

Propagation of CR in the Galaxy with the DRAGON code

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DRAGON is a public software package developed to study CR propagation in the Galaxy.

It includes diffusive/advective transport, as well as reacceleration and energy losses, for most of the nuclear and lepton species. Each species can originate from astrophysical sources (e.g., SNR, Pulsars) or from DM annihilations/decays in the halo, making the code very suitable both for studying Galactic high-energy processes and for DM indirect searches.

From the beginning, our goal was to design an inhomogeneous model able to properly take into account the different galactic environments. Our model provides accurate calculation of CR fluxes both locally, where they can be directly probed, and at galactic scale, where they predominantly contribute to gamma and synchrotron diffuse emissions.

Remarkably, this approach already provided noteworthy improvements in our understanding of FERMI and WMAP signals.

In this talk, we present a new update of the DRAGON code which includes several new features incorporated to describe spatially dependent and anisotropic diffusion.

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