

Particle Dark Matter constraints: the effect of Galactic uncertainties

The interpretation of results from in/direct dark matter (DM) searches depend on the adopted DM distribution within the target. In particular, the reconstruction of the DM profile in the Milky Way proceeds from astrophysical observations, all affected by quantifiable uncertainties. I will show how with a full data-driven analysis, actual uncertainties on the relevant astrophysical observations of such quantities (such as e.g. the Sun's Galactocentric distance) affect the interpretation of in/direct detection (or lack thereof). I will present a practical tool to propagate uncertainties on astrophysical quantities into the DM particle parameter space, based on developments of the analysis presented in <https://arxiv.org/abs/1612.02010>.

Primary author: BENITO, María

Co-authors: Prof. BOZORGNI, Nassim; Prof. CALORE, Francesca; Prof. IOCCO, Fabio; Prof. BERNAL, Nicolás; Dr CUOCO, Alessandro

Presenter: BENITO, María