



中国科学院高能物理研究所

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HGTD news

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New time scale for TDR

- All study finished at end of 2019
 - Altroc1 version 2 ASIC irradiation
 - Beam test In November 2019
 - Sensor irradiation campaign.
 - 6e15 (for now, sensor only works up to 3e15)
 - 500MRad
 - More bump bonding study for Module
 - Module irradiation
 - Module cooling simulation
 - Optimization of HGTD layout
 - If sensor only works for 3e15(more replacements?)
- Aiming to submit TDR to LHCC in April 2020.

IHEP sensor R &D for TDR

(my personal view)

- X ray irradiation for sensor (ASIC and modules later)
 - Only IHEP will do this study.
 - Would be great to prepare irradiated sensor by May 13 DESY beam test
- Chinese LGAD sensors
 - NDL sensor should be included in both X ray and proton irradiation
 - NDL sensors have been included in DESY May test beam
 - New sensors Mei and Kewei are working on, should aim for August or Nov test beam.
- Proton irradiation
 - Sensor group want to use a few hundred GeV proton beam (PSI in late 2019)
 - Also they schedule a 70MeV proton sensor irradiation in Japan this summer
 - 100MeV proton is still the best for now, but need to be fast