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The Fermi blazar phenomonology in one parameter[1] DEMOS-THENES KAZANAS, NASA Goddard Space Flight Center, STELLA BOULA, APOSTOLOS MASTICHIADIS, University of Athens, Greece — We present comprehensive modeling of the SEDs of the ensemble of the Fermi-LAT detected blazar spectra, commonly known as 'the blazar sequence'. As shown by Fermi, the entire sequence is encapsulated in a single diagram that relates the LAT spectral index to the blazar synchrotron peak frequency. The former ranges between values 1.5 and 3 while the latter spans five decades from 10^{12} to 10^{17} Hz, to form a one parameter family. We show that this parameter is basically the (normalized to the Eddington value) dimensionless blazar accretion rate. An aspect of this model, crucial in reducing the many parameters of the spectra of individual objects, is the presence of an accretion disk MHD wind which spans the entire accretion disk domain, of order 10^6 gravitational radii; this reprocesses the central engine continuum to similar distances along the jet axis and thus provide significant γ-ray emission at distances from the black hole as large as 1pc, as implied by the observations. We will also discuss the issue of blazar neutrinos within the context of this same model.

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