

Abstract Submitted
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Integrating Luminescent Concentrators into HAWC BRIAN CARVAJAL, SEGEV BENZVI, None, HIGH ALTITUDE WATER CHERENKOV (HAWC) COLLABORATION COLLABORATION — The High-Altitude Water Cherenkov (HAWC) observatory measures high energy cosmic and gamma rays using Photomultiplier Tubes (PMTs) inside large water tanks. To reduce the cost of future water-Cherenkov observatories, we investigate methods of light collection to reduce the number of PMTs while maintaining the same level of sensitivity. A luminescent concentrator offers the possibility of collecting and directing light towards the detector at very low cost. We have designed and tested a prototype luminescent concentrator using Kuraray wavelength-shifting fibers. We report on the optical gain of the fiber concentrator measured in the laboratory.

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None

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