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## Experience with the AFP 3D Silicon Pixel Tracker

The ATLAS Forward Proton (AFP) experiment has recently installed two 3D Silicon pixel trackers in Roman Pots at one side of the ATLAS interaction point (IP) in order to measure forward protons. Each tracker consists of three to four 3D FE-I4 pixel modules. The detector will be completed with two more 3D trackers at the other side of the IP plus time-of-flight detectors at both sides in the winter shutdown 2015/2016. AFP is the second HEP experiment that applies the 3D sensor technology, after the ATLAS IBL.

The technology was chosen as it was demonstrated in numerous qualification beam tests that it fulfills the AFP requirements of slim edges of less than 200  $\mu\text{m}$ , radiation hardness in the case of non-uniform irradiation, and a tracker resolution of about 3  $\mu\text{m}$  in the short pixel direction.

The 3D pixel sensors have been produced by CNM Barcelona in a double-sided process with non-passing-through columns, profiting from IBL experience. They have been bump-bonded to the FE-I4 readout chip, assembled, wire-bonded and undergone a Quality Assurance procedure at IFAE Barcelona. The module delivery, tracker assembly and installation in the LHC tunnel took place in February 2016, followed by commissioning and first data taking in Roman Pots inserted into the LHC beam during the LHC intensity ramp-up in April/May 2016.

This presentation will give an overview on the qualification, production and commissioning of the AFP 3D pixel trackers.

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