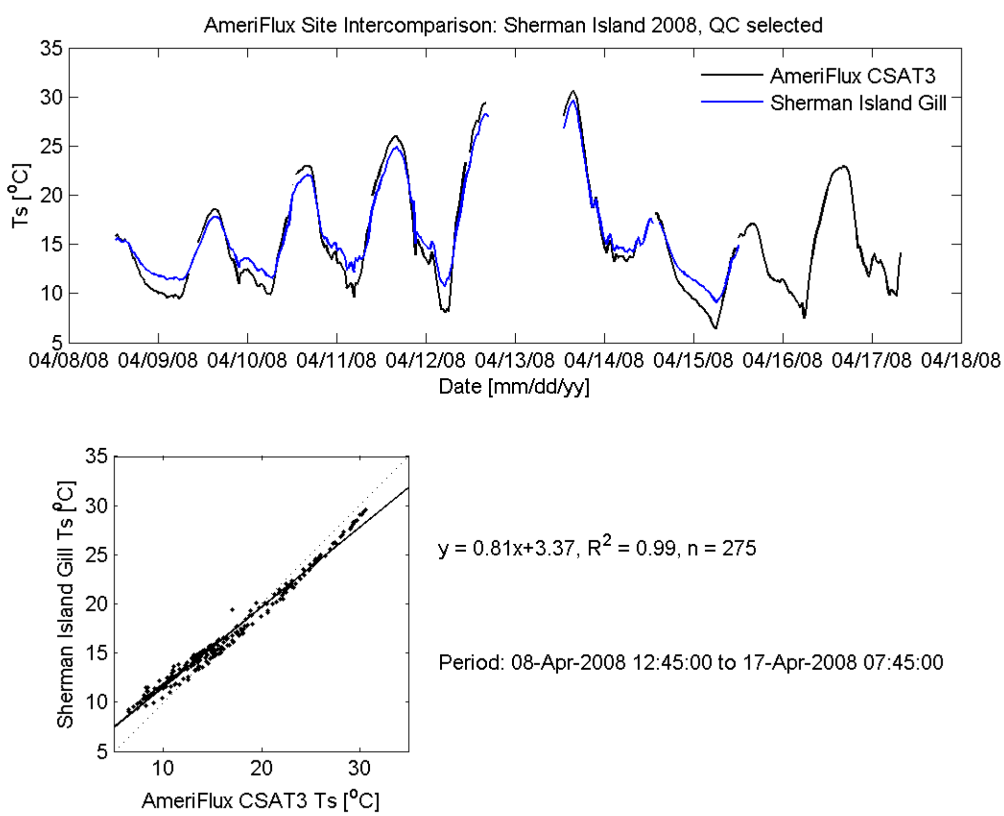

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux CSAT3
Sherman Island Gill
Ts [^{o}C]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island Gill Ts [^{o}C]
AmeriFlux CSAT3 Ts [^{o}C]
y = 0.81x+3.37, R^2 = 0.99, n = 275
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 4

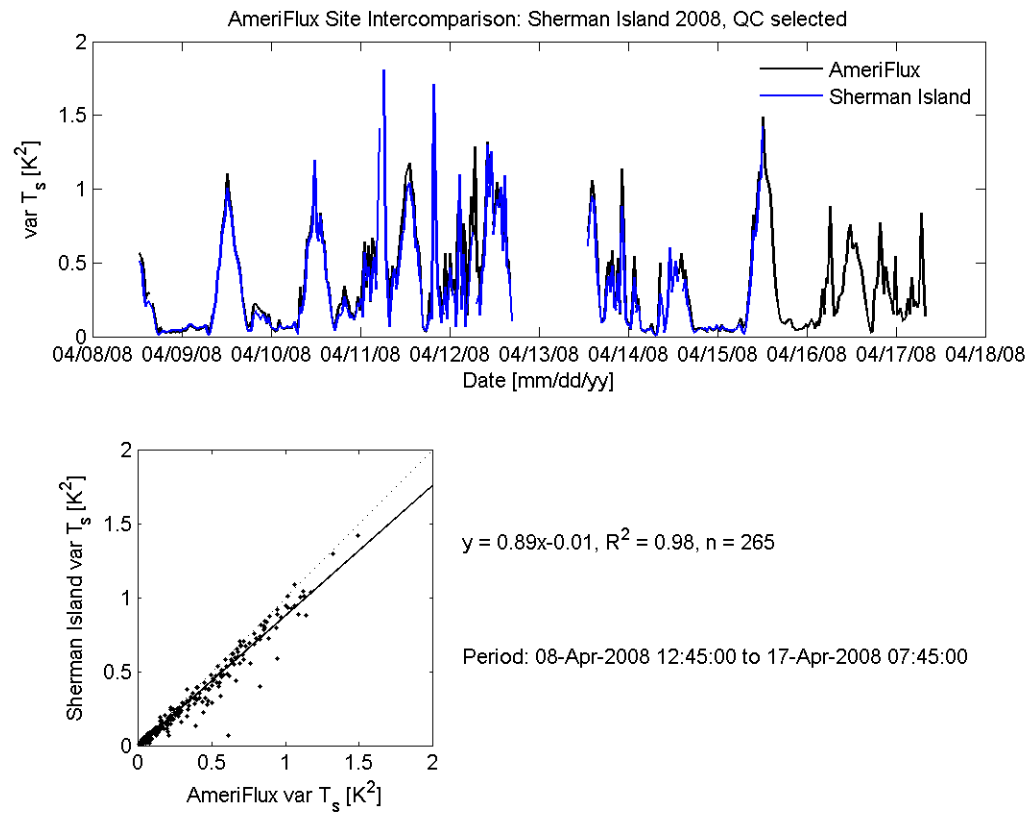

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
var T_s [K^2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island var T_s [K^2]
AmeriFlux var T_s [K^2]
y = 0.89x-0.01, R^2 = 0.98, n = 265
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 5

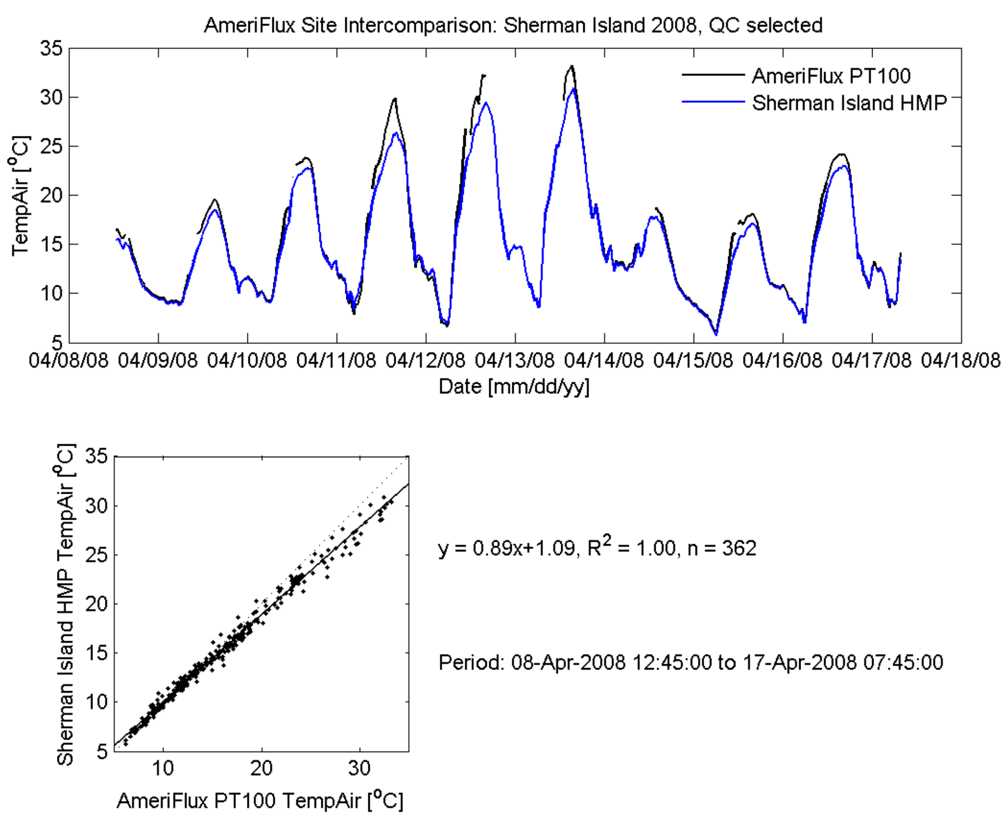

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux PT100
Sherman Island HMP
TempAir [°C]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island HMP TempAir [°C]
AmeriFlux PT100 TempAir [°C]
y = 0.89x+1.09, R^2 = 1.00, n = 362
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 6

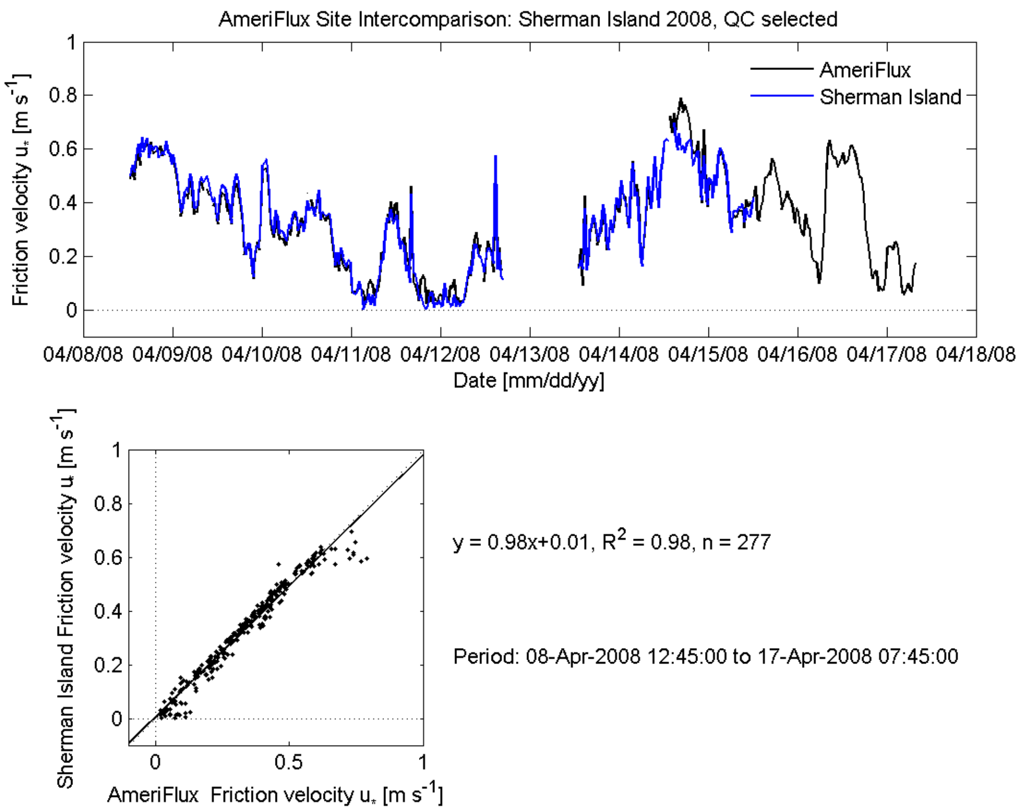

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
Friction velocity u* [m s-1]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island Friction velocity u* [m s-1]
AmeriFlux Friction velocity u* [m s-1]
y = 0.98x+0.01, R2 = 0.98, n = 277
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 7

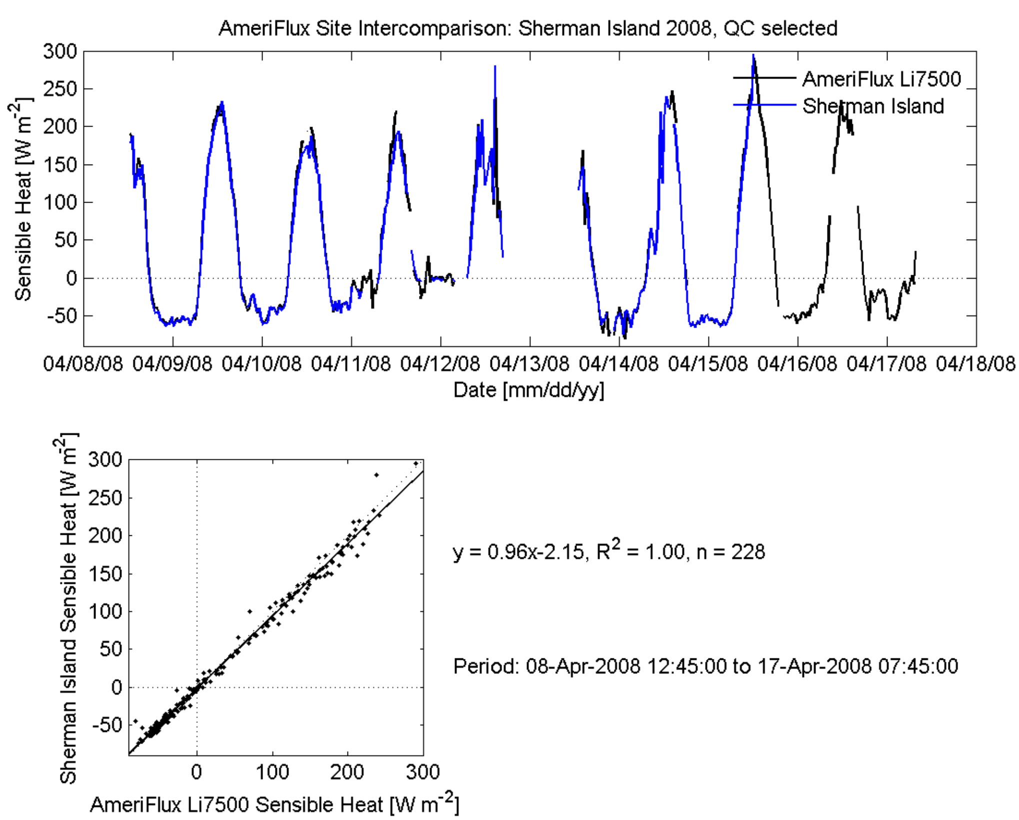
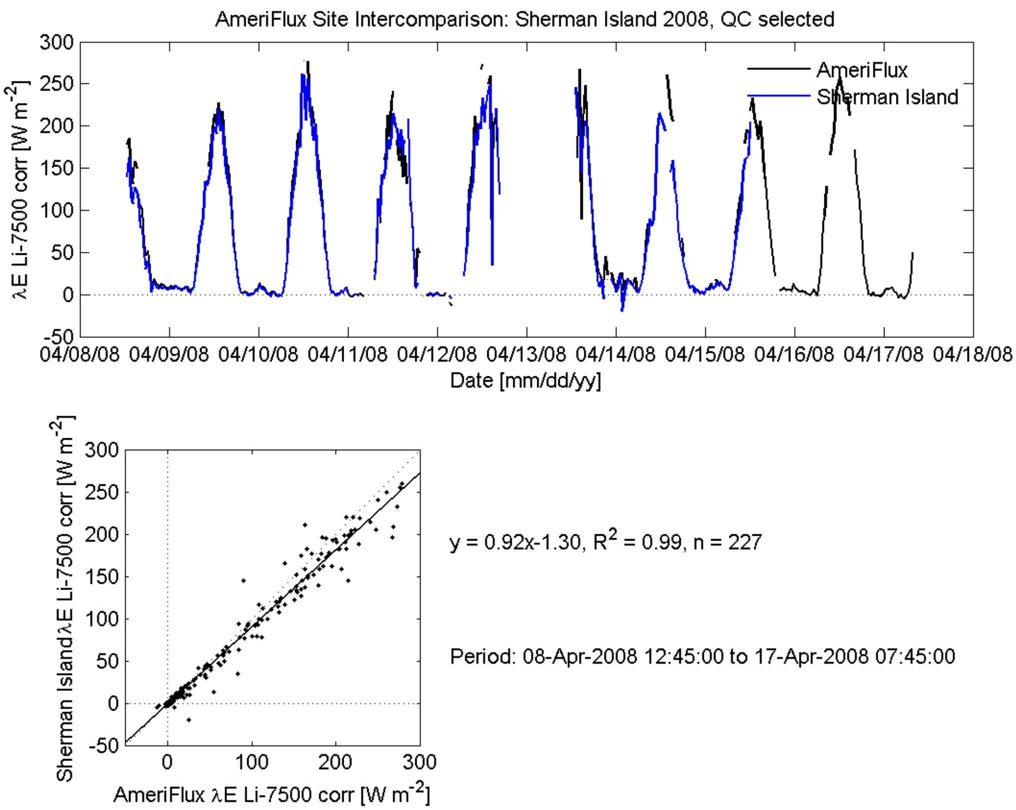
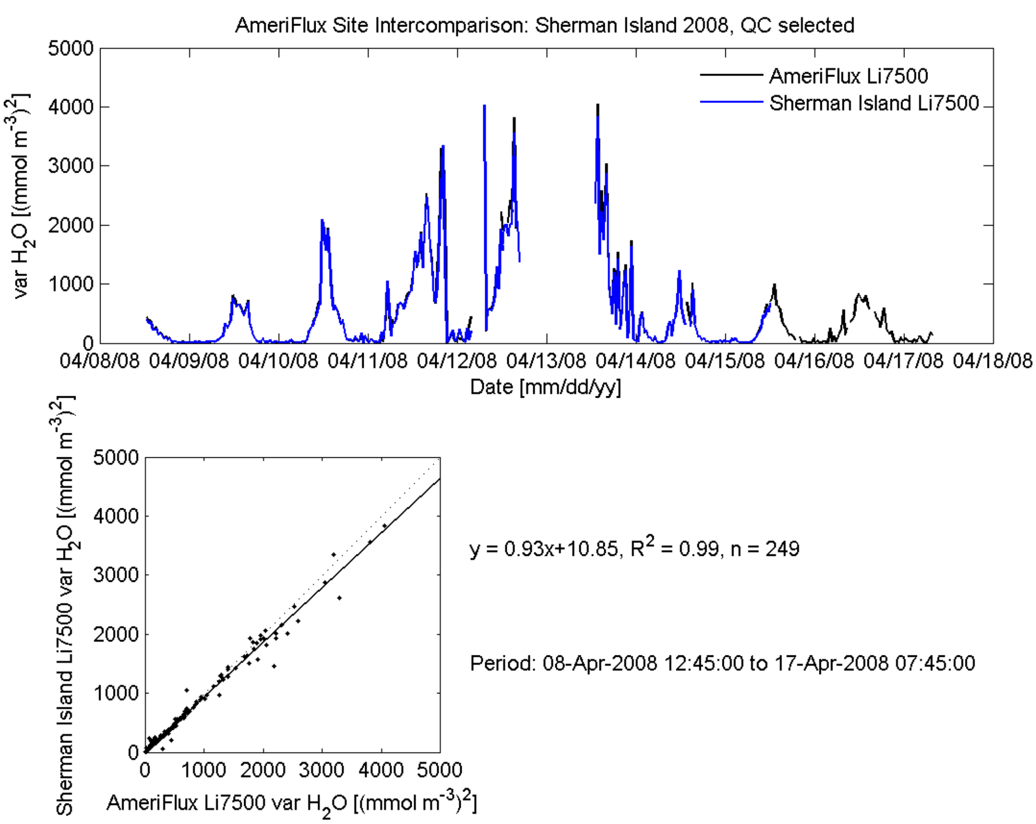

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500
Sherman Island
Sensible Heat [W m-2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island Sensible Heat [W m2]
AmeriFlux Li7500 Sensible Heat [W m-2]
y = 0.96x-2.15, R2 = 1.00, n = 228
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 8



AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
λE Li-7500 corr [W m-2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island λE Li-7500 corr [W m-2]
AmeriFlux λE Li-7500 corr [W m-2]
y = 0.92x-1.30, R2 = 0.99, n = 227
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 9



AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500
Sherman Island Li7500
var H2O [(mmol m-3)2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island Li7500 var H2O [(mmol m-3)2]
AmeriFlux Li7500 var H2O [(mmol m-3)2]
y = 0.93x+10.85, R2 = 0.99, n = 249
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 10

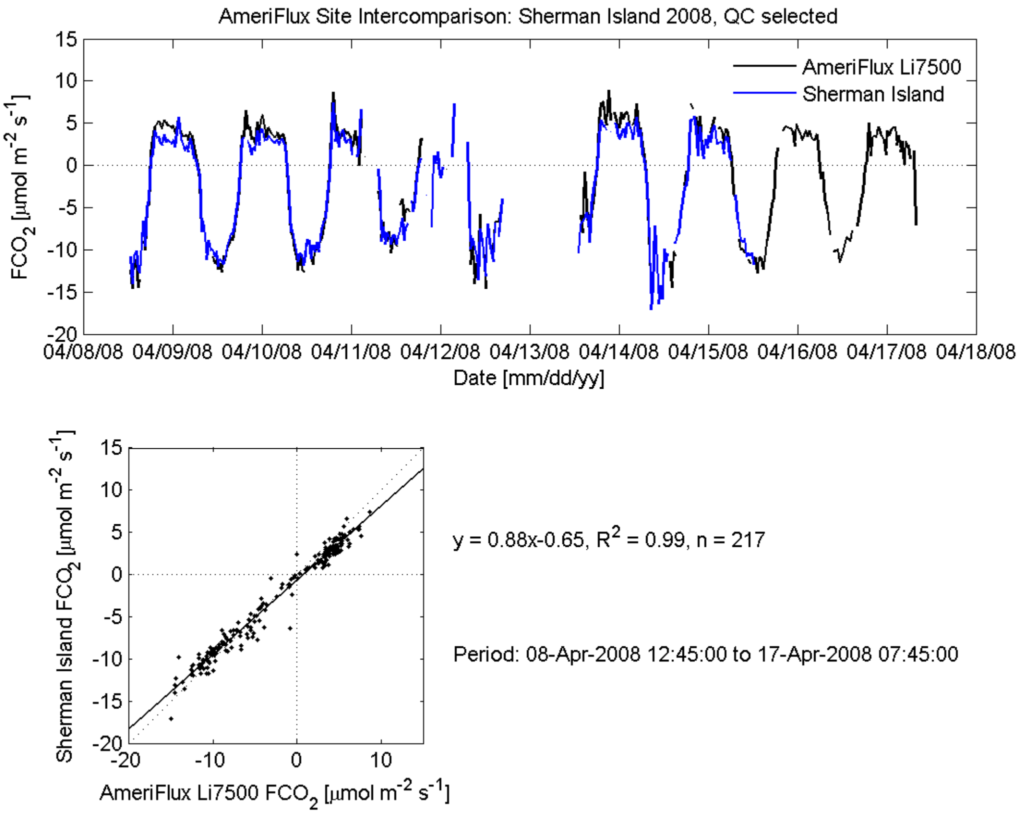
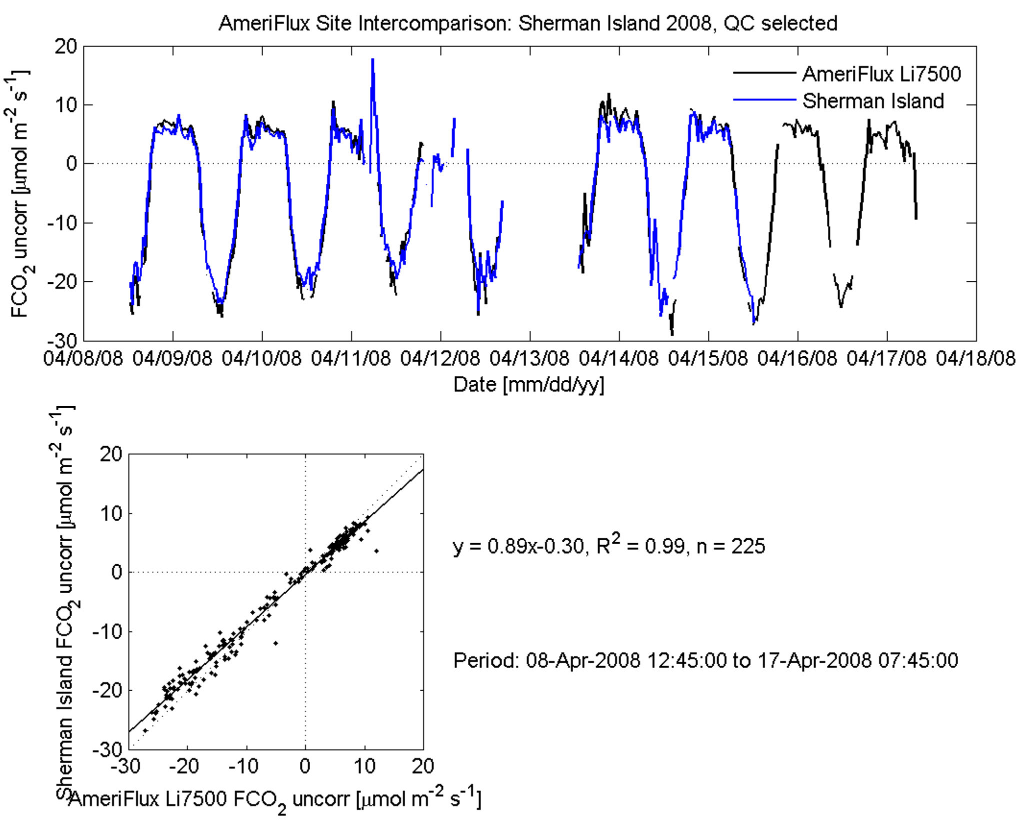

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500
Sherman Island
FCO2 [µmol m-2 s-1]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island FCO2 [µmol m-2 s-1]
AmeriFlux Li7500 FCO2 [µmol m-2 s-1]
y = 0.88x-0.65, R2 = 0.99, n = 217
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 11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AmeriFlux Li7500
Sherman Island
FCO2 uncorr [µmol m-2 s-1]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island FCO2 uncorr [µmol m-2 s-1]
AmeriFlux Li7500 FCO2 uncorr [µmol m-2 s-1]
y = 0.89x-0.30, R2 = 0.99, n = 225
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 12

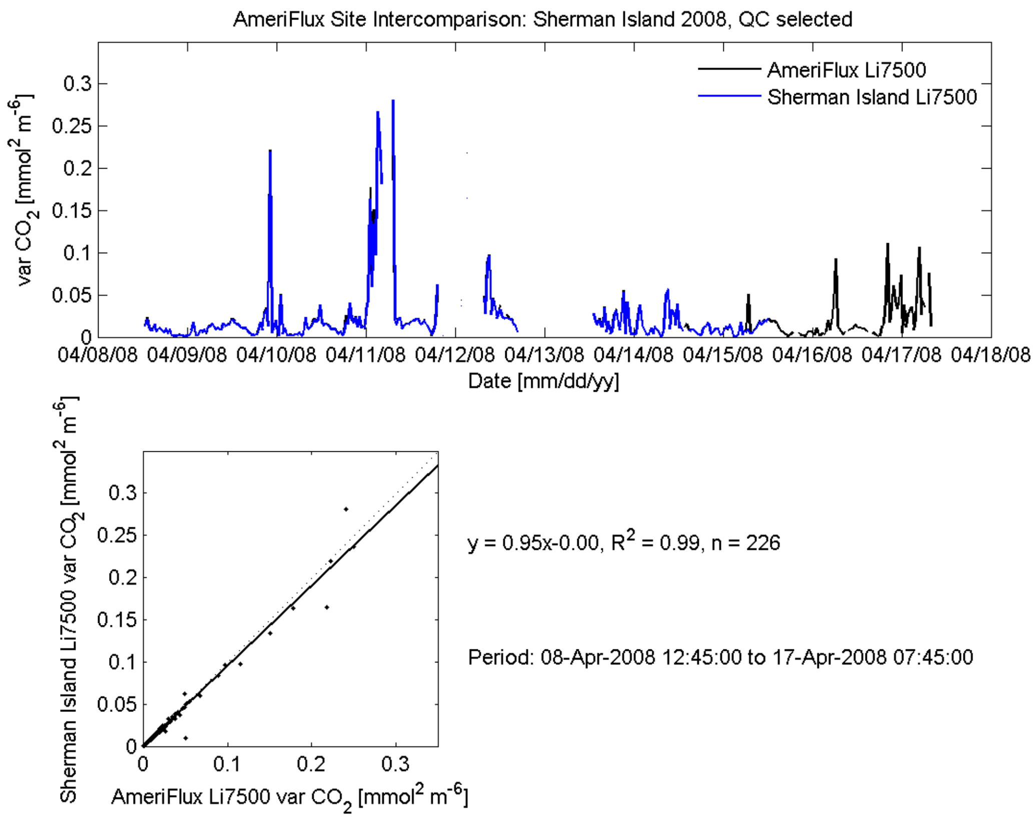

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500
Sherman Island Li7500
var CO2 [mmol2 m-6]
Date [mm/dd/yy]
Sherman Island Li7500 var CO2 [mmol2 m-6]
AmeriFlux Li7500 var CO2 [mmol2 m-6]
y = 0.95x-0.00, R2 = 0.99, n = 226
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 13

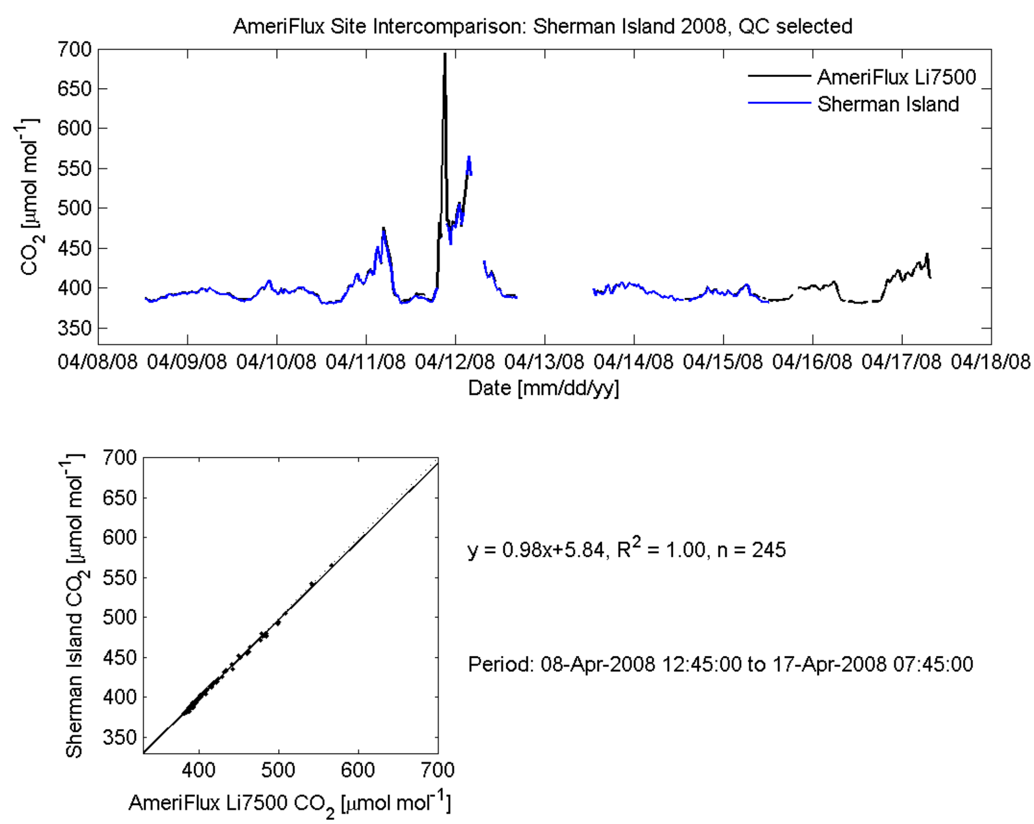

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500
Sherman Island
CO2 [µmol mol-1]
Date [mm/dd/yy]
Sherman Island CO2 [µmol mol-1]
AmeriFlux Li7500 CO2 [µmol mol-1]
y = 0.98x+5.84, R2 = 1.00, n = 245
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 14

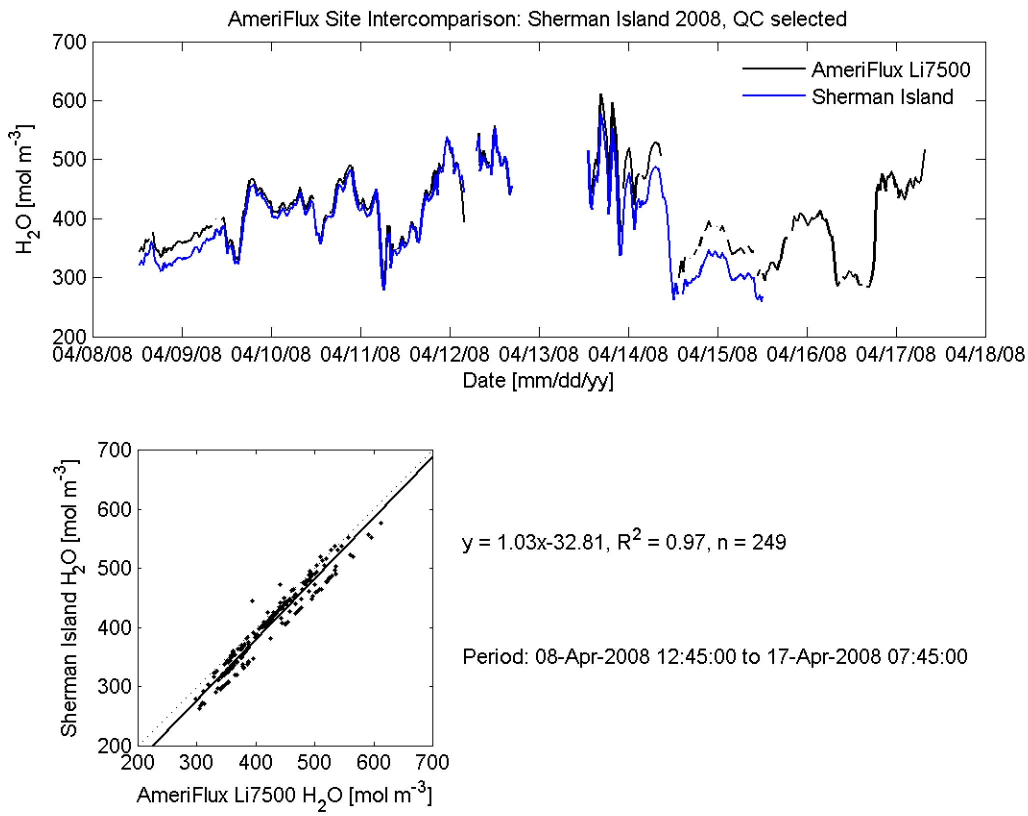

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500
Sherman Island
H2O [mol m-3]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
200 300 400 500 600 700
Sherman Island H2O [mol m-3]
AmeriFlux Li7500 H2O [mol m-3]
y = 1.03x-32.81, R2 = 0.97, n = 249
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 15

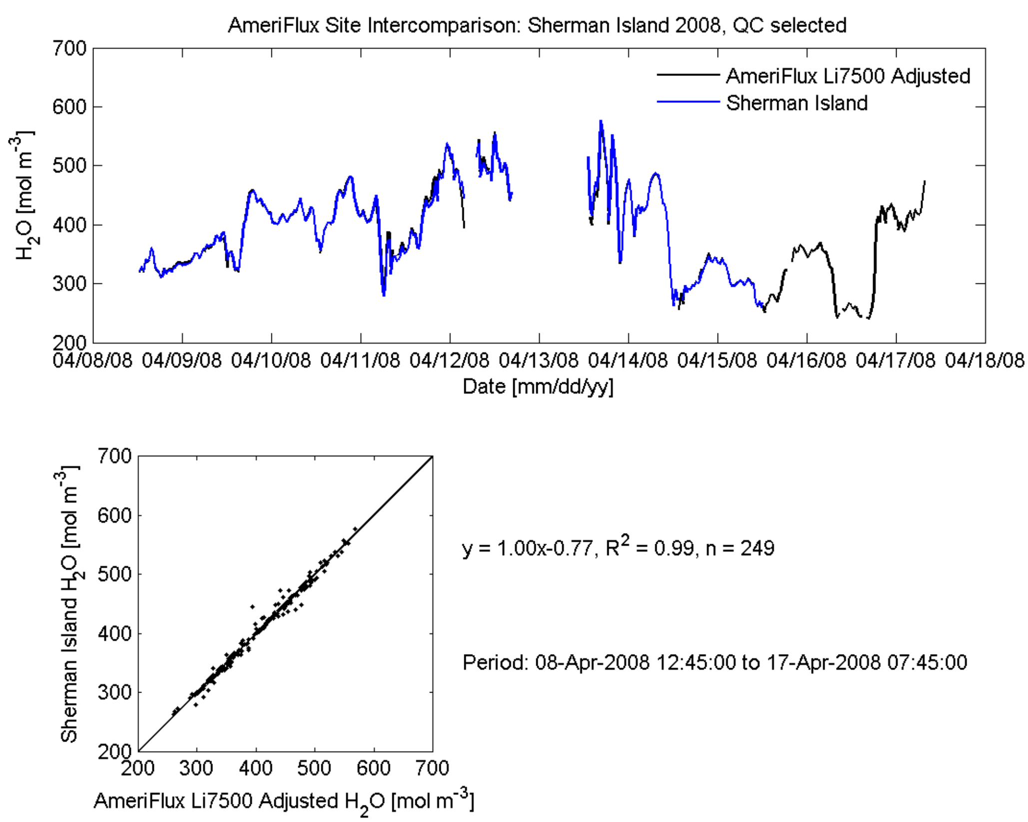
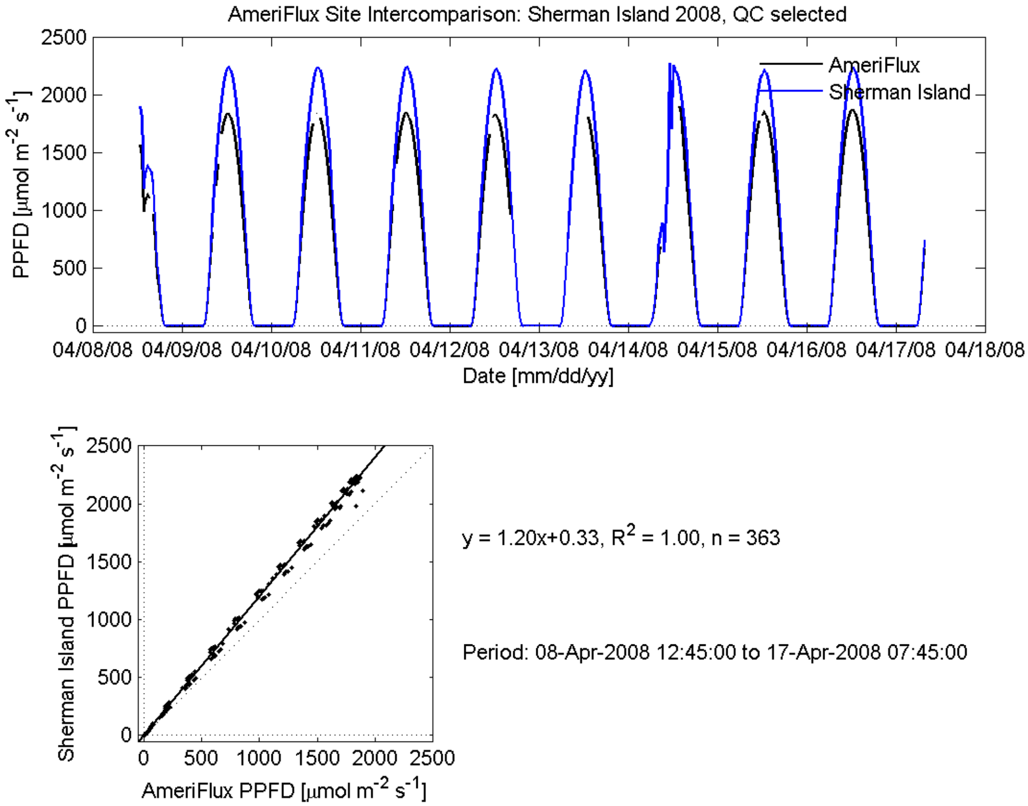
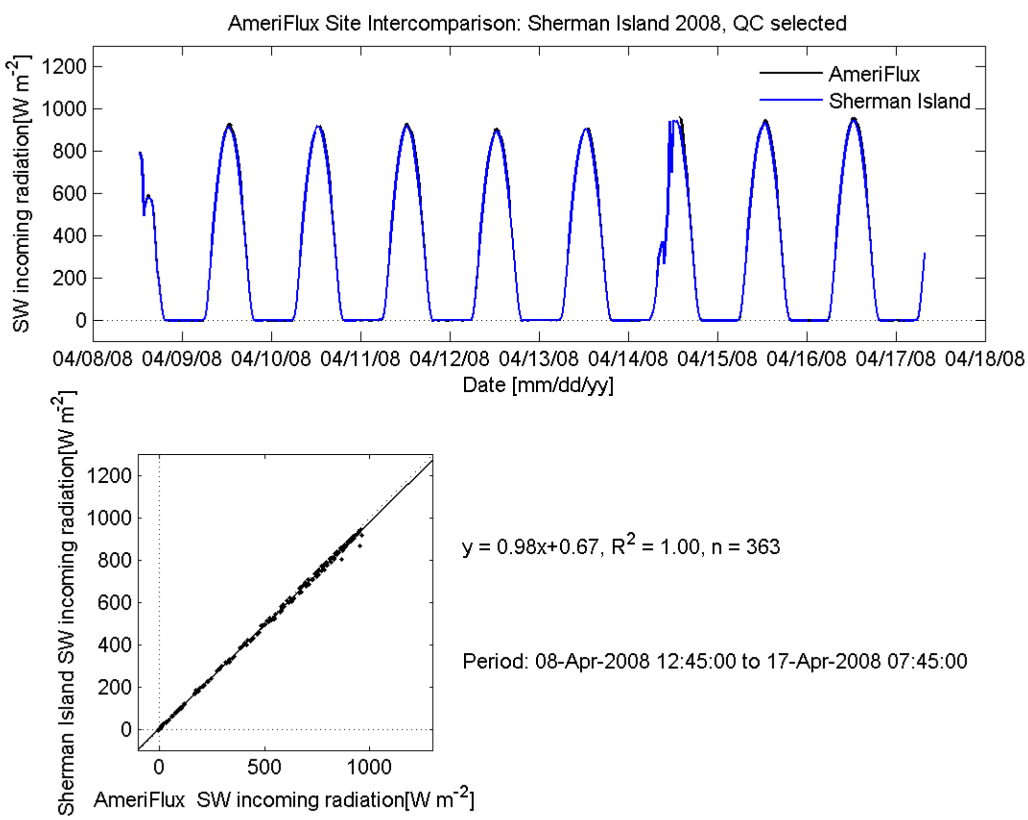

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux Li7500 Adjusted
Sherman Island
H2O [mol m-3]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
200 300 400 500 600 700
Sherman Island H2O [mol m-3]
AmeriFlux Li7500 Adjusted H2O [mol m-3]
y = 1.00x-0.77, R2 = 0.99, n = 249
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 16



AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
PPFD [μmol m-2 s-1]
AmeriFlux
Sherman Island
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island PPFD [μmol m-2 s-1]
AmeriFlux PPFD [μmol m-2 s-1]
y = 1.20x+0.33, R2 = 1.00, n = 363
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 17



AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
SW incoming radiation[W m-2]
AmeriFlux
Sherman Island
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island SW incoming radiation[W m-2]
AmeriFlux SW incoming radiation[W m-2]
y = 0.98x+0.67, R2 = 1.00, n = 363
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 18

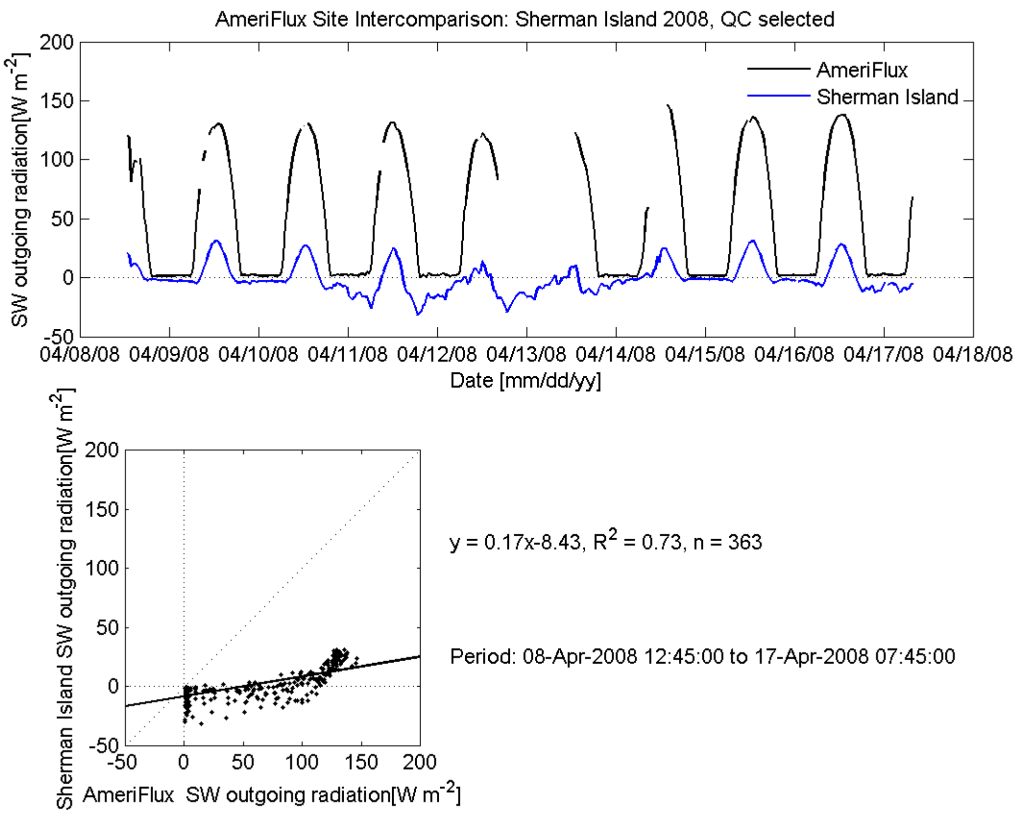

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
SW outgoing radiation[W m-2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island SW outgoing radiation[W m-2]
AmeriFlux SW outgoing radiation[W m-2]
y = 0.17x-8.43, R2 = 0.73, n = 363
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 19

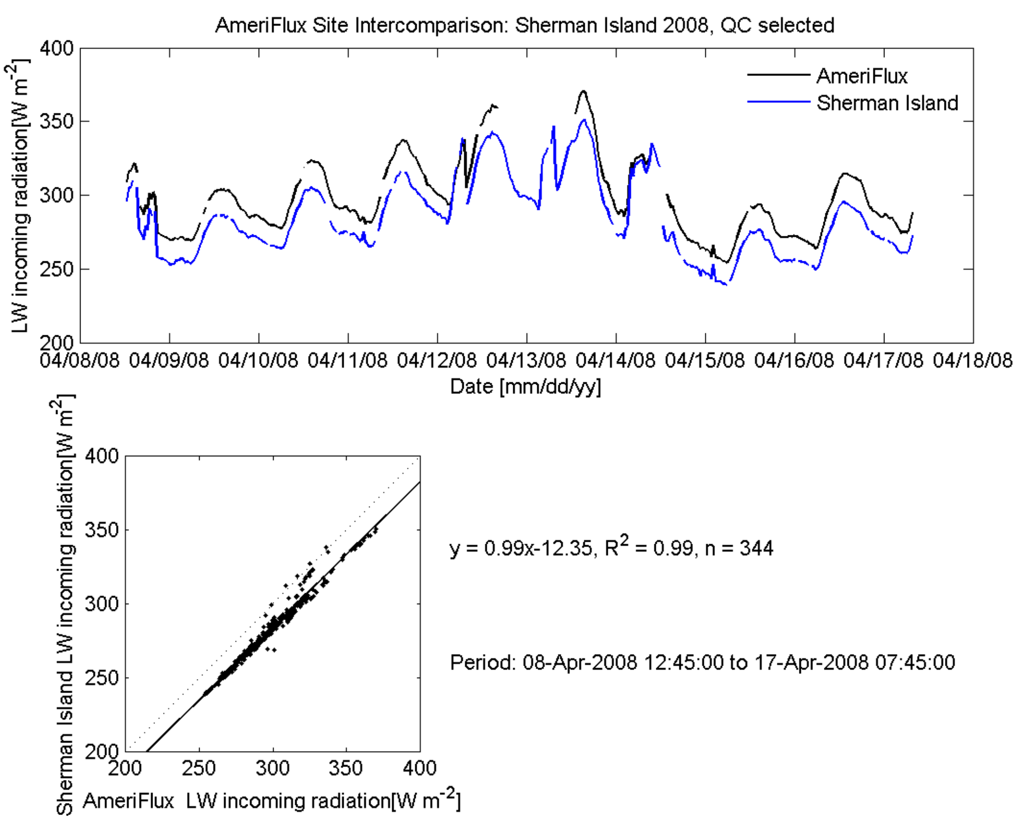

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
LW incoming radiation[W m-2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island LW incoming radiation[W m-2]
AmeriFlux LW incoming radiation[W m-2]
y = 0.99x-12.35, R2 = 0.99, n = 344
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 20

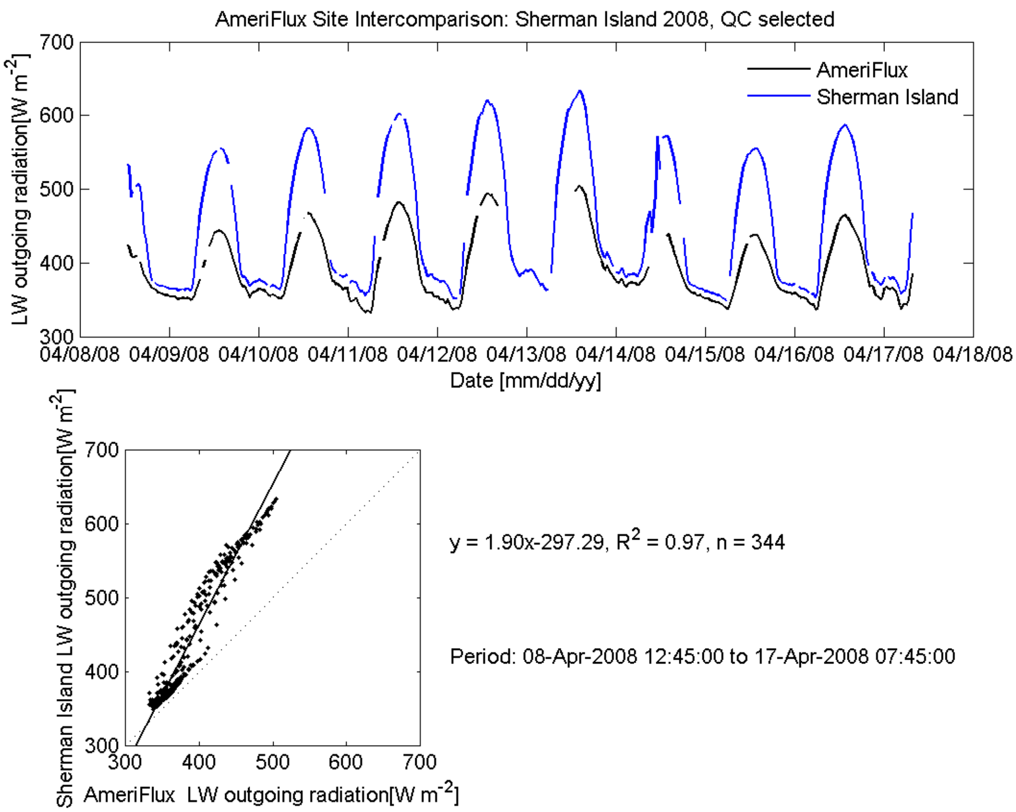

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
LW outgoing radiation[W m-2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island LW outgoing radiation[W m-2]
AmeriFlux LW outgoing radiation[W m-2]
y = 1.90x-297.29, R2 = 0.97, n = 344
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 21

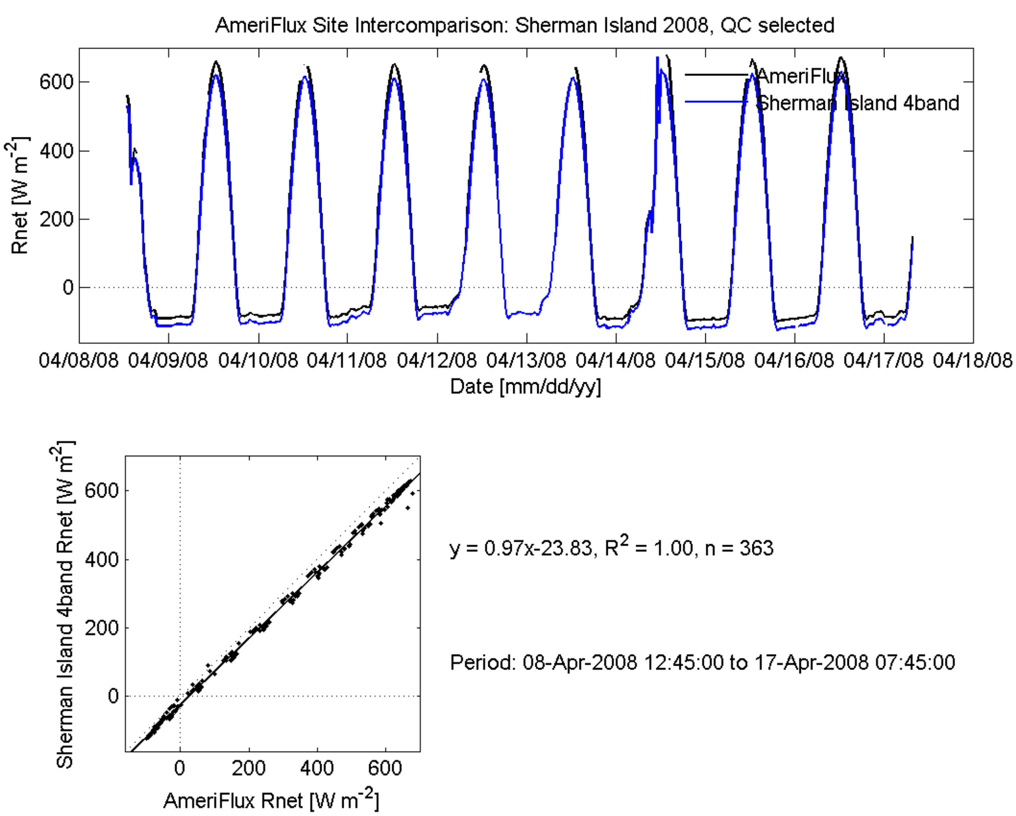
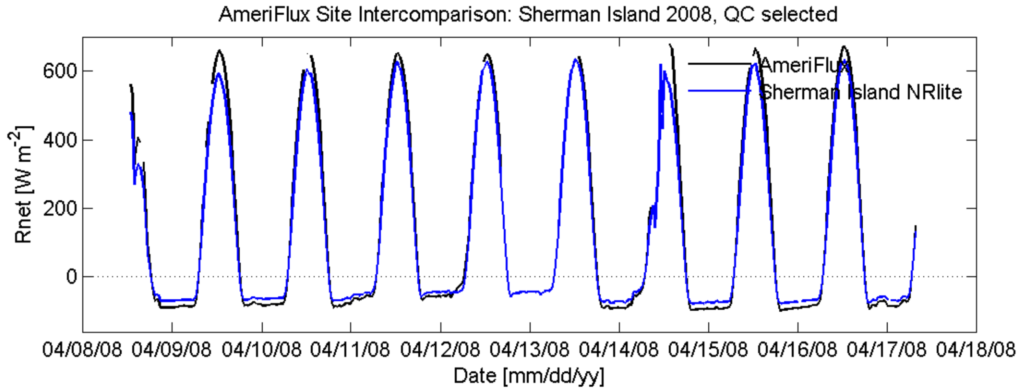

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island 4band
Rnet [W m-2]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island 4band Rnet [W m-2]
AmeriFlux Rnet [W m-2]
y = 0.97x-23.83, R2 = 1.00, n = 363
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 22


AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island NRlite
Rnet [W m-2]
600
400
200
0
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Date [mm/dd/yy]

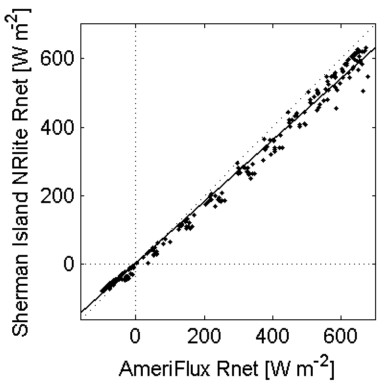
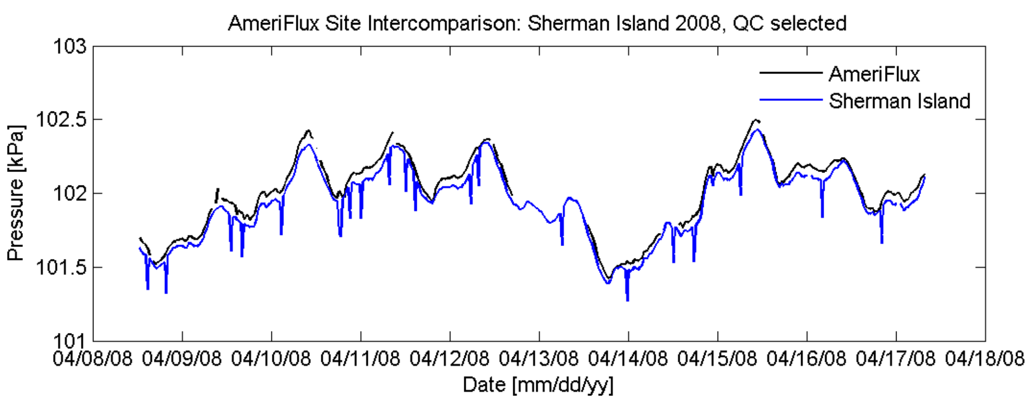

Sherman Island NRlite Rnet [W m-2]
AmeriFlux Rnet [W m-2]
600
400
200
0
0 200 400 600
y = 0.90x+2.51, R2 = 1.00, n = 363
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 23


AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
Pressure [kPa]
103
102.5
102
101.5
101
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Date [mm/dd/yy]

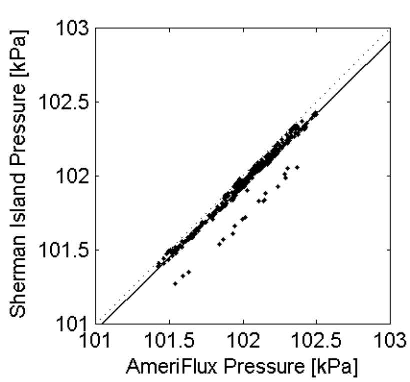

Sherman Island Pressure [kPa]
AmeriFlux Pressure [kPa]
103
102.5
102
101.5
101
101 101.5 102 102.5 103
y = 0.98x+1.94, R2 = 0.97, n = 364
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 24

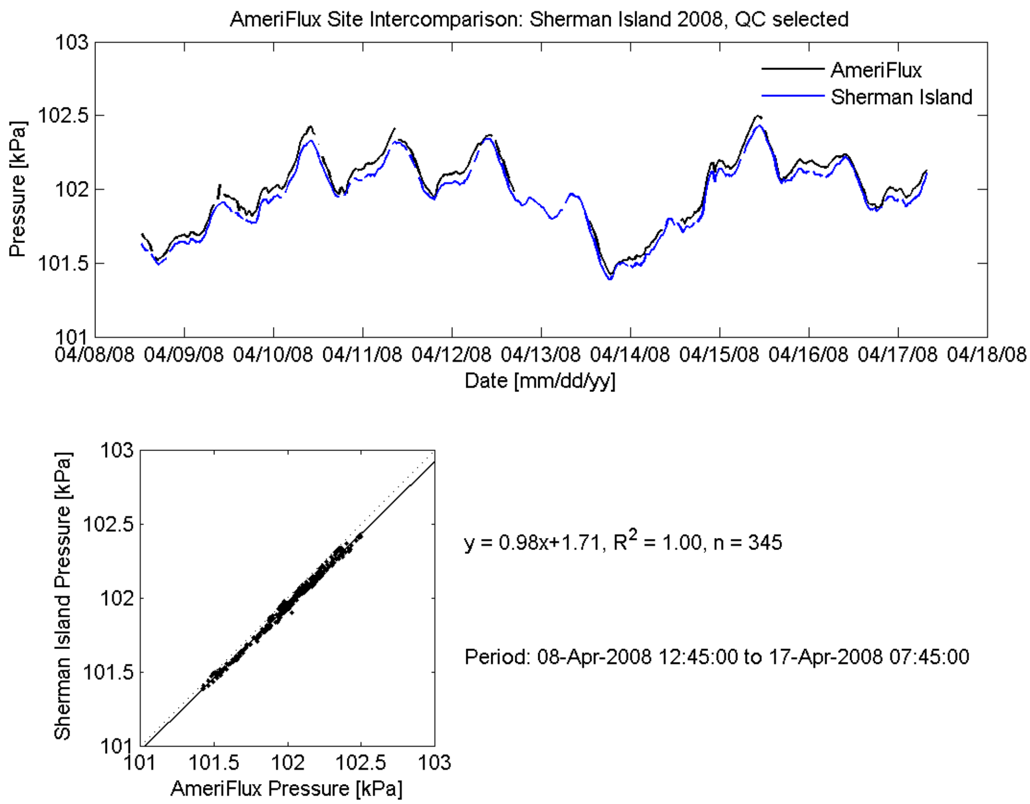

AmeriFlux Site Intercomparison: Sherman Island 2008, QC selected
AmeriFlux
Sherman Island
Pressure [kPa]
Date [mm/dd/yy]
04/08/08 04/09/08 04/10/08 04/11/08 04/12/08 04/13/08 04/14/08 04/15/08 04/16/08 04/17/08 04/18/08
Sherman Island Pressure [kPa]
AmeriFlux Pressure [kPa]
y = 0.98x+1.71, R2 = 1.00, n = 345
Period: 08-Apr-2008 12:45:00 to 17-Apr-2008 07:45:00

Fig. 25