

## **Is a Space Laundry Needed for Exploration?**

Michael K. Ewert and Frank F. Jeng

### Abstract

Future human space exploration missions will lengthen to years, and keeping crews clothed without a huge resupply burden is an important consideration for habitation systems. A space laundry system could be the solution; however, the resources it uses must be accounted for and must win out over the very reliable practice of bringing along enough spare underwear. Through NASA's Logistics Reduction and Repurposing project, trade off studies have been conducted to compare current space clothing systems, life extension of that clothing, traditional water based clothes washing and other sanitizing techniques. The best clothing system of course depends on the mission and assumptions, but in general, analysis results indicate that washing clothes on space missions will start to pay off as mission durations push past a year.