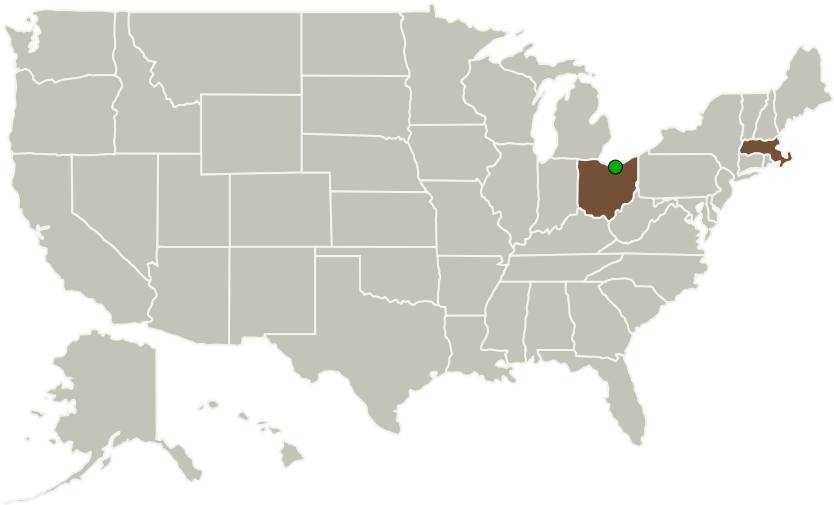
Enhanced Dynamic Load Sensor for ISS (EDLS-ISS), Phase I

Completed Technology Project (2013 - 2013)

Project Introduction

To advance the effectiveness of exercise activities performed to counteract bone and muscle deterioration under microgravity conditions, Aurora Flight Sciences and the Massachusetts Institute of Technology propose to develop a self-contained, enhanced dynamic load sensor that can be integrated into the existing exercise equipment onboard the International Space Station. These sensors will allow the collection of crewmember biomechanical while they are exercising on-orbit. These data can be used to validate the effectiveness of the countermeasures and improve their impact to mitigate bone and muscle loss during long duration spaceflight missions.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
Glenn Research Center(GRC)	Supporting Organization	NASA Center	Cleveland, Ohio

Primary U.S. Work Locations	
Massachusetts	Ohio

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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

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Project Transitions

May 2013: Project Start

November 2013: Closed out

Closeout Documentation:
- Final Summary Chart*(https://techport.nasa.gov/file/140386)*

Images

Project Image
Enhanced Dynamic Load Sensor for ISS (EDLS-ISS)
(https://techport.nasa.gov/image/136323)

Project Management

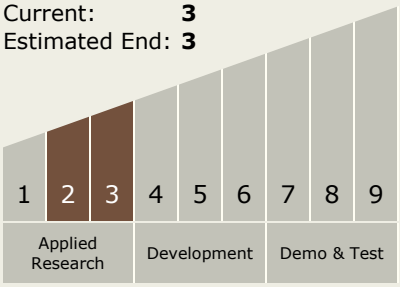
Program Director:
Jason L Kessler

Program Manager:
Carlos Torrez

Principal Investigator:
Christopher Krebs

Technology Maturity (TRL)

Start: **2**
Current: **3**
Estimated End: **3**



Technology Areas

Primary:

- TX06 Human Health, Life Support, and Habitation Systems
  └ TX06.3 Human Health and Performance
    └ TX06.3.2 Prevention and Countermeasures

Target Destinations

The Sun, Earth, The Moon, Mars, Others Inside the Solar System, Outside the Solar System