

## **LAD-C - A large area debris collector on the ISS**

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LAD-C is a 10 m<sup>2</sup> aerogel and acoustic sensor system under development by the U.S. Naval Research Laboratory (NRL) with main collaboration from the NASA Orbital Debris Program Office at Johnson Space Center. LAD-C is tentatively scheduled to be deployed by the U.S. Department of Defense Space Test Program (STP) on the International Space Station (ISS) in late 2007. The system will be retrieved, after one to two years of data and sample collection, for post-flight analysis. In addition to micrometeoroid and orbital debris sample return, the acoustic sensors will record impact times, locations, signal strengths, and acoustic waveforms of the largest collected samples.

LAD-C attempts to utilize the ISS as a scientific platform to characterize the near-Earth micrometeoroid and orbital debris environment in the size regime where few data exist. The addition of acoustic sensors will enable potential source identification of some of the collected residuals. This dynamical link can be combined with laboratory analysis of the collected samples to further our understanding of orbital debris and the sources of micrometeoroids - asteroids and comets.