Active Space Technologies

space | aeronautics | nuclear | industry

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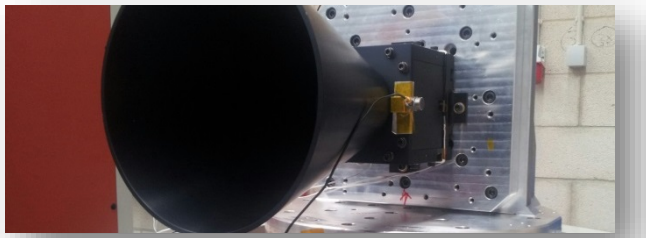
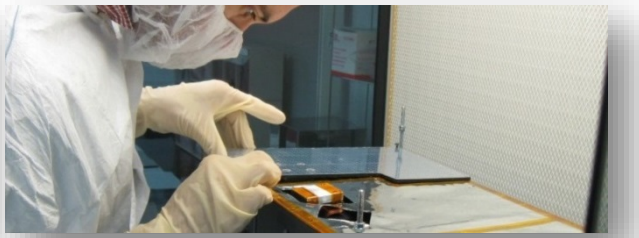
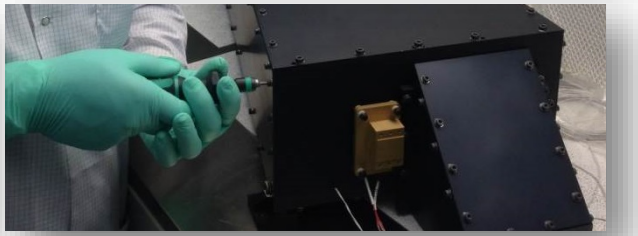
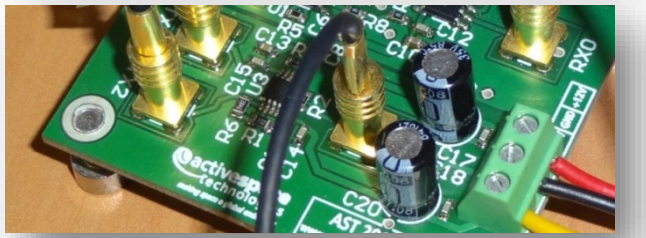
making space a global endeavour

Track Record









Space

ASTRIUM AN EADS COMPANY · ThalesAlenia Space · DLR · esa · OHB SYSTEM An OHB Technology Company · SELEX GALILEO · SENER · ZEISS We make it visible. · JPL · KAYSER-THREDE · IberEspacio Tecnologia Aeroespacial · RUAG

Aeronautics

AgustaWestland A Finmeccanica Company · SAFRAN Turbomeca · Avio Aero

Nuclear

iter-nl · ipfn INSTITUTO DE PLASMAS E FUSÃO NUCLEAR · UKAEA · iter · EFDA EUROPEAN FUSION DEVELOPMENT AGREEMENT · FUSION FOR ENERGY THE EUROPEAN JOINT UNDERTAKING FOR ITER AND THE DEVELOPMENT OF FUSION ENERGY

Industry, LRF

PSA PEUGEOT CITROËN · ESO · CIE Plasfil · cea · AEMtec

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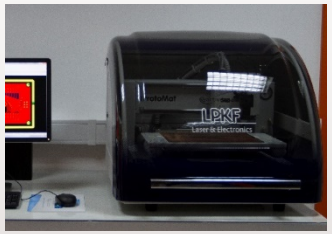
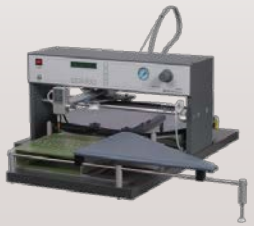
Capabilities

Manufacturing

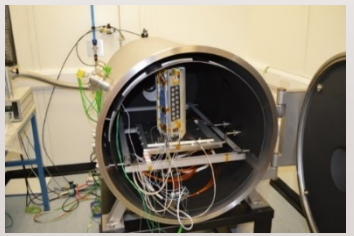
Metrology

Assembly



Testing



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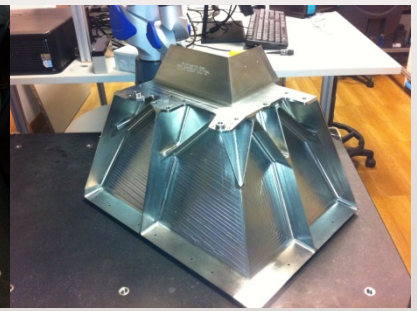
Case Studies

Solar Orbiter: Feedthroughs MTD, STM, EQM, FM

Manufacturing

Assembly

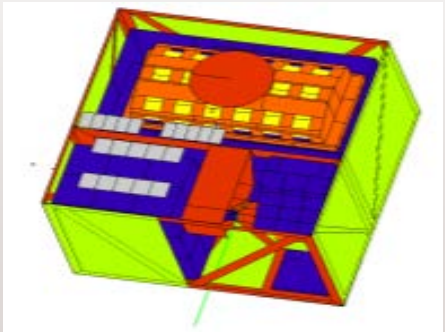
[Airbus]



Hayabusa 2: MASCOT

Phase A,B,C+D Thermal Analysis, thermal design, procurement (MLI, heaters, heat pipes), thermal test support

[DLR / JAXA]



InSight: HP3

investigation of the Planetary Heat flux on Mars

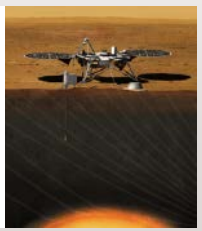
Thermal design, system engineering

Quality assurance, Thermal/structural analysis

CFD analysis, MGSE, Electronic boxes

Procurement (MLI, heaters, heat pipes)

[DLR / NASA]



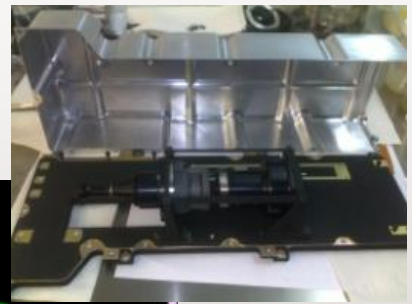
BepiColombo (MMO): MSASI QM, STM, FM

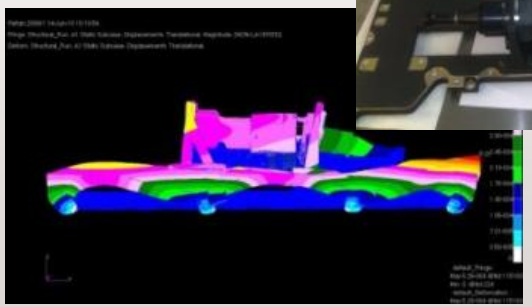
Thermal Analysis

Structural Analysis

Manufacturing

[JAXA / NEC]





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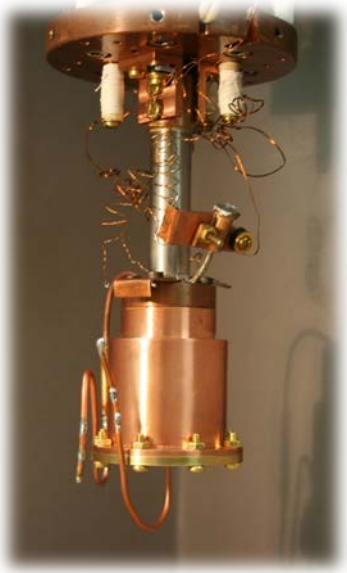
Energy Storage Units

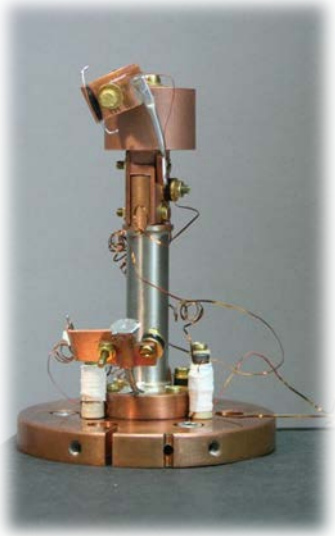


Model: ESU 6K

Mass: 200g
Volume: 40cc
Storage material: GOS
Starting temperature: <3K
Set point: 1 hour below 6K, 10 mW input

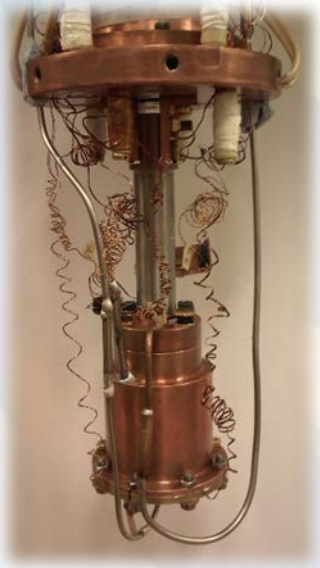
Model: ESU 15K

Mass: 250g (cold part)
Volume: 20 cc
Storage material: Liquid Hydrogen
Starting temperature: <15 K
Set point: 0.5 hour below 16K, 250 mW input
RT storage hydrogen canister <150 cc



Model: ESU 20K

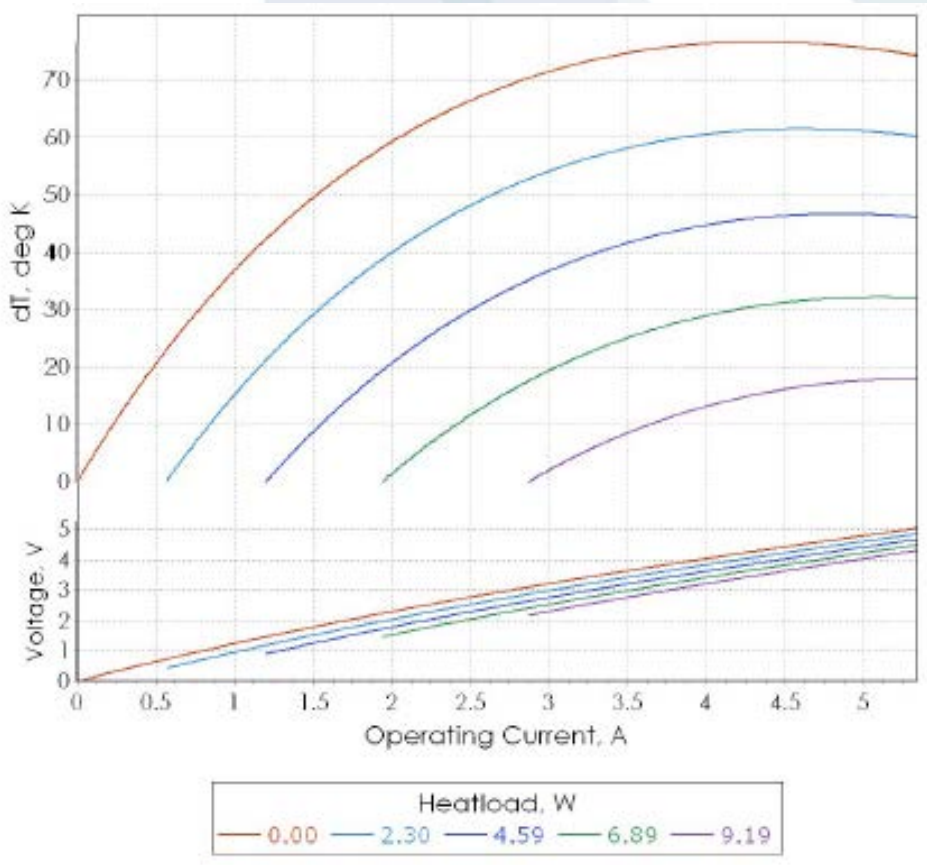
Mass: 200g
Volume: 15cc
Storage material: Lead
Starting temperature: <11 K
Set point: 1 hour below 20K, 10 mW input



Model: ESU 120K

Mass: 200g
Volume: 40 cc
Storage material: Liquid Nitrogen
Starting temperature: <80 K
Set point: 1 hour below 120K, 1 W input

Thermoelectric Coolers for LNA Thermal Control



Features

- Peltier cells for thermal control in Space applications
- Improved signal-to-noise ratio of communication systems
- Cooling power up to 10W
- $\Delta T_{max} > 70$ degrees
- Low-power operation (< 16W)

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Aerogels Super-insulation

Aerogel Flexible Panel

Panel dimensions (mm): 500x875 (x10-30)

Density (Kg m^{-3}): <100

Thermal conductivity (mW m^{-1} K^{-1})

31 SATP

10 @20ºC, 10mbar CO2

Permitivity 1.2

Tangent loss 0.003

Operating temperature (ºC): -253 to 400

Complies with ECSS (outgasing, radiation)

Aerogel Powder / Pellets

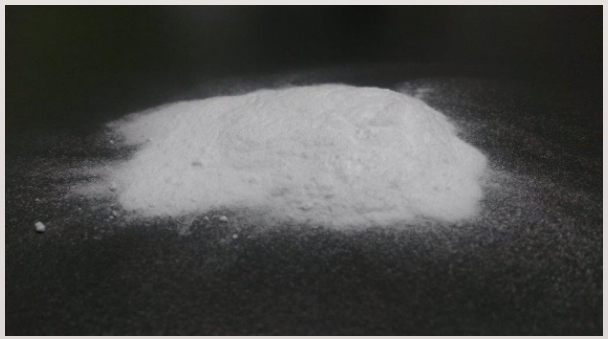
Density (kg m^{-3}): 85

Thermal conductivity (mW m^{-1} K^{-1})

31 SATP

Permitivity 1.2

Tangent loss 0.00048



Spray-on Aerogel

Density (Kg m^{-3}): <120

Thermal conductivity (mW m^{-1} K^{-1}):

40 SATP

Operating temperature (ºC): -196 to 250

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Contact us

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