



Contribution ID: 123

Type: **Poster**

## **COR SYSTEM FOR COSMIC RAYS TRAJECTORIES IN MAGNETOSPHERE SIMULATION**

*Wednesday 9 September 2020 16:50 (30 minutes)*

Cosmic rays are particles, coming from space. The system COR (Cut-off rigidity) provides access for the wider scientific community to models of simulation of cosmic ray trajectories in the magnetosphere via a web interface. The system offers simulations of vertical directions or, from multiple nonvertical directions covering half sphere ( $2\pi$  solid angle) with the center of the sphere in the point of interest. The simulation particle tracing is realized in combined internal (IGRF) and the external geomagnetic field (Tsyganenko 96 or Tsyganenko 05) covering the years 1968 to 2020. We call this Standard simulation module. There is also a module for simulation in an earlier period called Historic simulation module that uses a couple of geomagnetic field approximations for last two millennia (years from 0 to 1968). The system also contains individual trajectory visualizations for standard modules and a magnetosphere simulation module that allows users to evaluate the magnetic field in the magnetosphere for selected space and time range. Simulations based on space and time ranges are also available for Standard and Historical cosmic ray trajectories models.

**Presenter:** GECASEK D.

**Session Classification:** Poster session