Monitoring Radio Galaxies with HAWC

D. Avila Rojas, R. Alfaro, N. Fraija, M. M. González-Sánchez for the HAWC Collaboration

Abstract

With an instantaneous field of view of 2 sr and a duty cycle $> 95\%$, the High Altitude Water Cherenkov (HAWC) Gamma-Ray Observatory is a perfect instrument for monitoring variable TeV sources. Because radio galaxies are a type of Active Galactic Nuclei (AGN) with their jets misaligned with respect to our line of sight, they may help us to probe the physics of very-high-energy (VHE) emission processes. Three out of four radio galaxies that have been detected at TeV energies by other facilities are located within the field of view of the HAWC Observatory: M87, NGC 1275, and 3C 264. A search for TeV gamma rays at their locations yields no statistically significant excess of counts. We present corresponding upper limits for each radio galaxy and light curves covering 3 years of data taken with HAWC.