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Development of NEW, towards the first physics results of NEXT

The NEXT $\beta\beta\nu$ experiment will use a high-pressure gas electroluminescent TPC to search for the decay of Xe-136. The development, construction and installation of NEXT-WHITE (NEW), the first radio-pure version of NEXT, will take place this year at Laboratorio Subterráneo de Canfranc. NEW will run initially using 10 kg of natural xenon during which time NEXT technology will be validated and the topological reconstruction algorithms refined. Moreover, the background model will be benchmarked using data. A second run will use enriched xenon and will make a first measurement of the two neutrino channel ($\beta\beta 2\nu$) by NEXT.

This poster will present the various technical aspects of the detector detailing the radio-pure solutions for a low background experiment and the low noise, high resolution measurement of both energy and position.

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