



Contribution ID: 582

Type: Poster

## Search for magnetic monopoles with diphoton events at the LHC

*Friday, 8 July 2022 20:10 (20 minutes)*

The existence of magnetic monopoles is predicted by various theories of physics beyond the Standard Model. The introduction of magnetic monopoles can explain the electric charge quantization and restore the symmetry in Maxwell's equations with respect to magnetic and electric fields. Despite intense experimental searches, they remain unobserved to date.

The Large Hadron Collider (LHC) is achieving energies never reached before, opening possibilities for new physics including the discovery of exotic particles in the TeV mass range. We study the observability of virtual monopoles in the  $\gamma\gamma$  channel at the LHC for monopole masses in the range 500-1000 GeV. More specifically, we consider the central exclusive production of photon pairs in both ultra-peripheral Pb-Pb and pp collisions.

### In-person participation

Yes

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**Session Classification:** Poster Session

**Track Classification:** Beyond the Standard Model