

A Thermal Review of the Sample Cartridge Assembly (SCA) Gravitational Effect of Distortion in Sintering (GEDS) Experiment Flight Processing

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NASA's Sample Cartridge Assembly (SCA) first flight experiment, Gravitational Effect of Distortion in Sintering (GEDS), was processed on the International Space Station (ISS) between 2019 and 2020. The SCA was heated in the European Space Agency's (ESA) Low Gradient Furnace (LGF) that is housed inside the Material Science Research Rack (MSRR) located in the U.S. Laboratory Module. This summary will give a review of the design and flight experiment development for the GEDS SCA. It describes flight processing and the role of thermal engineering support. Lessons learned and future Principle Investigators (PI) will be discussed.

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