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Gone with the breeze: A subsonic solution to the Fermi bubbles problem

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More than a decade after their discovery, the mechanism behind the Fermi bubbles features is still elusive. The two main models considered for the advection of cosmic-rays (CRs) are a jet model for leptonic process or wind model for hadronic process. An alternative has been proposed where CRs, produced by pp collisions, are both diffused and advected by a Galactic breeze, ie a subsonic outflow. The first results provided a flat surface brightness in the same range than observations. The breeze profile took the form of a divergence-free outflow. In this paper we push the model further by using an hydrodynamic code introducing a divergence conduction to adiabatic losses for the γ -ray emission.

Collaboration name

Co-authors: Dr RODGERS-LEE, Donna (Dublin Institute of Advanced Studies); Prof. TAYLOR, Andrew (DESY Zeuthen)

Presenter: TOURMENTE, Olivier

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