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Room:Convention Hall

Time:May 25 10:30-13:00

Submarine topographic surveys in Japanese Antarctic Research Expedition

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Japanese Antarctic Research Expedition has carried out landform and geological research on Antarctic land to reveal East Antarctic ice sheet fluctuations. However, detailed bathymetric surveys were not often carried out in East Antarctic Ocean. Submarine topography of Antarctic Ocean provides significant information for continental breakup, sea-floor spreading and environmental change such as ice sheet fluctuations.

On the 51st Japanese Antarctic Research Expedition, the new vessel Shirase equipped with a multibeam echo-sounder operated the bathymetric survey on the first time. Because Shirase carried out continuous bathymetric survey while the contiguous ice-breaking cruise and ramming ice-breaking survey, we were able to obtain area-wide submarine topographic data of East Antarctic Ocean for the first time as Japanese team. We were also able to obtain bathymetric data in Lutzow-Holm Bay area covered with thick ices by ramming ice-breaking cruise. As a result, we found erosional features formed by icebergs, mega-scale glacial lineations and gullies on the continental shelf or continental slope off the shore of Lutzow-Holm Bay and Cape Danley.