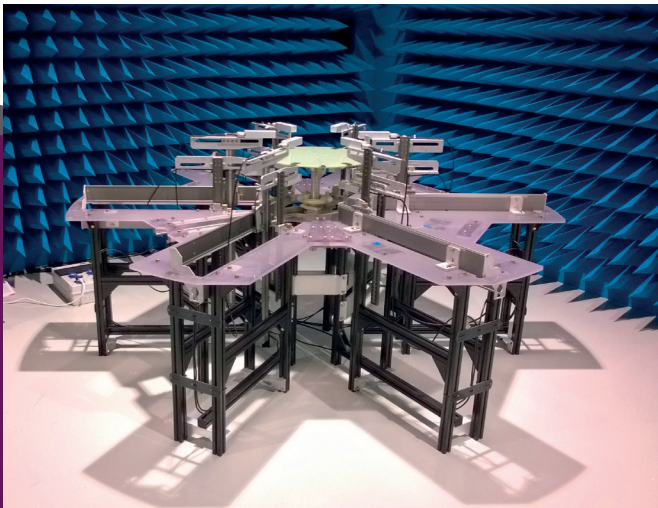


Snapshot Multi-Magnetometer Facility (snapshot-MMF)

The **Snapshot Multi-Magnetometer Facility** (snapshot-MMF) uses several fixed magnetometers to measure with **high accuracy**, the magnetic field produced by an Equipment Under Test (EUT) for **magnetic cleanliness** applications. The Snapshot-MMF is designed after thorough study of various possible multi-magnetometer arrangements, taking into consideration the optimum number of magnetometers and their relative positions, in order to achieve **fast measurement time** and maximum measurement repeatability. The facility eliminates utilization of Helmholtz Coils to cancel Earth's magnetic field during measurements.



Operation

The snapshot-MMF instantly captures the EUT magnetic field (magnetic signature) in the presence of the Earth's Magnetic Field.

Main features:

- Radial and vertical adjustment of magnetometers
- EUT vertical adjustment
- Software guided sequential (in steps) measurement procedure
- Software based measurement acquisition, data filtering & reporting
- EUT magnetic signature total measurement time ~1 min (total time including background field measurement)
- avoid influence of ambient field variations

Snapshot-MMF test facility achieves better quality measurements to help magnetic dipole modeling methodologies produce reliable results.

USE THE SNAPSHOT-MMF FOR FAST,
ACCURATE AND EASY MEASUREMENTS
OF EUT MAGNETIC FIELDS.

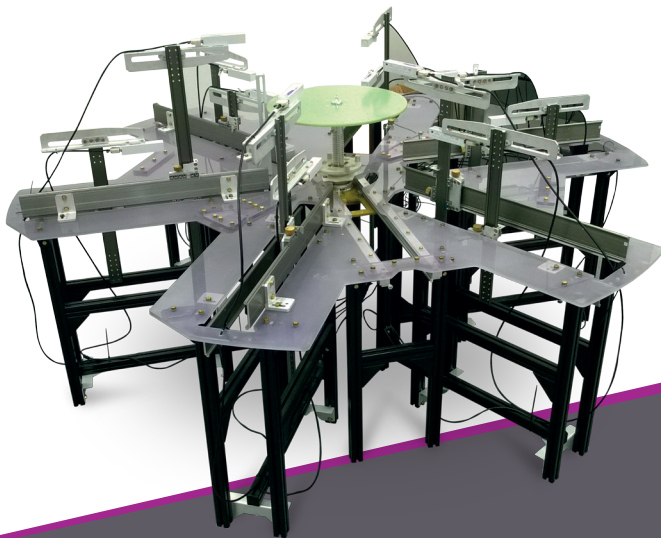
The snapshot-MMF is already used by the European Space Agency - European Space Research & Technology Centre (ESA/ESTEC) to perform accurate measurements of electronic EUT and magnetic dipole modeling, useful for spacecraft magnetic cleanliness applications.

Measuring Elements

Magnetometers	Up to 12
Type	Fluxgate
Brand	Bartington Mag03-MS series
Range	70 or 100 μ T
Power Supply Units	2xBartington PSU1 1xBartington deca PSU
Data Acquisition	NI 6289 USB DAQ
Resolution	18-bit
Software Application	Graphical User Interface Measurement Configuration Data Acquisition & Processing Solver Interface Measurement Data Reporting

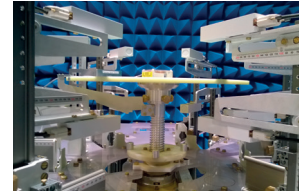
Mechanical

Concept	Common Panel Design Scheme: Circular (~2,3m)
Magnetometers Support System	up to 12 Magnetometers Gradiometers Support (optional, via adaptors) Radial Movement (5 to 100 cm from centre) Vertical Movement: Continuous, ~ \pm 35 cm from z=0
EUT Support System	Z-axis movement: Continuous, ~ \pm 25 cm from z=0 Easy EUT loading (EUT support table can be moved at the outer perimeter of the facility)

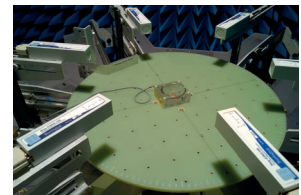


Main elements of the facility

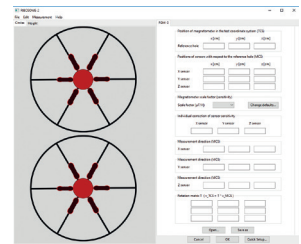
Mechanical support system hosts the magnetometers and the EUT support table.



Magnetometers & DAQ
Measurement of the EUT magnetic field and data collection.



Software application
controls the operation of snapshot MMF, data processing.



*Contents are subject to change without prior notice

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