The AMS Short Course on ***Interactive Immersion Learning: Flying Through Data Onboard The GEOpod*** will be held on **Sunday afternoon, 6 January 2013** preceding the 93rd AMS Annual Meeting in Austin, Texas.

GEOpod is an intuitive, interactive Java module that allows users to navigate and probe an immersive 3-D world. GEOpod features authentic geophysical data, which is based on actual physics, thus exhibiting technical accuracy, scientific soundness and fidelity. GEOpod leverages the Unidata Program Center's open source Java-based visualization software, the Integrated Data Viewer (IDV), to import and render meteorological data. We will demonstrate how the GEOpod gives a user a first-person perspective of flying through a data volume, and provides an intuitive, engaging interaction style designed to appeal to students and motivate them to explore the volume and gain a comprehensive understanding of meteorological concepts. GEOpod provides a number of useful devices and features to facilitate and enhance this exploration process, while maintaining a clean, easy-to-use interface which is accessible to novices and experts alike. The workshop is intended for faculty and students in undergraduate atmospheric or related sciences programs.

Course Goals and Objectives: 1) To introduce faculty and students to a virtual 3-D immersion application that allows them to navigate through data at the controls of a virtual probe called GEOpod; 2) to expose them to a new learning tool, complete with missions and assessment rubrics, that uses real, geophysical data instead of artificial simulations to understand atmospheric structure and concepts; and 3) to provide an exciting game-like immersion that will stimulate interest and lead to better understanding.

Format: The 3 ½ - hour short course will be divided into three main parts. In the first hour we will provide an introduction to GEOpod and demonstrate its capabilities. The second hour will focus on hands-on, instructor-guided activities with participants using their own laptops to explore the features of the software. In the third hour, participants will be given two missions to complete. A course wrap-up and user survey will fill the final 30 minutes.

AMS SHORT COURSE
Interactive Immersion Learning: Flying through data onboard the GEOpod

Instructors:
Richard D. Clark, Ph.D., (Organizer and Instructor) Millersville University, Meteorology Program
Sepideh Yalda, Ph.D., (Instructor) Millersville University, Meteorology Program
Gary Zoppetti, Ph.D., (Instructor) Millersville University, Computer Sciences
Yuan Ho, Software engineer and IDV technical support, Unidata Program Center, Boulder, CO.

Student Assistants:
Lindsey Young (Student and Technical Assistant) Millersville University, Computer Sciences
Neil Obetz (Student and Technical Assistant) Millersville University, Computer Sciences
Timothy Juliano (Student and Technical Assistant) Millersville University, Meteorology Program

Sunday, 6 JAN 2013, 1:00 - 4:30 PM

Time	Activity	Instructor	Support materials
1:00 - 1:15	Short course welcome, introduction, and expectations	R. Clark	
1:15 - 2:00	Overview of GEOpod, demonstration of capability	R. Clark S. Yalda G.Zoppetti	Itinerary, hand-outs, GEOpod documentation, missions for the course
2:00 - 3:00	Instructor-guided activities using GEOpod	S. Yalda G. Zoppetti R. Clark	Participants must bring Windows compatible laptops to follow the guided exercises
3:00 - 4:00	Hands-on exercises with users accessing GEOpod missions and performing functions; exploration and discovery	G. Zoppetti R. Clark S. Yalda	Participants will use their laptops to access two missions and navigate the GEOpod
4:00 - 4:30	Course wrap-up; solicit feedback on the hands-on exercise and classroom compatibility; answer remaining questions; conduct survey	R. Clark S. Yalda G.Zoppetti	

Participants are required to bring their own Windows-based (Vista or later) laptop with at least 4 GB of RAM; *GEOpod is not compatible with MAC OS*. No previous IDV experience is necessary. **Registration fee: $25.00**. Maximum enrollment: 30. GEOpod is funded through a grant from the National Science Foundation (NSF-IIS 0835411), and this short course is partially supported by NSF.

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