Fine pitched silicon strip sensors are placed as close as possible to the LHC beam with a minimum amount of material between. The sensors are housed in secondary vacuum boxes which are retracted from the beam during LHC injection.

Institutes: CERN, Glasgow, Heidelberg, Lausanne, Liverpool, NIKHEF

The VELO allows precise primary and secondary vertex reconstruction. It is the main tracking device before the magnet and its data are heavily used in the L1-trigger. The readout is analog using 40m copper cables. Zero suppression and cluster finding happens on L1 boards behind the radiation shield. The L1 board contain links to the L1-trigger and the DAQ system.