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Type: **Oral Presentation**

## Modelling of galactic cosmic ray electrons in the heliosphere

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### Abstract content <br> &nbsp; (Max 300 words)

The modulation of galactic electrons in the heliosphere is studied using a three-dimensional (3D) steady-state model based on Parker's transport equation for charged particles. The first objective is to determine the very local interstellar spectrum for low energy galactic electrons. The spacecraft Voyager 1 has been in the heliosheath for quite some time returning valuable observations that serve as a guideline when constructing such a spectrum. This spectrum is crucially important for studying the modulation of galactic electrons with numerical models. The computed solutions are compared with 4 to 16 MeV electron observations from Voyager 1 since its launch in 1977. Results will be shown for the radial and polar intensity profiles as well as spectra. Conclusions are made about the intensity of galactic electrons reaching Earth and the diffusion tensor required to describe electron modulation at these low energies realistically.

Key words: Cosmic rays, Galactic electrons, Heliosphere, Heliosheath, Very local interstellar spectrum

### Apply to be<br> consider for a student <br> &nbsp; award (Yes / No)?

yes

### Level for award<br>&nbsp;(Hons, MSc, <br> &nbsp; PhD)?

MSc

### Main supervisor (name and email)<br>and his / her institution

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### Would you like to <br> submit a short paper <br> for the Conference <br> Proceedings (Yes / No)?

No

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