OKEANOS EXPLORER ROV DIVE SUMMARY

Site Name	Site of strong hydrothermal signal		EX 1103 GALREX - SITES OF INTEREST SECOND S
ROV Lead/ Expedition Coordinator	Dave Lovalvo/ Jeremy Potter		Disposition of the state of the
General Area Descriptor	Galapagos Rift, , X km NX of x Island, Galapagos Islands		
ROV Dive Name	Cruise Season	Leg	Dive Number
	EX1103	2	DIVE02
Equipment Deployed ROV Measurements	ROV: Little Hercules		
	Camera Platfom:	□ Depth □ Depth	Seirios Altitude
	Scanning Sonar	Substitution Substitution	Heading
	Nitch Pitch	Roll	HD Camera
	Low Res Cam 1	Low Res Cam 2	
Equipment Malfunctions	None		
ROV Dive Summary (From processed ROV data)	AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA	1-07-15T17:30:13.458000 44.095' N; 088°, 18.953' N 1-07-16T01:38:10.054000 44.037' N; 088°, 18.453' N 1-07-16T00:06:18.673000 44.284' N; 088°, 18.628' N 1-07-15T17:42:43.713000 44.082' N; 088°, 18.948' N	w w w
Special Notes Scientists Involved (please provide name / location / affiliation / email)	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

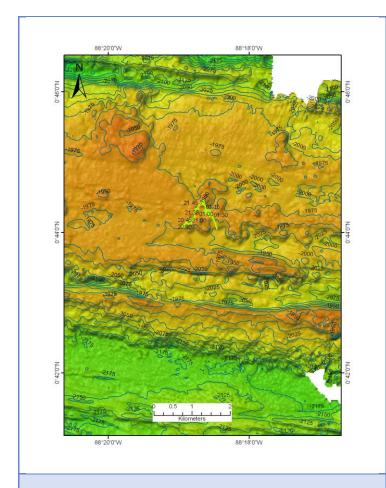
To descend with the ROV Little Hercules to a site on the Galapagos Rift where strong hydrothermal plume signals were detected few weeks ago, and traverse toward WP2- Plume target 2a, exploring the vicinity for hydrothermal activity.

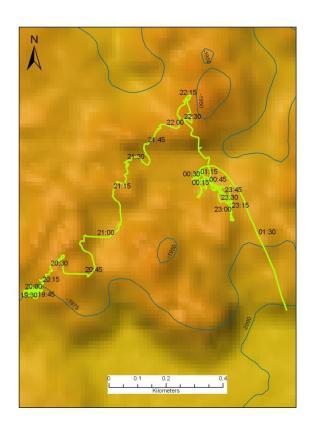
Description of the Dive:

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

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