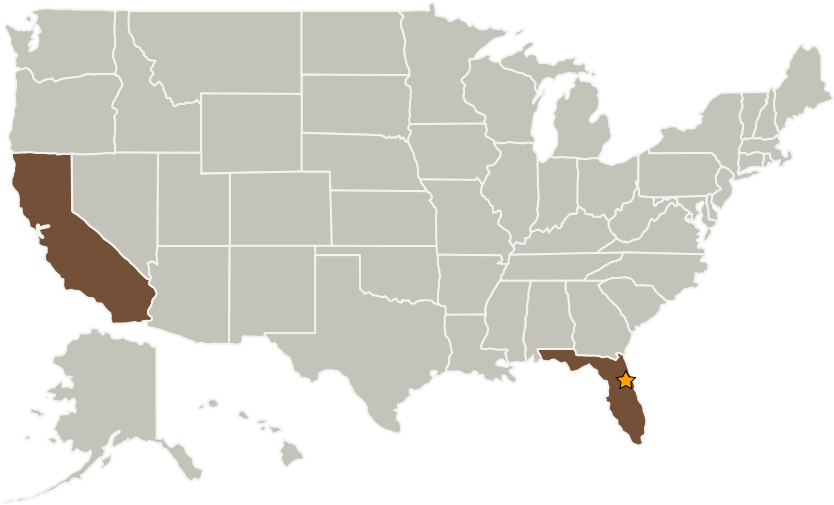
Hyperspectral Imager - Tracker, Phase I

Completed Technology Project (2008 - 2008)

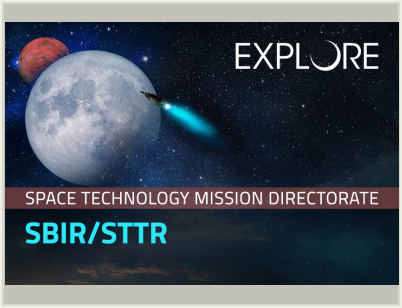
Project Introduction

To address the NASA need for innovative optical technique for visualization and tracking of space vehicles during launch and landing operations, Light Prescriptions Innovators, LLC proposes to develop a Hyperspectral Imager - Tracker. The Hyperspectral Imager - Tracker architecture is based on an innovative and only recently developed concept in imaging optics. This innovative architecture will give the LPI Hyperspectral Imager - Tracker the possibility of simultaneously collecting the spectral band images (hyperspectral cube) to operate with high light-gathering power and high magnification. The innovative Adaptive Spectral Filtering algorithms will efficiently increase the contrast of low contrast scenes. In phase I LPI will analyze the device design for its spectral filtering and imaging efficiency and assemble and test a proof-of-concept prototype to demonstrate feasibility. In Phase II a full scale engineering prototype will be developed and tested.

Primary U.S. Work Locations and Key Partners



Organizations Performing Work	Role	Type	Location
★Kennedy Space Center(KSC)	Lead Organization	NASA Center	Kennedy Space Center, Florida
Light Prescriptions Innovators, LLC	Supporting Organization	Industry	Altadena, California



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Organizational Responsibility

Responsible Mission Directorate:

Space Technology Mission Directorate (STMD)

Lead Center / Facility:

Kennedy Space Center (KSC)

Responsible Program:

Small Business Innovation Research/Small Business Tech Transfer

Primary U.S. Work Locations	
California	Florida

Project Management

Program Director:

Jason L Kessler

Program Manager:

Carlos Torrez

Principal Investigator:

Ilya Agurok

Technology Areas

Primary:

- TX08 Sensors and Instruments
  └ TX08.1 Remote Sensing Instruments/Sensors
    └ TX08.1.1 Detectors and Focal Planes