

What is the best displacement transducer for a seismic sensor?

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Development of a seismic sensor for the future Compact Linear Collider (CLIC) will be presented. Sensor in which three different types of sub-nanometre displacement transducers have been integrated: a Fabry-Pérot interferometer, an optical encoder and a capacitive transducer. This sensor allows us to compare the resolution of all the transducers under the same conditions, thus enabling us to verify the most suitable transducer for a seismic sensor. However, to reach requirements of the PACMAN project, even further increase in resolution was needed. This was achieved by implementation of a multi-pass Michelson interferometer into the sensor. First results obtained with this transducer will also be presented.

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