



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 flight-verification 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.