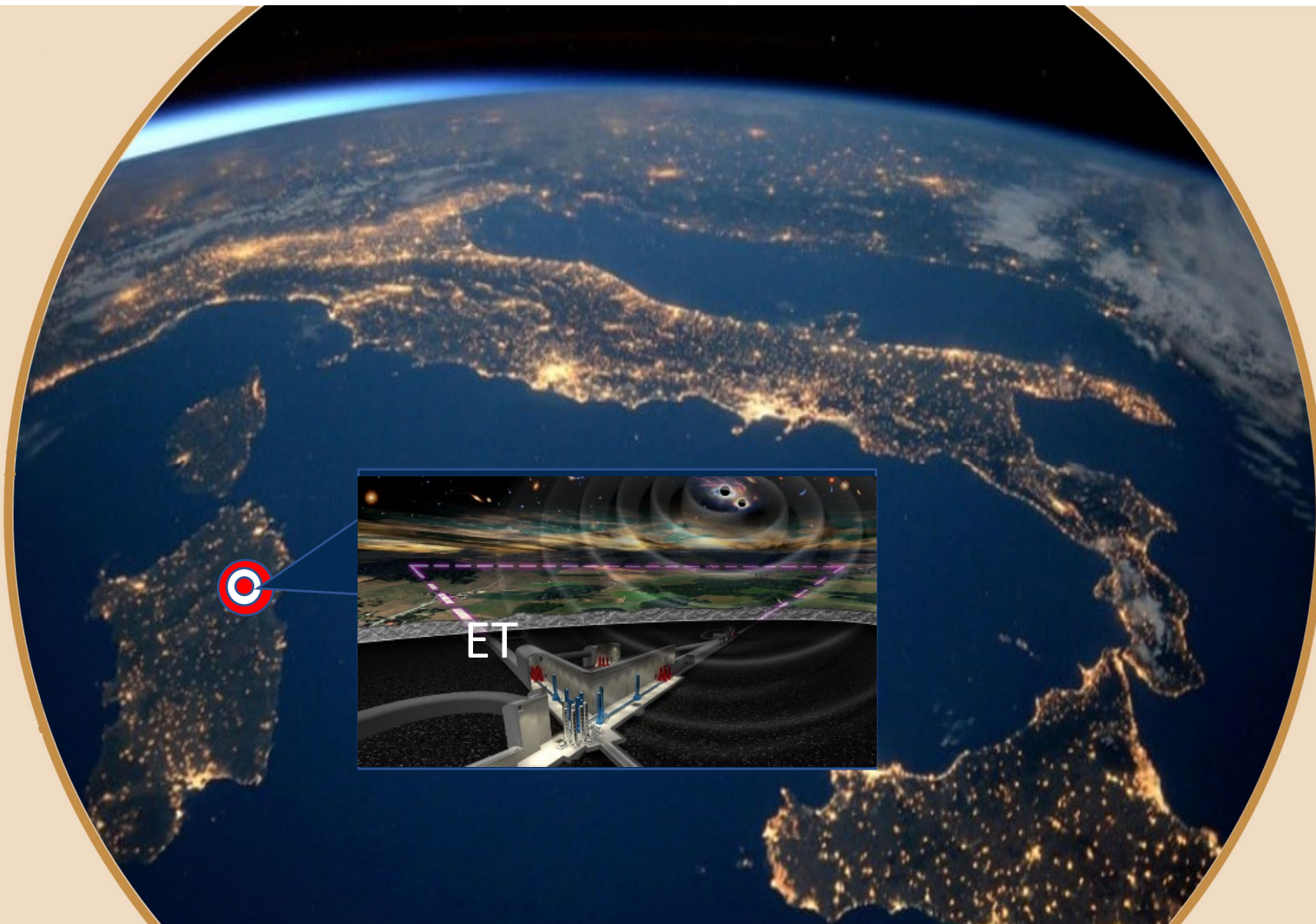# CAOS

Centro per
Applicazioni sulle
Onde gravitazionali e la
Sismologia

Center for Applications on Gravitational waves and Seismology

Gabriele Capoccia

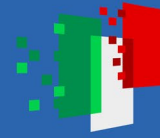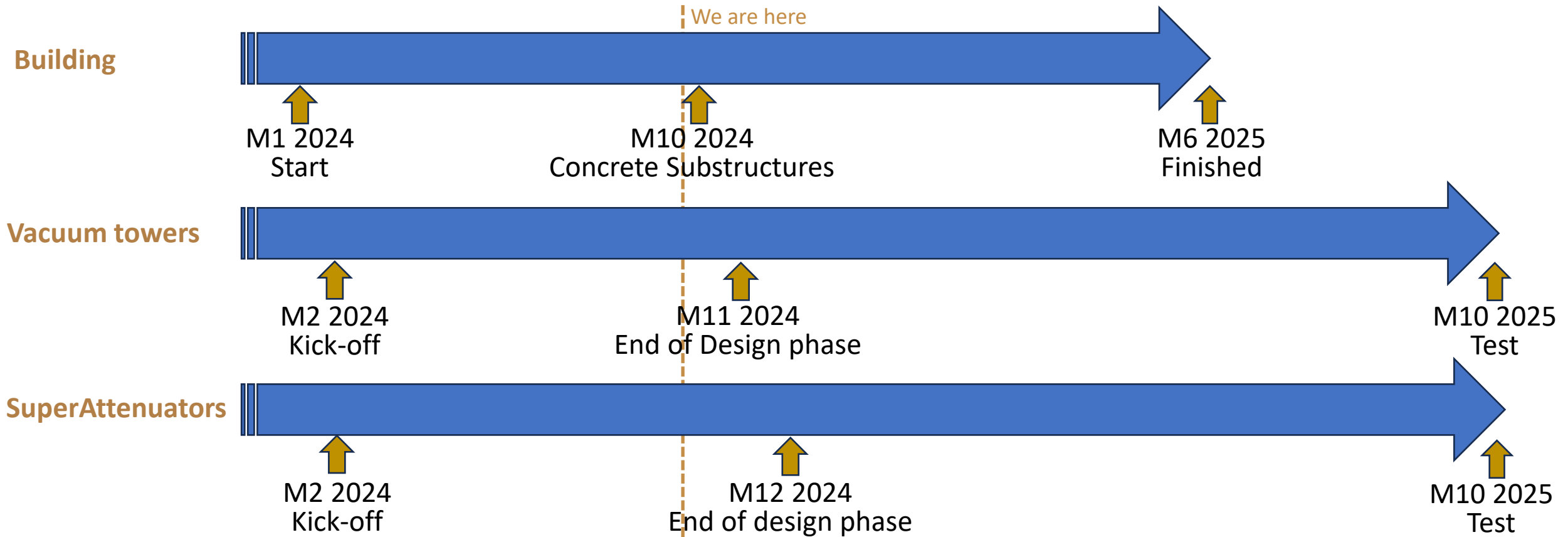*On behalf of the entire Perugia group*

ET

What is CAOS?

- CAOS is the main ETIC infrastructure, it is located in Perugia. An international and unique facility to develope new technologies on seismic filtering and low noise controls;

- The skills developed in CAOS will serve both as a development of specific technology for the third generation gravitational waves detectors, and as a follow out in many other sectors, first of all that of seismology (early warning);

- In CAOS there will be two 15 mt high vacuum towers that allow us to test the suspensions at room temperature (1:1 ET-HF scale suspensions);
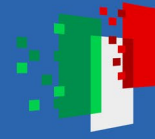
Biggest Call for Tender ongoing:

We are here

Building

M1 2024
Start

M10 2024
Concrete Substructures

M6 2025
Finished

Vacuum towers

M2 2024
Kick-off

M11 2024
End of Design phase

M10 2025
Test

SuperAttenuators

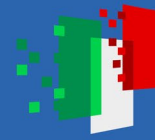M2 2024
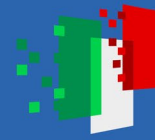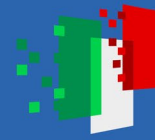Kick-off

M12 2024
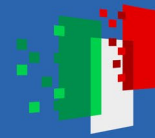End of design phase

M10 2025
Test

Finanziato
dall'Unione europea
NextGenerationEU

Ministero
dell'Università
e della Ricerca

Italiadomani
PIANO NAZIONALE
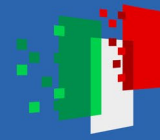DI RIPRESA E RESILIENZA

INFN

Building:

The Laboratory will benefit the proximity with the Engineering Department and the Civil and Environmental Engineering Department.
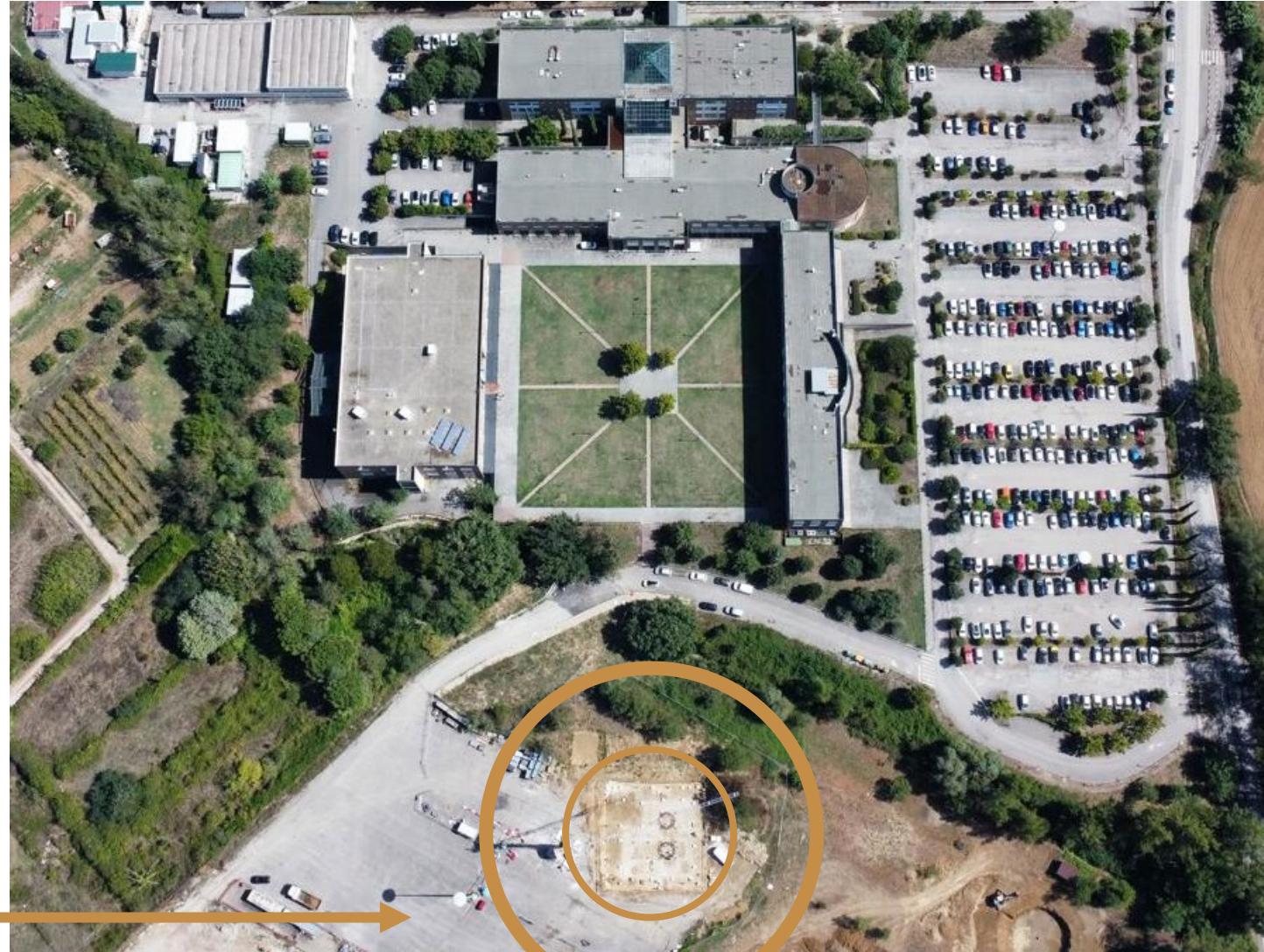
Building:

Building:
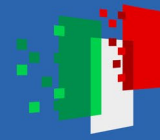
Finanziato
dall'Unione europea
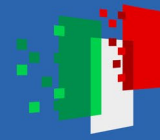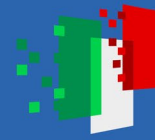NextGenerationEU

Ministero
dell'Università
e della Ricerca
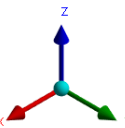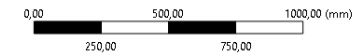
Italiadomani
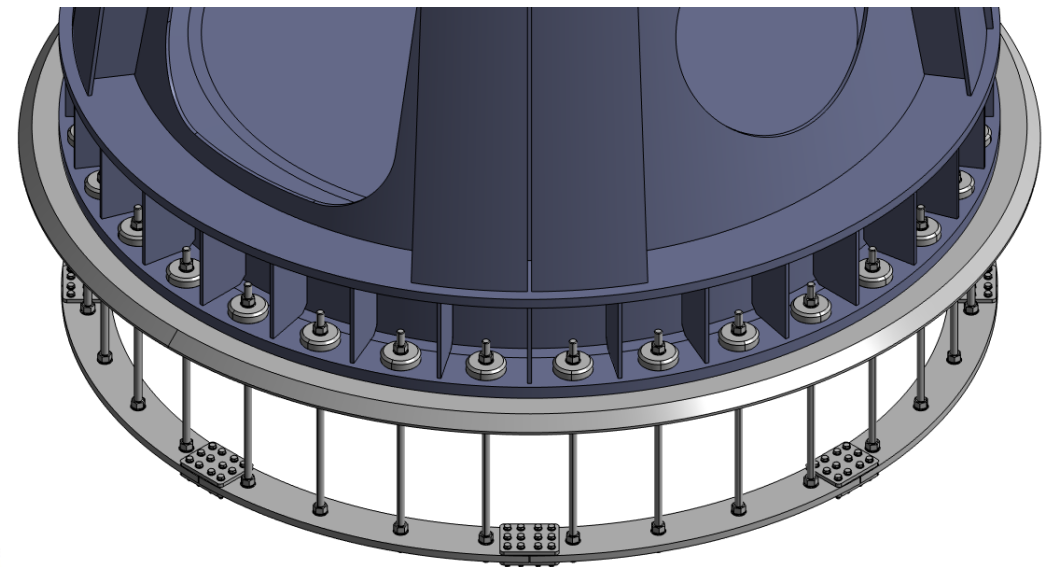PIANO NAZIONALE
DI RIPRESA E RESILIENZA

INFN

Building:
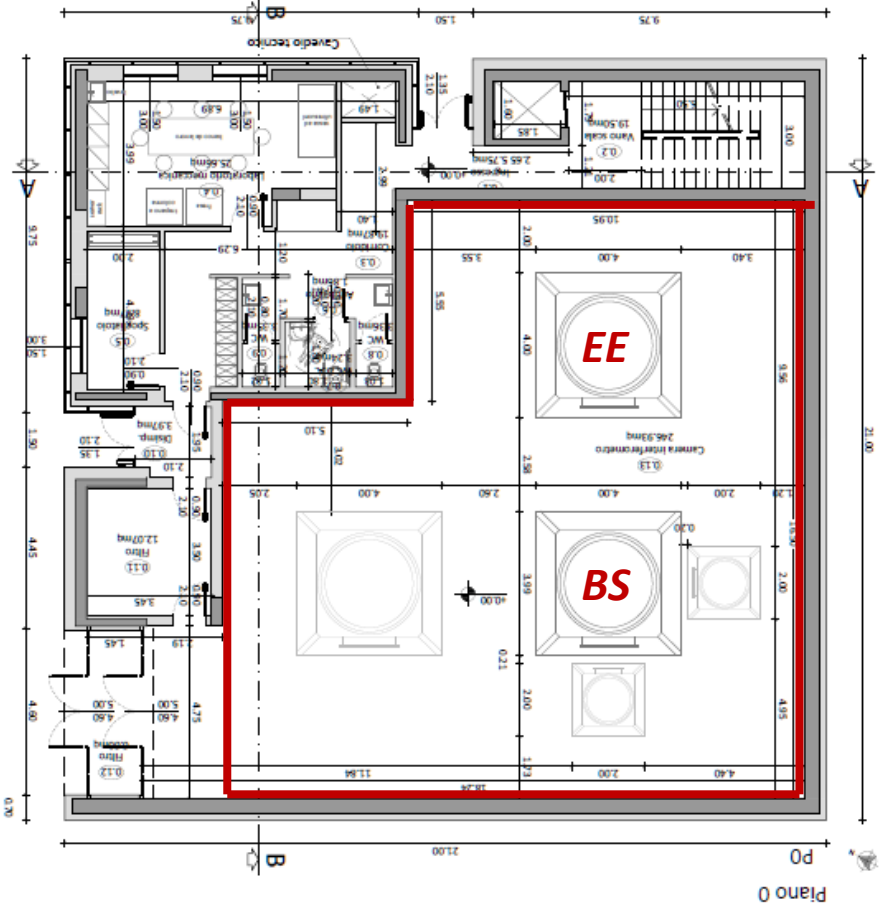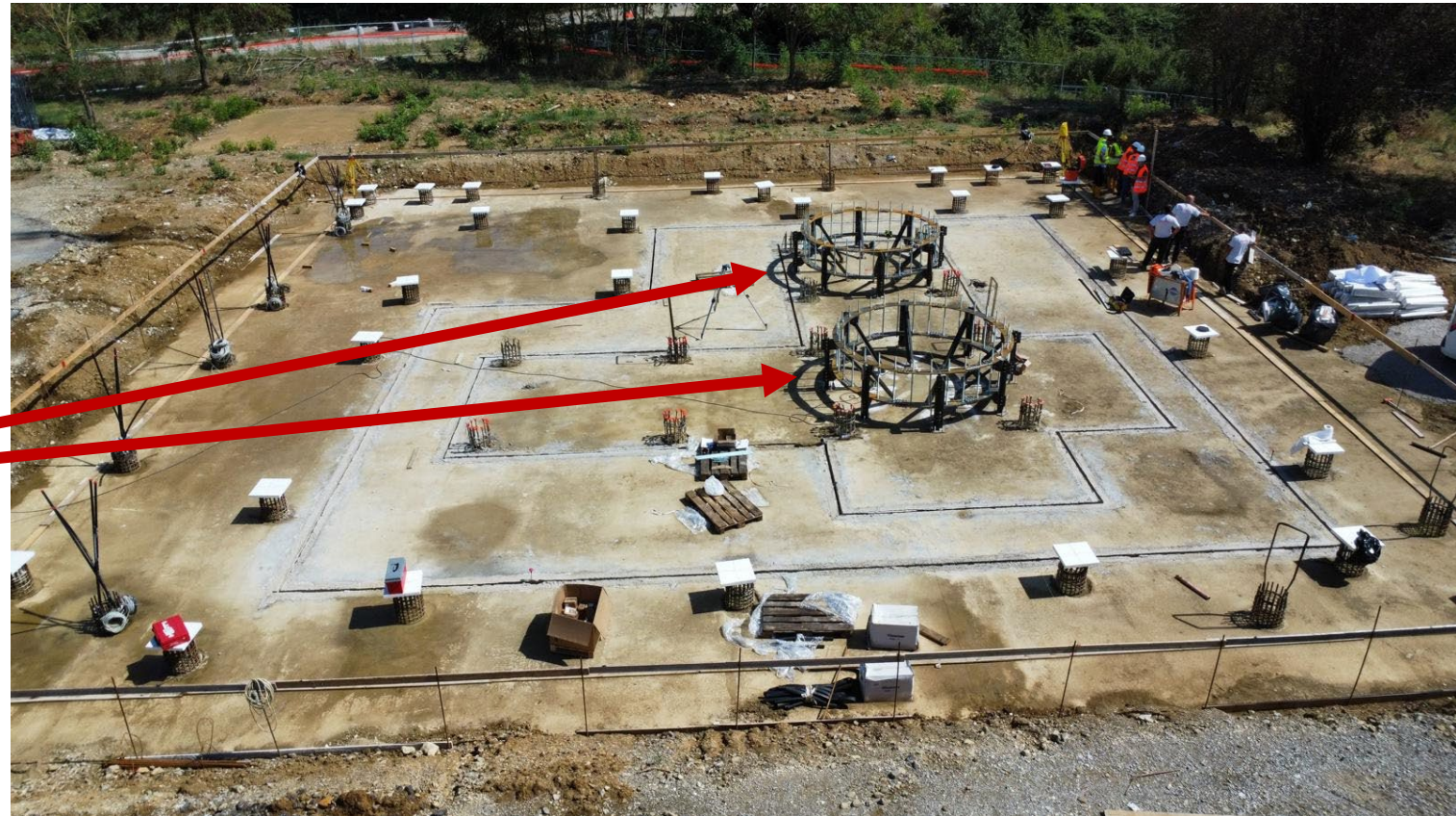
Vacuum towers:
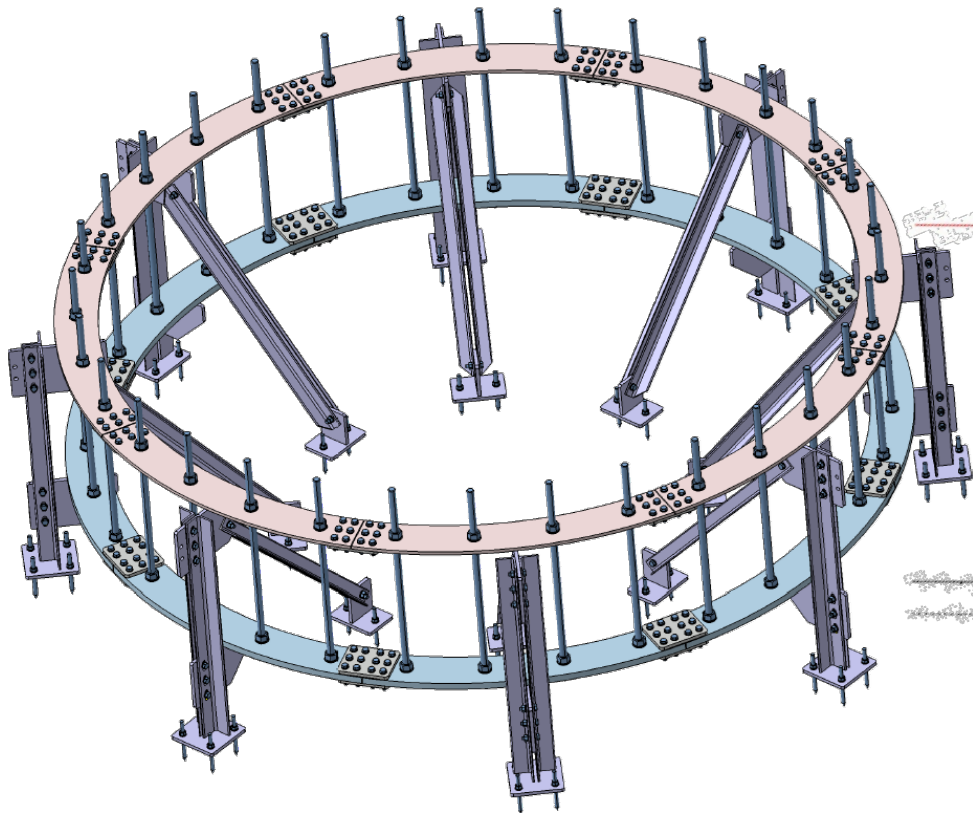
Vacuum towers:

Substructure: Structural Concrete
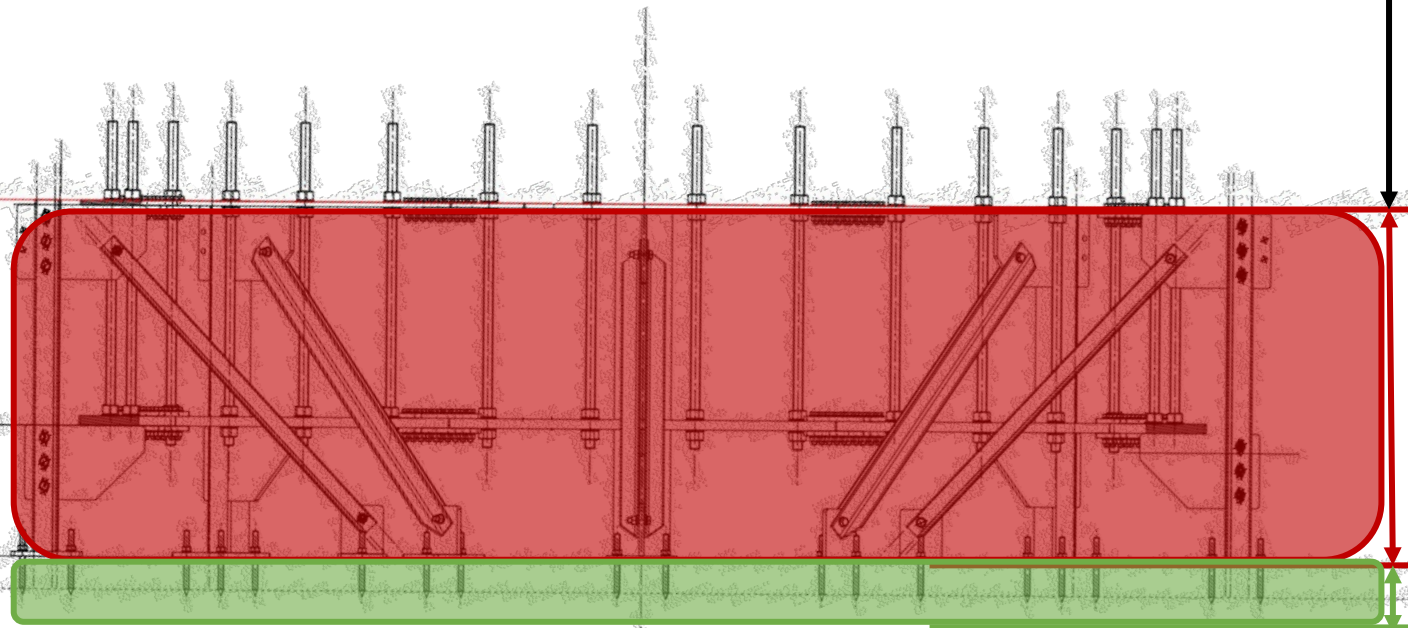
Substructure: 'Magrone'

Vacuum towers:

Credit: Andrea Paoli;
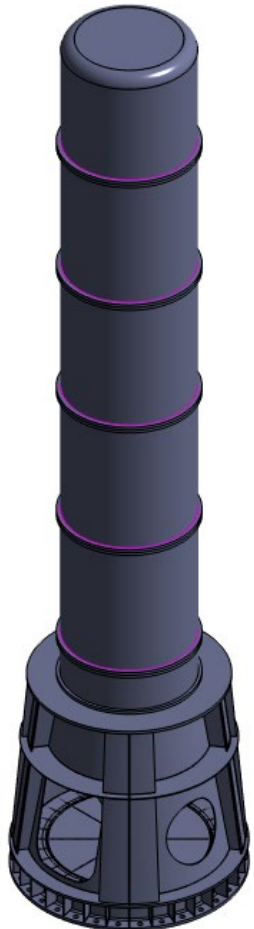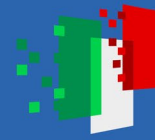Carlo Fabozzi;
Riccardo Romoli;
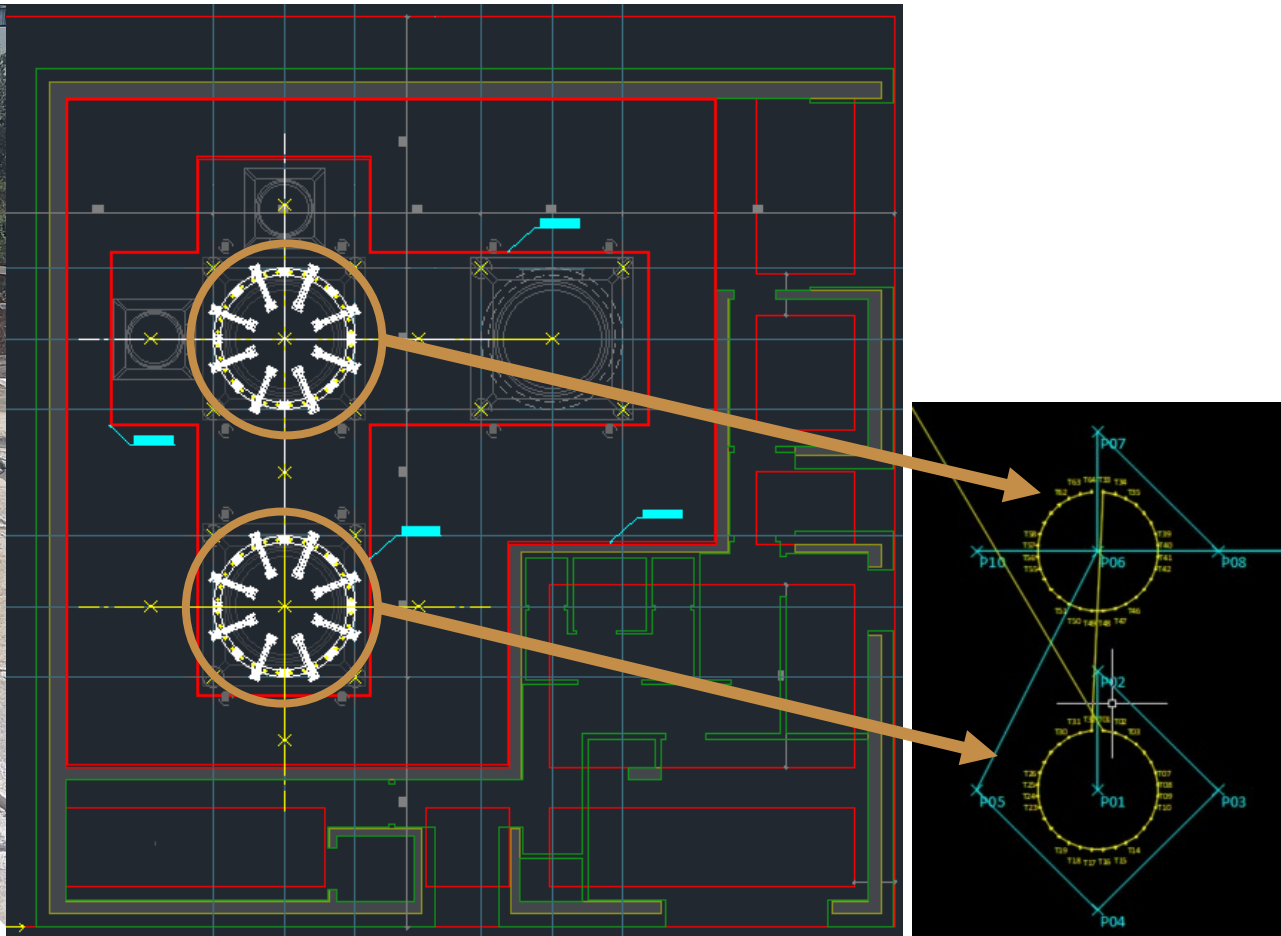
Vacuum towers:

Vacuum towers:
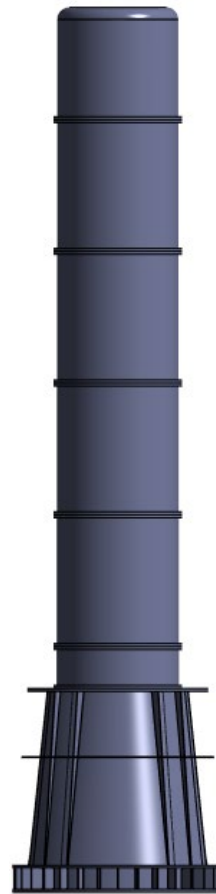
SuperAttenuators
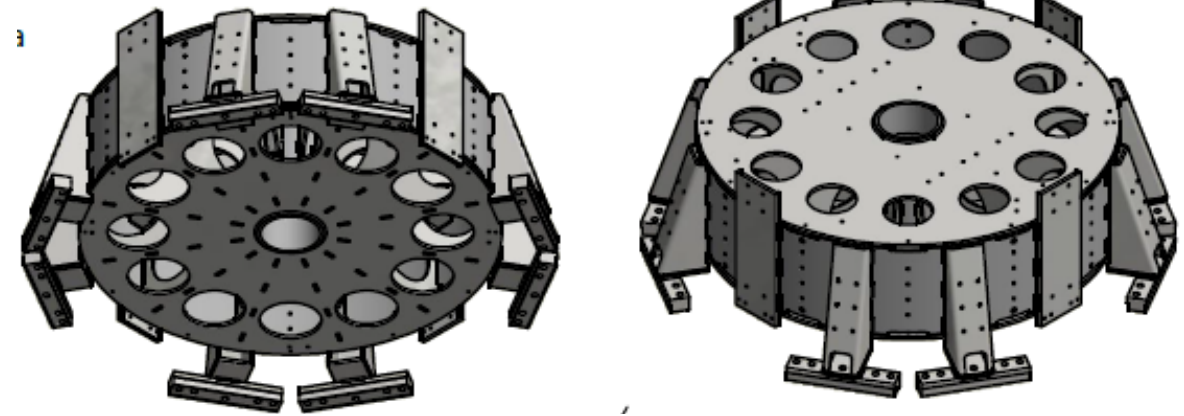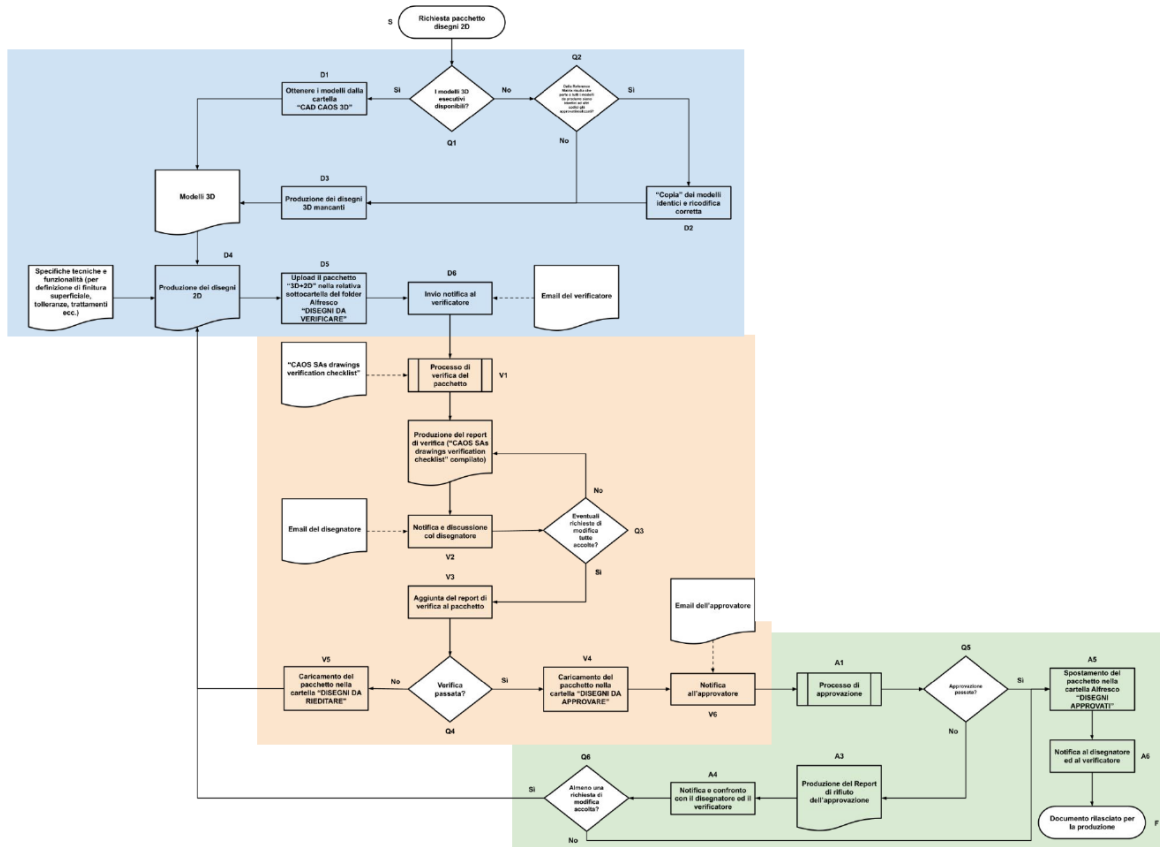
Credit: Franco Frasconi;
Leonardo Lucchesi;
Leonardo Orsini;

Einstein Telescope aims to improve the sensitivity of current detectors by a factor of 10 over a wide frequency spectrum and by several orders of magnitude at low frequencies.

CAOS facility will play a key role!

Thank You All!