

# DART Status Report

## May 2001

In June 2001, the NOAA ship Ronald H. Brown is scheduled to service the 4 DART buoys that are operational in the North Pacific Ocean. The surface buoys at D171, D165, D157, and D130 will each be inspected, serviced, and subsequently re-deployed for another year of service. A new DART site, D128, will be occupied off of the U.S Washington coast at approximately 128.5 degrees North latitude, 47 degrees West longitude.

During this June cruise, the bottom pressure recorder (BPR) at site D157 will be recovered and a replacement BPR will be deployed. D157 correctly triggered into tsunami reporting mode following a magnitude 6.9 earthquake on January 10 centered southwest of Kodiak City, Alaska. Data was reported on the DART website within 4 minutes of the earthquake.

Three of four DART systems had greater than 98% data return during this past quarter. The 4th system, D157, ceased reporting real-time data in mid-April. D157 unexpectedly failed to return to normal tide reporting mode following the January 10 event trigger and continued to report 1-minute data for real-time transmission via the GOES satellite during the 3 months that followed. As a result, the surface buoy power supply has been depleted and is no longer relaying BPR data to ground stations.

The Engineering Development Division (EDD) has successfully reproduced a possible cause of the failure in D157 and is engaged in testing of the DART system in Puget Sound. In addition to system investigations stemming from D157's failure to return to normal tide reporting mode, EDD continues to explore system enhancements and modifications. A slim-line low power board, based on 3.3-volt technology, is being tested as a replacement for boards with higher power requirements currently in use. The expected benefit of this technology is to potentially increase BPR deployment duration from 2 to 4 years.

The 6th buoy in the DART operational network will be deployed off of the NOAA ship Ka'imimoana in August 2001. D125 will be sited in the Equatorial Pacific Ocean at approximately 8 degrees South latitude, 125 degrees West longitude.