General

The Web links below are provided for informational purposes only. Links outside of Ocean Explorer have been checked at the time of this page's publication, but the linking sites may become outdated or non-operational over time. All links were checked on November 6, 2014.

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NOAA Office of Ocean Exploration and Research [cited January 14, 2011]. 2002. Magic Mountain Virtual site [Internet]. Available from: *http://oceanexplorer.noaa.gov/explorations/02fire/logs/magicmountain/welcome.html*; Links to virtual fly-throughs and panoramas of the Magic Mountain hydrothermal vent site on Explorer Ridge in the NE Pacific Ocean, where two tectonic plates are spreading apart and there is active eruption of submarine volcanoes

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University of New Hampshire [cited January 14, 2011]. [Internet]. Available from: *http://oceanexplorer.noaa.gov/okeanos/media/movies/ex_podcast_video.html*; Video simulations of *Okeanos Explorer* discovering a midwater plume on May 17, 2009 using multibeam sonar; video formats are provided for PC users and Macintosh users

Water Column Investigations

German, C., D. Yoerger, M. Jakuba, T. Shank, C. Langmuir, and K. Nakamura. 2008. Hydrothermal exploration with the Autonomous Benthic Explorer. Deep-Sea Research I 55:203-219

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Underwater Robots

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Sea Perch Program [Internet]. Massachusetts Institute of Technology Sea Grant Program. [cited January 12, 2011]. Available from *http://seaperch.mit.edu/* – Includes detailed instructions for building a simple remotely operated underwater vehicle; based on designs from "Build Your Own Under Water Robot and Other Wet Projects" by Harry Bohm and Vickie Jensen

Key Images and Video Links

Telepresence

Images:

Control room aboard the NOAA Ship *Okeanos Explorer*.

> *http://oceanexplorer.noaa.gov/okeanos/explorations/10index/logs/aug03/media/ex_utc.html*

The Inner Space Center (ISC) at the University of Rhode Island.

> *http://oceanexplorer.noaa.gov/okeanos/explorations/ex1104/logs/aug7/media/isc_video.html*

The science team at the University of Rhode Island's Exploration Command Center (ECC) participate in the Mid-Cayman Rise 2011 Expedition.

> *http://oceanexplorer.noaa.gov/okeanos/explorations/ex1104/logs/hires/7_ecc_hires.jpg*

A doctoral student with the MIT-WHOI joint program, based at the Seattle ECC during the INDEX-SATAL 2010 Expedition.

> *http://oceanexplorer.noaa.gov/okeanos/explorations/10index/logs/hires/ellie_seattle_hires.jpg*

The team aboard the *Okeanos Explorer* communicates with participants at Exploration Command Centers on shore during the Mid-Cayman Rise 2011 Expedition.

> *http://oceanexplorer.noaa.gov/okeanos/explorations/ex1104/logs/dailyupdates/media/aug9_update_1.html*

Video:

A series of live webcasts with San Francisco's Exploratorium® from the NOAA Ship *Okeanos Explorer* during her maiden voyage to Indonesia in 2010. These webcasts are archived on the explo.tv site.

> *http://www.exploratorium.edu/tv/index.php?project=94&program=1095*

Video footage captured by the *Little Hercules* remotely operated vehicle (ROV) and camera platform during the April 26 ROV dive from NOAA Ship *Okeanos Explorer* during the Gulf of Mexico 2012 Expedition. The dive was conducted at site 15577 – a recently mapped but never-before seen shipwreck in the western Gulf of Mexico.

> *http://oceanexplorer.noaa.gov//okeanos/explorations/ex1202/logs/dailyupdates/media/movies/highlights0426_video.html*

Multibeam Sonar Mapping

Images:

A Senior Survey Technician makes an entry in the mapping watch log book during the INDEX-SATAL 2010 Expedition.

> *http://oceanexplorer.noaa.gov/okeanos/explorations/10index/logs/hires/mapper_hires.jpg*

Slideshow of 3D bathymetric images from the Submarine Ring of Fire 2012: Northeast Lau Basin Expedition.

> *http://oceanexplorer.noaa.gov/explorations/12fire/background/laubasin/media/slideshow/flash_slideshow.html*

Flat-topped Bear Seamount off the coast of Massachusetts rises approximately 2000 meters from the surrounding ocean floor to a depth of 1100 meters from the Mountains in the Sea 2003 Expedtiion.
http://oceanexplorer.noaa.gov/explorations/03mountains/logs/summary/media/seamounts.html

Videos:

Mendocino Ridge gas plume discovery off the California coast.
http://oceanexplorer.noaa.gov/okeanos/media/movies/ex_podcast_video.html

Magic Mountain Chimney Fields in the Northeast Pacific Ocean - an interactive map which links to computer animations of the seafloor.
http://oceanexplorer.noaa.gov/explorations/02fire/logs/magicmountain/welcome.html

3D fly-throughs of volcanoes during the Submarine Ring of Fire 2012: Northeast Lau Basin Expedition.
http://oceanexplorer.noaa.gov/explorations/12fire/background/laubasin/laubasin.html

3D fly throughs of the volcanoes mapped on the New Zealand American Submarine Ring of Fire 2005 Expedition.
http://oceanexplorer.noaa.gov/explorations/05fire/background/kermadecarc/kermadecarc.html

Water Column Investigations

Images:

A scientist extracts water from one of the sample bottles in the CTD rosette during the Submarine Ring of Fire 2012: Northeast Lau Basin Expedition.
http://oceanexplorer.noaa.gov/explorations/12fire/logs/sept20/media/scientistctd.html

Illustration of a CTD "tow-yo".
http://oceanexplorer.noaa.gov/okeanos/explorations/ex1103/logs/hires/tow_yo_diagram_hires.jpg

Scientists examine multibeam and CTD data in preparation for a dive during the Submarine Ring of Fire 2012: Northeast Lau Basin Expedition.
http://oceanexplorer.noaa.gov/explorations/12fire/logs/sept20/media/scientistslab.html

CTD data from a "tow-yo" in the Western Pacific.
http://oceanexplorer.noaa.gov/explorations/12fire/background/plumes/media/ctd_results.html

Underwater Robots

Images:

The ROV *Little Hercules* aboard the *Okeanos Explorer*.
http://oceanexplorer.noaa.gov/okeanos/explorations/ex1104/background/hires/plan_little_herc_hires.jpg

The ROV sled *Seirios* being deployed from the *Okeanos Explorer*.
http://oceanexplorer.noaa.gov/okeanos/explorations/ex1104/background/plan/media/plan_seirios_launching.html

The Quest 4000 remotely operated vehicle during the Submarine Ring of Fire 2012: Northeast Lau Basin Expedition.
http://oceanexplorer.noaa.gov/explorations/12fire/logs/sept19/media/quest4000.html

The Quest 4000 remotely operated vehicle collecting geological samples with the manipulator claw during the Submarine Ring of Fire 2012: Northeast Lau Basin Expedition.
http://oceanexplorer.noaa.gov/explorations/12fire/logs/sept19/media/claw.html

The Autonomous Benthic Explorer (ABE), a free-swimming robot.
http://oceanexplorer.noaa.gov/explorations/10chile/background/exploration/media/exploration1.html

NOAA Ocean Explorer Web page on submersible technology; includes many images of underwater vehicles.
http://oceanexplorer.noaa.gov/technology/subs/subs.html

Video:

Geologists and biologists explore the sea floor during the March 23 ROV dive from the NOAA Ship *Okeanos Explorer* during the Gulf of Mexico 2012 Expedition.

http://oceanexplorer.noaa.gov/okeanos/explorations/ex1202/logs/mar23/media/movies/ highlights0323_wm640.wmv

A gas capture device is assembled and installed on the *Little Hercules* ROV, then deployed by the team on the *Okeanos Explorer* during the Gulf of Mexico 2012 Expedition.

http://oceanexplorer.noaa.gov/okeanos/explorations/ex1202/logs/apr18/media/movies/ highlights0415_video.html