

SPACE TRANSPORTATION SOLUTIONS AND INNOVATIONS SYMPOSIUM (D2)  
Upper Stages, Space Transfer, Entry and Landing Systems (3)

Author: Dr. James Burke  
The Planetary Society, United States, jdburke@caltech.edu

Prof. Chris Welch  
International Space University (ISU), France, chris.welch@isunet.edu

CONVERTING RETIRED ISS INTO A CISLUNAR CYCLER

**Abstract**

The ISS, after its mission is declared ended, should not descend and burn up as did Skylab, Salyut and MIR. One proposal has been to move it up into a long-lived monument orbit. In this paper we describe and advocate a more ambitious concept; namely, to dismantle and reassemble it in LEO and then, using high-powered electric propulsion, accelerate the resulting station into a cislunar cycling orbit. With the addition of Earth-LEO-Earth and Moon-LLO-Moon rendezvous services, plus a far side communications relay, this new station would be part of a permanent cislunar transport architecture supporting the progressive expansion of a globally sponsored Earth-and-Moon civilization. To make this possible, of course new international policies, agreements and large funding would be required. In this paper we consider how to begin work toward the needed new regime, ideally including major participation by China.