**Design and Characterization of Charcoal Filter for Planck Sorption Cooler**

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A charcoal filter of a design appropriate for use in the Planck Sorption Cooler Piping Assembly and Cold End (PACE) has been fabricated and characterized for performance under conditions appropriate to the Planck Surveyor mission. Capacity for methane extraction was calculated from real-time measurement of exit flow partial pressures and from measurement of accumulation in the filter medium. The quantity of methane extracted is found to agree with published data for typical charcoal materials at the operating temperature range of ~110 K, and is adequate for performance of the Planck Sorption Cooler mission requirements.

**This research was carried out at the Jet Propulsion Laboratory, California Institute of Technology under a contract with the National Aeronautics and Space Administration.*