

An Active platform for the Inverted Pendulum of the Superattenuator

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The Seismic Isolation System of the Advanced VIRGO, based on the working principle of a multi-stage pendulum hung to a three legs mechanical structure of the Inverted Pendulum, is equipped with 3 Piezoelectric actuators encapsulated with a foot structure. So far, these tools were never used to compensate seismic motion at very low frequencies regime due to missing high sensitivity sensor and some difficulties to distinguish this component of noise from the others. Recently the INFN Pisa group started a deep revision of this transducer with the intent to improve its performance within a more complex control strategy together with the possibility to implement a similar device for the horizontal degrees of freedom in view of ET.

Primary author: FRASCONI, Franco (INFN Pisa)

Presenter: FRASCONI, Franco (INFN Pisa)

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