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### **The NEXT Experiment**

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The NEXT collaboration is pursuing a program of high pressure xenon gas experiments with the goal of mounting sensitive, ultra-low background, ton-scale searches for neutrino less double beta decay. This talk will present recent results from the presently running NEXT-White demonstrator, a status update on construction of NEXT-100, and a discussion of the future ton-scale phases. We will also discuss the latest RD for the NEXT program including studies of diffusion-reducing gas mixtures and the development of barium ion tagging based on single molecule fluorescence imaging.