Spectral index distribution of FR I and FR II radio lobes: Case study of 4C 11.71 and 4C 14.11

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The goal of this paper is to investigate the spectral index distribution of radio Active Galactic Nuclei (AGNs). We focused on the distribution of spectral indices over the lobes, as well as in their hotspots. For this purpose, we used the observations at several frequencies in radio domain, taken from the sky surveys. Particularly, we used Leahy's Atlas of radio-emitting Double Radiosources Associated with Galactic Nuclei (DRAGNs), Jodrell Bank Centre for Astrophysics in Manchester, and radio range surveys form Max-Planck-Institute for Radioastronomy in Bonn. We investigated an example of Fanaroff-Riley Class I (FR I) and an example of Fanaroff-Riley Class II (FR II) source. We found that the non-thermal (synchrotron) radiation dominates over the areas of the lobes.