Spectral analysis of S5 1803+784 in the recent flaring state

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S5 1803+784 is a BL Lac object. Unlike most low synchrotron peaked (LSP) blazars, the spectrum of S5 1803+784 is poorly fitted with a single zone synchrotron self-Compton (SSC) leptonic jet model. This could be why recent multiwavelength studies show no clear correlation between the synchrotron emission and the gamma-ray emission in this blazar. We utilize a simple single-zone leptonic jet emission model with external Compton (EC) originating from the dusty torus (DT) to explain the emission and to produce the best-fit parameters of the emission process. We present here the spectral analysis of the recent flaring state reported in Astronomy Telegram (ATel #13633) using data from Fermi-LAT and NED archival data. The spectral energy distribution (SED) model of the flare and the quiescent states best-fit parameters produced using Jetset code are used to constrain the upper limit of the γ -ray emission region length scale, the jet energetics, and the likely acceleration mechanism of the blazar during the flare.

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