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## **Charged particle track reconstruction in CMS using fast algorithms implemented in hardware: an overview of the proposed implementations to be used for the HL-LHC and the current efforts to demonstrate their operation**

*Tuesday, 7 June 2016 15:00 (1h 30m)*

The CMS detector will be upgraded in preparation for the high luminosity operation of the Large Hadron Collider, which is due to start in 2025. The CMS collaboration plans to reconstruct the trajectories of charged particles produced in the LHC collisions, using advanced electronics processing data from its tracking detector. The resulting tracks must be available within a few microseconds, such that they can be used as input to the level-1 trigger. This talk introduces the proposed system implementations and the current efforts to demonstrate charged particle tracking in hardware.

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