

Gamma-ray Observations of Galaxy Clusters: Current Constrains and Future Prospects

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Despite several gamma-ray observational campaigns of clusters of galaxies in the last years, both by Fermi-LAT and Cherenkov telescopes, the diffuse high-energy emission that is expected to come from cosmic-ray hadronic interactions with the abundant ambient gas remains elusive. Nevertheless, we significantly improved our understanding of non-thermal phenomena in clusters. I will summarize the most important results obtained so far in this field and their impact on clusters' cosmic-ray physics and magnetic fields, with particular emphasis on the cases of Coma and Perseus. Finally, I will discuss prospects for the future, particularly for the Cherenkov Telescope Array.

Summary

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