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I. Introduction

What do teachers do with the information and ideas they gain through participation in the AMS Education Programs? For many years now, the AMS has trained teachers through the “DataStreme Atmosphere,” “DataStreme Ocean,” and “Water in the Earth System” courses. Yet continuing connections between the teachers and AMS following the end of courses, and obtaining valuable feedback about how they use their knowledge have been difficult.

We have developed one format to bring participants together to share experiences, along with giving them new ideas about cutting-edge research. We provide twice-a-year meetings at the Lamont-Doherty Earth Observatory of Columbia University (LDEO) in Palisades, NY, that have proved informative to participants and useful for learning more about the impact of the AMS Program.

The first “AMS@LDEO” meeting was held in February 2004. A second meeting is planned for December. Highlights from both meetings are described in the Symposium poster.

II. Inviting Participants

E-mail invitations were sent to more than sixty teachers who have participated in AMS Education courses for which the presenter serves as a Local Implementation Team member. Invitations were also extended through LIT leaders in nearby areas to teachers in their programs. 12 teachers were able to participate in the first AMS@LDEO program.

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III. Format of the Meetings

These “reunions” for AMS Education program participants follow the format established for our “Earth2Class Workshops for Teachers” held monthly at LDEO. More about this program can be found in the accompanying presentation in this Symposium, “P1.42 Earth2Class—Expanding Opportunities to Link Classroom Teachers and Research Scientists.”

This format includes a morning program comprising an introduction, presentations by scientists about their cutting-edge investigations into topics included in the DataStreme programs, and a tour of selected LDEO facilities, especially the Deep Sea Sample Repository.

During the afternoon session, participants share descriptions of how they have utilized materials and concepts obtained from the courses. Such peer-to-peer exchanges have been mutually beneficial for the more experienced teachers and the newer teachers. Examples of some of these shared materials will be presented in the poster.

III. The First AMS@LDEO (28 Feb 2004)

The agenda included:

- 10:00 – 10:15 Welcome and Introductions
- 10:15 – 10:45 Dr. Steve Goldstein:
“Volcanoes of the Arctic”
- 10:45 – 11:00 Break
- 11:00 – 11:30 Dr. Alexey Kaplan:
“El Nino and Climate Changes”
- 11:30 – 12:00 Tour of the LDEO Deep Sea
Sample Repository
- 12:00 – 1:00 Lunch (Cafeteria)
- 1:00 – 3:00 Using AMS Education
Program Resources for Classroom
Instructional Activities and Peer-Training

Dr. Steven Goldstein (Associate Professor of Geochemistry) described how scientists collect data in the field, specifically from a research trip to study Arctic volcanology aboard a US Navy ice-breaker to the Gakkel Ridge and the North Pole. His talk expanded on information found in DataStreme Ocean (week/chapter 2.)

Dr. Alexey Kaplan (Doherty Senior Research Scientist) discussed his work on theoretical aspects of research, specifically the development of mathematical models to describe El Nino and climate changes. He provided the teachers with new understandings about historical climate analyses, paleoclimatic reconstructions, data assimilation, and studies of error dynamics in the ocean and coupled climate models. These topics occur in the later weeks/chapters of all three AMS courses.

Participants toured the LDEO Deep Sea Sample Repository, the world's largest collection of underwater piston cores and dredge materials. Studies of these materials have provided significant data for understanding paleoclimates and other important aspects of the geosciences. It was the first time that many of the teachers had actually handled the ocean floor materials described in DataStreme Ocean (chapter/week 4.)

Also during the morning, teachers were provided with copies of a variety of posters, brochures, CDs, and other materials developed by the National Weather Service and other NOAA programs, the Jet Propulsion Laboratory and other NASA programs, and AMS teacher-training materials, such as "Today's Weather." Participants also received a certificate of participation recognizing their time in this professional development opportunity.

In the afternoon teacher-to-teacher sessions, participants explained to each other how they have used materials from their AMS programs with their students. Some provided copies of hand-outs they used to teach lessons related to topics in the AMS education courses. They also had the opportunity to use a computer lab to share AMS and LDEO web sites with colleagues who might not previously have been familiar with these.

IV. The Second AMS@LDEO (11 Dec 2004)

The second program is being planned at the deadline time for this Abstract, so a description of this program cannot be provided. However, it will follow the same format, and a wider invitation has been extended, not only to past participants in the AMS programs, but also to teachers who have not yet participated but are potential future enrollees.

Highlights of this program will be included in the Symposium poster presentation.

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For more information about Dr. Steve Goldstein's research: <http://eesc.columbia.edu/faculty/goldstein.html>

For more information about Dr. Alexey Kaplan's research: <http://rainbow.ldeo.columbia.edu/~alexeyk/>
LDEO Deep Sea Sample Repository: http://www.ldeo.columbia.edu/res/fac/CORE_REPOSITORY/RHP1.html

Earth2Class Workshops for Teachers at LDEO: www.earth2class.org