



# icMercury AstroMine Collaboration Program

Provided by Interstellar Communication Holdings Inc.

# Why Invest in Space Exploration for Our Future?



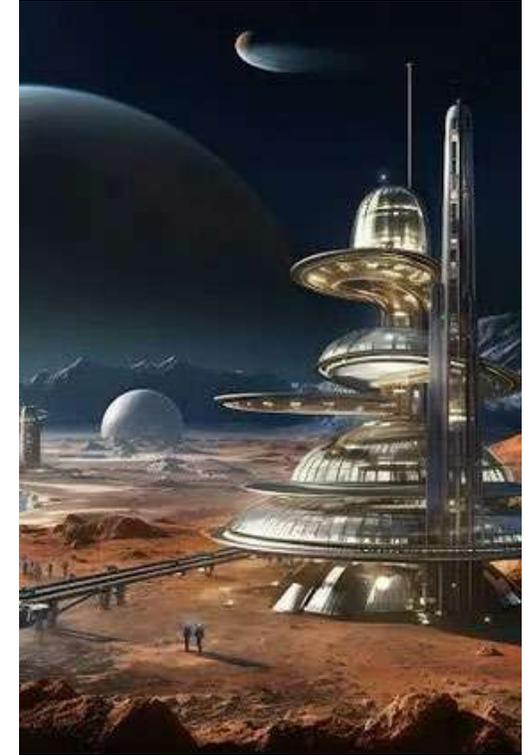
Innovation for Sustainability



Global Collaboration



Perspective Shift



Unknown Solutions

# How Satellite Impact Your World

Five Ways You Might Know...



**Weather  
Forecasting**



**Television**



**Cell Phones**



**Military  
Communications**



**Navigation**

And Some You Might Not...



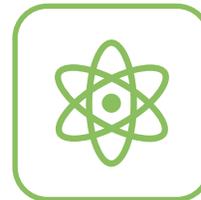
**Banking**



**Agriculture**



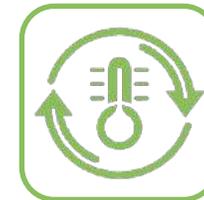
**Search & Rescue**



**Scientific  
Discovery**



**Aviation**



**Climate  
Monitoring**

# How Big is a Satellite?



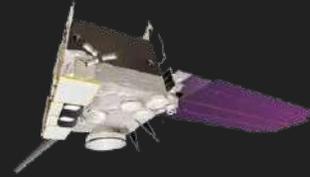
**GOES-R**

6,173lbs/ 2,800kg



**PICKUP TRUCK**

7,000lbs/ 2,175kg



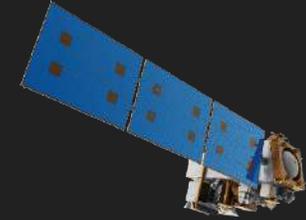
**GOES-15**

3,395lbs/ 1,540kg



**HIPPOPOTAMUS**

3,250lbs/ 1,474kg



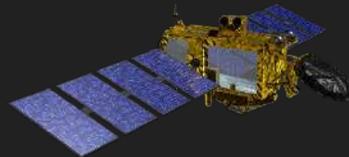
**SUOMI NPP**

3,086lbs/ 1,400kg



**1965 VW BUG**

1,900lbs/ 862kg



**JASON-3**

1,157lbs/ 525kg



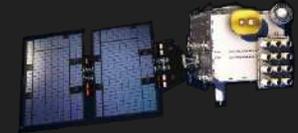
**GRAND PIANO**

1,000lbs/ 454kg



**DSCOVR**

677lbs/ 307kg



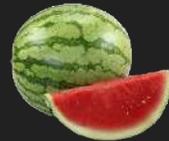
**ONE COSMIC-2**

617lbs/ 280kg



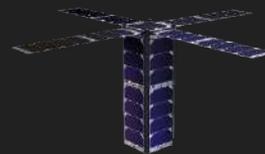
**42in RIDING LAWN MOWER**

400lbs/ 181kg



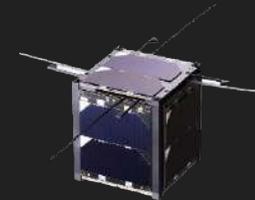
**WATERMELON**

20lbs/ 9kg



**EARTH OBSERVATION CUBESAT**

9.3lbs/ 4.2kg



**PocketQube SAT**

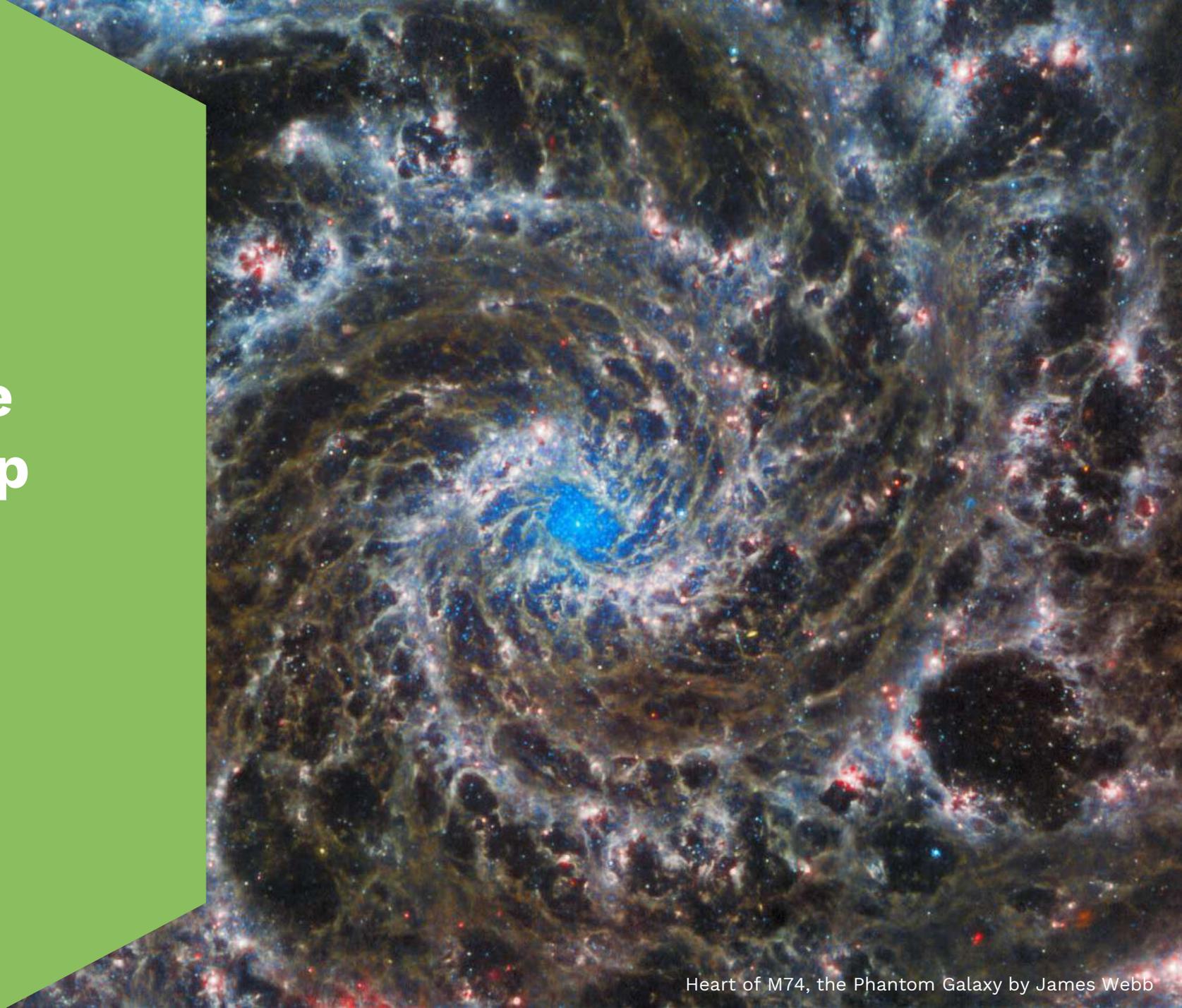
0.55lbs/ 0.25kg



**iPhone 15 Pro Max**

0.49lbs/ 0.22kg

# How Can Space Technology Help The Mining Industry?



# What is Mining?

- Mining is the process of **extracting valuable minerals or other geological materials from the Earth or, potentially, from other celestial bodies**
  - Mining provides raw materials that are used in manufacturing, construction, technology, energy production, etc.
  - These materials are essential for our daily lives and for advancing human progress, whether on Earth or beyond

Intelligent and sustainable buildings will define the future:

- ❖ **Nickel** combined with stainless steel to provide cost-effective architecture
- ❖ **Limestone** to make insulated concrete for efficient temperature control
- ❖ **Copper** to improve conductivity and reduce energy consumption
- ❖ **Quartz** in windows to improve energy-efficiency
- ❖ **Gold** in solar panels to increase photovoltaic efficiency



# Mining Industry Challenges



**Environmental  
Monitoring**



**Resource  
Management**



**Operational Efficiency**



**Safety and  
Communication**

# The Role of Space Technology in Mining Industry

## Exploration:

Satellites provide high-resolution imagery and data to identify potential mining sites and mineral deposits, saving time and resources compared to traditional methods.

## Operations Monitoring:

Satellites track mining operations, including excavation progress and material movement, helping to optimize operations, reduce waste, and improve safety.

## Environmental Monitoring:

Satellites monitor environmental impacts, such as water quality, vegetation, and land use changes, ensuring compliance with regulations and reducing environmental impact.



## Infrastructure Monitoring:

Satellites observe mining infrastructure (pipelines, roads, rail lines), helping to identify maintenance needs and minimize downtime.

## Market Analysis:

Satellites provide insights on global commodity markets, supply and demand trends, price fluctuations, and shipping routes for informed production and pricing decisions.

# Asteroid Mining: The Next Frontier

**The future of mining isn't just beneath our feet — it's above us**, in the vast expanse of space. Asteroid mining presents a bold new horizon for resource exploration, offering:



## Limitless Resources:

Asteroids contain valuable metals like platinum, nickel, and cobalt — resources essential for technology, clean energy, and infrastructure.



## Driving Technological Advancement:

Exploring and extracting resources in space pushes the boundaries of automation, robotics, and remote operations — technologies that can revolutionize Earth-based mining.



## Economic Potential:

The estimated value of materials in a single asteroid can reach trillions of dollars, creating unprecedented opportunities for growth and innovation.



## Inspiration for Tomorrow:

Asteroid mining offers a glimpse into a future where mining extends beyond our planet, paving the way for sustainable exploration and economic expansion.

Asteroid mining may seem like science fiction, but the technology shaping it is already transforming Earth's mining industry. Embracing space-driven innovation today means leading the charge into this exciting new frontier.

# About icMercury

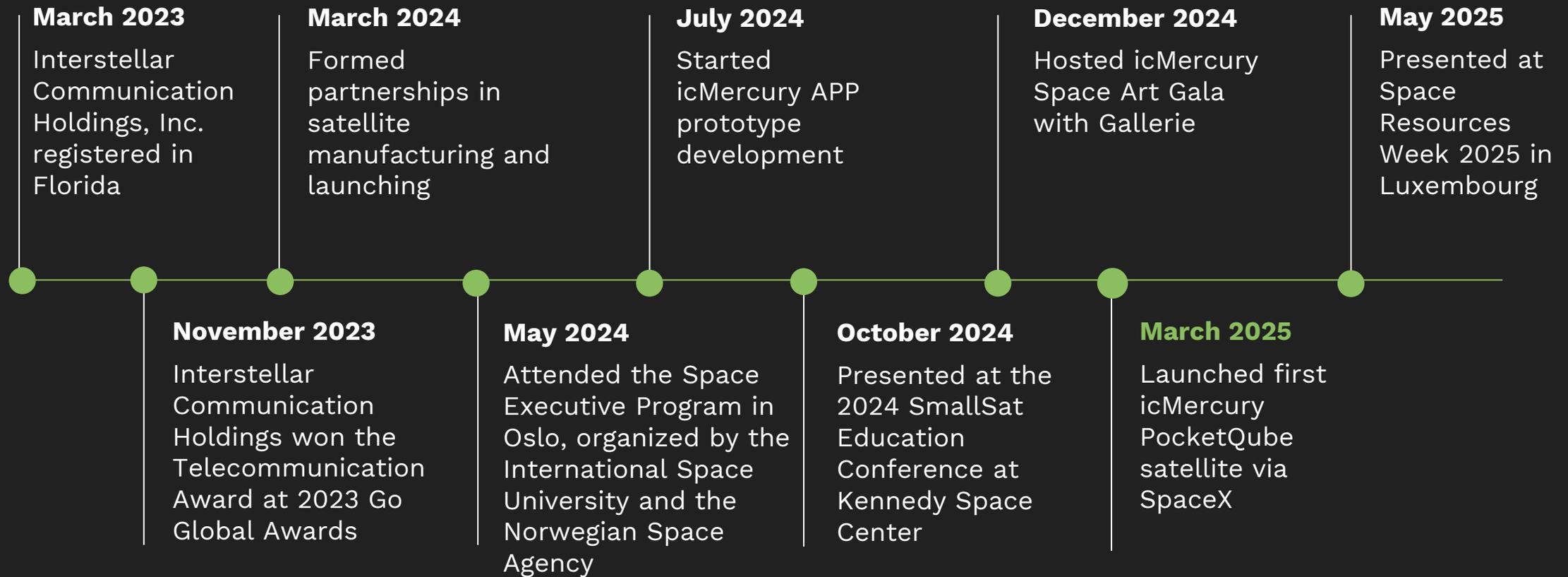


# About Interstellar Communication Holdings



Interstellar Communication Holdings, Inc., a Florida based company, is a holding company that connects and consolidates space-related companies, **enabling entrepreneurs and investors to tap into the vast potential of the universe**. Interstellar Communication Holdings provides an affordable personal satellite service named icMercury for stargazers, using Pocketcube technology and a customized user platform. With this service, users will be able to access their satellite and unlock the potential of the universe.

# Roadmap



# Overview of the icMercury System



Cornerstone of our platform, representing our commitment to **making space exploration personal and accessible.**



More than a satellite service, icMercury serves as **your personal messenger to space**, providing unparalleled access to the cosmos.



Leveraging the **cost-effective PocketQube satellite technology**, the system offers personalized cosmic experiences for individuals and innovative marketing opportunities for small to mid-sized companies.



Enable and empower users to embark on a journey of cosmic exploration, fostering **a sense of wonder and understanding of the mysteries of space.**

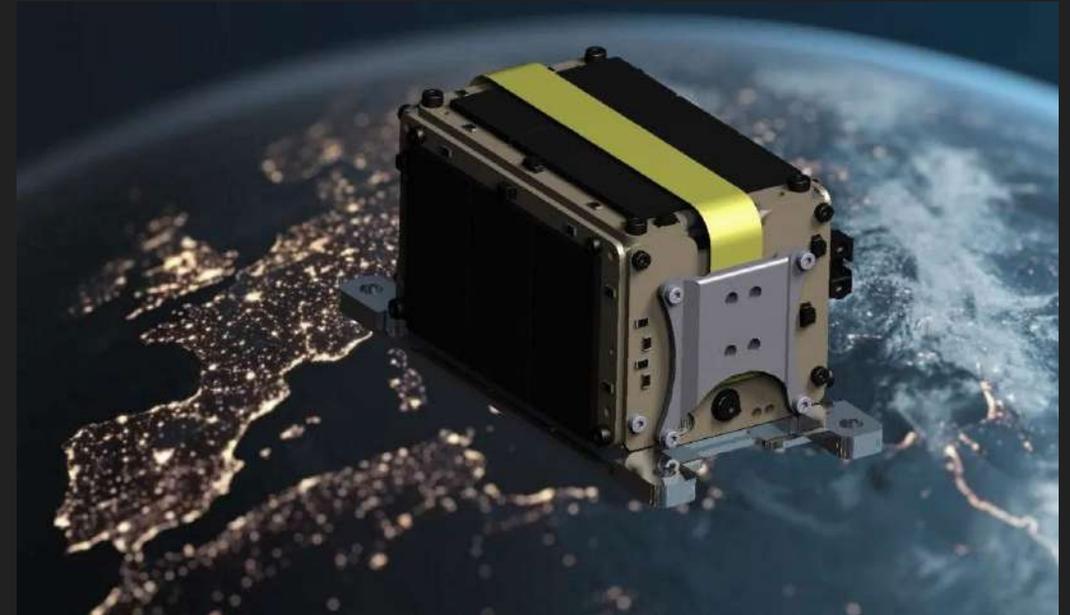


icMercury aims to facilitate **unforgettable experiences** that transcend mere transactions.

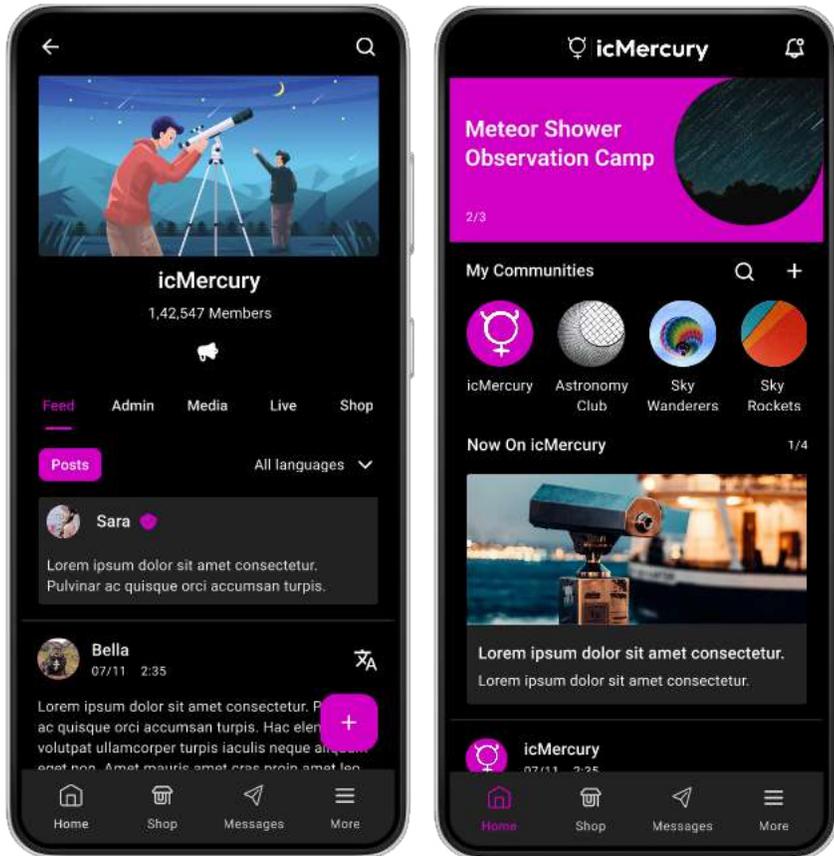
# First icMercury Satellite - HADES-ICM

**HADES-ICM** is a 1.5P PocketQube mission which will offer AX.25 / APRS 300/1200 bps communications. This will be achieved by implementing a SDR based FM and FSK repeater. UHF and VHF bands will be used for downlink and uplink respectively. Estimated satellite volume is 5x5x8 cm and its mass is 400 g.

It will carry an experiment by Smart IR/Graphene Engineering Innovation Centre, GEIC University of Manchester (UK) consisting in a very **low power active radiator to be tested on space conditions** and a **software payload** (game) developed by icMercury.

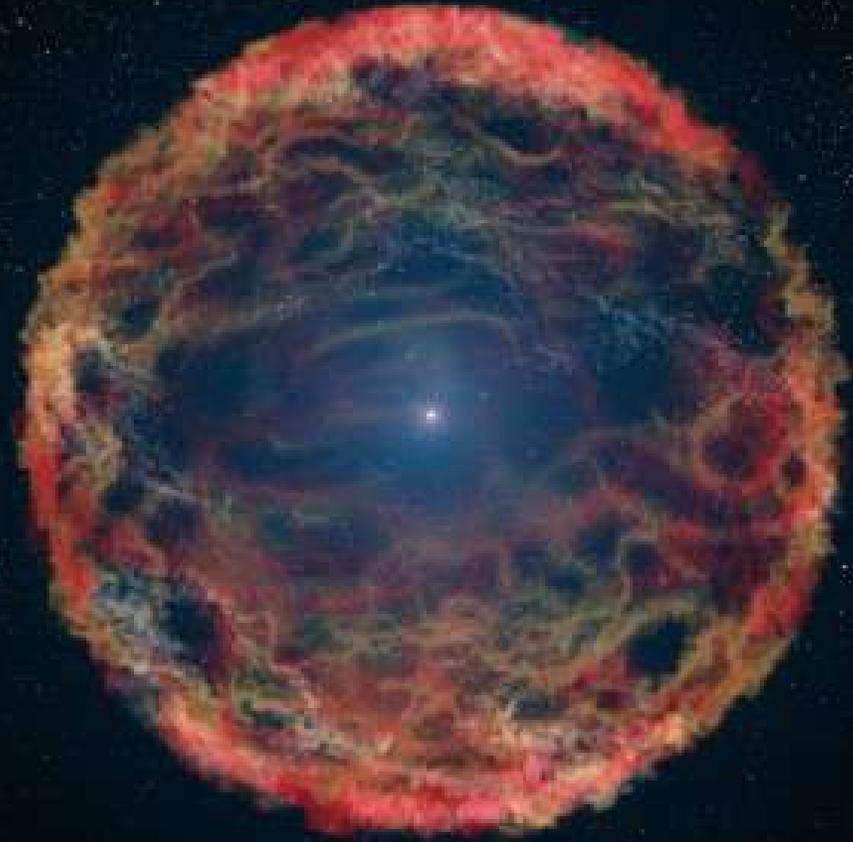


# icMercury System - icMercury APP



- A **dedicated platform for space enthusiasts**, providing a centralized space for community engagement, idea-sharing, and curated space-related products and experiences
- Bridges the gap left by existing space-related apps, which often focus on games or one-way information delivery, creating a **vibrant community hub for space enthusiasts** to connect and collaborate
- Revolutionizes conventional communication methods used by local astronomy clubs and space-focused businesses, offering a seamless platform for users to explore, join, and actively participate in space-centric communities

**icMercury AstroMine  
Collaboration Program**



# icMercury AstroMine Collaboration Program

The icMercury AstroMine Collaboration Program is the bridge between mining and space innovation. A collaboration between **icMercury, the University of Arizona's Mine Automation and Autonomous Systems Laboratory, and forward-thinking mining companies**, this program provides access to groundbreaking research, emerging technologies, and strategic industry exposure. Designed for companies ready to lead the charge in high-tech mining, the collaboration positions participants at the forefront of a new era.

## Mission & Key Objectives



Technology Integration



Research Collaboration



Industry Exposure



Innovation Leadership



## Be Part of the Future

Mining is no longer just about what's beneath us—it's about what's beyond. Join the icMercury AstroMine Collaboration Program and be at the forefront of the mining revolution.

Let's shape the future together.

# U of A - Global Leader in High-Tech Mining & Space Exploration

- **Over 140 years of excellence** – Established in 1885, University of Arizona's Department of Mining and Geological Engineering (MGE) leads advancements in mining automation, sustainability, and space-related resource extraction.
- **Strategic Location** – Based in Arizona, the top U.S. producer of copper and metal mining, MGE plays a pivotal role in the evolution of modern mining.
- **Cutting-Edge Research Areas:**
  - Geophysical sensing & mine automation
  - Mineral processing & extractive metallurgy
  - Rock excavation & sustainable mining
  - Lunar mining & space resource utilization



# U of A - Bridging Mining & Space Through Innovation

- **San Xavier Underground Mine** – A one-of-a-kind, student-run test site for developing and refining new mining technologies.
- **Industry & Government Collaborations** – Strong ties with global research institutions and industry leaders in resource extraction innovation, including R&D collaborations with international partners in major mining countries such as Canada, Peru, Australia, and Chile.
- **High-Impact Research Initiatives:**
  - Early detection of rock hazards
  - Metals extraction & water reuse
  - Space mining & extraterrestrial resources
- **icMercury AstroMine Collaboration Program** – A unique opportunity for mining companies to engage with cutting-edge research, faculty expertise, and advanced mining technology.



# U of A - Cultivating the Next Generation of Space Miners



Formed in January 2021, Wildcat Moon Miners is a team of passionate University of Arizona undergraduate and graduate students dedicated to advancing space mining research. The group actively participates in lunar mining competitions sponsored by NASA, tackling challenges that push the boundaries of resource extraction beyond our planet.



CIPHERS Moon Base Logistics for RASC-AL (NASA)

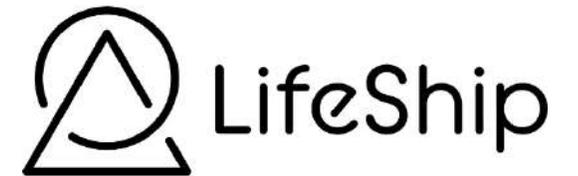
## Other Partners



International Centre for  
Trade Transparency  
& Monitoring



**VIDUSHI**<sup>®</sup> Infotech  
Software Solutions Provider Pvt. Ltd.  
A CMMI Level 3 Company



# ForestGuard

## A New Era of Environmental Monitoring

**Founded: 2021**

**Headquarter: Istanbul, Turkiye**

ForestGuard is an early detection system for forest fires through IoT, providing air quality, toxic, flammable, and explosive gas detection.

ForestGuard can create fire risk heatmaps before the fire to predict any possible fire threats in the following weeks. It can also detect any smoke and fire by using an AI algorithm that processes 30+ parameters in real time.



# Redistribution Partnership for Starlink Services

On Dec. 02, 2024, Interstellar Communication Holdings Inc. announced a partnership with **Olympia Point Ventures, LLC**, a certified master agent of **Starlink** services. This agreement, effective November 22, 2024, enables Interstellar Communication to act as an **authorized agent** for Olympia's technology solutions, including **Starlink's satellite internet services**. Starlink service provides mining operations with reliable, high-speed internet connectivity in remote locations, enabling improved communication, automation, and data management in the field.



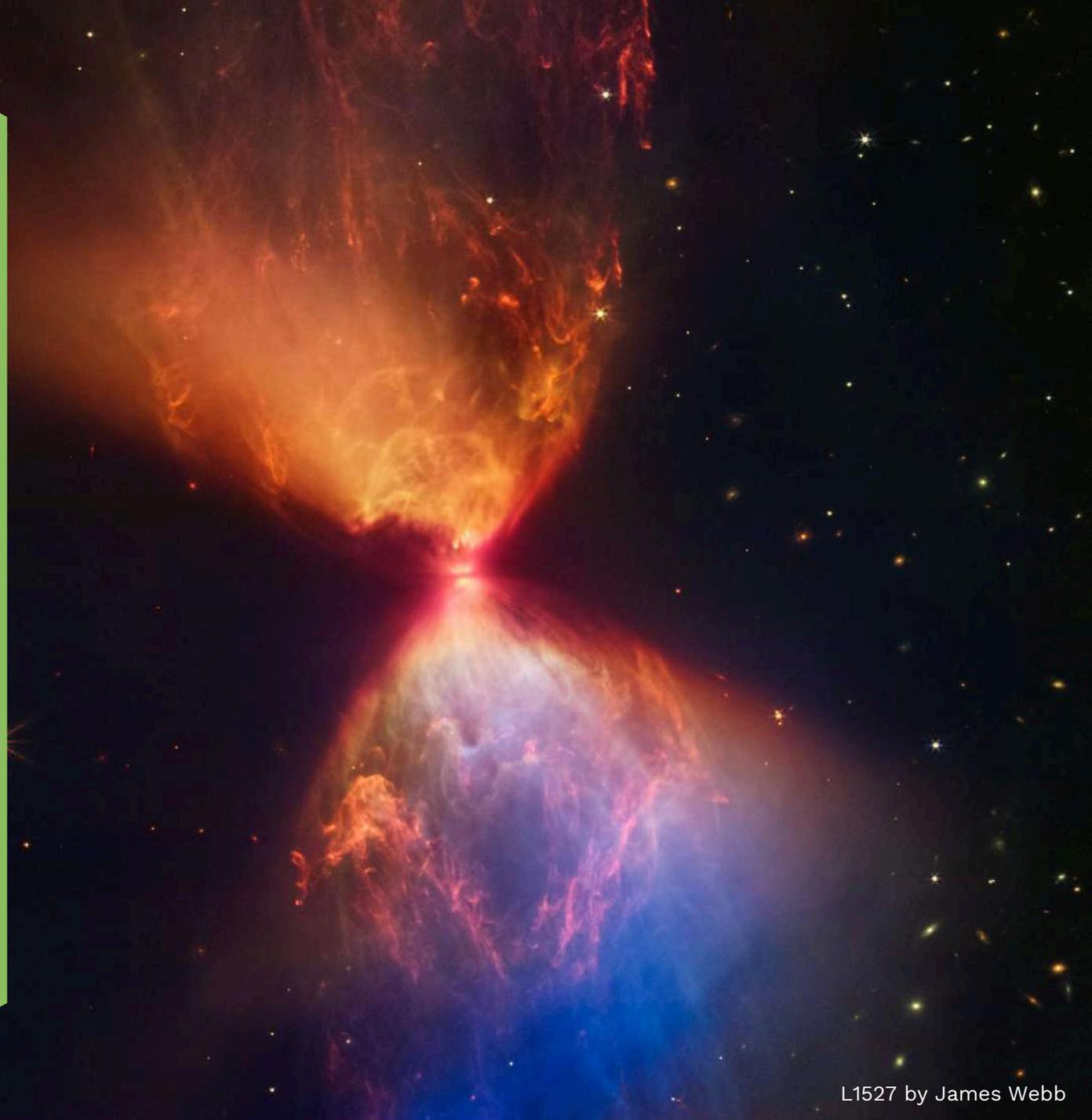
# How You Can Launch a Satellite – A Collaboration with ITC

Supported by the International Trade Council, icMercury, together with its partners, hosted a free webinar, "[Unlocking the Possibilities – How You Can Launch a Satellite](#)," on March 19, 2025.

The event offered an inside look at the development and potential of PocketQube satellite technology, **featuring icMercury's first satellite launch as a live case study**, providing a unique opportunity to explore the journey of satellite launches and understand how space is rapidly becoming a tangible platform for innovation and growth. The webinar also introduced the upcoming icMercury app, demonstrating how users can interact with the satellite in real time.



# Offering



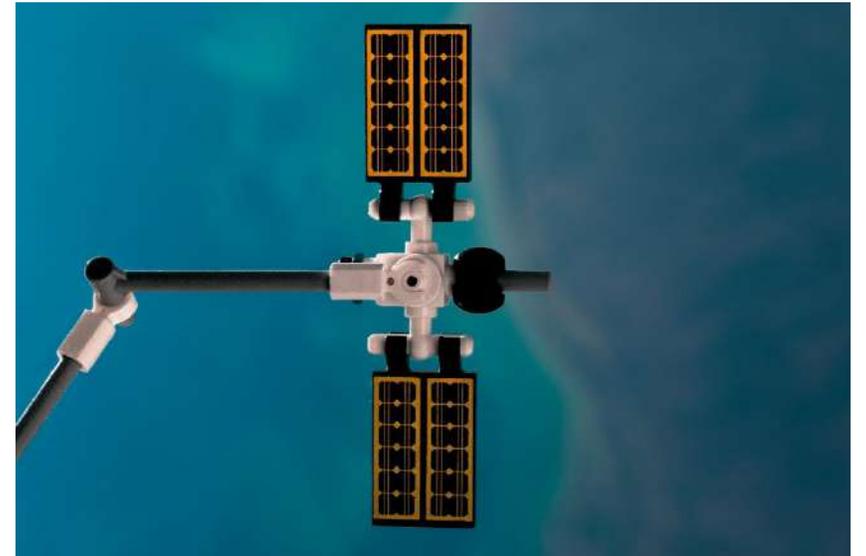
# Tier 1 Collaboration - Stellar Explorer

The **icMercury AstroMine Collaboration Program** is a strategic collaboration between icMercury, the University of Arizona's Mine Automation and Autonomous Systems Laboratory, and visionary mining companies. This program empowers your business to harness space-driven innovation and cutting-edge mining technologies. Choose the tier that best aligns with your strategic vision and growth objectives.

## Tier 1: Stellar Explorer

For companies eager to stay informed and connected with the latest space-driven mining innovations.

- Receive **curated updates** on cutting-edge space-related mining advancements, research breakthroughs, and technological progress.
- Enjoy invitations to **exclusive events** showcasing space-driven innovations and industry trends.
- Enhance your **brand recognition** by aligning with the icMercury AstroMine initiative, positioning your company as an early adopter of transformative innovation.



# Tier 2 Collaboration - Celestial Innovator

## Tier 2: Celestial Innovator

For companies ready to deepen their engagement and transform operations through high-tech solutions.

- All benefits of Tier 1, plus:
- Gain access to exclusive **industry reports and featured articles** spotlighting breakthroughs in mining automation and space-based solutions.
- Engage in hands-on collaboration with the University of Arizona's world-class research teams.
- Test and validate advanced mining automation and satellite-based solutions.
- Benefit from enhanced media exposure through **featured articles and case studies** that showcase your leadership in innovation.



# Tier 3 Collaboration - Cosmic Pioneer

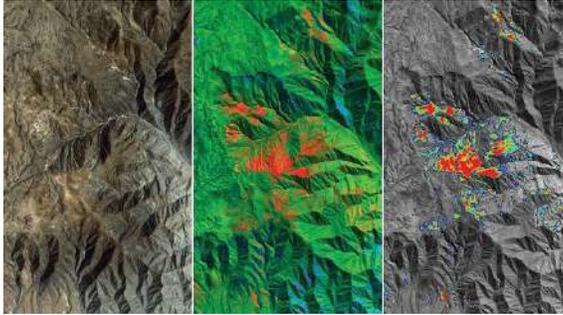
## Tier 3: Cosmic Pioneer

For industry leaders ready to drive groundbreaking change and strategic innovation.

- All benefits of Tier 2, plus:
- Enjoy priority access to pioneering **R&D projects** focused on satellite-driven resource mapping and autonomous mining.
- Receive exclusive invitations to high-level networking events with top leaders in both the space and mining sectors.
- Collaborate on custom research initiatives tailored to your company's strategic innovation goals.
- Access the University of Arizona's **satellite image database** for advanced mineral exploration and remote sensing applications.
- Leverage thought leadership opportunities through keynote speaking engagements and industry panel participation.



# What CEOs Can Expect



## Faster Mineral Discovery & Lower Exploration Costs

- Leverage satellite-based geological analysis to reduce exploration expenses.
- Shorten site selection timelines by months or years.
- Utilize university research to improve discovery efficiency with advanced tools.

## Higher Operational Efficiency & Cost Savings

- Conduct industry benchmarking with university experts to enhance efficiency.
- Optimize logistics and predictive maintenance to cut fuel and equipment costs.
- Improve safety, compliance, and minimize costly operational disruptions.



# What CEOs Can Expect (Cont'd)

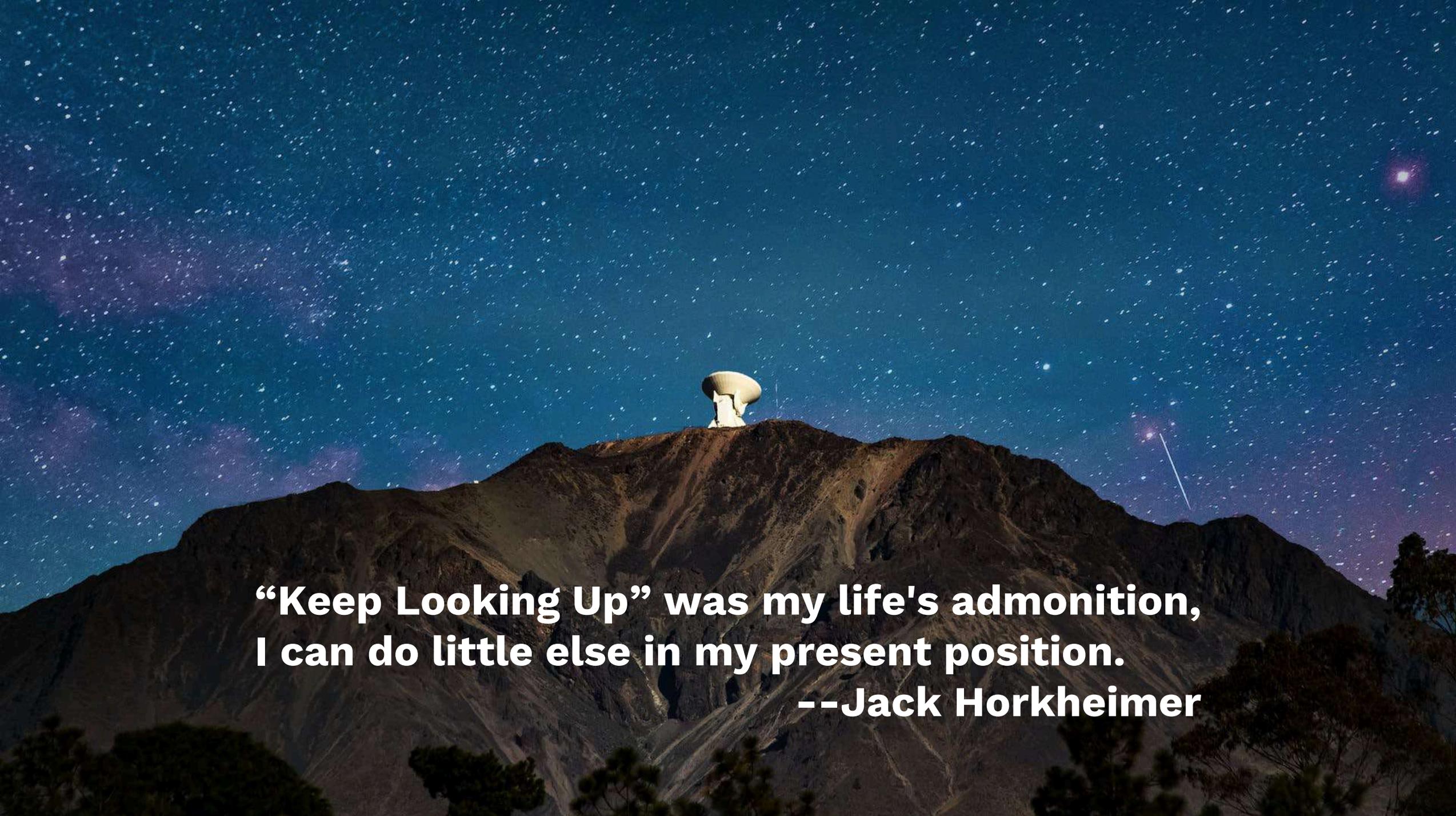
## Stronger Market Position & Strategic Advantage

- Establish early leadership in asteroid and space mining.
- Gain a competitive edge by integrating space technology into mining operations.
- Use real-time commodity insights to refine production and pricing strategies.



## Enhanced PR & Investor Confidence

- Receive expert IR/PR analysis to strengthen capital market positioning.
- Secure global media exposure as a leader in space-enabled mining.
- Attract investors by showcasing innovation and long-term growth potential.

A night sky filled with stars and the Milky Way galaxy. A satellite dish is perched on the peak of a dark, rocky mountain. The sky is a deep blue, and the Milky Way is visible as a faint, glowing band of light. A bright star is visible in the upper right, and a comet or meteor streak is seen in the lower right. The overall scene is serene and evokes a sense of wonder and exploration.

**“Keep Looking Up” was my life's admonition,  
I can do little else in my present position.  
--Jack Horkheimer**

# THANK YOU



Interstellar Communication Holdings Inc.

4201 Collins Ave. Suite 402, Miami Beach, FL 33140 USA

Earth, Solar System, Milky Way, Laniakea

The Pale Blue Dot is a photograph of Earth taken Feb. 14, 1990, by NASA's Voyager 1 at a distance of 3.7 billion miles (6 billion kilometers) from the Sun.

**Appendix:  
icMercury Space Art  
Gala with Gallerie**





December 9th, 2024  
Downtown Association Club, New York

# icMercury Space Art Gala with Gallerie





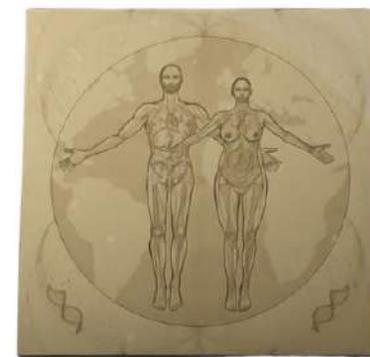
Our event is more than an exhibition; it's a  
**Community.**

We bring together a diverse group of artists, collectors, space enthusiasts, and industry leaders, fostering a dynamic environment of collaboration and exchange. By participating, you become part of a global network dedicated to the intersection of art and space exploration.

# Community

# Art to the Moon

The winning artworks from the 2024 icMercury Space Art Gala with Gallerie will be sent to the Moon. Through a special collaboration between the icMercury Space Art Gala with Gallerie and LifeShip, these selected pieces will be featured in LifeShip's Lunar Art Gallery on a NanoFiche art plate, preserved in a Pyramid, and launched aboard the Astrolab FLIP lunar rover in November 2025. This extraordinary opportunity is sponsored by the icMercury Space Art Gala with Gallerie, celebrating the fusion of art and space.



“

The icMercury Space Art Gala was an unforgettable experience. From the stunning venue to the thoughtfully curated program, every detail reflected a commitment to excellence and inspiration. The fusion of art and space exploration was not only innovative but also deeply moving. I left the event feeling inspired and uplifted, grateful to have been part of such a unique occasion.

**Paul Panos**

Art Curator from Greece

Attending the gala was an unforgettable experience! The seamless blend of art and space-themed elements created a truly magical atmosphere. Every detail, from the stunning exhibits to the engaging performances, was thoughtfully curated. It was inspiring to be surrounded by such creativity and innovation. I can't wait to see what icMercury and Gallerie have in store for their next event!

**Jacob D. Frankel**

Beyond Alpha Ventures

It was an honor and privilege to be part of the icMercury Space Art Gala. The thoughtful event and incredible people made for a memorable afternoon and evening. The entire day highlighted the work of talented people from the organizers to the talented artists. It was also so nice to be in the presence of so many people who truly appreciate art.

**Giuseppe Ferreri**

Artist

”

# Testimonial

# Stellar Moments





# Snapshots