



## **NASA SBIR 2011 Phase I Solicitation**

### **X12.01 Crew Exercise Systems**

**Lead Center: GRC**

**Participating Center(s): JSC**

NASA seeks compact, low mass, low power, hi life-cycle, force-generating components for application to future crew exercise equipment - capable of providing aerobic and resistive (>700 lbs) loads over a range of load increments of 5 lbs. for each load setting 100 lbs., and with adjustable stroke range up to 70 inches, while providing return: pull stroke load ratios of 0.9:1.0 or greater (e.g., 1.0:1.0 better, or 1.1:1.0 best) over the entire range of motion.

Phase I Deliverable: Fully developed concept complete with feasibility and top-level drawings/computational methodology as applicable. A breadboard or prototype system is highly desired.