

Status of the NEXT experiment

Tuesday 11 May 2021 14:30 (20 minutes)

The NEXT project will be presented, describing the excellent performance of the current NEXT-White apparatus (5 kg of enriched xenon), and the status of NEXT-100 detector (100 kg of enriched xenon), currently under construction. Plans for the ton-scale phase will also be discussed. Currently two options are being studied by the collaboration. NEXT-HD would be a detector with a mass in the range of 1 ton, which would build incrementally over NEXT-100 capabilities, and can explore comfortably lifetimes of 10^{27} years. An upgraded detectors with barium tagging and several tons of mass could be the next stage, able to reach a sensitivity beyond 10^{28} year. Intense R&D is under way aimed to produce a demonstrator of a barium-tagging capable detector within about 5 years.

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