HM-2000 profiling float

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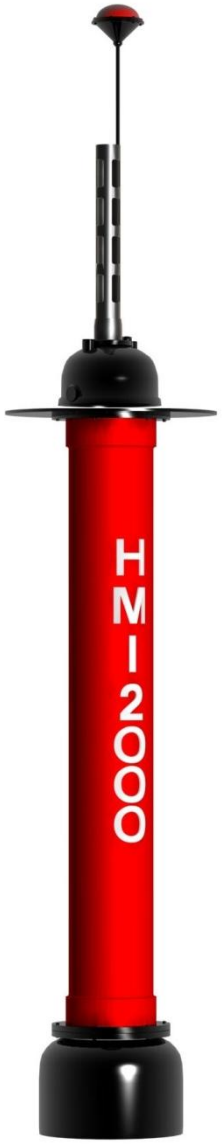
19 March 2015

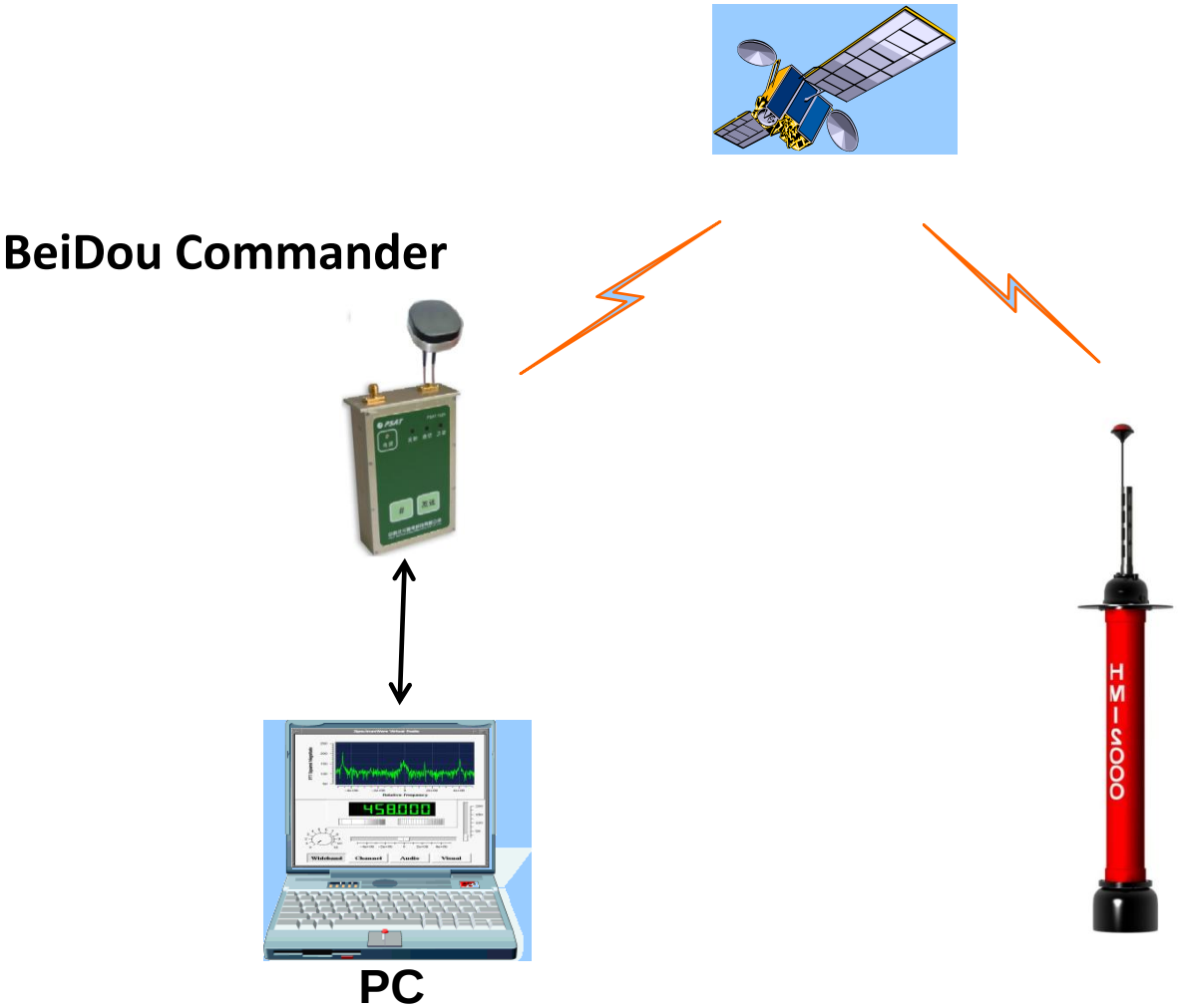
Maker: Qingdao Hisun Ocean Equipment Corporation Limited (HSOE)

Developed since 2010

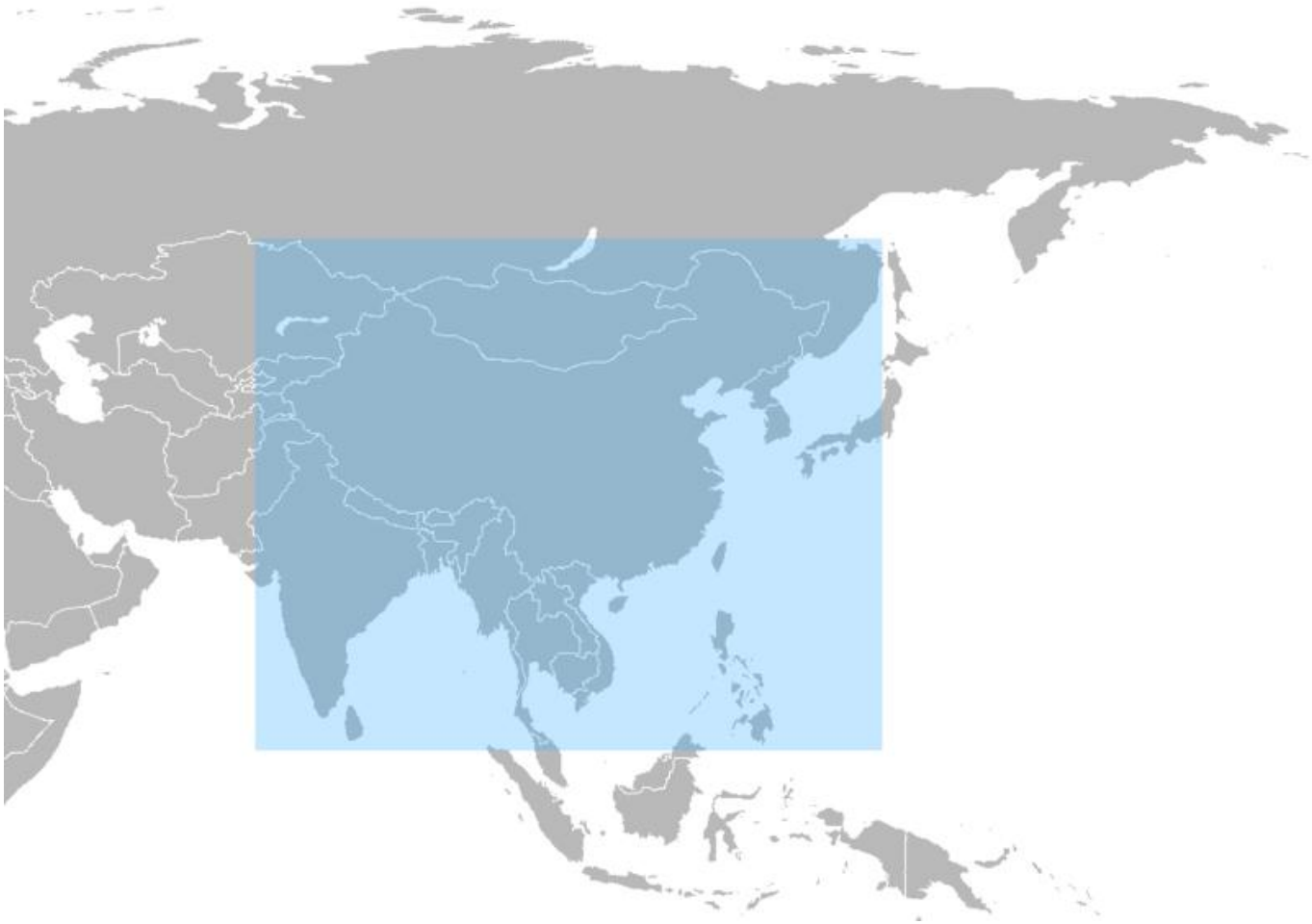


Transmission system	BeiDou System (BDS)
Positioning system	BDS/GPS
CTD sensor	SBE41/SBE41CP
Mass	≤ 50kg
Max. profiling depth	2000 dbar
Sampling resolution	1-100 dbar for 7 slices
Transmission repetition	90 s
Transmission rate	> 74 bytes/message
Typical transmission duration	30 min

Two-way communication



BDS Coverage



14 satellites are active, and 2 satellites for transmission

Advantages

(1) Two-way communication

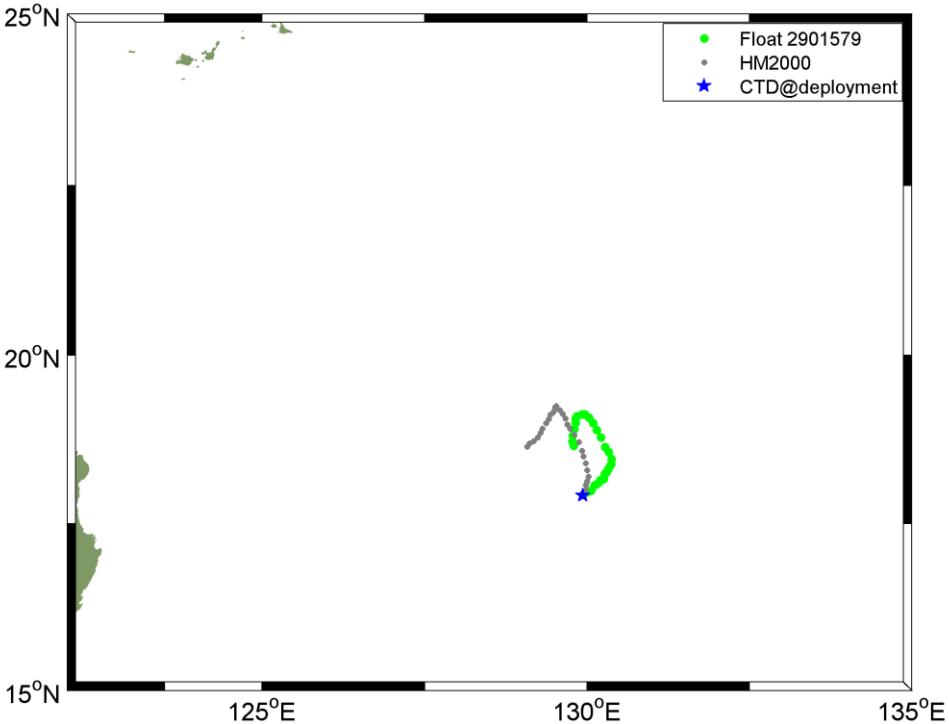
(2) Grounding protection

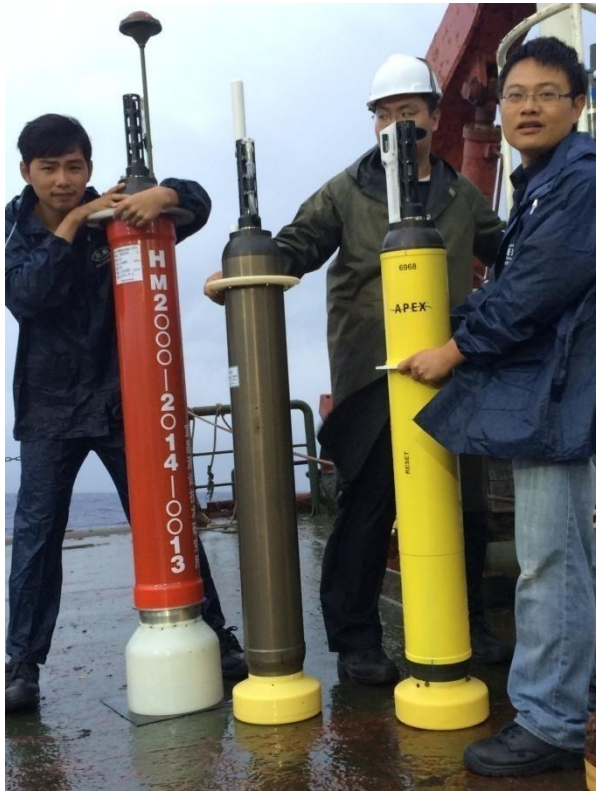
(3) Automatic data retransmission

(4) Max. profiling depth protection

(5) Optional positioning system

Cruise in November 2014

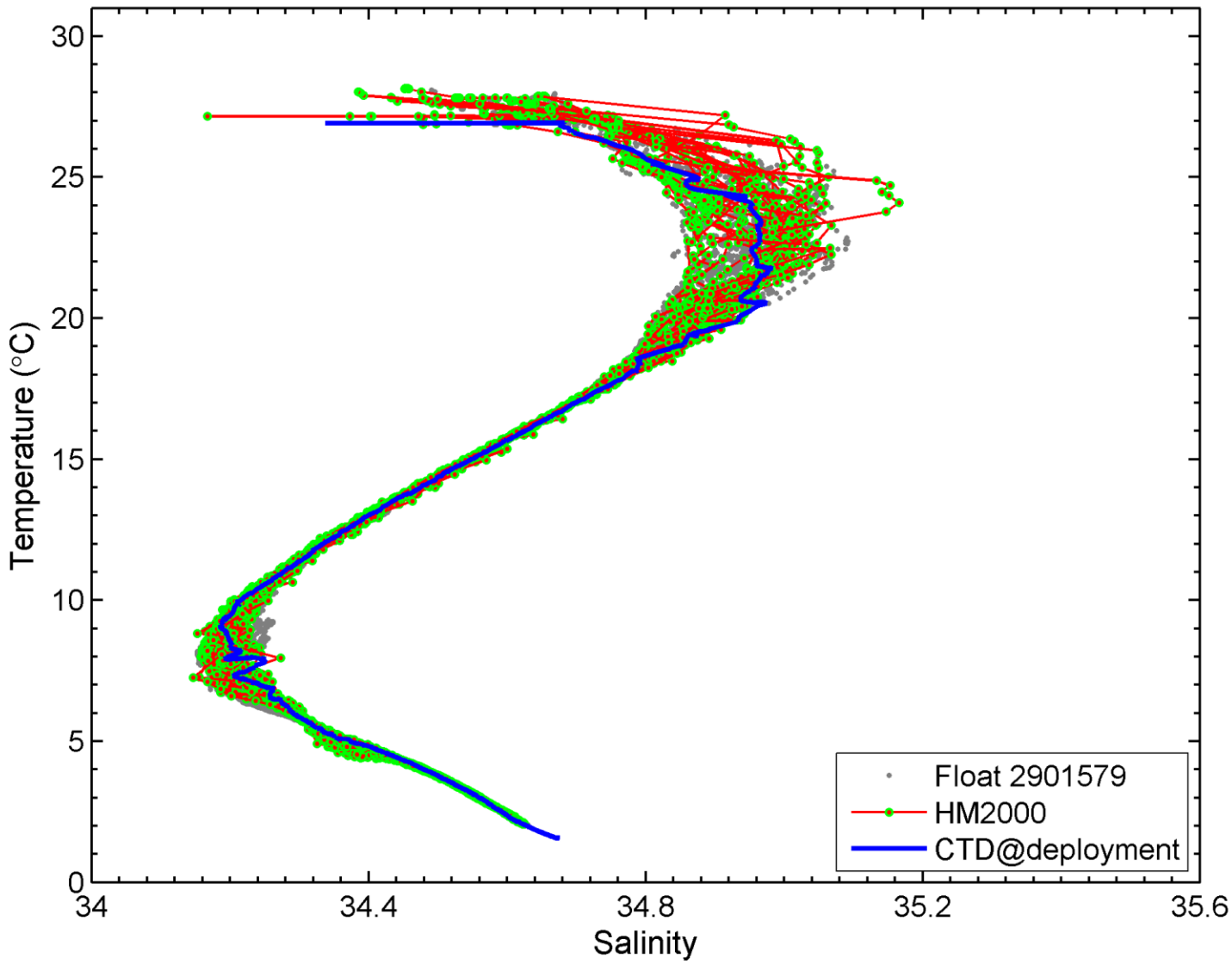


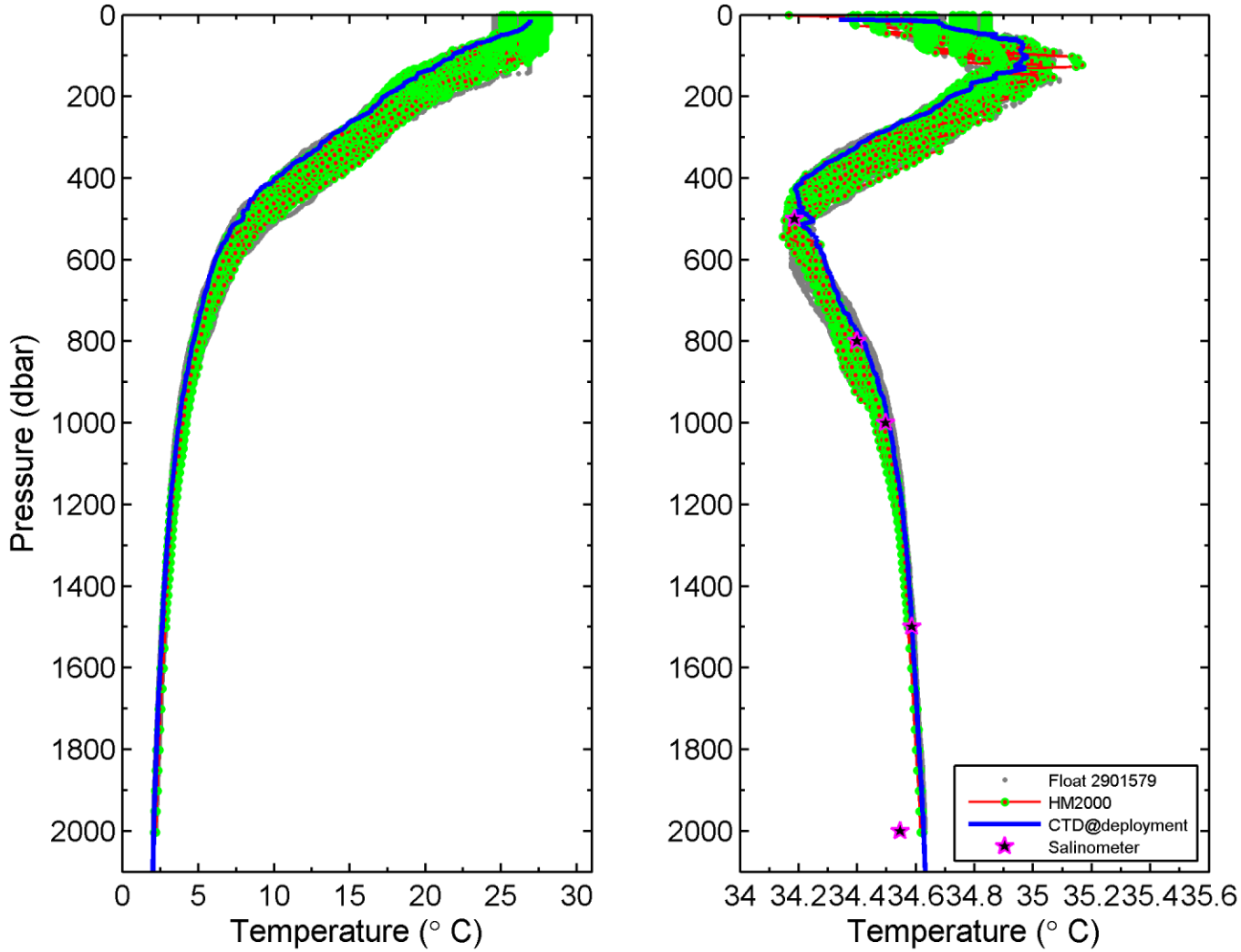


Cycle Time

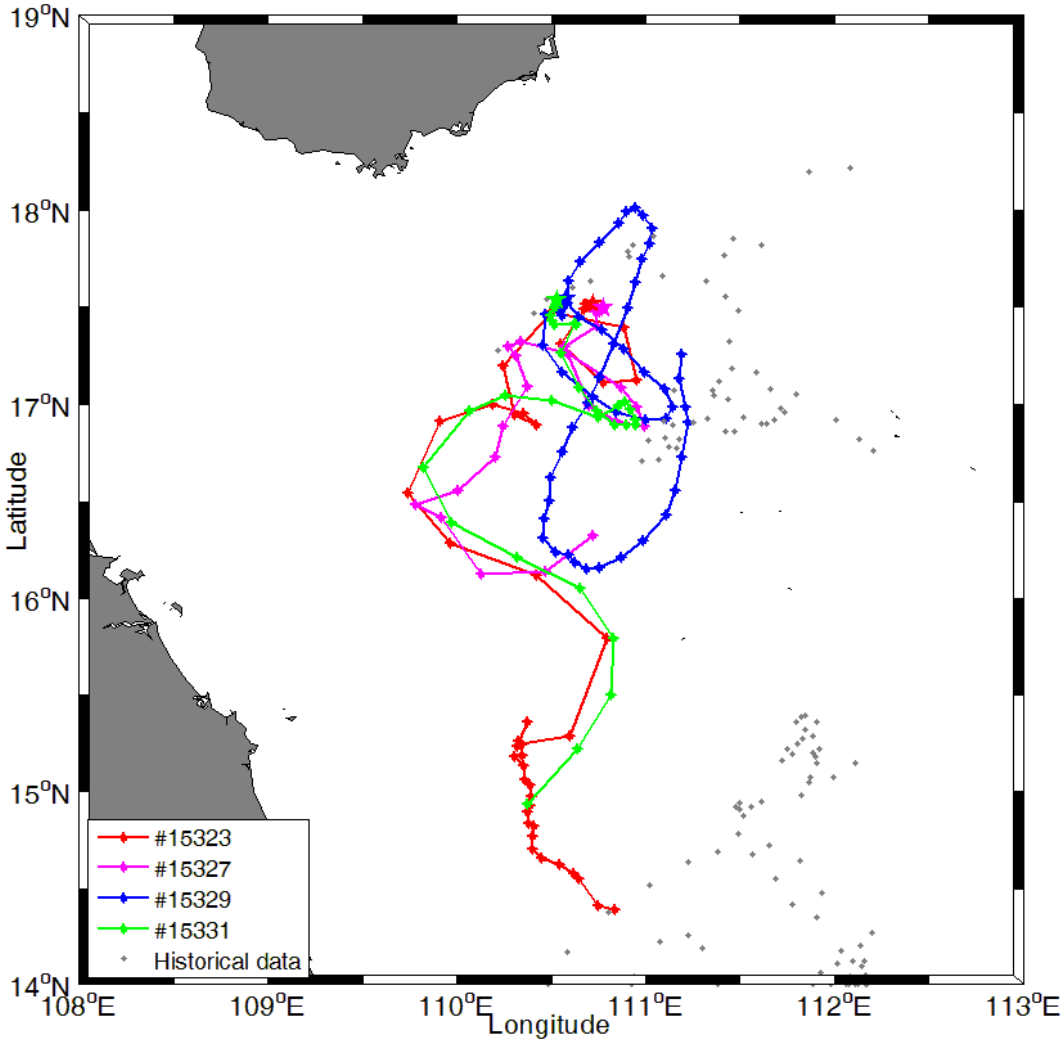
HM2000: 1 day

Iridium APEX: 2 days


Temperature (°C)
Salinity
30
25
20
15
10
5
0
34
34.4
34.8
35.2
35.6
Float 2901579
HM2000
CTD@deployment

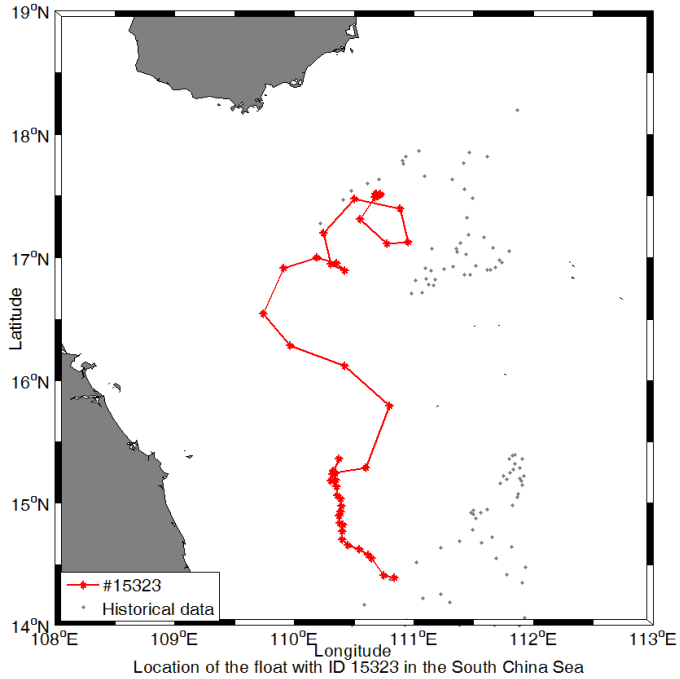

Pressure (dbar)
0
200
400
600
800
1000
1200
1400
1600
1800
2000
0 5 10 15 20 25 30
Temperature (° C)
34 34.2 34.4 34.6 34.8 35 35.2 35.4 35.6
Temperature (° C)
Float 2901579
HM2000
CTD@deployment
Salinometer

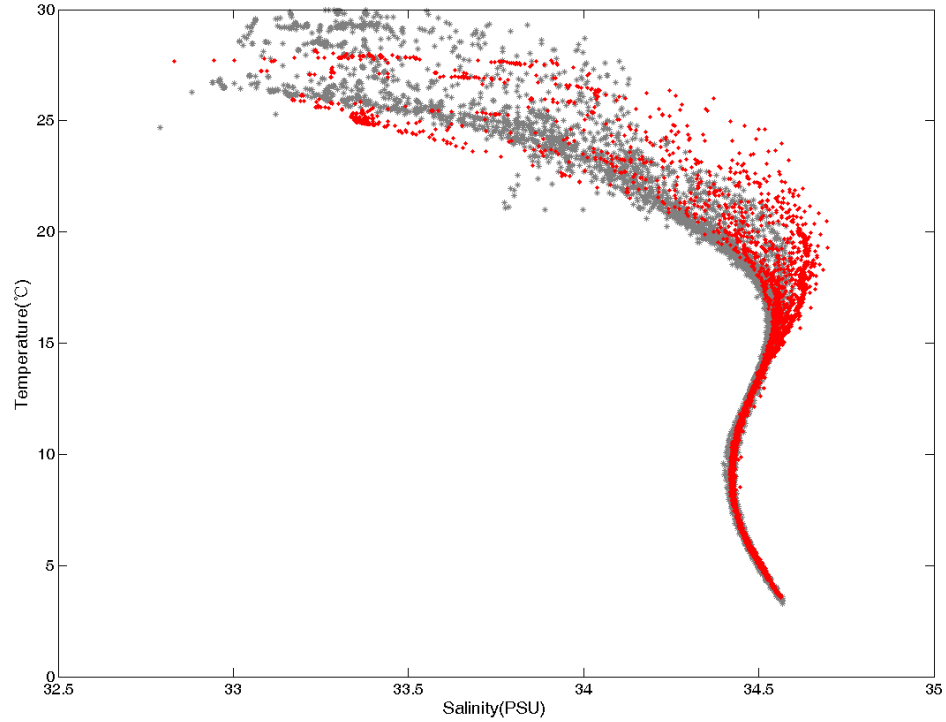
October 2014



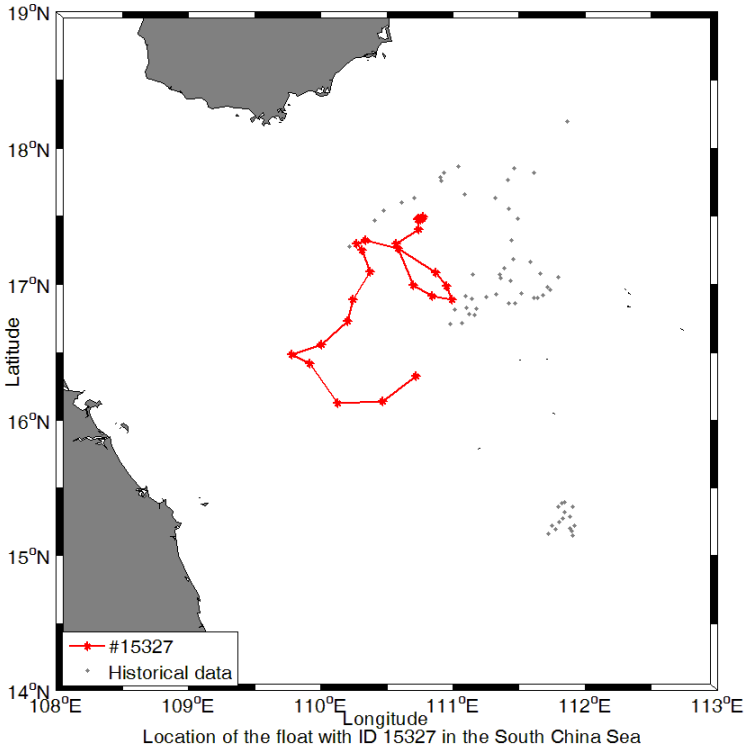
Location of 4 floats in the South China Sea

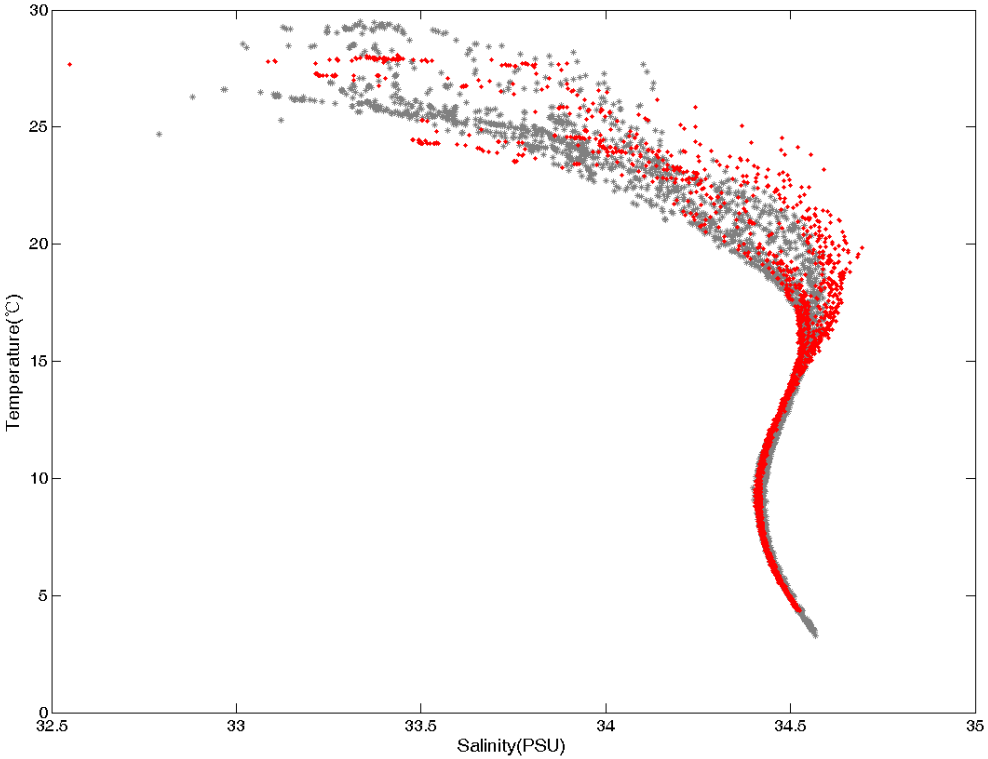
Float 15323


19°N
18°N
17°N
16°N
15°N
14°N
Latitude
108°E
109°E
110°E
111°E
112°E
113°E
Longitude
#15323
Historical data
Location of the float with ID 15323 in the South China Sea

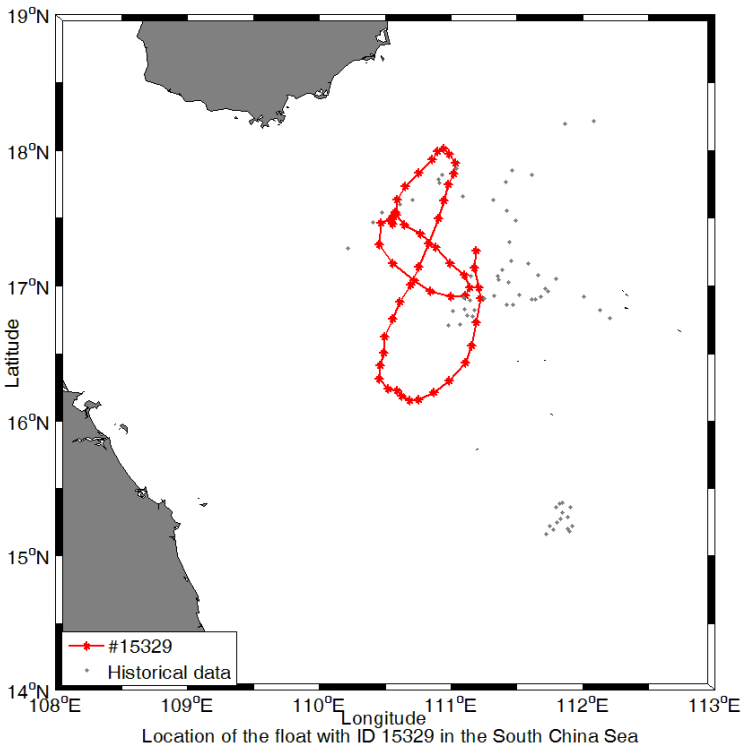

30
25
20
15
10
5
0
Temperature(℃)
32.5
33
33.5
34
34.5
35
Salinity(PSU)

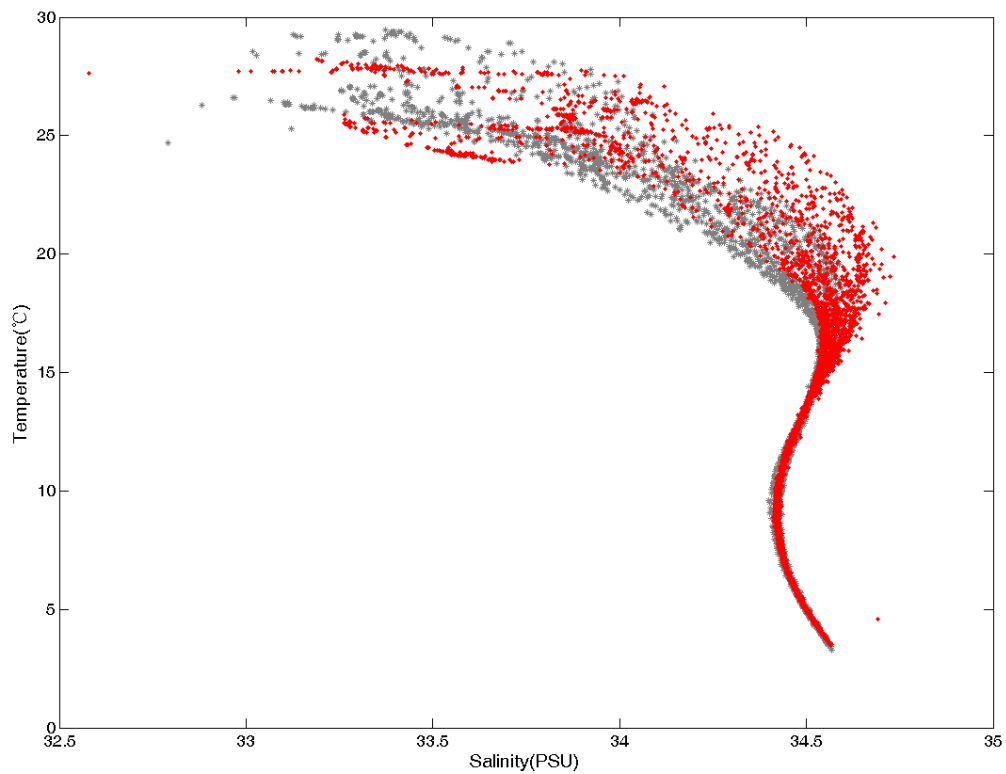
Float 15327


19°N
18°N
17°N
16°N
15°N
14°N
Latitude
108°E
109°E
110°E
111°E
112°E
113°E
Longitude
#15327
Historical data
Location of the float with ID 15327 in the South China Sea

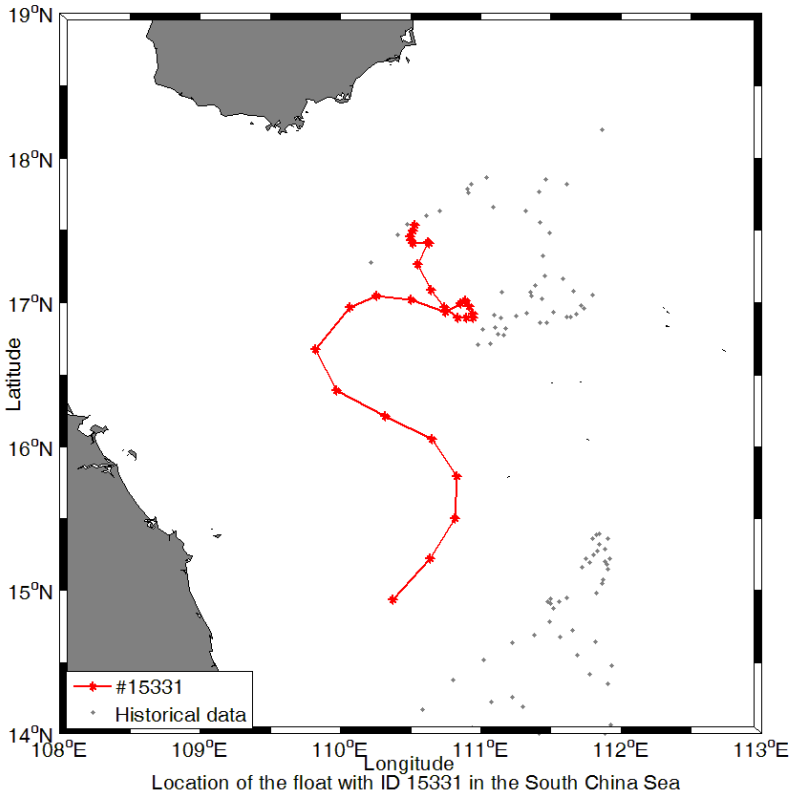

30
25
20
15
10
5
0
Temperature(℃)
32.5
33
33.5
34
34.5
35
Salinity(PSU)

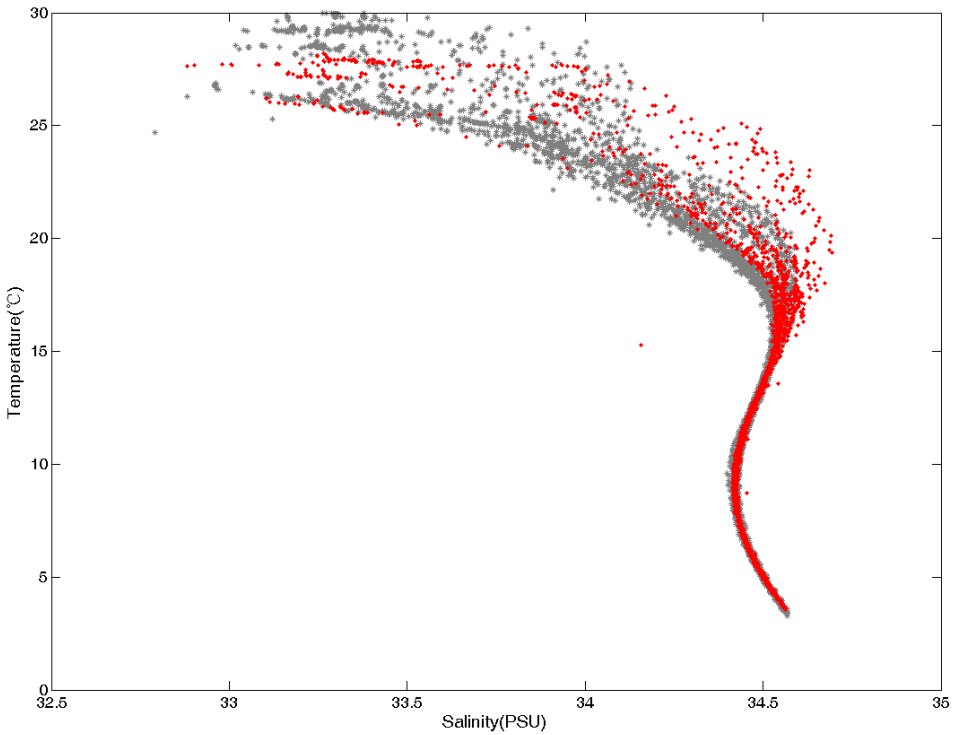
Float 15329


19°N
18°N
17°N
16°N
15°N
14°N
Latitude
108°E
109°E
110°E
111°E
112°E
113°E
Longitude
#15329
Historical data
Location of the float with ID 15329 in the South China Sea


30
25
20
15
10
5
0
Temperature(℃)
32.5
33
33.5
34
34.5
35
Salinity(PSU)

Float 15331


19°N
18°N
17°N
16°N
15°N
14°N
Latitude
108°E
109°E
110°E
111°E
112°E
113°E
Longitude
#15331
Historical data
Location of the float with ID 15331 in the South China Sea


30
25
20
15
10
5
0
Temperature(℃)
32.5
33
33.5
34
34.5
35
Salinity(PSU)