OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Site of strong hydrothermal signal		EX 1103 GALREX - SITES OF INTEREST SECURITY SEC
ROV Lead/ Expedition Coordinator	Dave Lovalvo/ Jeremy Potter		
General Area Descriptor	Galapagos Rift, , ~175nm northeast of the Galapagos Islands		NOW SHOW SHOW SHOW SHOW SHOW SHOW SHOW
ROV Dive Name	Cruise Season	Leg	Dive Number
Equipment Deployed	EX1103 ROV:	2	DIVE02 Little Hercules
	Camera Platfom:	Seirios	
ROV Measurements		☐ Depth☐ USBL Position☐ Roll	☐ Altitude☐ ☐ Heading☐ ☐ HD Camera
	Low Res Cam 1	Low Res Cam 2	_
Equipment Malfunctions	None		
ROV Dive Summary (From processed ROV data)	Dive Summary: EX1103L2_DIVE02 AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA		
Special Notes Scientists Involved (please provide name / location / affiliation / email)	Click here to enter text. Timothy M. Shank/ Okeanos Explorer Lead Scientist/WHOI/tshank@whoi.edu Edward T. Baker/NOAA-PMEL, Washington/Edward.baker@noaa.gov Robert W. Embley/NOAA-PMEL, Oregon/Robert.w.embley@noaa.gov Stephen Hammond/ NOAA-PMEL, Oregon/Stephen.r.hammond@noaa.gov James F. Holden/ UMASS Amherst/jholden@microbio.umass.edu Scott White/University of South Carolina/swhite@geol.sc.edu Sharon L. Walker/ NOAA-PMEL, Washington/sharon.l.walker@noaa.gov Santiago Herrera/ WHOI Exploration Command Center/WHOI/sherrera@whoi.edu T. Jennifer Lin/UMASS Amherst/tjennlin@gmail.com Catriona Munro/ WHOI Exploration Command Center WHOI/catmunro89 @gmail.com		

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Purpose of the Dive

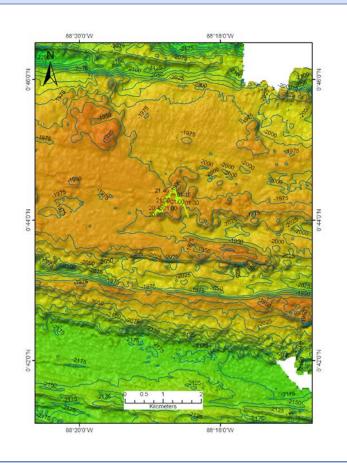
To descend with the ROV Little Hercules to a site on the Galapagos Rift where strong hydrothermal plume signals were detected a few weeks ago during tow-yo operations. Traverse toward WP2- Plume target 2a, exploring the vicinity for hydrothermal activity.

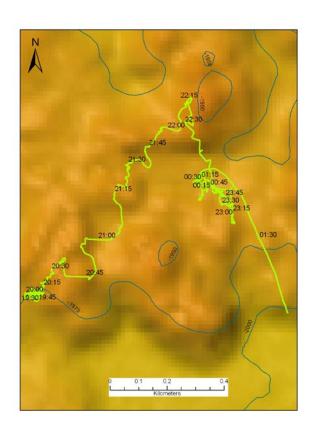
Description of the Dive:

At the start of this dive, we transited NE over pillow mounds in an area of 1 meter collapses with small pillars displaying bathtub rings. *Little Hercules* then moved 200 meters to the north to locate the extent of the linear collapses and the northern boundary. We traversed toward Plume target 2a and explored the vicinity, transiting across a graben structure and confirming the northern margin of that structure. *Little Hercules* came across a new lava flow within a broad 10 meter fissure; black fresh flow about 1-3 meters into the fissure with iron-oxide staining on the flow breaks and pillow margins. Just prior to seeing this new flow in the fissure, we located a contact between younger lava and much older material. The dive ended by looking at and imaging a wall of truncated pillow lava.

Overall Map of ROV Dive Area

Close-up Map of Main Dive Site





Representative Photos of the Dive



At the beginning of the dive, the ROV transited NE over pillow mounds in an area of 1 meter collapses with small pillars displaying bathtub rings.



Towards the end of the dive, the ROV imaged contact between younger lava and much older material.

Please direct inquiries to:

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