Title: Intercomparison and validation of global sensible heat flux data

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Abstract:

Heat flux at the sea surface consists of four components, i.e. shortwave radiation, longwave radiation, latent heat flux and sensible heat flux. Though sensinble heat flux is generally small compared with other components, the values over western boundary current regions such as Kuroshio and Gulf Stream and at high-latitudes are not negligible. In this study we compare J-OFURO sensible heat flux data with GSSTF2, NRA and ERA40 data.

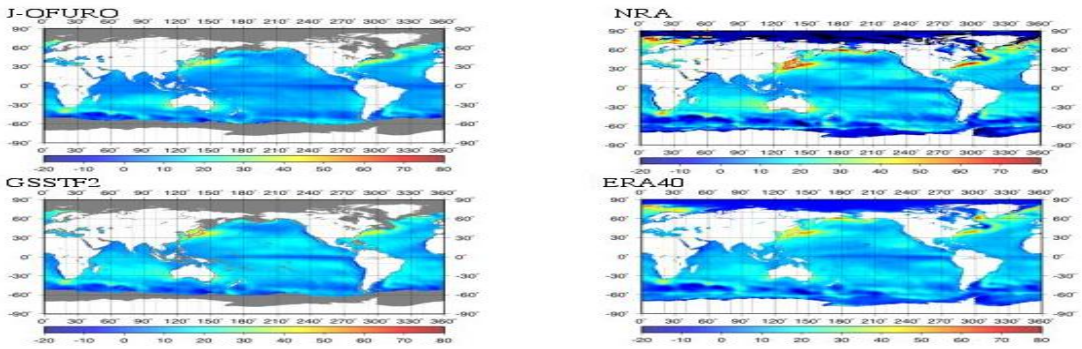

Figure 1. Annual-mean sensible heat flux averaged for 1999.

Figure 1 shows annual-average fields for 1999. The large-scale patterns of sensible heat flux are generally similar but with quantitative differences among those products. For example, NRA data overestimate sensible heat flux in the Kuroshio region and underestimate sensible heat flux at high-latitudes compared with other products. This feature can be understood by a scatter diagram in shown Fig.2.

Figure 2. Scatter diagram between J-OFURO and NRA sensible heat flux.