Contribution ID: **131** Type: **Parallel talk**

A joint ep/pp interaction region and detector at the LHC and the FCC

Tuesday, 28 March 2023 11:10 (10 minutes)

The possibility of a joint interaction region and detector which could study ep/eA and pp/pA/AA at the HL-LHC was presented in [1]. Here we show the most recent developments on the design of such novel interaction region where, in ep/eA mode, one hadron or nuclear beam must go through the region unscathed while in hh mode that beam must be focused to collide with the other hadron or nuclear beam. We also comment on the integration with the other HL-LHC interaction points and on the realisation of such interaction region at the FCC. We finally present a detector concept suitable to serve precision measurements both in eh and hh collisions.

[1] K.D. J. Andre et al., Eur. Phys. J. C 82 (2022) 1, 40, e-Print: 2201.02436 [hep-ex].

Submitted on behalf of a Collaboration?

Yes

Participate in poster competition?

Primary author: NEWMAN, Paul Richard (University of Birmingham (GB))

Presenter: NEWMAN, Paul Richard (University of Birmingham (GB))

Session Classification: WG6

Track Classification: WG6: Future Experiments