Contribution ID: **450** Type: **Talk**

Dark matter constraints from measurements of cosmic-ray positrons

Friday 16 July 2021 19:18 (12 minutes)

Cosmic-ray positron measurements provide a powerful probe of dark matter annihilation. A possible contribution to the measured positron flux could come from dark matter annihilating or decaying into e+e- pairs. In this work, we combine a detailed scan of the cosmic-ray propagation parameter space using Galprop with a new time-, charge- and rigidity-dependent model for solar modulation to present improved constraints on the dark matter mass in the range from 20 to 600 GeV from recently published cosmic-ray positron data. Our models provide particularly strong constraints on dark matter annihilation into leptonic final states, which fall below the thermal cross-section for much of our mass range.

Keywords

Collaboration

other Collaboration

Subcategory

Theoretical Results

Primary author: JOHN, Isabelle

Presenter: JOHN, Isabelle

Session Classification: Discussion

Track Classification: Scientific Field: DM | Dark Matter