



National Report of China

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National Marine Data and Information
Service (NMDIS), State Oceanic
Administration (SOA), China

DBCP-30, 27 Oct. 2014, Weihai, China



1. Current program status

----State Oceanic Administration (SOA)

○ Number and type of buoys:

(a) Deployed during the year: 121

121 buoys, including 3m, 6m and 10m discus moored buoys, Tsunami buoys, drifters, and 84 Argo floats

(b) Operational at 31 July:

5 drifters
39 moored buoys
108 Argo float

○ Purpose of program:

- ◆ support the operational forecasting and warning service
- ◆ ocean state and climate monitoring
- ◆ Marine environmental monitoring

○ Main deployment area:

China Seas and adjacent waters

○ Vandalism incidents: 9





1. Current program status

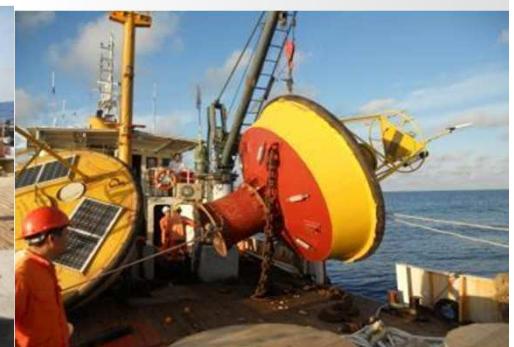
---- China Meteorological Administration (CMA)

- Number and type of buoys:
 - (a) Deployed during the year: 0
 - (b) Operational at 31 July: 25
- Purpose of program:
 - ◆ support the operational forecasting and warning service
 - ◆ ocean state and climate monitoring
- Main deployment area:
China Seas
- Vandalism incidents: none



2. Future deployment plan

Agency	Number and type of buoys planned for deployment in next 12 months		Deploy location
SOA	14	5 moored buoys	China Seas
		2 deep sea mooring	Tropical Indian Ocean
		3 multi-parameter buoy of 10m discus	East China Sea
		4 SAMS	Arctic Ocean
CMA	8	8 met-ocean buoys: 4 -- 6m discus, 1—10m discus, 2—11m discus, 1-- 12m discus.	China Seas and adjacent waters





3. Technical developments

East China Sea Branch

Assembled large moored data buoys R&D

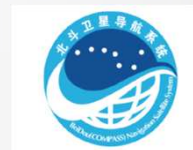
study of assemble technique and material to facilitate easier transport

Large ocean buoys data integration technology

new data acquisition system on the large buoy

The application of Compass receiver in large buoy data transmission and monitoring

buoy data transmission and surveillance





3. Technical developments

National Ocean Technology Center

A series of new assembled foam multifunction marine environment observation buoys

- Small wave buoys
- Ecological water quality monitoring buoys
- Detachable 10m discus buoy and 6m discus buoy



2.3m disc foam buoy



3m disc foam buoy



4. Publications

Instrumentation

Tang Yuanguang, Zhou Jinyuan, Li Siwei. 2013: Development of 3m multi-parameter wave buoys Meteorological, Hydrological and Marine Instruments, 2, 1-5.

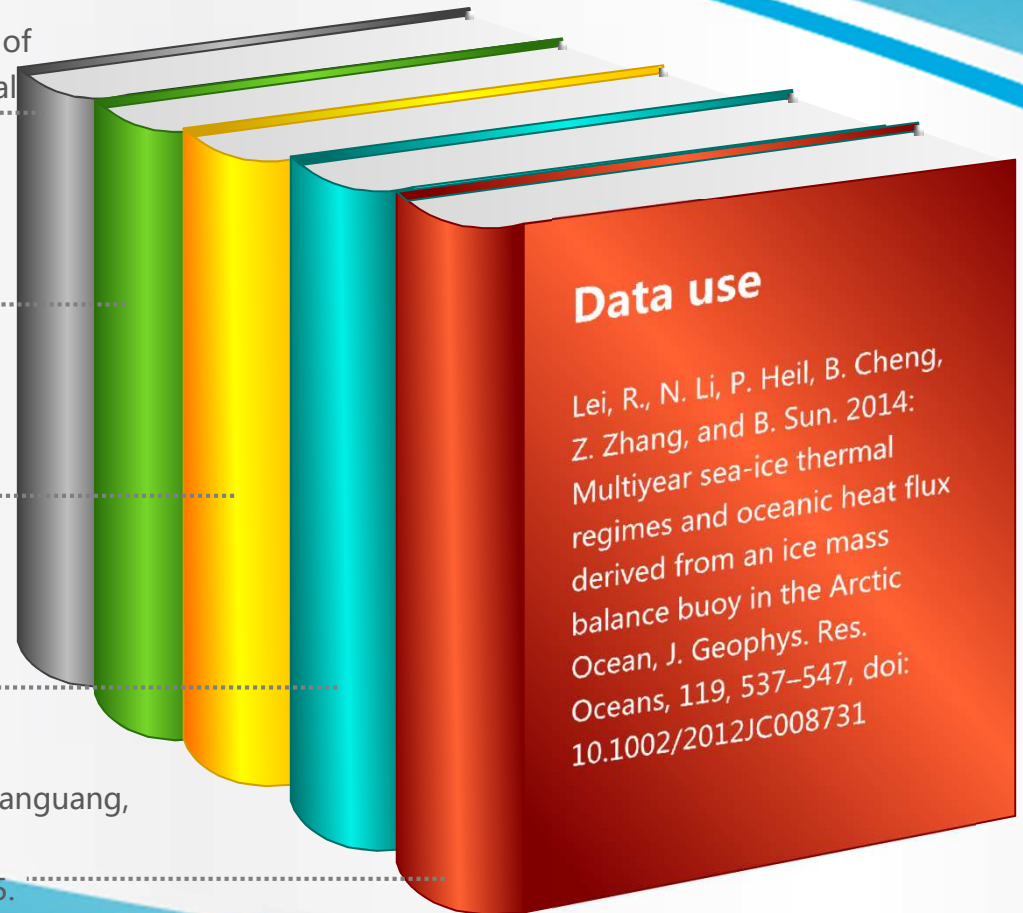
LIU Yuqiang, WANG Junqin, and GOU Yanfen. 2013: Discussion on the Analysis Calculation of the Deep Sea Multi-parameter Buoy Force. Ocean Technology. 32(3), 27-29.

Lan Hui, Wu Sheng, Chen Min, Li jianshun, Jia Wenjuan and Liao Heqin, 2014: Research on the key technologies of a novel inductive conductivity sensor. Ocean Technology. 33(3), 18-22..

Sun Dongbo, Zhang Suoping Qi Zhanhui, Dong Tao, and Zhao Jiangtao, 2014: Study on the influence of the structural parameters of spherical wave buoys on their undulate motion responses. Ocean Technology. 33(3), 23-26.

Sun Dongbo, Zhang Suoping Qi Zhanhui, Dong Tao, Tang Yuanguang, and Wang Ping. 2014: Design and implementation of U-disk memorizer on SZF Wave Buoys. Ocean Technology. 33(3), 1-5.

Tang Yuanguang, Sun Lei. 2014: SZF wave buoy receiving and playback system of double communication. Computer Technology and Development, 24(6)



Data use

Lei, R., N. Li, P. Heil, B. Cheng, Z. Zhang, and B. Sun. 2014: Multiyear sea-ice thermal regimes and oceanic heat flux derived from an ice mass balance buoy in the Arctic Ocean, J. Geophys. Res. Oceans, 119, 537-547, doi: 10.1002/2012JC008731

Data collection



5. Vandalism incidents

Fig.1 Ship collision damage to QF 153

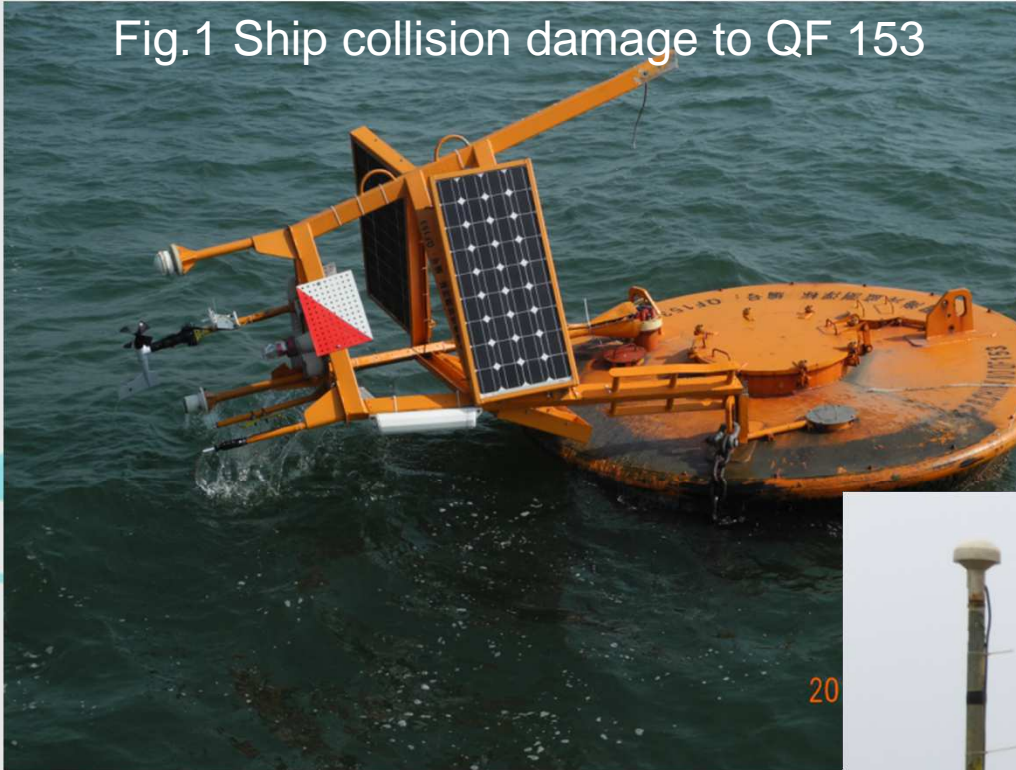


Fig.2 Sensor damage





5. Vandalism incidents

Fig. 3 Sensor lost and superstructure damage
(2014.06)



Fig.4 Entangled fishing nets at QF304
(2014.2.18-2014.2.27)



Fig. 5 Current meter probe lost (2014.2.18-2014.2.27)



5. Vandalism incidents



Fig. 6 Fishing line entanglement of mooring
(2014.3.19-2014.3.22)

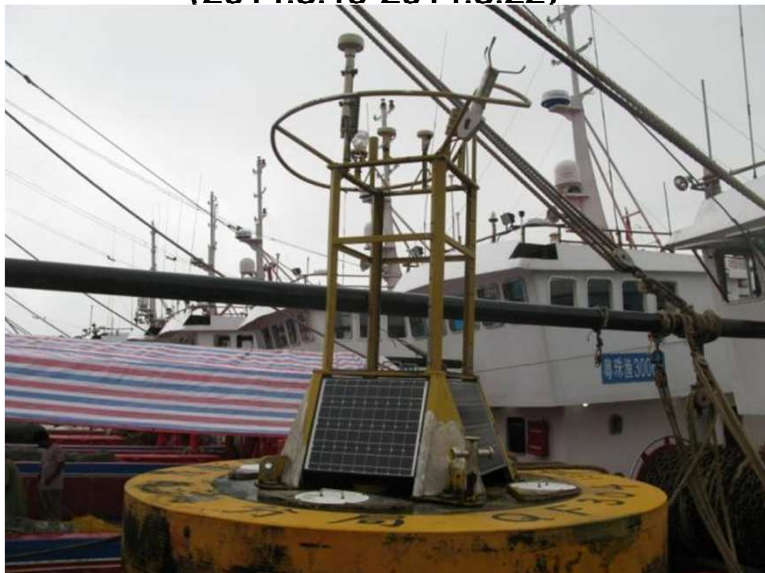


Fig.7 Sensor damage by collision (2014.3.19-
2014.3.22)

Fig. 8 Damaged buoy QF 304 by ship collision
(2014.4.1-2014.4.5)



6. DBCP related meeting

- The Second Capacity Building Workshop of the WMO/IOC Data Buoy Cooperation Panel (DBCPC) for the North Pacific Ocean and Its Marginal Seas (NPOMS-2) was held during 22-24 Oct. 2013, Hangzhou, China.

*Application of Regional Ocean
Observations for
Increasing Society's Understanding and
Forecasting of Typhoons*





THANK YOU