Geophysical Research Abstracts
Vol. 14, EGU2012-12159, 2012
EGU General Assembly 2012
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SAGE III on the International Space Station

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The Stratospheric Aerosol and Gas Experiment (SAGE III) has recently been selected for a flight on the International Space Station (ISS) beginning in 2014. Since the instrument was constructed in the early 2000s, the instrument will require extensive testing and refurbishment prior to deliver to ISS. The project will also include the refurbishment of the ESA Hexapod which is a high-accuracy pointing system developed to support ISS external payloads particularly SAGE III. SAGE III refurbishment may also include the replacement of the neutral density filter that has been associated with some instrument response issues during the METEOR/3M mission. We are also exploring options for expanding the science targets to include additional gas species including IO, BrO, and other solar, lunar, and limb-scatter species. In this presentation, we will discuss our plans for SAGE III - ISS refurbishment including results from Sun-look testing, revisions to the science measurements, and discuss expected measurement accuracies in part by examining SAGE III - METEOR/3M measurement data quality. We will also discuss potential mission science goals enabled by the mid-inclination ISS orbit.