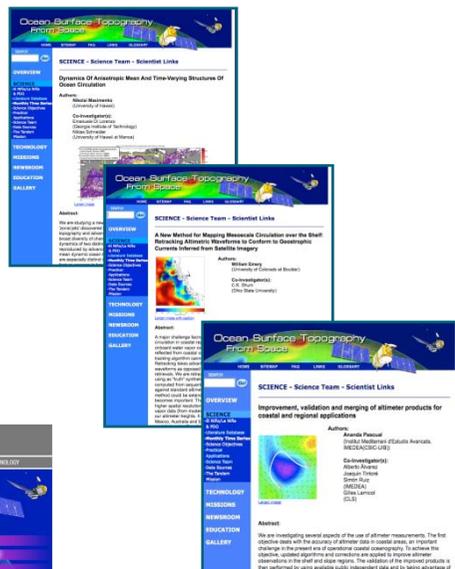
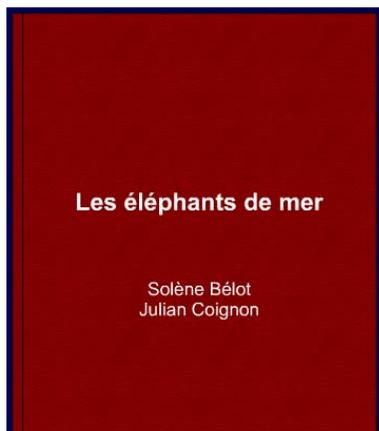


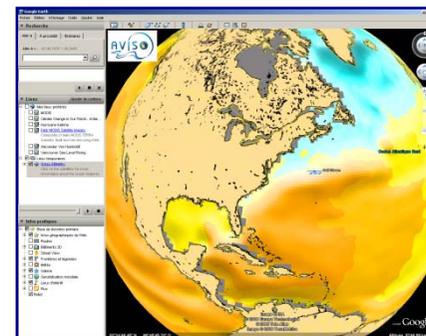


Outreach Splinter

Chairpersons: V. Rosmorduc, M. Srinivasan

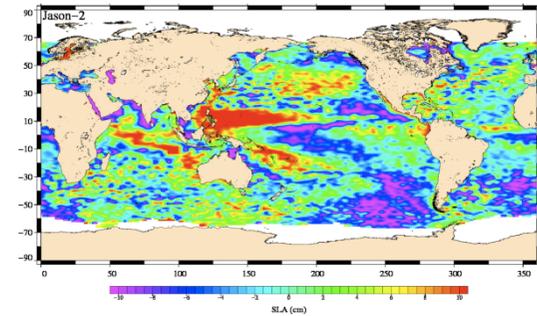


--Products
--Activities
--Internet
--Education



Agenda Topics

- Past & Future Activities
- Educational Outreach: Argonautica
- NASA/JPL & Aviso Web Sites
- Ocean & Climate Literacy
- Altimetry Training Program in India
- Outreach Showcase of OSTST Activities & Products



Posters

- *Practical Applications & Societal Benefits (poster)*
- *Basic Radar Altimetry Toolbox (poster)*
- *Aviso Altimetry Products Survey for You! (poster)*

Student Presentations

- Student contest – High School and Middle School
- Important educational approach – hands-on
- Pipeline for future ocean scientists
- Invite Oregon/SMILE students for presentations next year

Les éléphants de mer

Solène Bélot
Julian Coignon

AST Collège Jean Moulin
Didapages 1, 1 - <http://www.fruitsdusavoir.org>

Les éléphants de mer ne sont pas des éléphants avec des défenses et de grandes oreilles, les mâles ont tout de même une trompe ; ce sont plutôt de **gros phoques**.

Un couple de Mirounga leonina.

Les calculs

Calcul des distances et des vitesses.

Certains résultats découverts :

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20

La cartographie

Carte obtenue avec les données non corrigées.

Carte mettant en évidence les données incorrectes.

CONCOURS un canard sur l'océan

20 juin 2008
le satellite JASON-2 est mis en orbite. Objectif : observer les océans pour comprendre la machine climatique.

1er septembre 2008
le CNES lance un concours auprès des jeunes. Objectif : les sensibiliser à l'utilisation des satellites pour l'étude du climat.

EDITION SPECIALE Satellites et climat

Pour participer au concours **fais ton journal!**
connecte-toi sur le site : www.concoursatellitejason2.com

A GAGNER

- 3 étalons météo
- 3 lunettes électroniques
- 6 ordinateurs portables

En classe ou en individuel, le CNES t'invite à participer au concours "Un canard sur l'océan - Edition spéciale : satellites et climat". C'est toi le rédacteur en chef... mène l'enquête, écris, photographie, dessine et mets en page ton journal !

avec 4000 euros de récompenses pour toutes les classes participantes

6 prix : 1 prix de 1000 euros, 1 prix de 500 euros, 1 prix de 200 euros, 1 prix de 100 euros, 1 prix de 50 euros, 1 prix de 20 euros

Websites

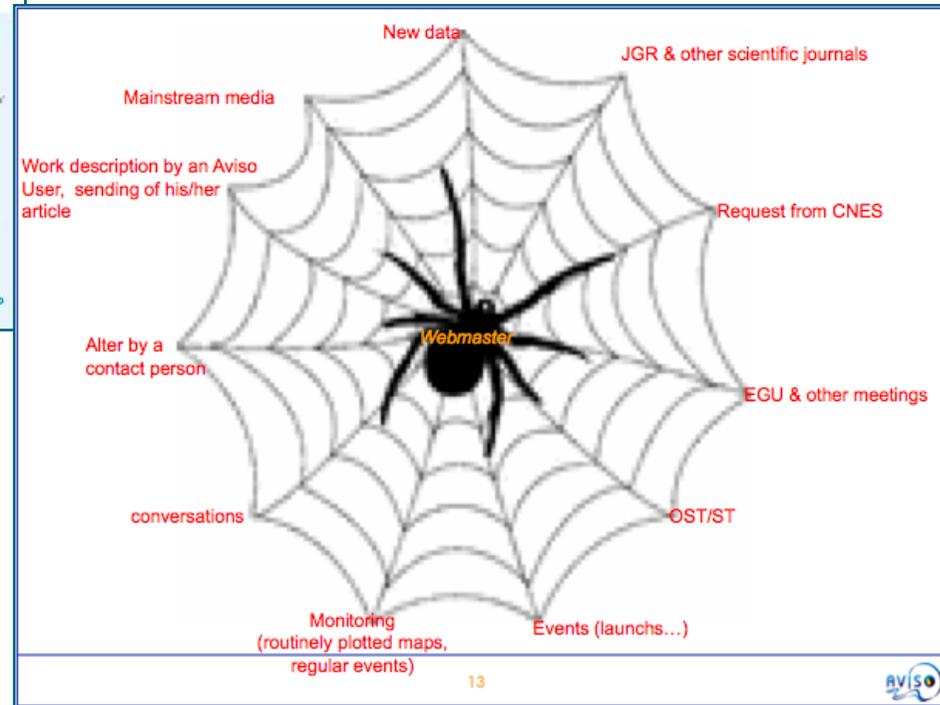
- Web sites must be continuously updated
- Help us feed them!
- New Aviso web site
- NASA/JPL OST web site: Promoting OSTST Research





Everything new!

- Contents, updated and completed
- Site management software
- New Graphics



sealevel.jpl.nasa.gov

Science Investigations

Ocean Surface Topography From Space

SCIENCE - Science Team - Scientist Links

Improvement, validation and merging of altimeter products for coastal and regional applications

Authors: Ananda Pascual (Institut Mediterrani d'Estudis Avançats, IMEDEA(CSIC-UIB)), Alberto Alvarez, Jogaann Tetzak, Simón Ruiz (IMEDEA), Giles Lamont (CLS)

Abstract: A major challenge facing precipitation in coastal regions: onboard water vapor correction reflected from coastal coasts.

Overview: We are investigating several aspects of the use of altimeter measurements. The first objective deals with the accuracy of altimeter data in coastal areas, an important challenge in the present era of operational coastal oceanography. To achieve this objective, updated algorithms and corrections are applied to improve altimeter observations in the shelf and slope regions. The validation of the improved products is then performed by using available public independent data and by taking advantage of

Monthly Features

NEWSROOM - Features

Being the Waves with Jason-1 - A GMA with Two Mission Leaders

December 2006

Being the Waves with Jason-1 - A GMA with Two Mission Leaders

More than just great technology, they need to be used and make the most of the information they have. Technicians and scientists behind Jason-1 are

NEWSROOM - Features

Army Casarave Honored

May 2008

Army Casarave, a Principal Investigator of the Ocean Surface Topography Science Team, has been elected a Foreign Associate of the US National Academy of Sciences as announced in a press release from the Academy.

Apr. 29, 2008: The National Academy of Sciences today announced the election of 22 new members and 18 foreign associates in recognition of their distinguished and continuing achievements in original research. Those elected today bring the total number of active members to 2,541.

Members and foreign associates of the Academy are elected in recognition of their distinguished and continuing achievements in original research; election to the Academy is considered one of the highest honors that can be accorded a scientist or scholar.

Societal Benefits

Ocean warming estimates from Jason

Global Ocean Heat Content Change

Heat content (10²¹ J)

Year

Sea 1
Sea 2
Sea 3
Sea 4
Sea 5
7 Sea Mean
Observations

Ocean heat content vs. time from observations and several global climate model runs.

JPL's Josh Willis was a co-author on the study and provided the ocean temperature data.

being absorbed from the Sun than is emitted back to space, using estimates based on data from satellite altimeters on a mission with oceanographic profiling instruments such as Argo floats. Josh Willis used the satellite data to provide a global picture of greenhouse gases would trap solar radiation and heat to a warming planet. Added by ocean altimetry data, they found this excess heat in the oceans. The measurements show that, over the past ten years, the heat content of the ocean has grown dramatically and can account for the excess energy that the climate model calculated should exist. Dr. Willis' analysis of the data showed a fairly steady, measurable warming over the past decade.

Warratt et al., Earth's Energy Imbalance: Confirmation and Implications, Science, 2006, 112 (3613), 1431-1435

Literature Database

SCIENCE - Literature Database Search

LITERATURE DATABASE SEARCH RESULTS

Click on the Title to get the details for that entry. Or return to the Search page and run another search.

Displaying 1 to 10 of 2753

1. A 44-year (1958-2001) sea level residual hindcast over the Mediterranean Basin
 Authors: Rey, A., Wu, S., Gellieff, M., G. Alvarez Farjuel, J. C., Perez Gomez, B., Hajji, H., ...
 Year: 2008
2. A parametric model for ocean wave period from Ku-band altimeter data
 Authors: Mackay, E. B., L.; Retzius, C. H.; Challoner, P.; Gommenginger, C. P.
 Year: 2008
3. A survey of ICESat coastal altimetry applications: Continental coast, open ocean island, and inland river
 Authors: Urban, T. J.; Schutz, B. E.; Neunschwander, A. L.
 Year: 2006
4. Accurate linking of Lake Erie water level with shoreline datum using GPS buoy and satellite altimetry
 Authors: Cheng, K. C.; Kuo, C. Y.; Shum, C. K.; Niu, X. T.; Li, R. X.; Bedford, K. W.
 Year: 2008
5. Anomalous variation of sea surface height in Southwestern Indian Ocean

EPO - Aviso

Books

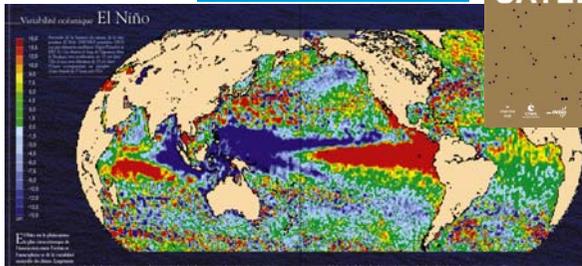
SATELLITES

AVISO Users Newsletter

News of OSTM Jason-2

This is a special feature issue of the OSTM Jason-2 Users Newsletter, dedicated to the satellite in its second anniversary. It features news, project updates, and technical information.

Aviso Newsletter



Posters

A collection of scientific posters featuring satellite imagery, data plots, and oceanographic research.

Posters

Accordions-fold flyer

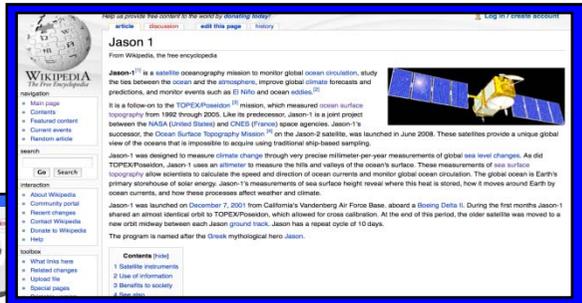
A large, multi-page accordion-style flyer containing various oceanographic topics and data visualizations.

- Altimétrie
- Doris
- Mercator, l'océan en prévisions
- Un océan d'applications
- Recherche
- Le niveau marin
- Climat: le dialogue de l'air et de l'eau
- Vents et vagues
- Environnement et sécurité en mer
- Cyclones
- Biologie et Courants
- Lacs, lacs et mers fermées
- Plus près des côtes
- La surveillance de l'océan par satellite

Accordions-fold flyer



EPO - JPL



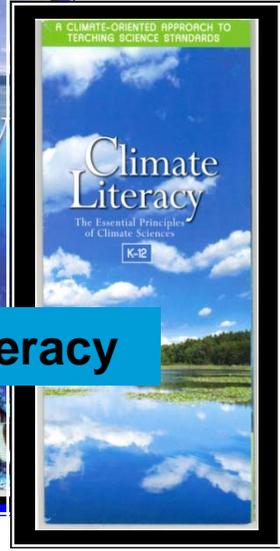
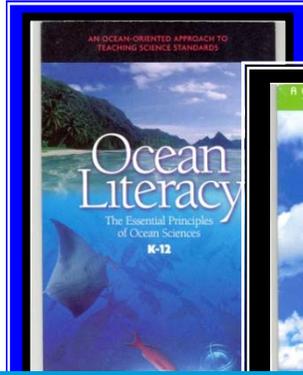
OST, Jason-1, Jason-2 in Wikipedia



Climate Day 2008



Products



Ocean & Climate Literacy

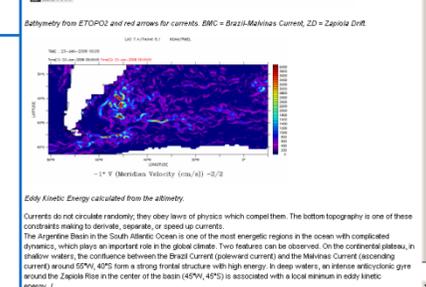
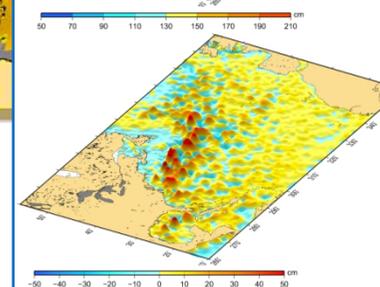
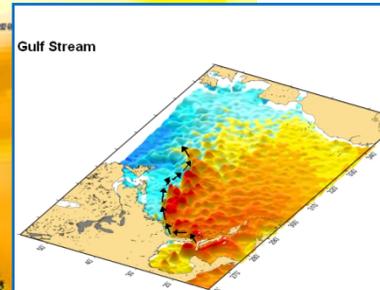
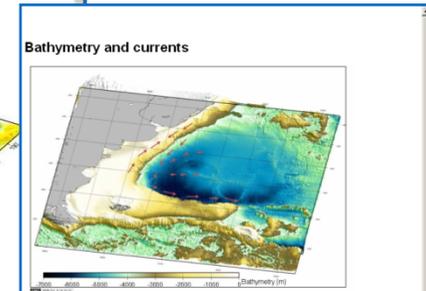
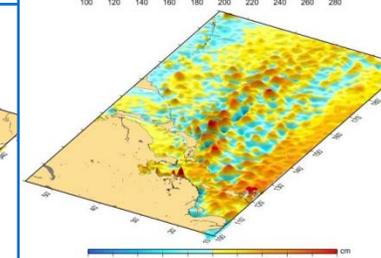
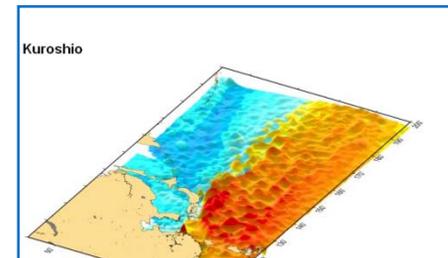
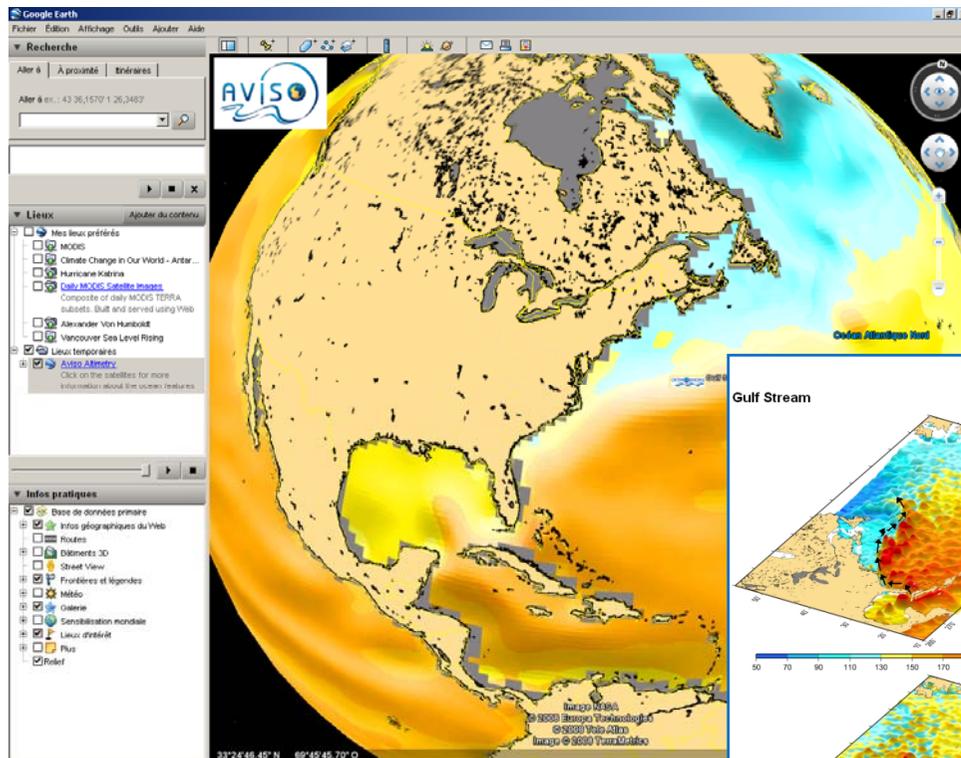
New Efforts

- Jason-2/OSTM, Saral & SWOT -- Education & Public Outreach & applications outreach
- Highlight altimetry & multisensor applications
- Promoting science team research and applications on web
- "Climate Day 2009" Multi-agency, multi-partner education and public outreach event
- Argonautica 2008-2009 begins soon
- Radar altimetry tutorial and toolbox new version (<http://www.altimetry.info>)
- Google Earth altimetry application browser with a series of new images



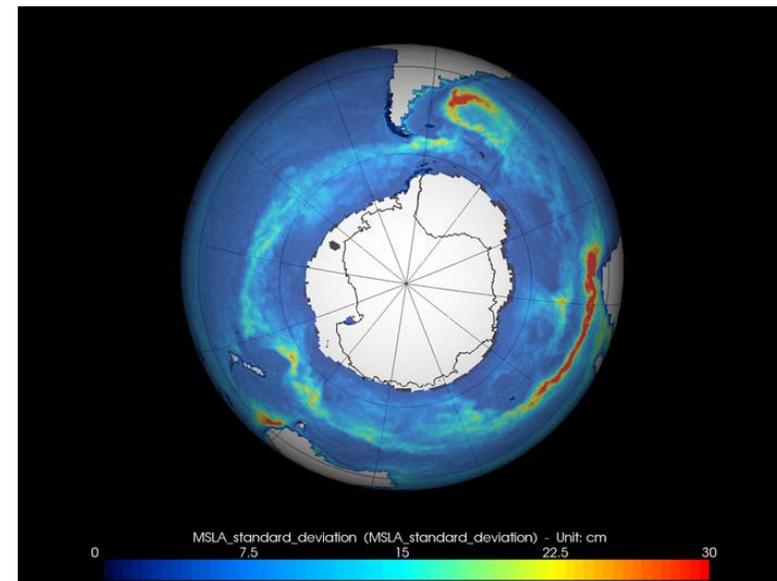
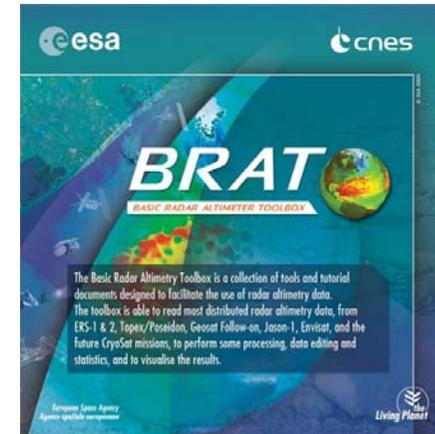
Browsing altimetry applications through Google Earth

- Using Google Earth to display images of altimetry applications



Altimetry toolbox & tutorial

- Feedback welcome!
- Altimetry teachers/instructors: what material would you need?
- What toolbox function would you find useful for hands-on activities?
- Resource for Post-docs and other new research users



Outreach Showcase



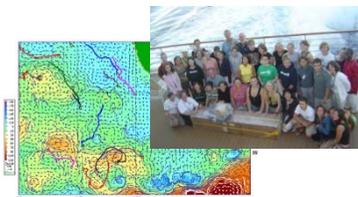
Envisat IMEDEA Leaflet – Spanish; Ananda Pascual



Envisat IMEDEA Exhibition; Ananda Pascual



IMEDEA Presentation; Ananda Pascual

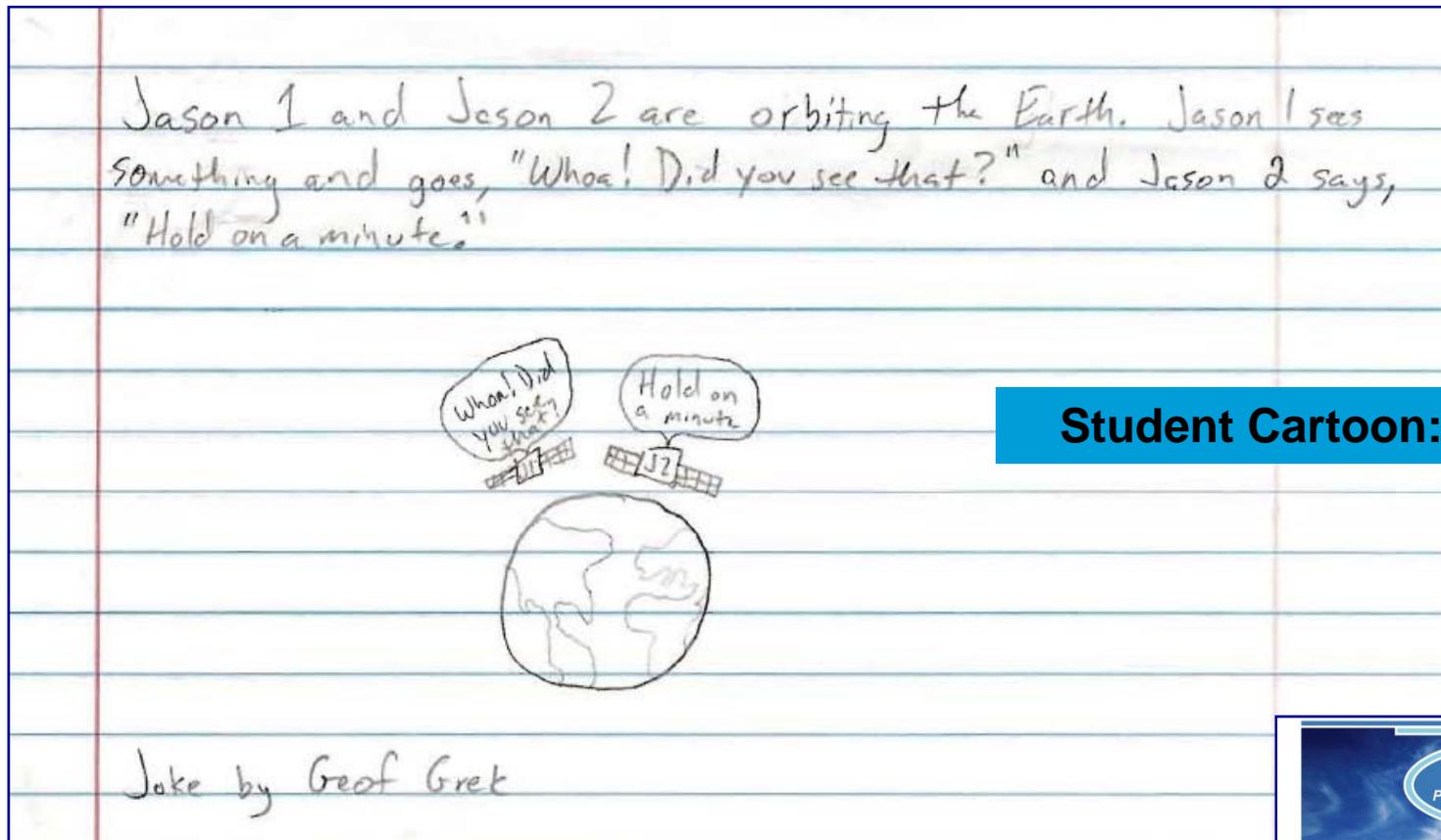


Semester at Sea; Gustavo Goni



Stars Shine For Everyone: F. Rémy, L. Testut (CNRS), V. Rosmorduc

Outreach Showcase



Student Cartoon: Geof Grek

Physics Textbook: Helen Snaithe

Oceanography Textbook: Development: Bob Stewart

