

A Nitric Oxide Photometer for ASIM

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While many questions have been addressed concerning TLE, a critical assessment of their atmospheric effects has remained elusive. To date, the most likely candidate for a direct effect on the atmosphere is through the production of nitric oxide, which is known to undergo catalytic reactions that destroy ozone. The Atmosphere-Space Interactions Monitor (ASIM) experiment will observe TLE from the International Space Station (ISS) in an effort to understand both their origins and their atmospheric effects. One proposed instrument on ASIM is a forward viewing (limb to near nadir) UV photometer to observe nitric oxide in TLE. An overview of NO production in TLE will be given as a background of possible signal levels to be observed. The characteristics of the emissions to be observed will be presented, and photometer design and performance outlined.