

# The 24th International Spin Symposium

Contribution ID: 160

Type: **Parallel Session keynote talk (by invitation only)**

## The MOLLER experiment

*Thursday, 21 October 2021 07:00 (30 minutes)*

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

**Track Classification:** Parallel Sessions: Fundamental Symmetries and and Spin Physics Beyond the Standard Model