

Space Studies of the Upper Atmospheres of the Earth and Planets including Reference Atmospheres (C)
8th Annual Thermospheric-Ionospheric-Geospheric (TIGER) Symposium (C12)

FIRST RESULTS FROM THE LYRA SOLAR UV RADIOMETER

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On November 2, 2009, the PROBA2 space mission of ESA was launched into a sun-synchronous polar orbit allowing quasi-permanent solar observation. Onboard PROBA2, LYRA is the first radiometer in space that benefits from diamond ultraviolet detectors. LYRA consists of four large pass band channels. Each channel observes the irradiance of the Sun behind a thin metallic foil or behind an interference filter. The detectors are either UV silicon diodes or diamond detectors, the latter having been specifically designed for LYRA. The combination of the spectral transmission of the filters and of the responsivity of the detectors makes the twelve LYRA channels sensitive to different soft X-ray and UV pass bands. Their exact choice was made in relation to scientific questions in solar physics, aeronomy, and Space Weather. ‘First Light’ of the experiment occurred on January 6, 2010, and LYRA was subsequently commissioned successfully. After few days, it measured the first solar flares of the new solar cycle, with an unprecedented high time resolution of 0.5 s. In the spring of 2010, LYRA data will start feeding research investigations and space weather forecasts. The proposed talk presents early results obtained with the measurements of the first months in space.