puts were assigned to work together in thematic teams and were charged with developing a consensus presentation on their theme in advance of the workshop. These theme presentations, available at http://cioss.coas.oregonstate.edu/CIOSS/altimeter_workshop.html, were then used to begin the discussion of each topic. Topics covered included tracking/retracking (improving the radar travel time measurement), wet troposphere (correcting radar travel time for delay by atmospheric water), tides, inverted barometer (the ocean's response to atmospheric forcing), sea state bias (error in SSH due to the instrument's response to wind and waves), wave height, data sets and management, and modeling and applications. There were no breakout groups or parallel sessions so that everyone participated in discussion of each theme.

The Centre National d'Études Spatiales (CNES) and the European Space Agency (ESA) have funded coastal altimetry programs; experts from the CNES Pistach and ESA Alticore and Coastalt programs presented their preliminary findings and future plans. Also represented was the ESA Samosa project, which is using the waveform simulator for the CryoSat 2 altimeter to study altimeter-coastline interactions in conventional and delay-Doppler modes. Funding-agency program managers offered their perspectives.

The workshop's findings, recommendations, and initial steps toward an error budget can be found in the electronic supplement to this *Eos* issue (http://www.agu.org/eos_elec/). A second coastal altimeter workshop will be held in Pisa, Italy, 6–7 November 2008 (see http://www.coastalt.eu/pisaworkshop08).

The information reported here does not constitute a statement of policy, decision, or position on behalf of NOAA or the U.S. government.

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Cultural Uses and Impacts of Fire: Past, Present, and Future

Analysis, Integration and Modeling of the Earth System (AIMES) Fourth Young Scholar's Network (YSN) Workshop; Boulder, Colorado, 14–18 July 2008

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Fire is a global phenomenon transcending social, economic, and political boundaries. Effective decision making regarding fire policies requires integrating knowledge of human, ecological, and climatic components of fire research over a range of spatial and temporal scales.

The Analysis, Integration and Modeling of the Earth System (AIMES) fourth Young Scholar's Network workshop brought together early-career researchers representing anthropology, archaeology, atmospheric science, climate modeling, ecology, fire management, geography, paleoclimate, political science, and remote sensing. Goals of the workshop were to explore the drivers, impacts, and feedbacks of human use of fires and to contextualize the management of fires.

The participants identified three important issues during the workshop. The first involves human use and the perception of fire. Although humans have used fire for millennia, public opinion about fire depends on geographic location and social, economic, and political factors. In many places, fire remains an essential landscape management tool, but it can also be associated with negative consequences such as deforestation, air pollution, and loss of livelihood. Meeting attendees agreed that because fire is both a natural process and a process readily altered by human management, public information campaigns must present a more nuanced message regarding this fundamental ecological process.

A second issue brought up at the meeting centered around the consequences of fire. The interplay of changing land use patterns, climate change, and invasive plant species contributes to significant uncertainties for fire management and the assessment of fire emissions. This lack of knowledge, combined with a poorly defined history of fire use and emissions, confounds accurate climate simulations. Participants suggested that cross-disciplinary research, blending local- to regional-scale information with paleofire and current fire data, offers the best method to understand fires in the Earth system.

A third point of discussion contemplated the future significance of fire for society. Fire management requires the integration of knowledge regarding historical anthropogenic fire use, the physical mechanisms controlling fire, and the ecological feedbacks of fire with vegetation and climate change. While management practices that alter the timing and intensity of fires can be effective, globally limiting fire is likely to be unsuccessful and an inappropriate method of reducing total anthropogenic emissions because it does not consider potential ecosystem feedbacks or the economic and cultural significance of fire in many parts of the world. Because fire emissions are a major component of the Earth system, meeting participants recommend that fires be fully incorporated into global climate models but that fire management goals and policy be composed on a regional level.

The Young Scholar's Network is an activity of the AIMES project of the International Geosphere-Biosphere Programme (IGBP). The workshop was supported by the National Science Foundation, the National Center for Atmospheric Research Advanced Studies Program, IGBP Past Global Changes (PAGES), and the Natural Environment Research Council. For more information, please visit http://www.aimes.ucar.edu/ysn.shtml.

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