

Abstract Submitted
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Measuring Optical Properties of Water in HAWC¹ STOIAN BORISSOV, Georgia Institute of Technology, HAWC COLLABORATION — The attenuation properties of water inside the tanks at HAWC affect the detection of Cherenkov photons due to gamma ray induced air showers. Understanding the attenuation properties of the water enables better modeling of the detector response. A Geant4 simulation has been written to describe light propagation in the device used for determining optical attenuation length at HAWC. We discuss systematic uncertainties of the current HAWC method of attenuation measurement. These relate to geometry, such as the diameter of the sensor used to measure attenuation and optical effects such as total internal reflection. We will provide alternative methods of measuring water properties that allow the independent measurement of scattering and absorption length.

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