

AT37-05 RV Atlantis – Nov. 3-Dec. 3, 2016

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(NSF-OCE 1356610)

Melting in the Off-Axis Environment – Interdisciplinary Field & Modeling Studies of the 8°20'N Seamount Chain, EPR



Operations Summary:

15 Alvin Dives ~5.2 hrs avg. bottom time

12 Sentry dives ~8 hrs avg. bottom time
(night ops only)

19 Rock Dredges

222 Alvin Lava Samples

145 Dredged Lava Samples

~16,000 km² of seafloor mapped with
EM122 multibeam, gravity, magnetics

~75,000 12-24MP high-res. still images
using MISO cameras on Alvin

Elevator deployment to image Alvin
operations on the seafloor using
HD video and high-res. still cameras

13 new Alvin science observers - several
with multiple dives

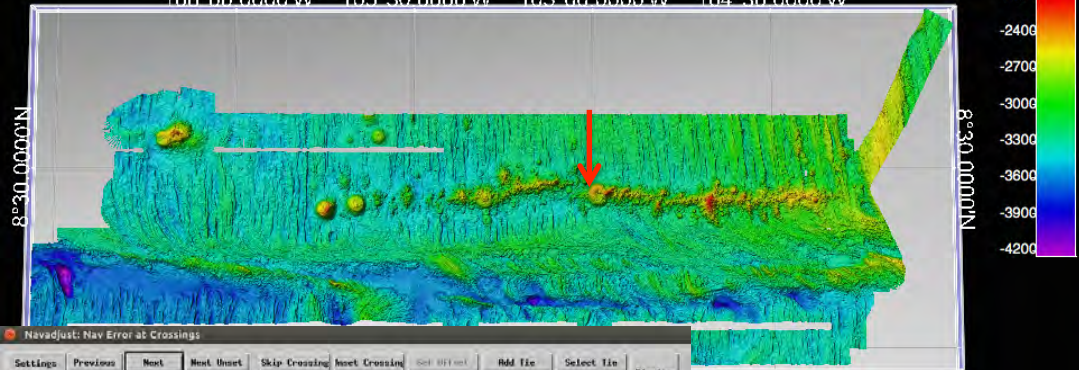
Outreach:

OASIS YouTube Channel: https://www.youtube.com/channel/UC2qHa5PSZCF2_KeCvRTaFGQ

Over 4300 views; collaborations/curriculum development: University Primary School (UPS)

Partnership at U. Illinois College of Education; Campus Middle School for Girls at U. Illinois

106°00.0000'W 105°30.0000'W 105°00.0000'W 104°30.0000'W



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Navajust: Nav Error at Crossings

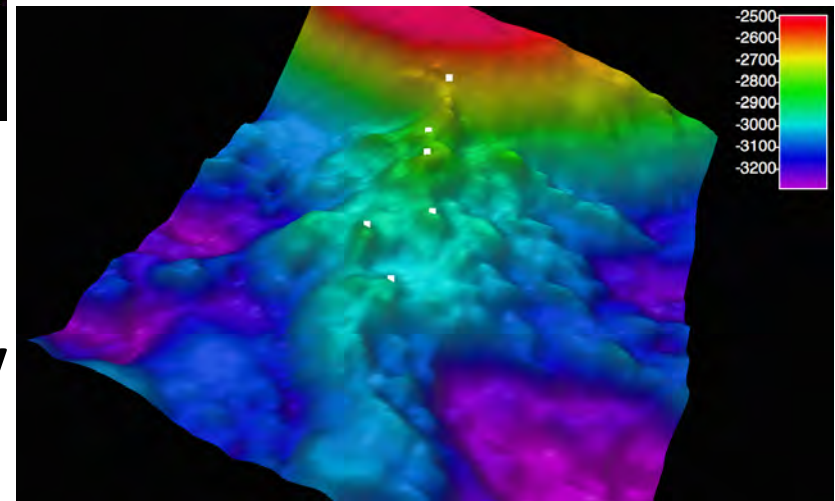
Settings Previous Next Next Unset Skip Crossing Next Crossing Get Off Line Add Tie Select Tie Delete Full Size Round Offsets Zero 2 Offset Zero Offset Delete Tie Disk...

Crossing: 46 of 696
 Sections: 00:00:00 and 00:00:00:000
 Time Difference: 0.064021 days
 Current Tie Point: 0 of 1 Nav Points:
 Plot Width (m): Contour: 271.25 Misfit: 2;
 Zoom Factor: 100.00
 Relative Offsets (m): -12.130 -1.678 0.005
 Sigma (m): 3.703 2.614 1.900

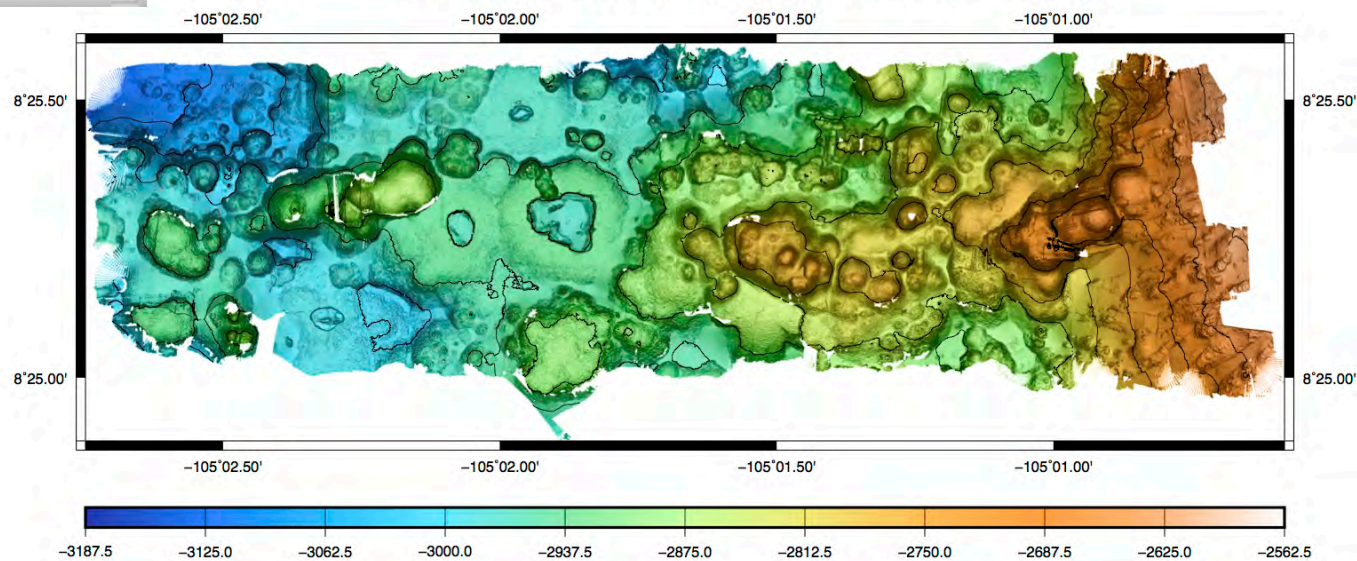
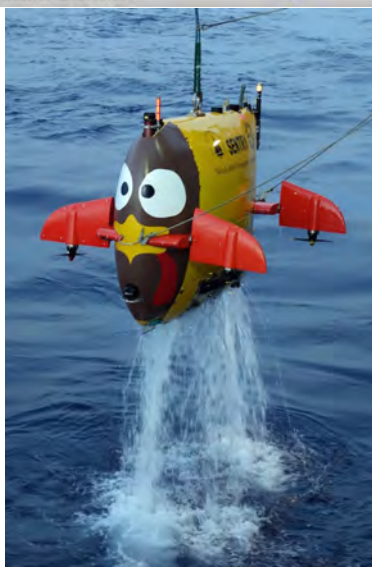
Working Offsets (m): -12.130 -1.678 0.005 1
 Sigma (m): 6.431 4.521 1.300

Minimum Misfit -> Center on Zero Offset
 Minimum XY Misfit -> Center on Current Offset

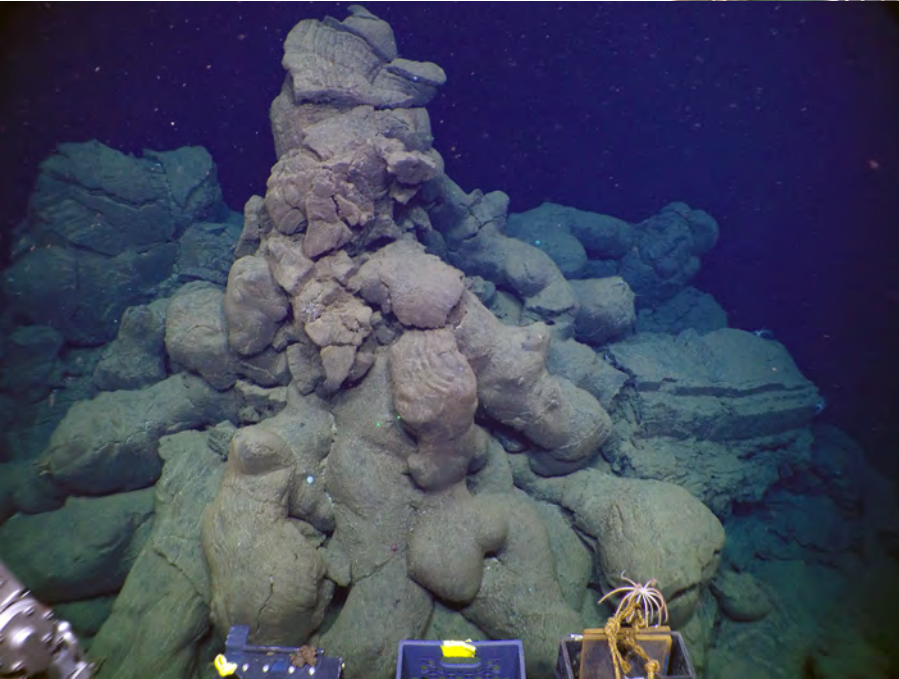
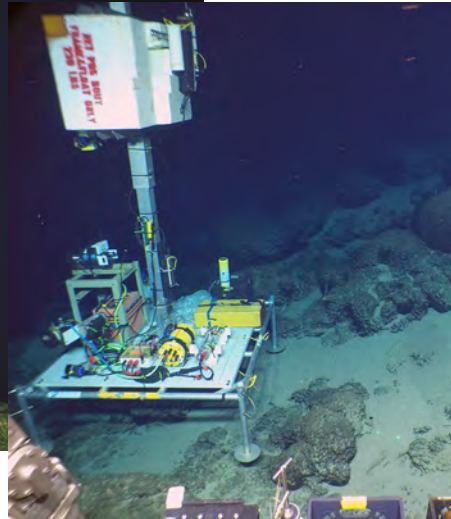
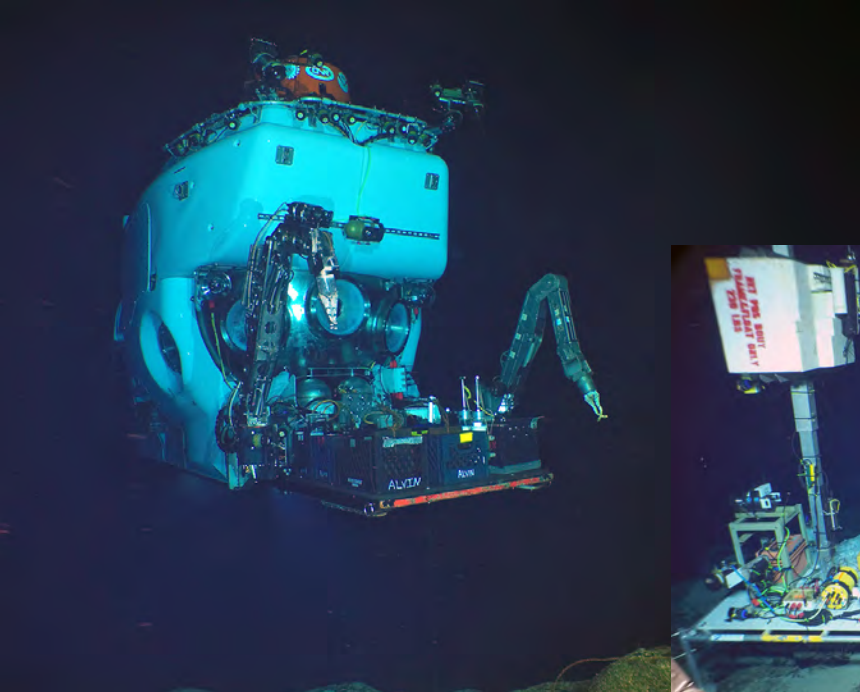
Operational Synergy: Alvin & Sentry



sentry405_20161129_1308 V03 Bathy Generated at 20161129_1319



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Left-bottom: ~ 4 m-
high hornito
marking rooted vent
on Beryl Seamount

Right-top: Dumbo
octopus and folded
sheet lava imaged
by 24 MP MISO
downlooking
camera

