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# The ATLAS ITK strip detector - status of R&D

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While the LHC at CERN, where the ATLAS and CMS experiments have discovered the Higgs Boson in 2012, is ramping up luminosity, upgrades to the LHC and experiments are planned.
The major upgrade is foreseen for 2024, with a roughly tenfold increase in luminosity, resulting in corresponding increases in particle rates and radiation doses.
In ATLAS the entire Inner Detector will be replaced for Phase-2 running with an all-silicon system. This talk will concentrate on the strip part. Its layout foresees low-mass and modular yet highly integrated double-sided structures for the barrel and forward region. The design features conceptually simple modules made from electronic hybrids glued directly onto the silicon. Modules will then be assembled on both sides of large carbon-core structures with integrated cooling and electrical services. The modularity allows assembly and testing at multiple sites, while the high integration density facilitates macro-assembly and system tests.
We will present the outcomes of the massive R&D effort underway, and show on-going development and prototyping efforts. A large number of components are currently being developed, with for many parts, prototyping efforts towards full-size components in full swing. The recent developments and test results will be presented. Particular emphasis will be given to silicon sensors and readout. In addition, assembly and QA procedures will be shown. We will also give an outlook towards mass production.

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