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OB module electrical test

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Current tests on MOSS

- Impedance and power testing
 - 1st impedance measurement: prior to powering
 - Power ramp without PSUB biasing
 - Power ramp with PSUB biasing
 - 2nd impedance measurement: post powering
- Functional testing
 - Power on scan
 - Register scan
 - Shift register scan
 - DAC scan
- Matrix testing
 - Digital scan
 - Analogue scan
 - Fake-hit rate (FHR) scan
 - Threshold scan

Planned tests on MOSS in 2025

- Power testing
 - Powering from LEC and REC
- Functional and matrix testing
 - Control and readout from LEC
- Calibration
 - Threshold tuning
 - ToT with ^{55}Fe → conversion factor

Moving to MOSAIX

- Preliminary plans (from Markus, work in progress)
 - Service Power Test
 - Service Register Test
 - Tile Power Test
 - Tile Register Test
- Unaddressed data transmission tests for MOSS, for example:
 - Performance of high-speed links under operational conditions
 - PRBS
 - Readout test: pulsing a large number of pixels per trigger

Test plans and FW/SW development status are being discussed in ITS3 WP3.3 meetings



Moving to SVT OB module

- Powering and slow control evaluations incorporating Ancillary ASIC functionality

Further details to be finalized in collaboration with Ancillary ASIC and MOSAIS experts

Tests on OB module

- Powering
- Slow control tests including DAC/register scans
- Data transmission
- Matrix scan
- Matrix tuning
- Endurance tests with selected test items

Specific test parameters will be refined based on insights obtained from MOSS/MOSAIX and Ancillary ASIC evaluations

Backup