

Realization of pseudo high frequency high resolution observation by geostationary satellite and orbiting satellite combined observation

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Observation data of the earth observation optical sensor data from both the earth science and the actual utilization is required more frequently and higher resolution. However, in order to realize this high frequency observation and high resolution observation at the same time, it is impossible with one satellite, and it is being realized by many operations of micro satellite. However, in general, micro satellites have problems such as short design life and no calibration system. On the other hand, satellites of medium size or more including geostationary satellites have a long design life and have a calibration system. However, in order to realize high frequency and high resolution with satellites of medium size or larger, if we try to secure the number of satellites, its budget is enormous and not realistic. This proposal is based on high frequency observation of geosynchronous satellites with relatively low resolution among satellites launched by Japan (assumed to be successors such as Himawari, GCOM - C, ALOS etc), and high resolution but low frequency orbiting satellite observations. We aim to manufacture pseudo high frequency high resolution observation data through a model that adjusts part of sensor specifications of each satellite and adjusts the difference between observation geometries, and provides such a high quality long-term framework. This aims to expand the use of satellite optical sensor data in earth science and practical use fields, and to expand scientific progress and practical use. This framework is a planned budget size, one step to get bigger results, and expansion of the actual field of use will also contribute to the continuity of the Earth observation in Japan. Furthermore, by incorporating newly planned satellites of other countries into this framework, we aim to increase the presence of our Earth observation in the field of earth science and practical use.

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