



Committee on Biological and Physical Sciences in Space – March 23, 2022

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Our Experience

Nanoracks is the most experienced team in the world when it comes to commercial in-space services.

1000+

PAYLOADS LAUNCHED

30+

NATIONS FLOWN

40+

MISSIONS

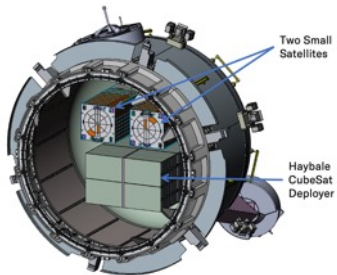
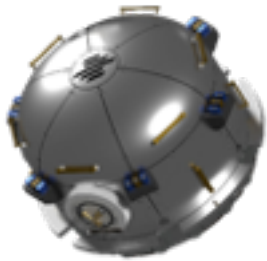
265+

SATELLITES DEPLOYED



THE BISHOP AIRLOCK

The first private real estate on the
International Space Station



INTRODUCING STARLAB

Nanoracks spent the last decade mastering the commercial operation of space stations, meeting customer demand, charting market growth, and self-investing in private hardware on the International Space Station.

Based on this experience, and to assure there is no Space Station gap, Nanoracks proudly introduces Starlab, a continuously crewed commercial station dedicated to conducting advanced research, fostering commercial industrial activity, and ensuring continued U.S. presence and leadership in low-Earth Orbit.



INFLATABLE HABITAT

Human Rated

Initial capacity for up to six astronauts or continuously hosting 4

Size

350 cubic meters of volume in one launch. Half the size of a 747 fuselage

Customer Composition

NASA, other countries space agencies, tourists, researchers, students, and commercial companies will use Starlab.

George Washington Carver Science Park

Democratizing access to space and facilitating microgravity research



STARLAB IS A NEXT GENERATION SPACE STATION

Developed by Voyager, Nanoracks, and Lockheed Martin, Starlab will support a crew presence by 2027.

One Launch

Starlab will deploy from one single launch in 2027

Propulsion

60kW Power and Propulsion Element

Ground Support

Various terrestrial facilities will support Starlab operations, research, and development

Robotic Arm

Supports cargo and external payloads

Metallic Docking Node

Regenerative ECLSS system; Continuously host up to four astronauts, accommodate up to six; Accommodates multiple visiting vehicles

Inflatable Habitat

Crew quarters and George Washington Carver Science Park (340m³ volume)

Additional Modules

Starlab is designed to expand into additional modules over time



“ *The noise is awesome and the excitement is electric as the huge slender rocket rises majestically to meet its destiny in outer space. It is a dramatic moment for mankind; a triumph for science. Yet the irony remains: in his bold leap to the stars, man must rely on synthetic substances whose origins can be traced to the humble farm.*

DAVID MANBER

The Wizard of Tuskegee, The Life of George Washington Carver



George Washington Carver Science Park

The First Science Park in Space

- Starlab Core
- First in-space member of the International Association of Science Parks (IASP)
- Proven business model

Our Labs

- Biological Research Lab
- Plant Habitation Lab
- Physical Sciences & Materials Research Lab
- Open workbench area
- External instrument hosting
- Hosting space for commercial projects

Our Process

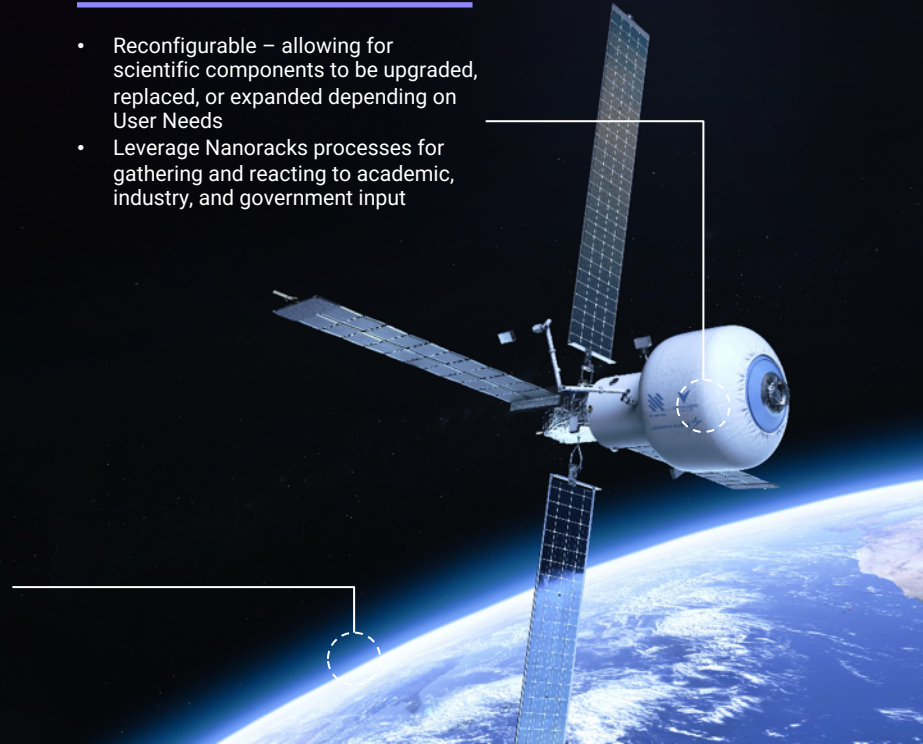
- Reconfigurable – allowing for scientific components to be upgraded, replaced, or expanded depending on User Needs
- Leverage Nanoracks processes for gathering and reacting to academic, industry, and government input

Our Past

- Honors the legacy of a great American scientist
- Continues his tradition of research in agriculture, sustainability, and innovation

Our Future

- Host and manage dedicated student programming
- Terrestrial Analog allows students and researchers to see and feel what conducting science in space is like





Nanoracks



Founding Partners



**ZIN
Technologies**
Component Developer



**Universities
Space Research
Association**
Director, GWC Park



**Ohio State
University**
*Director, University
Consortium & Terrestrial
Analog*



**International
Association of
Science Parks**
Global Engagement



DreamUp
*STEM Education
Advisor*



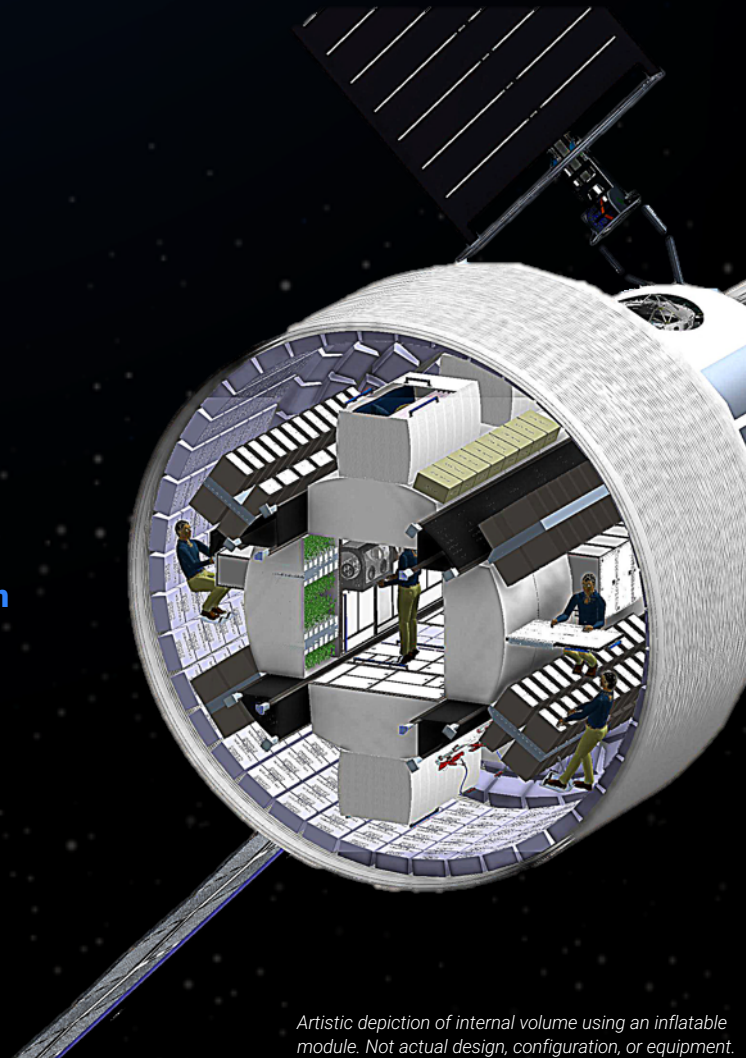
StarLab Oasis
AgTech Advisor

HOW TO PARTICIPATE:

- ON ISS TODAY
- ON STARLAB IN 2027

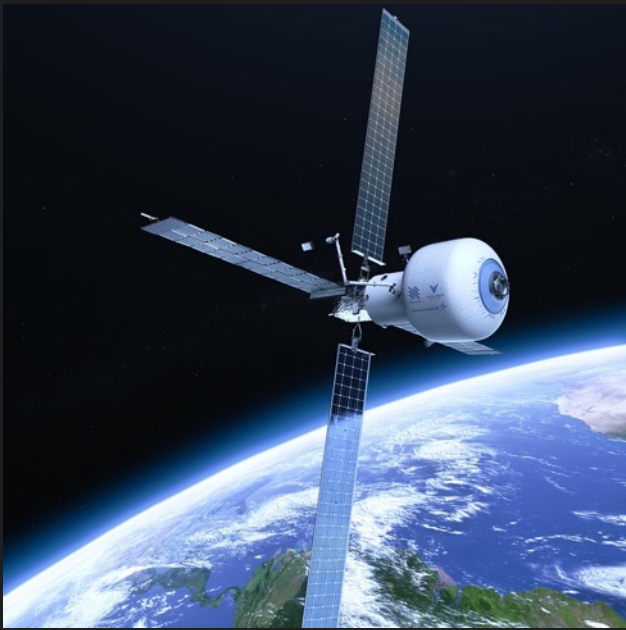
-
- BY PAYLOAD
 - BY ALLOCATION
 - BY VOLUME
 - BY MODULE
 - BY STATION

- ✓ **Provide input on capabilities as part of NASA's utilization requirements**
- ✓ **Continue conducting research on ISS with Nanoracks support**
- ✓ **Attend annual GWC Users Conferences, beginning 2022**
- ✓ **Begin preparing for a seamless transition to Starlab**
- ✓ **Utilize the Terrestrial Analog Facility to plan experiments, optimize operations, and provide feedback for future modifications**



Confidential

Artistic depiction of internal volume using an inflatable module. Not actual design, configuration, or equipment.



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