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Title: Large Sample Studies of Blazars Spectral Indices

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Studying radio to millimeter spectral indices of a large sample of blazars enables us to better understand the evolutionary properties between BL Lac objects (BLOs) and flat spectrum QSOs (FSRQs). BLO and FSRQ are two subclasses of blazars, where blazars are a type of radio loud active galactic nuclei with their relativistic jet pointing to our line of sight, making them highly variable. In this study, we used the 5-th edition Roma-BZCAT, which is a multifrequency catalog of blazars, the ALMA calibrator catalog (ACC), and other online archival data to determine the radio and the radio to millimeter spectral indices properties of 181 BLOs and 828 FSRQs. Besides, we calculate variability amplitudes using the structure function of ALMA band 3, 6, and 7 light curves from ACC. We found significant difference in the radio and the radio-mm spectral index of high and low redshift FSRQs ($0 \leq z < 1.5$). Also, there is significant difference in the radio-mm spectral index distribution for BLOs and the low redshift FSRQs, i.e., BLOs display steeper spectrum than low redshift FSRQs, which could be due to electron ageing effect. No significant correlation was found for the spectral index-variability amplitude relation.