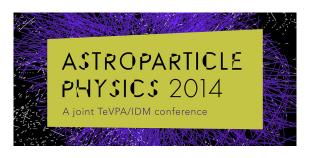
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Neutrinoless double beta decay and dark matter searches with CUORE-0 and CUORE

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The CUORE (Cryogenic Underground Observatory for Rare Events) experiment, currently under construction at the Gran Sasso National Laboratory (LNGS), will operate 988 TeO₂ bolometers at a temperature of around 10 mK, adding up a total mass of 750 kg. CUORE-0, a 52 TeO₂ bolometers array built using the same protocols developed for CUORE, is currently in operation at LNGS and has recently released the first data, showing a very promising background reduction with respect to its predecessor CUORICINO. Although the primary goal of the experiment is to look for neutrinoless double beta decay (0ν DBD) of 130 Te, the ultra-low radioactive background, large exposure and projected stability on working conditions over several annual cycles make it suitable for a search for annual modulation in the dark matter (DM) detection rate, provided a low energy threshold is achieved. Encouraging results have been obtained with CUORE-like bolometers thanks to a new low-energy triggering method, resulting in a \sim 3 keV energy threshold. In this talk, the status of the experiment, as well as the projected sensitivity to 0ν DBD and DM annual modulation of CUORE-0 and CUORE, are presented.

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