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Spectral Energy Distribution variation in BL Lacs and FSRQs

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We present the results of our study of spectral energy distributions (SEDs) of a sample of ten low- to intermediate-synchrotron-peaked blazars. We investigate some of the physical parameters most likely responsible for the observed short-term variations in blazars. To do so, we focus on the study of changes in the SEDs of blazars corresponding to changes in their respective optical fluxes. We model the observed spectra of blazars from radio to optical frequencies using a synchrotron model that entails a log-parabolic distribution of electron energies. A significant correlation among the two fitted spectral parameters (a, b) of log-parabolic curves and a negative trend among the peak frequency and spectral curvature parameter, b, emphasize that the SEDs of blazars are fitted well by log-parabolic curves. On considering each model parameter that could be responsible for changes in the observed SEDs of these blazars, we find that changes in the jet Doppler factors are most important.

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