

LOW MASS

LOW COST

HIGH QUALITY

**SPACE**  
COMPOSITE STRUCTURES  
**DENMARK**

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# SPACE COMPOSITE STRUCTURES

## The Facts

# DENMARK

### 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, Beyond Gravity, EUROCOMPOSITES, AST Science US

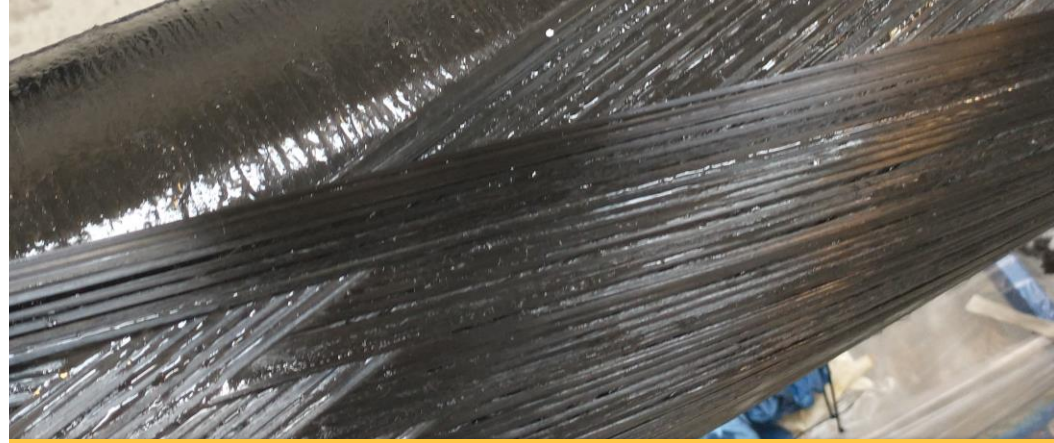
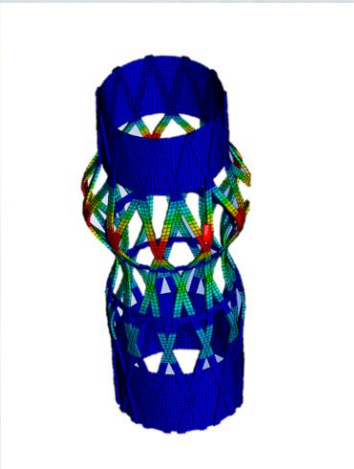
**ISO 9001**/2015 certificate

“WE KNOW SPACE”

# SPACE COMPOSITE STRUCTURES

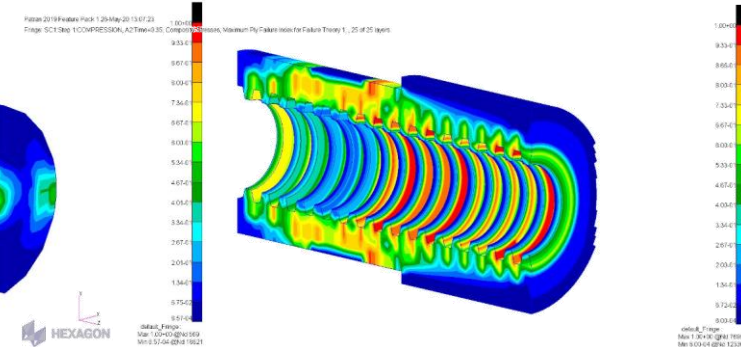
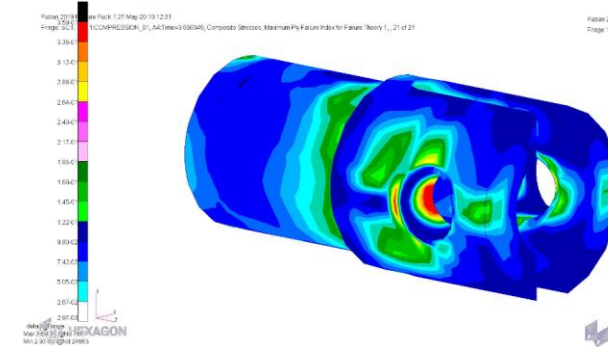
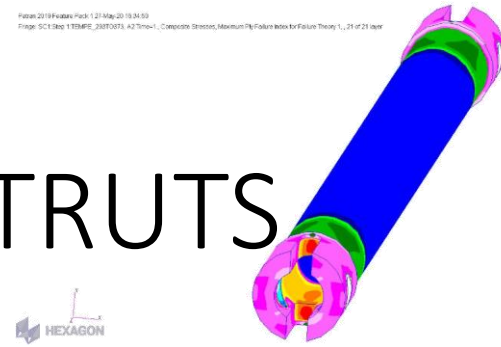
The Company

DENMARK

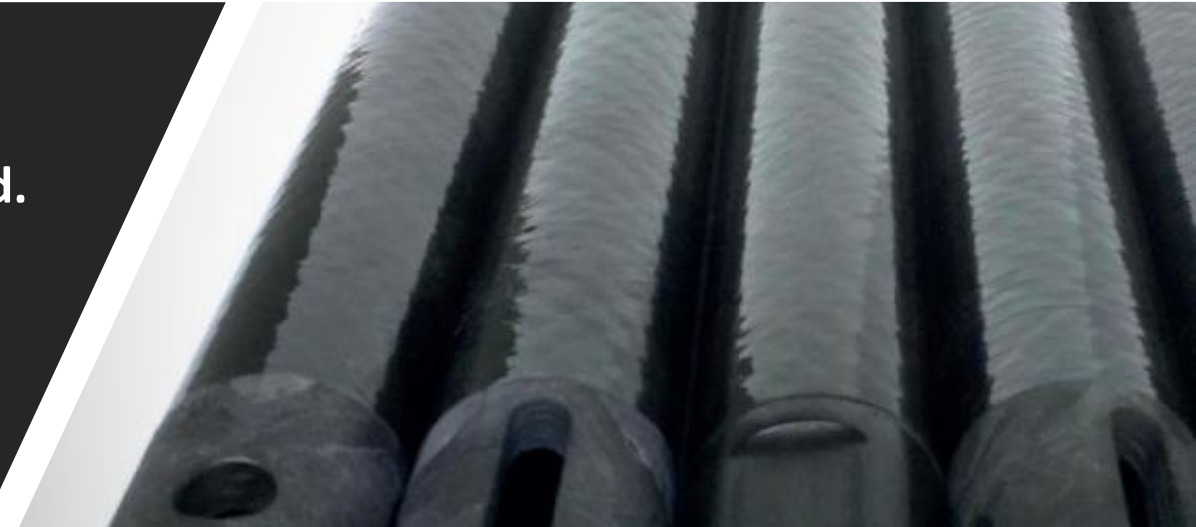


Composite Design: “If you don’t manufacture composite components yourself, you probably don’t know what you’re doing!”

# BLACK STRUTS



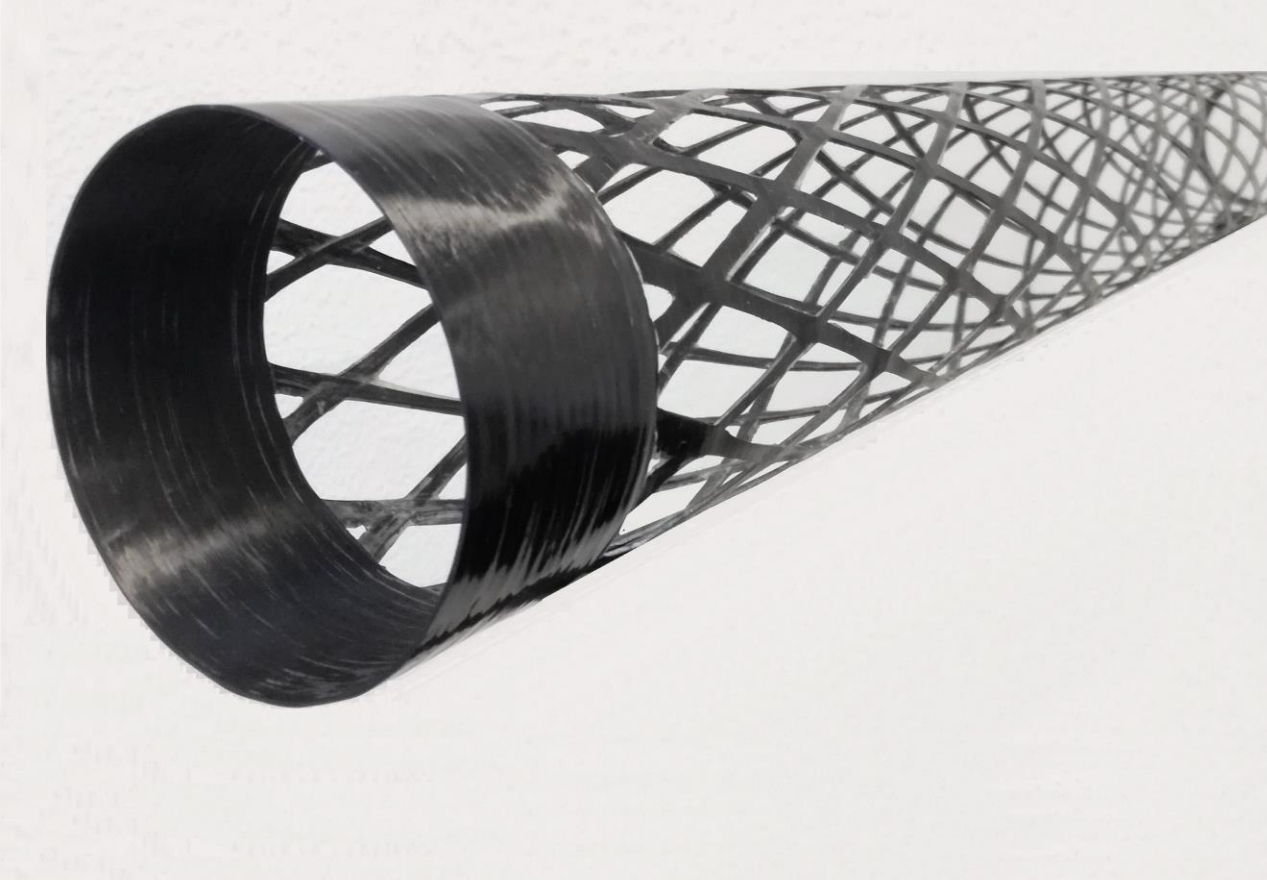
- TRL6
- 30 to 70 % further mass reduction compared to std. metal/composite solution
- **NO METAL**
- CTE = 0
- - 218°C
- 2 TYPES & 3 PERFORMANCE LEVELS
- In-house Manufacturing by PROPRIETARY procedure
- **COST OPTIMIZED**



# BLACK STRUTS on ARIEL mission

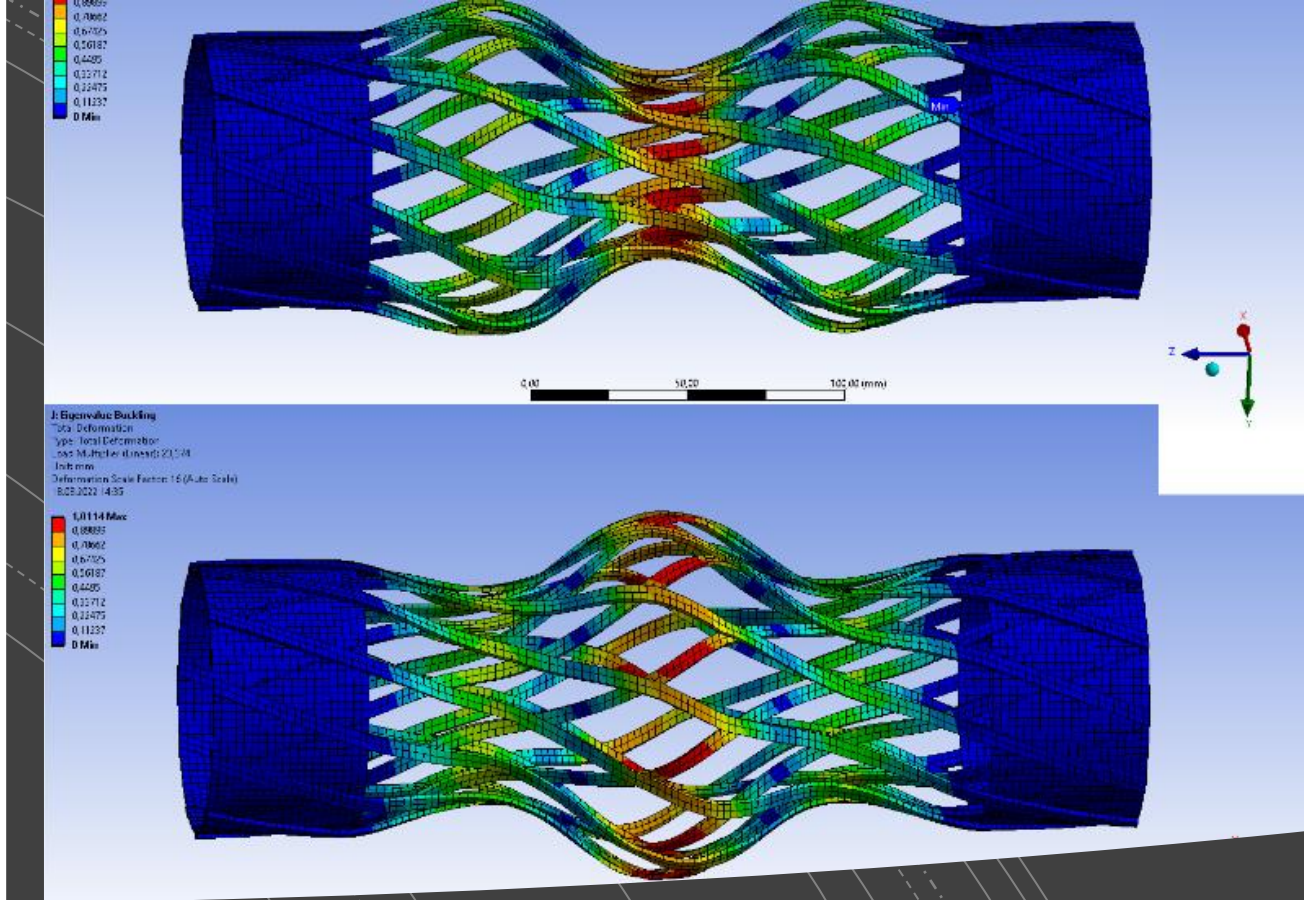
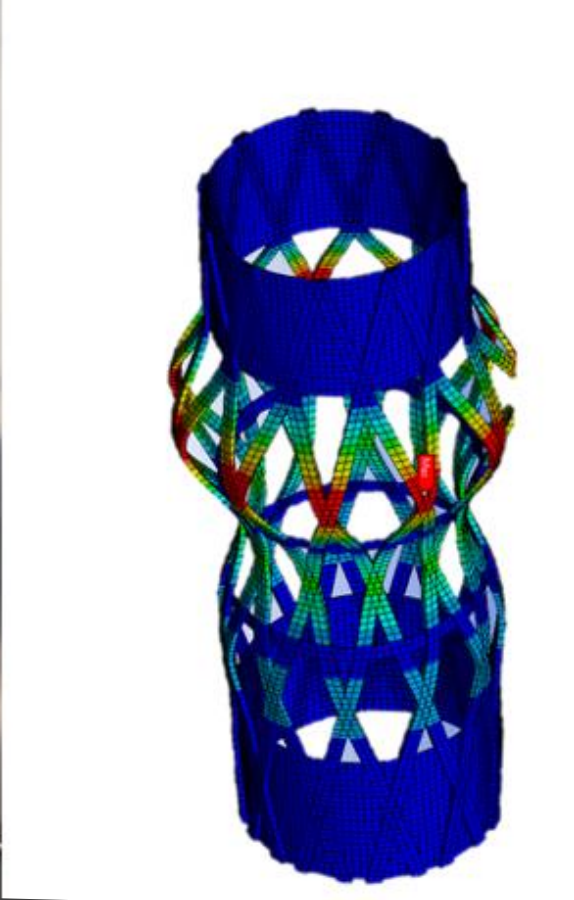
- <https://arielmission.space/>
- Atmospheric Remote-sensing Infrared Exoplanet Large-survey
- BIPODS between payload & service module





# ANISOGRID

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



# ANISOGRID

- Full scalable and **customable**
- **PERFORMANCE OPTIMIZED**



# ANISOGRID

- Full scalable and **customable**
- **PERFORMANCE OPTIMIZED**
- Short leadtimes
- Very cost-efficient tooling – change of the pattern costs 0 EUR
- Design, verification and manufacturing in-house





# STANDARD STRUTS

TRL 9

15 sizes

Carbon/Glass/Epoxy tubing

Aluminum 7075-T6xxx fittings

Lead Time: 8-10 weeks

In-house Manufacturing

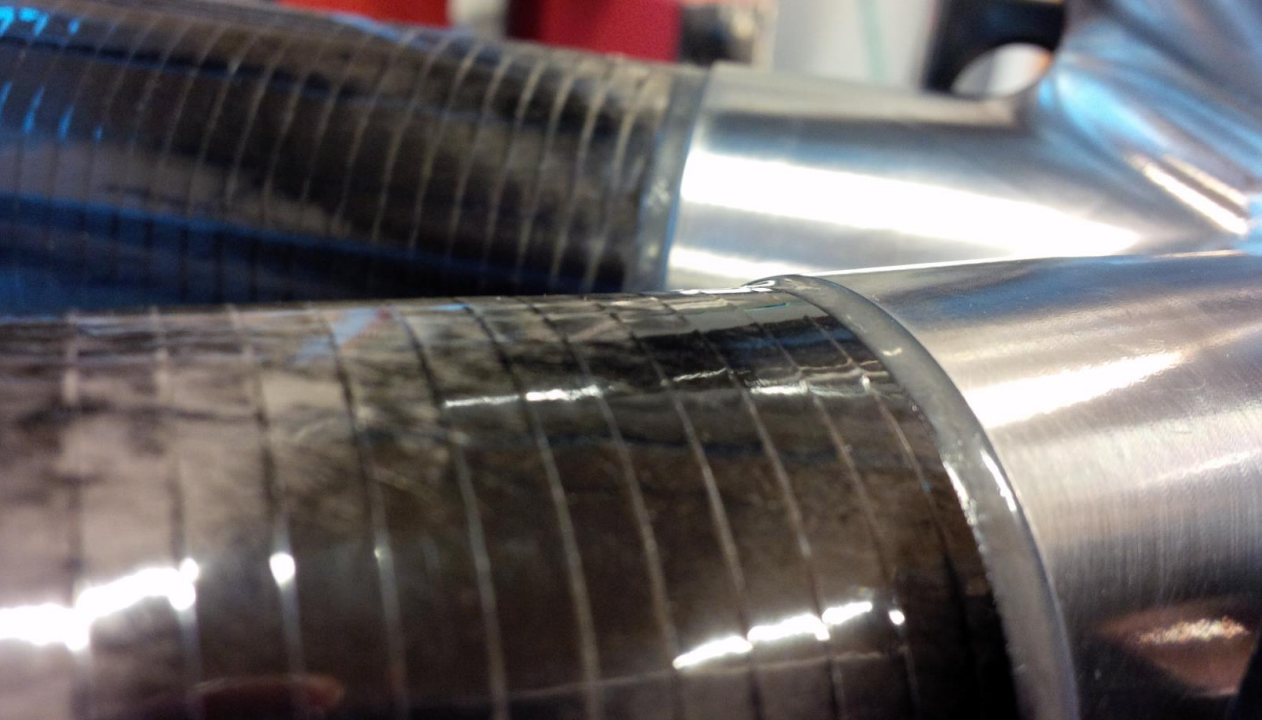
**COST OPTIMIZED**





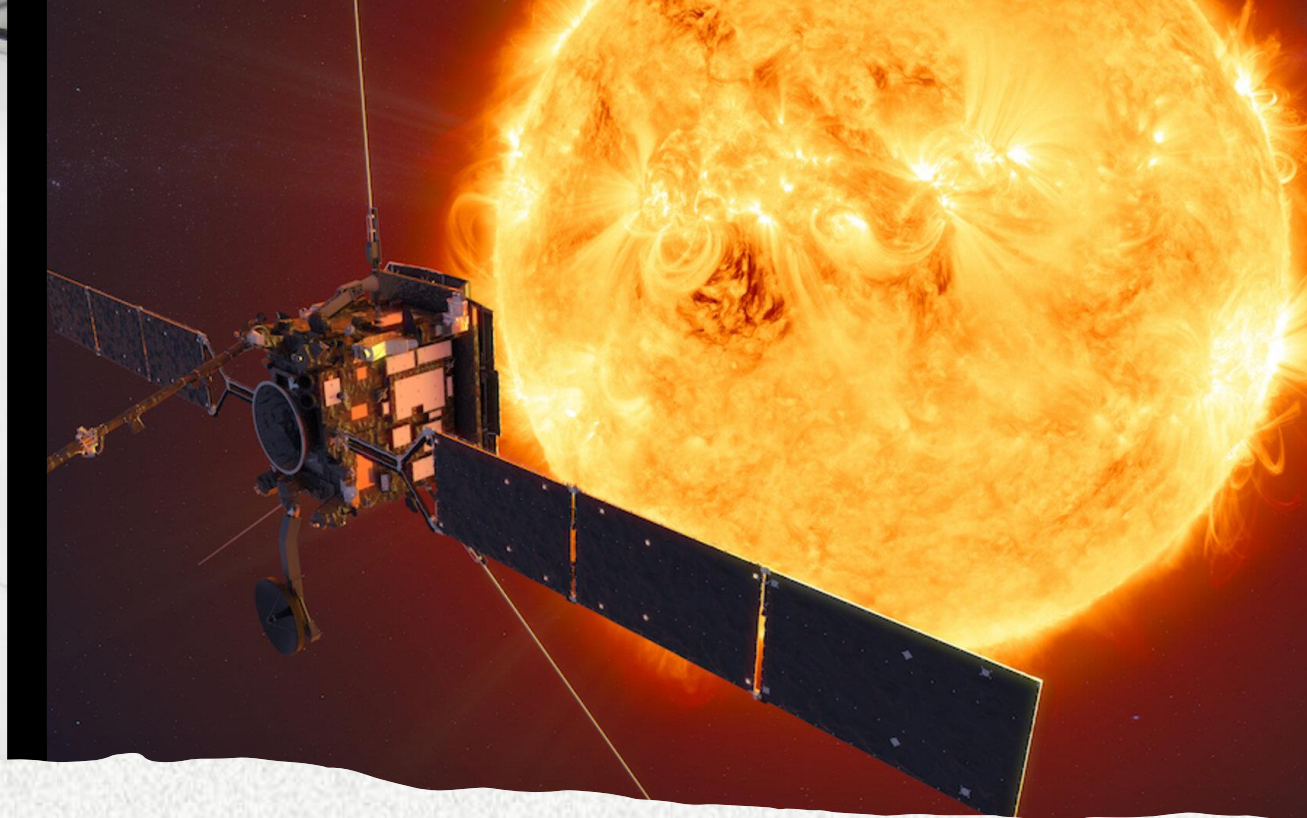
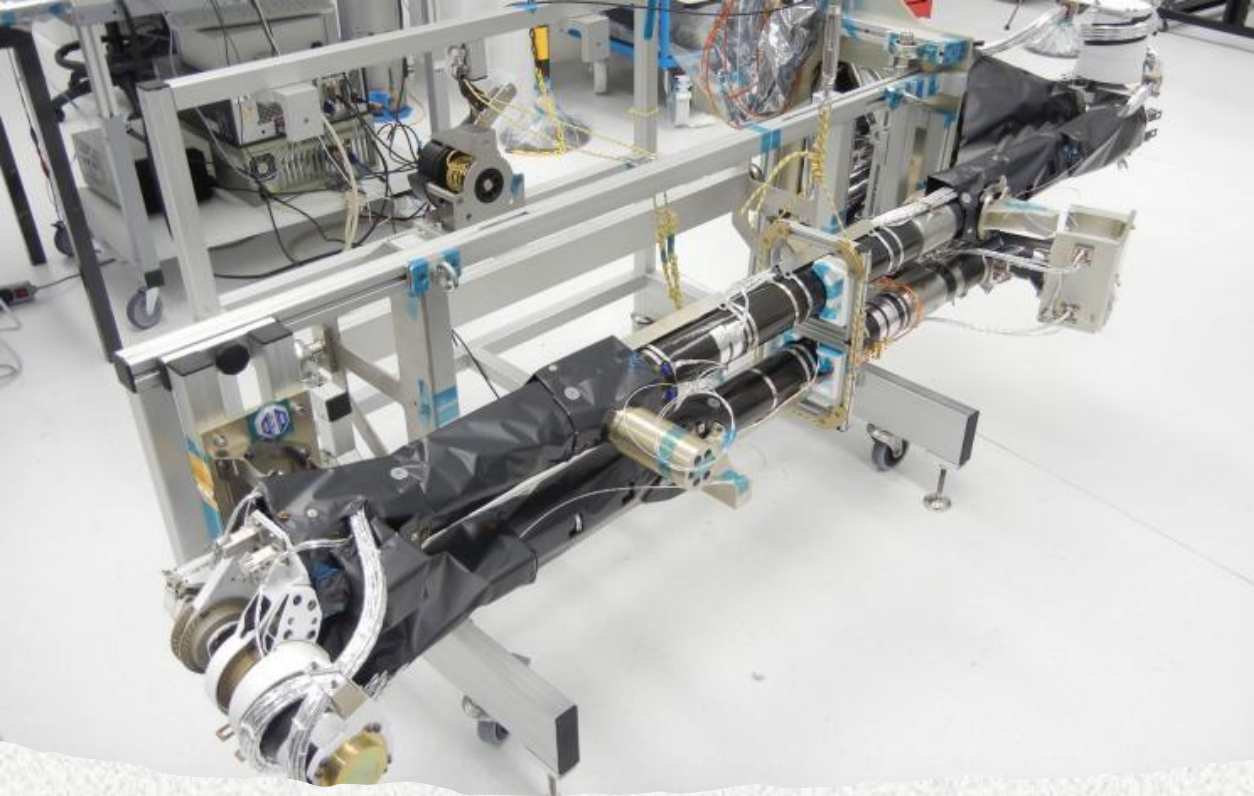
STANDARD  
STRUTS on  
ISRAELI SPACE  
INDUSTRY'S  
missions

LAUNCHED



# SPACE STRUCTURES

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



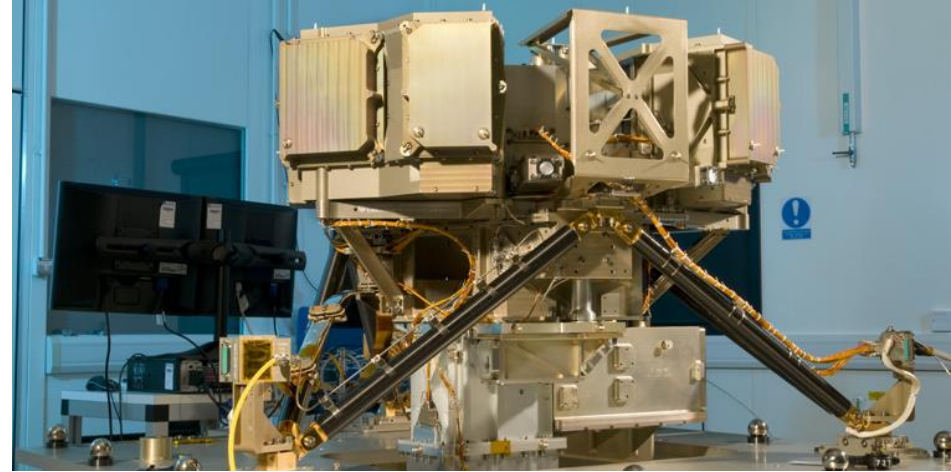
# SOLAR ORBITER INSTRUMENT BOOM

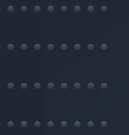
- LAUNCHED



JAMES WEBB  
SPACE  
TELESCOPE  
MIRI SENSOR  
STRUTS

- **LAUNCHED**

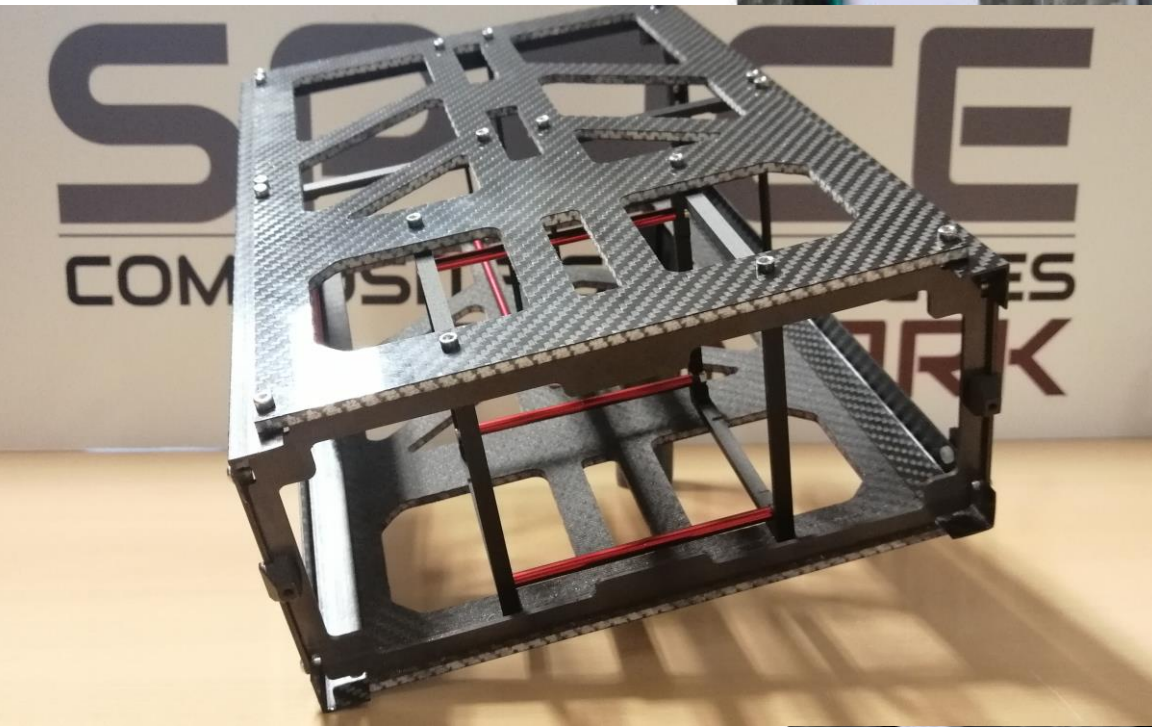




# DEFENCE STRUCTURES

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





# CUBESAT FRAME

TRL2

REDUCES OVERALL SATELLITE MASS BY 0.5KG / 6%

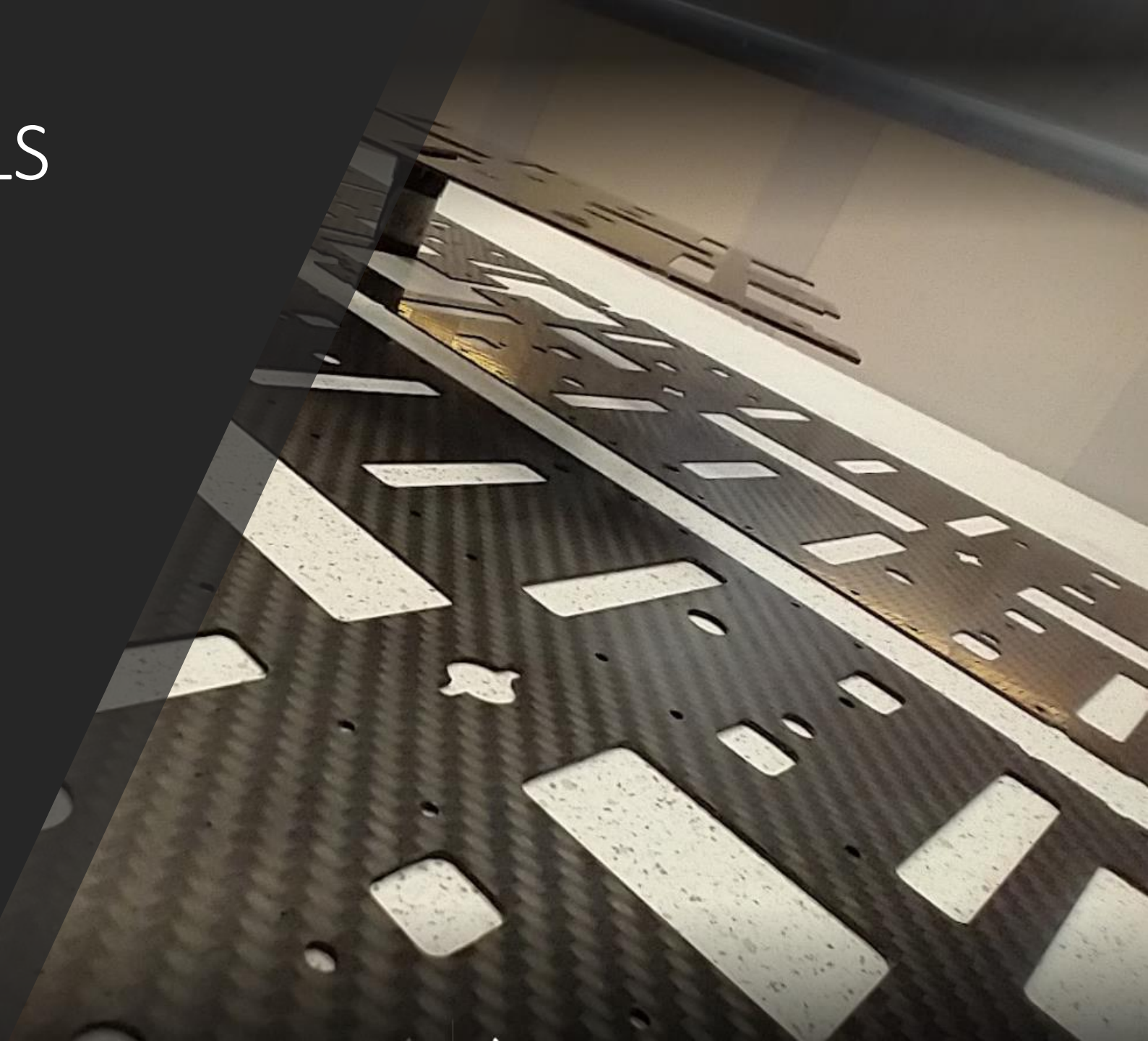
MORE COST EFFICIENT THAN ALUMINUM FRAME

EASY RE-CONFIGURATION

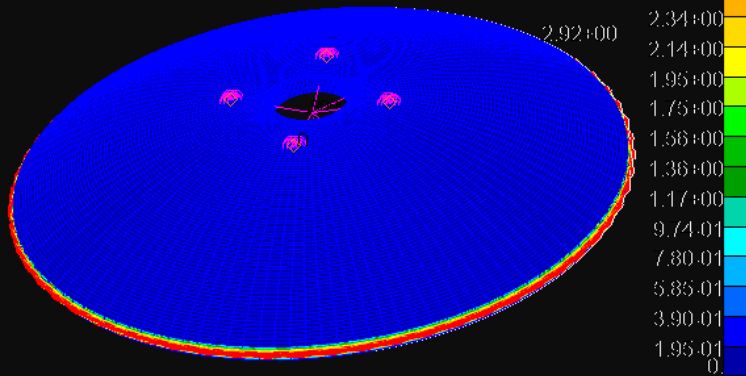
**COST OPTIMIZED**

# THIN FLAT PANELS

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

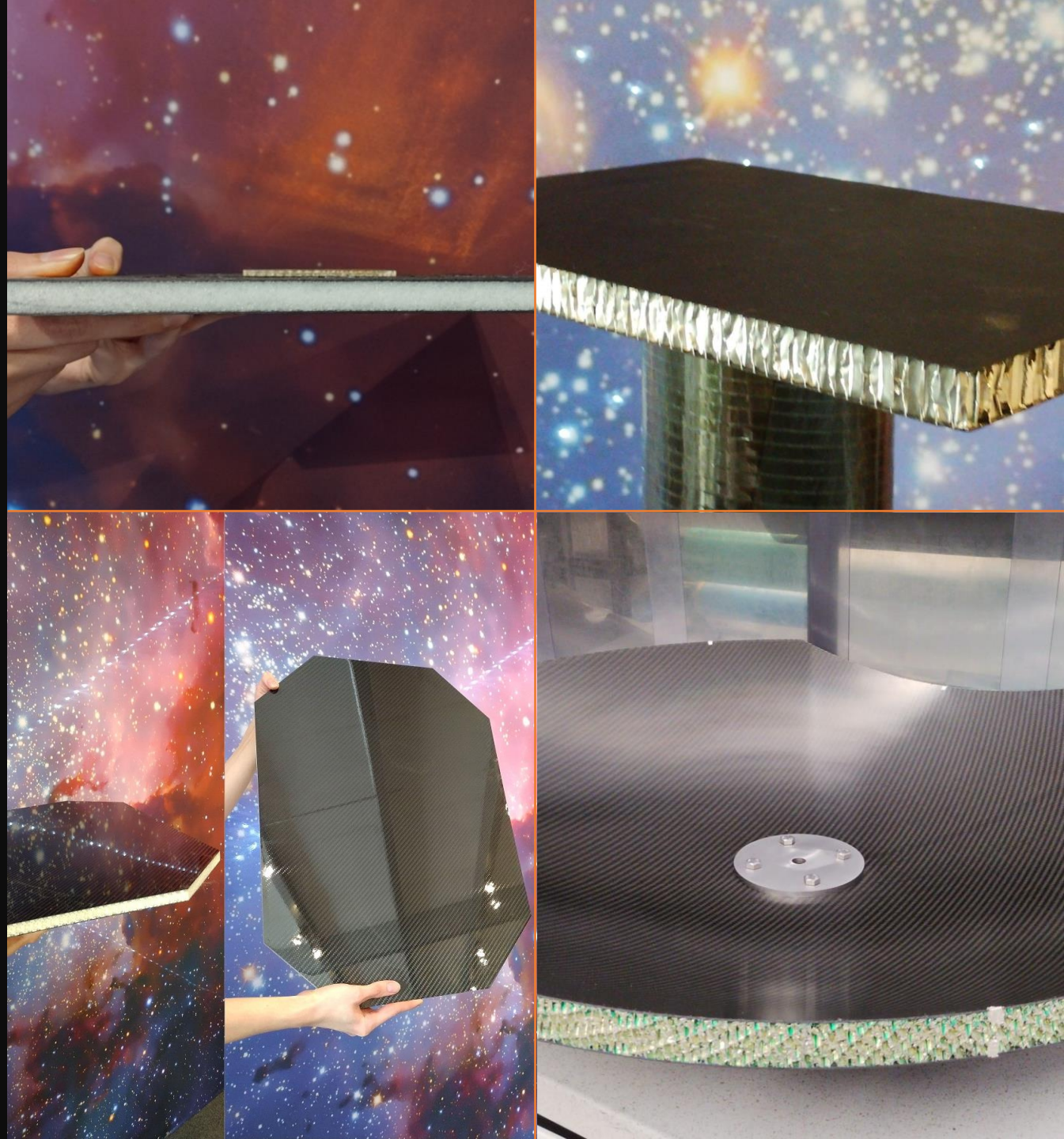
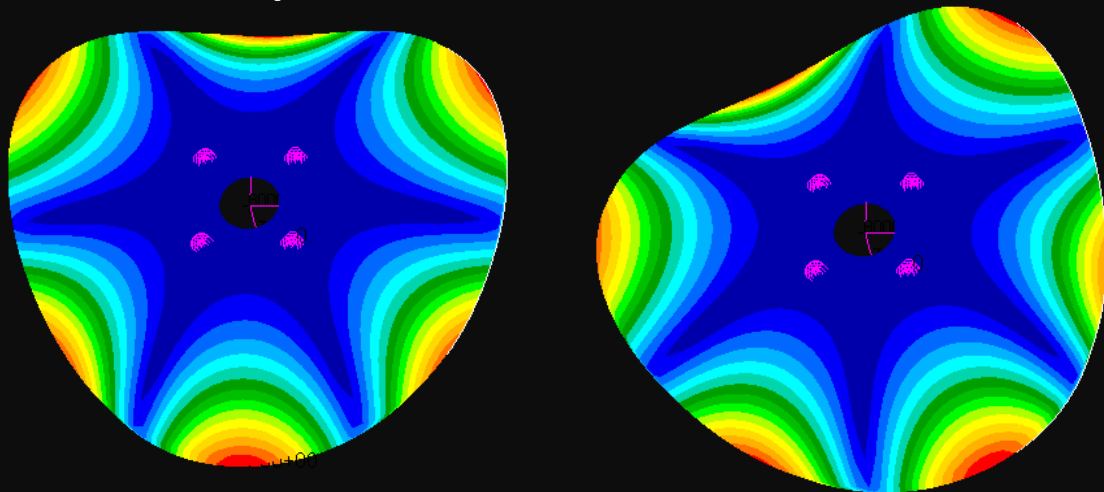


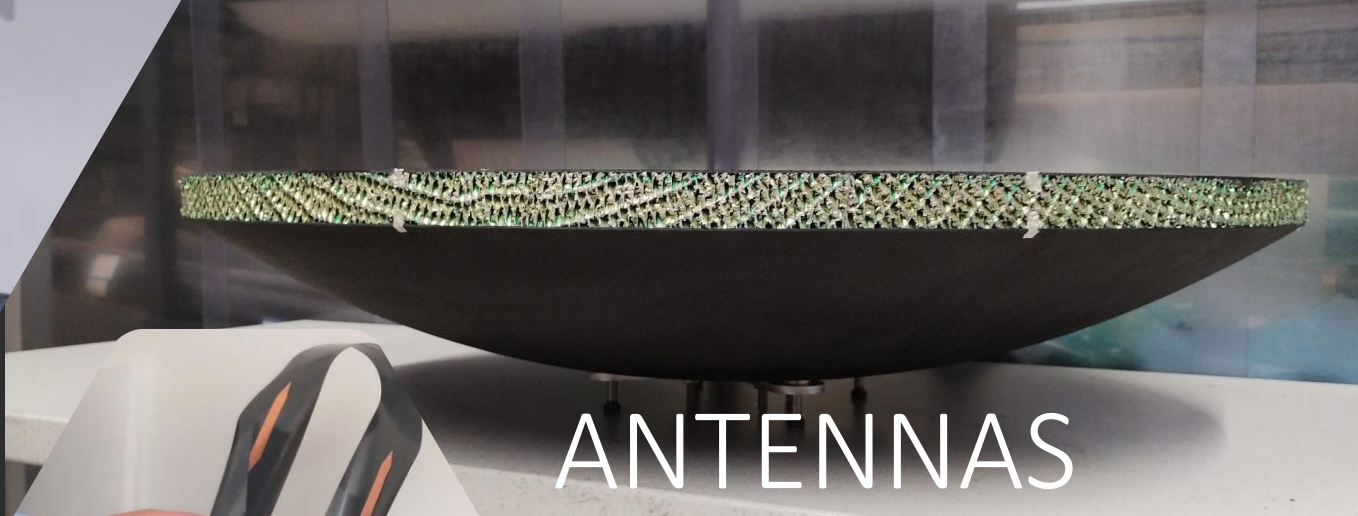




# CORE PANELS

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

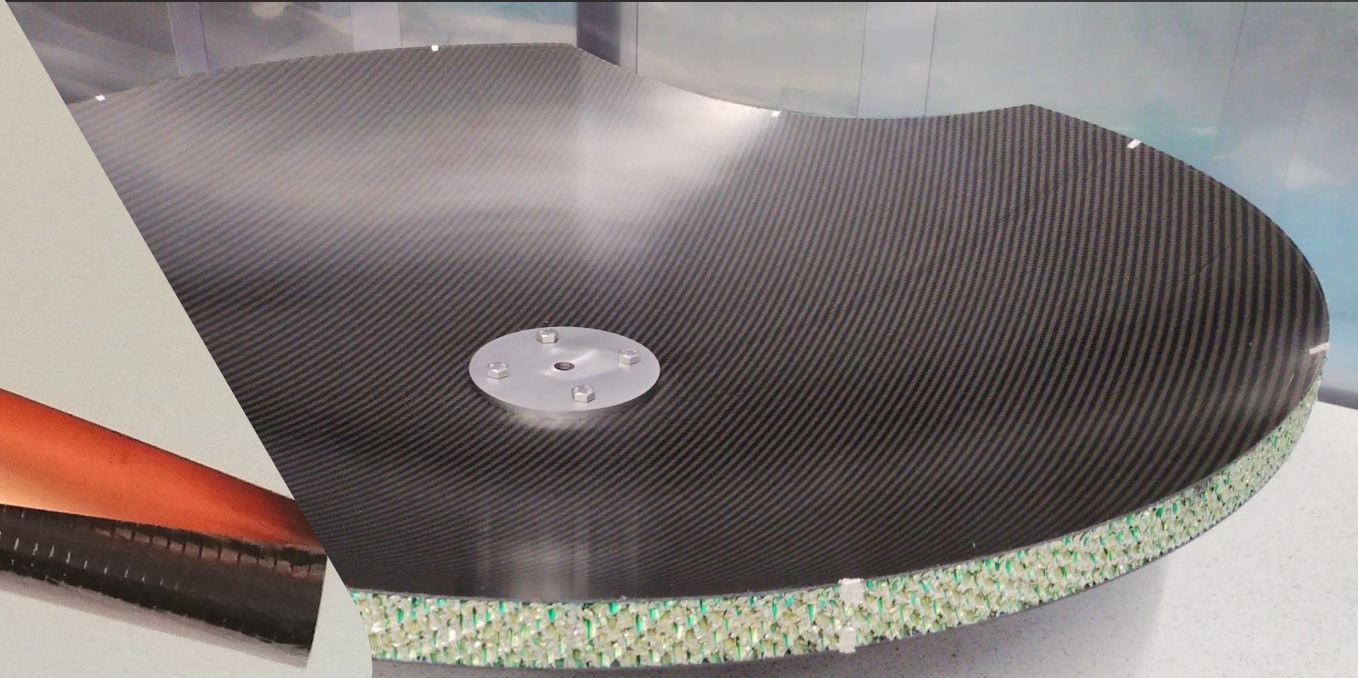




# ANTENNAS

- STEM TAPE SPRING
  - CFRP, CFRP METALIZED & **TITANIUM**
  - INHOUSE MANUFACTURING
  - **COST OPTIMIZED**

- PARABOLIC
  - CFRP/CORE





# The Premises

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



- Email: [contact@scsdk.dk](mailto:contact@scsdk.dk)
- Phone: +45 9383 6595

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Contact