## LOW MASS

LOW COST

HIGH QUALITY





# SPACE COMPOSITE STRUCTURES The Facts

#### **SME**

New State-of-the-Art-Technologies

**Design** for manufacturing, **Finite Element Analysis**: Mechanical & Thermal

In-house manufacturing: CFRP tubes, Struts, Booms, Core Panels, Thin Panels and more...

In-house mechanical & thermal testing: tensile/compression/ temperature

ISO 8 clean room

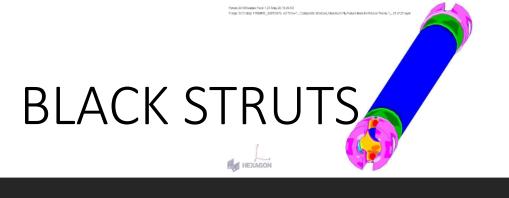
Customers: ESA, AIRBUS DS, Thales-Alenia Space, DTU Space, Lusospace, EUROCOMPOSITES, AST Science US

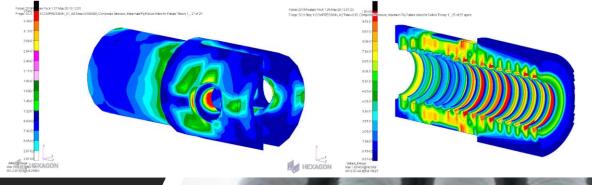
ISO 9001/2015 certificate

"WE KNOW SPACE"



Composite Design: "If you don't manufacture composite components yourself, you probably don't know what you're doing!"





- TRL6
- 30 to 70 % further mass reduction compared to std. metal/composite solution
- NO METAL
- CTE = 0
- - 218°C
- 2 TYPES & 3 PERFORMANCE LEVELS
- In-house Manufacturing by PROPRIETARY procedure
- COST OPTIMIZED

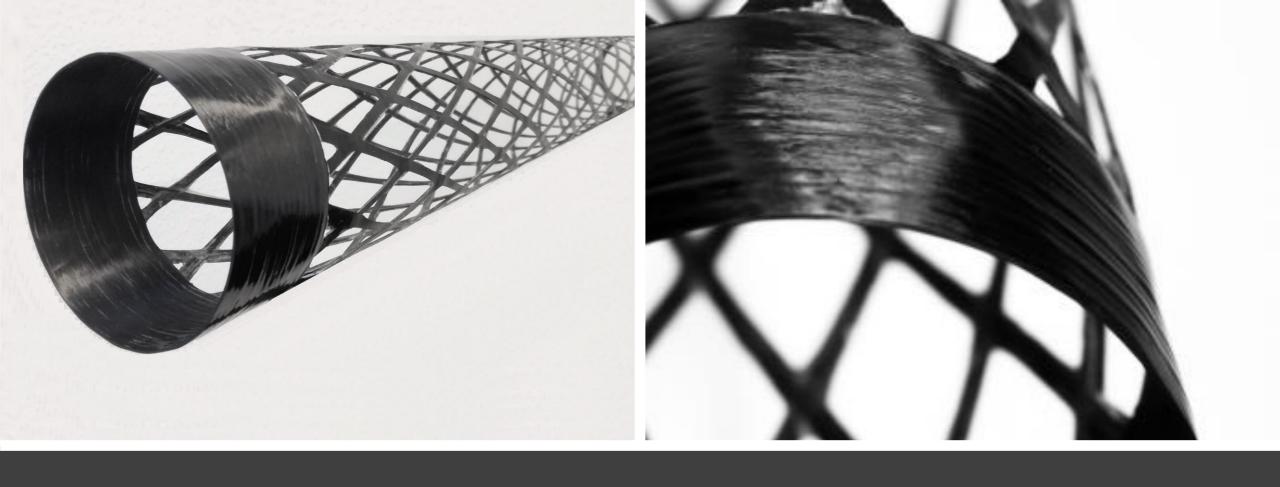




# BLACK STRUTS on ARIEL mission

- <a href="https://arielmission.space/">https://arielmission.space/</a>
- Atmospheric Remote-sensing Infrared Exoplanet Large-survey
- BIPODS between payload & service module



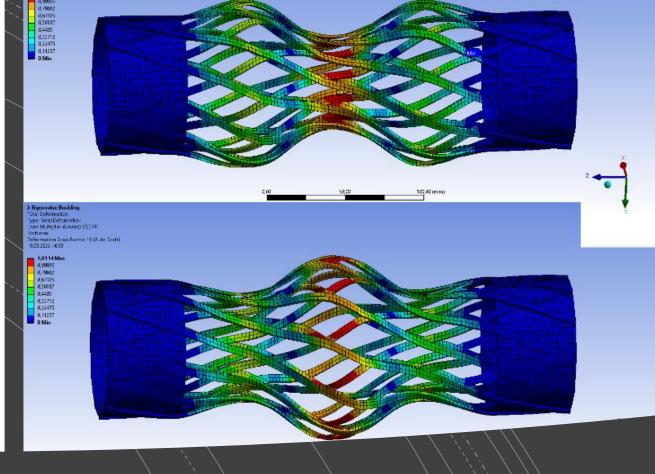


# ANISOGRID

- 5 times less mass than comparable composite solution
- In-house Manufacturing by PROPRIETARY procedure
- Full scalable and customable
- COST OPTIMIZED

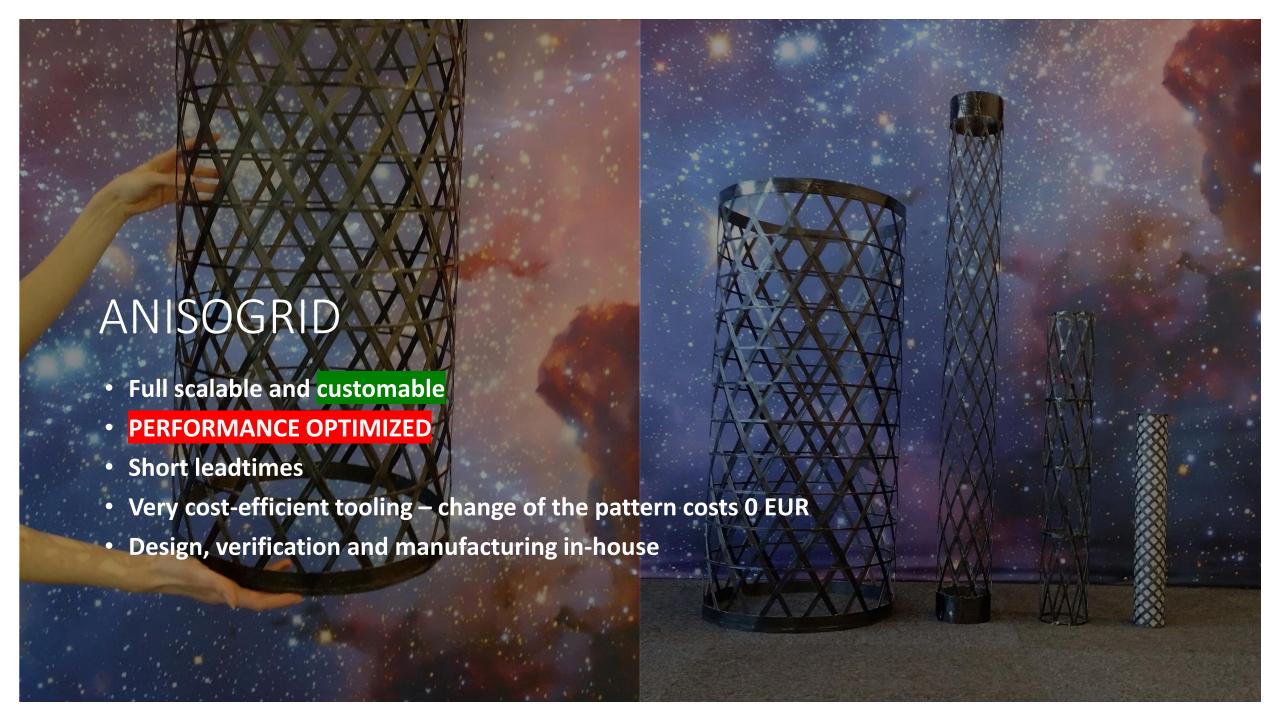






ANISOGRID

- Full scalable and customable
- PERFORMANCE OPTIMIZED



### STANDARD STRUTS

TRL 9

15 sizes

Carbon/Glass/Epoxy tubing

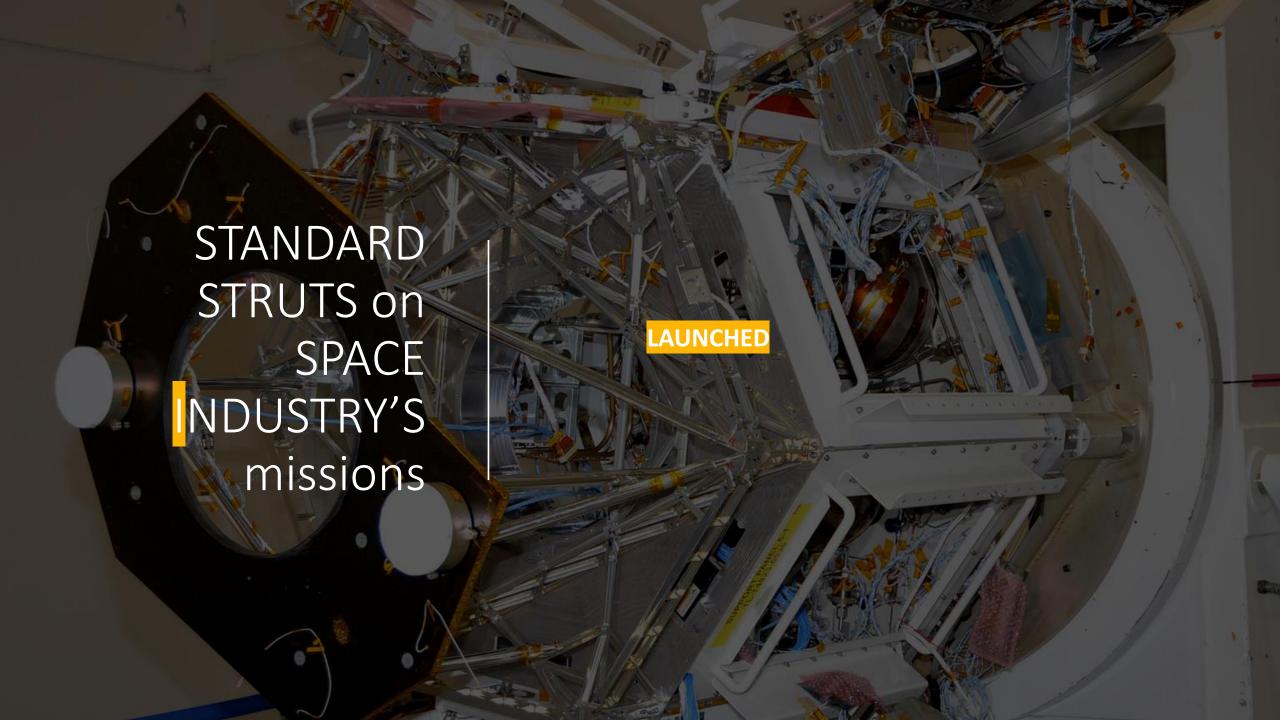
**Aluminum 7075-T6xxx fittings** 

**Lead Time: 8-10 weeks** 

**In-house Manufacturing** 

**COST OPTIMIZED** 



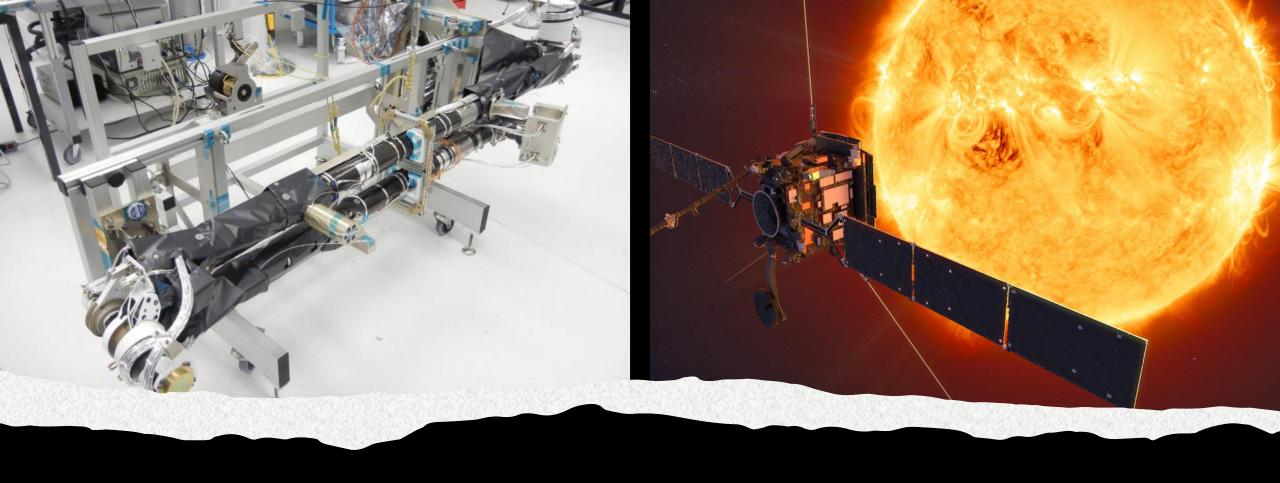






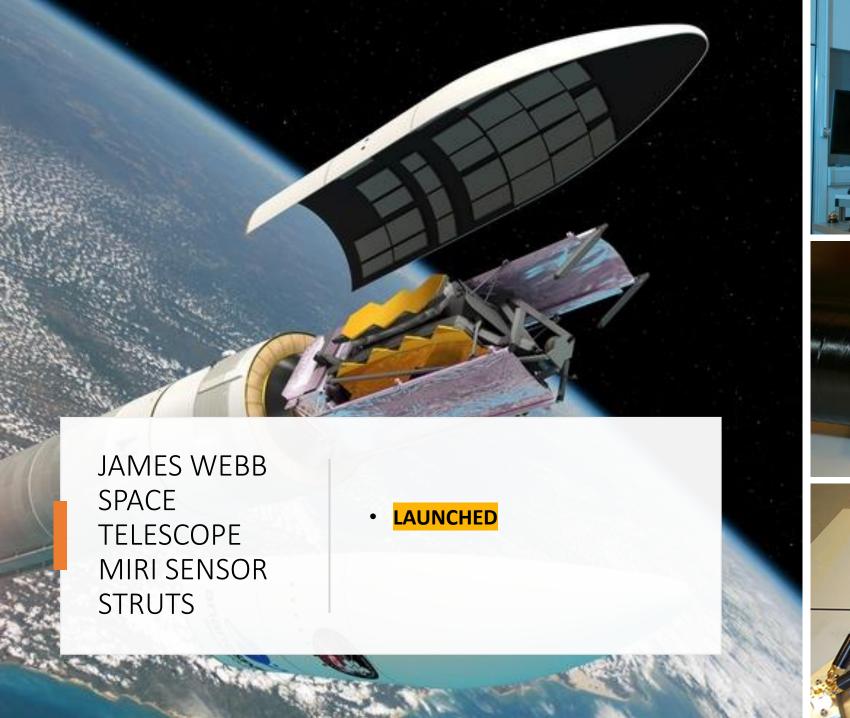
# SPACE STRUCTURES

- TRL9
- CUSTOM MADE
- ASSEMBLY
- PRECISION
- - 175°C



SOLAR ORBITER
INSTRUMENT BOOM

**LAUNCHED** 







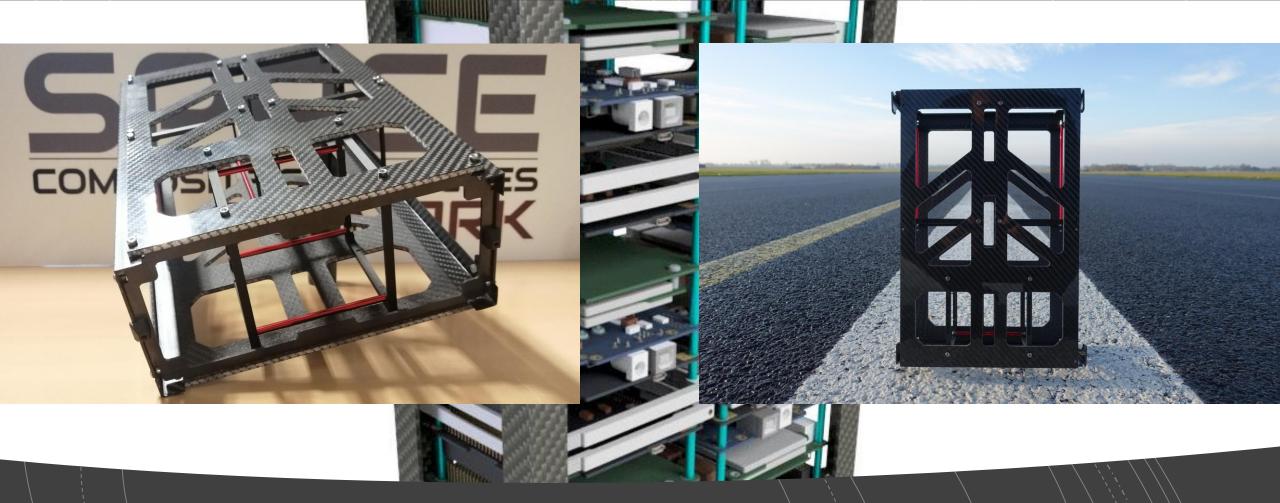




# DEFENCE STRUCTURES

.........

- DEPLOYED
- CUSTOM MADE TELESCOPIC MAST SECTIONS
- ASSEMBLY
- PRECISION
- MIL810G DESIGNED



CUBESAT FRAME

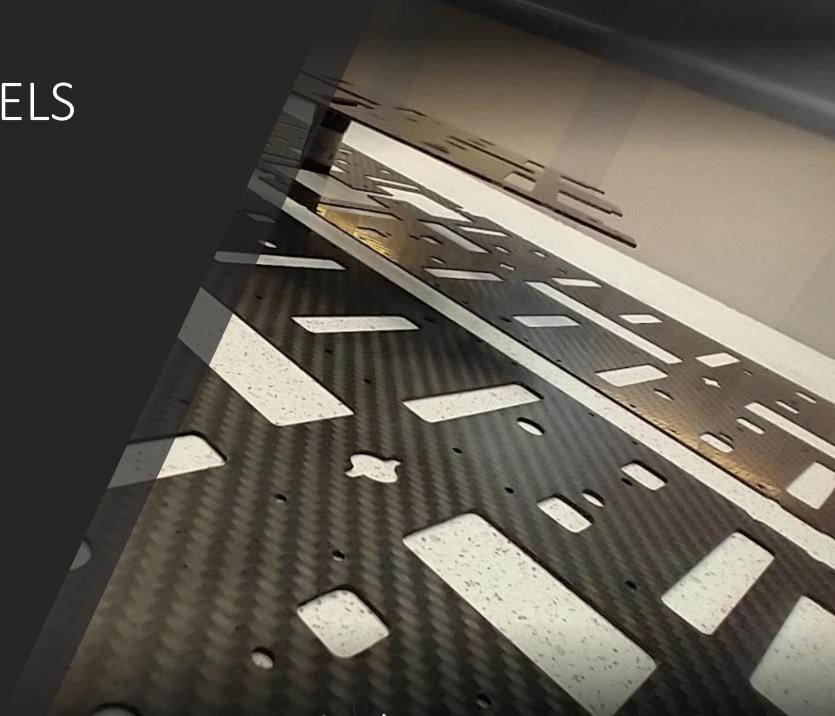
TRL2

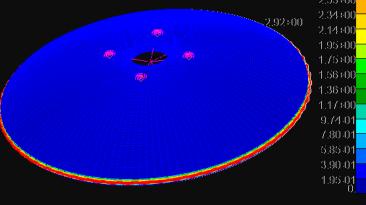
REDUCES OVERALL SATELLITE MASS BY 0.5KG / 6% MORE COST EFFICIENT THAN ALUMINUM FRAME EASY RE-CONFIGURATION

**COST OPTIMIZED** 

THIN FLAT PANELS

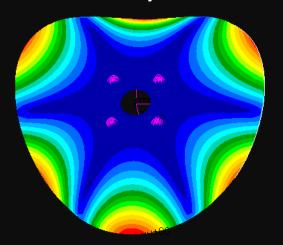
- TRL9
- CUSTOM MADE
- COST OPTIMIZED
- PRECISION
- - 175 /+ 160 °C
- LAUNCHED

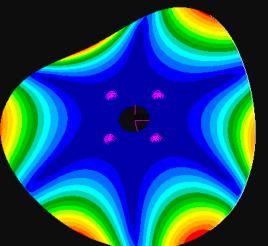


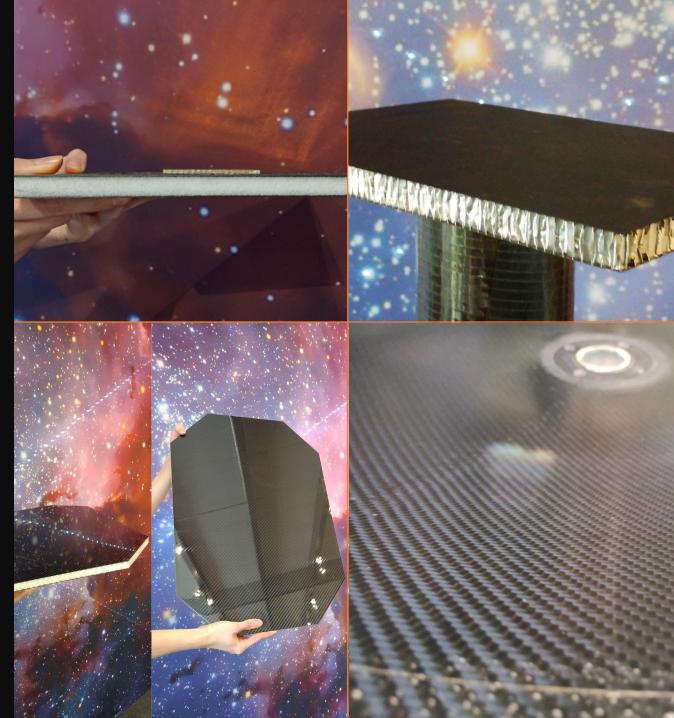


### CORE PANELS

- CUSTOM MADE
- COST OPTIMIZED
- HONEYCOMB & SORIC or ROHACELL FOAM
- - 175 /+ 160 °C









- TRL4
- CFRP, CFRP METALIZED & TITANIUM
- INHOUSE MANUFACTURING
- COST OPTIMIZED



#### The Premises

- Production
- CleanFloor with CleanRoom
- Office adjacent to production
- Very close to E20 motorway



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