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## **Fri-Mo-Or25-02: Construction and Cold Test of the Superferric Skew Quadrupole for HL-LHC**

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INFN is developing at LASA lab (Milano, Italy) the prototypes of five corrector magnets, from skew quadrupole to dodecapole, which will equip the high-luminosity interaction regions of the High Luminosity-LHC (HL-LHC). These magnets are based on a superferric design, which allows a relatively simple, modular and easy to construct magnet. This activity takes place within the framework of a collaboration agreement between CERN and INFN. Four prototypes, from sextupole to dodecapole, have been built and tested starting in 2016. We present here the last prototype of the high order correctors, to be installed in LHC, the skew quadrupole: magnetic and mechanical design are discussed together with quench protection.

We report also on the overall experience gained during construction aiming toward the series production. The power test of the quadrupole, including the training, the qualification and the quench behavior in operational conditions are also described.

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