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The DEAP/CLEAN dark matter search MICHAEL AKASHI-RONQUEST, University of North Carolina, DEAP/CLEAN COLLABORATION — The DEAP/CLEAN collaboration is constructing the latest generation of a series of single-phase Noble-liquid dark matter experiments. The Mini-CLEAN-360 detector will be the next of these experiments to be brought on-line in 2009, and is expected to obtain a sensitivity to the spin-independent WIMP-nucleon cross-section in the neighborhood of 10^{-45}cm^2 for $M_{\mathrm{WIMP}} \approx 100$GeV. The DEAP/CLEAN detectors observe only the scintillation light from the liquid target, removing the need for TPCs which can lower the light yield and make larger scale experiments a challenge. The ratio of the amount of prompt to total scintillation light provides an excellent statistic with which to discriminate background electron from signal nuclear recoils. The MiniCLEAN-360 experiment will have the ability to utilize LAr or LNe as a target, which in the event of a positive signal will allow the expected A^2 dependence in cross section to be probed, as well as produce very different intrinsic background characteristics. In addition to the status of the MiniCLEAN-360 detector, data from the smaller R&D detectors MicroCLEAN and DEAP-1 will be presented, including their demonstrated background rejection power. Finally, the schedule and design for a ton-scale detector, DEAP/CLEAN-3600, will be reviewed.

[X] Prefer Oral Session
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