

Measurement of the pion form factor in the rho-peak region relevant for $(g-2)_\mu$

Measurements of the cross section $e^+e^- \rightarrow \pi^+\pi^-$, i.e. of the pion form factor, are known to be decisive for the hadronic contribution of the anomalous magnetic moment of the muon, $(g-2)_\mu$. We present a new measurement of the pion form factor at BESIII in the energy range between 600 and 900 MeV, which corresponds to the peak region of the rho and omega resonances. The method of initial state radiation has been exploited in this measurement and a systematic uncertainty of 0.9% has been achieved. The impact of the new BESIII data on $(g-2)_\mu$ as well as a comparison to existing data of the KLOE, BABAR, and VEPP-2M collaborations is presented.

Summary

Primary author: REDMER, Christoph Florian (Johannes Gutenberg-University Mainz)

Presenter: REDMER, Christoph Florian (Johannes Gutenberg-University Mainz)