

Archives of long-term deep seafloor video image offshore of Cape Muroto in Nankai Trough

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Offshore of Cape Muroto in Nankai Trough at a depth of 3572 m the multidisciplinary cable-end station of the cabled observatory was deployed in 1997. The cable-end station was located at the cold seepage site where several vesicomid clams existed. It was composed of a video camera, a CTD (Conductivity, Temperature and Depth of sea water) sensor, sub-bottom thermometer, an electro-magnetic current meter and an ADCP (Acoustic Doppler Current Profiler). Visual observation of seafloor with the video camera was carried out from April 1997 to January 2003 before the breakdown of all of the lights and the video camera. The outline of the visual observation was already introduced in the video "LIFE IN THE ABYSS - 4 Year Observations in Nankai Trough, Japan" (Iwasaki and Iwai, Tokyo Cinema, inc., 2002). The observed video images were recorded on 800 S-VHS videotapes. This time, all of the videotapes were digitized and were converted to MPEG-2 format files.

The video camera had pan and tilt control. All through the observation period, a specific place, where two vesicomid calms existed in most of the period, has been focused as a home position. Although the condition of the video image was not same because of the successive fault of the lights, the long-term change of two clams has been viewed. One of the clams died in May 2001, and the other clam moved out of the sight in August 2001. Periodic appearance and disappearance of bacteria mat beside one of the clams could be seen in the early stage of the observation period.

Although online providing of those MPEG-2 video image files is not planned at present, offline providing could be possible in near future. Contribution to the research on chemo-synthetic ecosystem is expected.

Keywords: offshore of Cape Muroto in Nankai Trough, long-term visual observation, archives of videos