

Anisotropy constraints on blazar models

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Angular power spectrum is getting more and more important in recent years to study components of the diffuse gamma-ray background. Understanding constituents through this and other measurements is extremely important for our generic knowledge on high-energy sky. If we are interested in searching for new physics such as dark matter annihilation, it is essential to address all possible astrophysical source components. This study goes along this line, by providing important piece of information on blazars.

Summary

We interpret recent measurements of the angular power spectrum of the extragalactic gamma-ray background in order to constrain astrophysical components. Among several sources, blazars are considered to be the dominant source of the detected angular power spectrum. Therefore, we are able to extract important information on blazar luminosity function. In this work, we analyze data of both the source flux distribution and the angular power spectrum of the gamma-ray background, and put stringent constraints on relevant parameters of blazar luminosity function. We also discuss constraints on other components such as starburst galaxies.

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