

cWPS versus oWPS

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The strategy of the CLIC pre-alignment relies on Wire Positioning Sensors (WPS) measuring the radial and vertical offsets with respect to a stretched wire. A precision below 2 μm and an accuracy below 5 μm over a whole range of measurement of 10 mm are required for these sensors. Two types of sensors, based on two different technologies are under development and study at CERN: the capacitive (cWPS) is already in use for the monitoring of the position of the low beta triplets in the LHC and the optical (oWPS) is currently under development with Open Source Instruments. The cWPS sensor had to be upgraded in order to reach the specifications required by the CLIC alignment. The oWPS sensor is a new development especially designed to the CLIC demands. The paper presents the two types of sensors, the developments, as well as the latest results obtained through validation tests. These two sensors are part of a common test setup: results of inter-comparison tests achieved on this setup are detailed.

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