

SEARCH FOR POINT SOURCES OF PRIMARY GAMMA RAYS ABOVE 10TEV WITH AN AIR SHOWER ARRAY AT MT. CHACALTAYA

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Several point sources of primary gamma rays below 10TeV have been observed with atmospheric Cherenkov telescopes. At present, it is concluded that these gamma rays are produced via the synchrotron and the inverse Compton processes. On the other hand, in order to study the origin of cosmic rays with nuclear components, it is crucially important to search for point and diffuse sources of primary gamma rays above 10TeV as decay products of secondary neutral pions. For this purpose, we improved an air shower array at Mt. Chacaltaya by adding twelve 4m² scintillation detectors in 1996 and twenty-one 1m² ones in 1998 to reduce the threshold energy to 6TeV to old array(threshold energy, 30TeV). Since the exposure is less than one year yet, we did not find any significant source up to now. Then we will report the upper limits of primary gamma ray fluxes for several attractive sources such as Crab nebula, Vela pulsar, Sco X-1 and so on.