

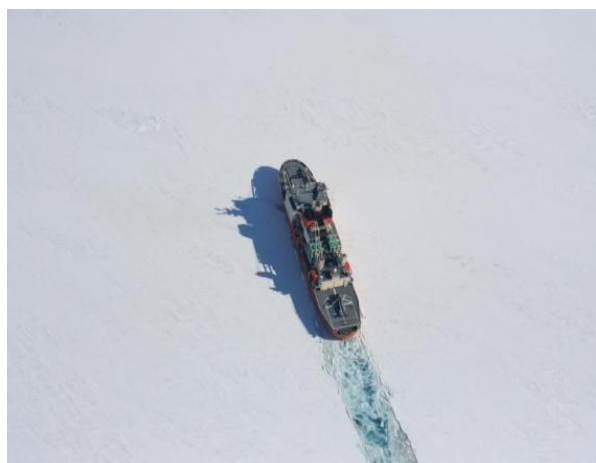
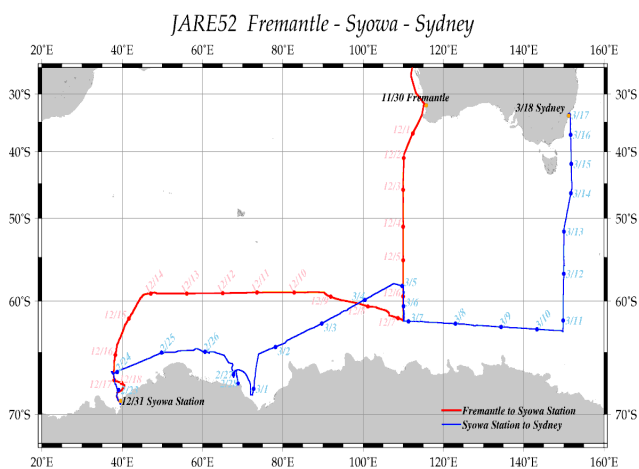
IHO HYDROGRAPHIC COMMISSION ON ANTARCTICA (HCA)  
11<sup>th</sup> Meeting, Hobart, Tasmania, Australia, 5–7 October 2011

National Report - JAPAN  
Hydrographic and Oceanographic Department of Japan

1 Bathymetric Surveys with icebreaker “Shirase” in the Antarctic Area

The icebreaker *Shirase* left Fremantle Port, Australia on 30 November 2010, conducted bathymetric surveys during the voyage, and went into the landfast ice edge near Syowa Station in 18 December. She reached off Showa Station on 31 December after struggling with the thick ice over 4 metres and snow pack as is the case in the previous year. She left Syowa Station on 8 February 2011, conducted bathymetric surveys just like outward journey, and then arrived in Sydney Harbour on 18 March.

Acquired data was quite good in spite of the difficulty caused by the thick ice and snow. We will continue the surveys in Lutzow-Holm Bay and other areas in the Antarctic areas.



## 2 Publication of nautical charts

The recently published and planned charts in the Antarctic Ocean are given in the table below.

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*National Chart Number* W3922 (INT9045)  
*Title* LÜTZOW-HOLM BUKTA AND APPROACHES  
*Area* Surrounded by the four lines of 67-00S, 70-00S, 32-00E and 44-00E  
*Scale* 1:500,000  
*Year and month published* February 2011

*National Chart Number* W3941 (INT9046)  
*Title* ONGUL ISLANDS TO SKARVSNES  
*Area* Surrounded by the four lines of 68-52S, 69-28S, 38-47E and 39-55E  
*Scale* 1:100,000  
*Year and month published* March 2010

*National Chart Number* W3950 (INT9047)  
*Title* ONGUL TO LANGHOVDE-KITA MISAKI  
*Area* Surrounded by the four lines of 68-59S, 69-12S, 39-18E and 39-43E  
*Scale* 1:25,000  
*Title* PLAN: SHOWA KICHI AND APPROACHES  
*Area* Surrounded by the four lines of 69-00S, 69-01S, 39-35E and 39-37E  
*Scale* 1:10,000  
*Year and month published* March 2009

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### 2.1 INT Charts publication schedule

*INT Number* INT9045 (W3922)  
*Title* LÜTZOW-HOLM BUKTA AND APPROACHES  
*Area* Surrounded by the four lines of 67-00S, 70-00S, 32-00E and 44-00E  
*Scale* 1:500,000  
*Year and month published* February 2011

*INT Number* INT9046 (W3941)  
*Title* ONGUL ISLANDS TO SKARVSNES  
*Area* Surrounded by the four lines of 68-52S, 69-28S, 38-47E and 39-55E  
*Scale* 1:100,000  
*Year and month published* March 2010

*INT Number* INT9047 (W3950)

*Title* ONGUL TO LANGHOVDE-KITA MISAKI

*Area* Surrounded by the four lines of 57-00S, 70-30S, 30-00E and 75-00E

*Scale* 1:25,000

*Title* PLAN: SHOWA KICHI AND APPROACHES

*Area* Surrounded by the four lines of 68-59S, 69-12S, 39-18E and 39-43E

*Scale* 1:10,000

*Year and month published* March 2009

## 2.2 ENC publication schedule

*Year and month published new ENC* April 2011

4 “Coastal Navigation” ENCs based on INT9046 , Cell size : 1°

Cell No. : JP30ODCO, Area : 70-00S - 69-00S 38-00E - 39-00E

Cell No. : JP30ODCS, Area : 70-00S - 69-00S 39-00E - 40-00E

Cell No. : JP30PKEO, Area : 69-00S - 68-00S 38-00E - 39-00E

Cell No. : JP30PKES, Area : 69-00S - 68-00S 39-00E - 40-00E

4 “Approach” ENCs based on INT9047, Cell size : 30′

Cell No. : JP40P0TS, Area : 69-30S - 69-00S 39-00E - 39-30E

Cell No. : JP40P0TU, Area : 69-30S - 69-00S 39-30E - 40-00E

Cell No. : JP40PKES, Area : 69-00S - 68-30S 39-00E - 39-30E

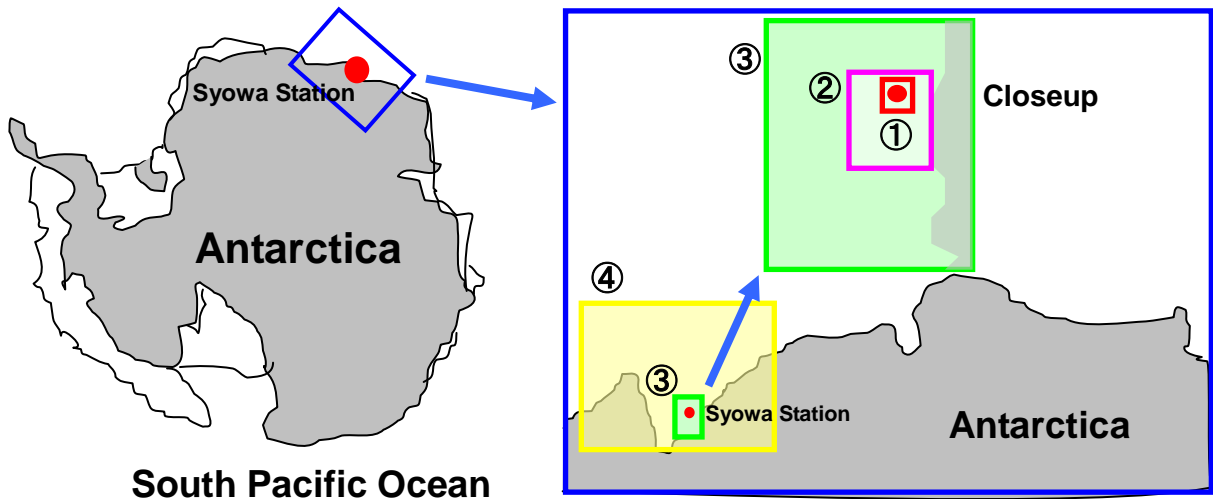
Cell No. : JP40PKEU, Area : 69-00S - 68-30S 39-30E - 40-00E

2 “Harbour” ENCs based on INT9047 Plan , Cell size : 15′

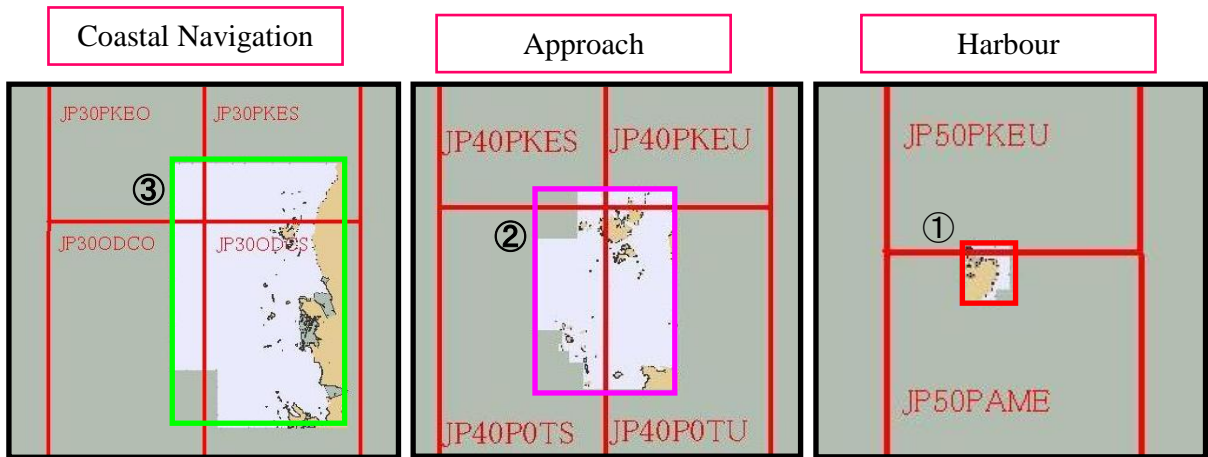
Cell No. : JP50PAME, Area 69-15S - 69-00S 39-30E - 39-45E

Cell No. : JP50PKEU, Area 69-00S - 68-45S 39-30E - 39-45E

*Planned* The new ENC based on INT9045 will be published in October 2011.



- ① INT9047 Plan
- ② INT9047
- ③ INT9046
- ④ INT9045



ENC PUBLICATION SCHEME AND INT CHARTS IN ANTARCTICA

### 3 Tidal observations

The tidal observation at Syowa Station in Antarctica has been carried out by Japan Hydrographic and Oceanographic Department (JHOD) as a part of Japanese Antarctic Research Expedition (JARE) since 1965.

The observation has been continued in good condition until now.

The observed data are transferred from the station to the JHOD once a day via satellite and are opened in public on the Internet as real time data.

([http://www1.kaiho.mlit.go.jp/KANKYO/KAIYO/jare/tide/tide\\_index.html](http://www1.kaiho.mlit.go.jp/KANKYO/KAIYO/jare/tide/tide_index.html) )

The tsunamis caused by the Sumatra Earthquakes on 26 December 2004 and 29 March 2005 were observed at Syowa Station even located 8,900 kilometres far from the earthquake sites. The tsunami records are also available at the following website.

([http://www1.kaiho.mlit.go.jp/sumatra/index\\_e.html](http://www1.kaiho.mlit.go.jp/sumatra/index_e.html))

Long term variation of mean sea level at Syowa Station has been clearly observed, which would be caused by sea level rise due to global warming and crustal uplift due to Antarctic ice melting.

Its monthly and yearly mean sea level are shown in fig.1 and fig.2 respectively. The tidal data from February 2007 to January 2011 are under processing.

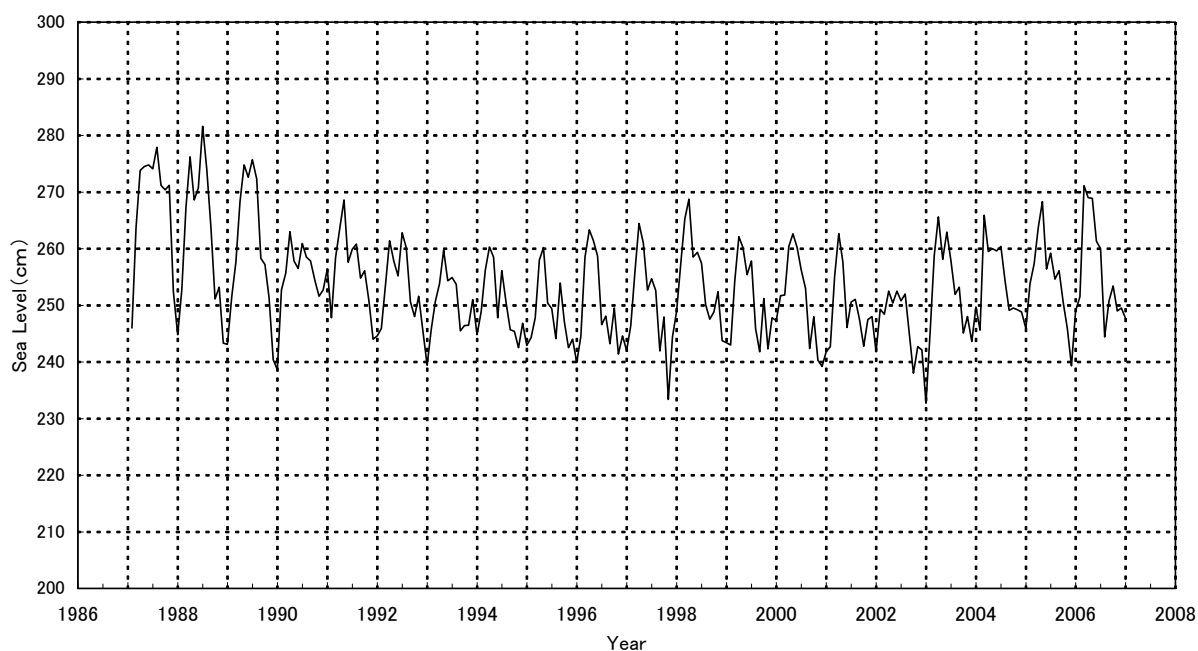


Figure 1: Monthly Mean Sea Level at Syowa Station

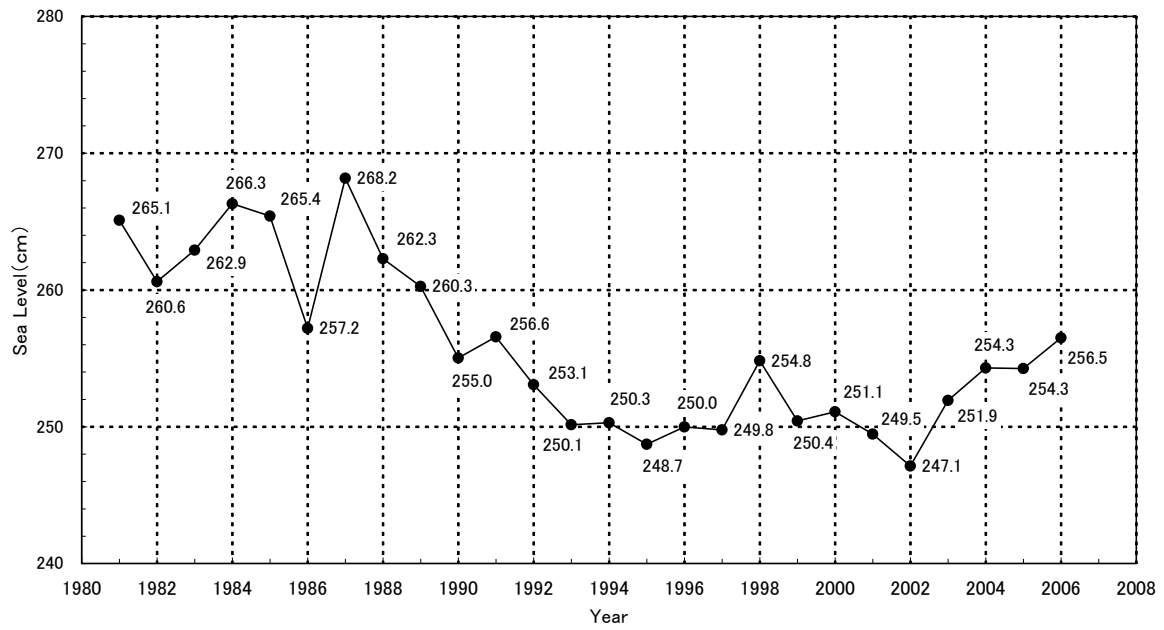


Figure 2: Yearly Mean Sea Level at Syowa Station