

# Magnetic Polarisability with the background Field Method

*Thursday, August 6, 2020 4:00 PM (20 minutes)*

The magnetic polarisability is a fundamental property of hadrons, which provides insight into their structure in the low-energy regime. The pion magnetic polarisability is calculated using lattice QCD in the presence of background magnetic fields. The results presented are facilitated by the introduction of a new magnetic-field dependent quark-propagator eigenmode projector and the use of the background-field corrected clover fermion action. The magnetic polarisabilities are calculated in a relativistic formalism, and the excellent signal-to-noise property of pion correlation functions facilitates precise values.

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**Session Classification:** Hadron Spectroscopy and Interactions

**Track Classification:** Hadron Spectroscopy and Interactions