

## Numerical study of orbital and statistical behaviors of galactic cosmic rays invading into the heliosphere

*Friday, 14 January 2022 13:15 (10 minutes)*

We have studied the transport process of galactic cosmic rays invading into the heliosphere using test particle simulations embedded in global MHD simulation of the heliosphere. The heliosphere was reproduced by an MHD simulation under the assumptions that the solar wind is steady with northward solar magnetic polarity and zero tilt angle. Motions of a number of test particles (=galactic cosmic rays) in and near the virtual heliosphere are solved to analyze their detailed orbits and statistics as well focusing especially on the effects of heliospheric boundary structures.

**Primary author:** YOSHIDA, Kotaro (Interdisciplinary Graduate School of Engineering Science, Kyushu University)

**Presenter:** YOSHIDA, Kotaro (Interdisciplinary Graduate School of Engineering Science, Kyushu University)

**Session Classification:** Young Scientists' Session