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FCC-ee & hh cryogenic system conceptual design, status & perspectives

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Capitalising on the cryogenic operation experience of the LHC and thanks to the promising results of the R&D efforts, the first phase of the Future Circular Collider (FCC) study presents in its Conceptual Design Report (CDR) published in January 2019 a clear route to a post-LHC machine, which shall be housed in a new 100km circumference tunnel. Regarding the cryogenic system, it is describing the proposed architecture required by the implementation of the staged FCC programme, which would integrate in sequence a lepton (FCC-ee) then a hadron (FCC-hh) collider in the same tunnel with related cryogenic system upgrades respectively.

This presentation will cover the current status of the study so far, gathering the cryogenic conceptual design work already achieved. Foreseen organization of the cryogenics work package within the Technical Infrastructure Working Group Pillar should be addressed. Objectives for the second study phase, including tentative timeline and next steps should be covered.

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