SEARCH FOR LEPTON NUMBER VIOLATION WITH CUORE

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The CUORE experiment, a ton-scale cryogenic bolometer array, recently began operation at the Laboratori Nazionali del Gran Sasso in Italy. The array represents a significant advancement in this technology and it is now applied for a high-sensitivity search for a lepton-number-violating process: Te-130 neutrinoless double-beta decay.

The first results extracted from 2 months of data taking are presented and discussed, in the framework of the achievements obtained by other collaborations and of future prospects for these studies.