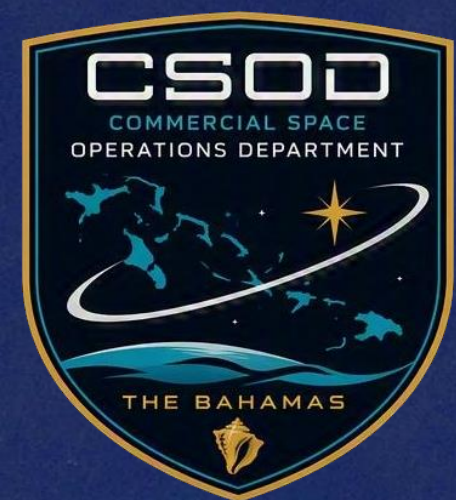




Authority. Oversight. Protection.
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From Island Nation to Space Nation

Leveraging Space for Climate Resilience and National Development

Dr. James Jason Murray

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From Space Observer to Space Participant

Space 'landed' in the Bahamas in 2025

Bahamas strategically located within the downrange footprint of two major US launch sites:

- 1 Cape Canaveral Florida
- 2 Starbase Texas



AHA A, AHA B-1, AHA B-2 (red)
DRA 1, DRA 2, and DRA 3 (yellow)

AHA A

DRA 1

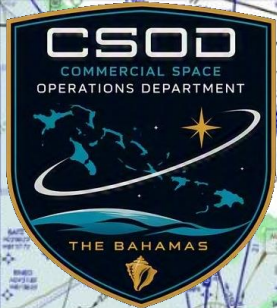
DRA 2

DRA 3

AHA B-1

AHA B-2

Something to be vigilant about...



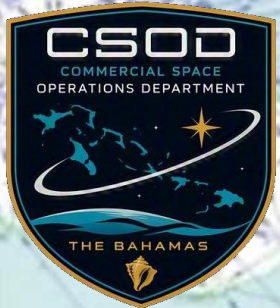
AHA – Aircraft Hazard Areas
DRA – Debris Response Areas



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as seen from the southern Bahamas
and the Turks & Caicos Islands

But it's also an opportunity...



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Opportunity to support US launch operations

Capitalize on our strategic location within the downrange footprint of these US sites where space transportation is changing from an occasional event into daily aircraft-like operations.

- 1 Overflight licensing
- 2 Reusable launch vehicle recovery
- 3 Re-entry contingencies
- 4 Future commercial space transportation site services

This Small Island Developing State turning its geographic challenges into strategic advantages.

Catalyze other types of participation in the global space economy rather than remaining a spectator.

Space used to be a game of scale. It no longer is.

Over the last fifteen years, a handful of countries with a fraction of the population and budget of the major space powers have built space sectors that matter — commercially, scientifically and diplomatically.

They did it not by imitating NASA or ESA in miniature, but by choosing a single asymmetric advantage and pressing it hard: a law, a launch latitude, an orbital slot, a diaspora of engineers, a procurement pipeline.



A LAW

A clear regulatory framework



A LAUNCH LATITUDE

Strategic geographic advantage



AN ORBITAL SLOT

Access to key orbits



A DIASPORA OF ENGINEERS

Global talent, local impact



A PROCUREMENT PIPELINE

From opportunity to capability

BETTER DATA.
BRIGHTER DECISIONS.

CLEANER PLANET.
STRONGER COMMUNITIES.

Bahamas National Space Roadmap



**Strong Political Support,
National Governance &
Interagency Coordination**



**21st Century Market Enabling
Regulatory & Legislative Framework**



**Forward Thinking Licensing &
Responsive Space Operations
Oversight**

1. Launch
2. Small Satellite operations
3. Space Data sharing



Engagement

- Pursue international partner countries and companies
- Collaborate with foreign regulators and international organizations



**Promote Alternative
Industry Growth & Public Support**

- **National Satellite Programme**



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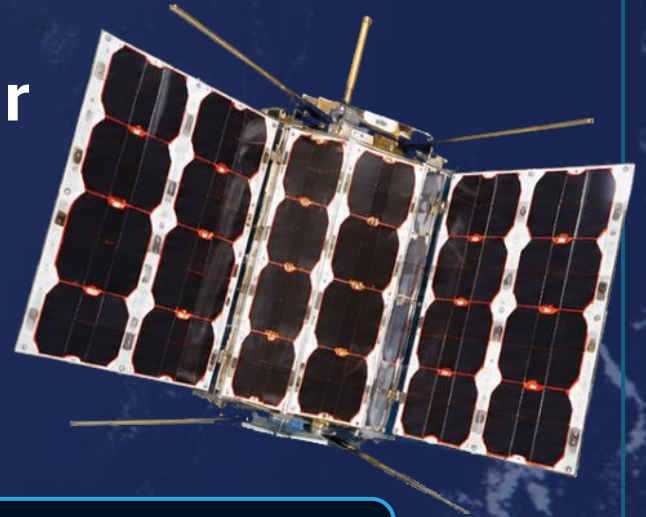


Building the 1st Bahamian-own Space Capability

A National Satellite Programme is underway for
Environmental and Maritime Intelligence

University of The Bahamas **initiative.**

Launch **by 2028 Q3**



Creating a new academic pathway as an
Environmental and Aero-Space Satellite Engineering (EASE) Programme.
Training the next generation of Caribbean engineers, scientists, and entrepreneurs.

The satellite is not the end goal. It is the catalyst for developing
national skills, institutions, and data-driven decision making.

From One satellite to a Small Tropical Constellation

FROM ORBIT TO INSIGHT

Small form factor, highly capable, multi-spectral camera, cubesat

Earth observation mission focused on:

- Climate and environmental monitoring
- Disaster preparedness and response
- Water and coastal resource management
- Maritime domain awareness and border monitoring

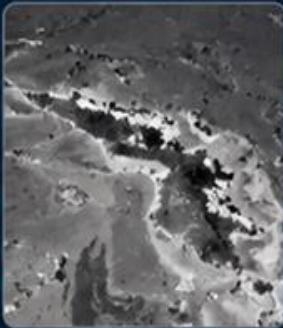
Payload tailored to small island tropical and costal maritime endangered areas.

Full space to ground to data analysis and distribution system suited for smaller countries.

Same area, different bands



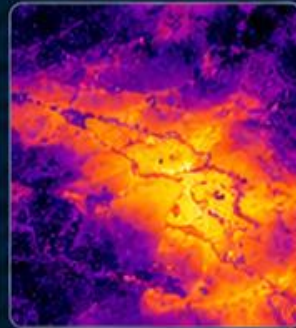
VNIR
~ 10 m



MWIR
~ 25 m

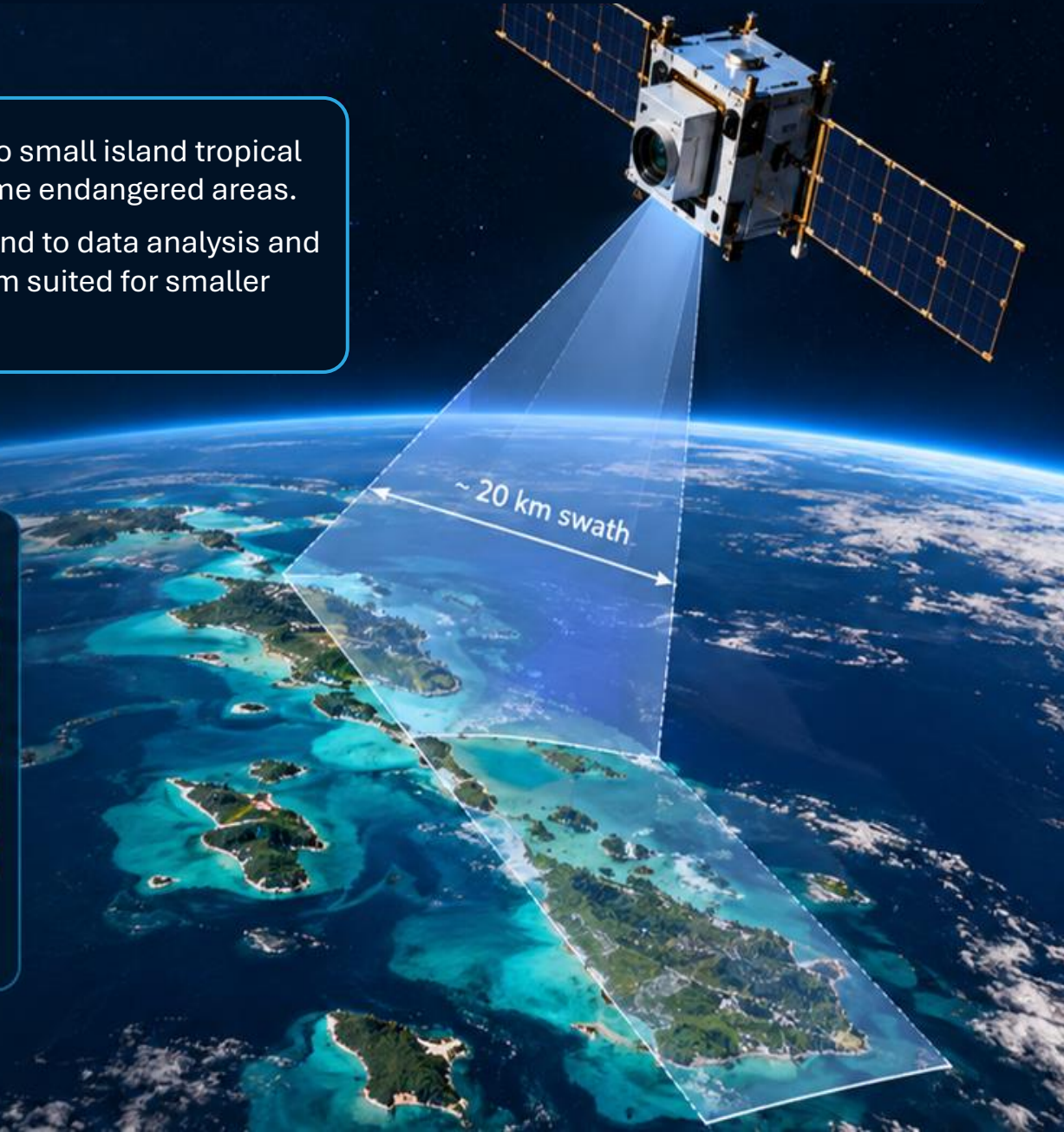


LWIR
~ 34 m



Thermal (LWIR)
~ 34 m

Multi-spectral imaging enables a deeper understanding of our planet, from visible detail to thermal insight.





Why this mission exists



Primary objective

A sovereign Maritime Observation Space System — continuous Earth Observation and AIS vessel tracking over Bahamian reefs, coastal waters and shipping lanes.



Educational objective

Train the first generation of Bahamian satellite engineers on a real, flying national asset, not a simulation.



Two more reasons this exists



Enhancing Bahamas space-industry capabilities

Building domestic aerospace and satellite-related expertise that outlasts this mission.



Advancing environmental monitoring and conservation

Combining Earth Observation with AIS tracking to protect marine ecosystems and support sustainable resource management.



Even more reasons for this mission

Collaborate with neighbouring CARICOM Nations
Involve Lower Latitude, Equatorial, and Small Island
Tropical Nations from around this planet!

Space as a tool for resilience, security, and sustainable development.

Bahamas uniquely positioned to become both a space operations partner and a beneficiary of space technologies.

FROM
SPACE TO
OPPORTUNITY.

Ad Astra EASE Satellite

EDUCATION • ACCESS • SOVEREIGNTY • BAHAMAS



The Bahamas is ready to become a living laboratory where **space technology**, **environmental stewardship**, **education**, and **economic development** converge.

We invite partners to help us build that future.

Many nations go to space because they are wealthy. The Bahamas is pursuing space because it must become more resilient, more informed, and more capable.

If you are interested in helping us to build that future, I'd be delighted to speak with you during the break.

Seeking Partners for a Caribbean Space Capability

Looking for:

- Satellite engineering and mission partners
- Remote sensing and Earth observation experts
- Universities and research institutions
- Policy, legal, and regulatory specialists
- Commercial space operators and launch service providers
- Funding, philanthropic, and development partners

Together we aim to:

- Create a regional CARICOM space and environmental innovation hub.
- Establish world-class education and workforce development programmes.
- Develop sustainable models for emerging small island space nations.
- Demonstrate how space technology can improve resilience for vulnerable coastal communities.

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