

## II. Workshop on ET-LF TM Tower Integration

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# Super-Attenuator Design Concept Integrating an Active Platform and an Inverted Pendulum

*Wednesday 26 March 2025 11:00 (45 minutes)*

This work originates from the aim of reducing the height of the 17 m suspension chain considered in the ET 2011 Conceptual Design Report and its 2020 Update. The presentation focuses on the current state of design and modelling of a candidate solution integrating both an inverted pendulum and an active platform. This key feature allows reducing the height of the seismic attenuation chain, while satisfying the requirements in terms of residual longitudinal motion of the test-mass below the ET-LF design sensitivity reaching  $7.45e-24 \text{ Hz}^{-1/2}$  at 3 Hz.

**Primary author:** GIORDANO, Thomas (ULiège)

**Co-authors:** COLLETTE, Christophe; LAKKIS, MOUHAMAD HAIDAR (University of Liege, Université Libre de Bruxelles)

**Presenter:** GIORDANO, Thomas (ULiège)

**Session Classification:** Payload and super-attenuator design