

Abstract Submitted
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Particle Detection with Cadmium Telluride Quantum Dots

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Cadmium Telluride Quantum Dots are small semi-conductor particles, only several nanometers in size. Cadmium Telluride Quantum Dots will emit light of specific frequencies if light is applied to them, and these frequencies are dependent on the dots' size. But would they also emit light if a neutrino or neutron, were to pass through it? In this experiment we attempt to figure out if Cadmium Telluride Quantum Dots can serve as a neutron, neutrino, or gamma detector. If so, this could lead to the creation of a detector that can easily reconstruct the energy of neutron events in water. This could possibly aid in the detection of dark matter.

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