

Abstract Submitted  
for the APR10 Meeting of  
The American Physical Society

**Gas phase R&D for the Enriched Xenon Observatory** CHRISTINA HAGEMANN, Carleton University, EXO COLLABORATION — The EXO (Enriched Xenon Observatory) collaboration will search for neutrinoless double beta decay using Xe-136. A liquid-phase prototype, EXO-200, is currently being commissioned and will use 80% enriched Xe-136 to reach an expected sensitivity of the double beta decay mass of approximately 150 meV. Complimentary efforts are underway to explore a gas phase detector option. The current status of the EXO gas phase, which is studying the use of Micromegas and electroluminescence techniques, will be presented. Progress towards a gas phase prototype, which will be used to evaluate the ultimate energy resolution and track reconstruction achievable for 1 MeV electrons, will be shown.

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Date submitted: 23 Oct 2009

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