

XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



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Status of the MOLLER Experiment

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The future Measurement of a Lepton-Lepton Exclusive Reaction (MOLLER) experiment will run at Jefferson Lab in Hall A. MOLLER will make an ultra-precise measurement of the weak charge of the electron, 5x more precise than E158 and with an uncertainty on the weak mixing angle that is on par with the two collider measurements at the Z-pole. The parity-violating asymmetry in the scattering of longitudinally polarized electrons from an unpolarized liquid hydrogen target will be measured by an array of 224 quartz detectors. Due to its extreme precision, MOLLER is sensitive to mass scales of new physics (depending on the particular model) up to 42 TeV. The experiment is complementary to measurements at CERN, as well as the PVDIS measurements that will be possible with the SoLID spectrometer. I will provide a description of the experiment and an update on the experimental design and the project status.

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