



Ship-to-Shore: Telepresence-Enabled Research and Education

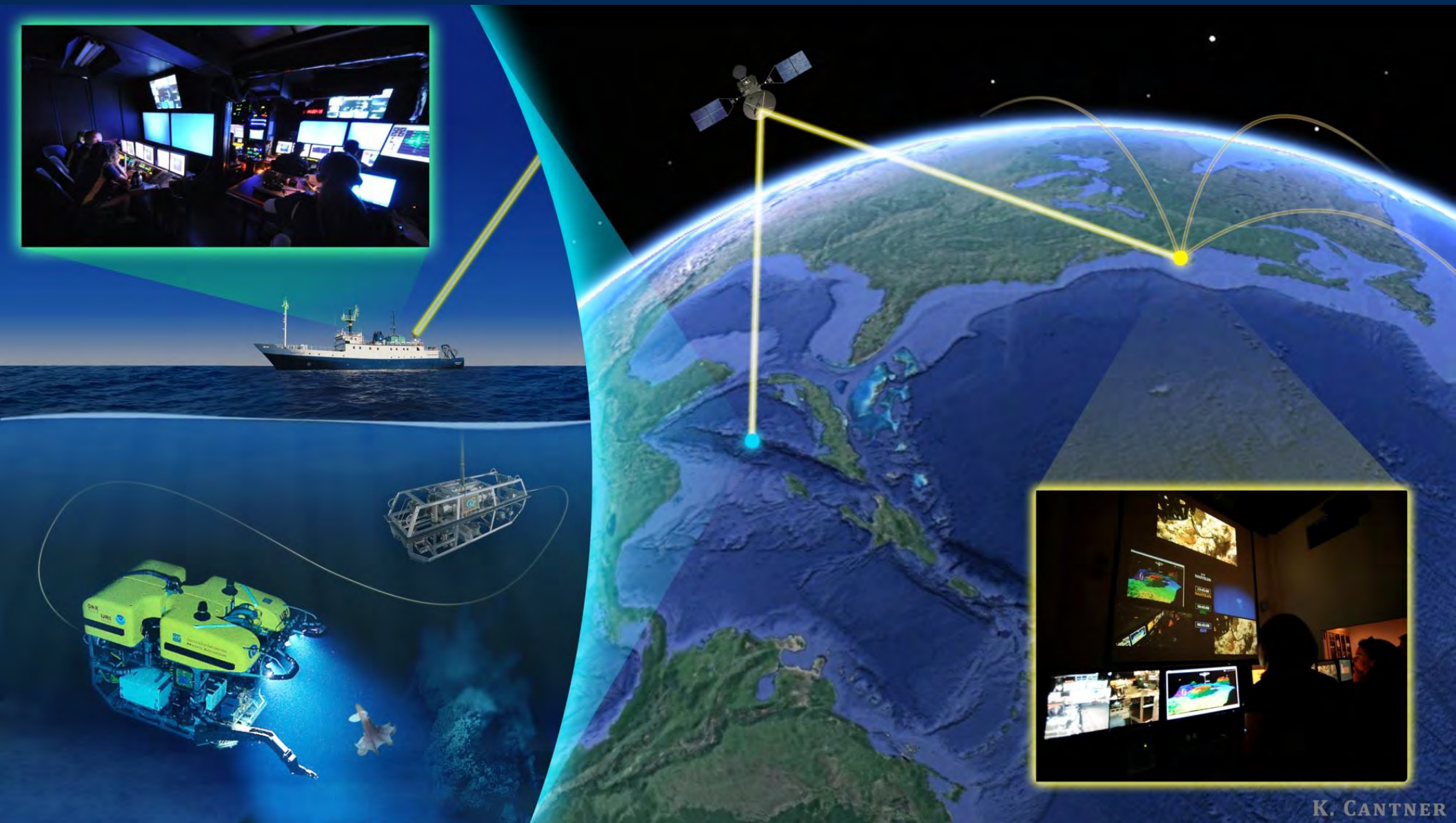
Dwight F. Coleman

Director, URI-GSO Inner Space Center

THE
UNIVERSITY
OF RHODE ISLAND

GRADUATE SCHOOL
OF OCEANOGRAPHY





K. CANTNER

Ship-to-Shore Telepresence

EXPLORE 

OCEAN EXPLORATION TRUST 





THE
UNIVERSITY
OF RHODE ISLAND

GRADUATE SCHOOL
OF OCEANOGRAPHY

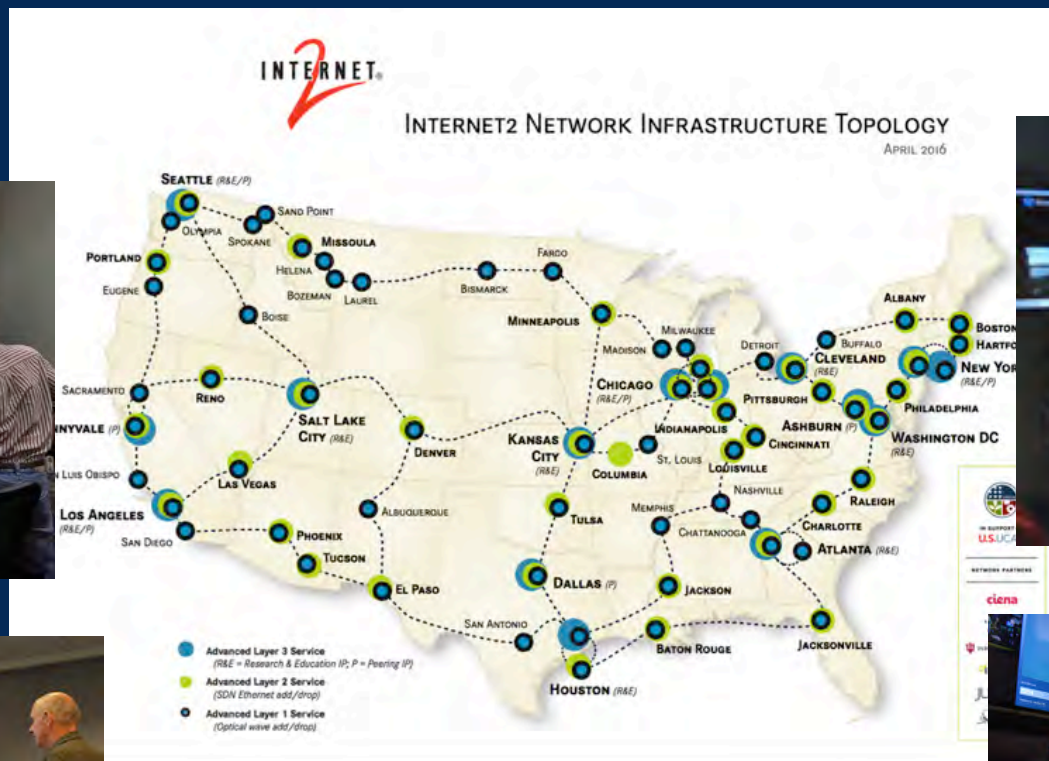


Mission
Control





NOAA PMEL



UNH



U Hawaii

Exploration Command Centers (ECCs)



WHOI



HBOI



NOAA Stennis



NOAA Silver Spring



NOAA Okeanos Explorer Program

ROV Dive Planning Form

Please use this as a template for documenting your recommendations for high-priority dive targets. Be sure to include a rationale for the dive as well as specific protocols (if applicable), and any known previous work or potential hazards at the site. Please include only generalized location information for any marine archaeology sites.

The form also includes fields for mapping targets and CTD cast locations as well.

Site Name: Middle Bank

Approximate Location: 22.75042/-160.92643

Dive Date (local): 2017/09/26

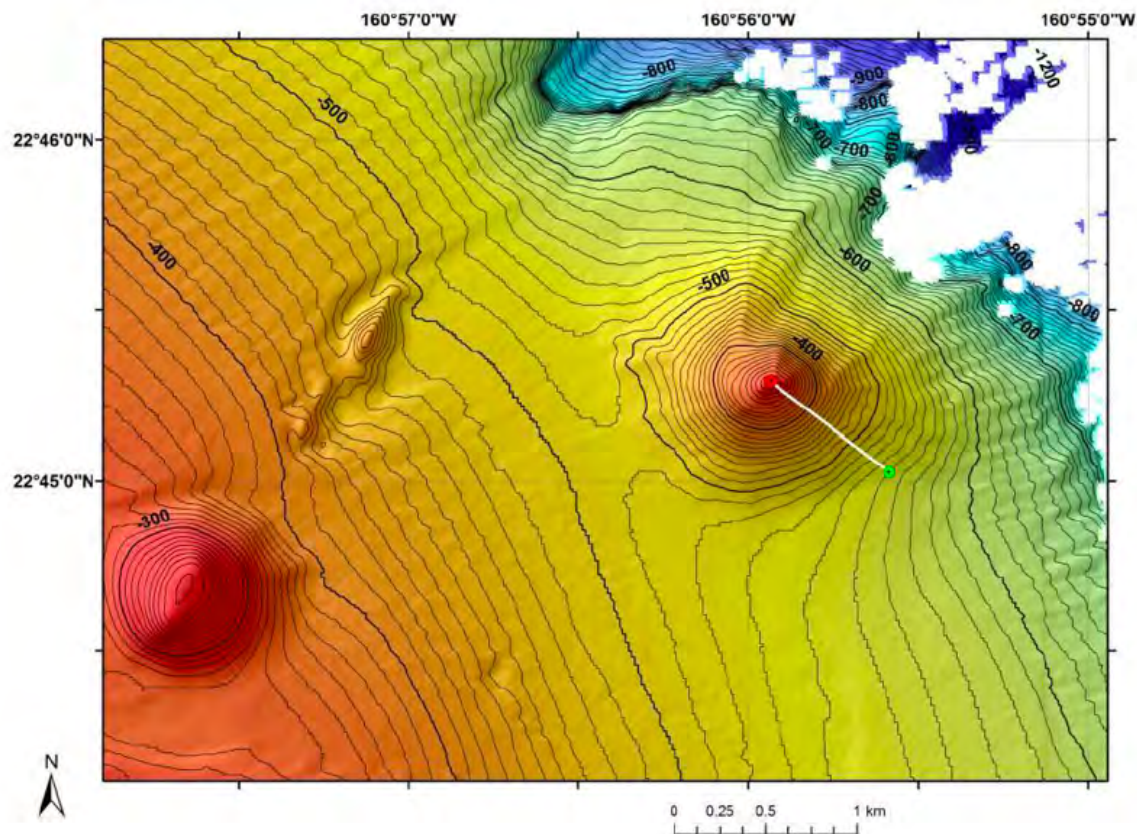


Fig 1: Bathymetry data for the dive site. Dive start and end points are shown as green and red dots, respectively.

Dive times:

Due to wind/weather/current concerns these times should be considered estimates. These times from the ship early morning.

	Ship (HST)	Pacific (PDT)	East Coast (EDT)	UTC	Moscow	Tokyo	New Zealand
Date	26-Sep	26-Sep	26-Sep	26-Sep	27-Sep	27-Sep	27-Sep
Launch	8:30	11:30	14:30	18:30	7:30	13:30	6:30
Dive 21 Planning Call	8:20	11:20	14:20	18:20	7:20	13:20	6:20
Pre-Dive Brief	8:40	11:40	14:40	18:40	7:40	13:40	6:40
Approx. on bottom time	8:50	11:50	14:50	18:50	7:50	13:50	6:50
Approx. off bottom time	13:45	16:45	19:45	23:45	12:45	18:45	11:45
Recovery	15:00	18:00	21:00	1:00	14:00	20:00	13:00

Expedition Teleconference Line: 1-866-617-5860, passcode: 1233796

Live Video Feeds (for public viewing): <http://oceanexplorer.noaa.gov/okeanos/media/exstream/exstream.html>

Low latency high resolution versions (for contributing scientists only):

<http://oceanexplorer.noaa.gov/okeanos/media/exstream/exstream-full-res.html>

Chat room: <https://exdata.tgfoe.org/chat> Login: <username>@exdata.tgfoe.org

Link to ROV dive in SeaScribe (these will be adjusted day to day):

For shore participants: <https://divelog.oceannetworks.ca/Dive?divelid=943>

H1726 - Dive Plan

Date: 29 September 2018 (HST)

E/V Nautilus Cruise: NA101

Lead Scientists: Chris Kelley (UH) & Tom Hourigan (DSCRTP)

Dive Site: Unnamed Seamount 1, Papahānaumokuākea MNM

Vital Stats

- Expected launch time: 1215 HST
- Expected length of dive: ~12 hours
- Max allowable dive time: On deck by 0000 HST on 9/30
- Expected depth at launch: 2901 m
- Expected max depth: 2901 m
- On bottom Latitude: 25.32231383 N Longitude: 163.7417786 W

Vehicle Configuration

- Forward box: 2 partitions
- Front porch: Scoop, crowbar
- Starboard box: 6 partitions inside (2 large, 4 small)
- Port side: Niskins
- Other: 4 Alvin weights for sample (rock) ballast, MIT 360° camera on Magnum
- **Natural fiber tie downs (hemp)**

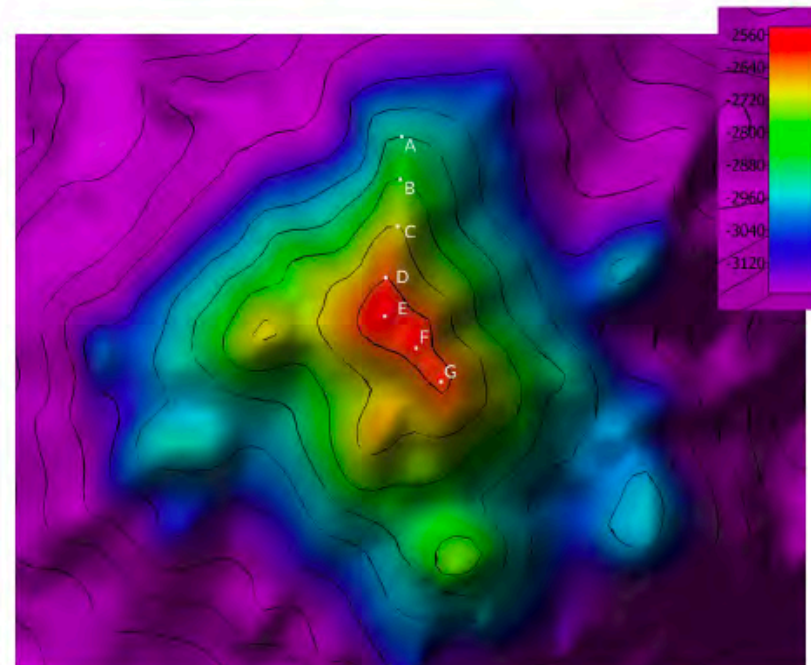
Watch Leaders

- 8-12: Kelley (UH)
- 12-4: Hourigan (DSCRTP)
- 4-8: Wanless (Boise State)

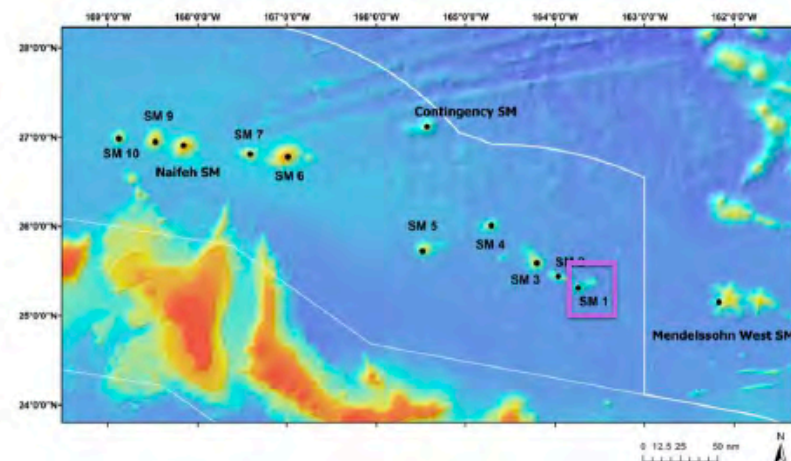
Waypoints

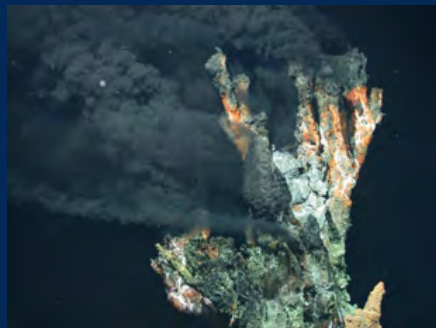
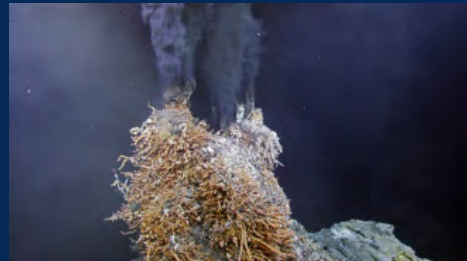
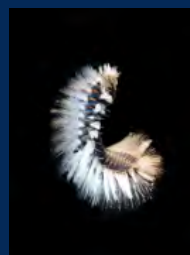
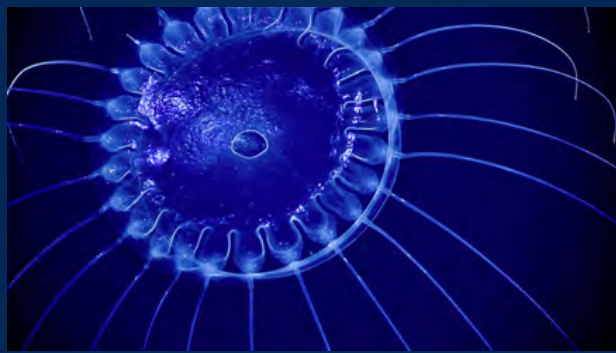
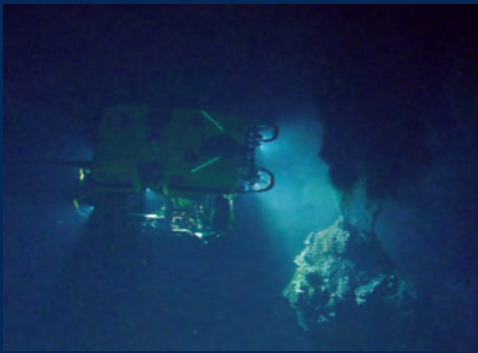
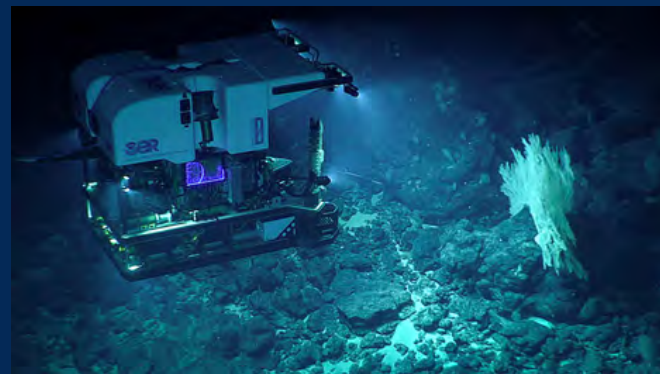
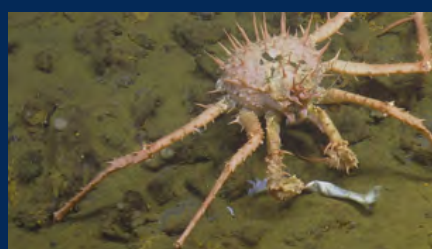
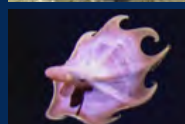
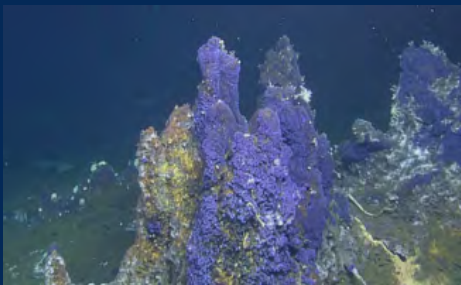
waypoint	LAT	LON	DEPTH (m)
A	25.32231383 N	163.7417786 W	-2900.89
B	25.31948805 N	163.741905 W	-2798.01
C	25.31635393 N	163.74213176 W	-2703.14
D	25.31296062 N	163.74304149 W	-2601.55
E	25.31039941 N	163.74311651 W	-2575.23
F	25.30825996 N	163.74085478 W	-2581.63
G	25.3060363 N	163.73907991 W	-2589.80

Dive Waypoints



Dive Location - Papahānaumokuākea MNM





Live Broadcasts And Hosted Interactions From Ships



NAUTILUS LIVE

Explore the ocean LIVE with Dr. Robert Ballard and the Corps of Exploration



Production Control and Studio

THIRD ANNUAL **TRI-SHIP CONNECTION**
World Oceans Day
JUNE 8TH 2018
3-4pm EST 2-3pm CST 12-1pm PST



HOSTED BY THE
**Inner
Space
Center**

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f innerspacecenter





R/V Endeavor - Rhode Island Teachers At Sea (RITAS)





T.J. Del Santo



@tjdelsanto

Follow

Good morning from the Block Island Wind Farm!!



4:31 AM - 2 Aug 2018

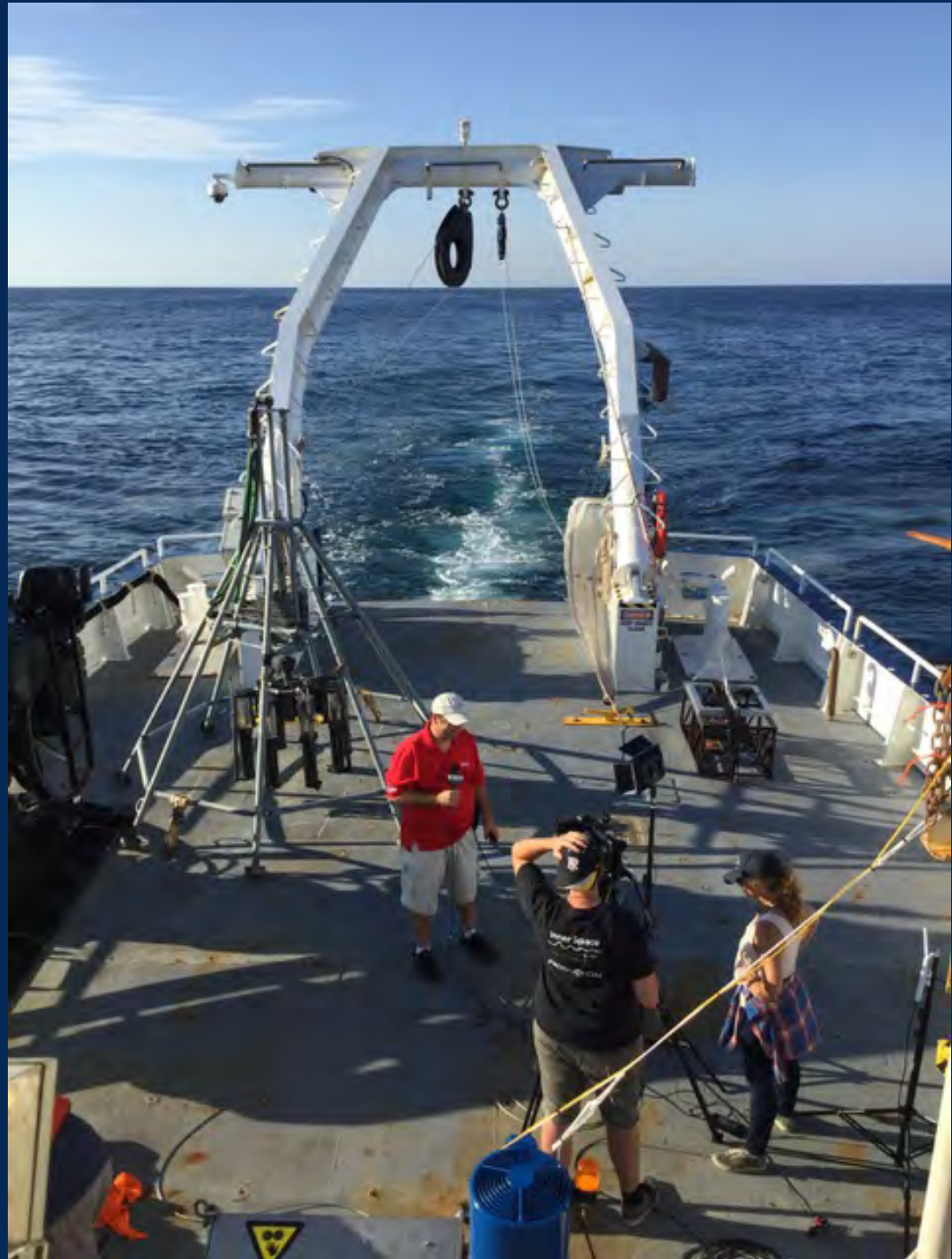
31 Retweets 272 Likes



4

31

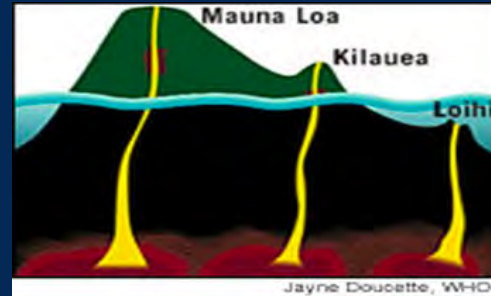
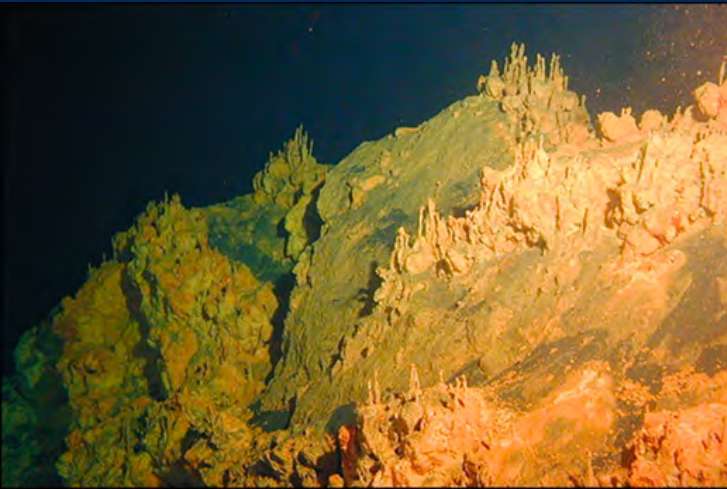
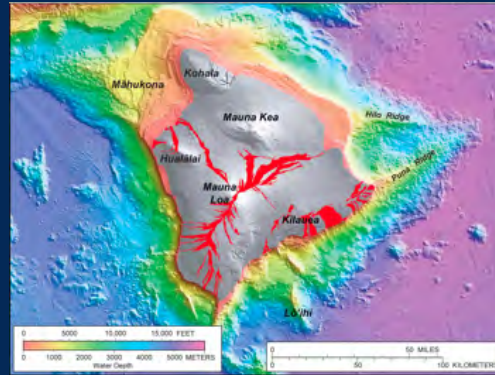
272



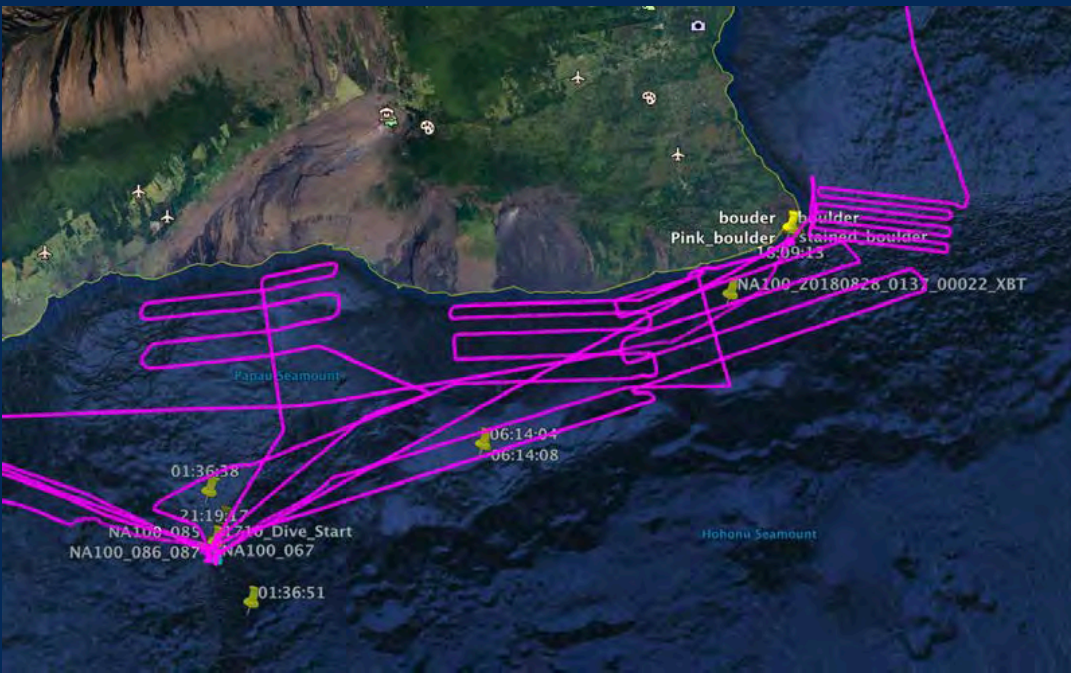


Mobile Telepresence Unit (MTU)





Systematic
Underwater
Biogeochemical
Science and
Exploration
Analog





NORTHWEST PASSAGE PROJECT

EXPLORING A CHANGING ARCTIC



[Home](#) [The Expedition](#) [The Science](#) [The Stories](#) [The Students](#) [The Documentary](#) [Video](#)

The Expedition



An innovative expedition into the Northwest Passage

The Science



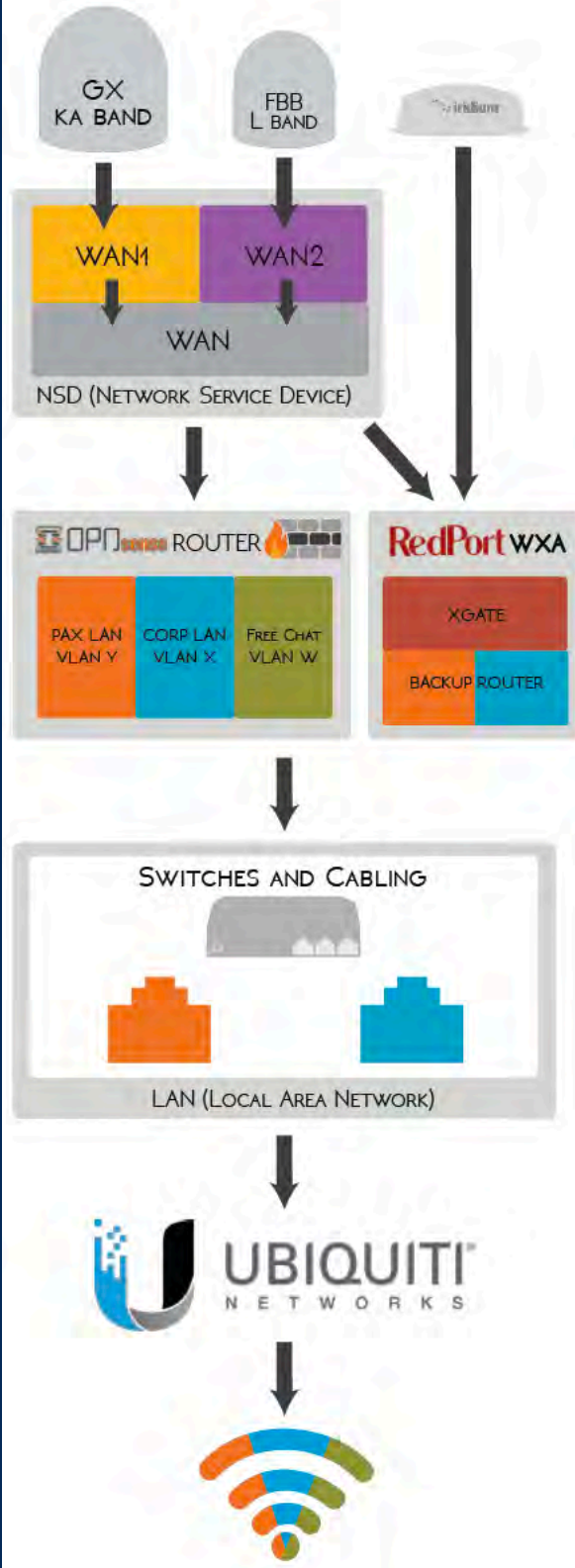
Scientists and students are studying the changing Arctic.

The Stories



Students, scientists, and filmmakers will document their experiences in real time.





BELOW DECKS EQUIPMENT





Wired RG45



HD-SDI

Cube 305



HDMI

Cube 405

860x480@400k



860x480@500k

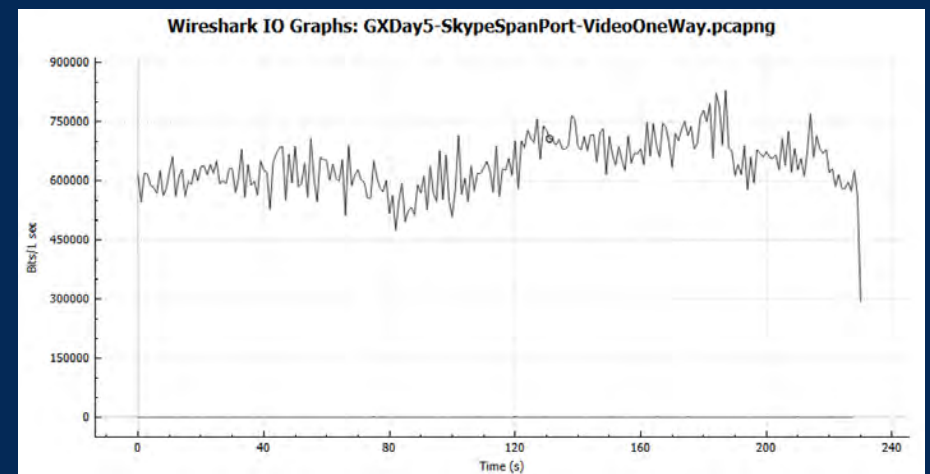
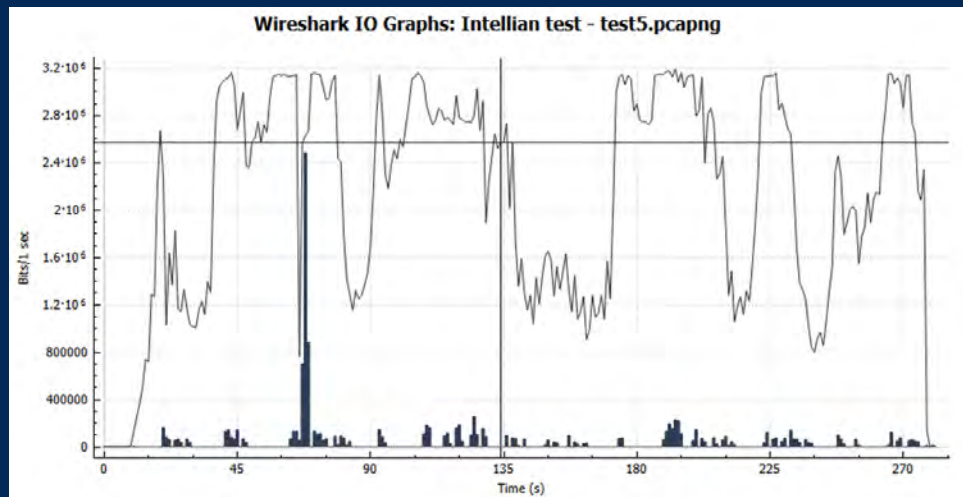
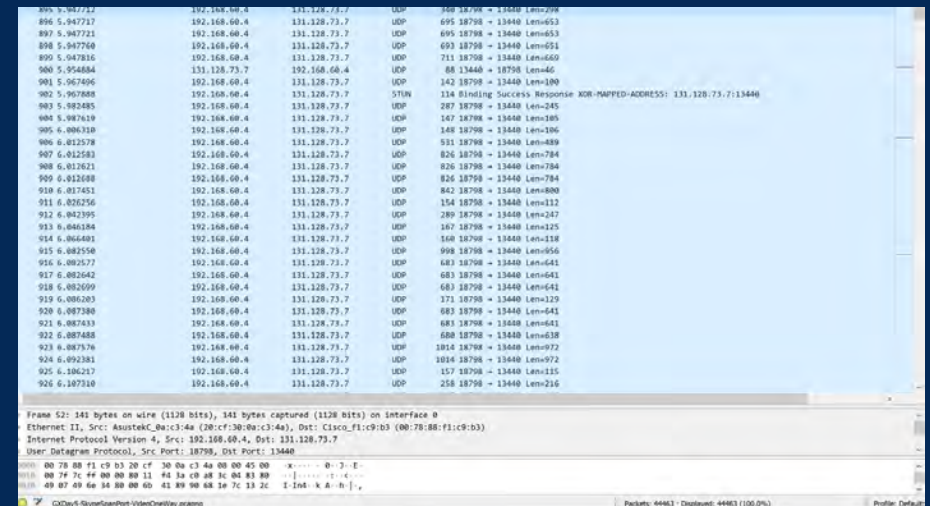
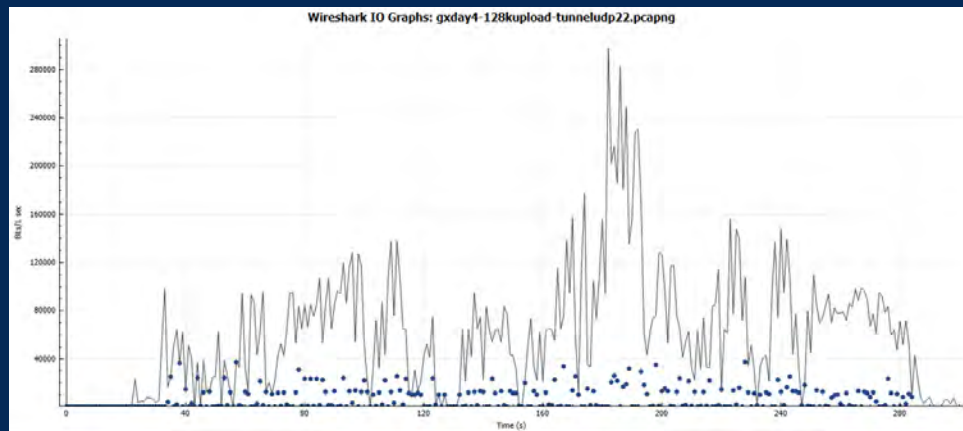


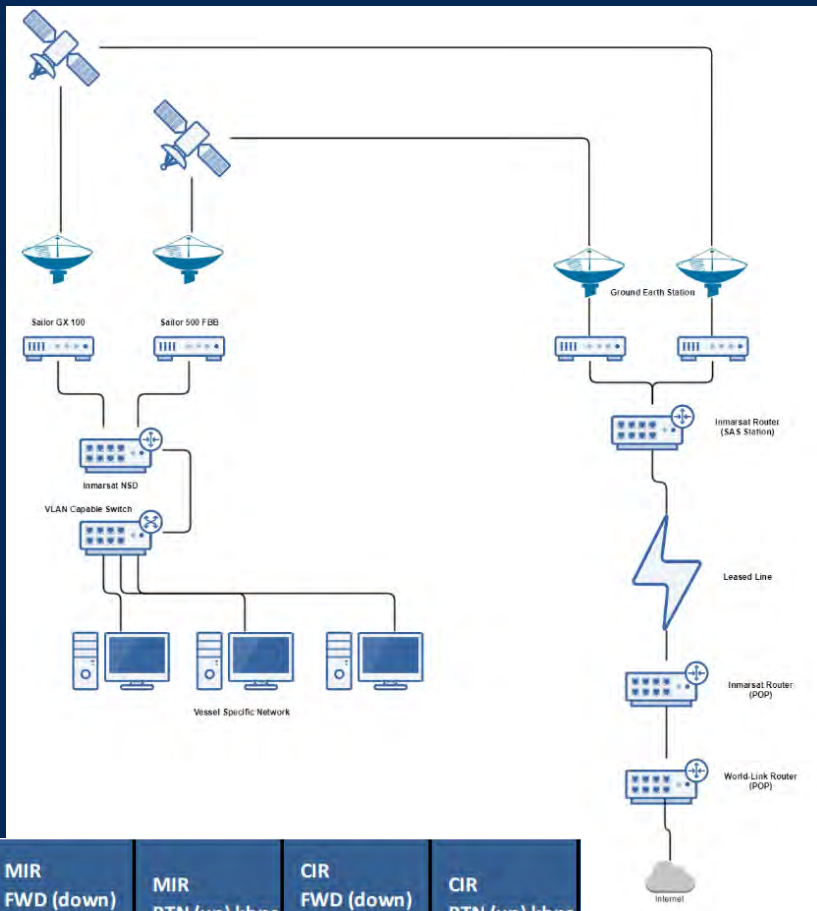




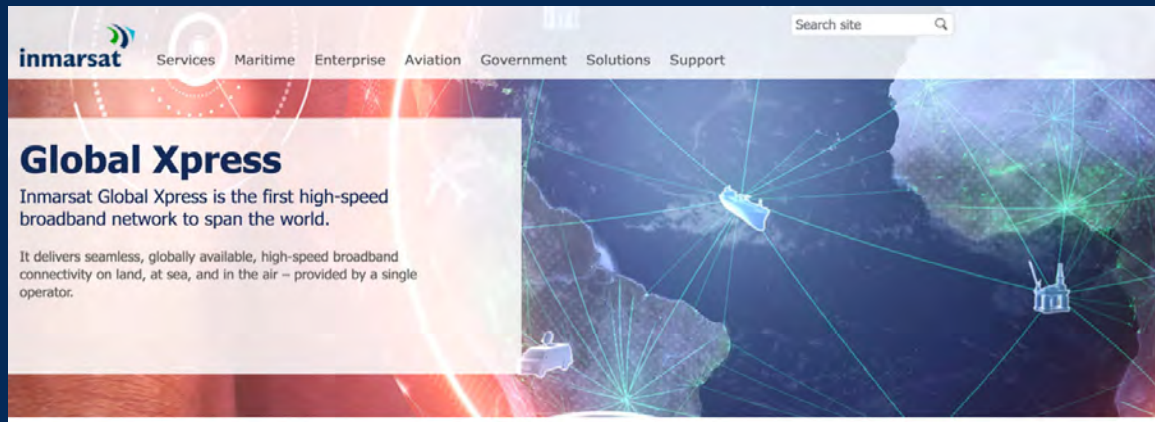


GX TESTING – before and after bandwidth upgrade
UDP video streaming (Teradek) inside tunnel (poor)
UDP voice intercom inside tunnel (usable)
TCP control of tunnel GUI and Teradek GUI (unusable)
Skype – worked well – outside tunnel





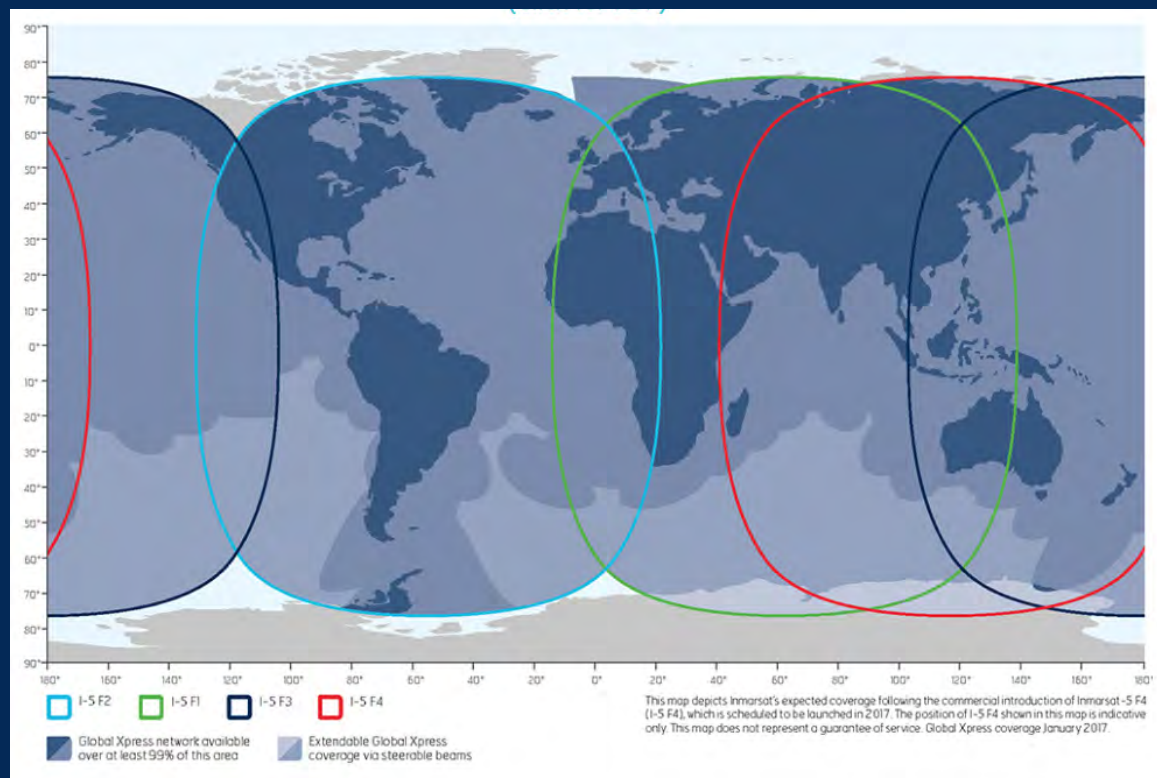
MIR FWD (down) kbps	MIR RTN (up) kbps	CIR FWD (down) kbps	CIR RTN (up) kbps
2,048	1,024	128	128
2,048	1,024	256	128
4,096	2,048	256	256
4,096	2,048	512	256
8,192	4,096	512	512
8,192	4,096	1,024	512
8,192	4,096	1,024	1,024
8,192	4,096	2,048	1,024
8,192	4,096	2,048	2,048



Global Xpress

Inmarsat Global Xpress is the first high-speed broadband network to span the world.

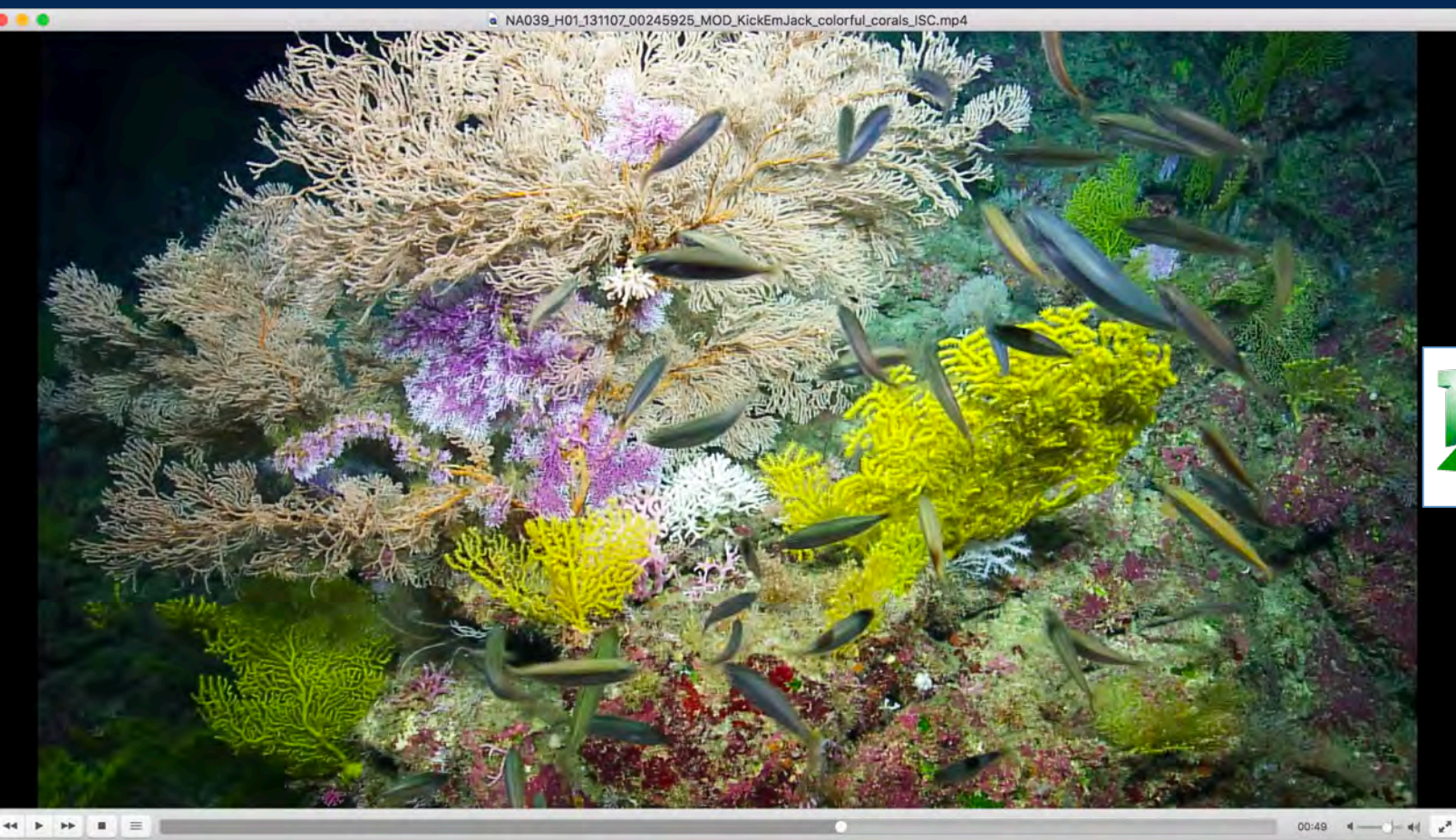
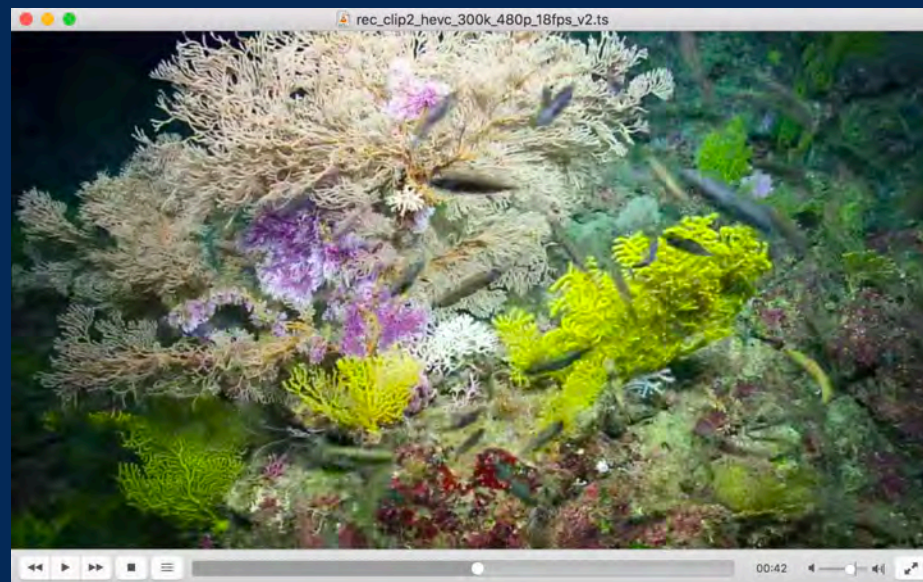
It delivers seamless, globally available, high-speed broadband connectivity on land, at sea, and in the air – provided by a single operator.



Antarctica



R/V Neil Armstrong





Future RCRVs