



First light of the UV-Detector of the ATMOSUV-CanSat (Atmospheric Thunderstorms's Monitor Optical Signal & UV)

Javier Navarro González (1), David Calvo Diaz-Aldagalán (2), Paul Connell (1), Joan Montanya (3), Ferran Fabró (3), Fernando Carrió (2), Pere Blay (1), Hector Espinós Morato (1), Chris Eyles (1), and Víctor Reglero (1)

(1) Spain (nagonja@alumni.uv.es), (2) IFIC, Valencia, Spain (david.calvo@ific.uv.es), (3) UPC,Tarrasa,Spain (montanya@ee.upc.edu)

The ATMOSUV-CanSat is a proposal of small instrument aimed to study the Optical and UV counterpart emission from upper atmosphere high-energy phenomena like TGF (Terrestrial Gamma-ray Flash) process. It could be used also as a complementary ground monitor facility in the study of thunderstorms at high altitude in the atmosphere. The main goal is to perform complementary observations to that of the MXGS/ASIM (Modular X-ray and Gamma-ray Sensor in the Atmosphere-Space Interactions Monitor) mission, at ISS (International Space Station). The detector is planned to be flight during severe thunderstorms and take measurements of air conditions and to perform fast imaging with high temporal accuracy. We expect to measure UV emission and optical signal, complementary temperature, pressure, and accurate 3D location could be obtained also.

Here we present preliminary results of a prototype of the UV-Detector ATMOSUVCanSat. The prototype detector has been used for high-speed directional ultraviolet detection from controlled electrical discharges up to 1MV.