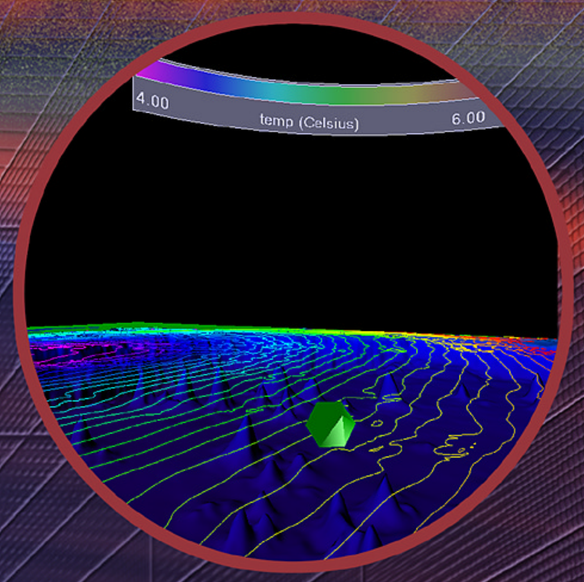
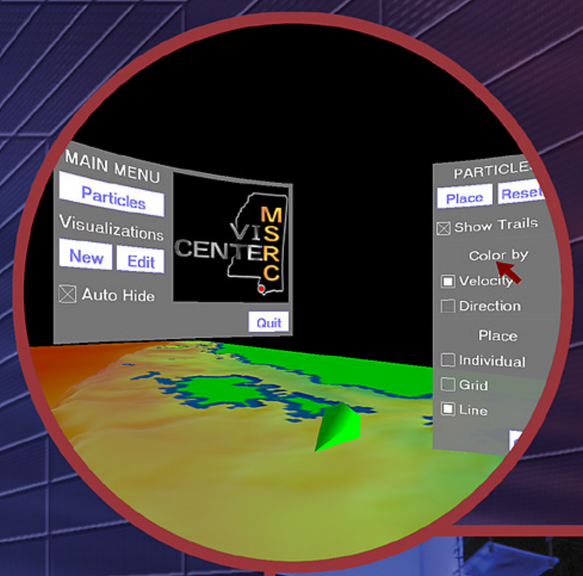
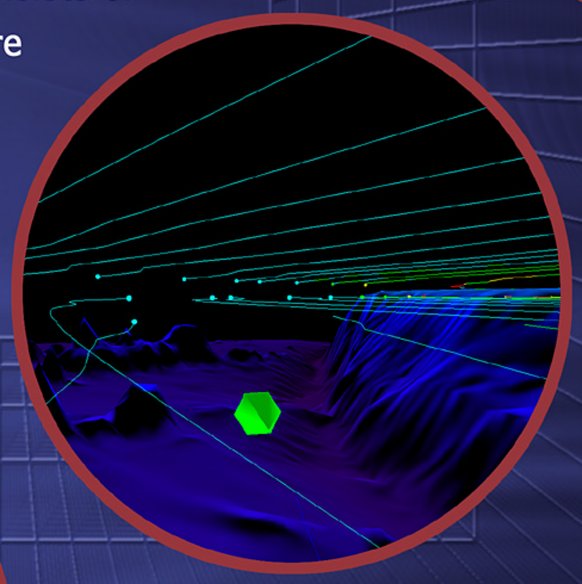
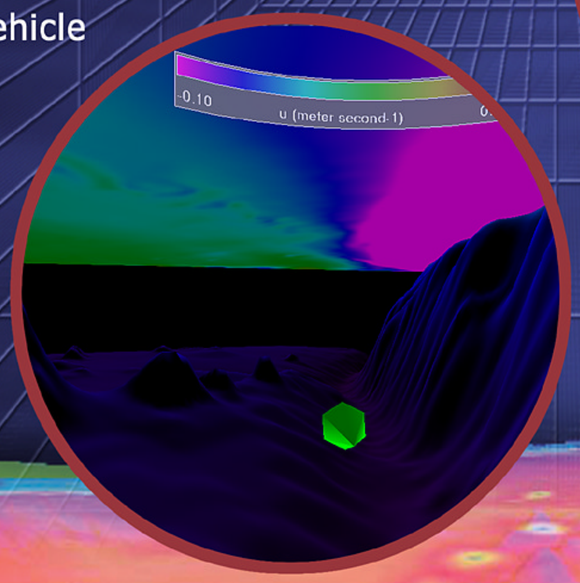
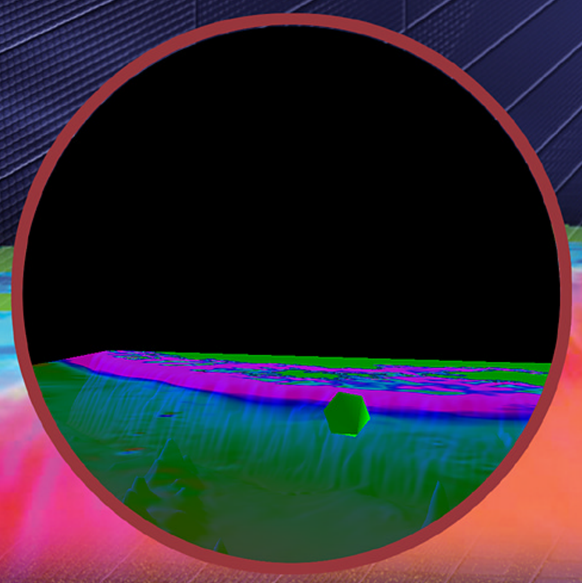
SALMON Virtual Environment



The NAVO MSRC provides tailored support to the Climate, Weather, and Ocean (CWO) modeling community. This includes support in the realm of High Performance Computing (HPC), storage, and visual analysis. In the area of visual analysis, the NAVO MSRC Visualization Center has become proficient in developing interactive analysis applications, which allow users to interactively analyze and interrogate their full-resolution model output. These custom applications are efficient and portable and can usually be run on the users' desktops.

In a continuing effort to provide users (in this case Dr. Kate Hedstrom and the Sea-Air-Land Modeling and Observing Network (SALMON)) with visual analysis solutions, a collaboration with the Arctic Region Supercomputing Center (ARSC) was initiated to exploit the ARSC's new state-of-the-art immersive display system (CAVE). Testing at the Mississippi State University (MSU) CAVE concluded this software application project, which should be delivered by November 2003.



The Cave Automatic Virtual Environment (CAVE), originally developed at the University of Illinois, is a room-sized, multi-user virtual reality device. A CAVE consists of one to six walls on which Three-Dimensional (3D) stereo graphics are projected and usually includes some type of spatially tracked input device such as a wand or pinch glove. By tracking the position and orientation of the user's head, the graphics can be generated in such a way to give the user a very immersive experience. The CAVE has been useful in a variety of scientific visualization applications such as vehicle design or ocean simulation.