

### **Large-Scale Experiments on Volcanic Processes**

Some of the most hazardous geologic processes involve complex multiphase flows, particularly those related to explosive volcanic eruptions, which are still not well understood. A “community use facility” designed to carry out large scale experiments for the study of hazardous flows has been discussed during a specialized workshop (Buffalo, 17–19 September 2010) to address some of the shortcomings of traditional investigations. In fact, large-scale experiments can provide important insights to capture the relevant regimes, length and time scales, and material properties of natural processes under controlled situations where careful measurements can be made with known initial and boundary conditions. Processes that will be primarily investigated include: i) conduit flows, ii) volcanic plumes, iii) pyroclastic density currents and iv) debris avalanches.

More details in: *Valentine G.A., Bonadonna C., Manzella I., Clarke A., Dellino P. (2011) Large-Scale Experiments on Volcanic Processes. EOS Transactions, American Geophysical Union, Vol. 92, No. 11, pages 89-96.*