

CEReS archived satellites related datasets and these applications

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Center for Environmental Remote Sensing (CEReS) was established in 1995 as a research institute for nationwide collaboration of the academic community of remote sensing. Since 2005, we have been re-constructed archiving and publishing environmental datasets system. In this presentation, we will introduce our archived and published satellites related datasets and products. In particular CEReS has most of geostationary meteorological satellites data, such as MTSAT, GOES-E, -W series and Meteosat series (Meteosat-IDOC, -MSG series) to cover globe with fine time resolution. We briefly introduce geostationary satellites gridded product and higher processed products and utilized applications (research results). 1). Shortwave radiation product EXAM, of which based on neural network system for faster-calculation, has been performed from MTSAT and other geostationary satellite dataset, we will explain brief explanation of EXAM output and future plan. 2). To improve the global precipitation product (GSMaP), now we are developing the potential precipitation map (PPM) based on the combination of several channels of geostationary satellites. PPM estimated by look-up-table (LUT) learned by true-observation of TRMM precipitation radar (PR), then PPM has a potential to improving the accuracy of precipitation areas without overpassing microwave imagers in GSMaP product (hourly 0.1 grid-box). Finally 3) Utilizing EXAM radiation product and satellites oriented precipitation products such as GSMaP, we re-analysis land surface meteo-hydrological status (hydro-reanalysis). As one of demonstration, we will introduce the Japan 1km resolution land process reanalysis project forced by EXAM and Radar-AMEDAS (perfect reanalysis) and impact of satellites forcing datasets.

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