

# **Red Atlántica de Estaciones Geodinámicas y Espaciales**

*An Atlantic Network of Geodynamical and Space Stations*

**(proyect RAEGE)**

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# Abstract

Project RAEGE (“Red Atlántica de Estaciones Geodinámicas y Espaciales”) intends to set up a Spanish-Portuguese network of four Geodetic Fundamental Stations in Yebes (1), Canary Islands (1), and Açores Islands (2), as part of the developments needed for the IVS VLBI2010 scenario.

Each station will be equipped with one radiotelescope of VLBI2010 specifications (13.2-m diameter and fast slewing speed, able to operate up to 90 GHz), one gravimeter, one permanent GPS station and, at least at the Yebes site, one SLR facility.

Three radio telescopes are under construction at MT Mechatronics (Germany), the first to be delivered to Yebes in 2012. The infrastructure for the Santa Maria (Açores) and Yebes (Spain) stations are also under construction, the latter including dark fiber for high-capacity eVLBI data transfer.

[Http://www.raege.net/](http://www.raege.net/)

# Equipment details

4 x VLBI2010-type antennas

13.2 meters diameter

Slew 12°/s (az) and 6°/s (el)

200  $\mu$ m RMS surface

Ring focus optics

< 20'' pointing

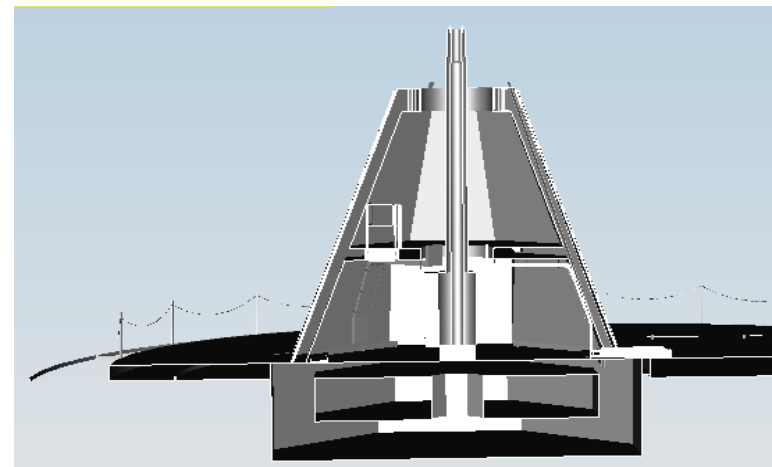
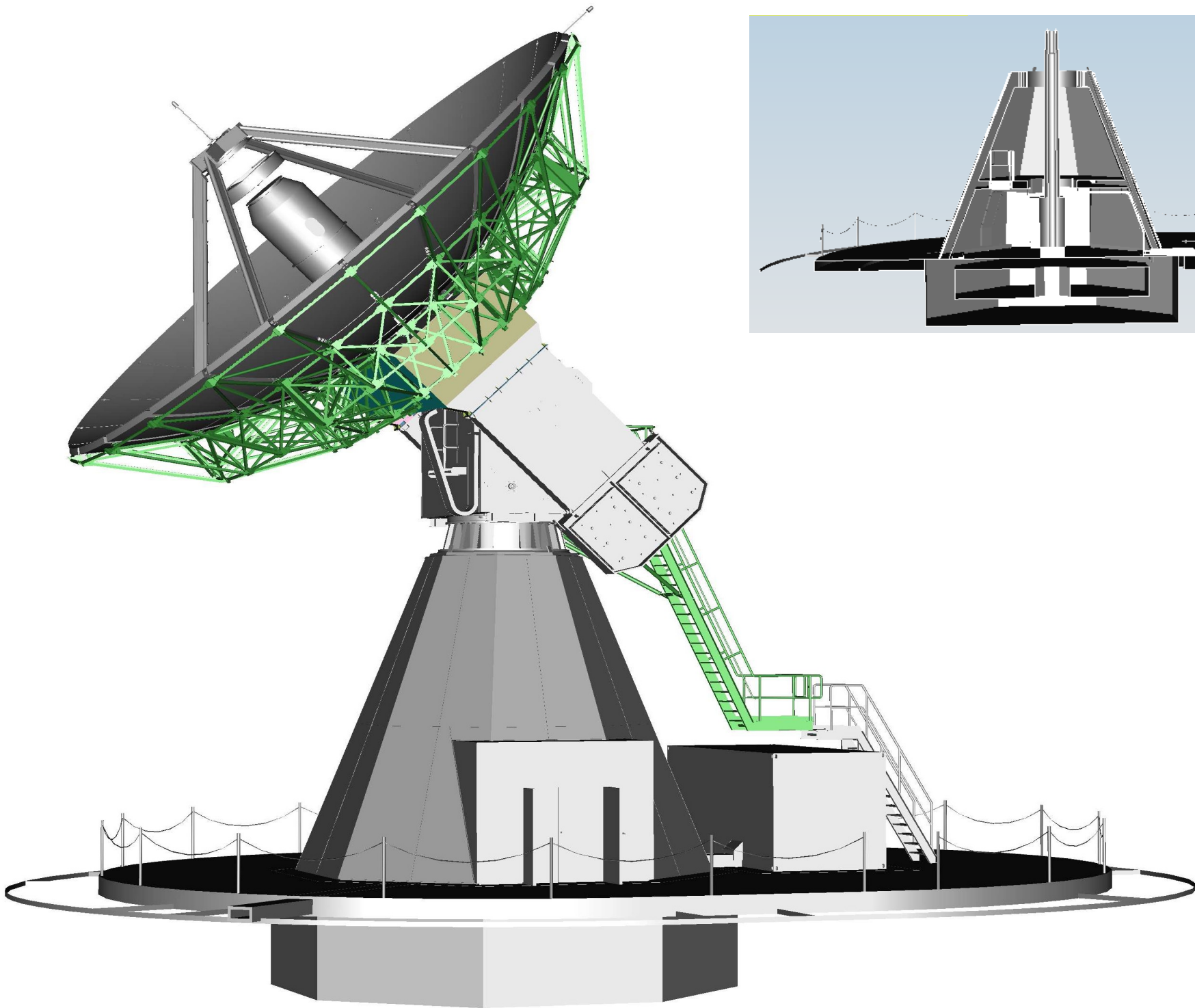
0.6 mm optical path stability

GNSS receiver

Gravimeter

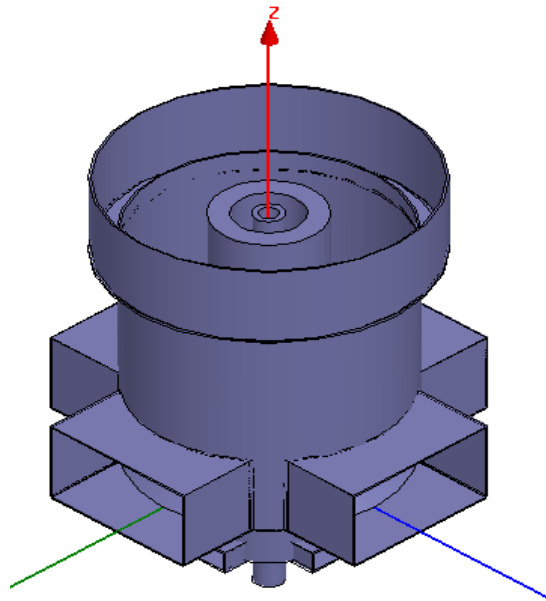
Satellite Laser Ranging (Yebes)



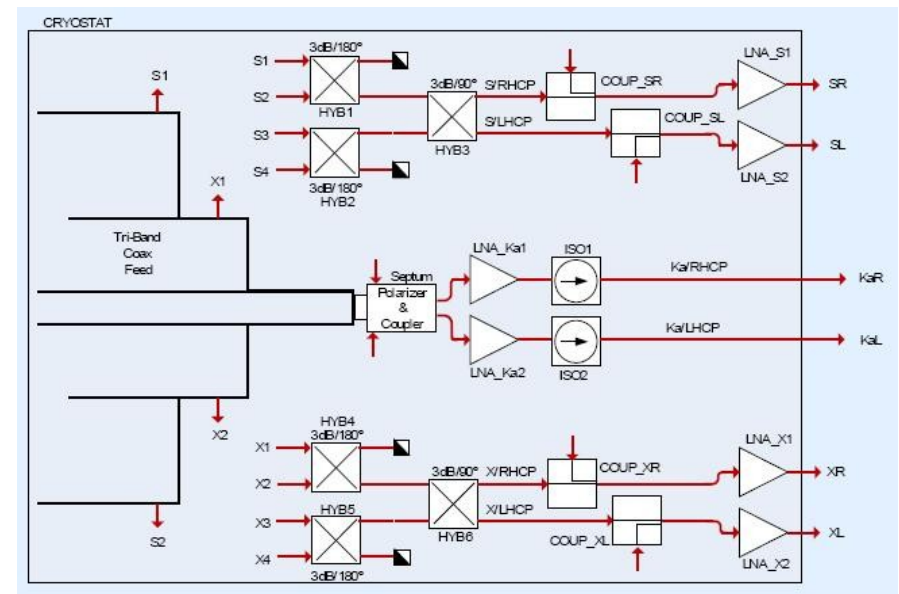


# S/X/Ka bands feed

Cryogenically cooled



# RAEGE receiver



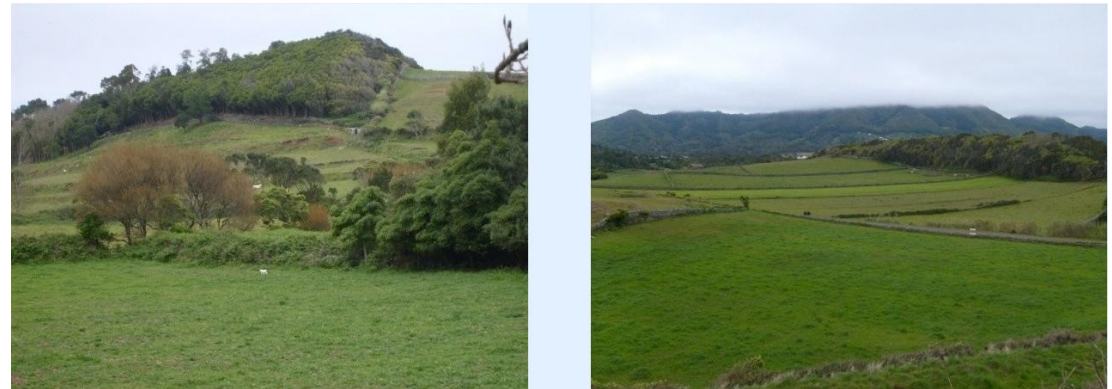
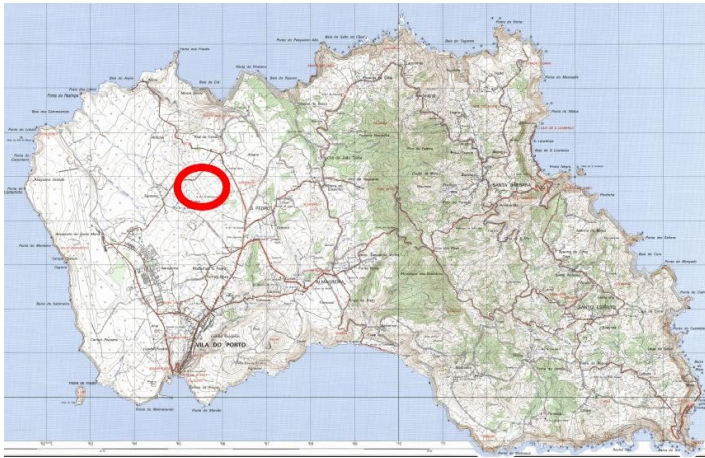


# Stations location

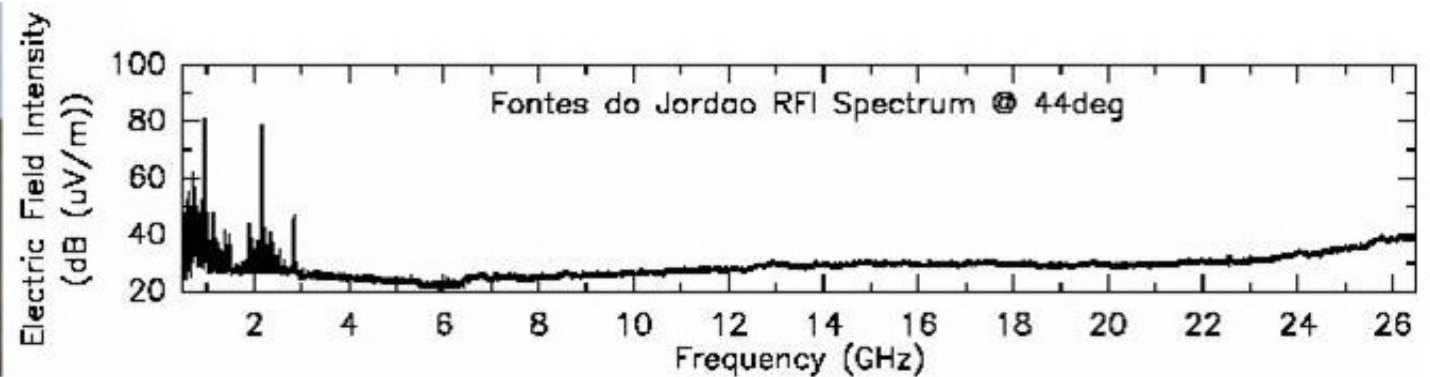
**Yebes (Guadalajara), Tenerife (Canary Islands), Santa María & Flores (Azores Islands).**



# RFI monitoring at RAEGE sites



Measurements at the RAEGE station site in Santa Maria island (Azores)





# e-VLBI connections

