



Contribution ID: 276

Type: Poster

## Proton Structure through the Two-Photon Exchange

*Tuesday, 18 October 2022 16:31 (1 minute)*

In this poster presentation, I will discuss the two-photon exchange (TPE) as a crucial higher-order contribution to lepton-proton scattering and the theory of light muonic atoms. In particular, I will focus on the proton polarizability contribution as the dominant uncertainty in the theory prediction of the Lamb shift and the hyperfine splitting (HFS) in muonic hydrogen ( $\mu\text{H}$ ). It is important to provide the best possible theoretical estimate for the TPE correction to guide the upcoming high-precision measurements of the  $\mu\text{H}$  ground-state HFS.

**Primary author:** SHARKOVSKA, Vladyslava (PSI - Paul Scherrer Institut)

**Co-author:** HAGELSTEIN, Franziska (PSI - Paul Scherrer Institut)

**Presenter:** SHARKOVSKA, Vladyslava (PSI - Paul Scherrer Institut)

**Session Classification:** BBQ - Drinks & Posters