UNIVERSITY OF TARTU
Tartu Observatory

LABORATORY SERVICES

Your reliable partner in testing and calibration!

Sine and random vibration

- Test object with a mass up to 50 kg
- Frequency range 5 Hz … 4 kHz
- Max acceleration* 720 m/s² (sine vibration)
- Max acceleration* 480 m/s² (random vibration)
- Max force 1,5 kN
- EVS-EN 60068-2-6
- EVS-EN 60068-2-64
- ECSS-E-ST-10-03C (not accredited)

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* Depends on the mass of the test object

Mechanical shock

- Mechanical shock response spectrum up to 98 000 m/s²
- Frequency range 1 Hz … 10 kHz
- Test object with a mass up to 26 kg
- ECSS-E-ST-10-03C

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Thermal vacuum

- Lowest pressure 5 × 10^{-7} hPa
- Temperature range (-40 ... +150) °C
- Chamber dimensions Ø 650 mm × 650 mm
- ECSS-E-ST-10-03C

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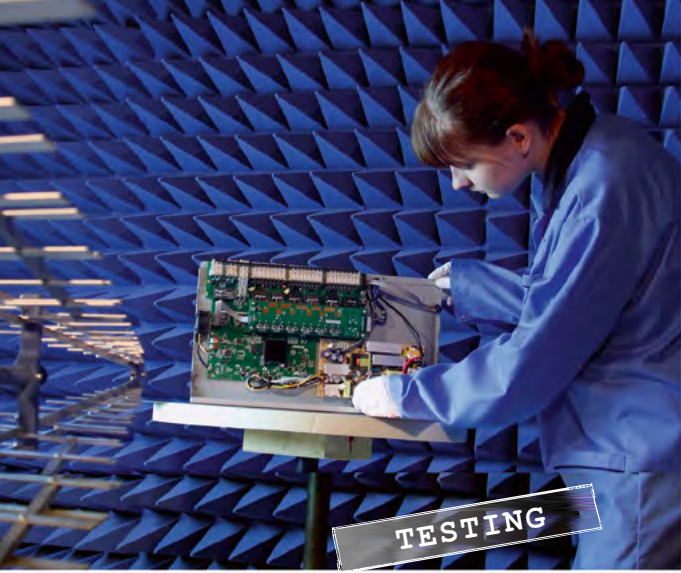
Climatic conditions

- Temperature (-40 … +150) °C
- Relative air humidity* (30 … 90) %
- Chamber dimensions 400 mm × 470 mm × 345 mm
- ECSS-E-ST-10-03C

* Depends on the temperature



Electromagnetic compatibility

- Immunity and Emission
- Frequency range 30 MHz … 18 GHz
- Distance from test object 1 m
- Size of uniform field area 0,5 m × 0,5 m
- Chamber dimensions 4 m × 3 m × 2,5 m
- IEC/EN 61000-4-3
- ECSS-E-ST-20-07C

Electrostatic discharge

- Emission
- Test voltage range ± (1 ... 30) kV
- IEC/EN 61000-4-2
- ISO 10605

Irradiance sensors

- Wavelength range (290 ... 900) nm
- Spectral irradiance*
  100 nW m^{-2} nm^{-1} ... 500 mW m^{-2} nm^{-1}
- Calibration and measurement capability*
  (1,1 ... 10) %

* Depends on the wavelength

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Radiance sensors

- Wavelength range (350 ... 900) nm
- Spectral radiance*
  50 nW m^{-2} sr^{-1} nm^{-1} ... 100 mW m^{-2} sr^{-1} nm^{-1}
- Calibration and measurement capability*
  (1,4 ... 16) %

* Depends on the wavelength

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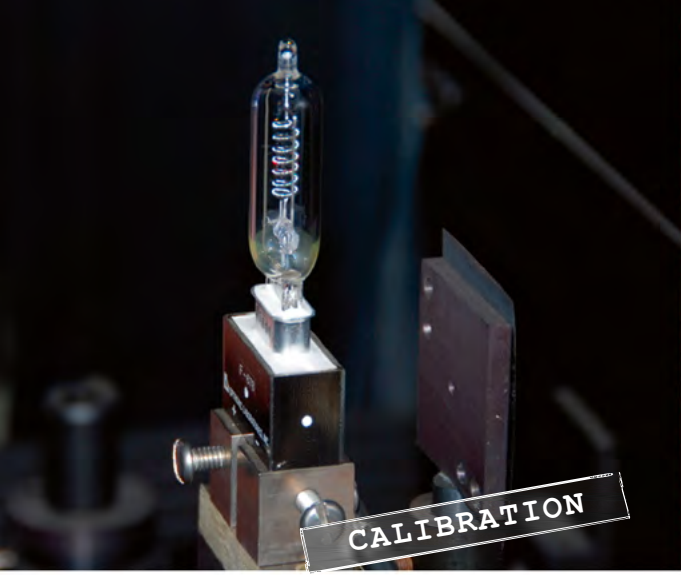

Incandescent lamps

- Wavelength range (340 … 900) nm
- Irradiance*
  100 nW m^{-2} nm^{-1} ... 500 mW m^{-2} nm^{-1}
- Calibration and measurement capability*
  (1,4 ... 3,0) %

* Depends on the wavelength

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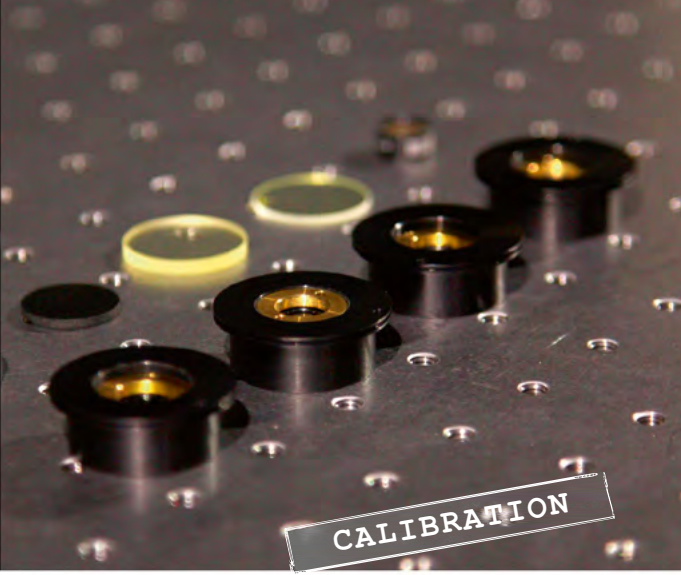

Optical filters

- Wavelength range (300 … 900) nm
- Regular transmittance 0,0001 … 1
- Calibration and measurement capability*
  (0,4 ... 10,0) %

* Depends on the wavelength

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Testing, calibration, consultation.

Tartu Observatory
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