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JAXA's sea-ice dataset derived from passive microwave sensors

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Japan Aerospace Exploration Agency (JAXA) plans the launch of Global Change Observation Mission ? Water (GCOM-W) in 2011. A variety of products are planned for observe the parameter related at the water cycle. The sea-ice product estimates the sea-ice concentration, the sea-ice vector, and the thin ice region. Moreover, a long-term of observation is important in the understanding of the environmental variation. The passive microwave sensor from space has been observed for over 30 years since 1978. Therefore, the sea-ice area was able to be observed to be minimized in 2007. The observation frequency of GCOM-W is the same as the Advanced Microwave Scanning Radiometer (AMSR) series. Therefore, the observation of the sea ice change can be continued to aftertime. However, the data of Scanning Multichannel Microwave Radiometer (SMMR) and Special Sensor Microwave/Imager (SSM/I) is necessary go back to the past. The observation frequency is almost the same as these sensors. However, the resolution and the incidence angle are different. Therefore, the correction between each satellite is needed for the presumption of a consecutive sea-ice area. We are making the data set of the corrected long-term area change.

Keywords: GCOM-W, sea-ice product, passive microwave sensor, sea-ice area, long-term dataset