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INTERCOMPARISON TESTS WITH HLS AND WPS

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Since the 1990s, hydrostatic levelling sensors (HLS) and wire position sensors (WPS) are used for monitoring applications in the accelerator alignment. The sensors are at different levels of development, ranging from prototype to off-the-shelf sensors, and use different technologies to achieve µm resolution.

Both, the Compact Linear Collider (CLIC) project as well as the International Linear Collider (ILC) project, are based on alignment concepts that can use such systems.

The idea of an intercomparison between different types of HLS sensors and different types of WPS sensors was the basis for the CLIC pre-alignment workshop which was held at CERN in 2009. An overview on HLS and WPS based alignment systems used in different institutes was given and in conclusion the participating institutes agreed on a sensor intercomparison programme.

The aims of these tests are outlined in this paper, the sensors and the comparison test installations described and results of the first intercomparison measurements are shown.

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