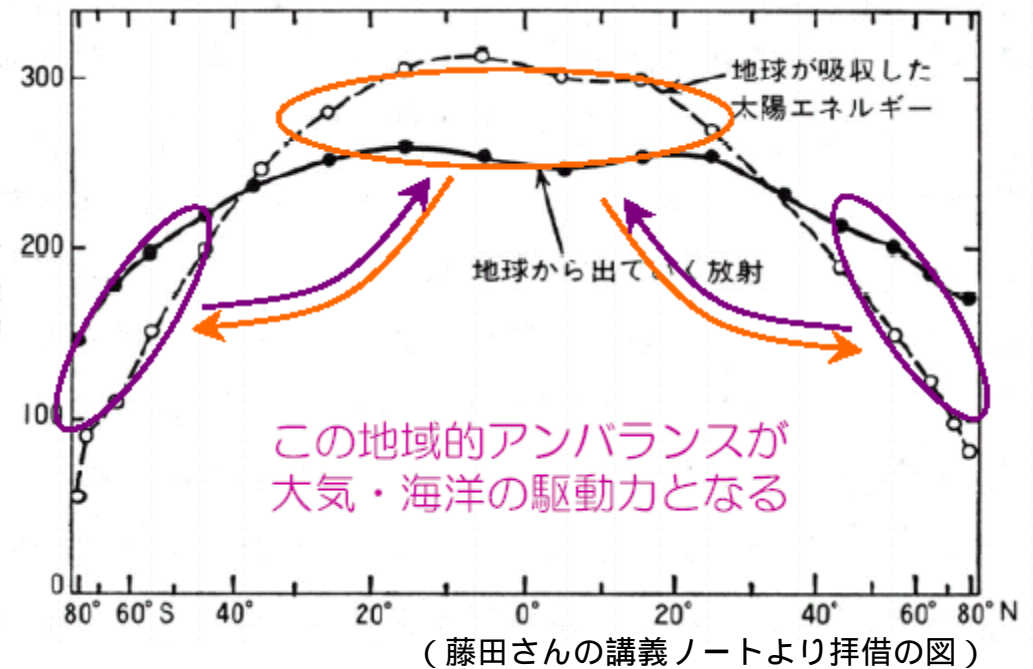
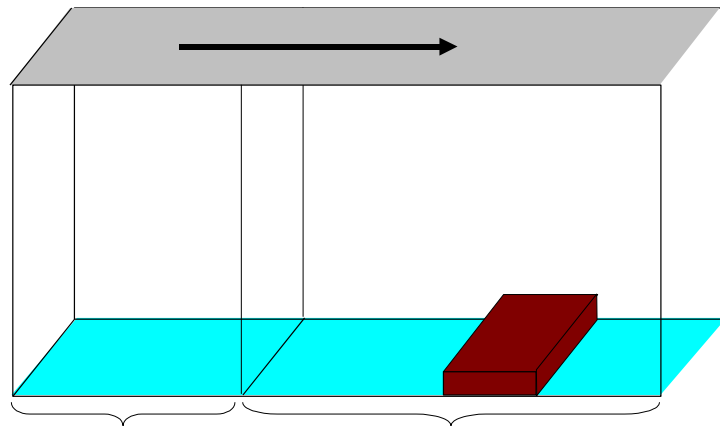


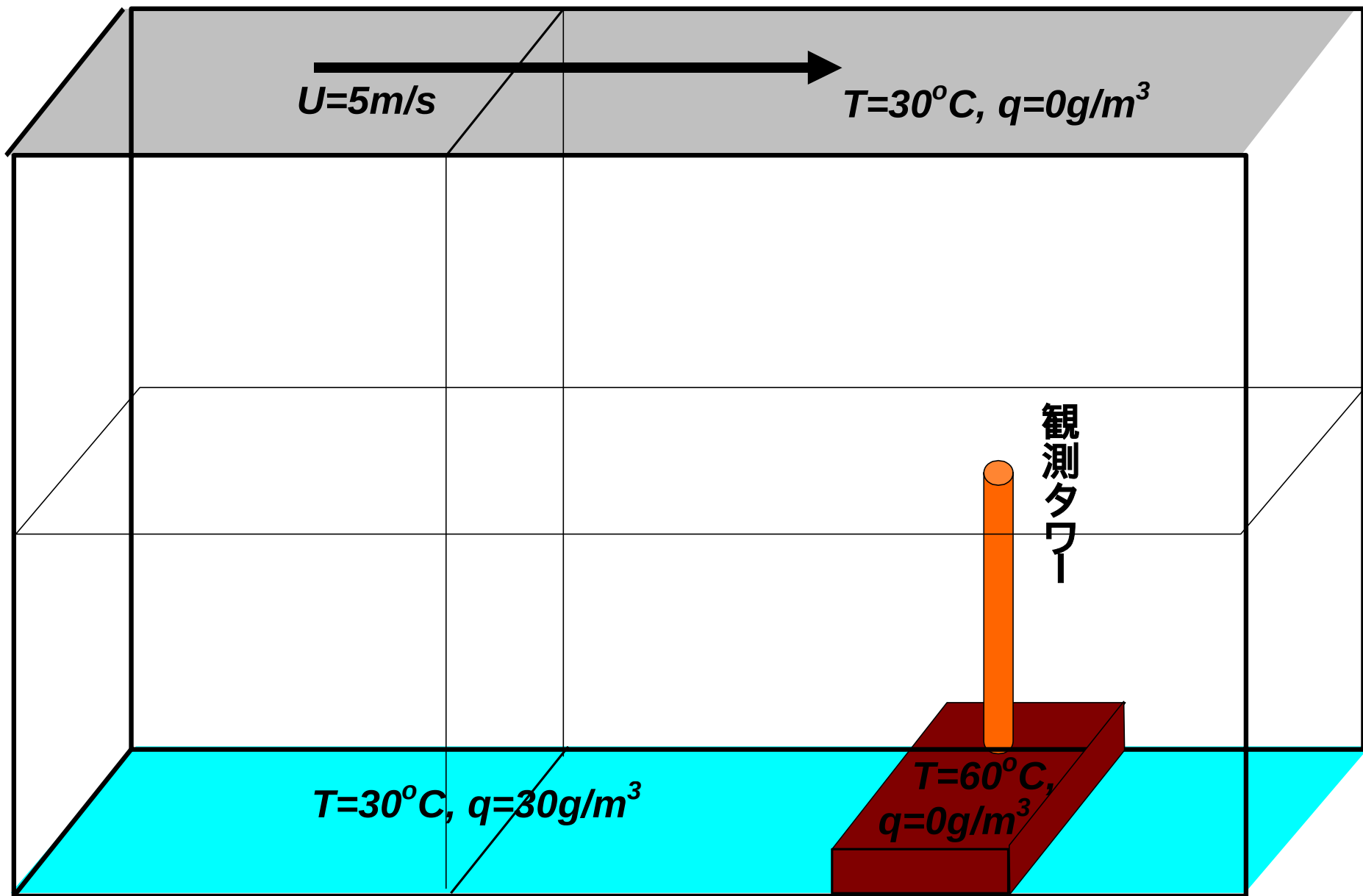
Flux observation in Miyako Island / LAPS-CREST Preliminary Report No.0.2 by Hiroki TANAKA



Objective

1. Boundary Layer Study (i.e. LAPS, Lower Atmosphere and Precipitation Study)
Provide the magnitude of the vertical fluxes above the sea surface.
2. Global Scale Study
Provide the magnitude of the lateral energy fluxes within the sea.
3. Local Turbulent Flow Dynamics
Know the truth of turbulent flow over a certain topography.
Compare to simulation results.





$U=5\text{m/s}$

$T=30^{\circ}\text{C}, q=0\text{g/m}^3$

$T=30^{\circ}\text{C}, q=30\text{g/m}^3$

$T=60^{\circ}\text{C},$
 $q=0\text{g/m}^3$

観測
タワー

緩衝
区間

解析
区間

助走区間

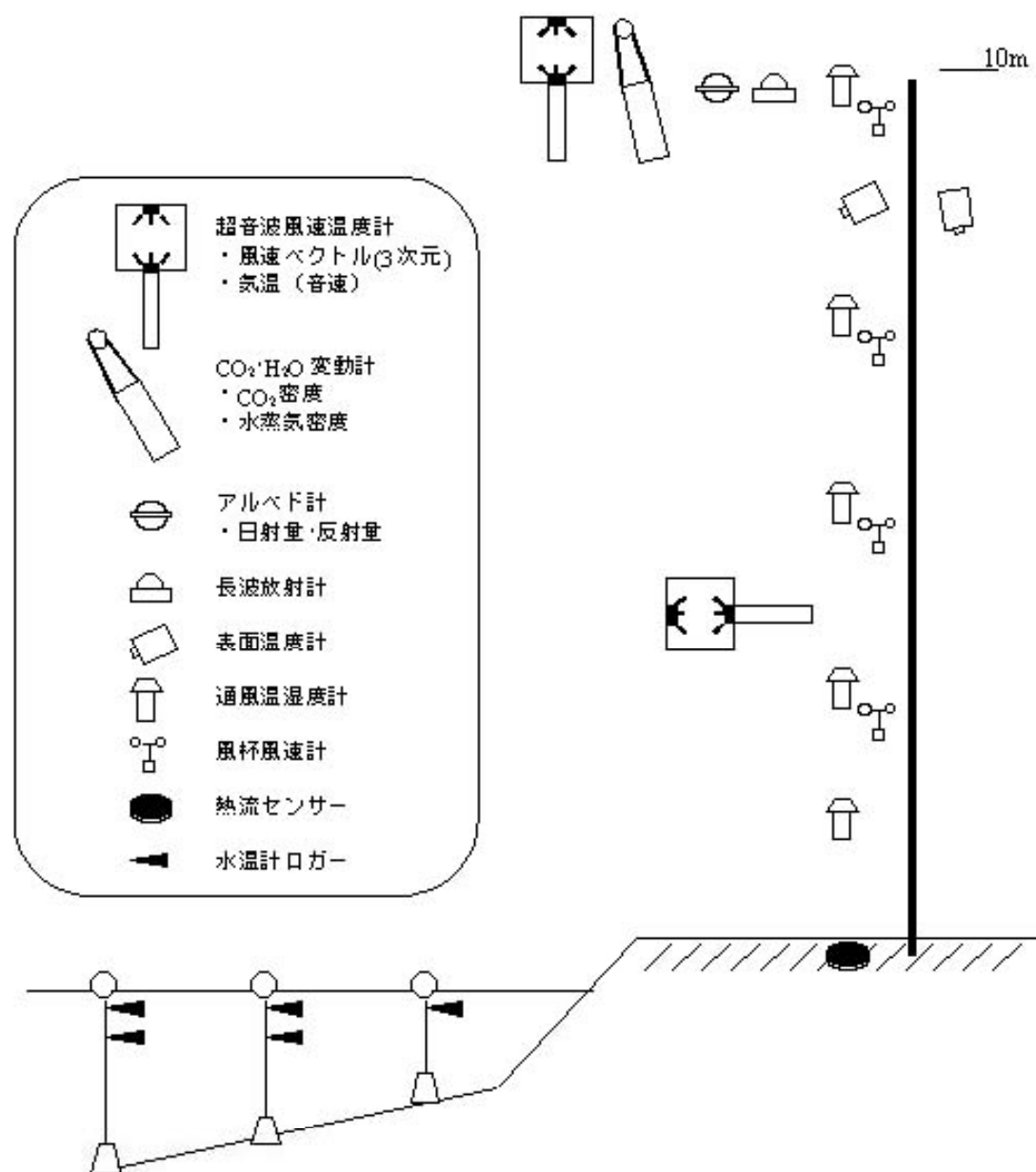
解析区間







宮古島マスト観測模式図 (2002/08/18~08/27)



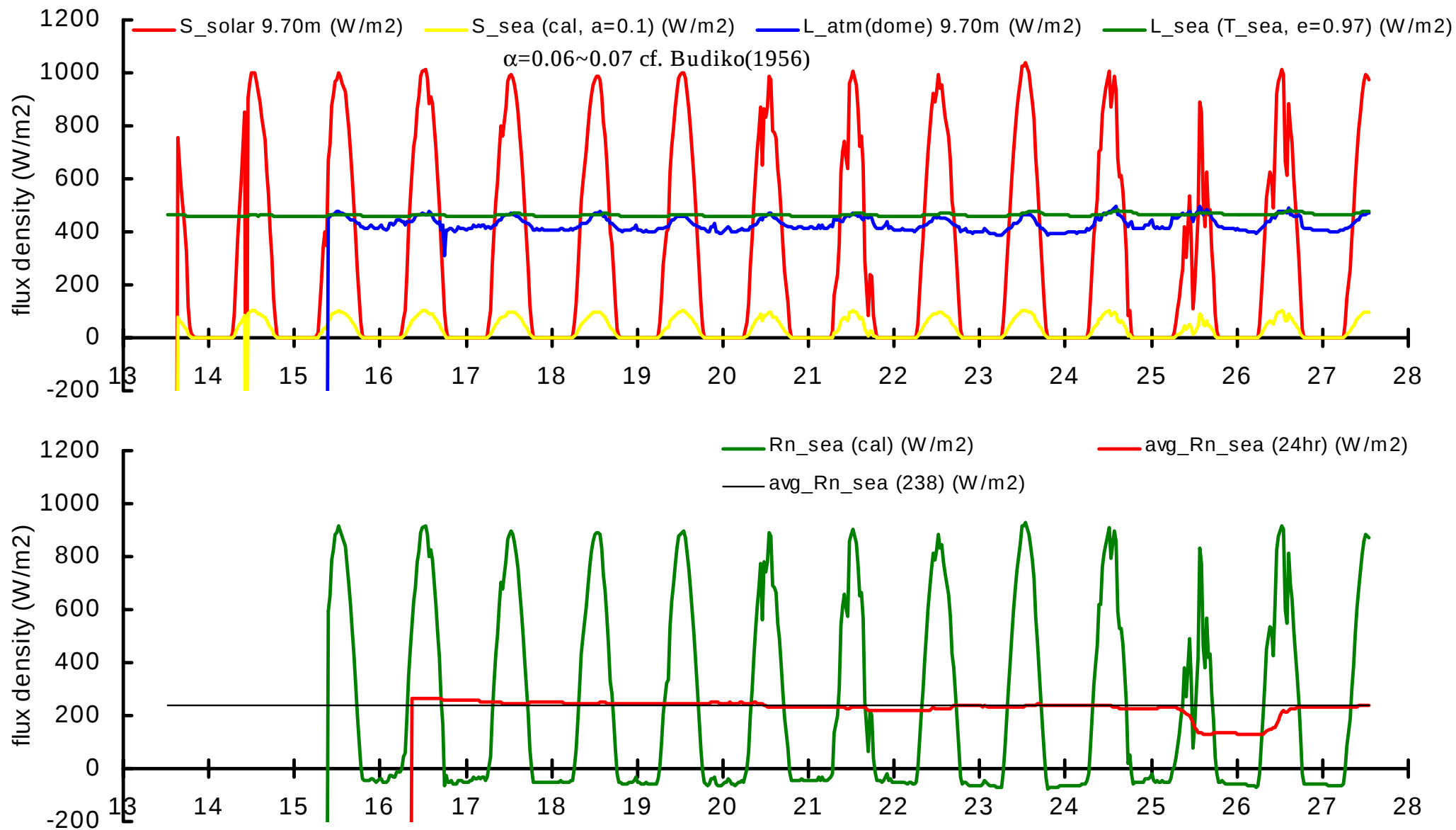


Fig. Radiative Energy Flux (AUG2002, Miyako I.)

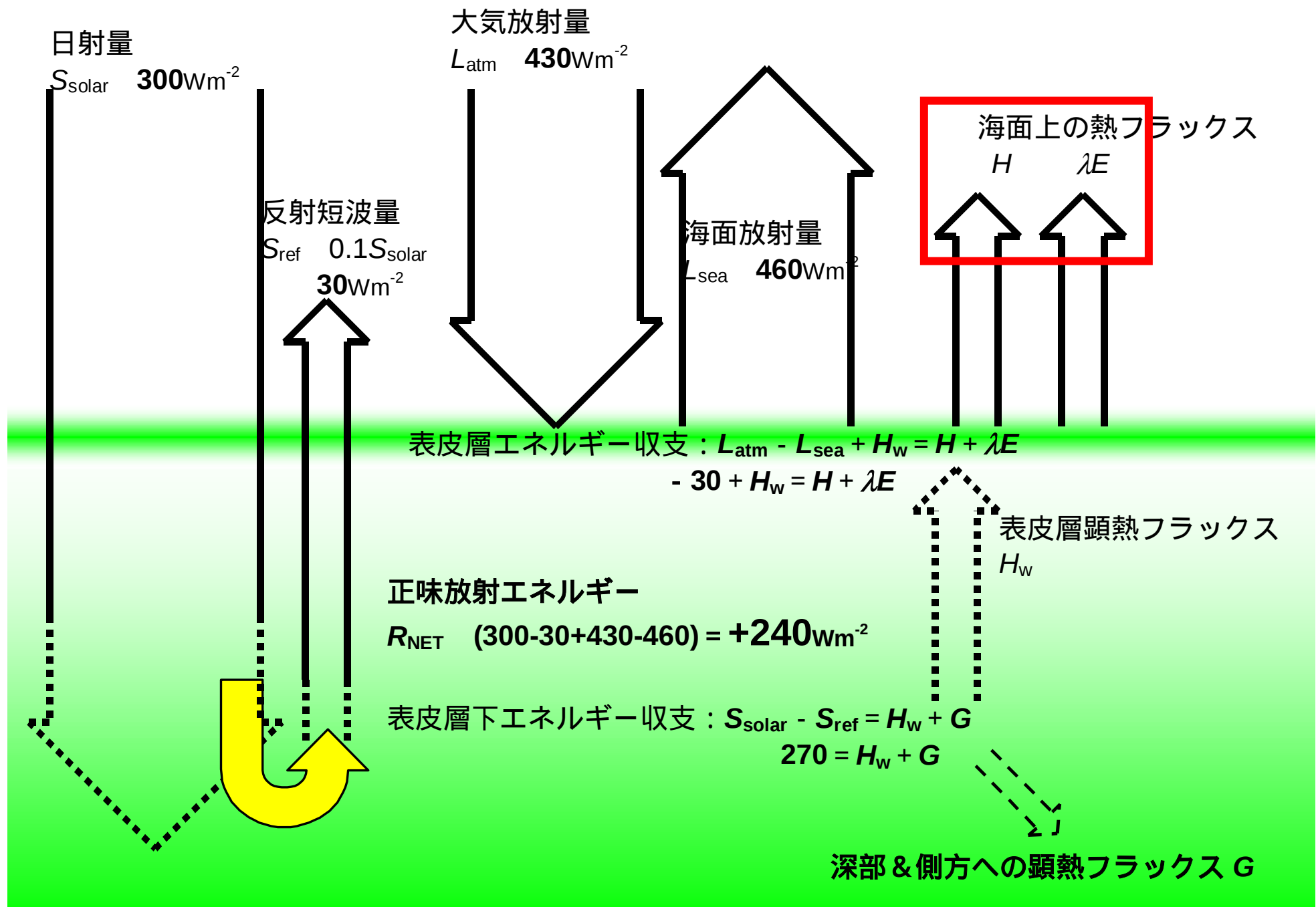


Fig. Daily Energy Budget in AUG2002, Miyako I.

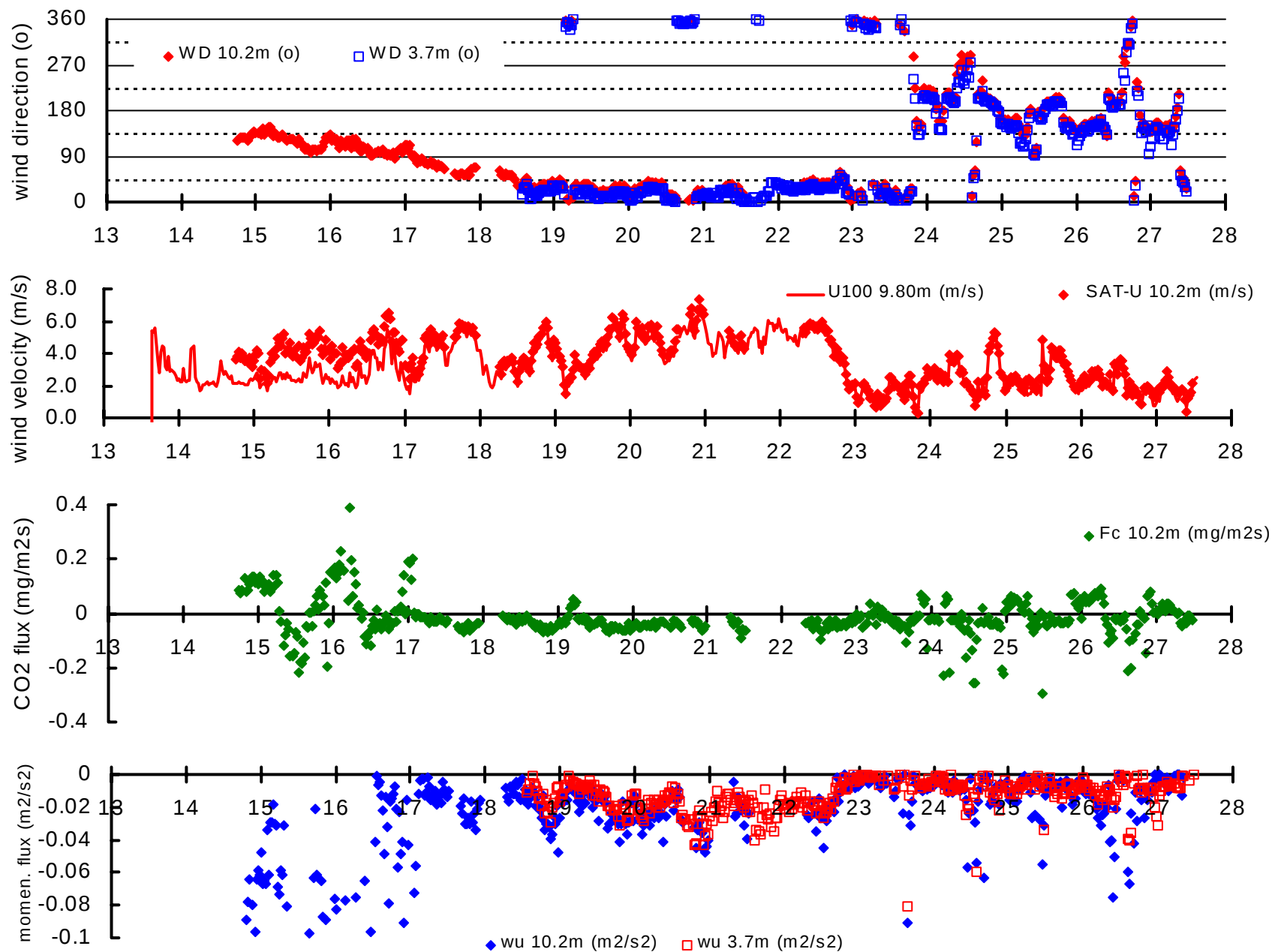
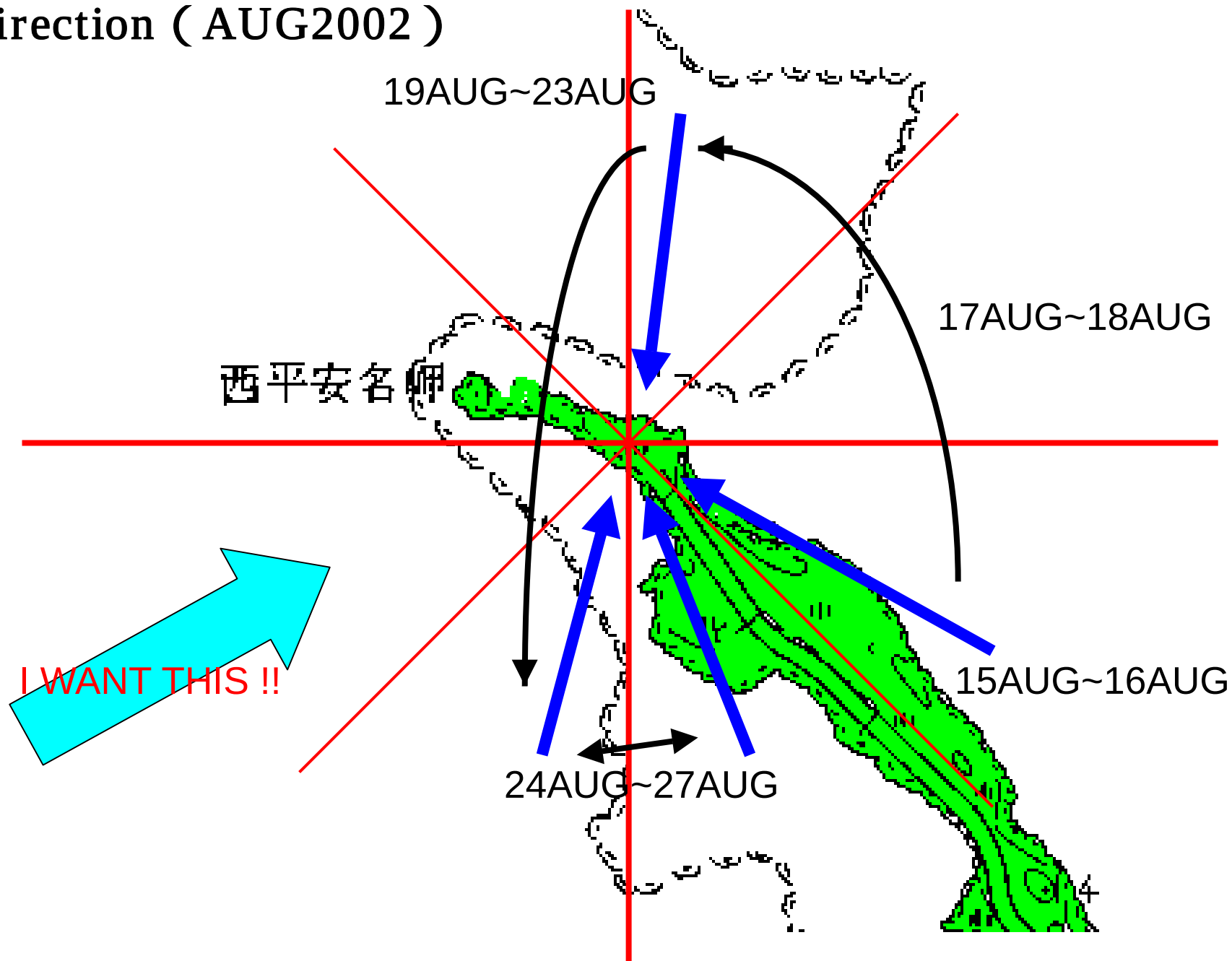


Fig. Wind Direction and Fluxes (AUG2002, Miyako I.)

Wind Direction (AUG2002)



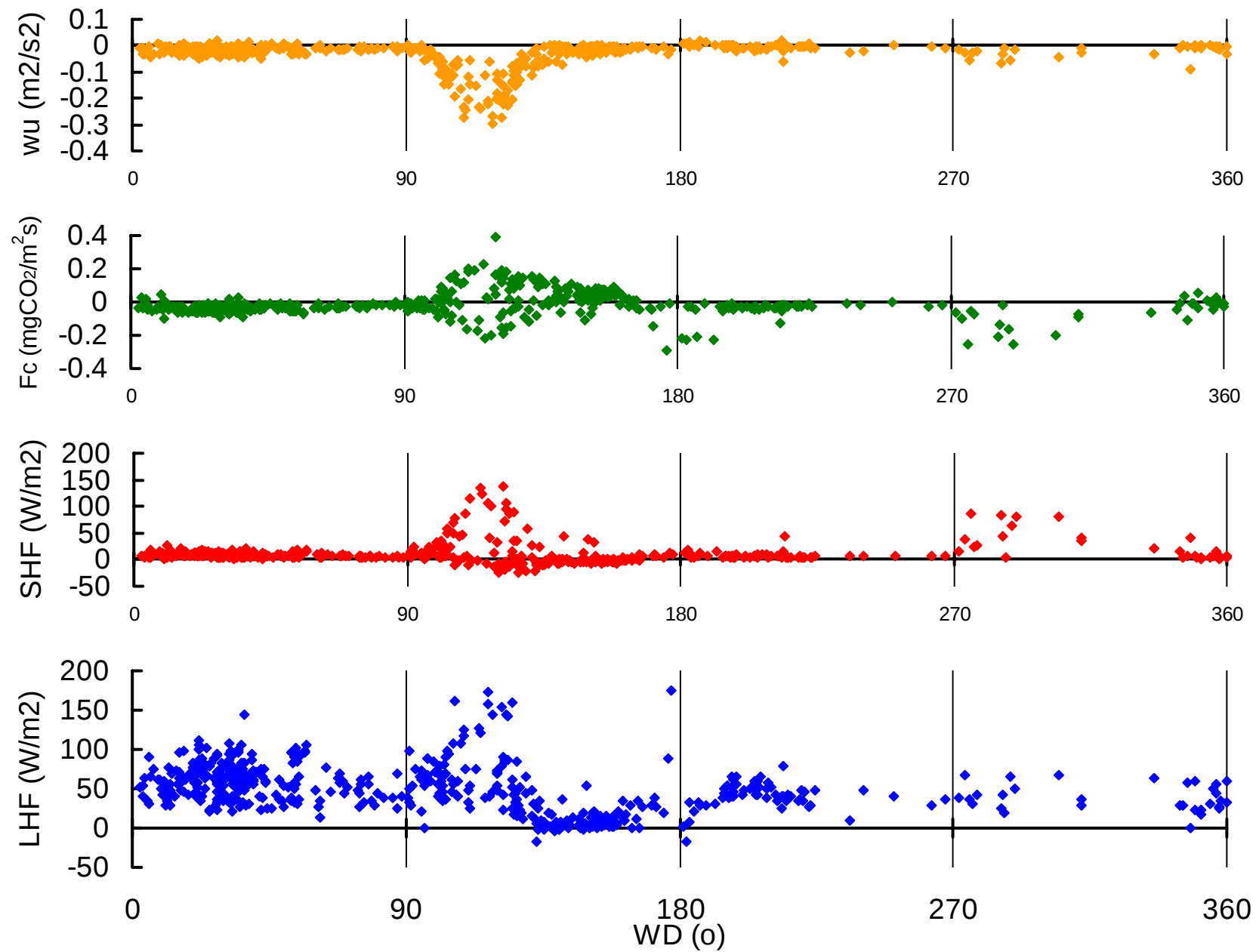


Fig. Wind Direction versus Fluxes (AUG2002, Miyako I.)

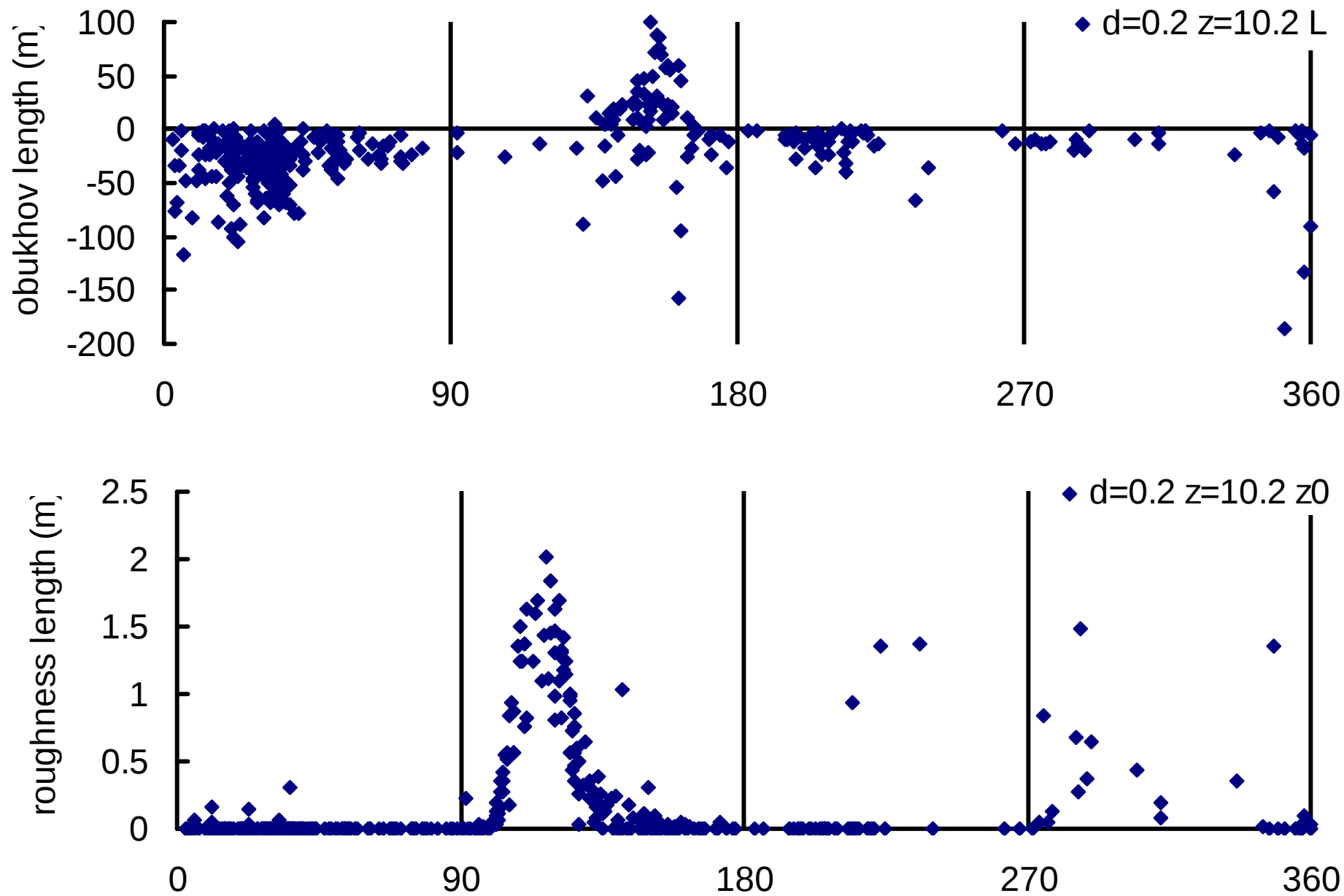


Fig. Wind Direction versus Parameters (AUG2002, Miyako I.)

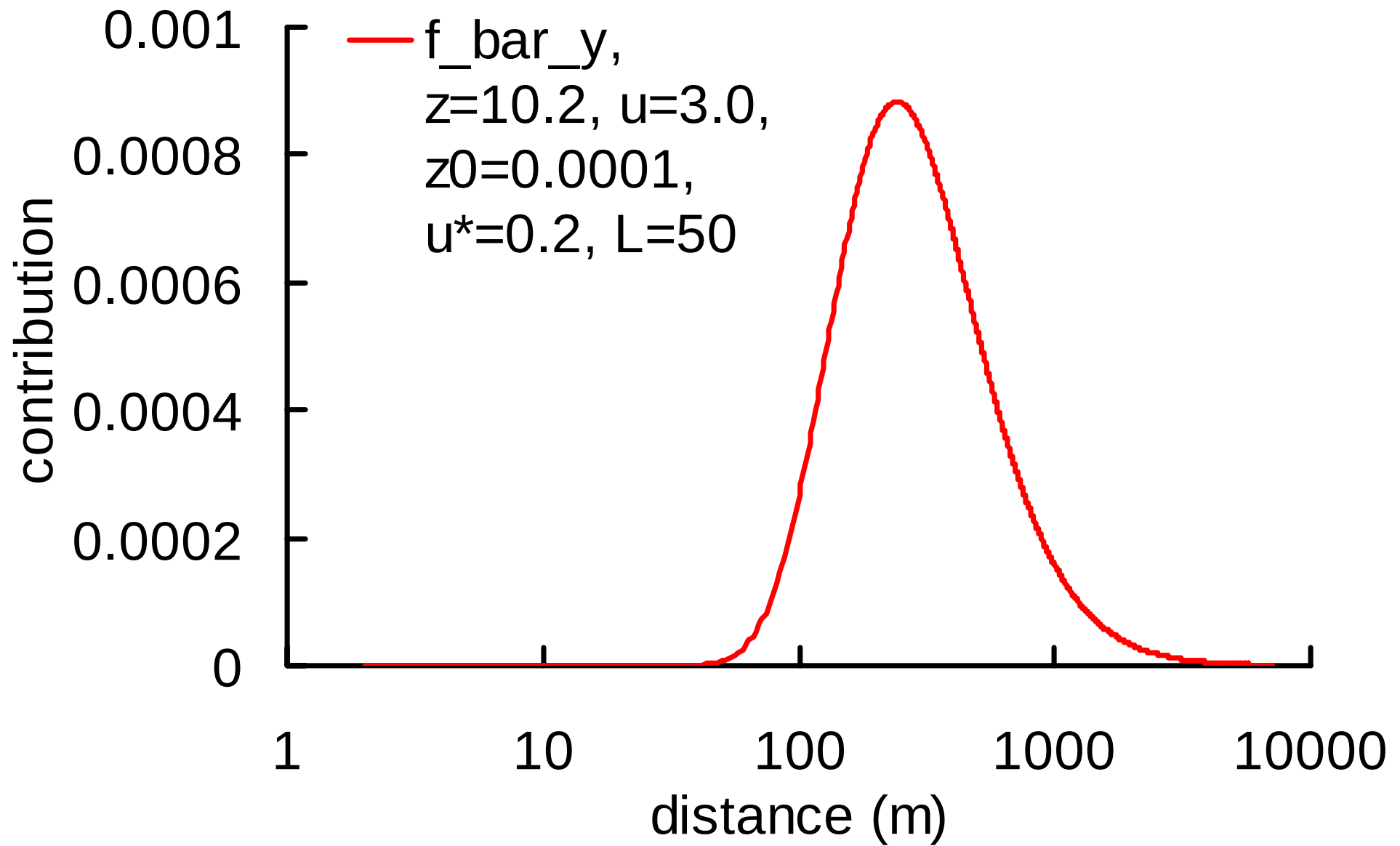


Fig. Footprint Function for AUG2002, Miyako I.

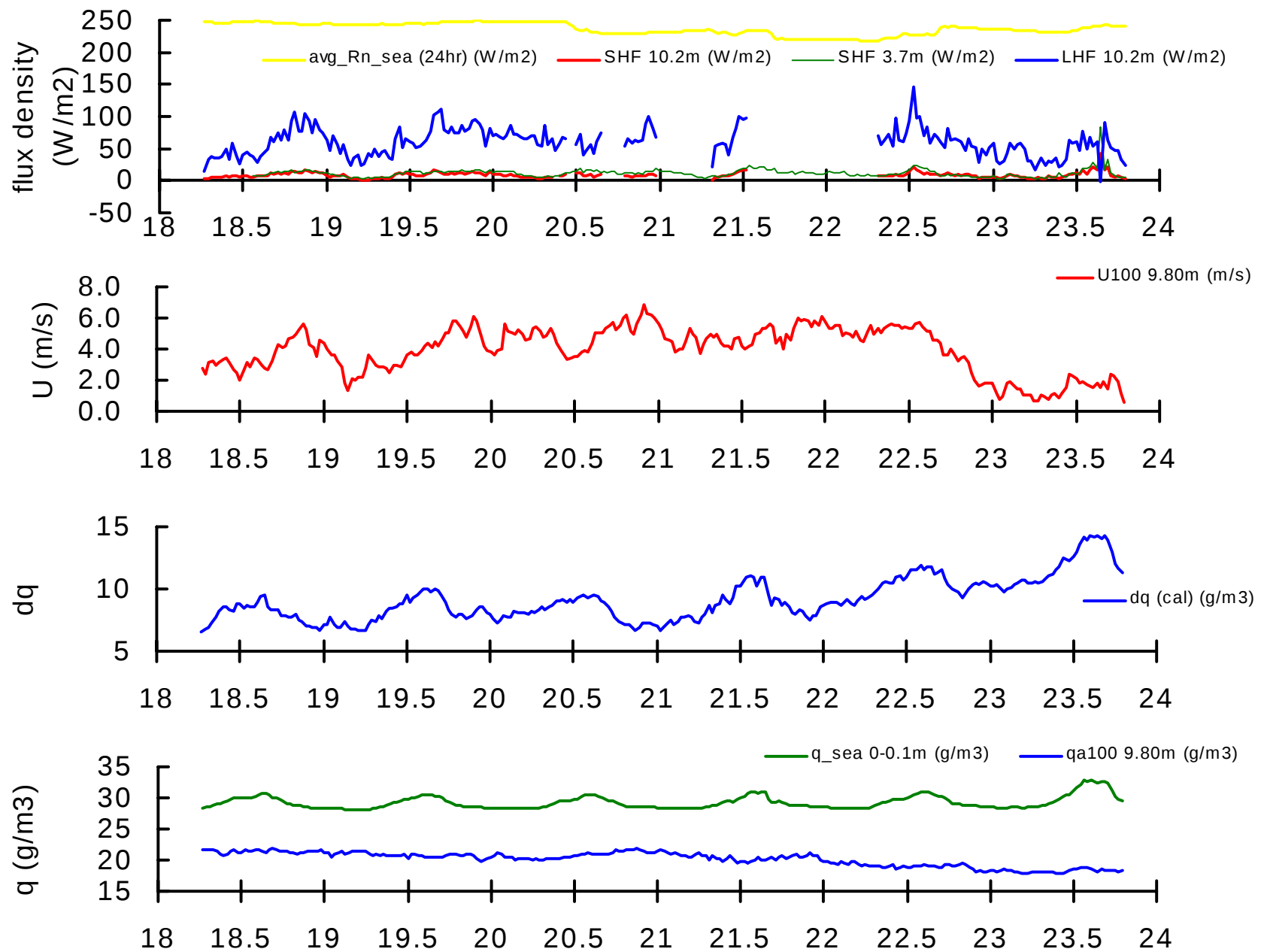


Fig. Latent Heat Flux, Wind Speed, and Vapor Deficit

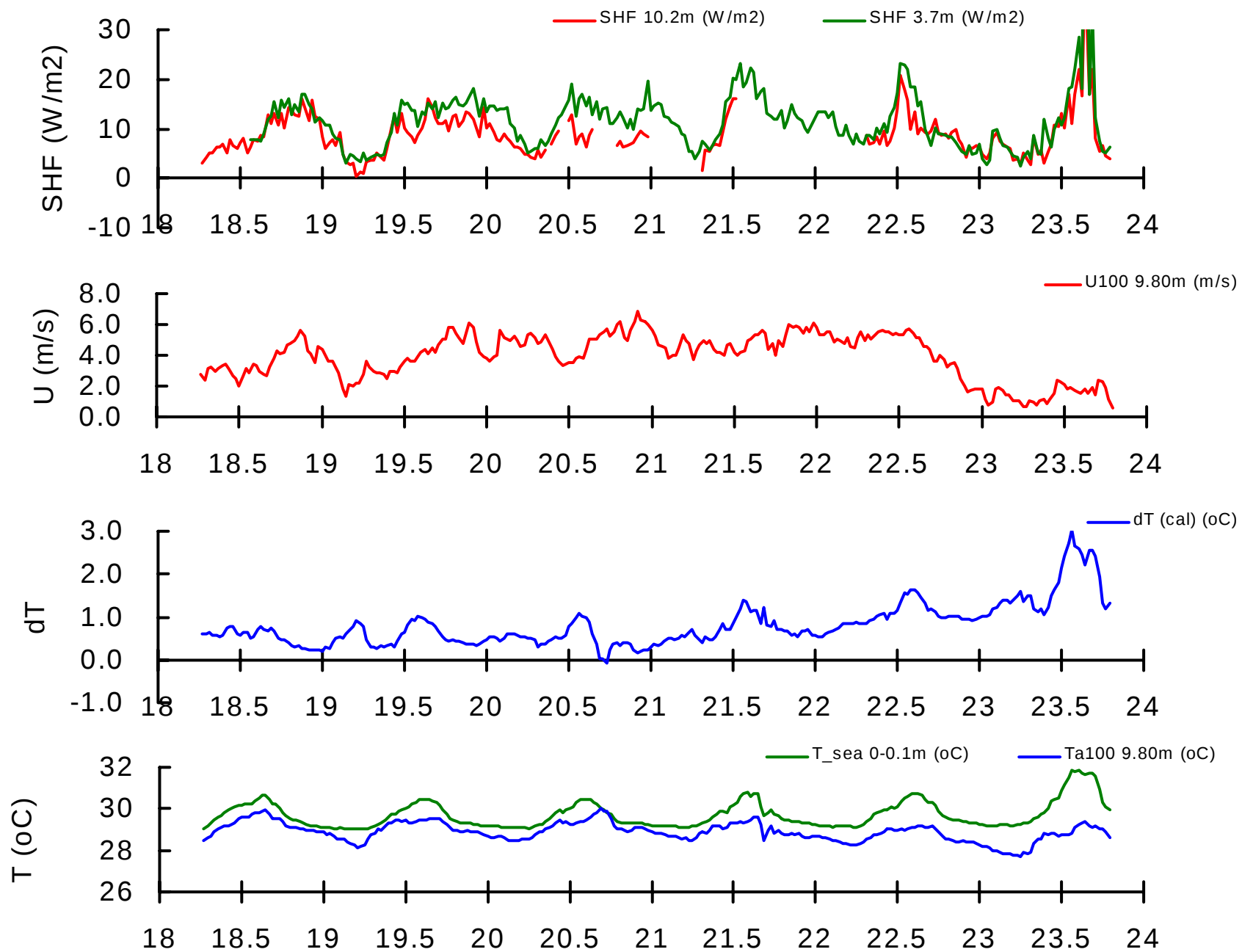


Fig. Sensible Heat Flux, Wind Speed, and Temp. Difference

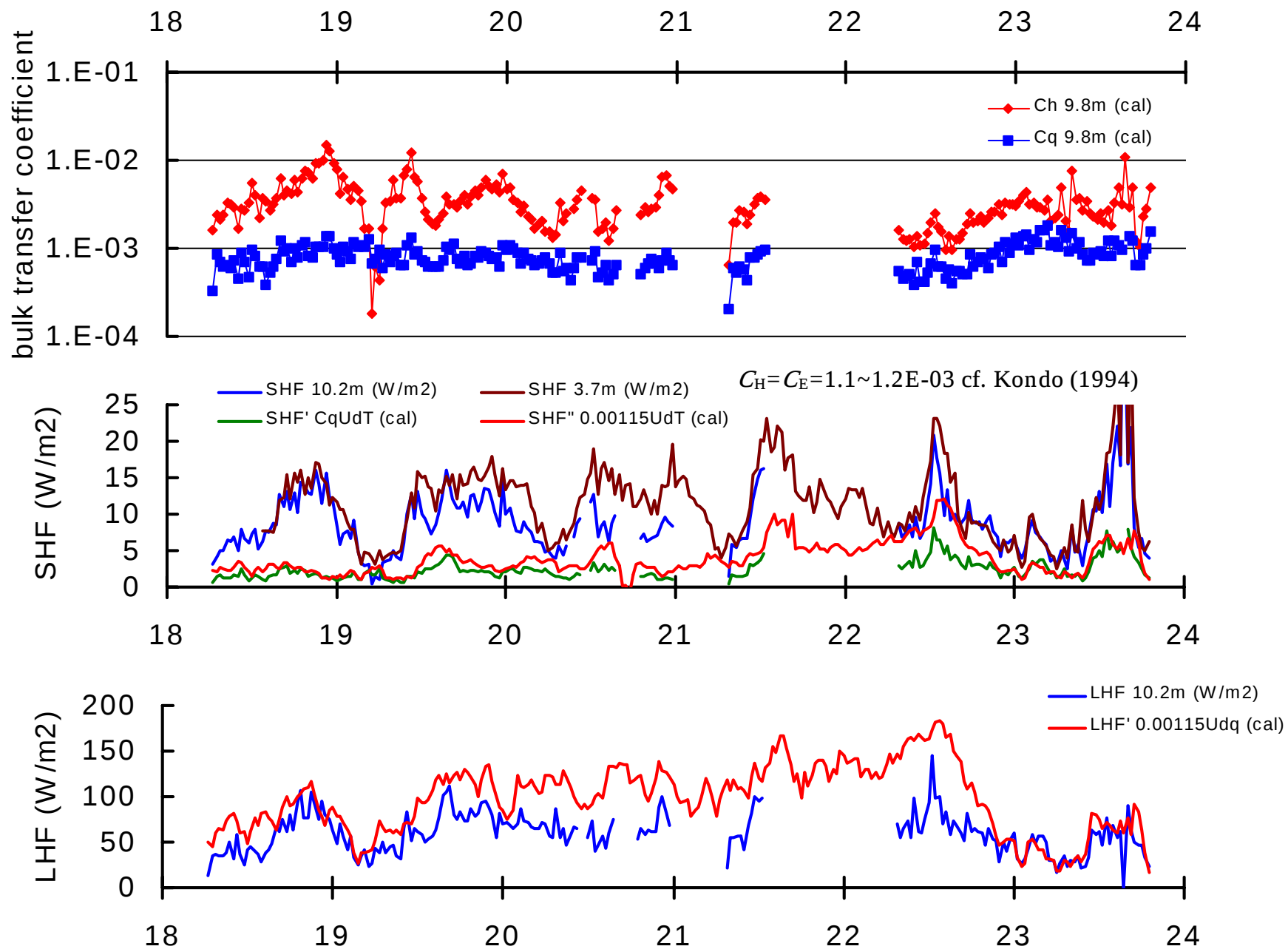


Fig. Bulk Transfer Coefficient and Heat Fluxes

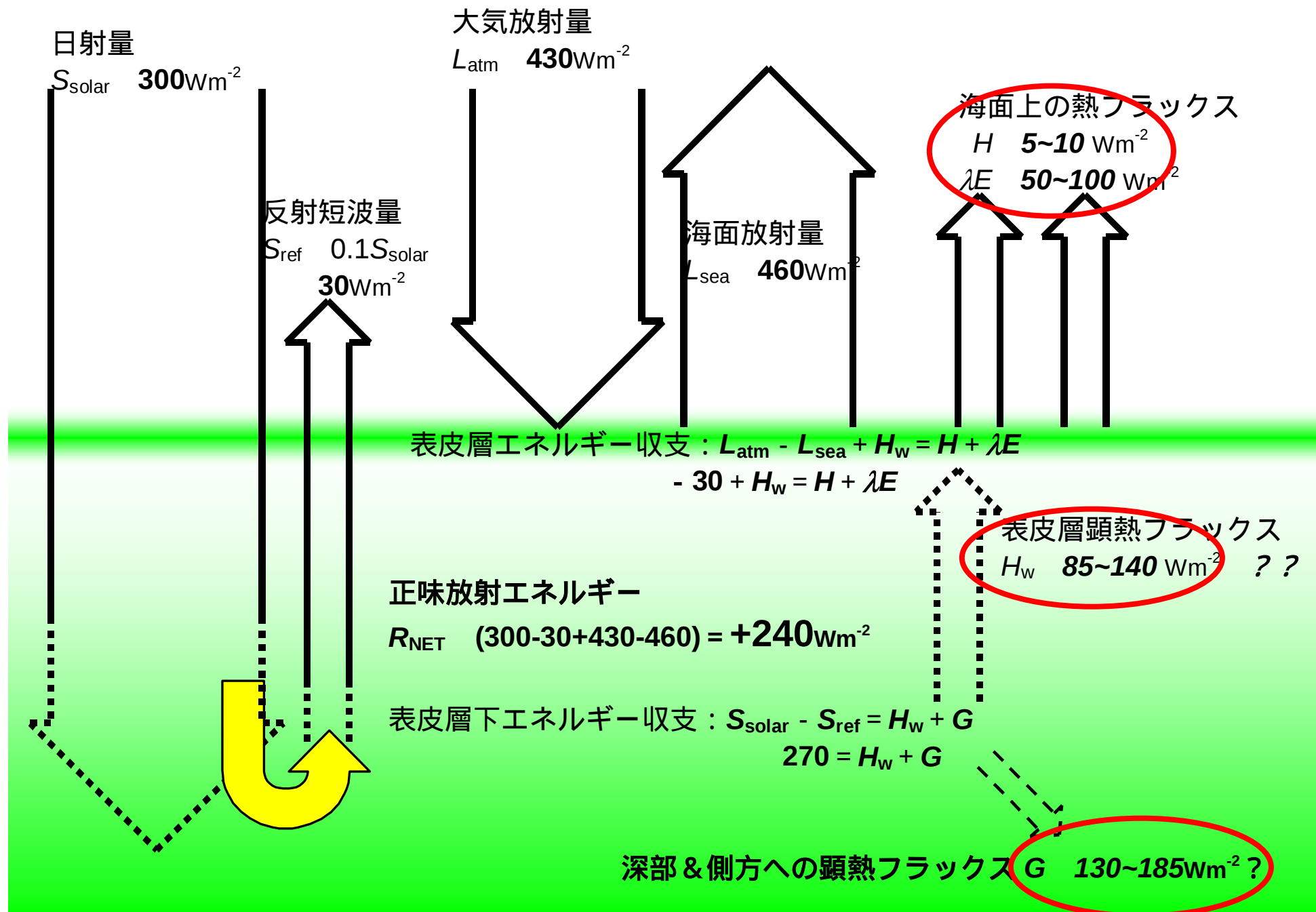


Fig. Daily Energy Budget in AUG2002, Miyako I.

Preliminary Results

1. Boundary Layer Study (i.e. LAPS, Lower Atmosphere Precipitation Study)

Provide the magnitude of the vertical fluxes above the sea surface.

Approximate values can be provided.

2. Global Scale Study

Provide the magnitude of the lateral energy fluxes within the sea.

Approximate values can be provided.

3. Local Turbulent Flow Dynamics

Know the truth of turbulent flow over a certain topography.

Compare to simulation results.

Not yet, progressing now.

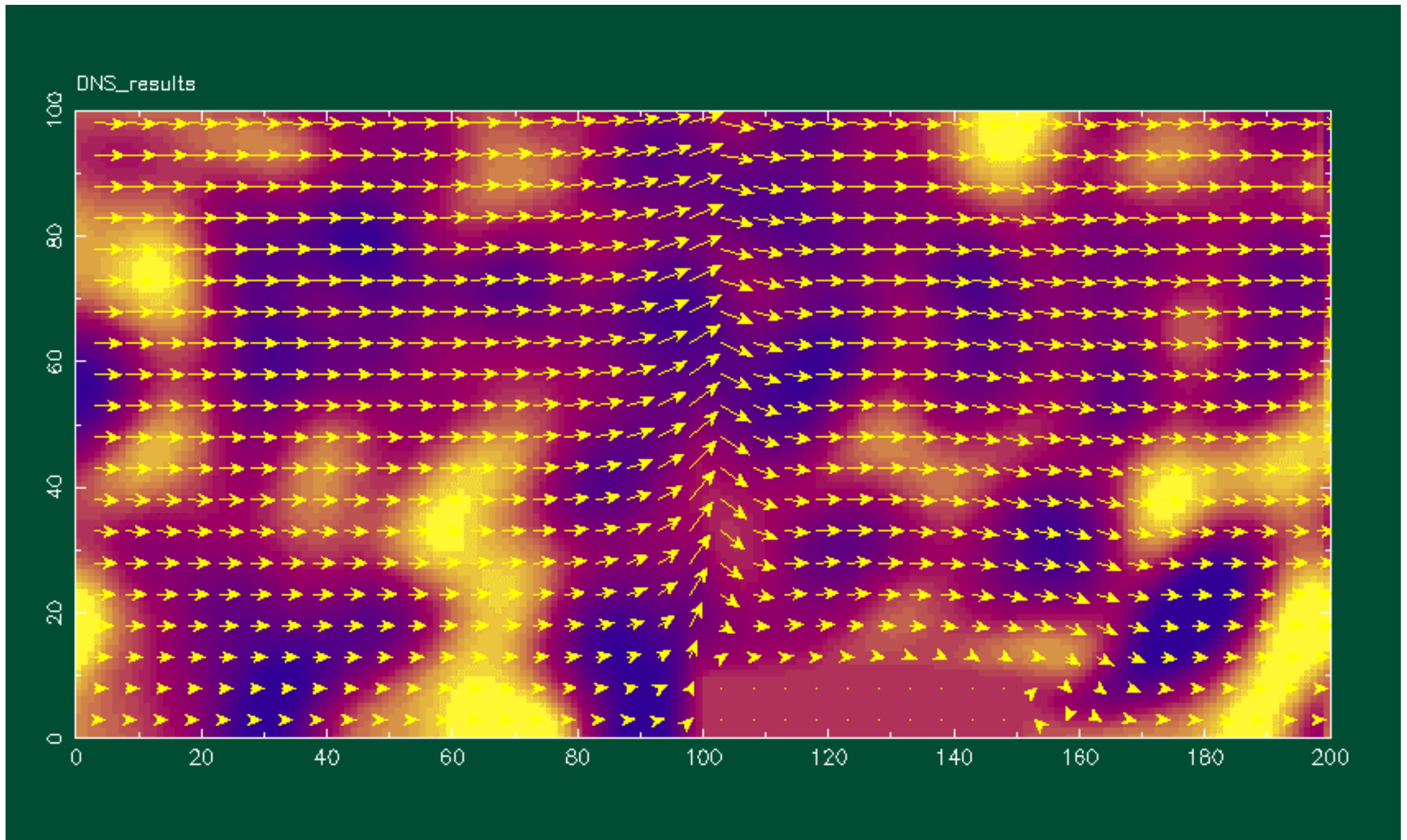


Fig. DNS computing (color: Y axis velocity, $t = 6000\text{msec}$)