

PRIMA: a micromechanical shutter based ion mass spectrometer

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New shutter systems based on MEMS technology (Micro-Electro-Mechanical System) allow to build new types of ultra-low weight mass spectrometers for applications in space. The PRIMA instrument (PRISma Mass Analyzer) is a MEMS shutter based time-of-flight mass spectrometer based on the Solar WInd Monitor (SWIM) sensor developed for the Indian Chandrayaan-1 mission. PRIMA will be used for flightverification of the MEMS shutter technique. We report on the current development of this instrument. The PRIMA instrument will be launched on the Swedish Space Corporation's PRISMA satellite in 2008/2009.