

# Electrical characterisation of stave prototypes for the ATLAS ITk Upgrade

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The ATLAS experiment is currently preparing for an upgrade of the inner tracking detector for High-Luminosity LHC operation, scheduled to start in 2027. The new detector, known as the Inner Tracker or ITk, employs an all-silicon design with five inner Pixel layers and four outer Strip layers. The staves are the building blocks of the ITk Strip barrel layers. Each stave consists of a low-mass support structure which hosts the common electrical, optical and cooling services as well as 28 silicon modules, 14 on each side. Two prototype electrical long-strip staves have been assembled at BNL. In this talk, we will present the deliverables of this prototyping phase highlighting the improvement of the stave layout and the results on the most recent stave.

## Career stage

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