



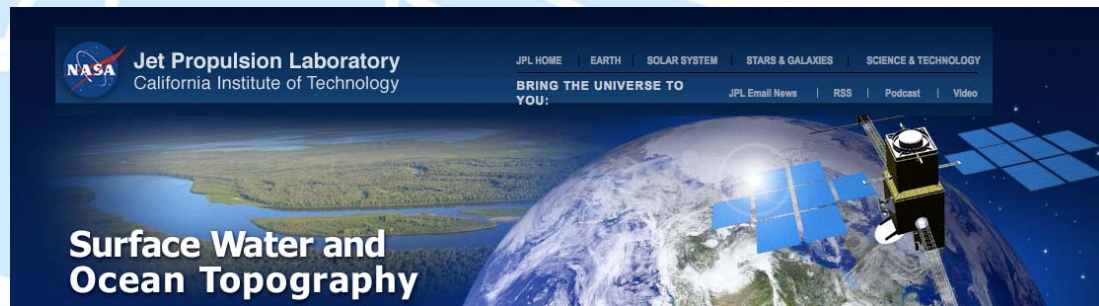
PROMOTING OSTST SCIENCE, RESEARCH, AND SOCIETAL BENEFITS

***Margaret Srinivasan
Altimeter Applications Lead
Jet Propulsion Laboratory
California Institute of Technology***

***Ocean Surface Topography Science Team Meeting
23 June 2009
Seattle, Washington***



NASA/JPL OST "Sealevel" <http://sealevel.jpl.nasa.gov>



NASA/JPL SWOT <http://swot.jpl.nasa.gov>



Aviso <http://www.aviso.oceanobs.com/>



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Sea Level Monitoring Enters a New Era

A major milestone for OSTM/Jason-2

Society Benefits

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Features



Latest El Niño/La Niña Jason Data

The latest image from NASA's Jason satellite is updated every two weeks. Check out the [latest ocean conditions here!](#)



We remember our friend & colleague, Yves Ménard

[Read more ...](#)



OSTST Meeting 10-12 November 2008

The 2008 ocean altimetry meeting and GODAE conference is in Nice, France. [Read more ...](#)

Congratulations!

OSTM/Jason-2 successfully launched on 20 June 2008

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  Site Manager: Margaret Srinivasan
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<http://sealevel.jpl.nasa.gov>

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Literature Database

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El Niño/La Niña Watch

World Ocean Day!
Appreciate Earth's ocean – wear blue on June 8th!



Features

Latest El Niño/La Niña Jason Data



The latest image from NASA's Jason satellite is updated every two weeks. Check out the [latest ocean conditions here!](#)

Atlantic and East Pacific Ocean Hurricane Seasons Begin for 2009



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The Earth Observer Newsletter

OST Science Team summary

Read the results from the Nov. 2008 ocean surface topography science team meeting: [PDF - pages 25-28](#)

[The Earth Observer Newsletter](#) (complete PDF)




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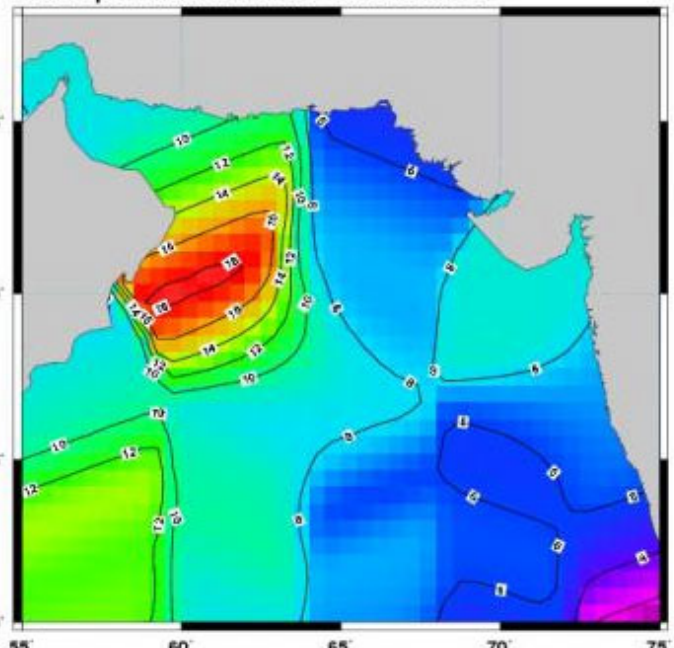
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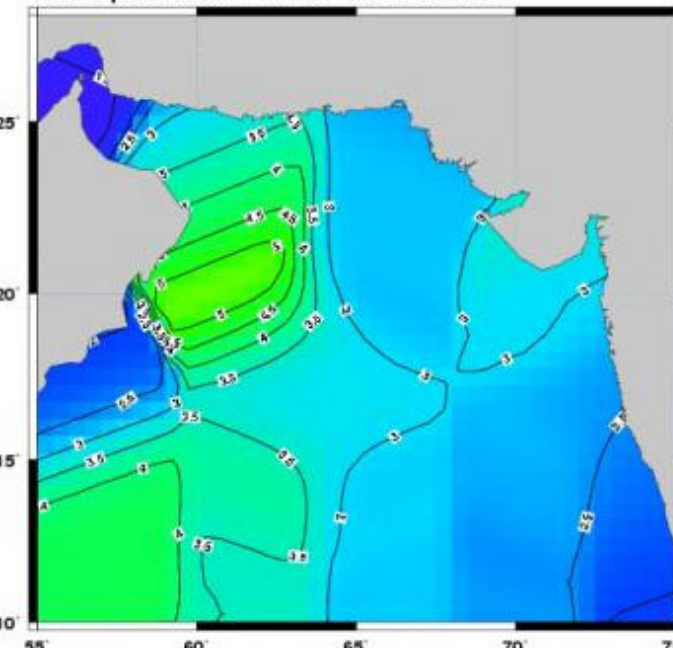




Society Benefits

Tropical Cyclone Gonu Observed by Jason-1
Data Span: 06/04/07 00:23 – 06/07/0700:23




Tropical Cyclone Gonu Observed by Jason-1
Data Span: 06/04/07 00:23 – 06/07/0700:23



Tropical Cyclone Gonu as seen by Jason-1

This pair of images from the radar altimeter instrument on the U.S./France Jason mission reveals information on wind speeds and wave heights of Tropical Cyclone Gonu, which reached Category 5 strength in the Arabian Sea prior to landfall in early June 2007. Strong winds near 20 meters per second and wave heights of greater than 5 meters were recorded. These high waves are extremely rare in the Arabian Sea and exacerbated heavy flooding from the storm surge over much of the Oman coastline.

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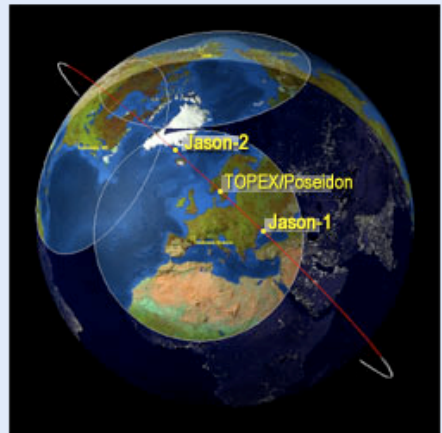
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- [TECHNOLOGY](#)
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NEWSROOM - Features


Tandem Mission Brings Ocean Currents Into Sharper Focus
February 2009

What's true for television screens and digital images also applies to satellite data. The more resolution, the better.

When the two ocean-observing satellites OSTM/Jason-2 and Jason-1 begin their tandem mission in February, they'll be flying in a new configuration designed to get the most detailed measurements possible of the ocean surface. They'll enable scientists to distinguish much smaller ocean features than they could with only one satellite and see more quickly how these



Tandem Mission news



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Oceans Up Close - From Space



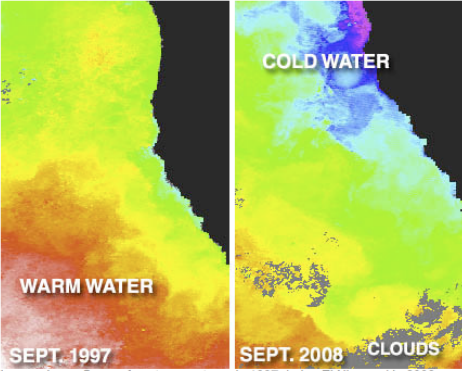
by Jorge Vazquez
Oceanographer

Not all oceanographers spend their time out on the seas. As a project scientist for the Physical Oceanography Distributed Active Archive Center here at JPL, I study the world's ocean from my computer, using data from a series of NASA satellites that orbit Earth. These data measure everything from how the ocean changes during an El Nino to how such climatic changes affect local regions like California's coast.

This kind of precise data was impossible 100 years ago. In fact, scientific and technological advances over the last century have revolutionized the field of oceanography. Today, we gather data both from instruments in the ocean and from satellites in space. These satellite data measure changes in sea surface topography (the ocean surface has changes in elevation, just like the land), ocean surface winds, sea surface temperature and water pressure at the bottom of the ocean. The satellites view the ocean from 700 to 1,300 kilometers (440 to 800 miles) above Earth. Current advanced technologies allow scientists to combine data from different satellites to view ocean conditions in near-real time, only 6 to 12 hours from when the satellite acquires the data. This information can then be sent to researchers and decision makers for use in improving forecasts for hurricanes to the regional and local impacts of ocean phenomena like El Nino and La Nina.

Examples of satellite data can be seen in these images. The view on the left shows temperatures off the coast of California in September of 1997 (El Nino). On the right, sea surface temperatures from September of 2008 (normal conditions). Notice the warmer temperatures (seen in red) resulting from the 1997-1998 El Nino event. Such temperature changes have direct impacts on local climate and fisheries. These data are leading to a new understanding of how hurricanes get their energy from the ocean. These satellite data also help forecast regional ocean temperatures, which affect local weather.

As technology improves, along with the availability of these data in real time, new opportunities will continue to expand to better understand our planet and its impacts on our lives.




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Contributors



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Oceans Up Close – From Space


JPL Scientist Jorge Vazquez



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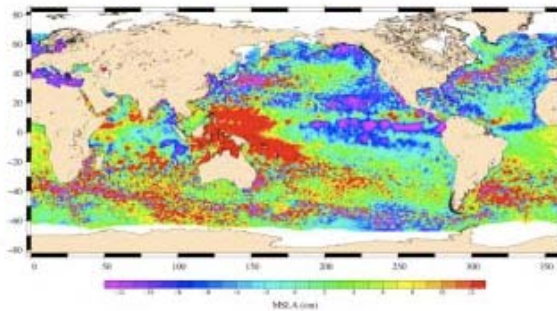
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PIA11859: First Jason-1 and OSTM/Jason-2 Tandem Global View

DUACS Map of Sea Level Anomaly – Jason2+Jason1



Target Name:	Earth
Is a satellite of:	Sol (our sun)
Mission:	Jason-1 (TOPEX/Poseidon) OSTM/Jason-2
Spacecraft:	Jason-1 (TOPEX/Poseidon) OSTM/Jason-2
Instrument:	Altimeter
Product Size:	3508 samples x 2479 lines
Produced By:	JPL
Full-Res TIFF:	PIA11859.tif (26.09 MB)
Full-Res JPEG:	PIA11859.jpg (1.128 MB)

Click on the image to download a moderately sized image in JPEG format (possibly reduced in size from original).

NASA's Planetary Photojournal

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- Practical Applications
- Science Team
- Data Sources
- The Tandem Mission

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Advanced Altimeter Data Assimilation for Physical Ocean Prediction and Ecosystem Monitoring

Authors:
Jacques Verron (LEGI/CNRS)

FOAM: From Ocean to inland waters Altimetry Monitoring

Authors:
Pascal Bonnefond (OCA/GeoAzur)

Co-Investigator(s):
Nelly Mognard (LEGOS)

Wide swath altimetry for high resolution oceanography and hydrology: the SWOT mission

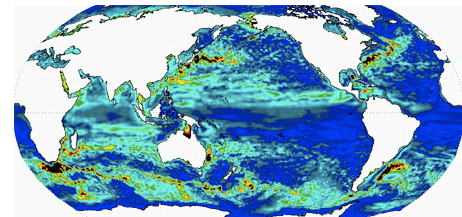
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Pierre Baharel
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Yann Drillet (Mercator Océan)
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Mounir Benkiran (CLS)
Didier Jourdan (SHOM)

New entries – CNES
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Abstract:
In collaboration with the CNES and NASA, the OCA developed a verification site in CALibration/VALidation embraces a wide interpretation of information from internal of the fully corrected sea-level estimates Harvest platform (NASA side), an operational continuous monitoring with a high level of instantaneous bias estimates with a 10-d (deviation) and mean errors of 3-4 mm (st

Abstract:
A critical drawback of profiling altimeters for the between orbital tracks that prevents sampling mesoscale processes that contain 90% of the observations, surface fresh water measurement of gauges that record water surface elevations SWOT (Surface Water Ocean Topography) mission improved resolution that will revolutionize the
The SWOT mission ocean science questions
1. What is the small-scale (1-100 km) variability that determines the velocity of ocean currents and evolving? How is oceanic kinetic energy
2. What is the synoptic variability of coastal waters and how do they interact with the open ocean variability?



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- **Estimate the economic/practical effects/benefits**
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Thanks.