Contribution ID: **994** Type: **Poster**

Measurement of ω mesons in pp collisions at the LHC with ALICE

Wednesday, 6 April 2022 18:30 (4 minutes)

Measurements of neutral mesons in small collision systems can serve as a baseline to understand modifications in heavy-ion collisions, where a QGP is formed.
These measurements can also be used to test pQCD predictions and to constrain fragmentation functions as well as parton distribution functions.
Furthermore, a good understanding of particle production enables the measurement of direct photons yields, where a large background of decay photons is present and needs to be accounted for.

In this poster the invariant cross section of the ω-meson production in pp collisions at a center of mass energy of $\sqrt{s} = 13$ TeV, as measured by ALICE via its dominant decay channel $\omega \rightarrow \pi^+\pi^-\pi^0$, will be presented. While charged pions can directly be measured by the ALICE central barrel trackers, neutral pions are reconstructed using their decay channel into two photons. This reconstruction is realized with several complementary methods making use of various calorimeters and the ALICE central barrel trackers. The combined result covers an unprecedented p_T range with small statistical and systematic uncertainties.

Primary author: LUHDER, Jens Robert (Westfaelische Wilhelms-Universitaet Muenster (DE))

Presenter: LUHDER, Jens Robert (Westfaelische Wilhelms-Universitaet Muenster (DE))

Session Classification: Poster Session 2 T05 / T13

Track Classification: QGP in small and medium systems