CERN Technology portfolio

3D Magnetic Sensor Calibrator

Innovative device for calibrating magnetic field with high resolution

This calibration sensor device measures all three axes of the magnetic field, by performing a scan over the full unit sphere, independent of its orientation relative to the magnetic field. The calibration device rotates continuously around two orthogonal axes and the full range of polar and azimuthal angles is covered by a respective rotation. The parts of the device to be rotated are made very compact to fit in between pole pieces of a magnet.

Area of expertise
Detectors and Instrumentation

Applications
• Magnet field calibration in 3D using Hall sensors.
• Whenever precise magnetic field calibration is needed between 0 and 13 Tesla.

Innovative features
The technology allows automated and accurate calibration of many Hall sensors in a short time which is impossible to obtain with existing commercial devices.

Advantages
• Up to three sensors may be calibrated in one session.
• High resolution magnetic calibration of Hall sensors in three dimensions.

Intellectual Property status

Contact person
tiago.araujo@cern.ch
cern.ch/knowledgetransfer