

BOUSSOLE Monthly Cruise Report

Cruise 50

February 28 – March 04, 2006

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Vessel: R/V Europe/ IFREMER

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Fig 1. R/V Europe/IFREMER.

BOUSSOLE project

ESA/ESRIN contract N° 17286/03/I-OL

Deliverable from WP#400/200

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Foreword

This report is part of the technical report series that is being established by the **BOUSSOLE** project.

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Contents

1. Cruise Objectives
2. Cruise Summary
3. Cruise Report
4. Calculated Swath paths for Meris Sensor

Appendix

Cruise Objectives

Multiple SPMR profiles are to occur within 1 hour of satellite overhead passes of MERIS around solar noon, under optimal conditions: clear blue skies and flat, calm sea surface. If the sky is clear and sea conditions are reasonably calm (no whitecaps or large swell), hand held CIMEL sun photometer measurements are to be performed consecutively where possible with SPMR profiles. If sea conditions are poor but sky is good, hand held CIMEL sun photometer measurements can be made at intervals throughout the day to measure atmospheric optical thickness. A floating platform is to be used to support the SPMR Eu sensor approximately 20cm below the surface for up to 3 minutes of stable light field before a release mechanism triggers the release of the profiler to start a descent as normal. Multiple descents ideally will be started in this way and the data will be used to assess near-surface Eu extrapolation model calculations. CTD deployments are required at the start and end of the SPMR profiling day and around noon in the longer summer days or when there is a high possibility of a satellite matchup. In addition to the depth profile from the CTD, CDOM fluorometer, Chl fluorometer and AC9, seawater samples are to be collected, filtered and stored in N₂ for HPLC pigment and particulate absorption spectrophotometric filter analysis in the lab. A gimbed PAR sensor positioned on the foredeck and operated from the CTD computer serves as a light field stability indicator during SPMR profiling.

For one day of each cruise, at the end of the optics measurements on site, there will be one ctd transect between the Boussole site and the Port of Nice. This transect consists of four fixed locations on-route from Boussole and a final two station positions to be decided during the transect in order to sample on both sides of the main frontal structure between the coastal waters and Ligurian Sea. The time of day of this transect should be similar for each cruise, if possible to minimise influence of diurnal variability.

Cruise Summary

The weather was very bad for the 5 days of the cruise. Just the transect CTD profiles could be performed, as well as the buoy data retrieval (no clock lag this time!).

Tuesday 28 February 2006

Due to bad weather, only 7 CTD profiles were performed (one at boussole site, others on the usual transect to port of Nice).

Wednesday 01 March 2006

Bad weather prevented departure.

Thursday 02 March 2006

Bad weather prevented departure.

Friday 03 March 2006

Bad weather prevented departure.

Saturday 04 March 2006

Bad weather prevented departure.

Cruise Report

28 February 2006 (UTC)

0600 Departure from port of Nice.

1352 CTD 1 at buoy, with water sampling at 200, 10, 80, 70, 60, 50, 40, 30, 20, 10 and 5 meters for HPLC and Ap.

1352 CTD 2 at station 1 (43°25'N 07°48'E).

1458 CTD 3 at station 2 (43°28'N 07°42'E).

1555 CTD 4 at station 3 (43°31'N 07°37'E).

1658 CTD 5 at station 4 (43°34'N 07°31'E).
1756 CTD 6 at station 5 (43°37'N 07°25'E).
1756 CTD 7 at station 6 (43°39'N 07°21'E).
1910 Arrival to port of Nice.

01 March 2006

Stayed in port of Nice.

02 March 2006

Stayed in port of Nice.

03 March 2006

Stayed in port of Nice.

04 March 2006

Stayed in port of Nice.

Calculated Swath paths for MERIS Sensor (ESOV Software)

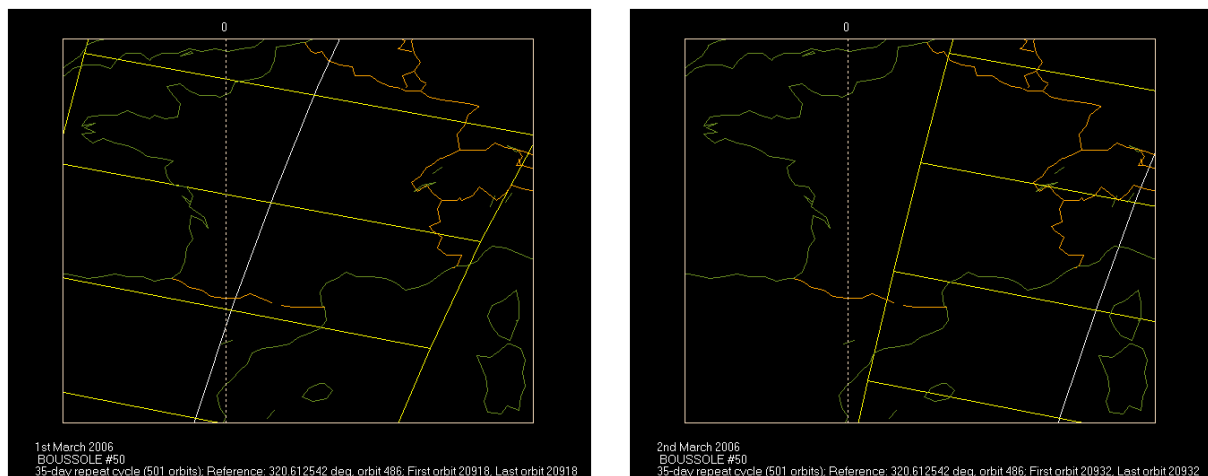
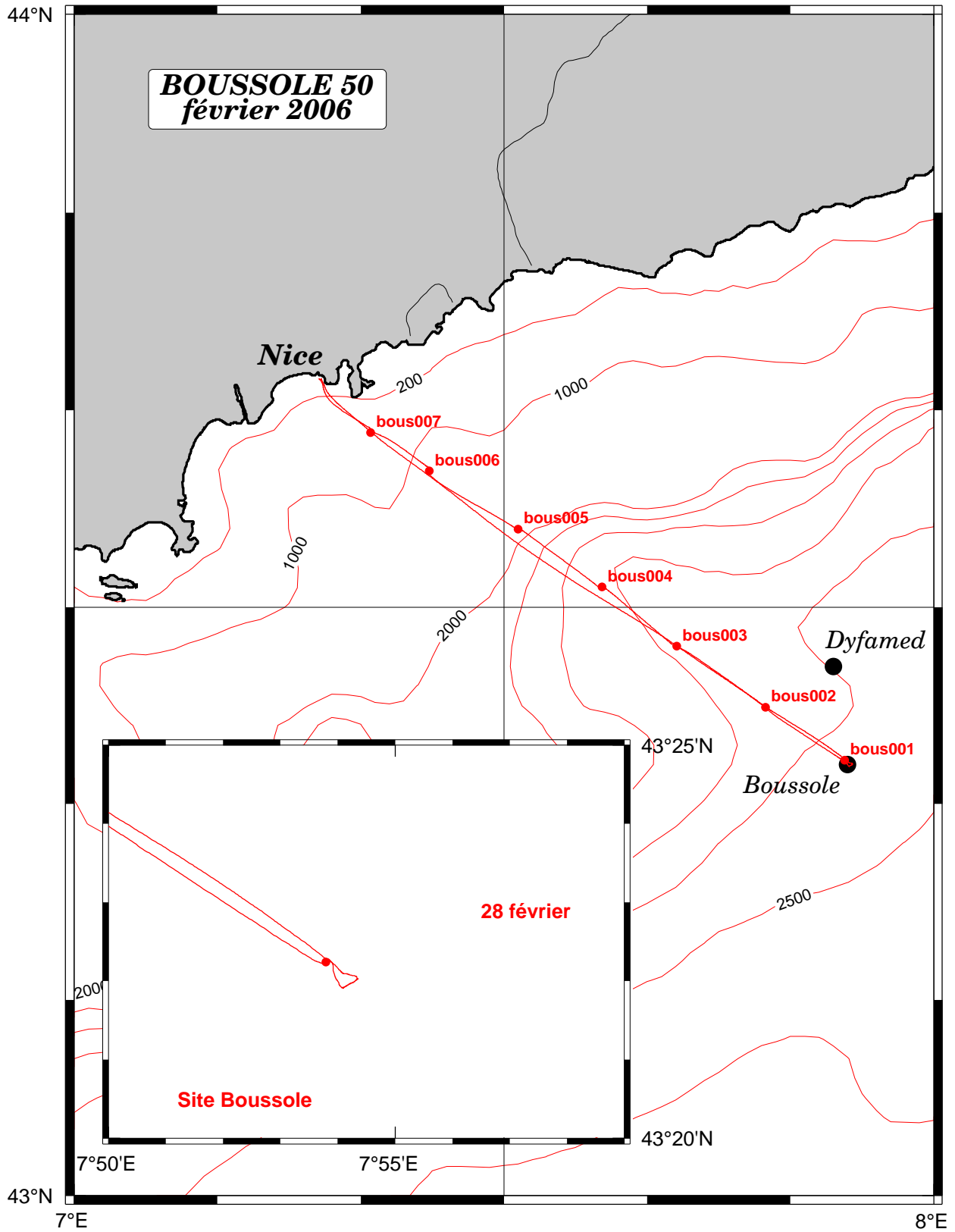


Figure 3. Calculated swath paths for MERIS (Esov software) above BOUSSOLE site for 01 and 02 March 2006.

Appendix

Cruise Summary Table for Bousole 50

Date	Black names (file ext: ".raw")	Profile names (file extension: ".raw")	CTD netées / satellite overpass	Start Time GMT (hour.min)	Duration (min.sec)	Depth max (meter)	Latitude (N) (Degree) (Minute)	Longitude (Degree) (Minute)	Other sensors	Their cast	Start/Finish	Sky	Clouds	Quantity (#/h)	Weather	Wind speed	Wind dir.	Am. Pressure	humidity	Visibility	T Air	T water	Sea	Swell height	Sea	Swell dfr.	White horses
28/02/2006			CTDBOUS001	09:27	24:00	400	43 22.241	7 53.792				covered	heter.	7	-	-	-	1009.0	-	very good	-	13.0	choppy	1.0 m		yes	
			CTDBOUS002	10:38	22:00	400	43 24.921	7 48.272				covered	heter.	4	-	-	-	1008.0	-	very good	-	12.9	choppy	1.1 m		yes	
			CTDBOUS003	12:12	29:00	400	43 31.032	7 36.642				covered	heter.	4	-	-	-	1006.0	-	very good	-	13.3	choppy	1.2 m		yes	
			CTDBOUS004	14:17	23:00	400	43 33.977	7 30.979				partly covered	few	2	-	-	-	1005.0	-	very good	-	13.1	choppy	1.1 m		yes	
			CTDBOUS005	15:28	25:00	400	43 36.932	7 24.780				blue	few	1	-	-	-	1005.0	-	very good	-	12.7	choppy	1.1 m		yes	
			CTDBOUS006	16:24	25:00	400	43 38.878	7 20.878				blue	few	1	-	-	-	1005.0	-	very good	-	12.6	choppy	1.1 m		yes	
			CTDBOUS007	18:24	25:00	400	43 38.878	7 20.878				blue	few	1	-	-	-	1005.0	-	very good	-	12.6	choppy	1.1 m		yes	

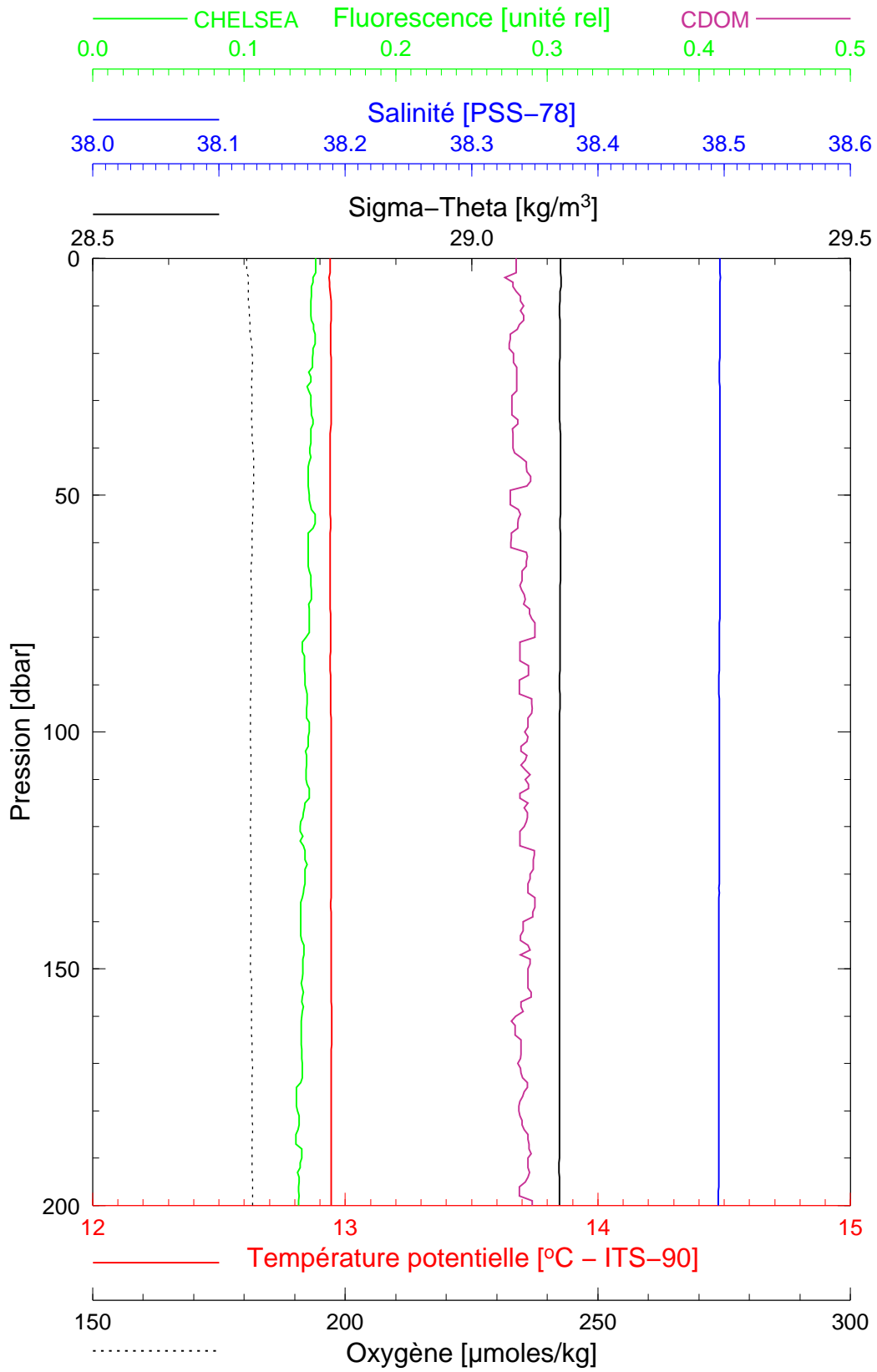


Boussole 50

28/02/2006

BOUS060228_01

BOUS001



Date 28/02/2006
Heure déb 09h 28min [TU]

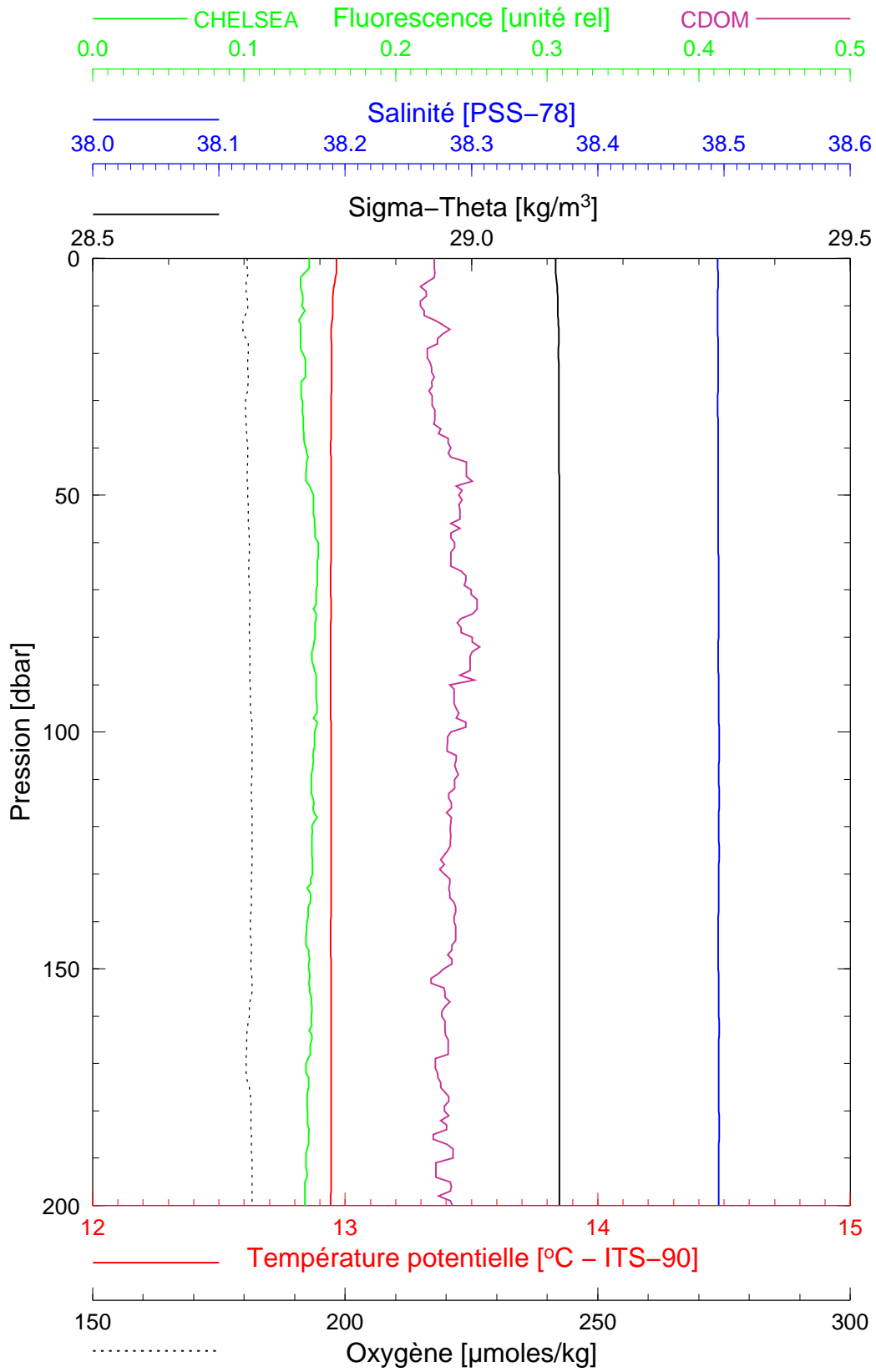
Latitude 43°22.241 N
Longitude 07°53.792 E

Boussole 50

28/02/2006

BOUS060228_02

BOUS002



Date 28/02/2006
Heure déb 10h 58min [TU]

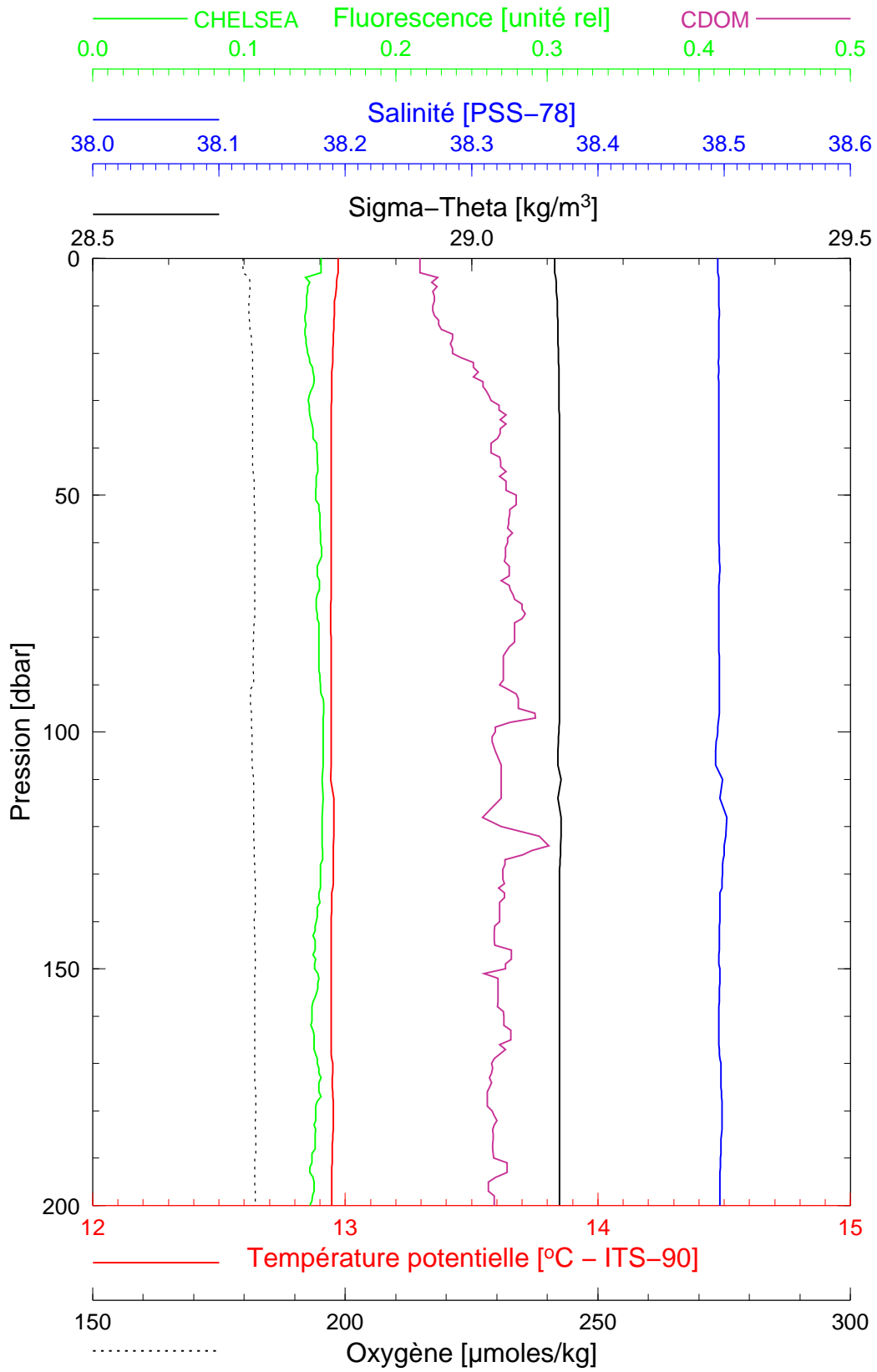
Latitude 43°24.921 N
Longitude 07°48.272 E

Boussole 50

28/02/2006

BOUS060228_03

BOUS003



Date 28/02/2006
Heure déb 12h 12min [TU]

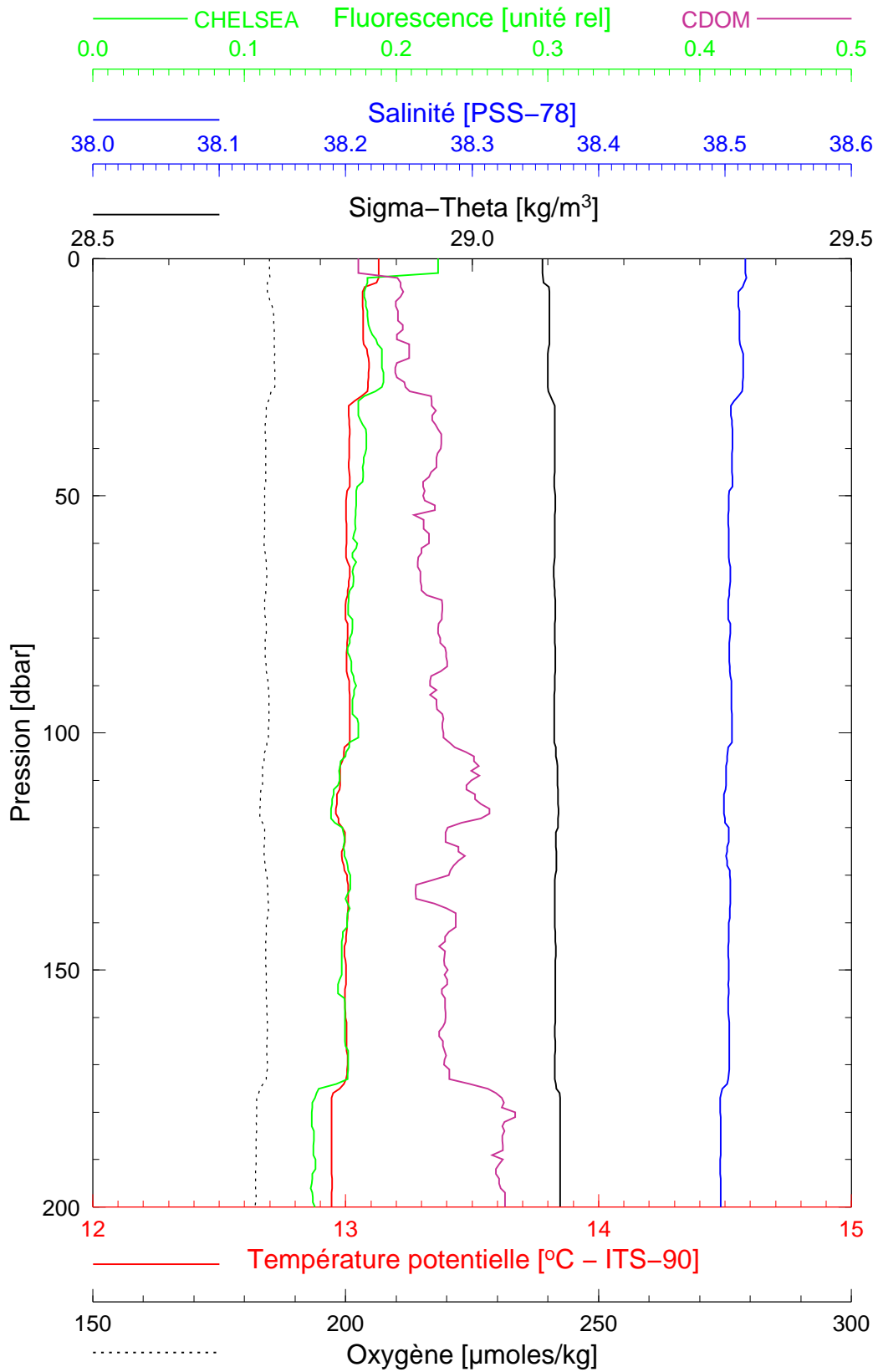
Latitude 43°28.026 N
Longitude 07°42.073 E

Boussole 50

28/02/2006

BOUS060228_04

BOUS004



Date 28/02/2006
Heure déb 13h 12min [TU]

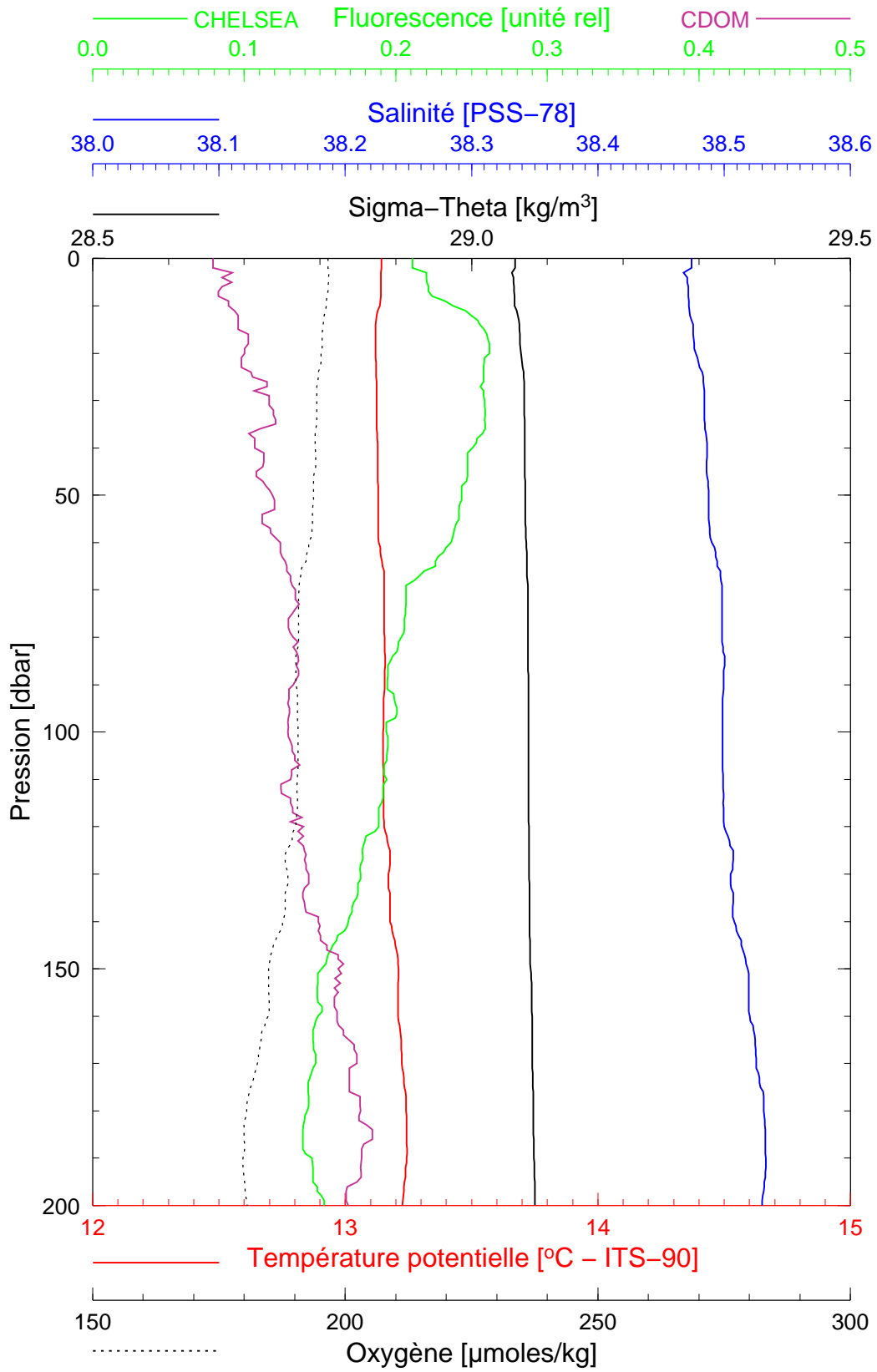
Latitude 43°31.047 N
Longitude 07°36.855 E

Boussole 50

28/02/2006

BOUS060228_05

BOUS005



Date 28/02/2006
Heure déb 14h 17min [TU]

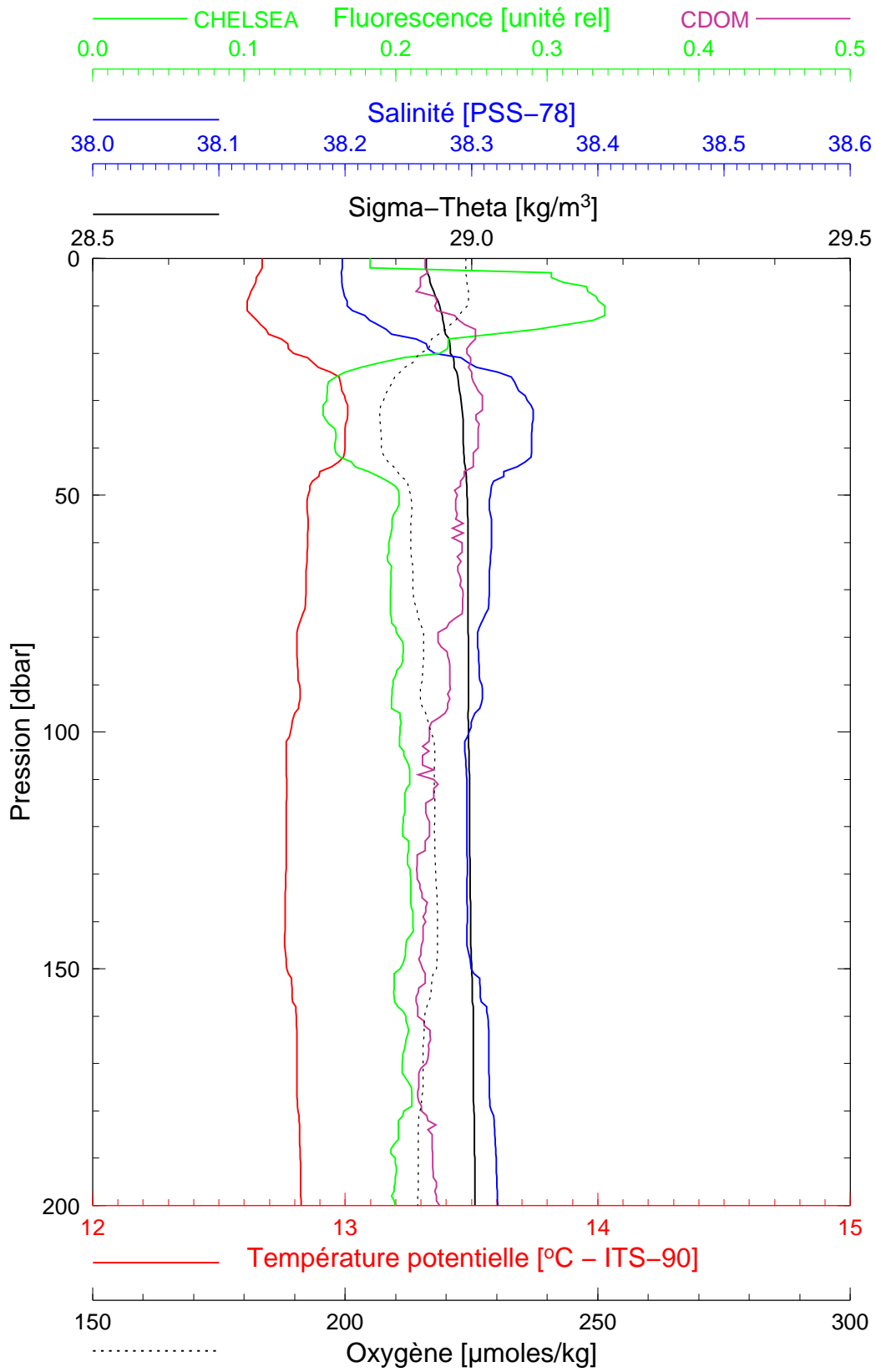
Latitude 43°33.977 N
Longitude 07°30.979 E

Boussole 50

28/02/2006

BOUS060228_06

BOUS006



Date 28/02/2006
Heure déb 15h 28min [TU]

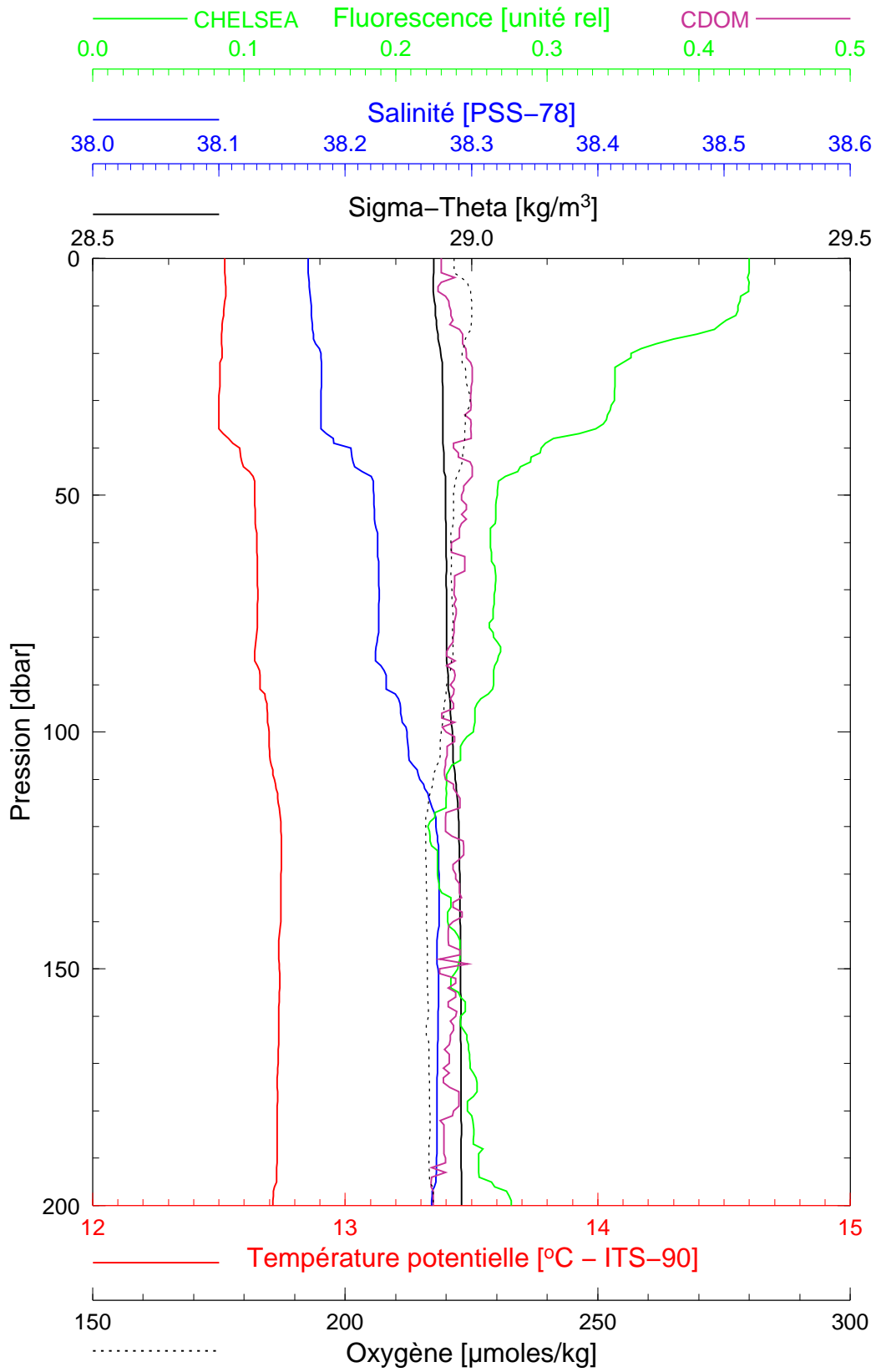
Latitude 43°36.332 N
Longitude 07°24.780 E

Boussole 50

28/02/2006

BOUS060228_07

BOUS007



Date 28/02/2006
Heure déb 16h 24min [TU]

Latitude 43°38.878 N
Longitude 07°20.678 E