SeaGuard recorded 1014 days of data at Hawaiian deep-water coral site

The Hawaiian Archipelago is home to the largest coral reef habitats in the USA. The spectacular shallow water coral reefs are known to many, but further down in deeper waters thrives a less known and less studied coral world.

These corals live at water depths from 200m to 1800m. The deep corals in the Hawaii area do not normally form reef structures, but rather coral “gardens”. More than 200 species of corals have been found around the archipelago and these numbers are steadily growing as new species are being discovered. About 25% of the species are endemic to the Hawaii area due to the isolated character of the islands.

Deep corals have an estimated life span of 40-1000 years and some of them – black, gold, bamboo, red and pink corals have previously been harvested as raw material for the jewelry trade.

The Pacific Islands Fisheries Science Center (PIFSC) administers and conducts scientific research and monitoring programs that support the domestic and international conservation and management of living marine resources. Investigators from PIFSC use submersibles from the Hawaii Undersea Research Laboratory and the NOAA Deep Discoverer ROV to place and recover instruments that monitor the environment in deep-sea coral beds.

A SeaGuard instrument was deployed at a deep-water coral site off the Keahole Point (westernmost point of the Big Island of Hawaii). It was intended to record there for one year but was not recovered until three years later because of logistic reasons. The SeaGuard had then recorded 1014 days of high quality current and suspended particles information at a 20-minute interval using its internal batteries.

Coral habitats are patchy. To predict the abundance and development of these important ecosystems, more knowledge is needed about their living conditions including variations in currents, oxygen, temperature, salinity, suspended particles, calcite saturation etc. The SeaGuard is well suited for such measurements with its long-term capabilities and its ability to add a large number of high quality sensors.

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