

Scripps Institution of Oceanography Submergence Activities 2001-2002

Most activities have gone through the Marine Physical laboratory, particularly under the guidance of John Hildebrand and Fred Spiess.

SIO Control Vehicle

In April 2002 the SIO-MPL Control Vehicle worked flawlessly during an expedition led by John Hildebrand. This project involved the RV REVELLE working on a seafloor geodesy project near Hawaii. The CV was operated for 18 days and made 32 CV lowerings. These operations were to make vertical (pressure) measurements on benchmarks and near precision transponders, as well as to replace transponders by placing new units within 1-2 m of older units on the seafloor at 2600 m.

John Hildebrand reports that CV is a workhorse. I seriously doubt that any other existing deep submergence asset could have made this many successful lowerings in such a short time span. Also note that we operated the CV this trip with a technical staff of 3 (one senior engineer, one junior engineer, and one technician). I suspect that the CV operational cost relative to other deep submergence assets is about 25% or less.

Further plans for the use of the CV constitute another RV REVELLE trip to the Juan de Fuca plate in June 2002 for Dave Chadwell's geodesy expedition using Juan de Fuca Plate installations by means of the CV.

There are additional operations funded for next year off the coast of Peru, a return to Hawaii, and a return to the Juan de Fuca area.

In the summer of 2001 Fred Spiess with Keir Becker and Earl Davis used the control vehicle for borehole reentry in association with a new wireline CORK. Fred Spiess reported on that work at the December DESSC meeting. His subsequent poster at AGU drew quite a few interested people, particularly viewers of the downhole video sequence - apparently the first down hole video log from the ODP/DSDP program.

Advanced Tethered Vehicle (ATV)

Fred Spiess reports the following ATV will receive due attention in the summer and fall of 2002.

The current plan is to connect the key elements together and do in-water tests from the Marine Facilities pier in Point Loma in June and July 2002. Following that plans are to install the system in REVELLE for an operation out of San Diego. At present the earliest opening in the REVELLE schedule would be in November 2002.

Interested people at SIO will participate in this effort.

A report will be available to DESSC in December 2002.