

## Internal Chronology: Activities of CIOSS Fellows at the College of Oceanic and Atmospheric Sciences, Oregon State University

\*CIOSS Fellows are in bold.

**January 8-10:** A number of CIOSS Fellows, post-docs and students participated in the annual meeting of PI's for the U.S. GLOBEC NE Pacific (NEP) Project. The NEP project is in its "synthesis" phase, integrating data sets and model results collected during 1997-present, with a focus on the response of the ecosystems in the California Current and the Gulf of Alaska to climate variability. A special emphasis is on several species of salmon and their prey. GLOBEC is jointly funded by NOAA, with funding through NOS (Beth Turner), and NSF.

**January 16:** RaeSeol Park, a student of CIOSS Fellow Eric **Skyllingstad** in Atmospheric Sciences, gave a seminar entitled, "Simple frontal instability problem." A description of the talk follows.

Near to the ocean front, we can look at features showing the baroclinic instabilities. These features are very deeply related to the strength of the temperature gradient and we guess that the atmospheric forcing can affect the baroclinic instabilities. In this presentation, I'll discuss about this problem and show some preliminary results and plan.

**January 17:** CIOSS sponsored a visit by Adriana Gonzalez-Silvera, Facultad de Ciencias Marinas, from the Universidad Autonoma de Baja California, Ensenada, Baja California, Mexico. During her stay she worked with CIOSS Fellow **Ricardo Letelier** and Post-Doc Martin Saraceno. She also gave a presentation entitled, "Identification of Biogeochemical Provinces at the Brazil-Malvinas Confluence and the La Plata Plume (Southwestern Atlantic) using SeaWiFS and AVHRR Imagery."

### Abstract

Ocean color (OCTS, SeaWiFS) and sea surface temperature (AVHRR) images were used to evaluate spatial and temporal variability of the Brazil-Malvinas Confluence and La Plata Pluma (Southwestern Atlantic Ocean). The data set covers the period from January 1996 to December 2003. Different approaches were used to identify Biogeochemical Provinces in the area but they did not considered its dynamic characteristic and for that reason we looked at the possibility of using data from these remote sensors to follow the limits between those boundaries. Considering that SST and Chla fields describe different characteristics of the Brazil-Malvinas Confluence and the La Plata Plume, a Principal Component Analysis (PCA) has been used in order to combine the information provided by these two variables. PCA yields its results in: (1) a matrix of eigenvectors that are the principal component loading factors or Empirical Orthogonal Functions, and (2) a matrix of principal component scores. A data matrix was constructed using latitude, longitude, Chla and SST of all valid pixels for each image. PCA analysis was applied to the standardized variables. The space variability of the principal component score, which explains most of the variance in the data, was used to simultaneously evaluate the spatial variability of Chla and SST. This new variable (score) was then remapped. A first evaluation of this analysis was done using as PCA input composites of Chla and SST for

an average year (from January to December). This approach allowed analyzing the potentiality of the assessment chosen to describe the spatial variability of Chla and SST patterns at the same time. Results were compared to Chla and SST images.

In general it was possible to observe the relationship between the score isolines and front distribution in the area and its close relationship with previous observations of currents behavior and La Plata Plume. On a second approach, the same procedure was used for the 90 monthly composites to evaluate monthly variability of the previously observed climatology focusing on the La Plata Plume variability. We applied the PCA analysis to each month of the study period. Score data clearly show monthly and interannual variability of La Plata Plume displacement. The potentiality of the analysis for daily satellite data was also investigated and seasonal and monthly patterns previously observed were confirmed. In general, our simplified approach proved to be a useful tool to show the coupling between these variables and follow fronts displacement. An overall description of the spatial and temporal variability in the area was presented and it was particularly useful to follow the displacement of the La Plata Plume. Our findings coincide with observations and modeling results. We believe that the approach presented can be used to separate and follow the displacement of biogeochemical provinces in the area, which is of primordial importance to remote sensing of phytoplankton primary production.

**January 26:** Wiley Evans, a student of CIOSS Fellow **Peter Strutton** in Biological Oceanography, gave a seminar entitled, "Phytoplankton variability observed from an equatorial Pacific mooring during fall 2005."

#### Abstract

The Tropical Atmosphere Ocean (TAO) mooring array spans the equatorial Pacific from the Galapagos Islands to Papa New Guinea. This array of ~70 buoys has provided essential observations of temperature and current variability associated with El Niño and higher frequency physical processes.

During the fall of 2005, we deployed optical instrumentation for determining chlorophyll and particulate organic carbon on the 0°, 140°W mooring (central Pacific). Preliminary time series analysis has focused on determining the relative importance of several physical variables in explaining variability in the chlorophyll records. Variability in sea surface temperature (SST) and thermocline depth explain substantial proportions of the variability in the surface and 100m chlorophyll records, respectively. However, no physical parameter well explains chlorophyll variability at 55 meters.

Cross-correlations reveal significant lags between the physical and biological parameters associated with tropical instability waves (TIWs) moving past the 140°W mooring.

**January 30:** **Dudley Chelton** collaborated with Peter Cornillon from the University of Rhode Island on a presentation given in Washington D.C. by Peter to the National Research Council (NRC) Committee on Scientific Accomplishments of Earth Observations from Space. Input from this presentation is presently being incorporated into an NRC report to be presented to NASA.

**January:** CIOSS Fellow **Jim Coakley** is co-author of the Climate Panel Report that appears in the National Academy's National Research Council Report: "Earth Sciences and Applications from Space: National Imperatives for the Next Decade and Beyond" which was released this month.

**February 12-15:** **Ted Strub**, Amy Vandehey and Carol Wallace attended the annual all-NOAA CI meeting, which was held in Silver Spring, MD. The first day consisted of a Capabilities Fair in which CI Directors and NOAA Program Managers were encouraged to interact to find intersections between CI capabilities and execution/planning Program requirements. The other meeting days continued this interaction, and followed up on issues raised by CI Directors and Administrators.

**February 12-16:** **Dudley Chelton** visited the International Pacific Research Center (IPRC) and the University of Hawaii (UH) in Honolulu and gave two seminars:

- "The Impact of SST Specification on Surface Winds in the ECMWF Operational Model, with Possible Evidence for SST Influence on Tropospheric Winds."
- "Global Observations of Westward Energy Propagation: Rossby Waves or Nonlinear Eddies?"

As a result of numerous discussions with faculty members at the IPRC and UH, collaborative studies were initiated with Nikolai Maximenko, Bo Qiu and Roger Lukas.

**February 14:** CIOSS Fellow **Ricardo Letelier** participated in the Oregon Remote Sensing Workshop, held at the LaSells Stewart Center on the Oregon State University campus. He spoke during the panel on "Collaborative Imagery Applications and Use at State and Local Levels", specifically addressing marine and coastal applications of imagery. A website that shows the workshop agenda is at <http://oregonstate.edu/conferences/remotesensing2007/>.

Awards:

October 2006: CIOSS Fellow Jim Coakley was elected Fellow of the American Association for the Advancement of Science.

Publications

Maloney, E. D., and S. K. Esbensen, 2007: Satellite and buoy observations of intraseasonal variability in the tropical northeast Pacific. *Mon. Wea. Rev.*, 135, 3-19.

Maloney, E. D., and A. H. Sobel, 2007: Idealized hot spot experiments in a general circulation model. *J. Climate*, in press.

Maloney, E. D., D. B. Chelton, and S. K. Esbensen, 2007: Subseasonal SST variability in the tropical eastern north Pacific during boreal summer. *J. Climate*, submitted.

G. Guo, and J. A. Coakley, Jr., 2007: Satellite Estimates and Shipboard Observations of Downward Radiative Fluxes at the Ocean Surface, *J. Atmos. and Ocean. Tech.* (submitted)

#### ABSTRACT

Clouds and the Earths Radiant Energy System (CERES) uses a suite of instruments on the Terra and Aqua satellites combined with analyzed weather data and information on surface conditions to estimate surface radiative fluxes. CERES estimates for the Terra satellite were compared with measurements of the surface radiation budget collected with the RV Wecoma and Thomas G. Thompson radiometers for cruises off the Oregon coast. To assess the shipboard measurements, the radiometer observations were analyzed to identify cloud-free conditions which were characterized by ~2-4 hours of relatively stable radiative fluxes. Fluxes for the cloud-free conditions were compared with those calculated using profiles of temperature and humidity from analyzed meteorological fields for the times and locations of the measurements and broadband radiative transfer models. For summertime conditions along the Oregon coast, and assuming a marine aerosol having 0.55-micron optical depth of 0.05, modeled and observed values of the shortwave flux agreed to within 1-2%. Similar comparisons for the downward cloud-free longwave flux were within 1-3%.

This agreement also held for the CERES surface radiative flux estimates with CERES cloud-free fields of view for ocean scenes within 50-km of the ship being compared with 30-minute averages of the shipboard measurements centered on the times of the Terra overpass. Using the CERES observations to identify cloud-free conditions for the Wecoma revealed that in some cases the shipboard measurements of the shortwave flux varied erratically.

Criteria were adopted to avoid such periods, yielding periods in which the surface radiative fluxes were reasonably stable for a range of cloud-free and cloudy conditions. With the criteria applied, the absolute magnitude of the mean differences between the shipboard measurements and the CERES estimates for the downward shortwave flux were within 2% with RMS differences less than 6% within each month of CERES-shipboard matchups.

The absolute magnitude of the mean differences for the downward longwave flux were less than 2% with an RMS differences less than 5%.

**February 15:** Angel White, a postdoc for **Ricardo Letelier**, presented, “The Case for Regional Coupling of N<sub>2</sub> Fixation and Denitrification in the Sea of Cortez” as part of the Biogeochemical Oceanography Series.

**February 24:** Several CIOSS fellows and associated students participated in the National Ocean Sciences Bowl 'Salmon Bowl' held at COAS/OSU. A dozen high school groups participated, testing their knowledge of ocean science. The event generated media coverage on local TV and several Oregon newspapers.

**March:** Update on **Curt Davis'** AOA activity.

The NESDIS Office of Systems Development led an Analysis of Alternatives (AoA) study to address ways to meet NOAA requirements for advanced sounding and coastal waters imaging capabilities. The AoA included participants from all NOAA Goals, University / Cooperative Institutes, contractors, the DoD, and NASA. The AoA team sought to determine the best solution to meet requirements for advanced sounding and coastal waters imaging in the absence of a Hyperspectral Environmental Suite (HES) capability on GOES-R/S. HES was eliminated from the GOES-R series in October 2006 due to technical risk and cost issues.

The AoA team explored satellite, airborne, and surface based capabilities, including government and commercial alternatives. The study began in November 2006 and was completed in February 2007. Curt Davis was the team leader for Coastal Waters Imaging. For coastal waters imaging, the team recommended the following: (a) continue the risk reduction work of the Coastal Ocean Applications and Science Team; (b) conduct a pre-phase A study to determine the best operational solution (either a multi-spectral sensor in geostationary orbit or 3 or 4-multi-spectral sensors in low-earth, sun-synchronous orbit); and (c) support for a follow-on operational in situ calibration source to the Marine Optical Buoy.

**March 1-2:** CIOSS provided the financial support for prospective graduate student Peter Gaube from Nova University in Florida to visit OSU and talk with faculty members in Physical and Biological Oceanography. After returning to Florida, Peter informed COAS that he accepts our offer and will enroll in the Physical Oceanography PhD program in COAS in September 2007. Dudley Chelton will be Peter's advisor. Peter will arrive at OSU in June and spend the summer analyzing satellite data in the VOCALS region of the eastern tropical South Pacific.

**March 9:** Maria Kavanaugh, a PhD student in Biological Oceanography for **Ricardo Letelier**, presented "Satellite-derived dynamic biophysical provinces in the North Pacific" as part of the COAS Student Seminar Series.

**March 12-15:** Several CIOSS Fellows and COAS Faculty attended the NASA Ocean Surface Topography Science Team Meeting in Hobart, Australia. Overview science presentations were given by **Dudley Chelton** (Global observations of westward energy propagation: Rossby waves or nonlinear eddies?) and **Gary Egbert** (Internal tides in shallow seas, and altimetry). Posters were presented by Ricardo Matano (The upwelling of downwelling currents) and **Ted Strub** (Satellite and model study of the circulation in the SE Pacific).

**March 15:** Undergraduate student Jenny Rolling at the University of Maryland accepted an offer to participate in the Summer REU Program with financial sponsorship from CIOSS. Jenny arrived in June 2007 to work with **Dudley Chelton** and **Eric Maloney** on analysis of the new high-resolution SST fields produced by Richard Reynolds as a result of his CIOSS-sponsored visit to COAS in the summer of 2005.

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**March 16:** Niles Araligidad, a PhD student in Atmospheric Sciences for **Eric Maloney**, presented “Buoy and satellite observations of wind-evaporation feedback in the intraseasonal oscillation over west Pacific and Indian oceans” as part of the COAS Student Seminar Series.

**March 27:** **Dave Foley**, **Dudley Chelton** and **Pete Strutton** made presentations to a group of visiting NOAA fisheries scientists and other interested participants as part of a 3-day short course on satellite ocean data analysis. Dave Foley gave a general introduction into ocean remote sensing. Dudley Chelton covered microwave satellite data products and Pete Strutton talked about ocean color. The rest of the course consisted of hands-on training in the use of satellite data and GIS techniques to address specific problems, which the participants brought with them. The short course was a repeat of a similar and very popular course given last August, both hosted at CIOSS in Corvallis.

<http://www.pfel.noaa.gov/events/workshops/NOAASatCourse2007/PostCourseInfo.html>

**April:** CIOSS Administrative Specialist Amy Vandehey began a Master’s degree in Marine Resource Management at OSU. She will be working full-time and taking about one class per term. Her area of interest is the identification and creation of Marine Protected Areas, as well as marine science-based outreach to students and the general public. Her classes will increase her knowledge of the science engaged in by CIOSS Fellows.

**April 2-6:** **Ricardo Letelier** and **Ted Strub**, along with COAS Faculty Ed Dever, participated in a CLIVAR/VAMOS workshop in Santiago Chile, planning a coastal ocean component of the VOCALS Project (VAMOS Ocean-Cloud-Atmosphere-Land Systems). This is a major CLIVAR project that will examine ocean-atmosphere interactions and their effects on the stratus cloud deck during October-November 2008, using satellites (atmospheric and ocean remote sensing), multiple ships and aircraft, along with measurements on land.

**April 3-5:** The “Data Assimilation in Support of Coastal Ocean Observing Systems” Workshop was sponsored and hosted by CIOSS at the LaSells Stewart Center in Corvallis. The course was organized by **Alexander Kurapov** and **John Allen**. Logistics were handled by CIOSS Administrative Specialist Amy Vandehey. A white paper will be written with recommendations from participants who included top experts in coastal ocean modeling and data assimilation. Those attending felt that the workshop produced worthwhile discussions of current issues in coastal modeling and DA. Presentations and posters from the workshop will be posted shortly on the workshop web page:

[http://cioss.coas.oregonstate.edu/CIOSS/modeling\\_workshop.html](http://cioss.coas.oregonstate.edu/CIOSS/modeling_workshop.html)

**April 12-13:** The SMILE program held their High School Challenge event, in which the students first designed a research cruise, using satellite images to select the cruise path, then engaged in a virtual “rescue at sea” when the research vessel became disabled.

**April 20:** Andrea Schuetz, a MS student in Atmospheric Sciences for **Jim Coakley**, presented “Overestimation of cloud cover in the MODIS cloud product” as part of the COAS Student Seminar Series. Her thesis for this same topic was defended on May 30.

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- April 24:** **Ted Strub** presented “The Humboldt Current System – Overview and Connections to the Large-Scale Pacific Ocean” as part of the Physical Oceanography Seminar Series.
- May 3-4:** **Ted Strub** visited NOAA offices and to discuss Outreach with Marlene Kaplan in the NOAA Office of Education, altimeter workshop plans with Laury Miller in the NESDIS/STAR Laboratory for Satellite Altimetry, and various plans for future activities with Kent Hughes, Paul DiGiacomo, Ingrid Guch and Al Powell in NESDIS/STAR.
- May 9:** Chris Hayes, a MS student of **Jim Coakley**, defended his thesis in Atmospheric Sciences entitled, “Properties of Marine Stratus and Stratocumulus Derived Using Collocated MODIS and CALIPSO Observations.”
- May 10:** A meeting of the local CIOSS Council of Fellows was held. Agenda topics included: an assessment of CIOSS’ current status and if there would be any changes in direction or emphasis for the next 5 years; use of ground systems funds; the possibility of a NOAA intern, similar to the Knauss Fellowship; a CIOSS-NOAA liaison position; and the upcoming Executive Board Meeting in August. A [summary](#) of the meeting minutes can be found on the CIOSS website.
- May 11:** **Mike Kosro** gave a seminar on "Time series mapping of ocean surface currents in the Pacific Northwest" at the University of Delaware.
- May 17-18:** **Dudley Chelton** participated in a 2-day review of the Earth science program at the Jet Propulsion Laboratory in Pasadena, CA.
- May 21-25:** **Ted Strub** attended the AGU Joint Assembly in Acapulco, MX, and presented a talk entitled, “Equatorial forcing of annual SSH signals off western South America.”
- May 24:** Anthony Kirincich, a PhD student of **Jack Barth**, defended his thesis in Physical Oceanography entitled, “Inner-shelf circulation off the central Oregon coast.”
- May 25:** Jeff Early, a PhD student in Physical Oceanography for **Roger Samelson**, presented “Group Foliation and the Flierl-Petviashvilil Equation” as part of the COAS Student Seminar Series.
- May 25:** Bronwen Rice, a MS student of Shawn Rowe, defended her thesis in Marine Resource Management entitled, “Teacher Perspectives in Ocean Sciences Education: A Look at the SMILE-CIOSS Partnership.” Bronwen produced a [narrative](#) of the 2007 SMILE Challenge Event which can be found on the CIOSS website.
- May:** Maria Kavanaugh, PhD student for **Ricardo Letelier**, and Rachel Mueller, PhD student for **Dudley Chelton**, were both awarded NASA Earth and Space Science Fellowships.
- May 27-31:** **Mike Kosro** attended the 7th Radiowave Oceanography Workshop in Cancun, Mexico, and gave a presentation on recognizing and overcoming HF surface current

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measurement biases in the presence of strong narrow currents, and on the delayed spring transition of 2005.

**June 1:** Larry O’Neill, a PhD student in Physical Oceanography for **Dudley Chelton** and **Steve Esbensen**, presented “Surface wind speed and direction response to mid-latitude SST fronts” as part of the COAS Student Seminar Series.

**June 6-8:** **Ted Strub** and Amy Vandehey attended the annual NESDIS CI Directors and Administrators Meeting that was held at CIMSS at the University of Wisconsin. Agenda topics included: Updates from NOAA’s Grants Management Division and NESDIS/STAR, as well as the NESDIS CI Formal Recompetition Schedule.  
[http://www.star.nesdis.noaa.gov/star/corpCIAM\\_6.php](http://www.star.nesdis.noaa.gov/star/corpCIAM_6.php)

**June:** Angel White, a PhD student in Biological Oceanography for **Ricardo Letelier** and **Yvette Spitz**, was chosen to receive the 2007 OSU Distinguished Dissertation Award. The award recognizes a doctoral recipient whose dissertation makes an unusually significant contribution to a discipline in biological and life sciences. Her dissertation, "Phosphorous Physiology and Environmental Forcing of Oceanic Cyanobacteria, Primarily *Trichodesmium* spp," will be advanced as OSU's nominee in the national competition, sponsored by the Council of Graduate Schools and University Microfilms International.

**June:** A new satellite website aimed at the general public was launched by **Ricardo Letelier’s** group: <http://picasso.coas.oregonstate.edu/ORSOO/MODIS/RTSI/>. This site presents real-time MODIS satellite data collected at OSU. It allows visitors to navigate images, make postcards, find satellites in the sky, and watch the satellite dish move. It also provides access to an advanced website where real-time MODIS data from OSU can be ordered by subscription for scientific use.

**June:** Andrey Koch is a new postdoc working with **Alexander Kurapov**. He replaced BJ Choi who left early to pursue a position in his home country of South Korea.

**Summer 2007:** In expanding its efforts in the Formal Education aspect of Outreach, CIOSS sponsored 4 Research Experiences for Undergraduates ([REU](#)) Students, which stayed for a total of 10 weeks. A summer seminar series was offered to showcase the breadth of oceanographic research at OSU. On June 11, **Dudley Chelton** gave a seminar on “Microwave Satellite Remote Sensing of the Ocean” and **Eric Maloney** gave one on “The Scientific Basis for Anthropogenic Climate Change” as part of the series. At the end of the 10 weeks, each of the students gave final presentations and reports. Following is a list of the COAS researchers involved, their students and topic of study.

**Alexander Kurapov**, Daniel Fulton from Lawrence University, Wisconsin, "[Modeling the Columbia River Plume on the Oregon Shelf during Summer Upwelling.](#)" Alexander asked Daniel to stay on for an extra month to take advantage of their good collaborations.

**Ricardo Letelier** and **Pete Strutton**, Beth Prier from Bethany College, Kansas, ["Evidence for photoacclimation by the diatom \*Chaetoceros muelleri\* due to fluctuating light."](#)

**Dudley Chelton** and **Eric Maloney**, Jenny Rolling from University of Maryland, ["Correlation of Sea Surface Temperature in the Gulf Stream Extension with the Northern Hemisphere Annular Mode."](#)

Kipp Shearman, Regina Yopak from Simmons College, Connecticut, ["Comparing Glider Observed Velocities and Geostrophic Currents."](#)

**June 11-12: Ted Strub** and other COAS PI's attended a planning meeting for the VOCALS experiment (see next item), to be held off northern Chile. Oscar Pizarro attended from Chile and returned to Corvallis to work with CIOSS/COAS oceanographers.

**June 13-21: Oscar Pizarro visit**

Oscar Pizarro from the University of Concepcion in Chile visited COAS and CIOSS, to establish collaborations in the future with various COAS faculty to take part in writing a specific proposal for research in an international project that will occur in Fall 2008. Oscar worked with Ed Dever in writing this proposal while he was here. He also participated in a research cruise, gaining experience in the use of both the new "minibat" towed undulating vehicle and the ocean gliders.

This past year, a new international experiment was planned by a group of U.S. and Chilean atmospheric scientists for Fall 2008 - called VOCALS (VAMOS Ocean-Cloud-Atmosphere-Land System). At OSU, Ed Dever, **Ricardo Letelier**, Clayton Paulson, **Jack Barth**, Kipp Shearman, **Mike Kosro**, **Ted Strub** and others proposed two components of the experiment. Oscar Pizarro, Samuel Hormazabal, Jose Rutllant, Rene Garreau and others are our counterparts in Chile. Oscar and Samuel are co-PI's with Ed, Kipp, Mike, Ted and others in the coastal component.

**June 18:** Martin Saraceno, postdoc for **Ted Strub**, was invited to the NOAA Laboratory for Satellite Altimetry in Silver Spring, Maryland to give the following presentation, "Can Tide Gauges Improve Sea Surface Height (SSH) Measurements in the Near Shore Coastal Region?" Martin also gave this talk at the 4th Annual NOAA/NESDIS/STAR/CoRP Symposium held at the University of Maryland the same week.

**June 19-21: Dudley Chelton** attended a National Research Council workshop held in Washington, D.C. to discuss strategies for ensuring the climate data record from NPOESS. This meeting was a follow-up to an NRC report published in early 2007 entitled "Earth Science and Applications from Space: National Imperatives for the Next Decade and Beyond."

**June 20:** CIOSS Postdoc Qingtao Song and graduate student Larry O'Neill attended the CoRP Science Symposium in College Park, Maryland and gave presentations on their research.

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**June 26-28: John Allen** and **Mike Kosro** participated in the USA-Mexico Workshop on the Deepwater Physical Oceanography of the Gulf of Mexico, sponsored by the Minerals Management Service.

**June 29:** The [CIOSS Year 4 Annual Progress Report](#) was submitted through NOAA Grants Online and covers the period of April 1, 2006 – March 31, 2007.

**July 4-14: Samuel Hormazabal visit**

On July 10, Samuel Hormazabal of the University of Concepcion in Chile presented, “Planetary Waves, Mesoscale Eddies and Pelagic Fish off Chile (18-40°S)” as part of the Physical Oceanography seminar series. This was during a visit similar to that by Oscar Pizarro, to explore areas of collaboration between oceanographers in COAS/CIOSS and those at the University of Concepcion.

**Summer 2007:** In the summer issue of Terra, the OSU research magazine, **Jack Barth** and Zanna Chase are the main sources for the lead article: “[Winds of Change: Scientists link air and water currents as shifting conditions take their toll on the Oregon coast.](#)”

**July 23: Pete Strutton** gave a talk at the Coastal Zone 07 meeting in Portland, OR entitled “Satellite prediction and tracking of harmful algal blooms” with co-authors **Michelle Wood** (UO), Jacqui Tweddle (OSU postdoc), Dave Foley (CoastWatch) and Deb Cannon (Oregon Dept of Agriculture).

**July 31-August 3: Curt Davis** hosted a COAST Data Workshop at OSU. At the workshop participants in the COAST September 2006 Monterey Bay Experiment reviewed data from the experiment and initiated work on 6 publications based on that work. Part of the workshop activity was to set up the COAST WEOGEO data server and to begin loading the data into that server.

**August 2:** Nilesh Araligidat, a MS student of **Eric Maloney**, defended his thesis in Atmospheric Sciences entitled, “Buoy and Satellite observation of Wind Induced Surface Heat Exchange in the Intraseasonal Oscillation over west Pacific and Indian Ocean.”

**August 7-8:** The SMILE program held its summer workshop for teacher training.

**August 8: Jack Barth** delivered the annual "2007 Bayard McConnaughey Lecture" at the Oregon Institute of Marine Biology in Charleston, Oregon. The title of the talk was "The Changing Rhythms of Oregon's Dynamic Coastal Ocean," and included a review of the low-oxygen or hypoxia events of the last several years and their effects on the marine ecosystem off Oregon. The talk was preceded by a TV interview about hypoxia which ran on KCBY, the CBS affiliate station in Coos Bay, Oregon.

**August 16:** Larry O’Neill, a PhD student of **Dudley Chelton** and **Steve Esbensen** successfully defended his thesis in Physical Oceanography entitled, "Surface Wind Modification Near Mid-Latitude Ocean Fronts: Observational and Dynamical Analysis.”

**August 20-23:** CIOSS was represented by several participants who gave presentations at the AMS Conference on Air-Sea Interaction in Portland, OR.

**Dudley Chelton:** “Oceanic eddies in the VOCALS region of the southeast Pacific Ocean.” At that meeting, Chelton also attended a splinter meeting to discuss QuikSCAT ocean vector wind and wind stress science products in which he gave a presentation on sampling characteristics of scatterometer data.

Dudley’s PhD student Larry O’Neill: “Dynamical analysis of the coupling between sea surface temperature and the surface vorticity and divergence fields associated with the Agulhas Return Current.”

CIOSS Postdoc Qingtao Song, working with **Alexander Kurapov:** “The Impact of SST Front on the Mid-level Troposphere in Satellite Observations and Numerical Models.”

**August 27:** **Curt Davis** presented “Spatial, Temporal, and Spectral Resolution Considerations for Imaging Coastal Waters” at the SPIE conference 6680 on Coastal Remote Sensing in San Diego, CA. The paper was co-authored by **Ricardo Letelier** and his student Maria Kavanaugh and COAST member Paul Bissett and his FERI colleague Dave Kohler. This was the first presentation on the COAST Monterey Bay Experiment Results. A [paper](#) by the same title has been accepted for publication in the Proceedings of the SPIE.

**August 27-28:** Josh Willis from the Jet Propulsion Laboratory in Pasadena, CA, visited **Dudley Chelton** and gave a seminar, co-hosted by CIOSS. His seminar was entitled, “Toward Closing the Globally Averaged Sea Level Budget on Seasonal to Interannual Time Scales.”

**August 29-30:** A meeting of the CIOSS Executive Board was held. Discussion topics centered on future directions for CIOSS during the next 5 years. A complete [summary](#) of the meeting discussion can be found on the CIOSS website.

**September 5-8:** Martin Saraceno, CIOSS Postdoc for **Ted Strub**, was invited to the Department of Oceanography at Florida State University to discuss with Dr. W. Dewar the use of satellite altimetry to estimate the interannual variability of the transport associated with the Zapiola Rise. While there, Martin gave a seminar entitled, “Estimates of Sea Surface Height and Near Surface Alongshore Coastal Currents From Combinations of Altimeters and Tide Gauges.”

**September 14-November 5:** **Dudley Chelton** was on extended travel to Europe. His trip began with a week in Les Diablerets in the Swiss Alps where he gave several lectures as part of a Dutch summer school on the dynamics of large-scale and mesoscale ocean circulation. This was followed by a week in Amsterdam for the Joint EUMETSAT Meteorological Satellite Conference and AMS Satellite Meteorology and Oceanography Conference, and the NASA Ocean Vector Winds Science Team Meeting. During the last four weeks of the trip, Chelton worked with Anton Beljaars and Hans Hersbach at the European Centre

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for Medium-Range Weather Forecasting in Reading, U.K. to improve the ECMWF model representation of SST influence on surface winds over the global ocean.

**September 18-21:** Several CIOSS Fellows attended the EPOC meeting in Leavenworth, Washington.

**September 24-28:** Several CIOSS Fellows attended the GLOBEC NEP meeting and GLOBEC Pan Regional Synthesis meeting in Seattle, Washington.

**September 30:** **Martin Saraceno** finished his Postdoc appointment at CIOSS and left to return to Argentina, where he will begin work in CIMA (Centro de Investigaciones del Mar y la Atmosfera) at the University of Buenos Aires. His return itinerary began by driving from Corvallis through Mexico, with a stop at CICESE to give a seminar, continuing as far south as possible before flying the rest of the way to Argentina.

**October:** Six CIOSS grants finished their three-month journey through GMD and arrived back at OSU. At the same time, the CIOSS Five-Year Plan and proposed funding for the Administrative costs for CIOSS for the next five years was submitted informally to the STAR office for comments.

**October 10, 31:** **Ted Strub** participated in the STAR conference call to discuss and plan lectures and a possible course on remote sensing that will be given remotely, using the NOAA VISIT web technology. Stan Kidder (CIRA) will give a guest lecture in Strub's graduate level course (Ocean Remote Sensing) on November 28, 2007. The lecture will cover the estimation of atmospheric winds.

**October 24:** **Jack Barth**, Bob Collier and Ed Dever gave a special interdisciplinary seminar, "An update on NSF's Ocean Observatories Initiative: Plans for the Pacific Northwest."

**October 29-30:** **Ted Strub** attended a meeting of the Science Working Team for the next generation altimeter, WATER-HM, and presented information regarding the use of altimeter data in coastal regions.

**October 31:** **Dudley Chelton**, **Ted Strub**, **Alexander Kurapov** and **Gary Egbert** were PI's or Co-I's on proposals submitted to the NASA ROSES-2007 Call for proposals for the Ocean Surface Topography Science Team. During the preceding months, CIOSS Fellows submitted proposals to the ROSES-2007 call for Physical Oceanography (**Dudley Chelton**, a successful proposal), Decision Support Systems (**Jack Barth** and Craig Risien), and Accelerated Use of NASA Products (**Ted Strub**).

**November 2:** A meeting of the CIOSS Council Members was held in Corvallis. Curt Davis has agreed to take over from Dudley Chelton as Chair of the Council. Paul DiGiacomo was recently added to the list of CIOSS Fellows, as well as the Council, per the August Executive Board Meeting.

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The purpose of the meeting was to have a general discussion of the Executive Board Meeting suggestions, and to discuss the priorities for the next year's internal research projects and send out a call for proposals. The major recommendation for our core research is to emphasize projects that will advance satellite research and applications that support the implementation of the Integrated Ocean Observing System (IOOS). A [summary](#) of the meeting minutes can be found on the CIOSS website.

**November 5:** The 2008 Call for Proposals was sent to CIOSS Fellows, with a due date of December 3. Minutes of the Council Meeting were sent to all Council Members for comments.

**November 5-8:** CIOSS sponsored a visit by Yonggang Liu, a postdoc at the School of Oceanography at the University of Washington. He works mainly on numerical modeling of the Columbia River plume and the northeast Pacific coastal ocean circulation using the ROMS. His work includes model tuning, validation, and analysis with in situ observations obtained in the RISE (River Influences on Shelf Ecosystems) project. Past research activities include observational studies of ocean circulation on the West Florida Shelf and in the Asian marginal seas (East & South China Seas, NW Pacific east of Ryukyu & Taiwan Islands). During his stay, Yonggang gave a presentation entitled, "Application of the Self-Organizing Map as a Feature Extraction Technique in Oceanographic Data Analysis," as part of the Physical Oceanography seminar series. He met with **Ricardo Letelier**, Roberto Venegas and Maria Kavanaugh and discussed future collaborations using the SOM methodology.

**November: Jim Coakley** was cited by an Editor of an AGU journal for excellence in refereeing. The Editor's citation recognizes this special service to the Union and commends Jim for consistently providing constructive and thoughtful reviews. Jim was cited by Rangasayi Halthore of Geophysical Research Letters.

**November: Roger Samelson** has been elected to the UCAR President's Advisory Committee on University Relations (PACUR), which helps maintain good communication and relationships between the Corporation and members.  
(<http://www.ucar.edu/governance/committees/urc/index.shtml>)

**November:** The [CIOSS 5-Year plan](#) was submitted through NOAA Grants.gov with a vision for the next five years of CIOSS.