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### **Indirect Detection and Theoretical Models**

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Gamma-ray, cosmic-ray, and microwave observations all have the potential to reveal signals from annihilating or decaying WIMP dark matter. These astrophysical tests of dark matter are known as “indirect detection,” in contrast to the direct detection of WIMP-nucleon scattering in cryogenic detectors. I will review the latest measurements from PAMELA, FERMI, and other projects, and discuss the possibility that the observations could already contain signals from dark matter. I will then present a variety of theoretical models that are compatible with these observations, and propose criteria which must be fulfilled before a detection of dark matter can be claimed. Provocative statements will be made.