From the Heart of Europe into Space

We are part of OHB Group

Over 40 years of experience, more than 3,500 employees at 17 locations across Europe.

Innovation

We provide ingenious approach to technical problems of any kind.

40 employees

Team of experienced engineers.

Hera, PLATO, CO2M, Comet Interceptor

We have been awarded various contracts within European Space Agency (ESA) programs.

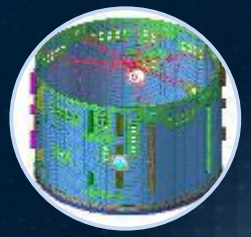
Flight heritage

Hera launched in Oct 2024.
Small satellite‘s platform designed by us for a private customer, launched January 2021.

Company Services

- Full range of activities for space-grade hardware development
- Highest quality standards in line with ECSS
- ISO 9001 certificated

Project Management & Procurement



Mechanical Design & Analysis

Optical Payloads

Thermal Design & Analysis

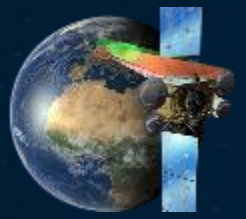
System Engineering

Research & Development

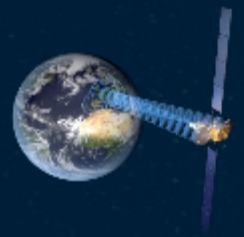
Quality & Product Assurance

Assembly Integration & Test

OHB Czechspace Heritage

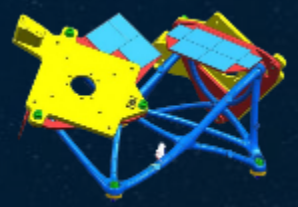


H2SAT
2018



ELECTRA
2019

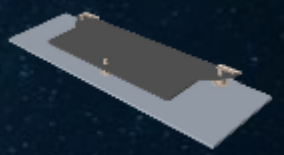
GALILEO
2019



AMCDF
2019

EMCS
2019

MTG
2019



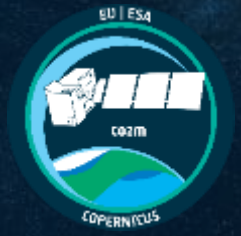
LiDeR
2020

GMS-T
2020

HERA
2020

PLATO
2020

MARE
2020



CO2M
2021

CHIME
2022

DLTS
2022

CRYSA
2022

ARIANE 6
2022

NEP
2023

COMET-I
2024

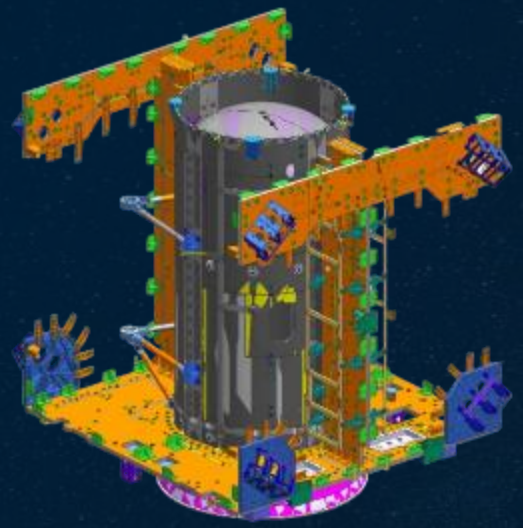
RAMSES
2024

SOVA - S
2025

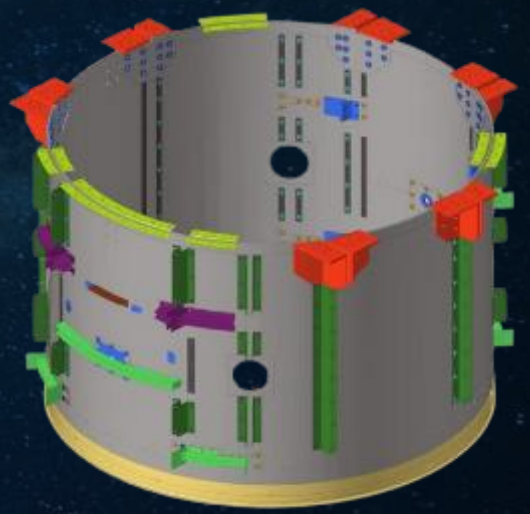
Major Relevant S/C Projects

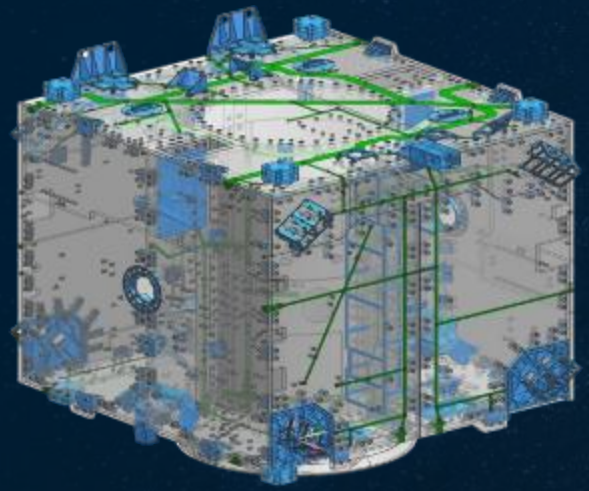
OHB CZECHSPACE

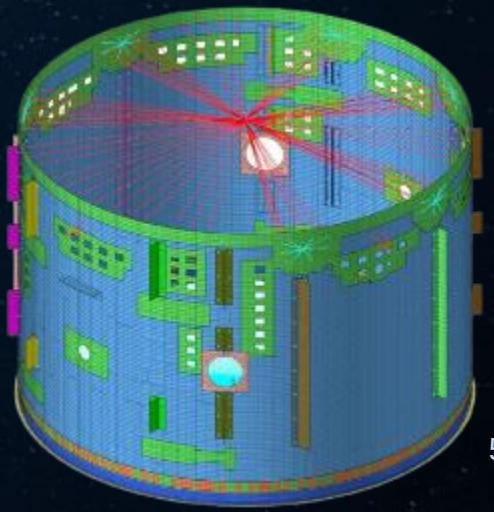
esa hera



esa plato

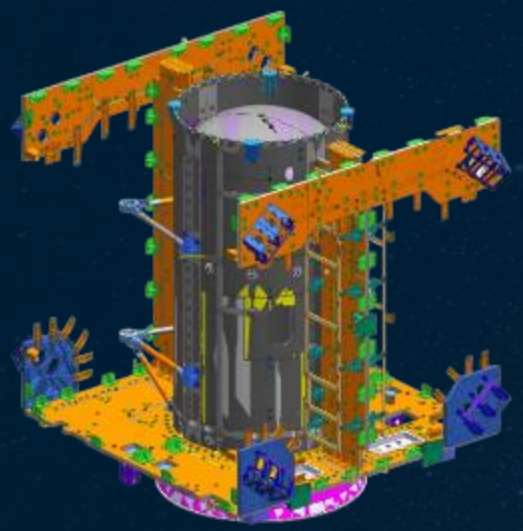


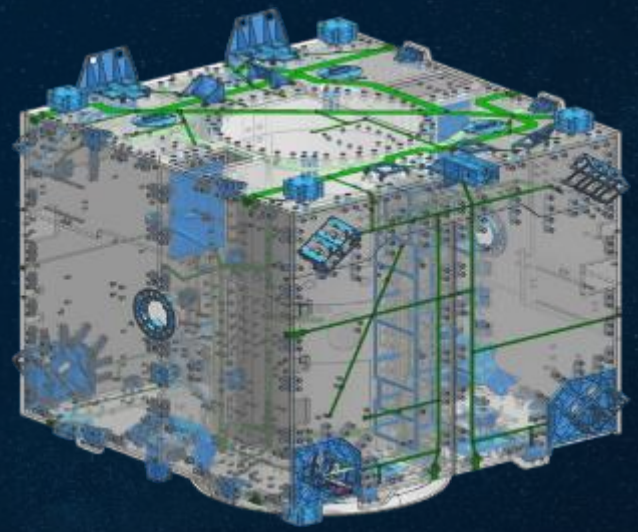




Hera – Space Safety Mission

- Development, design, verification and supply of the complete spacecraft‘s structural subsystem and MGSE
- Support of the spacecraft’s vibrational test campaign (sine and acoustic vibration)

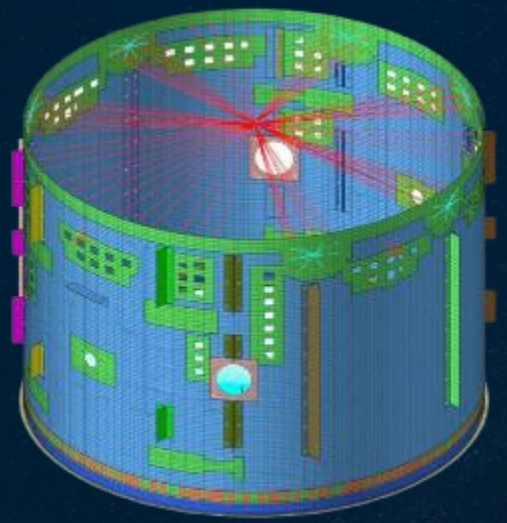


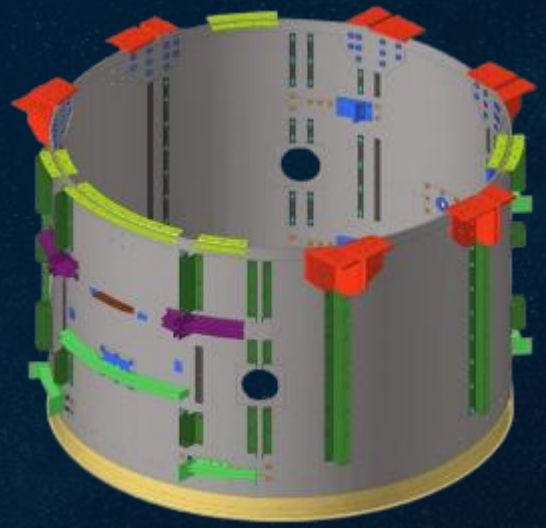


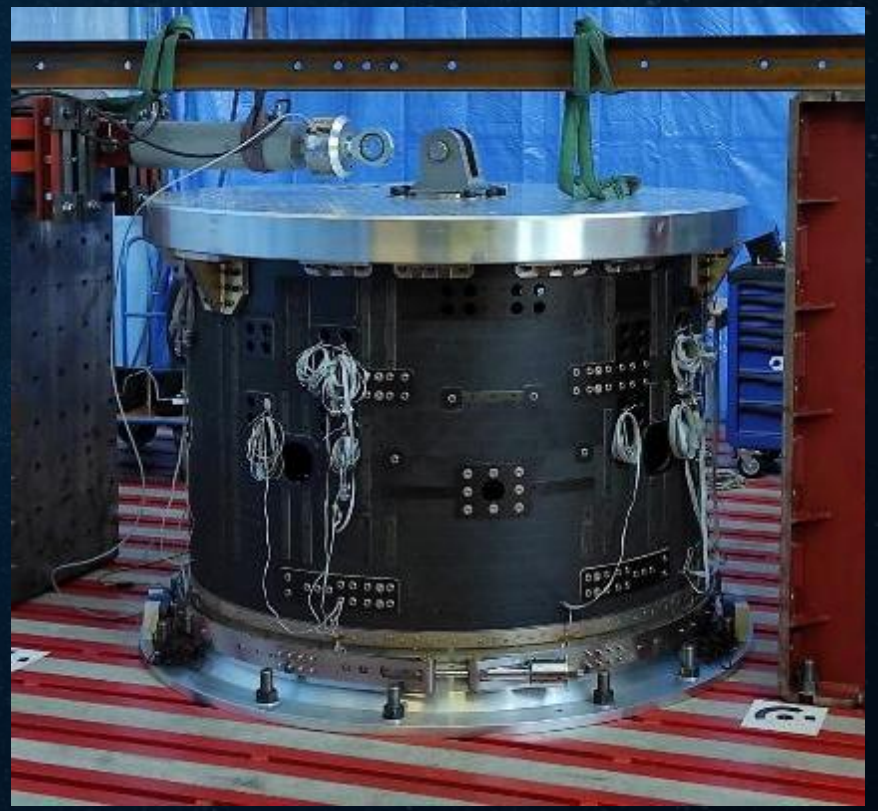
Hera – Propulsion Module AIT

PLATO – Science Mission

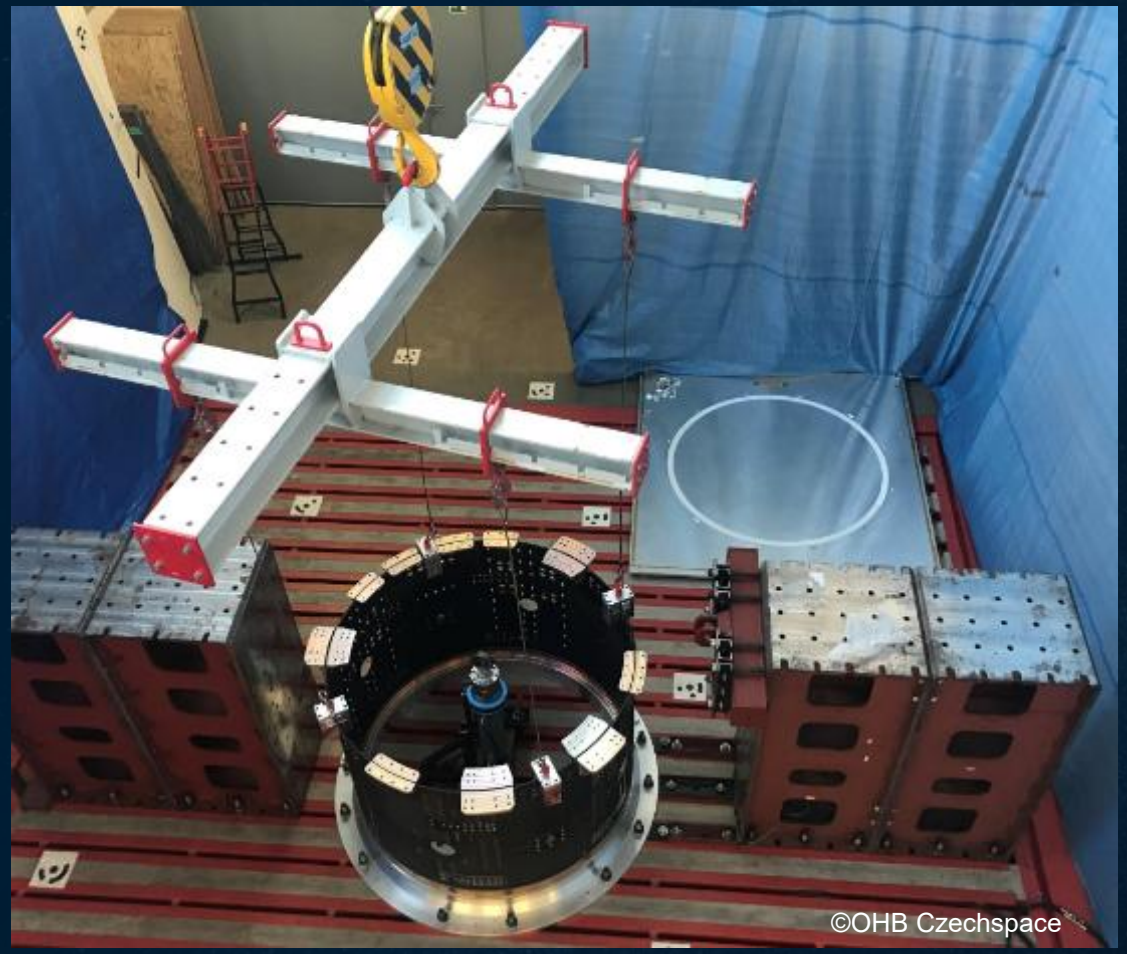
- Structural analysis of the CFRP central tube including design & mass optimization activities
- Test prediction, organization and execution of the static load test
- FE model correlation





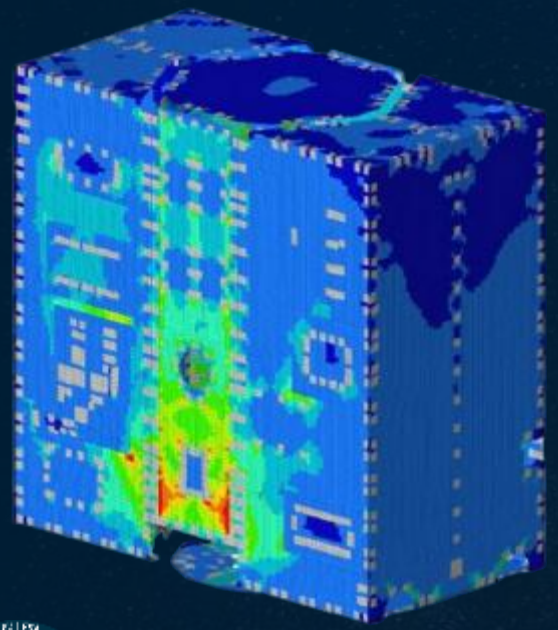


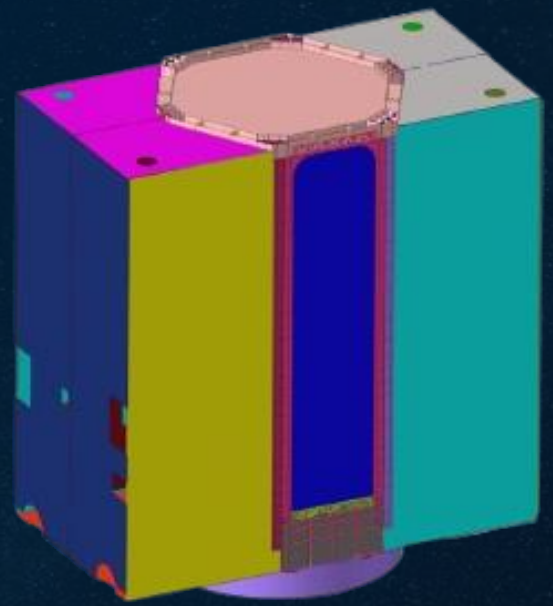
PLATO – Static Load Test



CO2M – Copernicus EO Mission

- Structural analysis of the satellite’s platform
- Verification of the structural elements (brackets)
- Analysis of joining elements (bolts, inserts)





CRYSA

Mission: ATHENA (Advance Telescope for High-Energy Astrophysics)

- Material analysis
- Thermal conductance measurement
- Mechanical properties characterization

CIPM & ISI

CIPM & ISI

CIPM & ISI

SLON

Steels improved by oxides and nitrides dispersion for launchers application

Main objective is to identify and demonstrate by test promising processing routes for simultaneous strength and ductility enhancement of metallic alloys for future space transportation structural applications.

Target application

- Increasing the TRL of selected combination of alloy system and processing methodology up to TRL3

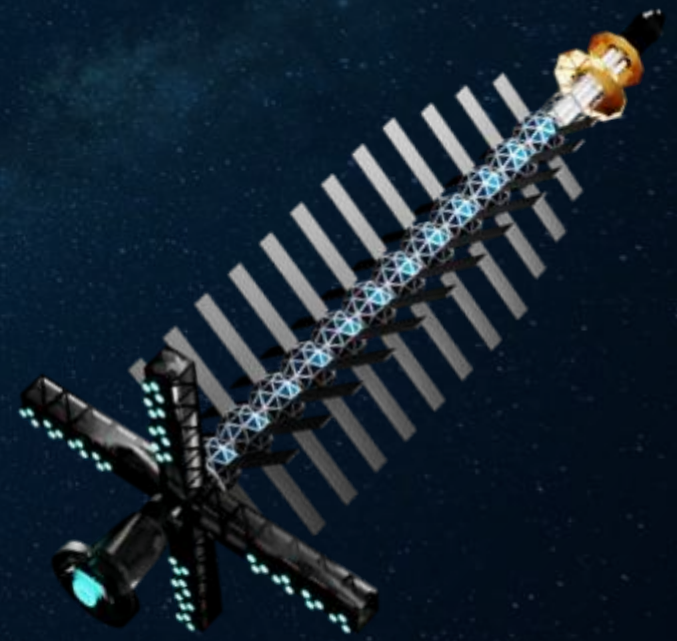
Target properties

- Enhanced mechanical performance (strength and ductility) allowing for lighter structures
- Reliability & robustness
- Reusability

Nuclear Electric Propulsion

ESA Study

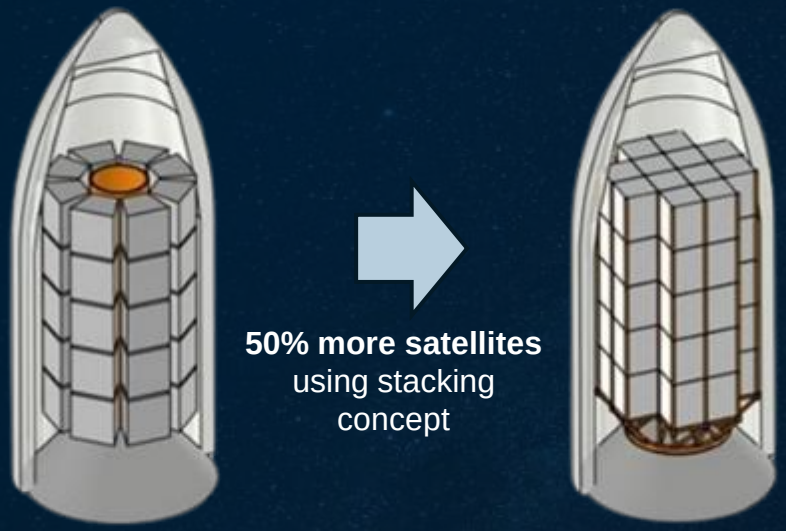
- Overview of existing European experience, technology and industrial capabilities for the development of a NEP vehicle. Identification and description of required key technologies for NEP engine, together with its subsystems.
- Design preliminary concept(s) and architecture elements for a NEP engine.
- Establishment of preliminary requirements on technical, safety and cost aspects to design a NEP engine.
- Assessment of the safety constraints and mission operating constraint for the end-to-end mission of a NEP vehicle.
- Comparison of the NEP with current in-space Solar Electric Propulsion technologies and identification where NEP is mission enabler.
- Continuation of the project via StayCooled activity – OHB Czechspace prime



SmallSat Stacking Guideline

Objectives

- Propose SmallSat design guidelines to enable efficient stacking on heavy launchers
- Maximum use of fairing volume and PL mass capacity
- Verification by test a BBM designed according to the guideline
- Extend the scope to FlatSat formfactor

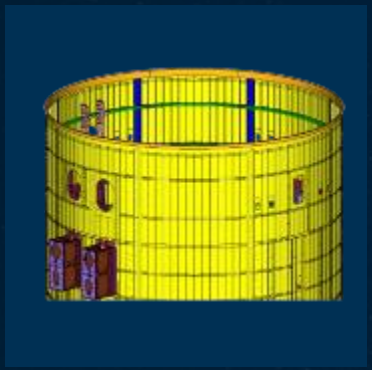


50% more satellites using stacking concept

5 x 8 = 40 OneWeb launch as benchmark

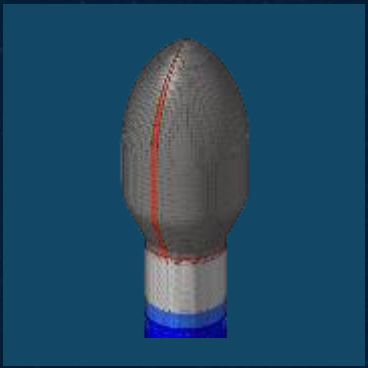
12 x 5 = **60 stacked** satellites

Other Launcher Related Activities



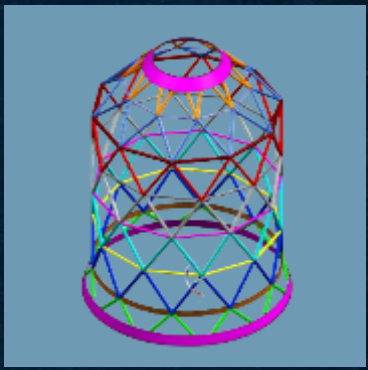
Ariane 6

Verification of Launcher structural elements



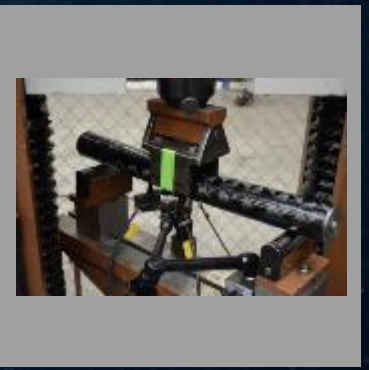
Coupled Load Analysis

Analysis of S/C & LV interaction



Dual Launch Truss Structure

Feasibility study and planned development



SmartBeam Technology

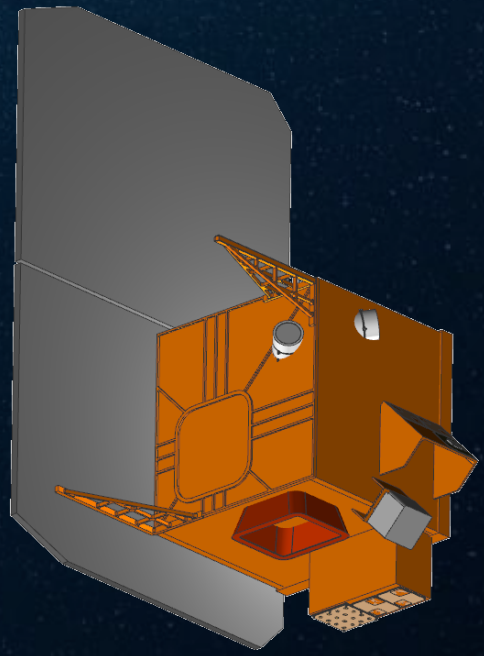
Ongoing Technology developments of Modular Struts featuring Structural Health Monitoring (SHM)

SOVA - Scout

OCZ is leading Czech-German Consortium for ESA Earth Observation Scout Mission

Objectives

- Understanding of gravity waves interaction with other large-scale dynamics in the MLT
- Improvement in the understanding of gravity wave propagations (MLT -> thermosphere-ionosphere)
- Global detection and precise characterization of gravity waves in the upper mesosphere and the ionosphere using day-to-day measurements of atmospheric airglow (OH*, O*) over at least two years



RAMSES

OCZ is responsible for the design, manufacture, test & deliver PFM of the RAMSES structure

- Update and maintain the spacecraft finite element models including all S/C components
- Performance of various static analysis loop in iteration with the design engineer under a consideration of all load cases to perform the verification of all structural elements
- Detail definition of external and internal interface design
- Development/Refurbishment of the RAMSES MGSE Panel Integration Device (PID)

From Experience to New Opportunities

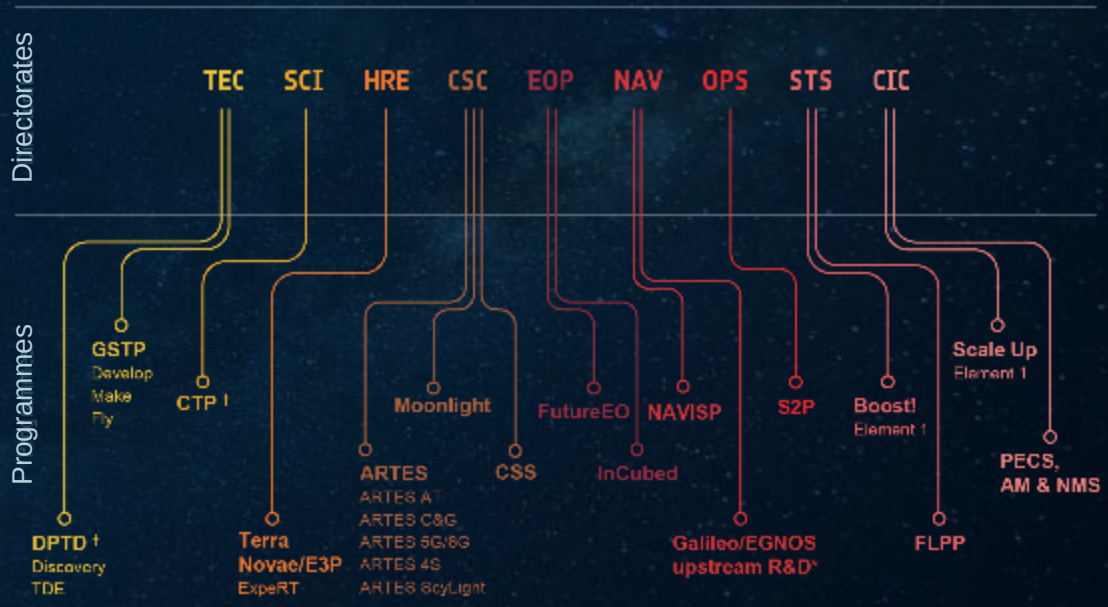
OHB Experience

- Across all ESA directorates
- Commercial and non-commercial applications
- Wide range of developments from low to high TRL

Areas of potential cooperation

- Design, Structural & Thermal Analysis
- Opto-mechanical & Opto-electronical Instruments
- Solar generators
- Reusable structures
- Nuclear Safety and Nuclear Electric Propulsion
- New manufacturing processes & Material Engineering
- Space Safety
  - Space debris
  - Demisability
  - Situational awareness
- ISS experiments

ESA DIRECTORATES AND TECHNOLOGY R&D PROGRAMMES



EU programme implemented by ESA through delegation and cooperation agreements.
DPTD & CTP are part of ESA´s mandatory activities.

TEC Technology Engineering and Quality I SCI Science I HRE Human and Robotic Exploration I CSC Connectivity and Secure Communications I EOP Earth Observation Programmes I NAV Navigation I OPS Operations I STS Space Transportation I CIC Commercialisation and Competitiveness

OHB CZECHSPACE

Thank you.