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Cosmic ray diffusion and the role of nearby sources in the study of positron excess

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The flux of positrons observed at Earth produced as secondaries in the cosmic ray nuclei interactions. In the astrophysical scenario positrons are also injected as primaries, and this scenario is very peculiar if these objects are located in the sub-kpc range of solar system. We calculate the positron flux produced by cosmic ray interaction using the DRAGON code, and also check the nearby source contribution using the diffusion-loss equation. A new population of electron-positron injection from astrophysical sources can account for the positron flux below 100 GeV.

Primary author: Dr JOSHI, Jagdish Chandra (University of Johannesburg)

Co-author: Prof. RAZZAQUE, Soebur (University of Johannesburg)

Presenter: Dr JOSHI, Jagdish Chandra (University of Johannesburg)

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