

Abstract Submitted  
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**Gamma-Ray Bursts Search with HAWC** CEDERIK DE LEON, HUMBERTO SALAZAR IBARGUEN, Univ Autonoma de Puebla, LUIS MANUEL VILLASEOR CENDEJAS, Univ Michoacana de San Nicols de Hidalgo, HAWC COLLABORATION — The High Altitude Water Cherenkov (HAWC) Gamma-ray observatory is a wide field-of-view observatory sensitive to gamma rays in the 100 GeV - 100 TeV energy range, located in Mexico at an altitude of 4100 m. In the present work we present results on the search for excesses in the rates of signals from the individual photomultiplier tubes (PMTs) using the Time to Digital Converters (TDC) of HAWC. This search is based on the implementation of the Moving Average Ratio Analysis (MARA) focused on the characterization of the different physical phenomena that may give rise to such excesses: noise in the PMTs, atmospheric conditions related with thunderstorms and excesses of astrophysical origin such as variable sources of high energy gamma rays and in particular GRBs. In particular we present an analysis over the HAWC historical data for the search of such excesses and elaborate on the possible physical interpretation of the found excesses.

Cederik De Leon  
Univ Autonoma de Puebla

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