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PAYLOAD MISSION OF SMALL PROBE DEEP SPACE 'SHINEN2'

Abstract

A small probe deep space Shinen2, developed by Kyushu Institute of Technology KIT, in partnership with the different companies and institutions of Engineering as Kagoshima University (Japan), NASA Johnson Space Center, that already launched with rocket H-IIA of Japan Aerospace Exploration Agency (JAXA), on the December 3, 2014 in Tanegashima.

The requested task of this small probe is to reach or demonstrate a communication system based on radio amateur in deep space between the ground station and the space vehicle. The most important is to use small payload as sensor RPDD Radiation Particles Pixels Detectors explored for our project in KIT Shinen2, developed by NASA and Prairie View AM University. Planned for the future to deep-space rights investigations, in excess of the protection of the magnetic field lines of the earth, we need to measure and evaluate the radiation particles flow changes. The aim is to evaluate or demonstrate different techniques as used a CMOS device as small payload for the Shinen2 mission. This device CMOS (Complementary Metal Oxide Semiconductor) with different electronics part inside. In fact, to do some simulations or test of the sensor that used some materials for testing and showing prototype of PDD radiation particles pixels detector, such as average or histogram determined using software Matlab.