

Abstract Submitted  
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**On the Sources of the High Energy Electrons and Positrons detected by Fermi** STEFANO PROFUMO, FERMI-LAT COLLABORATION — The FERMI Large Area Telescope is providing us with unprecedented accuracy and detail in the measurement of the spectrum of high energy (20 GeV to 1 TeV) cosmic ray electrons and positrons. Candidate sources for the observed cosmic ray electrons and positrons include the standard primary and secondary diffuse galactic contribution, as well as nearby point-sources, the latter expected to contribute more and more significantly the higher the energy. The most natural and obvious class of such sources is that of galactic pulsars. A more exotic, but widely discussed possibility is that weakly interacting particle dark matter annihilation also contributes to the high energy electron-positron flux. In this talk we discuss the FERMI results in relation with (1) other recent experimental data on energetic electrons and positrons (specifically those reported by PAMELA, ATIC and PPB-BETS), (2) possible contributions from astrophysical galactic objects and from dark matter, and (3) the role of Fermi gamma-ray data in providing us with a coherent and well-rounded picture of the origin of high energy cosmic ray electrons and positrons, in connection to both pulsars and dark matter.

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