

The 24th International Spin Symposium

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The MOLLER experiment

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The precision extraction of the weak mixing angle at low momentum transfer can significantly constrain extensions to the Standard Model. One such measurement will be undertaken by the MOLLER collaboration starting in 2025. Using longitudinally polarized electrons scattering from unpolarized electrons in a liquid hydrogen target the experiment will be able to measure the approximately 34 parts per billion parity violating asymmetry to a precision of 2%. Such high precision requires fine control of systematics and innovations in magnet and detector design. The status of the project, experimental description and potential implications of the result will be discussed.

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Session Classification: Fundamental Symmetries and and Spin Physics Beyond the Standard Model

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