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Search for four-top production in CMS using the latest collision data (2016 - 2018) NICHOLAS MANGANELLI, University of California, Riverside; CERN, CMS COLLABORATION COLLABORATION — The production of four top quarks is predicted by the Standard Model with a cross-section of 12fb, 69,000 times rarer than top-antitop production, and has not yet been observed. With the high invariant mass of the system and multiple decay channels, the process produces distinct signatures including 4 b-jets and multiple lighter-quark jets (up to 8 in the all-hadronic decay) and massive leptons (up to 4 in the all-semi-leptonic decay). The latest results from CMS for 2016 to 2018 data taking at the LHC are presented, with a focus on non Semi-Leptonic decays.

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