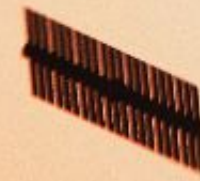




VAST

Building Next-Generation Space Stations

Founded in 2021 by Jed McCaleb, Vast is building next-generation space stations and pioneering the next giant leap toward long-term living and thriving in space.



Our Team



800+

Total team
Members

483

Years combined human
spaceflight expertise

2303

Years combined spaceflight
expertise

Facilities



HQ, Design, Manufacturing, Integration, Training Long Beach, CA



Environmental Testing Mojave, CA



Manufacturing Hawthorne, CA



Government Affairs Washington DC

Vast & NASA

CCSC-2

- In May 2023, NASA awarded Vast the second Collaborations for Commercial Space Capabilities (CCSC-2) initiative.

Private Astronaut

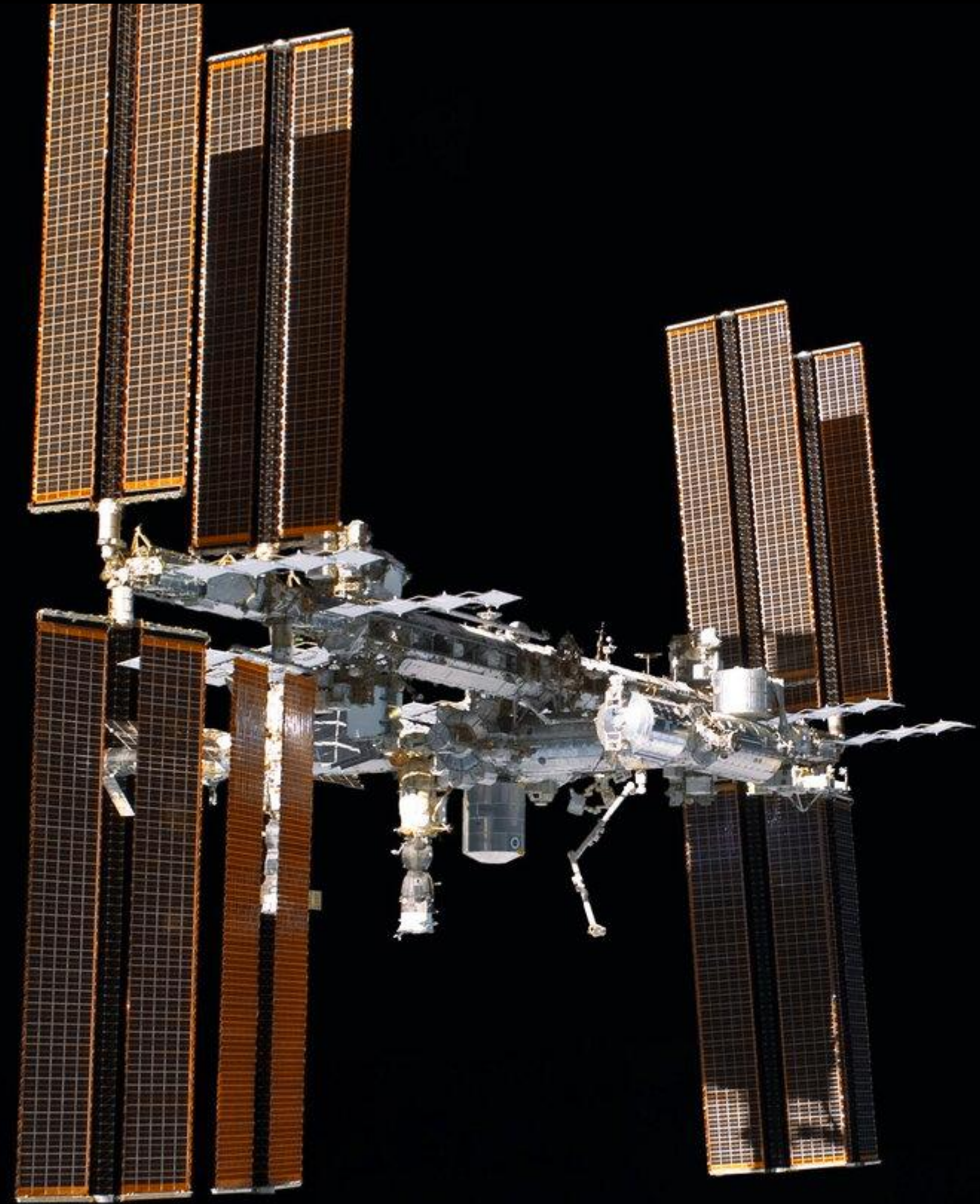
- Vast is bidding on private astronaut missions (PAMs) 5-6 to the ISS.

CLD Phase II

- Haven-2 to bid on NASA's Commercial LEO Destinations (CLD) Phase II Contract.



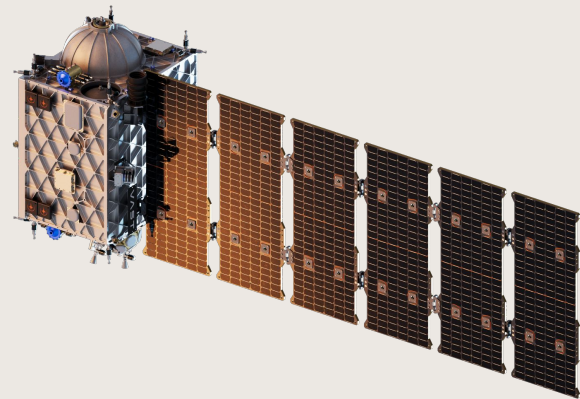
Our focus this decade is to win the NASA Commercial LEO Destination (CLD) contract and build the successor to the International Space Station (ISS).



To win, we will demonstrate that we can build and operate Haven-1: the world's first commercial space station, scheduled to launch NET May 2026.

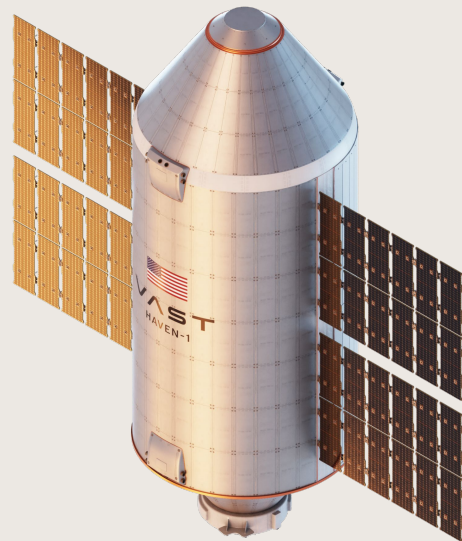


Expanding Human Progress in Space



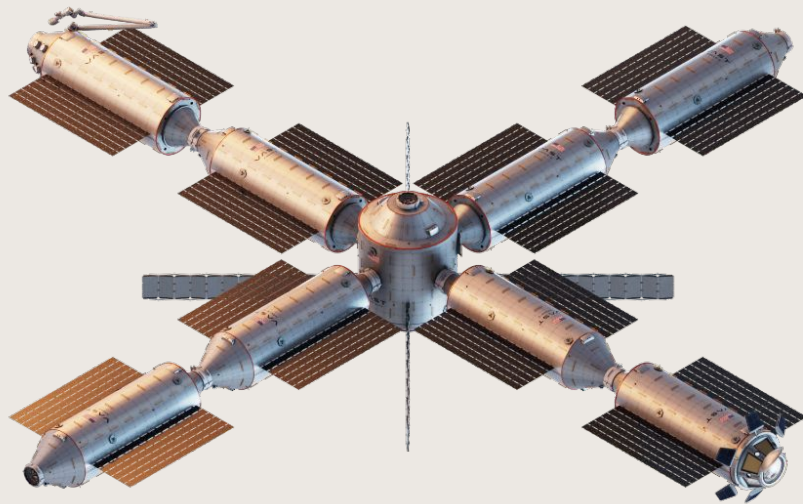
Haven Demo
In-orbit test bed
for critical space station
technologies

LAUNCHING 2025



Haven-1
The world's first
commercial space
station

LAUNCHING NET MAY 2026



Haven-2
Designed to succeed
the International Space
Station

LAUNCHING 2028

Haven-1

The world's first
commercial space station

- Two-week missions / Three year lifespan
- 45 m³ of habitable volume
- Personal sleeping quarters
- Large window
- Communal dining table
- SpaceX Starlink connectivity
- 10x payload facilities
- Designed for commercial activities



Haven-1 Lifecycle



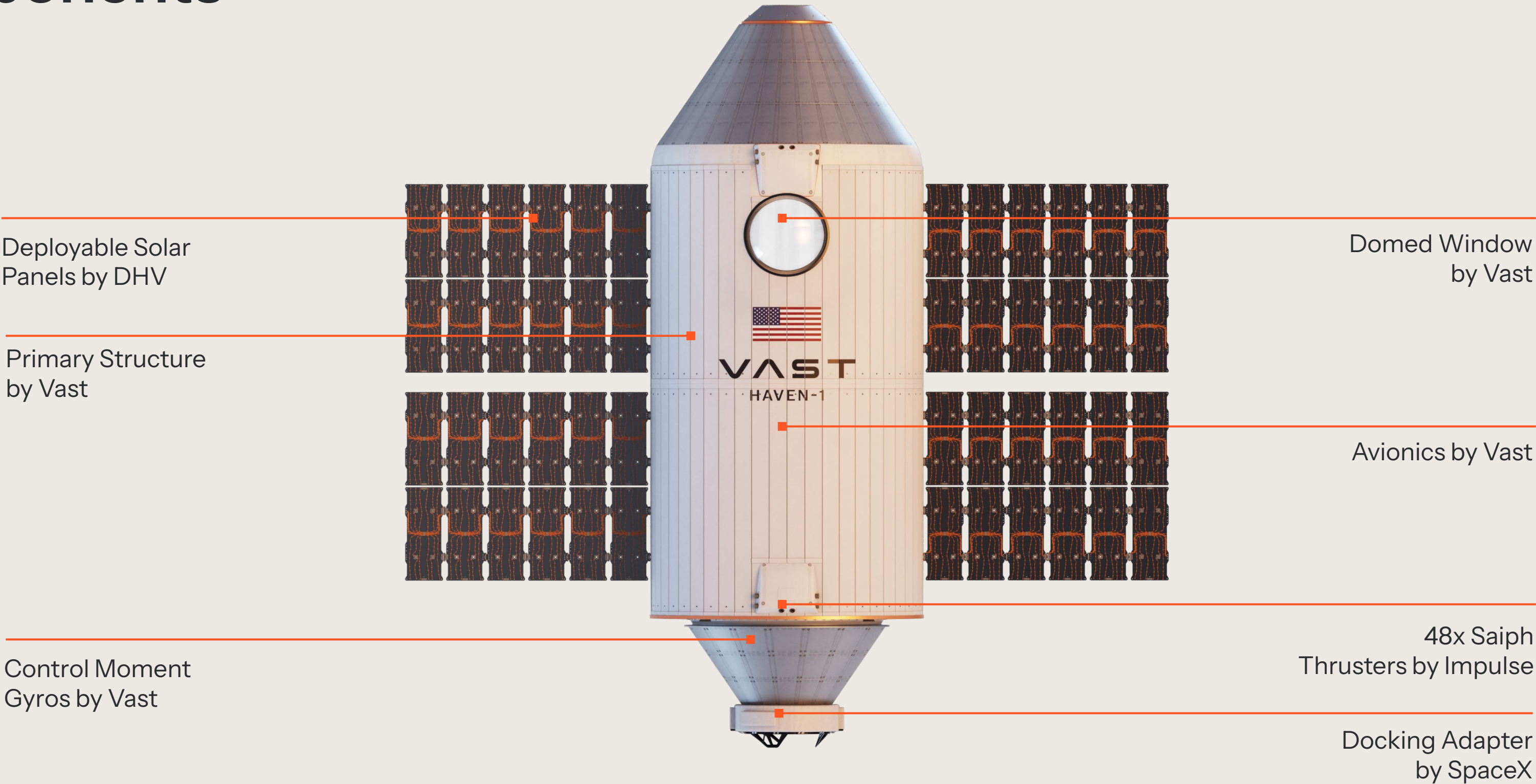
Haven-1

Specifications

Diameter	4.4 m
Height	10.1 m
Habitable Volume	45 m ³
Pressurized Volume	80 m ³
Mass	14,600 kg
Power	13,200 W
Orbit	51.6°, 425 km
Crew Capacity	4



Hardware Components



SpaceX Mission Partnership

Haven-1 will utilize the proven reliability of SpaceX's Falcon 9 launch vehicle and Dragon spacecraft. This will mark the first deployment of Starlink's laser terminal with gigabit/s speed connectivity aboard a commercial space station.

SPACEX



Falcon 9 launch vehicle



Crew Dragon spacecraft

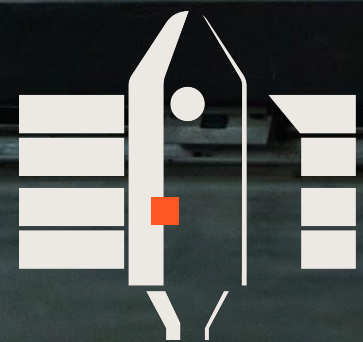


Starlink high-speed internet

Building America's Next Space Stations

Haven-1's primary structure qualification article is the first space station structure to be manufactured in the United States in two decades.

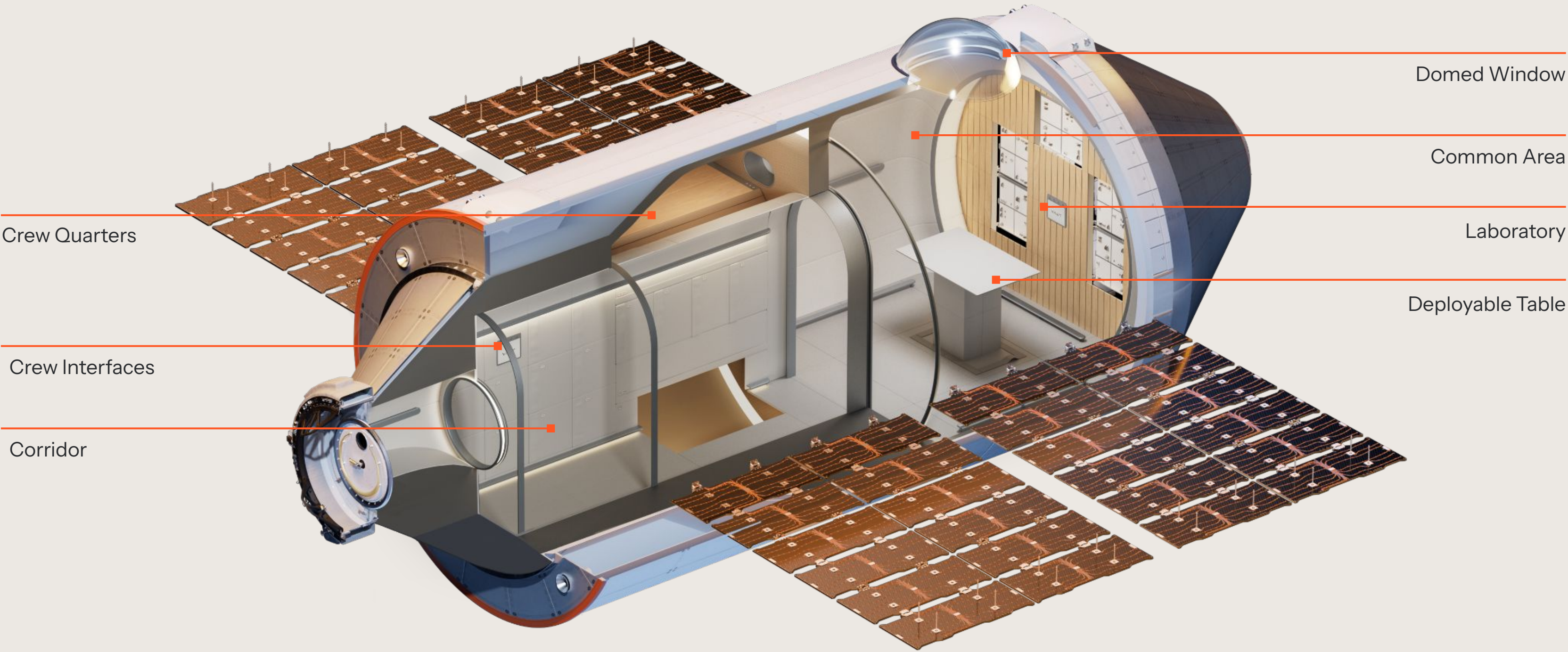
Primary Structure



VAST SPACE, LLC PROPRIETARY AND BUSINESS CONFIDENTIAL

VAST

Haven-1 Interior



Haven-1 Lab



Haven-1 Lab

The world's first microgravity research, development, and manufacturing platform on a commercial space station.

Full ISS EXPRESS Rack Capacity

- Ten air-cooled Middeck Locker Equivalent (MLE) payload slots
- Research, tech demonstration, and manufacturing in microgravity

Payload Operations

- Up to 30 kg per locker with 100 W of power
- Operated by Haven-1 astronaut crew
- Remotely commanded & monitored via Starlink gigabit-speed Internet

Commercial Product Return

- Deliver and return products and samples from space via SpaceX Dragon spacecraft

AVAILABLE

YURI

REDWIRE

RESERVED FOR
CREW PARTNERS

RESERVED FOR
CREW PARTNERS

RESERVED FOR
CREW PARTNERS

INTERSTELLAR LAB

EXO
BIOSPHERE

JAMSS

RESERVED FOR
CREW PARTNERS

Haven-1 Lab Partner Network



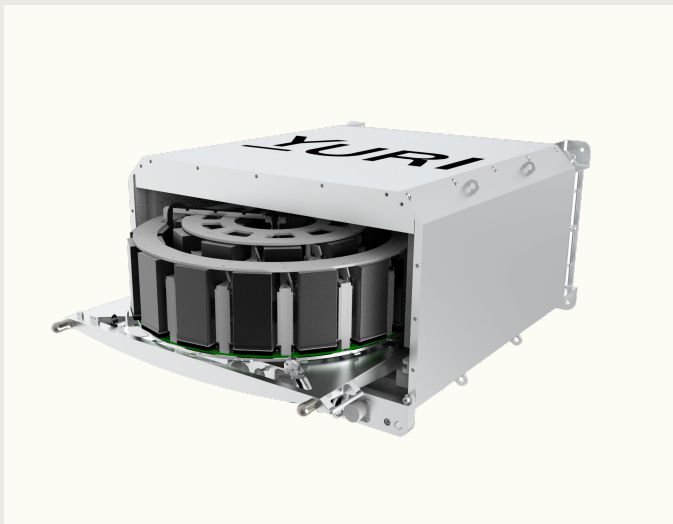
Redwire ADSEP

Pharmaceutical crystallization, cell culturing, tissue manufacturing

4 PIL-BOX cassettes

+4 to +40 °C

Up to 2 Levels of Containment



Yuri ScienceTaxi

Incubation / centrifuge for life sciences, biological experiments

38 ScienceShell canisters

+4 to +40 °C

Centrifuge Levels: Microgravity + Earth, Moon, Mars gravity



Interstellar Lab Eden 1.0

Plant growth habitat, crop production, biological research

BioSphere module

Automated water and nutrient exchange, CO₂ & O₂ monitoring, humidity control



Exobiosphere OHTS

Automated high-throughput testing, cell culturing, microscopy

2000+ slots (6x 384-well plates)

Disease modeling, drug screening, metabolic analysis, compound potency assessment



JAMSS

Multi-purpose facility for modular sub-payloads

12x 1U payload modules

Life sciences, pharmaceutical discovery, commercial merchandise

The First Multidisciplinary Commercial Space Lab

Haven-2

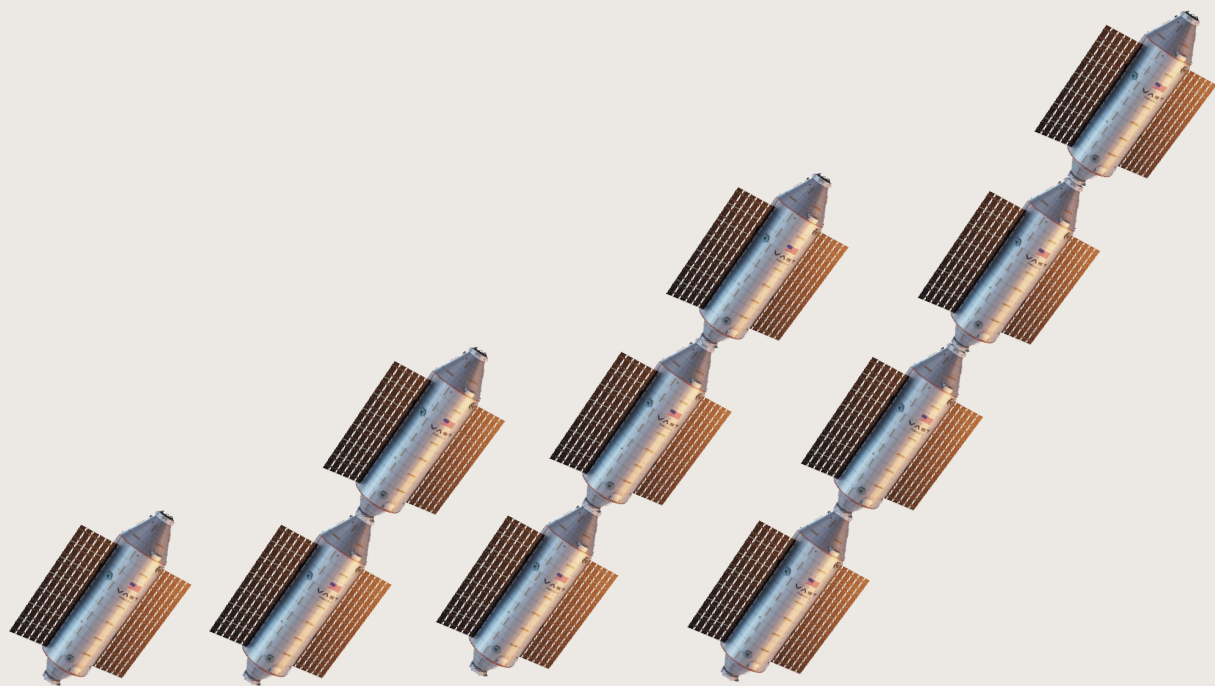
Designed to succeed the
International Space Station

- Designed for NASA certification
- First module operational in 2028, fully built in 2032
- Common module design increases build speed and reduces cost
- 9 modules, 611 m³ of habitable volume and 86 kW total power
- Designed for both government and commercial use
- Built on the heritage and technology of Haven-1



Timeline

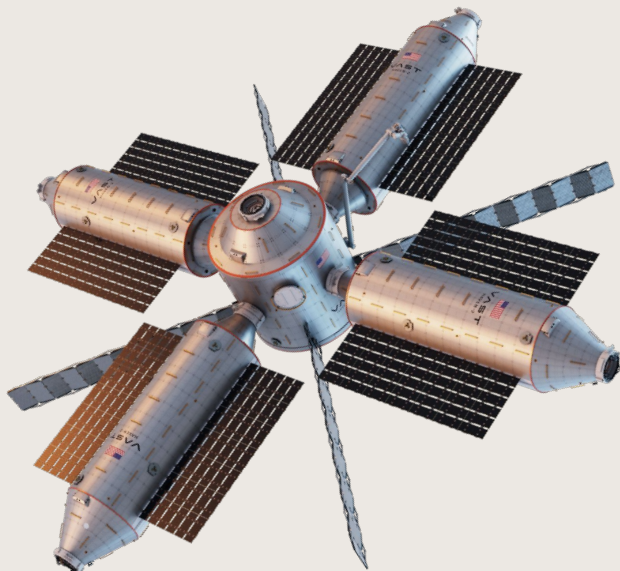
Starting in 2028, Haven Modules will launch approximately every 6 months, with a final station configuration slated for 2032



2028

4 Module Build up

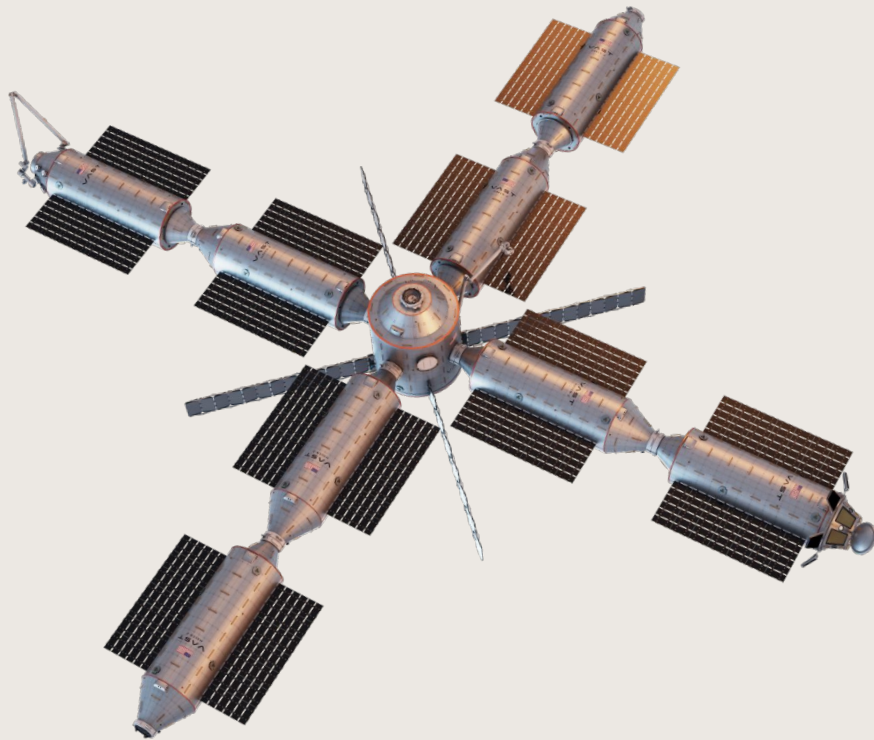
First Haven Modules launch, connecting to form a sequential station by 2030



2030

4 Modules + Core

The original 4 Haven Modules reconnect to a Haven Core, forming a robust cross-configured station in 2030



2032

8 Modules + Core

4 more Haven Modules connect, forming a comprehensive 1-core, 8-module cross-configuration station by 2032

Vision for Vast Space Lab Science Capabilities

- Enable the goal of the United States maintaining its leadership position for the next generation of space explorers and researchers
- Our Haven-2 Station will be fully compliant with NASA CLD2 requirements
- Lab facilities and mission capabilities will be informed by R&D advisory groups and consortia
- Will prioritize
 - Safe human spaceflight and astronaut health
 - R&D programs to advance Moon and Mars missions
 - A balanced R&D portfolio that will:
 - Support BPS and Decadal Survey themes and objectives
 - Service applied R&D that catalyzes LEO economic development and benefit to humanity
- An ecosystem will that will include industry, academia, and international partnerships and a diverse customer pipeline of civil and commercial customers
- Space Biology
 - Cell and Molecular Biology
 - Microbiology
 - Plant Biology
- Physical Sciences
 - Fluid Physics
 - Biophysics
 - Fundamental Physics
 - Materials Science
- Human Research
 - Bone, muscle, cardiac health
 - Psychosocial
 - Medical technologies
- Technology Demonstrations
 - Medical/health systems
 - BLSS
 - Exploration Forward – Moon to Mars focus
 - On-board computing and communication

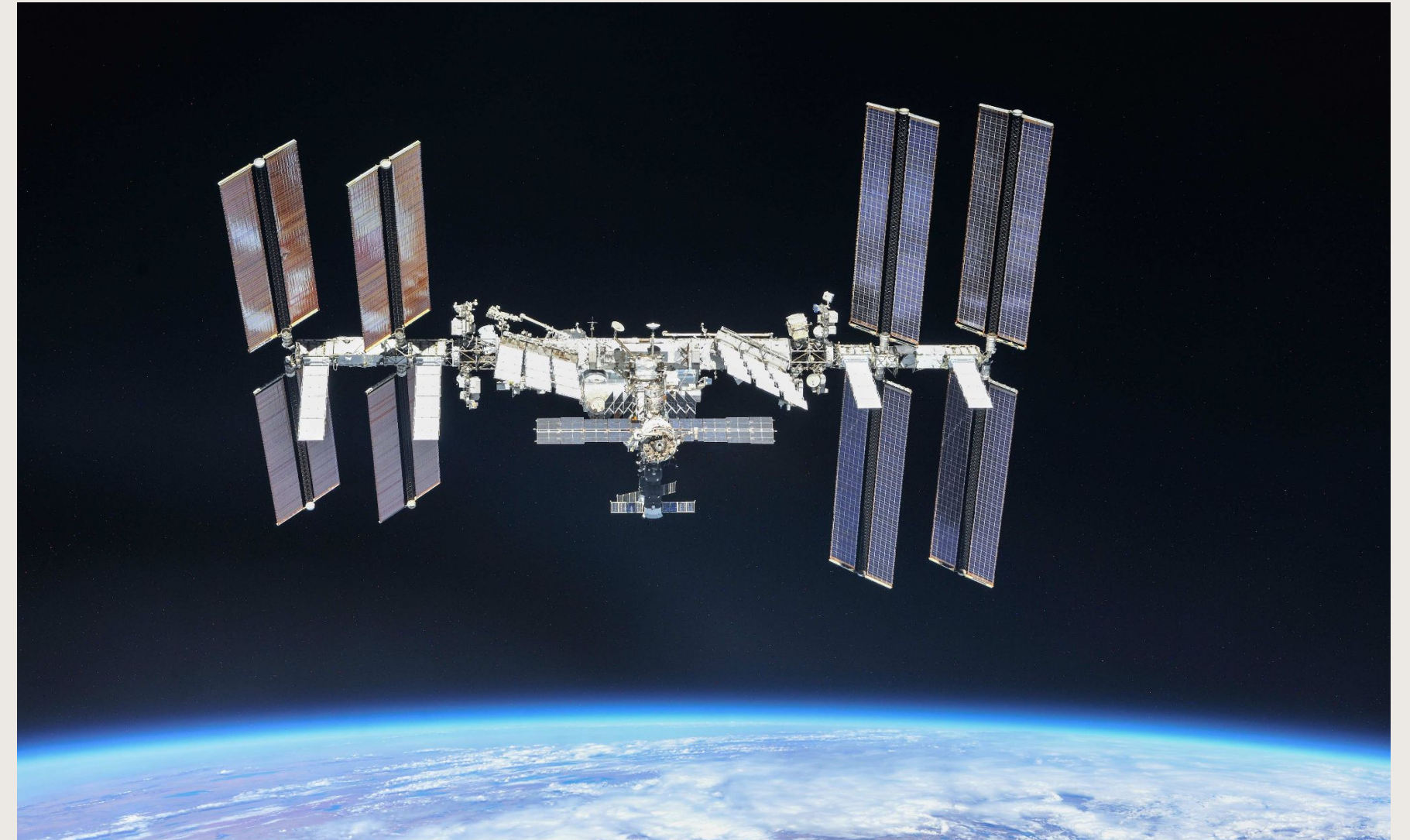
Flight Opportunities

Human Spaceflight Opportunities

Between 2026 and 2028, Vast will offer two distinct orbital missions to low-Earth orbit. Each mission lasting two weeks.



Haven-1 Space Station



**NASA Private Astronaut Missions (PAM)
to the International Space Station (ISS)**

Common Area





2851 Orange Avenue
Long Beach, CA 90806

fly@vastspace.com