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Thematic talk: The gamma-ray emission of Galaxy Outflows

Monday, 5 September 2022 17:30 (35 minutes)

Galaxies display a variety of outflows, which are detected from near the central super-massive black hole to the entire host. These outflows are often powerful enough to unbind, if sustained over time, the gas of these galaxies. Propagating through the galaxy, the outflows should interact with the interstellar medium creating a strong shock, similar to those observed in supernovae explosions, which is able to accelerate charged particles to high energies. Here we report the *Fermi* Large Area Telescope detection of gamma-ray emission from galaxies with two different types of outflows: ultrafast and molecular outflows. In this talk I will review our findings and discuss them in terms of particle acceleration at the shock front.

Collaboration

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Session Classification: Modeling the interactions of particles