



Poster session 4 – Friday 8 July

P4.055 Status and improved detector performance of EXO-200

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on behalf of EXO-200 collaboration

The EXO-200 experiment was created to search for neutrinoless double beta ($0\nu\beta\beta$) decay using an ultra-low background single-phase time projection chamber. The detector contains 110 kg of active liquid xenon, isotopically enriched in Xe-136, which acts as both the decaying nucleus and detection medium. The detector has demonstrated excellent energy resolution and background rejection capabilities and has set a lower limit on the $0\nu\beta\beta$ decay half-life of 1.1×10^{25} years at 90% C.L. in early 2014. The EXO-200 collaboration has since published several papers on experimental backgrounds and searches for rare or exotic processes. After a two-year data interruption, EXO-200 is now back online with significant hardware improvements, including a radon reduction air system and a front end electronics upgrade to improve the energy resolution. The improved detector performance since the restart and recent physics results will be presented.