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Neutrino Detection with ARGO

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The proposed ARGO detector, under development for deployment at SNOLAB is a 300-tonne fiducial mass single-phase liquid-argon detector. The physics program is broad and includes many relevant neutrino studies including a precise measurement of Boron-8 solar neutrinos from charged-current neutrino absorption on Ar-40. ARGO will have excellent supernovae neutrino sensitivity as well. The detector is being designed for ultra-low backgrounds to have sensitivity to Weakly-Interactiving Massive Particles with sensitivity well into the neutrino fog.

This talk will survey the physics program of ARGO, with particular attention to neutrino physics and the background control program. In addition, we will describe cutting-edge pixilated digital photon detectors that will allow for nano-second timing resolution and linear detector response to high energies.

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