Modelling TXS0506+056 with internal $\gamma - \gamma$ secondaries

37th International Cosmic Ray Conference (ICRC 2021)
Online – Berlin, Germany

Sunanda and Reetanjali Moharana

Department of Physics
Indian Institute Of Technology Jodhpur,India

July 12th – 23rd, 2021

Introduction

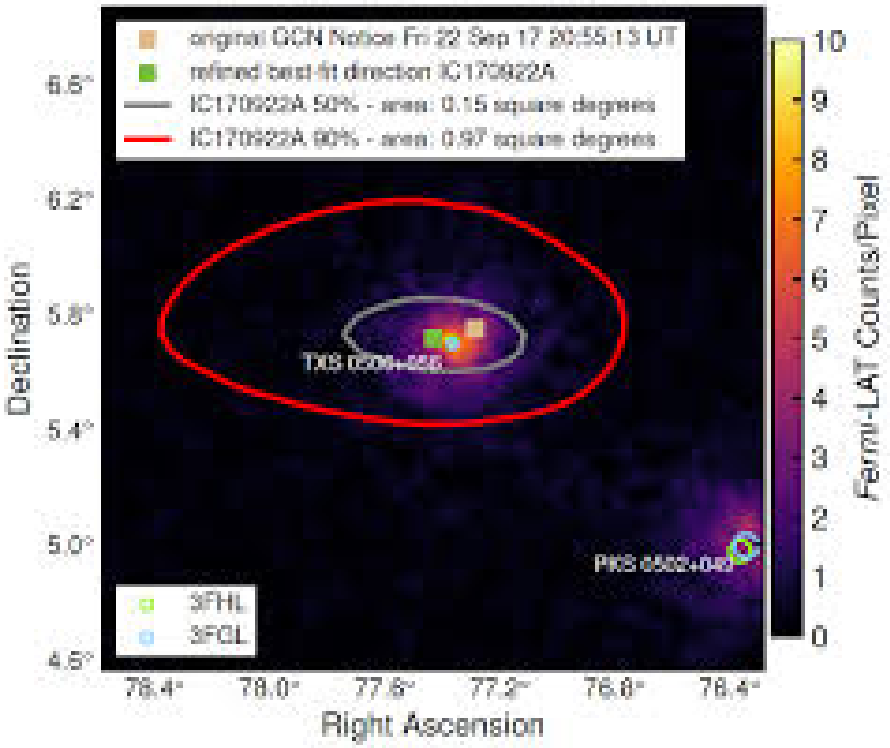

Figure: Fermi-LAT observation of IceCube-170922A location [*arxiv* : 1807.08816]

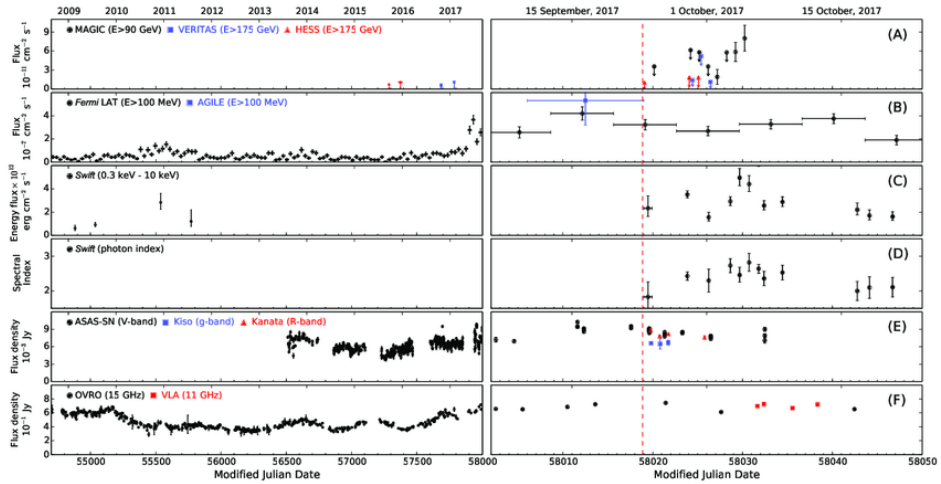

Figure: Time-dependent multiwavelength observation of TXS0506+056 [*arxiv* : 1807.08816]

Methodology

Parameters used in the lepto-hadronic model are

Parameters	Value	Parameters	Value
α	1.02	$l_0\ (1/erg)$	5×10^{45}
γ'_{emin}	1300	γ'_{emax}	7×10^3
δ	21.5	$B\ (Gauss)$	36
z	.3365	d(pc)	1.79×10^9
R (cm)	9.3×10^{14}	$N_0(1/erg)$	1.31×10^{42}
γ'_{pmin}	1	γ'_{pmax}	1.06×10^{10}
α_p	2	$t_{var}\ (days)$	60

Result

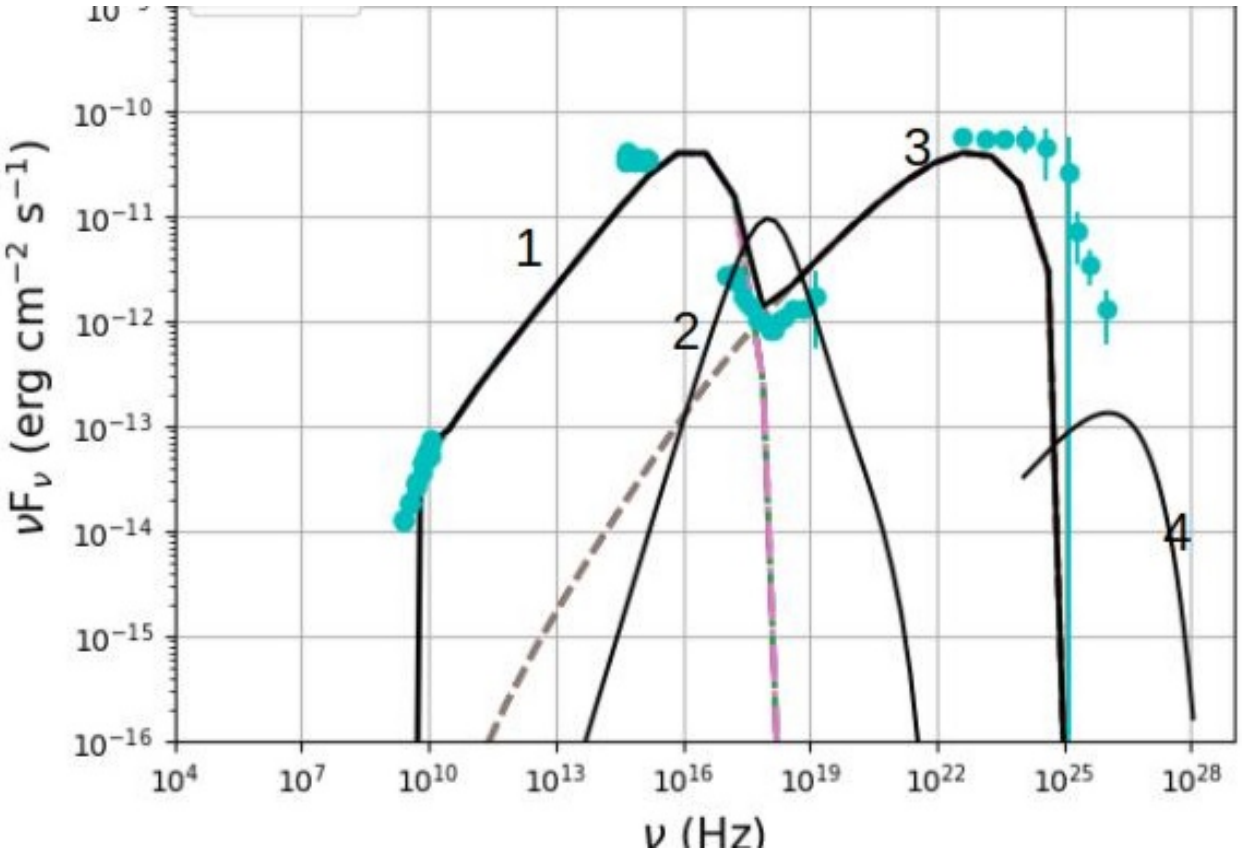

Figure: [The first curve characterizes electron synchrotron and the second curve denotes secondary contribution of gamma-gamma absorption and the 3rd curve shows SSC contribution and the 4th curve illustrates proton synchrotron contribution]

Thank You