

Communications and Ranging Experiment using Laser Terminal on Satellite

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A 1kg class optical transmitter (VSOTA) on board a 50kg class satellite RISESAT is to be launched in 2018. VSOTA has 2 wavelengths optical transmission element with no gimbal tracking function. A retro reflector is located as well. The orientation to the ground is based on satellite attitude control. It has a function of performing the guide beam for laser ranging from the ground using science camera on board. We describe the features of VSOTA comm. and ranging experiment plan and test result for satellite interface during integration as well as for the ground station.