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"Relations between High Energy Astroparticle Physics, Cosmic Ray Physics and Space Situational Awareness"

Abstract:

The talk will describe high energy galactic and solar cosmic ray data respectively models, which contribute to the physics behind space situational awareness activities. The European space situational awareness (SSA) programme was signed during the ESA Ministerial Conference in November 2008. SSA activities related to space weather (SW) and Near Earth Objects (NEOs) will be explained in detail. Technological, societal and economic impacts due to SW and NEOs will be sketched. In addition European and international activities for the forecast of SW storms and protection of critical infrastructures against SW and NEOs will be highlighted. New technologies and scientific inputs from microphysics detector developments like MediPix and others may significant contribute – by means of monitoring of galactic, solar cosmic ray particles and CMEs (Coronal Mass Ejections - from the Sun and in the interplanetary space) - to space weather related forecast and to a new generation of highly miniaturized active space radiation monitors.