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1. General Information

Site name (three letter code)	IRRI Flux Research Site (IRI)
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Other Researchers (e-mail)	
Observation period	5 Dec 2012 – 29 Oct 2014
Measurement frequency	Continuous
Infrastructure	Aluminum tripod mast
Research fund #1	International Rice Research Institute
Research fund #2	
Research fund #3	
URL	
Other information	

2. Site description

Site name (three letter code)	IRRI Flux Research Site (IRI)
Country	Philippines
Location	IRRI, Los Baños, Laguna
Latitude and Longitude (first decimal of second precision), Elevation (geographic coordinates, surveying method)	Latitude: 14.1 N Longitude: 121.3 E Elevation: 27 m a.s.l.
Slope	1-2 deg
Terrain Type	Flat
Area	4 ha
Fetch	100-140 m
Climate (Köppen Climate Classification)	Tropical (hot and humid)
Mean annual air temperature	27.5°C (1979-2012)
Mean annual precipitation	2112 mm (1979-2012)
Vegetation Type	Paddy rice
Dominant Species (Overstory)	
Dominant Species (Understory)	
Canopy height	1 m
Age	110-120 days
LAI	Average 7.2 m ² m ⁻² (max)
Soil type	Lithic Haplustept

3. Measurement Item

3-1. Meteorology

Observation items	Levels / Depth	Instrument
Global solar radiation (incoming)	2.79 m	NR01, Huskeflux Thermal Sensors, Inc., USA LI-200S (Pyranometer, LICOR, USA)
Global solar radiation (outgoing)	2.79 m	NR01, Huskeflux Thermal Sensors, Inc., USA
Long-wave radiation (incoming)	2.79 m	NR01, Huskeflux Thermal Sensors, Inc., USA
Long-wave radiation (outgoing)	2.79 m	NR01, Huskeflux Thermal Sensors, Inc., USA
Net radiation	2.79 m	NR01, Huskeflux Thermal Sensors, Inc., USA
PPFD (incoming)	2.79 m	Quantum sensor (LI-190S, LI-COR, USA)
PPFD (outgoing)		
Direct/diffuse radiation		
Direct/diffuse PPFD		
Air temperature	2.70 m	Vantage Pro2 Plus weather system (Davis, USA)
Humidity	2.70 m	Vantage Pro2 Plus weather system (Davis, USA)
Floodwater temperature	0.025 m	Type T thermocouple
Soil temperature	0.025, 0.05 m	Type T thermocouple
Soil heat flux	0.05 m	HFP01, Huskeflux Thermal Sensors, Inc., USA
Soil water content	0-0.25 m	CS616, Campbell Scientific, Inc., USA
Wind speed	3.30 m	Vantage Pro2 Plus weather system (Davis, USA)
Wind direction	3.30 m	Vantage Pro2 Plus weather system (Davis, USA)
Barometric pressure	3.30 m	Vantage Pro2 Plus weather system (Davis, USA)
Precipitation	3.30 m	Vantage Pro2 Plus weather system (Davis, USA)

3-2. Eddy covariance method (CO₂)

System	
Wind speed	CSAT3 Campbell Scientific, Inc., USA
Air temperature	Platinum resistance thermometer (HMP45C, Vaisala)
Water vapor	Capacitive hygrometer (HMP45C, Vaisala)
CO ₂	Open-path CO ₂ /H ₂ O analyzer (LI7500A, LI-COR, USA)
Measurement height	2.12 m
Sampling frequency	10 Hz
Averaging time	30 min
Data logger	CR3000, Campbell Scientific, Inc., USA
Data storage	CF cards
Original data (Raw data or statistics)	Raw data

3-3. Fluxes of non-CO₂ gases

Gas	CH ₄
Method	Eddy covariance
Measurement height	2.21 m
Data logger	CR3000, Campbell Scientific, Inc., USA
Data storage	CF cards

3-4. Soil respiration

Measurement method	
Reference(s) for method (if have)	
Measuring system	
IRGA	
Flow control	
Chamber type	
Chamber size	
Number of chambers	
Measuring intervals	
Is the ground covered by snow in winter? (if yes, how about the measurement in winter?)	
Original data (Raw data or statistics)	
Temperature and air pressure correction (if done, which temperature was used?)	

3-5. Other

Photosynthesis	
Ecological Investigation	LAI, plant height

4. Note (e. g. calibration information, Publications)

<p>Calibration information Open-path CO₂/H₂O analyzer was calibrated every year with standard CO₂ gases and a dew point generator (LI610, LI-COR, USA); open-path CH₄ analyzer was calibrated every year with standard CH₄ gases.</p> <p>Publications Alberto, M.C.R., Wassmann, R., Buresh, R.J., Quilty, J.R., Correa, Jr., T.Q., Sandro, J.M., Centeno, C.A.R., 2014. Measuring methane flux from irrigated rice fields by eddy covariance method using open-path gas analyzer. Field Crops Res. 160, 12-21.</p> <p>Alberto, M.C.R., Wassmann, R., Gummert, M., Buresh, R.J., Quilty, J.R., Correa, Jr., T.Q., Centeno, C.A.R., Oca, G.M., 2015. Straw incorporated after mechanized harvesting of irrigated rice affects net emissions of CH₄ and CO₂ based on eddy covariance measurements. Field Crops Res. 184, 162-175</p>
