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## Detector Module Design, Construction and Performance for the LHCb SciFi Tracker

The Scintillating Fibre (SciFi) Tracker for the LHCb Upgrade (CERN/LHCC 2014-001; LHCb TDR 15) is based on 2.5 m long multi-layered ribbons from 10,000 km of scintillating fibre over 12 planes covering 350 m<sup>2</sup>. The planes are separated into modular detectors, each with cooled silicon photomultiplier (SiPM) arrays for photo-readout. In this talk, we will present the construction and performance of this novel detector, including the intricacies of scintillating fibre ribbon production, constructing precision detector planes with a rigid and light module design, and the integration of the readout components for this detector. The complexities and issues regarding this active part of the SciFi Tracker will be emphasised along with the current solutions and measured performances.

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