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Diffuse Galactic Gamma Rays at intermediate and high Latitudes, Constraints on ISM properties and DM

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Recently published γ-ray spectral data from the Fermi Collaboration
have provided the possibility to study the diffuse γ-ray sky at medium and
high latitudes ($\mid b \mid > 10^{\circ}$) and energies of 1-100 GeV with unprecedented accuracy.
This provides us the chance of probing and constraining models of annihilating
and decaying Dark Matter, as well as studying and confirming conventional assumptions
made on Interstellar Medium properties including gasses distributions, diffusion and
propagation of cosmic rays.
Implementing the publicly available DRAGON code,
that has been shown to reproduce local measurements of cosmic rays, we can study
assumptions made in the literature on galactic gas models, and on diffusion properties of cosmic rays,
in order to confirm or exclude those that can (cannot) fit the observed γ-ray spectra.
Also constraints are placed on a garden variety of Dark Matter models recently
proposed to explain the local spectra of electrons, positrons and antiprotons,
and γ-rays at the center of the Galaxy.

Orateur: Dr CHOLIS, Ilias (SISSA Trieste)

Classification de Session: Diffuse emission and cosmic ray interaction with interstellar matter