

## Seafloor surveys in the Sagami bay by the Autonomous Underwater Vehicle 'Urashima' -Yokosuka YK0703 and YK0711 cruises-

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We investigated seafloor around SAG-1 and -2, which are the sites of the IODP 707 CDP proposal in Sagami bay submitted to the IODP, as a site-survey. The purposes of this survey are to confirm whether there is something to prevent drilling and to know condition of sedimentary soils, from high-resolution seafloor topography and sub-bottom structure.

We performed the surveys during the Yokosuka YK0703 (13-16 February 2007) and YK0711 (27 July - 2 August 2007) cruises. One survey line runs between SAG-1 and -2 during the former cruise. During the later cruise, six lines (one is the same as the previous, bathymetry 600-1000 m) are parallel to the line between SAG-1 and -2 and four lines (bathymetry 1200-1400 m) along the cliff, located about 1 km southwest of SAG-1, which is considered to be a plate boundary.

We used side scan sonar installed on the Urashima, which is an Autonomous Underwater Vehicle (AUV), and obtained acoustic image data. Urashima can get close to seafloor and can cruise at the fixed height from the seafloor. Thus we can stably obtain high resolution images.

Along the lines parallel to the line connecting SAG-1 and -2, topography in the most part changes gradually. Images are simple except where a dotted line appears. The dotted line exists in both images of YK0703 and YK0711 and may not be caused by the artificial noises. This line may not indicate a cable because it consists of dots. We cannot suggest the cause of the dotted line. There may be no problem for drilling at SAG-1 and -2, because the sites are away from the dotted line.

For the survey lines along the cliff, the topography abruptly changes but the high quality images were obtained due to the AUV. Many slope-failures appear along the cliff, indicating active structure. Complicated acoustic images are shown in some part of bottom of the cliff as well as along the cliff. Its interpretation remains to be solved.