



CONNECTIVITY IN THE POLES

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The Polar Challenge

Limited Connectivity Options Available



NO TERRESTRIAL INFRASTRUCTURE

Fixed fiber lines or microwave backhaul uneconomic to deploy in the Poles



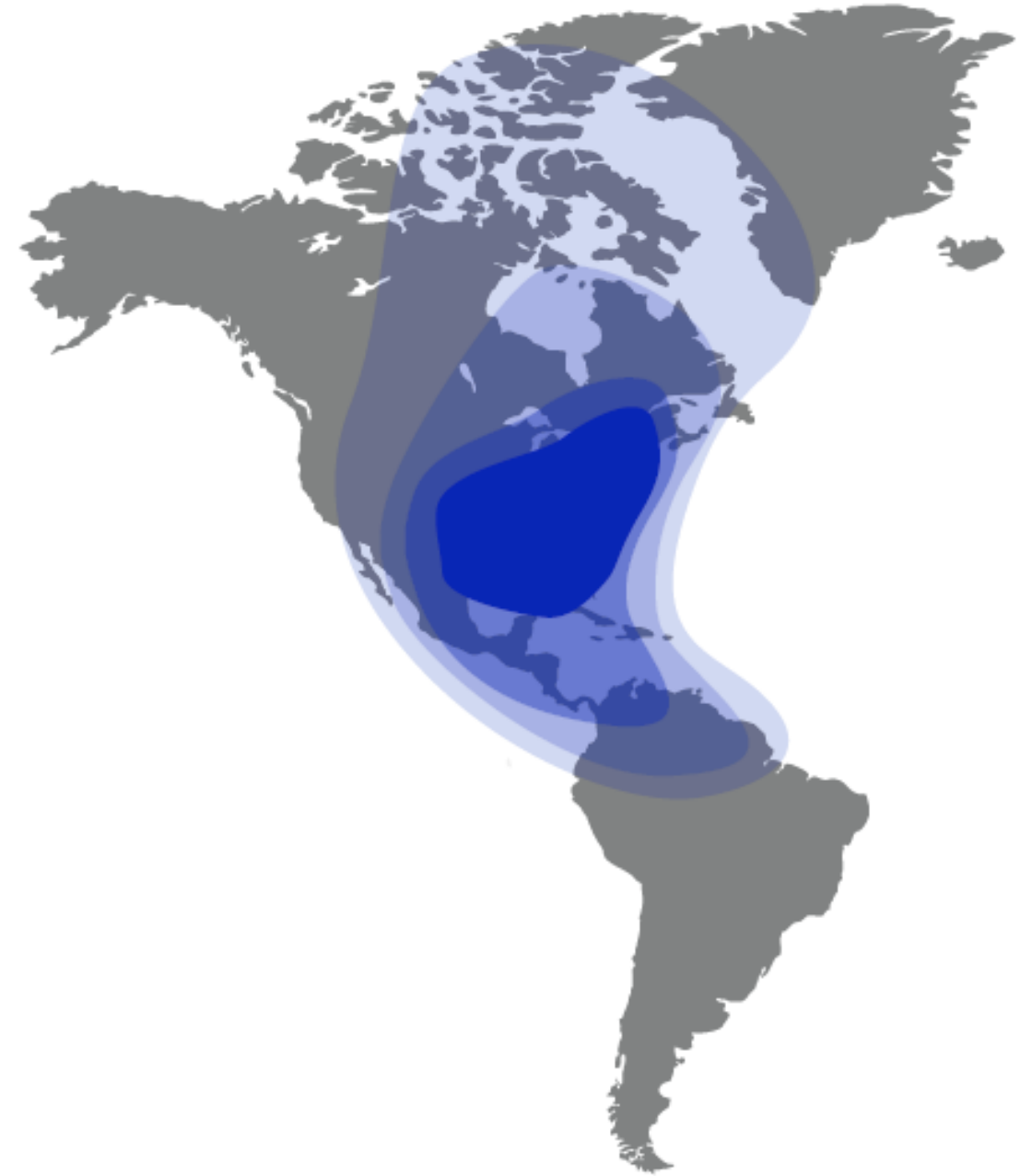
SATELLITE SPILLOVER COVERAGE

Traditional high-throughput satellite coverage degrades at high latitudes



LOW BANDWIDTH NETWORKS

Available networks at high latitudes are low-bandwidth



Kepler Delivers

Satellite Data Transfer Services



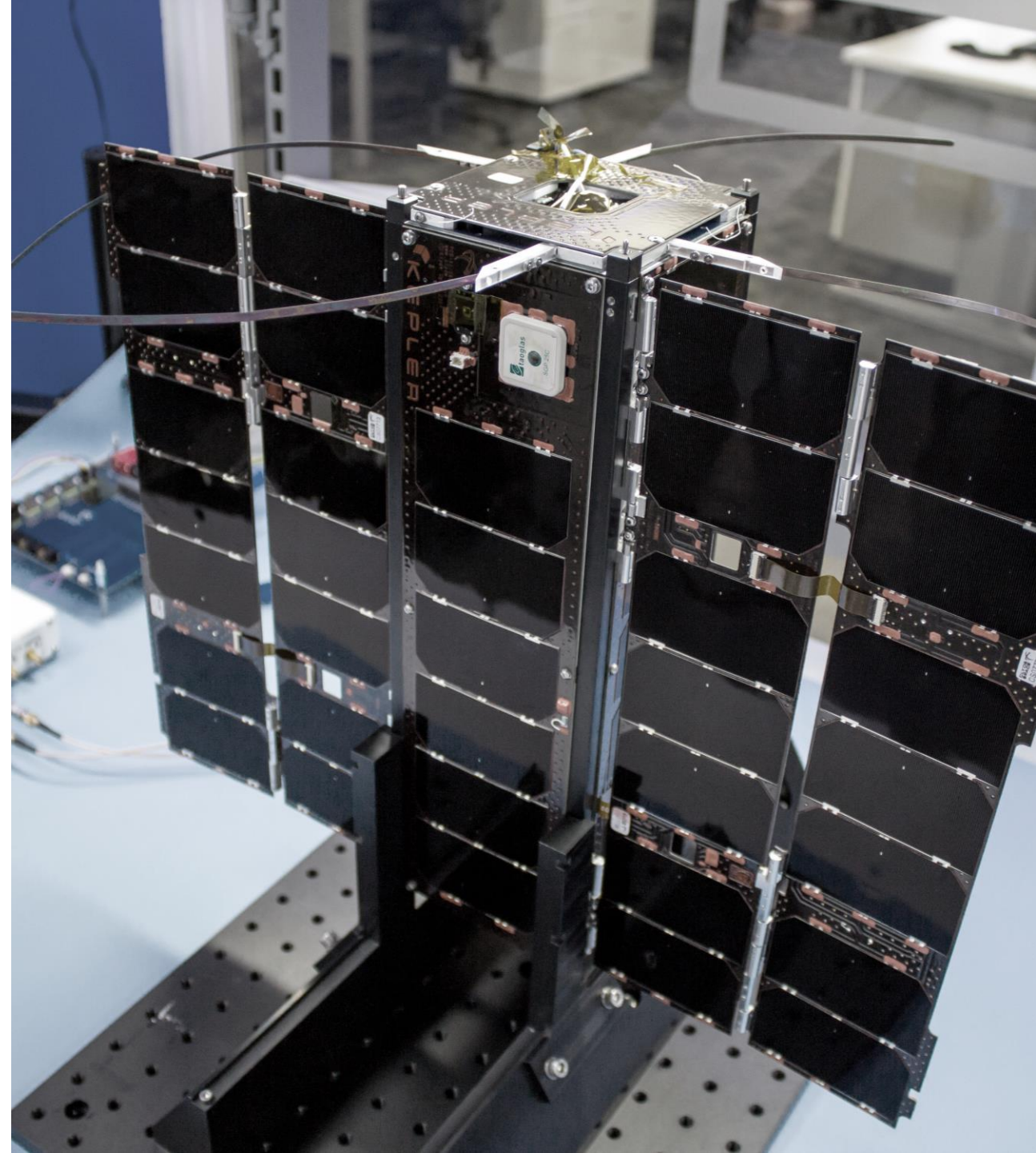
SATELLITES IN SERVICE

2x satellites currently on-orbit for early services, 3rd on launch pad



UP-AND-COMING

Launching 15 satellites in 2020



GLOBAL DATA SERVICE



POLE-TO-POLE WIDEBAND

Satellites in low-Earth orbit provide pole-to-pole global coverage



LOW-COST, HIGH BANDWIDTH

Move hundreds of GBs to TBs per month for the lowest price per bit



COMPLEMENT PERSISTENT LINKS

File transfer service offers a lower cost route for delay-tolerant data



How it Works



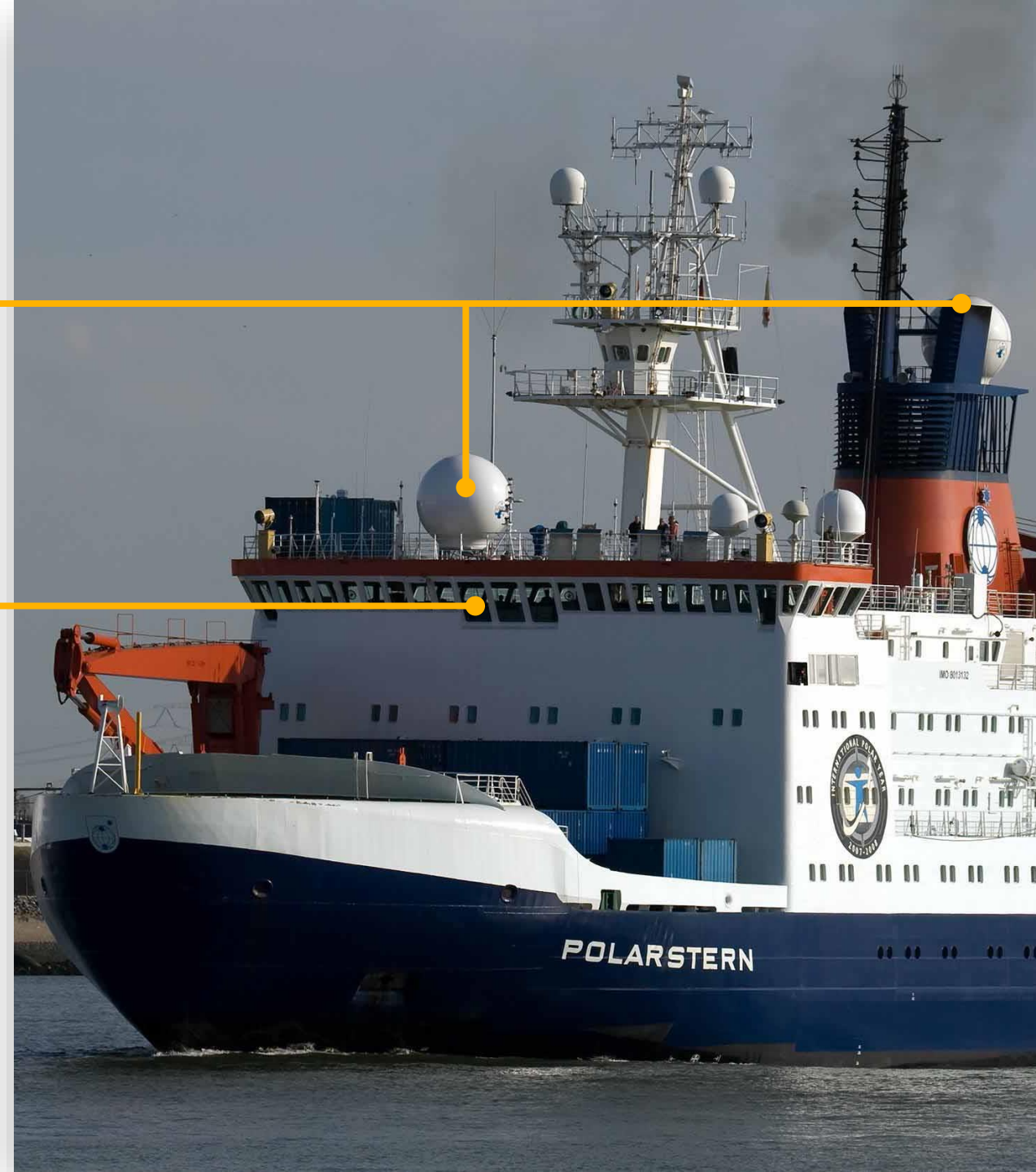
STEERABLE VSATS

Ku-band VSATs used to communicate with Kepler satellites.



MODEM INSTALLATION

Kepler-provided modem to facilitate network access



Ku-band VSAT Compatibility



MAX BANDWIDTH | 2.4m Dishes

Uplink	120 Mbps
Downlink	150 Mbps



MAX PORTABILITY | 0.6m Dishes

Uplink	20 Mbps
Downlink	50 Mbps

Use Case:

German *Polarstern* Icebreaker



POLAR OPERATIONS

90% of service life is in polar regions outside of traditional GEO satellite coverage



LARGE DATA NEEDS

Required wideband connectivity solution for operational and public-engagement data needs



BACKWARDS COMPATIBILITY

Recent deployment of SeaTel 9711 Ku/C dual-band system without deck space for new antennas



Use Case:

Deployment Status



WORLD'S FIRST POLAR WIDEBAND

Currently testing world's first high-bandwidth link in the High North, demonstration 150 x 120 Mbps data speeds at 85°N.



Coming Next:

Launch Plans



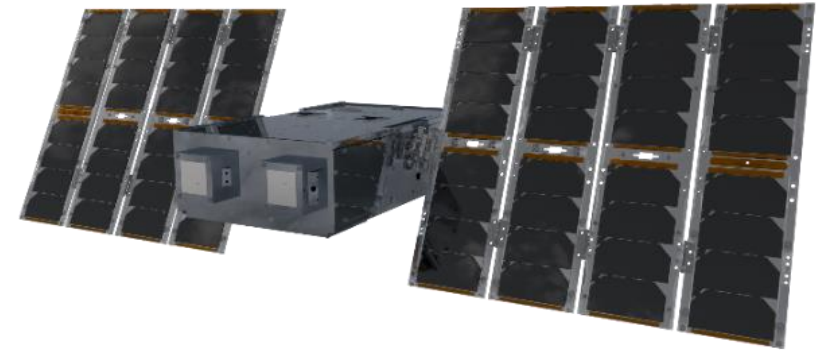
KIPP & CASE

Operational since 2018



TARS

Launching 24 March 2020



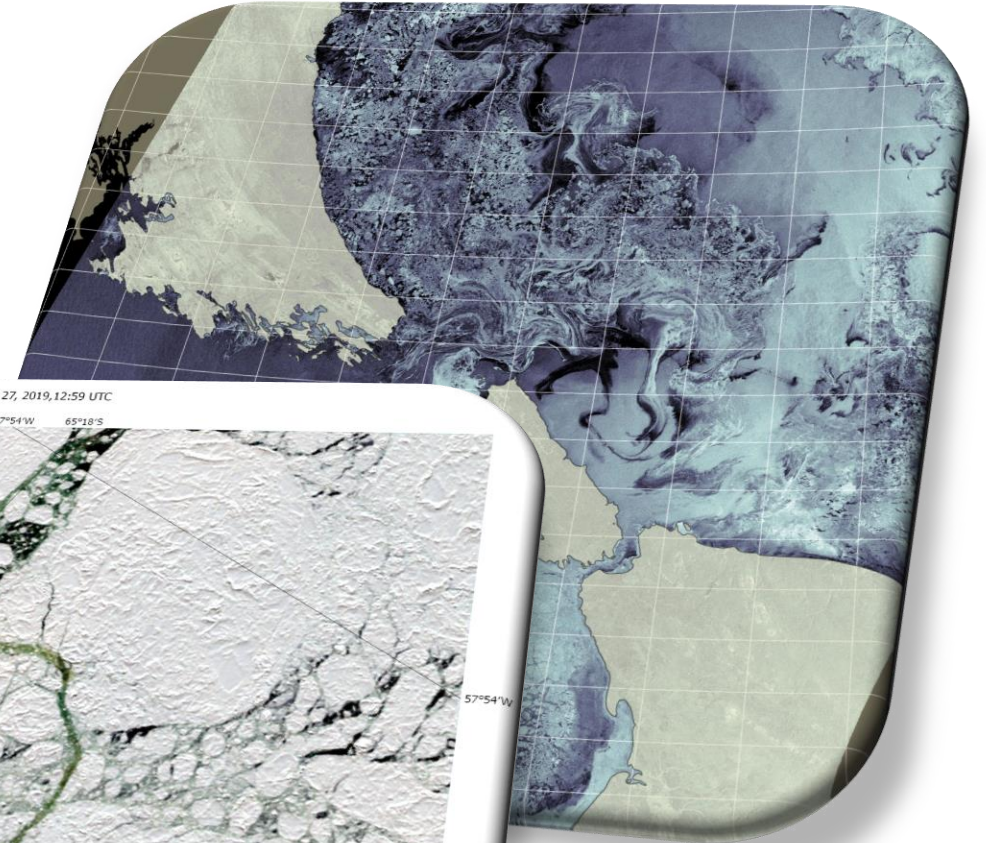
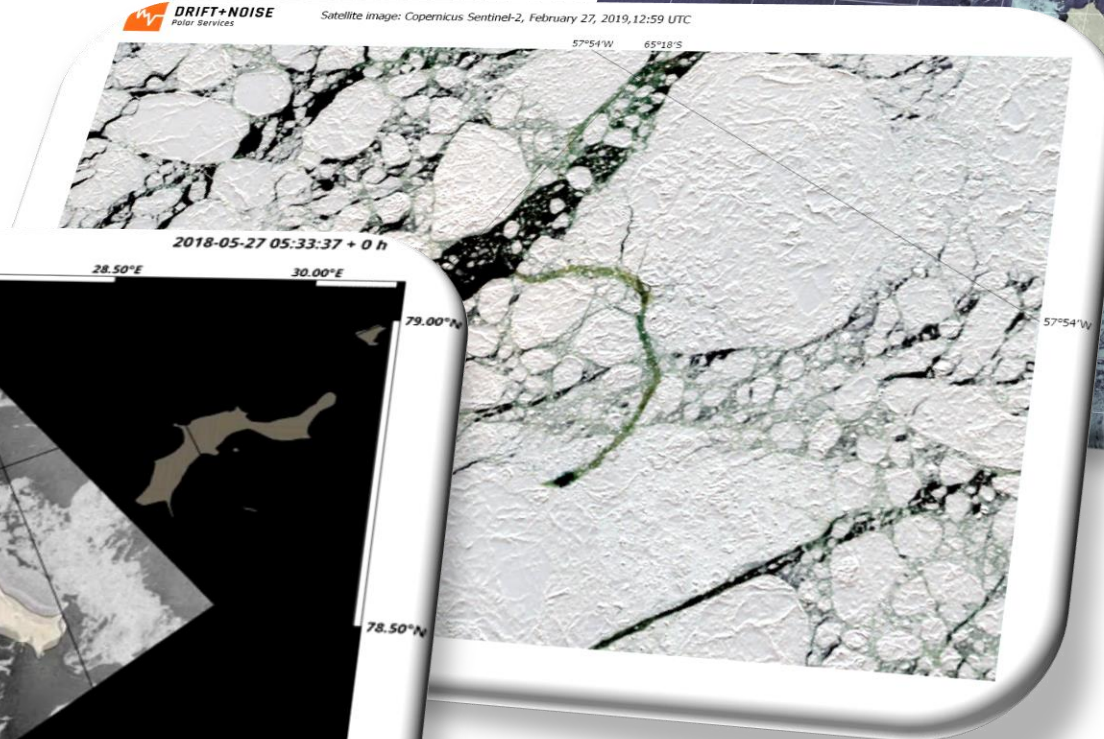
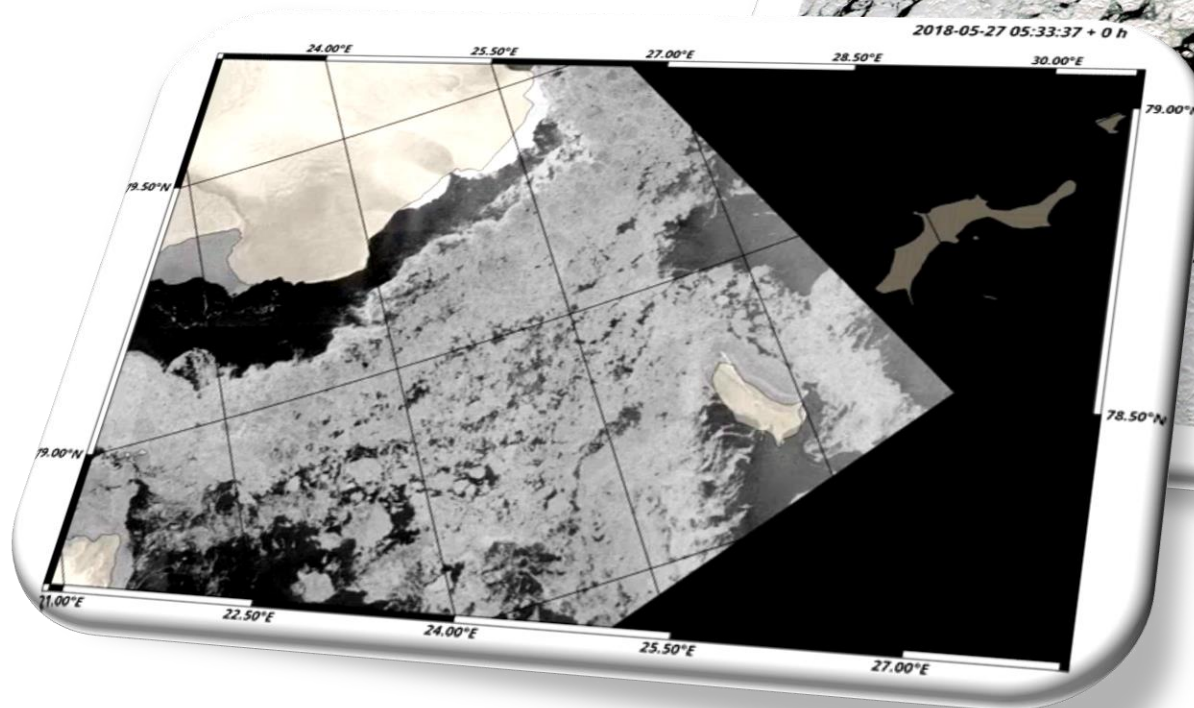
GEN1 Network (x15 sats)

Launching July – Dec 2020

Large bandwidth means ...

Best-possible Ice Information on-board

- Daily updated digital charts
- High resolution satellite images
- Animated sea-ice forecasts
- Integrated Map display
- One-stop solution
- www.driftnoise.com



DRIFT+NOISE
Polar Services



Satellite Communications **Simplified**™

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THANK YOU!

Check out our demo at
www.kepler.space/global-data-demo