INVERSE COMPTON RADIATION IN BLAZARS

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We generalize previous calculations of the beaming pattern of photons produced by inverse Compton scattering. The new result agrees with previous computations performed in the Thomson limit. We demonstrate that the Thomson approximation describes adequately the MeV peak emission of the strong lined EGRET detected blazars, while the EGRET-detected GeV spectrum is significanlty affected by Klein–Nishina effects, the spectrum being softer than that calculated in the Thomson limit. We further show that the change in spectral index of the inverse Compton emission across ϵ_{peak} can exceed the value of 0.5 predicted by computations performed in the Thomson limit. The model spectra agree with OSSE and COMPTEL limits on this break.