



Contribution ID: 102

Type: **Talk**

## Nucleon-pion-state contributions in the determination of the nucleon axial charge

*Wednesday, 15 July 2015 17:50 (20 minutes)*

The nucleon-pion-state contributions to QCD two- and three-point functions used in the calculation of the nucleon axial charge are studied in chiral perturbation theory. For sufficiently small quark masses and large volumes the nucleon-pion states are expected to have smaller total energy than the single-particle excited states. To leading order in chiral perturbation theory the results do not depend on low-energy constants associated with the interpolating nucleon fields and apply to local as well as smeared interpolators. The nucleon-pion-state contribution is found to be at the few percent level and non-negligible for precise determinations of the axial charge.

**Primary author:** Dr BAER, Oliver (Humboldt University Berlin)

**Presenter:** Dr BAER, Oliver (Humboldt University Berlin)

**Session Classification:** Hadron Structure

**Track Classification:** Hadron Structure