



Clean Space, Actionable Planet: Orbital Stewardship as the Engine for Earth Data



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Director, Mission Operations



PLANET'S MISSION

To image the whole world every day and make global change **visible, accessible, and actionable.**

Our Public Benefit Corporation (PBC) Purpose:

To accelerate humanity toward a more sustainable, secure, and prosperous world by illuminating environmental and social change.





Our data helps in the measurement of 14 out of the 17 United Nations Sustainable Development Goals (SDGs).

We work closely with the United Nations to help further progress towards the 2030 agenda and support alignment of our partners with the SDGs through the use of our data.





BASF

Origin

Orange River, South Africa • January 22, 2019

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Orbital Insight



KAYRROS

Singapore • July 19, 2019

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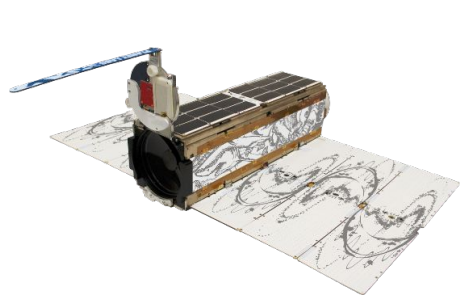






Planet Satellite Constellations

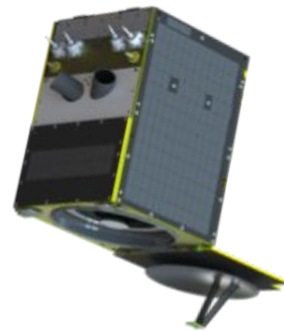
High spectral and radiometric resolution measurements augment Planet's solutions



SuperDove

Always-on Monitoring

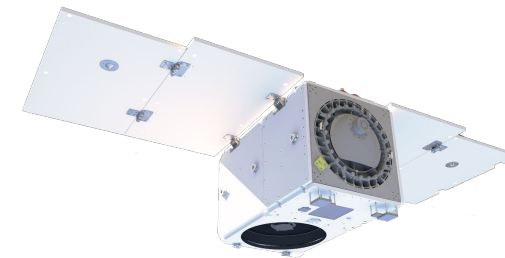
- Hundreds of satellites
- 3-5m
- Global scanning
- 8-band



SkySat

High-Resolution Tasking

- ~15 satellites
- 50cm resolution
- RGB, NIR, and Pan bands
- Sub-daily tasking



Pelican

Very High Resolution Tasking

- Initial fleet of up to 30 satellites¹
- Up to 30cm resolution
- Pan + 6 RGB+NIR bands
- Up to 30 revisits/day

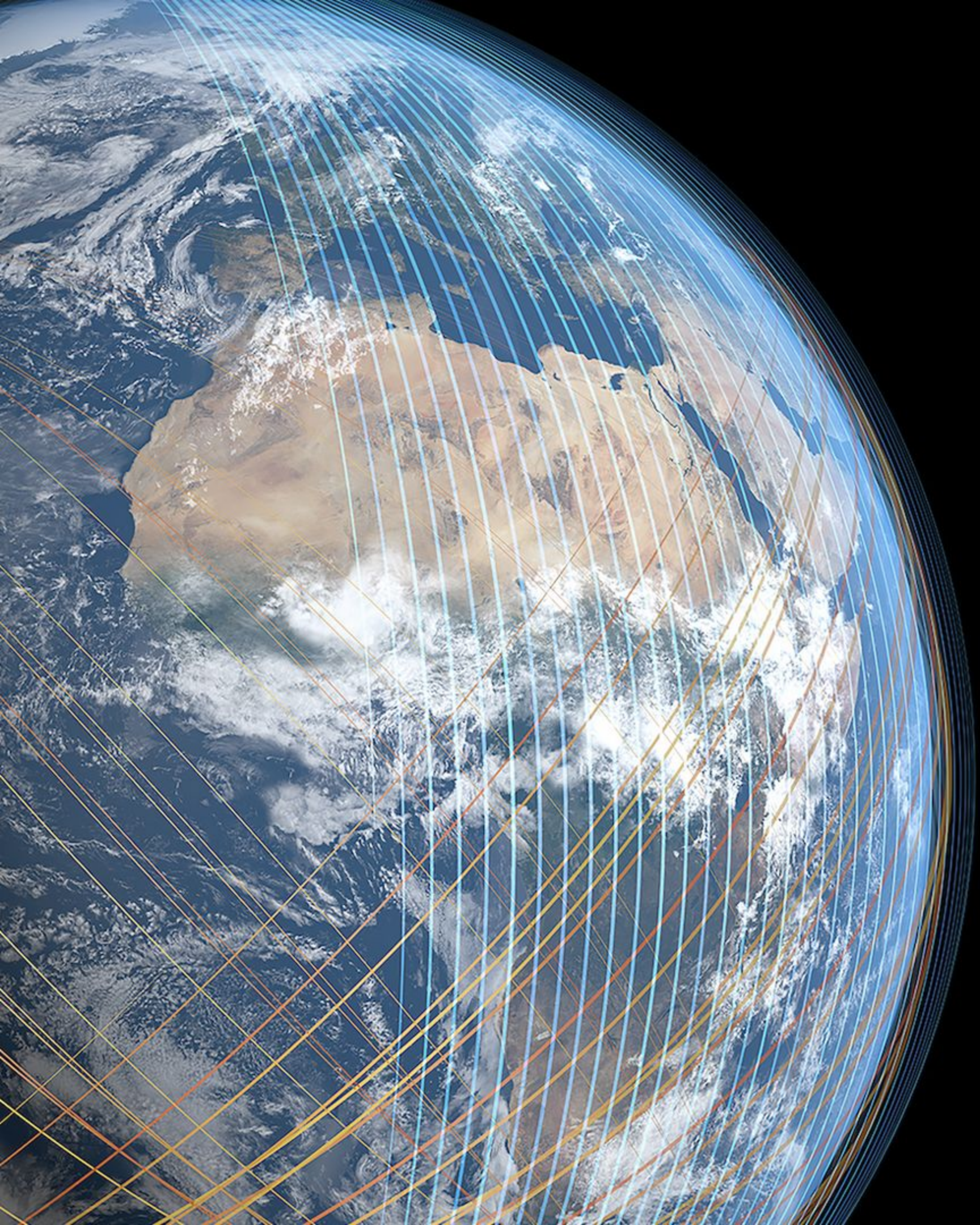


Tanager

Hyperspectral Tasking

- Tanager-1 launched
- 400 - 2500 nm
- ~400 5 nm bands

¹ Does not include initial 2 demonstration satellites planned for FY'24.



Protecting the space
environment is of utmost
importance to humanity's
short-term and long-term
success and requires action
across several
fronts



Planet's Space Operations

Committed to minimizing impact on space environment

- Safe operations of 500+ of satellites in orbit for over a decade. Over 200 successfully disposed.
- Designs for responsible demise leveraging agile aerospace
- Working on brightness mitigation for next-generation fleets
- Launching and operating at low altitude orbits
- Adopting and compliant with responsible decommissioning timelines





Planet's Space Operations

Committed to minimizing impact on space environment

- Publicly shares ephemerides since 2016
- Space Data Association (SDA) member, collaborates closely with 18th Space Defence Squadron
- Operational agreements with several operators including TOPO, NASA, ESA and industry
- Automated alerting workflows for conjunctions with 24/7 response posture

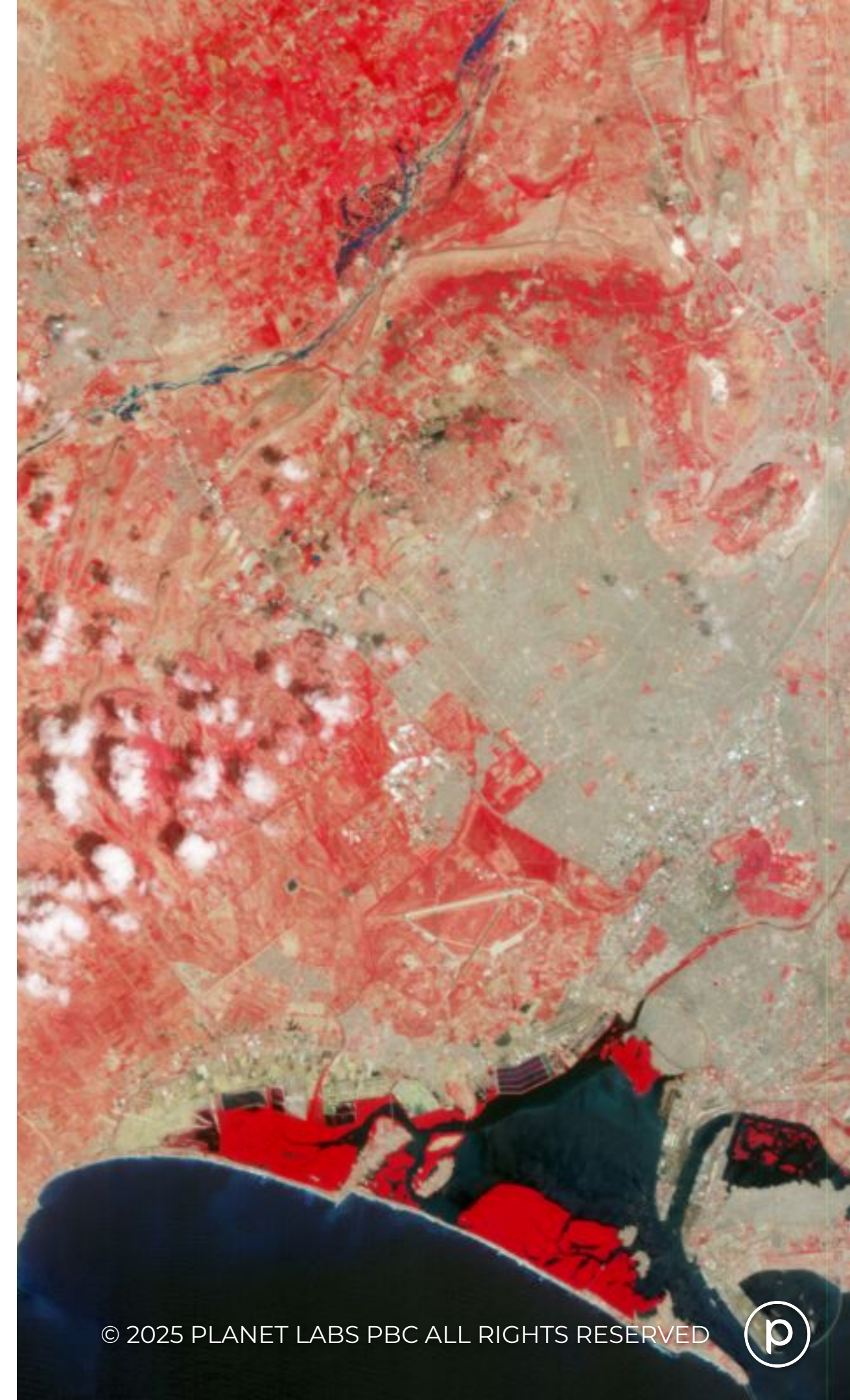




Improvements needed

Planet's recommendations

- More transparent & standardized data sharing among operators
- Continuous improvement of SSA data quality (e.g. space object positional data accuracy and reliability)
 - Improve ground & space based tracking assets
 - Enhance the data, services and space object catalogue
 - Better modeling for LEO atmospheric environment
- Guidelines and methodologies to measure brightness





Planet's advocacy

What we stand for

- Intentional Debris: International ban on all kinetic anti-satellite activity
- Space Traffic: Mandate transparent SSA and collaborative space traffic management
- End-of-life: Enforce rapid removal (within five years of EOL), allowing operators to choose any reliable passive or active deorbiting technology
- Defunct Object Mitigation R&D: Governments must invest in and encourage R&D for fundamental capabilities to avoid large-scale collisions of existing debris.

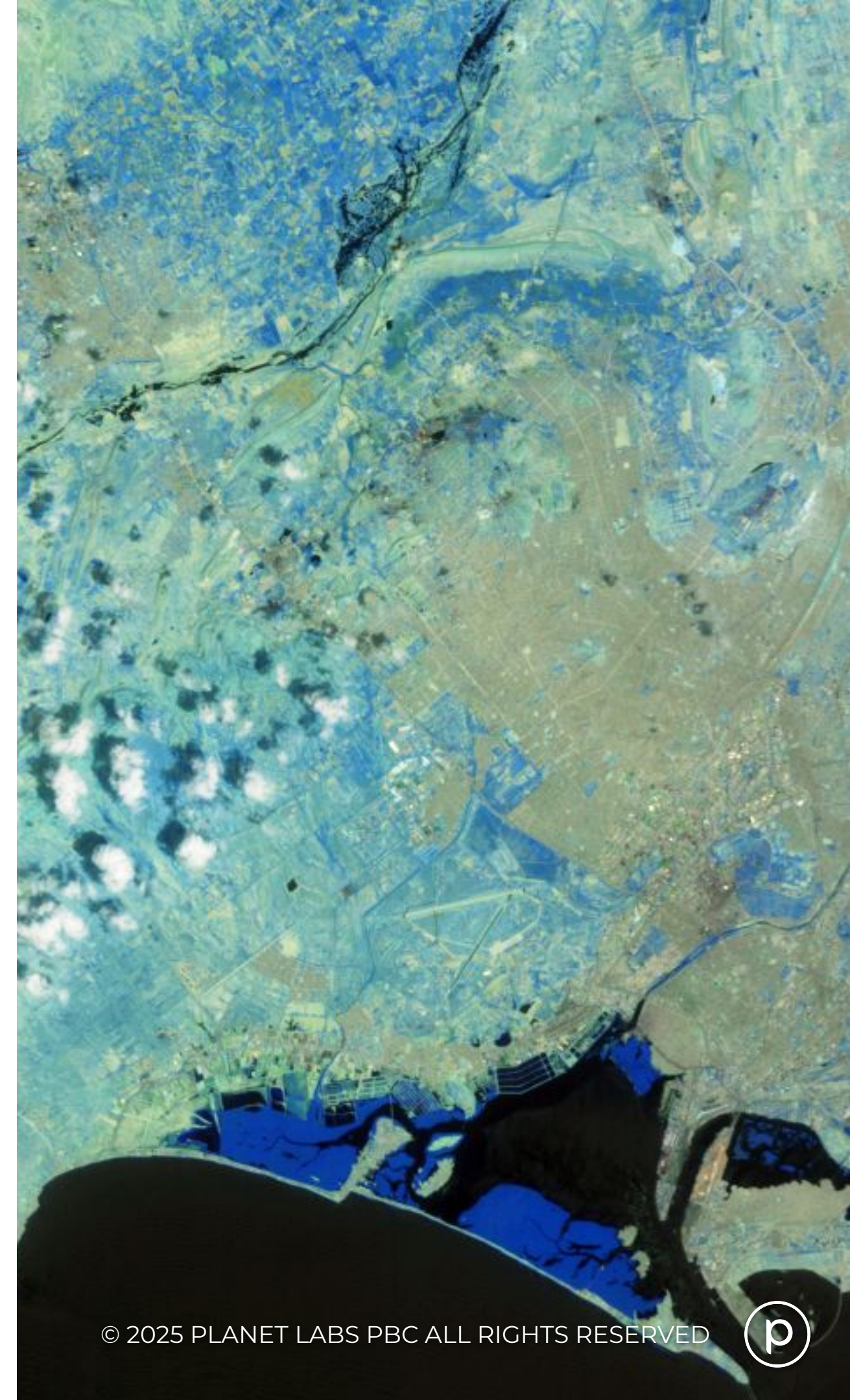




Planet's advocacy

What we stand for

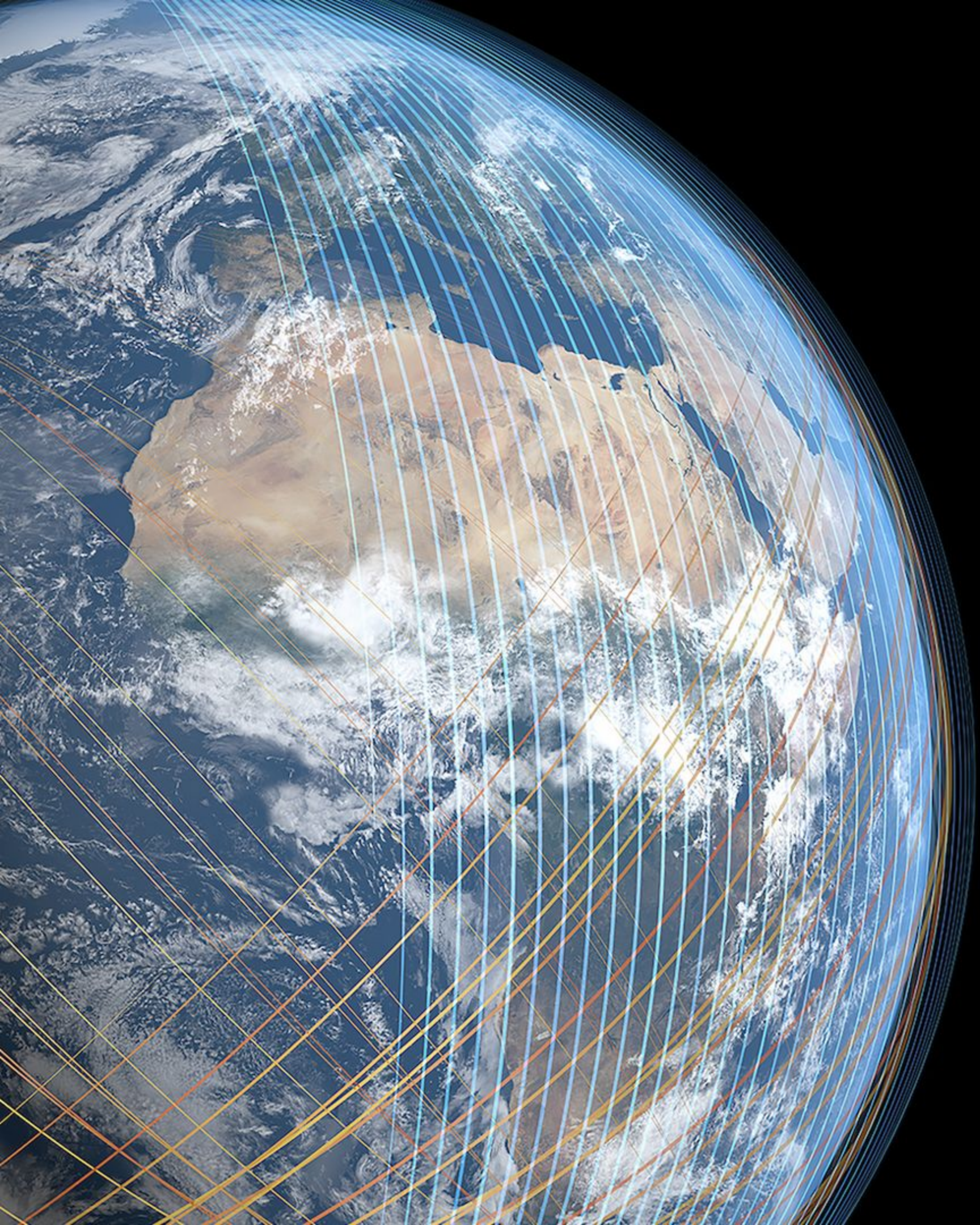
- Space actors must work to minimize the probability of causing casualties on the ground from re-entering space debris and design systems to exceed legal minimums with margin
- Dark and quiet sky: Minimize Astronomical Interference by minimizing spacecraft brightness and unintended radiofrequency emissions to reduce impacts on both optical and radio astronomy.





Sustaining orbit to sustain Earth action relies on collaboration

Continuing to leverage strategic partnerships between regulators, spacecraft operators, and commercial space organizations will help guarantee that guidelines and policies are innovation-enabling, effective, and serve as resilient guide rails for the long-term future of space.



Thank You.



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