

## **Status of the P2 Experiment: A Measurement of the Weak Mixing Angle at Low Energy**

*Monday, 10 September 2018 15:50 (20 minutes)*

The P2 collaboration prepares a precise determination of the weak mixing angle at low energy at the upcoming MESA accelerator in Mainz. The projected relative accuracy is 0.15% which is comparable to the existing measurements at the Z-pole. This accuracy will allow for a test of the Standard Model up to a mass scale of 50 TeV.

The experimental method, the measurement of the parity violating asymmetry in the scattering of polarized electrons off unpolarized protons, will be discussed along with the challenging experimental techniques associated with such a precision goal. The status of the project will be reported.

**Primary author:** BAUNACK, Sebastian (JGU Mainz)

**Presenter:** BAUNACK, Sebastian (JGU Mainz)

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

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