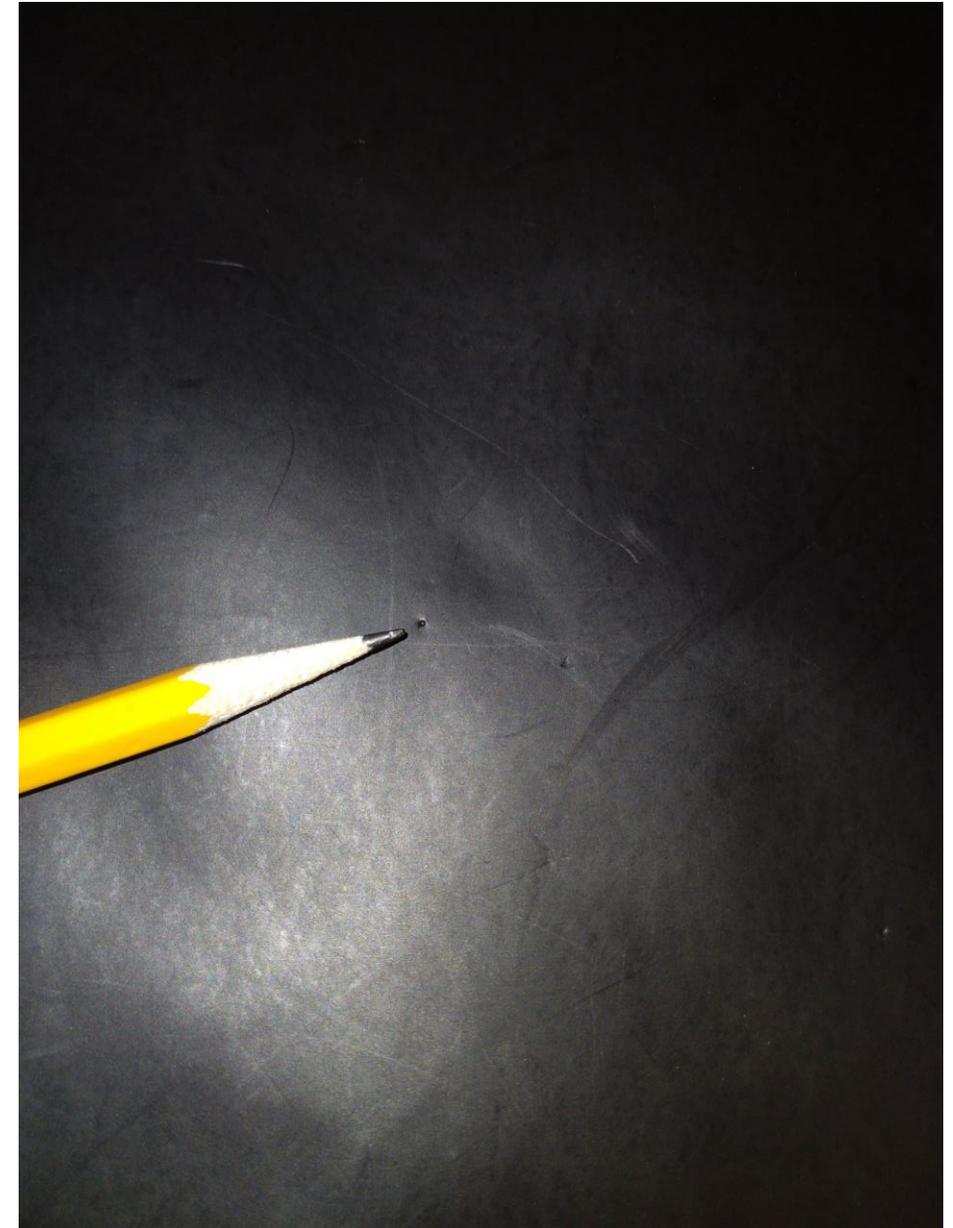


Light leaks in scintillator wrapping paper caused by tiny holes

R. Armendariz – 2024

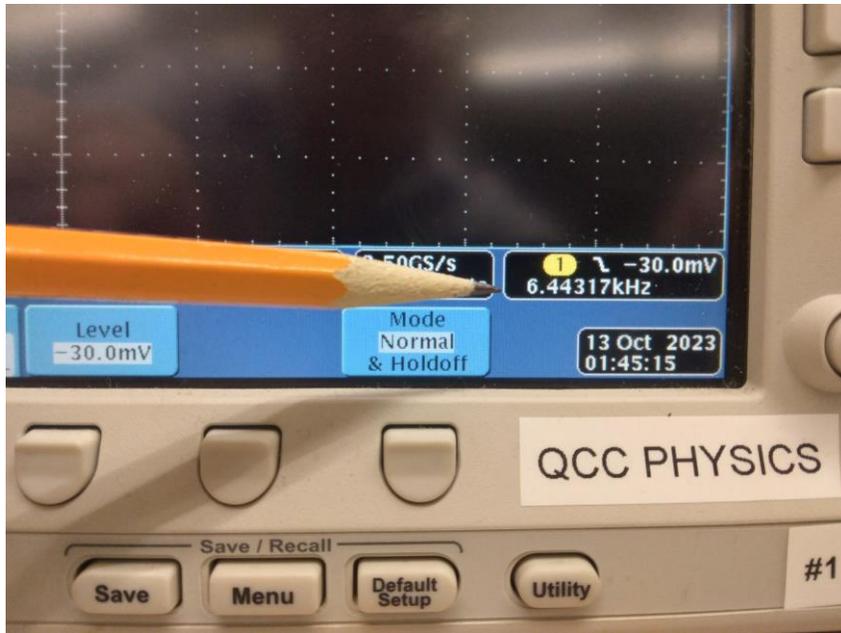
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In the picture the pencil tip is pointing to a 1 mm size hole in the black paper covering the plastic scintillator. At first the hole only looked like an indentation, but it turned out to be a huge light leak problem which would have introduced a lot of noise in the cosmic ray data



A pmt was mated to the end of the scintillator (outside of the picture), and the pmt output was connected to an oscilloscope. Shining a flashlight over the little hole caused the noise rate to increase from 6.4 kHz to 3 MHz!

When the flashlight was not shining over the hole the noise rate measured 6.4 kHz on the oscilloscope



When the flashlight was shining over the hole the noise rate measured 3 MHz on the oscilloscope

