

Vulcano Workshop 2022 - Frontier Objects in Astrophysics and Particle Physics



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Extragalactic Cosmic Ray Sources

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After a brief review of the status of ultrahigh-energy cosmic ray (UHECR) physics. I discuss observational and theoretical constraints on the sources of UHECRs. I comment also briefly on the role of magnetic fields. Then I discuss a recent analysis of radio galaxies as the dominant extragalactic UHECR sources. In particular, I argue that scenarios where few local sources like Fornax A and Virgo A dominate the flux above the ankle, while low-luminosity radio galaxies contribute an isotropic background dominating below the ankle, provide a good fit to the spectrum, composition and anisotropy data.

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