



## PNRR Project – Task 1310.7 | Progetto: EMM – Earth Moon Mars *Antenna Infrastructure upgrade*

### Overview

This task consists of the design and implementation of the new ASE (Alidade Space Equipment Room) mechanical structure and viable grid and all related basic ancillary systems for X, K and Ka band receiving systems. It includes the preliminary Engineering analysis regarding New ancillary systems integration, Thermal loads, Power distribution system upgrade for the new ASE power supply, including the provision of new UPS system; HVAC systems implementation for the ASE air conditioning; Data cabling implementation for new equipment connection; Cryogenic system.

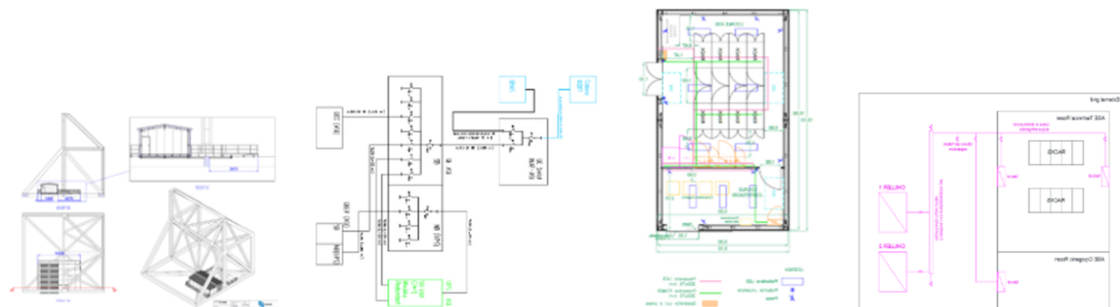
### Technical specifications

ASE Shelter, External grid and EER parapets executive design: Plan dimensions 10.00 x 6.00 m, height 3.50 m. ; Exterior double-hinged doors of 150 cm, anodized aluminum frame, interior panic bar, exterior handle with lock.; Interior 100 cm door.; External sliding door to be installed within the cryogenic room to allow the loading of equipment via a winch.: Antenna's mechanical study ("F.E.M.")

### Applications

The new ASE shelter will host the ancillary systems dedicated to the new receiving systems for the enhancement of space capacity in the X, K and Ka bands.

### ASE design images and auxiliary systems



ASE Shelter design

Layout

Power distribution

Ancillary systems Layout

HVAC distribution system