

Flux Observations over a Soy Bean area in Southern Brazil

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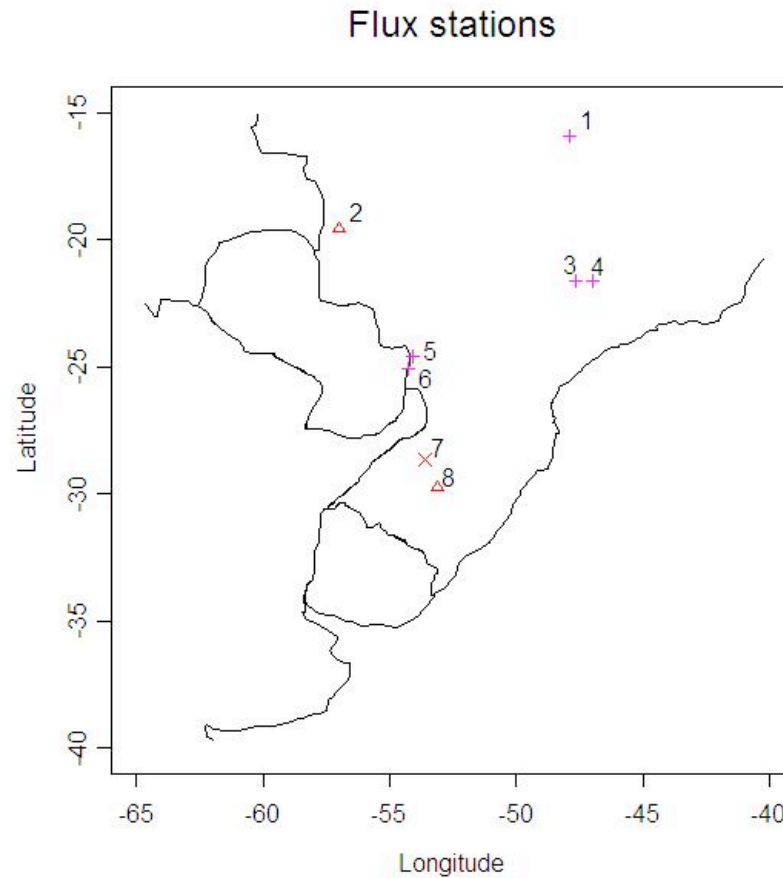
Santa Maria, RS, Brasil

2006 12 8

Motivation

- Flux measurements are being performed as part of a investigation on soy bean planting techniques;
- Study also includes soil carbon flux measurements made by researchers from the Rural Sciences Center from UFSM;
- Flux data will be available as a part of LPB dataset.

Flux stations in Brazil



The soy bean study is being held in Cruz Alta, RS (site 7 in the map)

The site



Flux observations started 8 December 2006, when the soy beans had just been planted.

Measurements



Flux measurements are performed by an eddy covariance system, consisting of a Campbell 3-D Sonic Anemometer and a Licor Infra-red gas analyzer

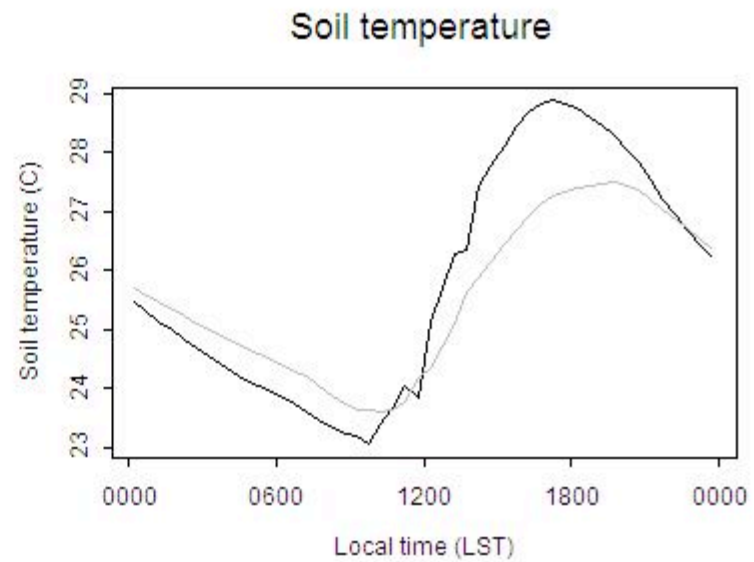
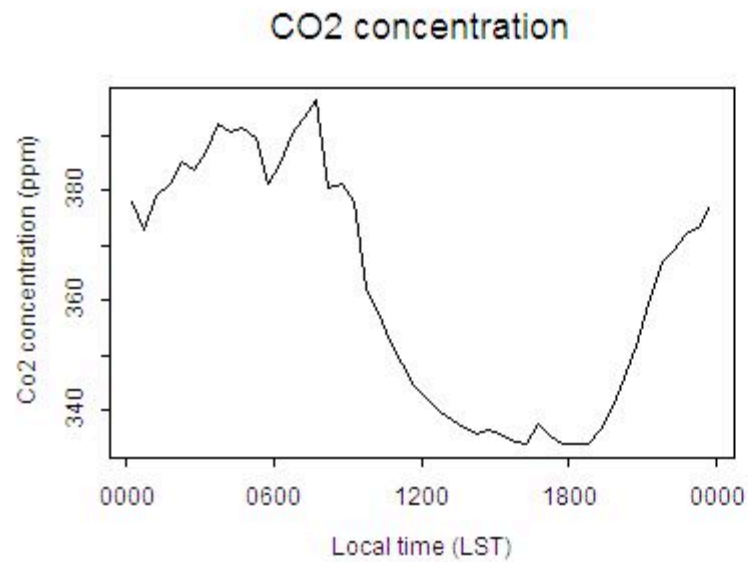
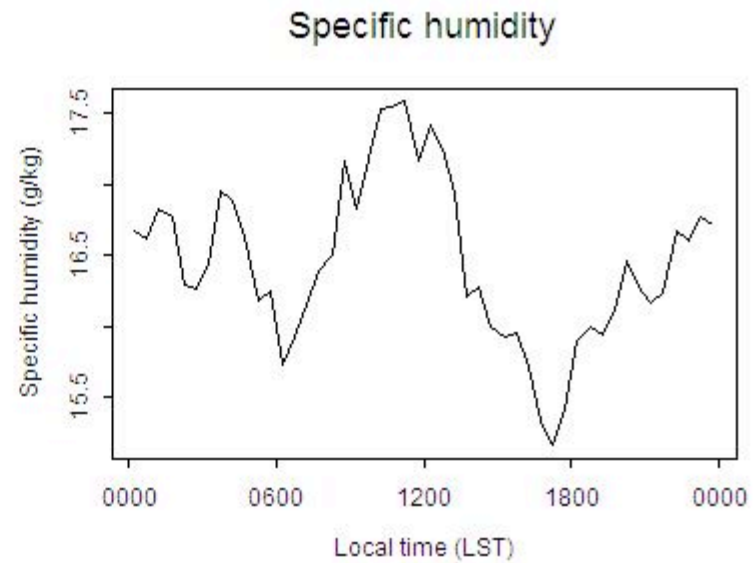
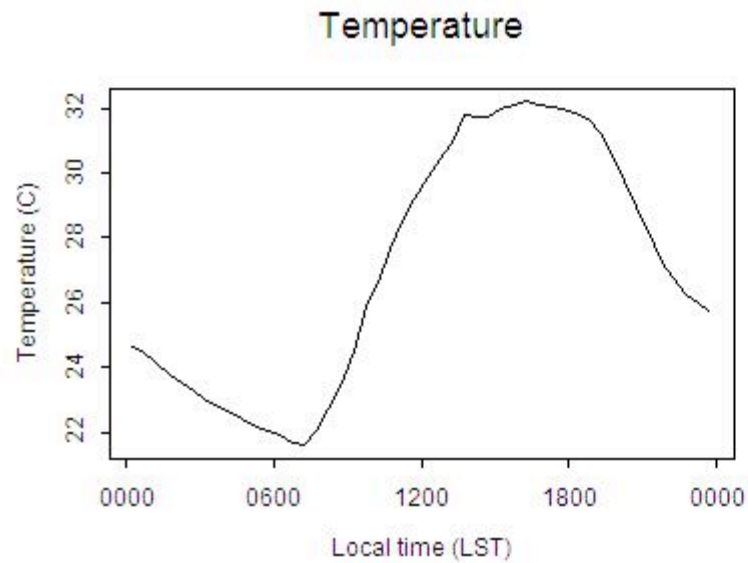
Other measurements include two levels of soil temperature and moisture.

Data Availability



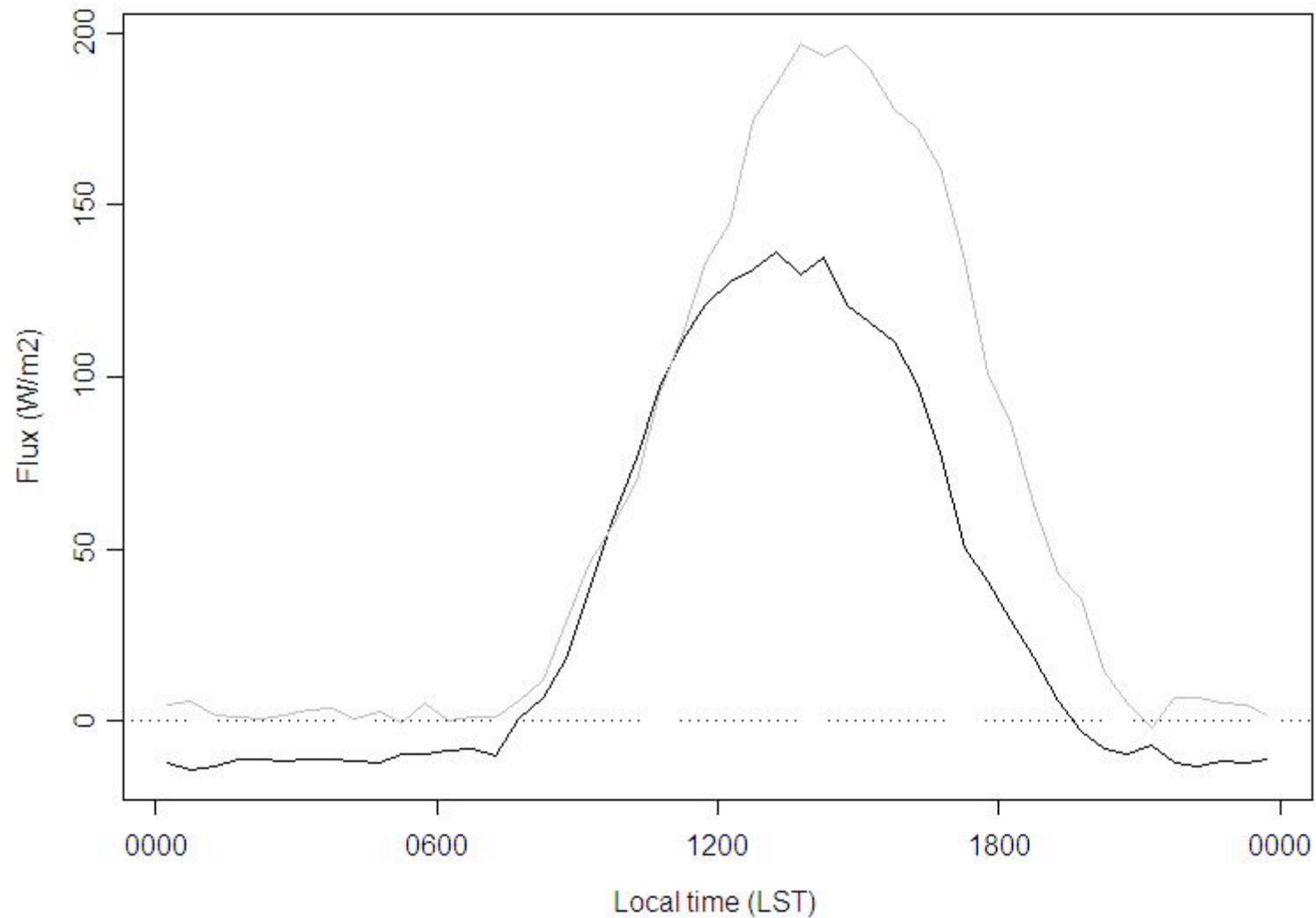
Data are available from 8 December to present, with some gaps caused by system problems. Measurements will continue, with no ending date planned.

Results



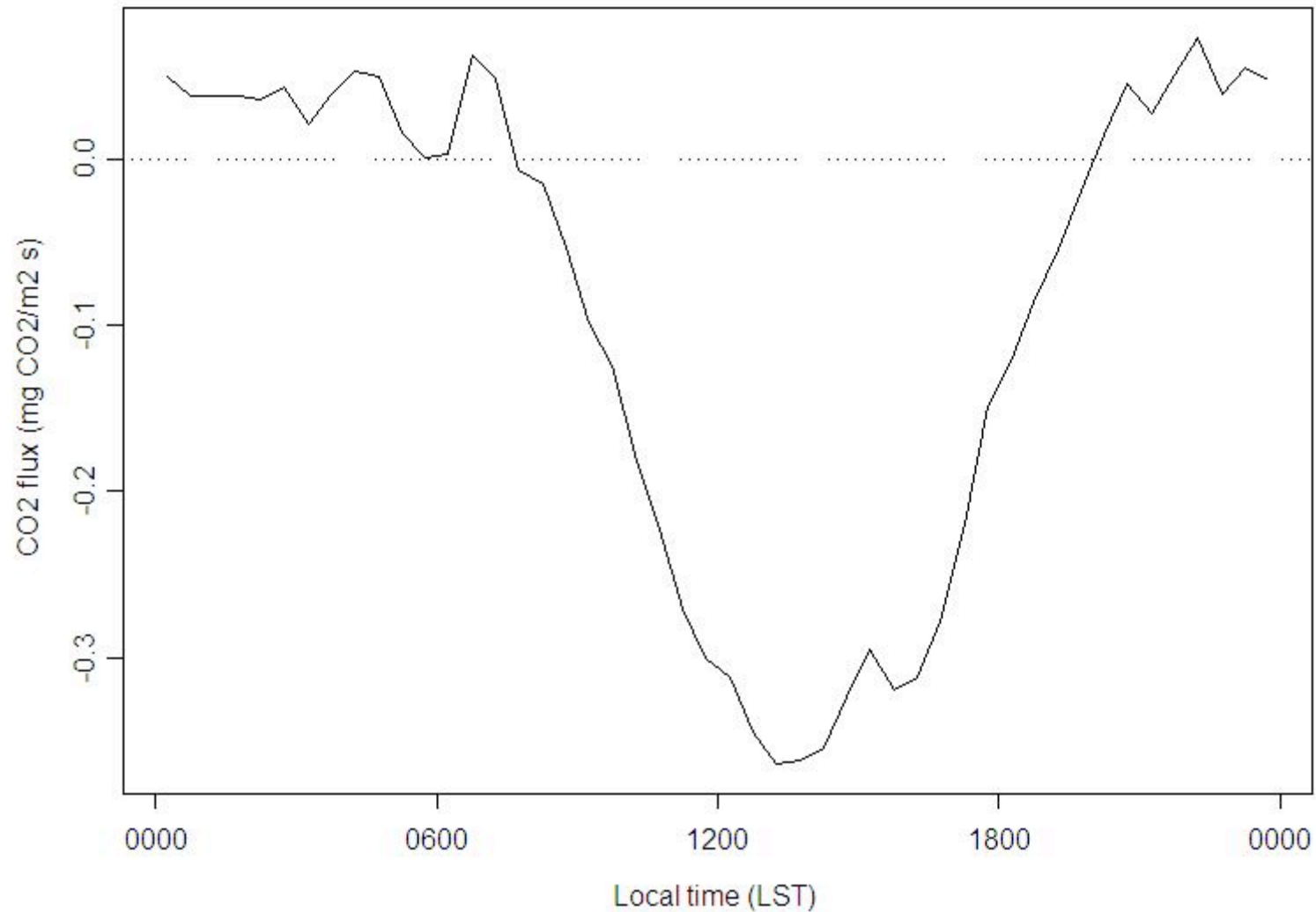
Mean daily evolution

Cruz Alta, RS, Mean heat fluxes - December 2006 to February 2007



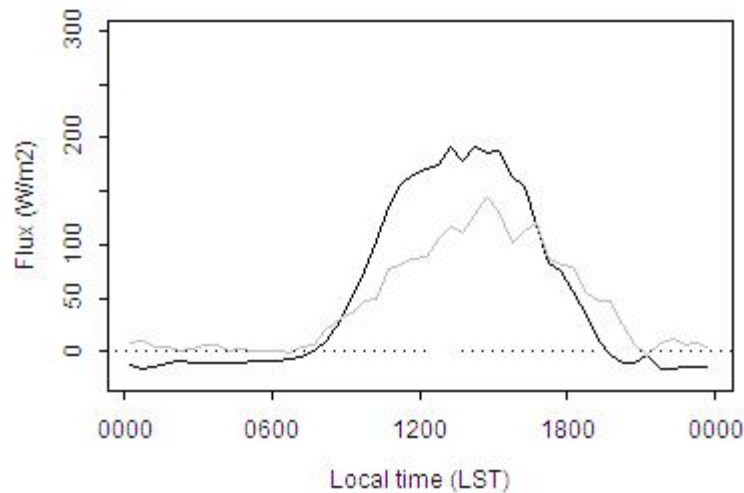
Mean daily evolution

Cruz Alta, RS, Mean CO₂ fluxes - December 2006 to February 2007

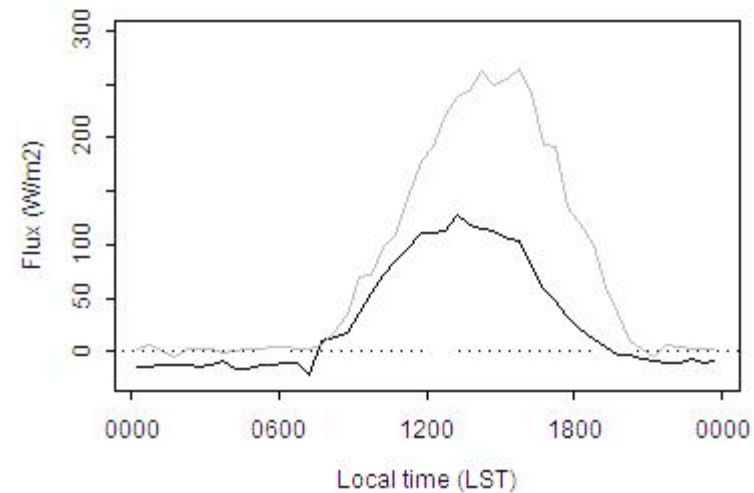


Mean daily evolution in different periods

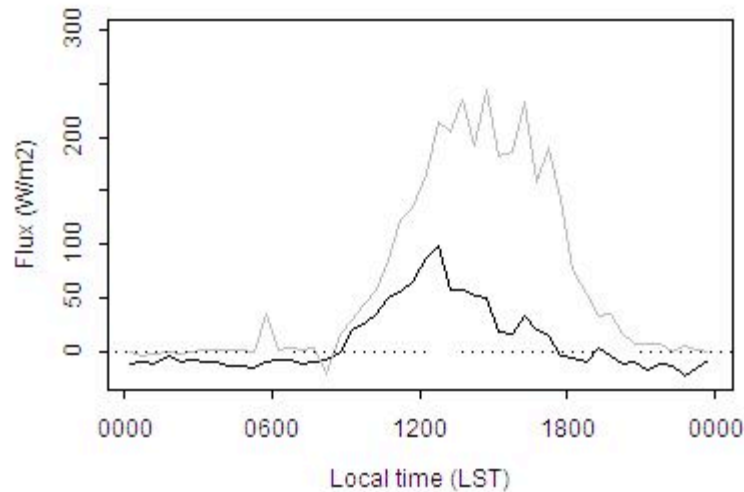
8 to 23 December 2006



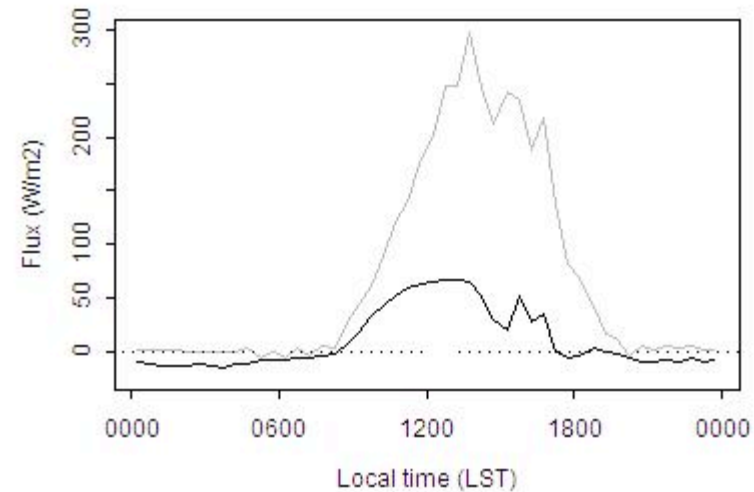
26 Dec 2006 to 9 Jan 2007



27 Jan to 3 Feb 2007

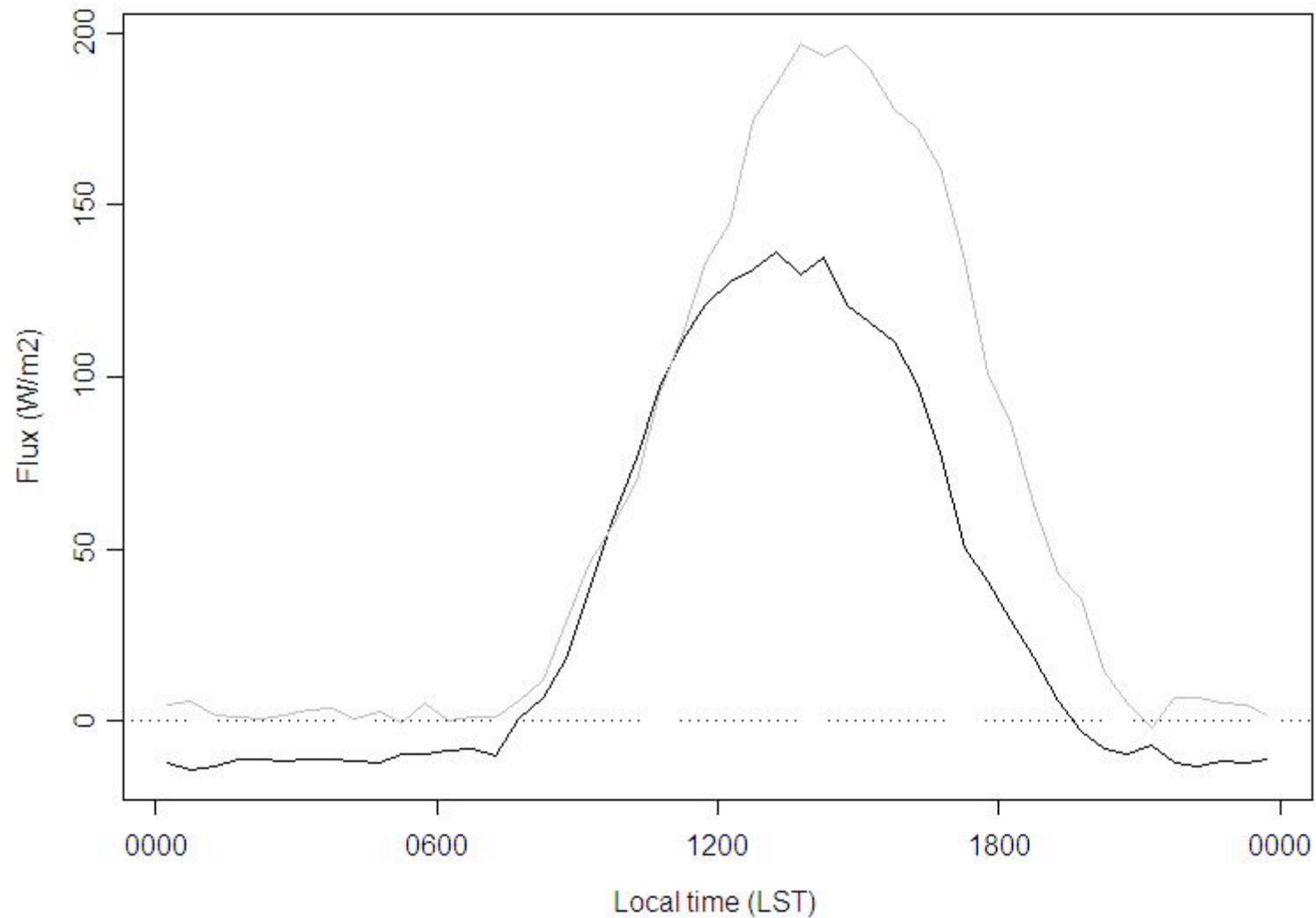


21 to 28 Feb 2007

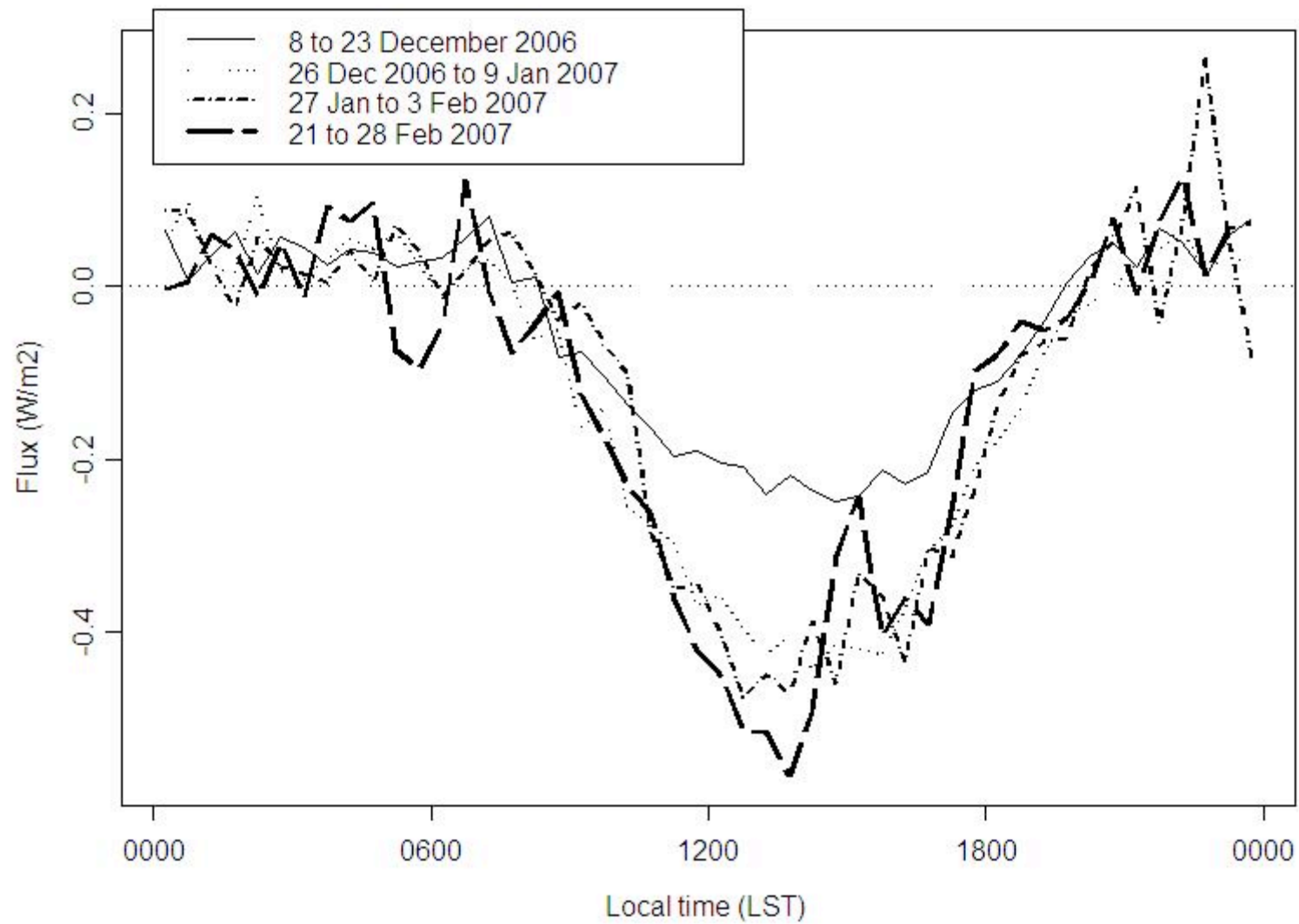


Mean daily evolution by period

Cruz Alta, RS, Mean heat fluxes - December 2006 to February 2007



Mean daily evolution in different periods



Future developments

- Measurements will continue at the site;
- Data will be made available as part of LPB program;
- Another flux site will be deployed as part of CNPq project *Estimativa de fluxos turbulentos superficiais na Bacia do Prata*.