

Relation between continuum radio spectra and parsec-scale properties of extragalactic radio sources

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We present the results of a joint analysis of VLBI and total continuum radio spectra measurements for the complete sample of 502 extragalactic radio sources with declination $>+75$ degrees and NVSS flux density > 0.2 Jy at 1.4 GHz. We use data of our VLBA Northern Polar Cap Survey observed at 13 and 3.6 cm as well as instantaneous 2-22 GHz broad-band spectra measured at RATAN-600. Parsec scales detections, size, compactness, brightness and spectral index are compared versus shapes of integrated continuum spectra (flat, steep, peaked, etc.) for the observed complete sample. We discuss the fraction and properties of archetypal blazars, CSS, and GPS targets within the population of extragalactic radio sources and make predictions of a fraction of detections expected for future blind VLBI surveys.