

ETIC - WP4



status update - 20-06-2023

WP4

Suspensions and Interferometric large facilities

FRAME

realization of research facilities and the acquisition of large experimental equipment for the development and characterization of the technologies and systems that will isolate the ET test masses from seismic and environmental disturbances

CAOS

an international laboratory
for the development
of technologies for Einstein
Telescope and for
seismology studies

- **CAOS infrastructure** - task T014: Progetto definitivo rilasciato: Settembre: consegna progetto esecutivo
- **Sistema di sospensioni sismiche** - task T019: Capitolato tecnico e documenti di gara completati
- **Sistema di torri da vuoto** - task T019/T021: Capitolato tecnico e documenti di gara completati

GEMINI

development of an active seismic-isolation system and an inter-platform motion control for Einstein Telescope in the low-noise underground environment of the National Laboratories of Gran Sasso

- Order procedure of the on-platform seismometers close to completion (6x Nanometrics T360 GSN)
- Mechanical platforms
 - Modified HAM-ISI design fully analyzed in terms of vibration modes (requirements are met)
 - Executive drawings of the mechanical platforms completed
 - Main issue: (non)availability of maraging steel (250 or 300) at good price
- Documentation for the call of tender for the vacuum system under preparation

SAMaNET

test and validation of
Superattenuator passive
and active components and
control electronics for
seismic noise and local
disturbances
suppression at the optical
components level of the ET
interferometer

- Concluded the National selection process for the Technological figure to be employed in the project activities, three new Technologist have joined the INFN Pisa group in the first part of June.
- Five over nine purchase requests, for the acquisition of new instruments/apparatus by using the “Affidamento Diretto” process have been started and they are slowly going on with the final objective to conclude the procedure by the end of this year.
- Experimental activities (NGSA) on the new design of Magnetic Anti-Spring (MAS) for mechanical passive filter of the future Superattenuators are progressing, as well as the studies around a new Superattenuator including two pre-attenuation stage in Nested configuration (Nested Inverted Pendulum - NIP).