



Contribution ID: 105

Type: **Poster + flash-talk**

## Forward proton measurements with ATLAS

*Monday 1 August 2022 18:30 (10 minutes)*

The elastic scattering of protons at 13 TeV is measured in the range of protons transverse momenta allowing the access to the Coulomb-Nuclear-Interference region. The data were collected thanks to dedicated special LHC beta\* = 2.5km optics. The total cross section as well as rho-parameter, the ratio of the real to imaginary part of the forward elastic scattering amplitude, are measured and compared to various models and to results from other experiments. The measurement of exclusive production of pion pairs at the LHC using 7 TeV data is also presented. This represents the first use of proton tagging to measure an exclusive hadronic final state at the LHC.

### On behalf of collaboration?

ATLAS Collaboration

### Attending in-person?

Yes

### Subfield

HEP experiment

### Preferred track

Forward & Diffractive Physics

**Presenter:** SCHMIDT, Mustafa Andre (Bergische Universitaet Wuppertal (DE))

**Session Classification:** Poster Session