

EADS SODERN Star Tracker SED16 tested on ACUTRONIC Simulator

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Based in Limeil-Brévannes, a suburb of Paris, France, EADS SODERN is a firm specialised in space, optical & neutron activities. SODERN's participation in major space projects has significantly expanded to include Attitude Control, Earth Observation, Scientific Instrumentation integrated on board satellites, space stations, and space vehicles.

The BCG16 facility is part of the new test facilities developed by EADS SODERN to test the SED16 star tracker family. These are autonomous star trackers able to deliver 3-axis attitude measurement to the satellite AOCS, whether the orbit is LEO, MEO, GEO or Deep Space.

The BCG16 test bench measures the geometric calibration (distortion law and star tracker orientation) and the radiometric calibration of SED16 star trackers (calibration of the output signal of the star tracker with respect to the magnitude of a calibrated simulated star).

This opto-mechanical bench is composed of a star simulator and a two axis rotation table, which orients the star tracker in front of the star with $\pm 1''$ arc second accuracy. The BD8847 two axis table was specifically developed by Acutronic for Sodern. The whole test facility is a highly accurate calibration system, enabling STR star attitude determination with ultimate precision. Acutronic has contributed to this success with the utmost degree of efficiency and quality. The two axis table has been proven to be better than $\pm 1''$ arc second accurate with high stability measurements.

Sodern BCG16 star tracker test bench.



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THE DRIVING FORCE
IN MOTION SIMULATION

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