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## High and low energy puzzles in the AMS-02 positron fraction results

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AMS-02 recently measured the cosmic ray positron fraction (PF) with unprecedented accuracy in a wider energy range (0.5 - 350 GeV) than PAMELA and Fermi-LAT did. Above few hundred GeV the electron and positron spectra are expected to be significantly affected by the spatial distribution of sources. For this reason we model, for the first time, their propagation by means of a 3-dimensional numerical diffusion code (DRAGON.v3) accounting for a realistic spiral arm distribution of astrophysical sources in the Galaxy. We will show under which conditions the AMS-02 PF can consistently be reproduced together with the electron, and electron + positron, spectra measured by PAMELA and Fermi-LAT and shortly discuss possible interpretations.

Our analysis also address the GeV scale discrepancy between the PF measured by AMS-02, PAMELA, as well as previous experiments, by means of a new code simulating CR propagation in the Heliosphere and accounting for independent radio and gamma-ray data.

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