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Comparison between TRMM-TMI microwave land surface emissivity maps derived from JRA-25 and ERA-Interim

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Microwave land surface emissivity maps have been made from a brightness temperature of Tropical Rainfall Measuring Mission (TRMM) Microwave Imager (TMI), and land surface temperature (T) and atmospheric profile data of reanalysis data for rain-free scenes that the TRMM Precipitation Radar (PR) identify. As reanalysis data, Japanese 25-year Reanalysis Project (JRA-25) and the European Center for Medium Range Weather Forecast (ECMWF) Interim Re-Analysis (ERA-interim) are used. The emissivity maps estimated from both reanalysis data are similar but not the same. Estimated emissivity depends on used T. The cause of some 19 GHz vertical emissivity overestimations implies that their Ts are underestimated at each some region. Moreover, emissivity times T is compared. This is very similar with each other for all channels. It is confirmed that the difference of emissivities are mainly derived from the difference of surface temperatures between JRA-25 and ERA-Interim.