

## The Superattenuators for the CAOS Project

The CAOS (Centro per Applicazioni sulle Onde gravitazionali e la Sismologia) facility is currently under construction in Perugia, Italy. It will host a short Fabry-Perot cavity to carry out dedicated R&D on seismic attenuation systems for ET, specifically enabling the development of two AdV-like Superattenuators (SAs), a technology that represents the ET reference solution as envisaged in its conceptual design.

Both SAs will be taller than those of AdV+ and they will incorporate new technologies, such as new Magnetic Anti-Springs. However, during the conceptual design phase, we adopted slightly different approaches for the two SAs. The one called BS will be conceptually very similar to the AdV+ SA, whereas the other, named EE, will introduce new concepts and features, including innovative crossbars for seismic filters, a Disk 0, and an active platform with enhanced “feet”.

The mechanical design is currently in progress thanks to a collaborative effort between INFN Pisa, INFN Perugia, and UNIPG. Meanwhile, the manufacturing of mechanical components has already begun at Galli & Morelli’s workshop.

**Primary author:** Dr LUCCHESI, Leonardo (INFN Pisa)

**Co-authors:** GENNAI, Alberto (Istituto Nazionale di Fisica Nucleare); CASELLA, Alessandro (INFN Pisa; Galli & Morelli); PARISI, Alessandro (Università di Perugia); AISA, Damiano (Università di Perugia); PILO, Federico; SPADA, Francesca; BIANCHI, Francesco; FRASCONI, Franco (INFN Pisa); CAPOCCIA, Gabriele (INFN-PG); VOCCA, Helios (Università di Perugia); Dr ORSINI, Leonardo (INFN Pisa); BALDICCHI, Nicolo (Università degli studi di Perugia); PROSPERI, Paolo (INFN Sezione di Pisa); CHESSA, Piero (University of Perugia); BALDONI, Samuel (INFN-Perugia)

**Presenter:** Dr LUCCHESI, Leonardo (INFN Pisa)

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