Paving the Way for Small Satellite Access to Orbit

Cyclops' Deployment of SpinSat, the Largest Satellite Ever Deployed from the International Space Station

AIAA SMALL SATELLITE CONFERENCE

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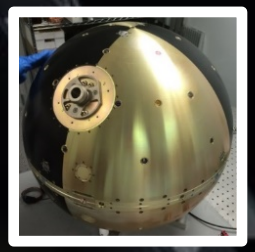
Deployer of Satellites 10-100 kg in Mass

Satellites of Unique Shapes & Sizes



Cyclops

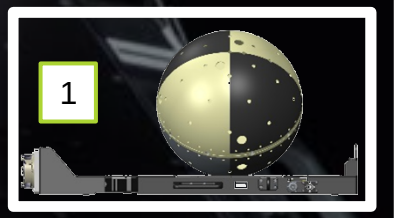
No Fees for Usage or Launch

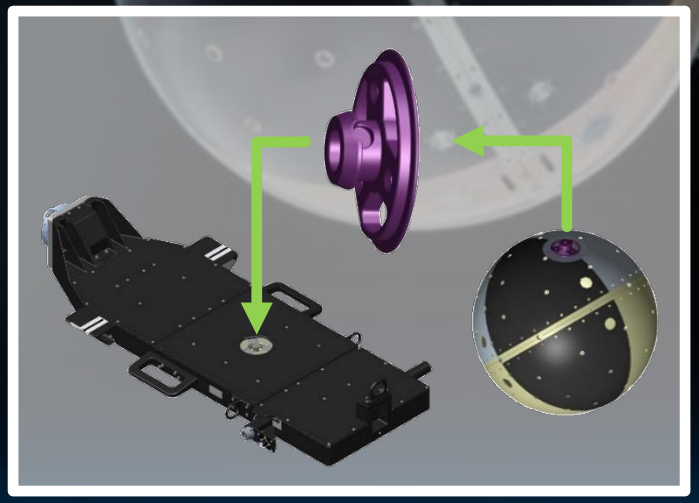
Fully Operational

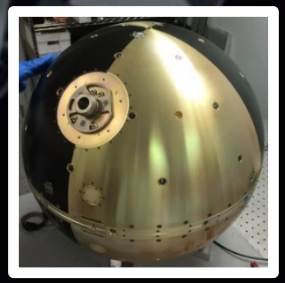
Cyclops

Interfaces with JAXA Robotic Airlock, ISS Robotic Arms, and Satellite

Mechanical Actuated by ISS Robotic Arm







Simple Satellite Interface

Made by Naval Research Laboratory

Dia of 55.9 cm (22”)

SpinSat

Advanced Thruster & Atmospheric Neutral Density Experiment

Mass of 52 kg

Deployed Nov 28, 2014

SpX-4
Pressurized,
Soft Stowed
Cargo

Arrived
on ISS
Sept 23,
2014

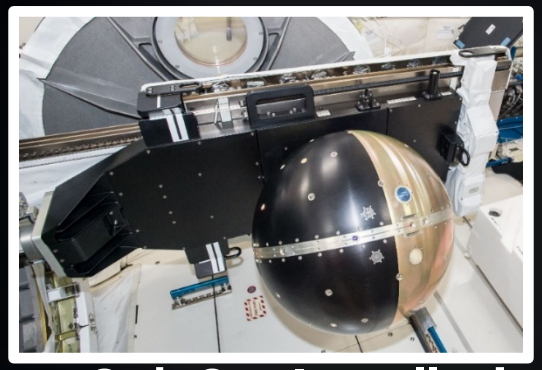
Up It Goes!

Stowed on-board ISS till Deployment

Cyclops Installed

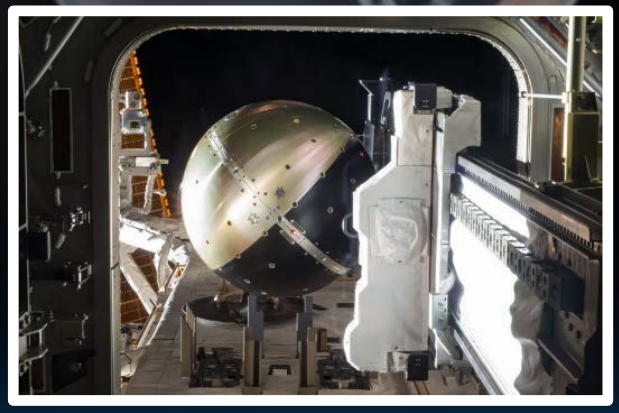
SpinSat Unpacked

Out It Goes!



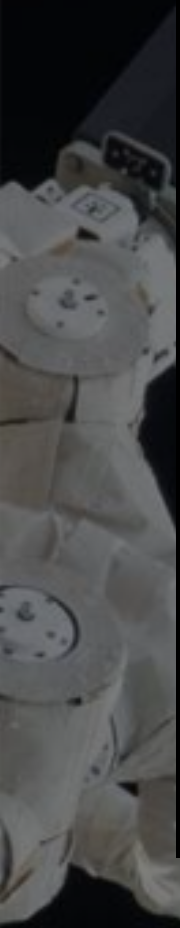
SpinSat Installed

Out of the Airlock



Into the Airlock

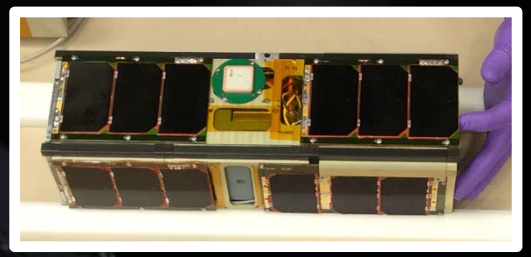
Away It Goes!



Nov 28, 2014

Texas A&M University

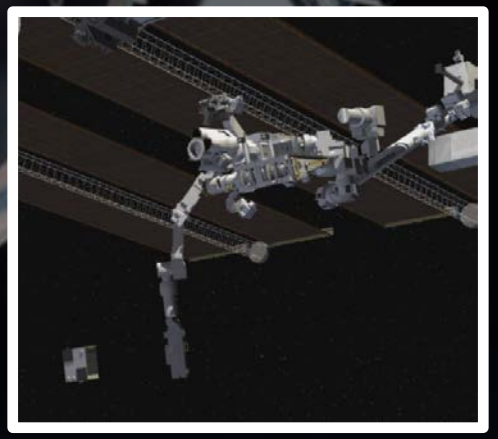
Univ. of Texas at Austin



Autonomous Rendezvous and Docking Experiment

LoneStar-2

64 cm x 64 cm x 31 cm;
(25” x 25” x 12”) 50 kg



Deployment 2016!

Satellite Characteristics
(Mass, C.G., Inertia Property, Coord. Sys.,
Ballistic No., Sep. Switch Installation, …)

User Requirements

Satellite Interfaces
(Mounting Fixture,
Envelope, Bonding, …)

Satellite Environments
(Acceleration, Loads,
Thermal, Deployment Force,
Pressure, Survivability, …)

ARE YOU NEXT ?

POCs for Future Cyclops' Users:

CASIS http://www.iss-casis.org/

ISS http://www.nasa.gov/mission_pages/station/research/rsch_proposal.html

Questions ?


SPACE STATION INTEGRATED KINETIC LAUNCHER FOR ORBITAL PAYLOAD SYSTEMS
CYCLOPS


DoD SPACE TEST PROGRAM
HUMAN SPACEFLIGHT PAYLOADS


INTERNATIONAL SPACE STATION

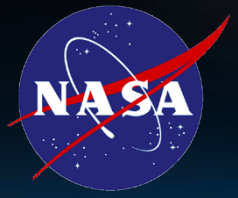

JSC
ENGINEERING
NASA

THANK YOU!


JAXA


SPACE STATION INTEGRATED KINETIC LAUNCHER FOR ORBITAL PAYLOAD SYSTEMS
CYCLOPS


Texas A&M University
LONESTAR
The University of Texas


NASA


DoD SPACE TEST PROGRAM
HUMAN SPACEFLIGHT PAYLOADS