

Gamma-rays from nearby galaxies: from star formation to nuclear activity

A. Carramiñana (INAOE), T.A.D. Paglione (FCRAO, U.Mass), J.J. Blom (INAOE)

We present our analysis and interpretation of gamma-ray data from the normal galaxy M31, nearby starburst galaxies and the radio galaxy Centaurus A. We estimated the expected gamma-ray luminosity due to cosmic-rays produced by star formation and Supernova explosions, and we compared it with observational results. While for M31 and the starburst sample the measured upper limits are consistent with gamma-ray production through star formation processes only, the Cen A emission is dominated by an additional (AGN) component.