### EHaz -- Six University Canada/US/Mexico exchange program in Earth Hazards

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This program is a consortium of six research-based universities in Canada, Mexico, and the U.S (Michigan Tech, Buffalo, McGill, Waterloo, UNAM and Colima) funded by the Department of Education in the US and equivalent organizations in Canada and Mexico as part of the NAFTA agreement. The focus area for the mobility program is mitigation of geological natural hazards in North America. The consortium universities will exchange students and faculty in several engineering and science disciplines (e.g. environmental engineering, civil engineering, geological engineering, social sciences and geology) involved in the study of natural geological hazards. Students in the social sciences also will be exchanged, recognizing that the solution of natural hazards problems involves critical political, social, and economic aspects. Students will be mobilized among the participating universities through oneto two-semester visits and up to 60 more students will be mobilized via short-term, intensive courses. Student activities will consist of three stages: intensive language training, natural hazards coursework, and professional or research internships with local industries, agencies or at the host university. In each of the next three years there will be a joint advanced volcanology class run via videoconferencing and a three week field trip to areas of volcanological interest in Canada, US and Mexico. The course and field trip foci for the next three years are: 2006: Megaeruptions/ LongValley and Yellowstone; 2007: Volcanic edifice failure/ Cascades and Western Canada 2008: Convergent plate Boundary Volcanism/ Mexican Volcanic Belt Although the six universities will have first access to the exchange we are constructing ways for other volcanology programs to share the teleconference courses and field trips.

# What is EHaz about?

The focus area for the mobility program is mitigation of geological natural hazards in North America. This project will facilitate the integration of graduate education programs by allowing graduate students to combine the expertise and experience of several universities with active programs in hazards. At least 46 students (16 from the U.S., 16 from Canada and 14 from Mexico) will be mobilized among the participating universities through one- to two-semester visits and up to 60 more students will be mobilized via short-term, intensive courses. The intensive courses will enable the university faculties to explore further integration of graduate programs in hazards. The consortium allows graduate students access to programs with direct links to Volcano Observatories (Colima, UNAM), to atmospheric programs (McGill, UNAM, MTU), to landslide hazards programs (Waterloo), to numerical modeling centers (Buffalo, to remote sensing programs (MTU) and to diverse field volcanological research programs (Buffalo, McGill, MTU, UNAM). The overall goel is to improve graduate education by exploring mutual educational interests of several universities active in hazards research.

#### What kinds of exchanges can be done?

A study abroad consists of a one- or two-semester stay at a US, Mexican or Canadian university, including intensive language training, water resources coursework, and an internship. Study abroad is allowed only in the countries outside the student's host university. Students will register and pay the usual tuition and fees at their home university. Coursework credits are transferable. Students will earn a stipend and most travel expenses will be paid.Short-term intensive courses are field hazards studies (two to three weeks) on earth hazards topics in the U.S. Canada or Mexico. Most field trip expenses will be paid for by the program. No language proficiency is required. The intensive courses are offered yearly, and may be taken at any of the partner universities. Here is our planned schedule of field studies:

1. May-June 2006 Restless Calderas of Western US: Long Valley and Yellowstone (led by US partners with help from other institutions)

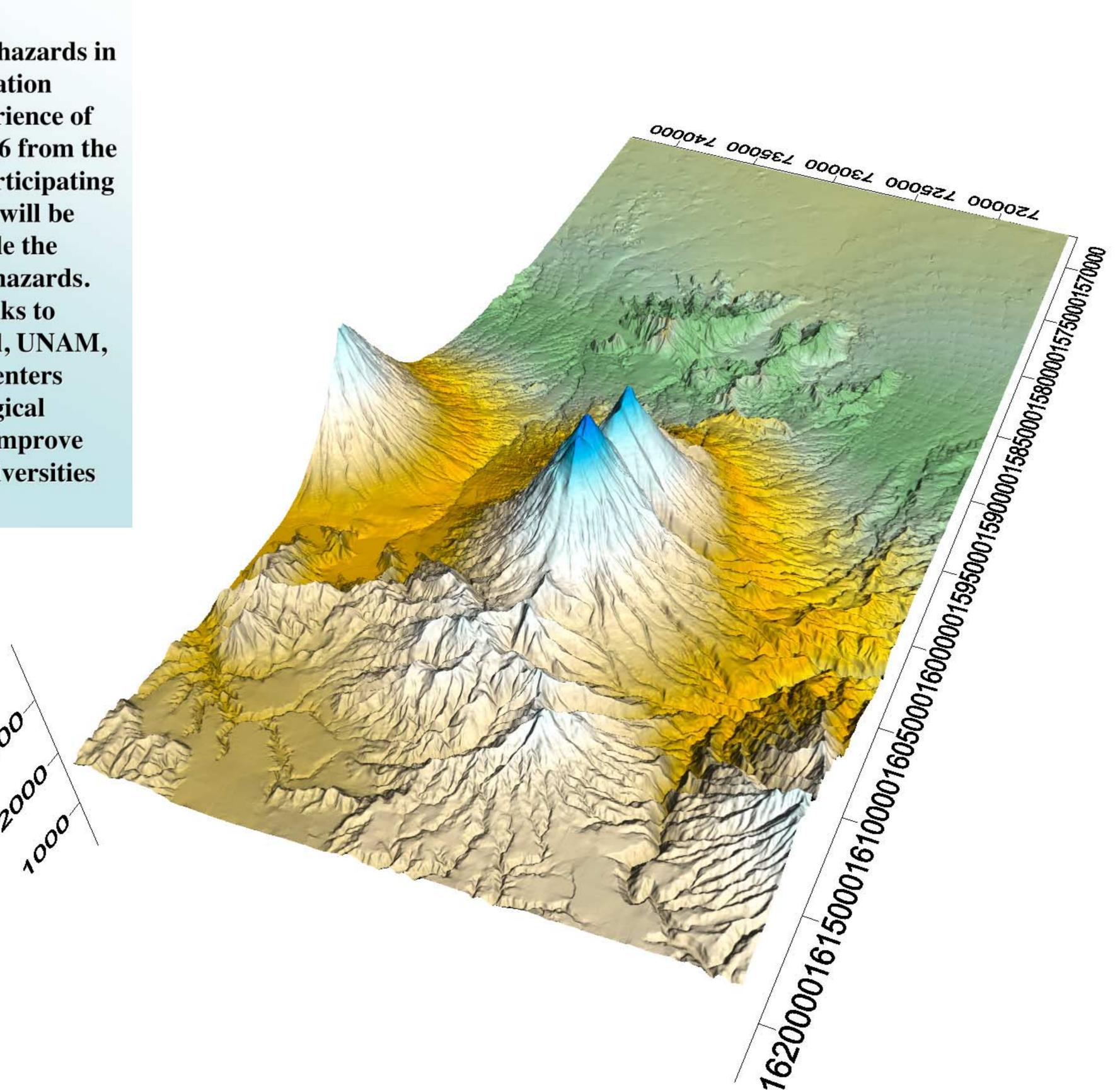
2. August-Sept 2007 Debris Avalanches and Landslides of the Cascade Range (US and Canada) and Canadian Rockies (led by Canadian Partners)

3. May- June 2008 Active Convergent Plate Boundary Volcanism in Mexico (led by Mexican partners)

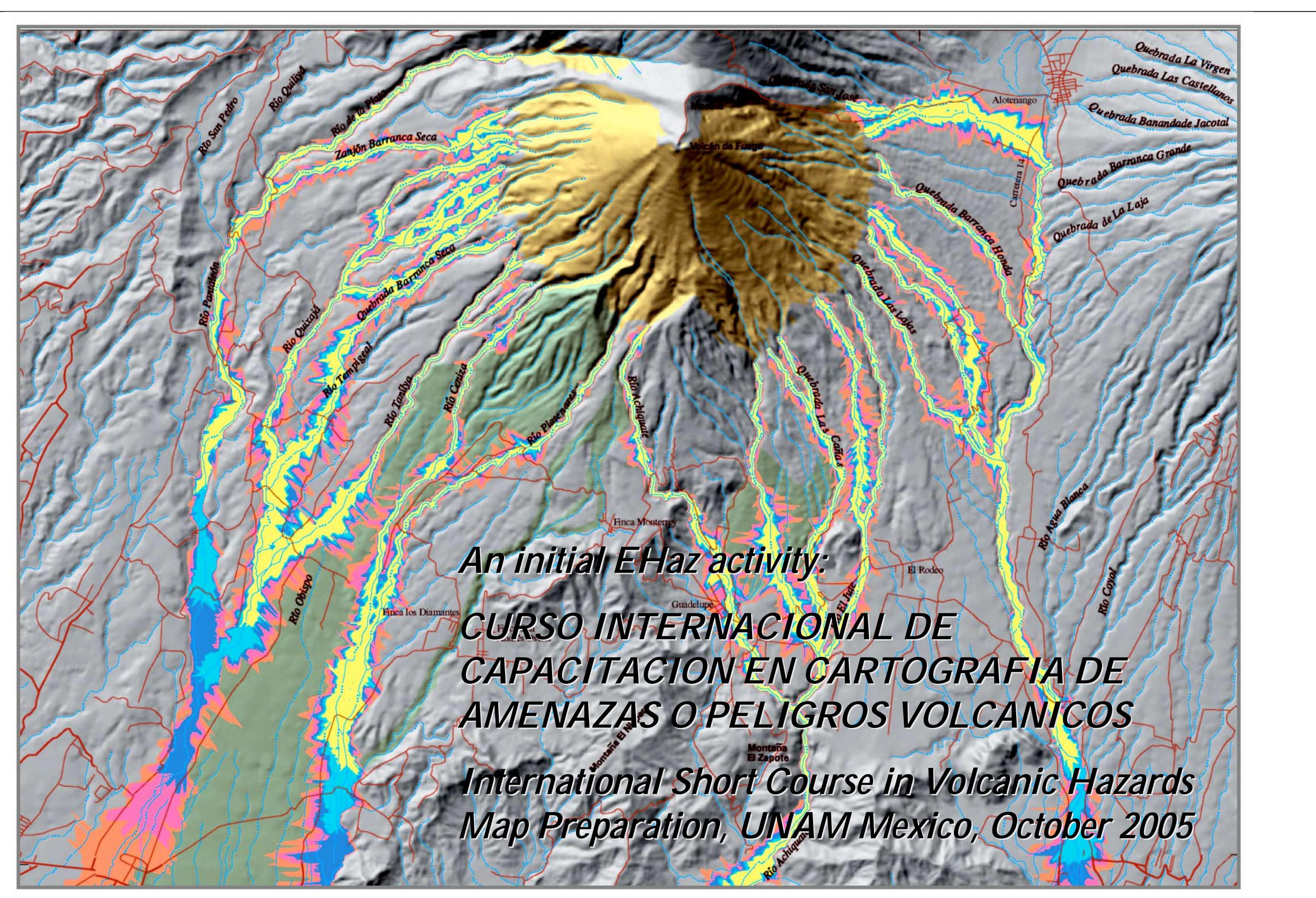
### A North American Mobility Project

Members:

Michigan Technological University, Houghton, Michigan University at Buffalo, Buffalo, NY Universidad Nacional Autónoma de México, México DF Universidad de Colima, Colima McGill University, Montreal, Quebec University of Waterloo, Waterloo, Ontario



DEM of Fuego and Acatenango Volcanoes, Guatemala



J. W. Vallance, S. P. Schilling, O. Matías, W. I. Rose, and M. M. Howell, 2001, Volcano Hazards at Fuego and Acatenango, Guatemala USGS Open File Report 01-431



The initial activity of EHaz was a shortcourse conducted by UNAM, with help from Buffalo, for students and scientists in Latin America and USA. The 10 day course, all in spanish, had field, lecture and computer lab components and was attended by 30 professionals and students. EHaz funded the attendance of eight graduate students from Michigan Tech.

# EHaz

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Photos by Jason Evans

