Session H25 - Nuclear Instrumentation.
MIXED session, Sunday morning, April 19
Room C224, Columbus Conv. Center


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We present the TkOptics program that simulates the light response of an arbitrary shaped scintillation detector. The predicted light responses of pure CsI polygonal detectors, plastic scintillator staves, cylindrical plastic target scintillators and a Plexiglas light-distribution plate are discussed. We demonstrate how the different bulk and surface optical properties of the detector lead to the specific spatial and temporal light collection probability distributions. Results of high-statistics Monte Carlo simulations are compared with the detector responses measured in a custom-made cosmic muon tomography apparatus. The presented code can also be used to track particles intersecting complicated geometrical objects.

Part H of program listing