



ID contributo: 22

Tipo: **Theoretical Models: Halo classification and mechanisms**

Discovery Prospects for TeV Halos and Physics Implications

Milagro and HAWC observations have revealed the existence of TeV halos around nearby, relatively old pulsars. We perform population modeling of TeV halos taking into account the age dependence of halo formation. Our analysis highlights the potential importance of TeV halos in existing and future observations by HAWC, HESS, and CTA. We quantify the contributions of TeV halos to the source counts and diffuse emission. Further, we show that future observations of TeV halos are useful to constrain the statistical properties of pulsars at birth.

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