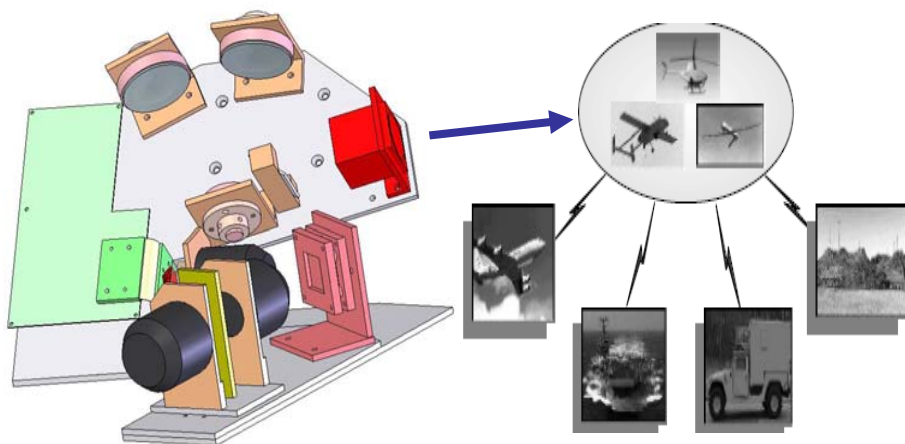


# HIPS Hyperspectral Integrated Programmable Sensor

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## Key Discriminators

**Operational Capabilities** HIPS will provide on-the-fly programmable adaptive optics for ODP methods to extend hours of operability and improved on-target SNR. HIPS is enabled by Micro-opto-electromechanical systems (MOEMS) technology.

HIPS System will demonstrate ODP function for improved performance as measured by SNR and search rate. Office of Naval Research, NavAir, National Geospatial Agency, National Security Agency, Defense Advanced Research Project Agency, Naval Research Laboratory, Space and Naval Warfare Command.

## Problems/Readiness/Champions

**Problem Being Addressed** UAV bandwidth limitations. Data glut. Failure to perform when encountering changes in the sensing environment or mission requirements. Low Signal-to-noise (SNR) and search performance.

HIPS is based on Optical Domain Processing (ODP) methods. Reduces bandwidth for UAV's. Adaptive optics for operation where other sensors fail. Higher SNR. Multi-mission function from a single HIPS system.

**Technical Readiness Level** Level 3 Analytical and experimental critical function and characteristic proof of concept.

**Champions** HTDV: \$200,000 for prototype sensor. DARPA investment of \$13 million in ODP method development.

## Milestones/Deliverables/Date/Status

<u>Milestones</u>	<u>Deliverables</u>	<u>Date</u>	<u>Status</u>
Design Drawings	Project Quad Chart	12/30	Complete
Acquire Parts	1 <sup>st</sup> Quarterly Report	4/7	WIP
Component Analy.	2 <sup>nd</sup> Quarterly report	7/7	Future
Full Assembly	3 <sup>rd</sup> Quarterly report	10/6	Future
Demonstration	Final Report	12/1	Future