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CHERENKOV WATER DETECTOR CALIBRATION BY DETECTED MUONS SIGNALS

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The interest in the study of astroparticles has grown exponentially in recent years and has spread rapidly throughout the world, especially in Latin America, where it has had a strong impact due to the ease of working and its low cost. The present work focuses on the study of the simulations performed using CORSIKA and GEANT4, the selection of vertical muons and the proposal of a simulation for the response of the photomultiplier tube. For this, experimental data for vertical muons collected in the city of Buenos Aires were analyzed using a coincidence system between a Cherenkov detector and scintillating plastics. The same data were used to find the parameters in the function that simulates the response of the photomultiplier tube.

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