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## Radio core dominance in Fermi blazars

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I would like to present our previous work on the radio core dominance in Fermi blazars. We compiled a sample of 4437 sources with available radio core-dominance parameters defined as the ratio of the core flux densities to extended ones, namely,  $R = \text{Score}/\text{Sext.}$ , which includes 696 Fermi-detected sources respect to the catalog of FL8Y, the first eight years of science data from the Fermi Gamma-ray Space Telescope mission, and the rest of them are non-Fermi-detected sources. In our sample, 636 blazars are Fermi-detected and 1294 are not, and also consists of other subclasses such as Seyfert, Fanaroff-Riley I/II and normal galaxies. We investigate various different properties between Fermi-detected sources and non-Fermi-detected ones by using the core-dominance parameters as the previous study has shown that  $R$  is a good indication of beaming effect.

We then calculate the radio spectral indices for whole sample and adopt  $\gamma$ -ray photon indices for Fermi sources from FL8Y catalog for discussing their different performances on different subclasses, and obtain the relation between core-dominance parameters and radio spectral indices for both Fermi and non-Fermi sources according to the two components model on radio band, which are consistent with our previous study.

We found that the core-dominance parameters and radio spectral indices are quite different for different subclasses of AGNs, not only for Fermi sources but also non-Fermi sources, particularly,  $R$  for the former ones is averagely higher than later ones. We also adopt the same relation on core-dominance parameters and  $\gamma$ -ray photon indices for Fermi sources by taking the same assumption with two components model on  $\gamma$ -ray band, and obtain the fitting results indicating that the  $\gamma$ -ray emissions of Fermi blazars are mainly from the core component, which is perhaps associated with the beaming effect. Therefore, Fermi blazars are beamed.

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