

AtmoHEAD: Atmospheric Monitoring for High-Energy Astroparticle Detectors



ID de Contribution: 27

Type: **Talk**

The Global Light System (GLS) for JEM-EUSO

mercredi 12 juin 2013 13:30 (35 minutes)

The Extreme Universe Space Observatory on board the Japanese Experiment Module (JEM-EUSO) on the International Space Station (ISS) aims at measuring the properties of Extreme Energy Cosmic-Rays (EECRs) by recording their Extensive Air Shower developments in Earth's atmosphere from space. In order to test the good operation of the JEM-EUSO telescope, a network of ground-based Xenon flashers and steerable UV lasers is being developed. This Global Light System (GLS) will generate benchmark optical signatures in the atmosphere with similar characteristics than the optical signals produced by EECR showers. Laser tracks and point flashes will be produced as the ISS passes over a GLS location within the field of view of the telescope. The event reconstruction and triggering efficiency of JEM-EUSO can then be tested against the specific properties of the laser shots and Xenon flashes. Currently, it is envisioned that 12 GLS stations will be deployed at selected locations around the World. A preliminary study shows that JEM-EUSO will fly over one of the 12 sites in a near-moonless night under clear condition every 2 days or so. The GLS concept and design will be presented, including the early development of the GLS prototype and the selection process for candidate sites.

Auteur principal: SARAZIN, Fred (Colorado School of Mines)

Orateur: SARAZIN, Fred (Colorado School of Mines)

Classification de Session: Wednesday afternoon 1

Classification de thématique: Monitoring facilities under development