
A Compact Low Power Altimetry Laser For Lunar Applications

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Abstract

A very compact 10 mJ, 10 Hz, 4ns laser with greater than a billion shots capability is being developed for lunar altimetry applications for a mission projected for 2008. The altimeter will complement other scientific payloads of the mission that includes Terrain Mapping Camera with stereo imaging capability, Hyper-Spectral Imager, and a Low Energy X-ray spectrometer. The laser design exploits the advances in technologies, capabilities, and lessons learned from the NASA Risk Reduction Laser program, Calipso, and others. The Engineering Model and Flight Model are discussed.