**Intercomparison of various products of latent heat flux over the ocean**

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| Latent heat fluxes play important roles in the exchanges of heat energy between the ocean and atmosphere. Since huge heat energy can be transferred from low-latitudes to mid- and high-latitudes as water vapor, latent heat flux is important in the climate system. Also, latent heat flux is important for the global hydrological cycle, because latent heat flux and water vapor are two sides of the same coin. Thus, latent heat flux between ocean and atmosphere is critical to our understanding of the climate and one of Essential Climate Variables (ECVs). Recently various turbulent heat flux products are provided. The products are divided into four categories, i.e., satellite, reanalysis, in situ and hybrid products. The characteristics of each product strongly depend on many factors such as data, algorithm and observation methods. Thus, it is important for flux users to know the differences between them and the accuracy of them. Our objectives are to clarify the differences between each global latent heat flux product and to compare the flux data in each product with buoy flux data.  We used nine global products including satellite, reanalysis, in situ and hybrid products in this study. The temporal and spatial resolutions are different depending on each product. Thus, we unified the temporal resolution is monthly, and the spatial resolution is 0.25°. The analysis period is one year, 2008. When intercomparison of global products is carried out, what we don’t know true values as reference is a problematic issue. Thus, we assumed the ensemble median as a reference product. Also we compared flux data in each product with buoy data. |