

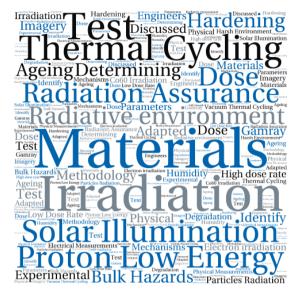
## **Material Qualification** & Characterization

**TRAD Tests & Radiations** provides a unique expertise to assist companies in predicting and minimizing radiation effects on their products and systems.

Our qualified staff has gained tremendous experience in assessing surface and bulk hazards of materials in strong radiative environments: space, nuclear, medical, etc.

## We offer a complete range of tests including:

- Particles & UV Radiation, Thermal cycling, UV ageing
- Electrical tests, Optical measurements, visual inspection, physical analysis, etc.





UV irradiation

- In accordance with ECSS-Q-ST-70-06C
- UV spectrum up to 15 suns (ASTM E490 - available)
- In-situ monitoring of the UV flux and the sample temperature

Keeping material in UV (200-400 nm) for validation of thermo-optical, coatings, adhesives, glass, etc.

Particle Irradiation

- Protons from a few keV to 10 MeV
- Electrons from 100 keV to 10 MeV
- Cobalt 60
- VEISPA: electrons up to 4 MeV (coming soon)

To solve problems of coatings, films and composites qualification ... (In accordance with ECSS-Q-ST-70-06C)

•Vacuum & Atmospheric thermal cycling

- In accordance with ECSS-Q-ST-70-04C
- Vacuum Facility
- Pressure down to 1e-5 mbar
- Temperature from -180°C to +200°C
- Dimension: 2 plates of 150 X 300 mm
- Atmospheric Facility
  - Inert atmosphere-N,Ar,He
- Temperature from -180°C to +400°C

& Functional Testing

Characterization means

- Microscopic Investigation
  - Optical microscope
  - SEM & Xray analysis
- Optical measurements
  - Transmission
  - Reflectivity / absorptivity
- Electrical measurements
  - Voltage tests
  - Insulation resistance (surface, transverse)
- Mechanical testing

Now available: SWIPI - Low energy protons facility to simulate solar wind!





