

The XENON Dark Matter Search Program

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The XENON program has helped develop the two-phase xenon time-projection-chamber technology into the most powerful means of directly detecting WIMPs. The program currently consists of the XENON100 and XENON1T experiments. The XENON100 experiment completed 225 live-days of data taking in 2012 that resulted, at the time, in the most stringent spin-independent elastic-scattering constrain on WIMPs. Currently, it is running and being used for detector and calibration R&D for future generations of Dark Matter detectors. Complementarily, the XENON1T experiment is under construction and will begin taking data this year. With a sensitive volume of 2.2 tons, the XENON1T experiment aims for a ~100 improvement over its predecessor. I will discuss the status of both experiments and our planned upgrade XENONnT, with a designed sensitivity of few times 10^{-48} cm².

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