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Inelastic neutrino-nucleus and dark matter-nucleus scattering

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We study inelastic neutrino-nucleus and dark matter(DM)-nucleus scattering using argon, cesium, and iodine target nuclei. We use Bigstick, a nuclear shell model code, to obtain the form factors of the nuclei. For the experiment setup (COHERENT and CCM) we estimate event rates for neutrino and dark matter scattering processes. Lastly we estimate cross-section and event rates of the inclusive photon final state from the decay of the excited states.

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