Global Change Observation Mission (GCOM)

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ADEOS Ⅱ was launched on Dec. 2002. However, after about 10 months operation, it has lost most of its power due to the solar paddle failure. As a follow on of ADEOS Ⅱ mission, JAXA is now planning GCOM mission which is composed of a series of satellites. They are now called GCOM-W and GCOM-C satellites. Both satellites are composed of 3 satellites with 5 year lifetime. Hence, 13 years of continuous observation can be assured with 1 year overlaps. The first satellite of GCOM-W will be launched in fiscal 2011 while the first one of GCOM-C will be launched in fiscal 2013. GCOM-W1 will carry AMSR F/O (now called as AMSR2). AMSR2 will be very similar to AMSR on ADEOS Ⅱ and AMSR-E on EOS-Aqua with some modifications. The main modifications are 1) higher accuracy of on-board hot load and 2) mitigation of ground interference in C-band. The orbit of GCOM-W is 700km altitude and 13:30 ascending node time to continue the AMSR-E observation. It will be in A-Train. GCOM-C will carry GLI F/O (now called as SGLI). The SGLI will be rather different from GLI. The main targets of SGLI are atmospheric aerosols, coastal zone and land. In order to measure aerosols over both ocean and land, it will have a near ultra violet channel, as well as polarization and bi-directional observation capability. For, coastal zone and land observation, the IFOV of SGLI for these targets will be around 250m. The instrument will be composed of several components. The shorter wavelength region will adopt push broom scanners, while long wave region will use a conventional whisk broom scanner. The orbit of GCOM-C is almost the same as that of ADEOS Ⅱ, i.e. around 800km altitude, and 10:30 descending node time. We have started the study of GCOM-W2. In addition to AMSR3, we are discussing the accommodation of an advanced scatterometer on GCOM-W2 with NOAA and JPL.