Abstract:
Gamma ray astronomy can act as probes to several background radiation fields of cosmological interest. This includes the extragalactic background light, which is the integrated light from all the stars and dust that have existed in the observable universe; and the intergalactic magnetic field, which could be a probe of the early universe. I will describe how measurements of distant gamma-ray sources with telescopes on the ground and in space can be used to constrain these fields.