

Dark matter: candidates and indirect detection prospects

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Astronomical and cosmological observations indicate that most matter in the universe is non-luminous and non-baryonic. This "dark matter" consists of particles of unknown type and requires physics beyond the standard model of particle physics. I review the motivation for and the basic physics of several dark matter candidates, including Wimps (with the lightest supersymmetric particle as prime example), axions, and superheavy dark matter. After a brief overview of experimental techniques and prospects for their detection, I'll concentrate on indirect detection. In particular, I'll discuss recent experimental results from Pamela, comparing particle physics and astrophysical solutions to their data.