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The LUX Dark Matter Search Program KENNETH CLARK, Case Western Reserve University, LUX COLLABORATION — LUX (Large Underground Xenon) is a two-phase Time Projection Chamber that will instrument 350 kg of Xenon, 100 kg of which will form a fiducially active target for WIMP interactions. It will be deployed at the Sanford Underground Lab at the Homestake Mine in Lead, South Dakota, where the Early Implementation Program is providing space at the 4850 feet level for LUX. The first detector with 120 photomultiplier tubes is being constructed and is projected to start collecting data in early 2010. Prior to this installation, a prototype detector with a reduced fiducial volume has been in operation in an above ground environment. Results from this detector, along with discussion of the full LUX sensitivity will be presented.

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