Radiation Measurement by the Light Particle Telescope for the Jason-2 Satellite

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On June 20, 2008, the CNES satellite, Jason-2, was launched in the Vandenberg Air Force Base, California, USA. This satellite accommodates JAXA's radiation environment monitor, which is called the Light Particle Telescope (LPT).

The mission of the Jason-2 is dedicated to ocean and climate forecasting, in continuation to the successful Jason-1 and TOPEX-POSEIDON satellites, launched in 2001 and 1992, respectively. According to lessons learned in the Jason-1, the Jason-2 needs a radiation environment monitor to improve radiation knowledge because an output of an instrument on the Jason-1 was found to be sensitive against the radiation. Based on the JAXA/CNES cooperation, JAXA and CNES agreed that the LPT would be accommodated in the Jason-2 in 2006 and this joint project was started.

The altitude of Jason-2 orbit is 1,336km and its inclination is 66 degree. We have not measured radiation environment along this orbit. We expect that data measured by LPT will contribute to getting a new knowledge of the radiation belt and to making a new model of the radiation belt. In addition, these data will be distributed to scientists who are interested in the data by JAXA and CNES.

LPT was powered on successfully on the 3rd day after the launch of the Jason-2. In this talk, we will make a presentation on the overview of the instrument and introduce some data measured by LPT.