

The XENON100 Detector for Dark Matter Searches

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The XENON100 detector, which has replaced the XENON10 prototype in the same shield and location at the Gran Sasso Underground Laboratory, is a dual phase (liquid-gas) xenon time-projection chamber for particle detection. The total amount of liquid xenon is 165 kg, of which 65 kg are in the active target enclosed in a teflon/copper structure, the rest being in the surrounding active veto. The direct and proportional UV light signal produced by particle interactions is detected by 242 PMTs (98 in the top array, 80 in the bottom array and 64 in the veto). The expected sensitivity of the XENON100 for spin-independent WIMP-nucleon couplings is $2e-45$ cm² for a 100GeV WIMP, with a planned (background-free) raw exposure of 6000 kg x days. In this talk, the present status of the XENON100 experiment and the near-future plans will be reported.

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