30th International Cosmic Ray Conference



Contribution ID: 835 Type: Poster

Search for TeV gamma-rays from galaxy clusters using the Tibet-III air shower array

Abstract content

The galaxy clusters might be the TeV gamma-ray sources with Inverse Compton scattering of photons by non-thermal electrons eccelerated by the chocks and galactic wind. The Tibet-III air shower array has a wide field of view and a high-duty cycle to observe celestial bodies in the TeV energy range. In this analysis we checked three galaxy clusters, Perseus, Coma and Virgo using the Tibet-III data(Nov. 1999 - Nov. 2005). None of them was found with high significance value during the live time after considering the trial number. We derived the 90\% confidence level upper limits on the integral flux above 3 TeV assuming an energy spectrum of $E^{-1.6}$ and $E^{-2.0}$ for each source.

If this papers is presented for a collaboration, please specify the collaboration

The Tibet ASgamma Collaboration

Summary

Reference

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Session Classification : Posters 2 + Coffee

Track Classification: OG.2.3