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## Commissioning of the ATLAS Inner Detector with cosmic rays

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The inner detector of the ATLAS experiment is in the process of being commissioned using cosmic ray events. First tests were performed in the SR1 assembly hall at CERN with both barrel and endcaps for all different detector technologies (pixels and microstrips silicon detectors as well as straw tubes with additional transition radiation detection). Integration with the rest of the ATLAS sub-detectors is now being done in the ATLAS cavern.

The full software chain has been set up in order to reconstruct and analyse this kind of events. Final detector decoders have been developed, different pattern recognition algorithms and track fitters have been validated as well as the various alignment and calibration methods. The infrastructure to deal with conditions data coming from the data acquisition, detector control system and calibration runs has been put in place, allowing also to apply alignment and calibration constants.

The software has also been essential to monitor the detector performance during data taking. Detector efficiencies, noise occupancies and resolutions have been studied in detail and compared with those obtained from simulation.

### Submitted on behalf of Collaboration (ex, BaBar, ATLAS)

ATLAS Offline Computing

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