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## CMS Phase-2 Inner Tracker Pixel Chip Prototype Tests

The Compact Muon Solenoid (CMS) experiment is preparing for the Phase-2 upgrade to work with the High-Luminosity LHC. The upgraded CMS detector will feature a completely new tracker system. The CERN/RD53 Collaboration is in charge of developing the readout chip for the upgraded pixel detector (Inner Tracker).

Currently, the 2nd generation prototype chips RD53B CMS (also codenamed CROC\_v1) are undergoing tests. We will present the latest test results for single chips with sensors. We will mainly focus on optimizing the chip's calibration process for realistic experiment conditions and testing the newest features of the currently developed DAQ system.

We will provide details on optimizing the signal detection threshold and signal gain, as well as studying the performance of various triggering options for single-chip tests, using both the internal calibration circuit and a radioactive X-ray source for these purposes.

### Type of contribution

Talk

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