

Contribution ID: 21

Type: Oral

FIrst Data with FASER: A new LHC experiment for long lived particle searches

FASER, the ForwArd Search ExpeRiment, is an experiment dedicated to searching for light, extremely weaklyinteracting particles at CERN's Large Hadron Collider (LHC). Such particles may be produced in the very forward direction of the LHC's high-energy collisions and then decay to visible particles inside the FASER detector, which is placed 480 m downstream of the ATLAS interaction point, aligned with the beam collisions axis. FASER also includes a sub-detector, FASERv, designed to detect neutrinos produced in the LHC collisions and to study their properties. FASER was designed, constructed, installed and commissioned during 2019-2022 and has been taking physics data since the start of LHC Run 3 in July 2022. This talk will present the status of the experiment, including the detector design, the physics sensitivity and the detector performance with first collision data.

Primary author: ANTEL, Claire (Universite de Geneve (CH)) **Presenter:** ANTEL, Claire (Universite de Geneve (CH))