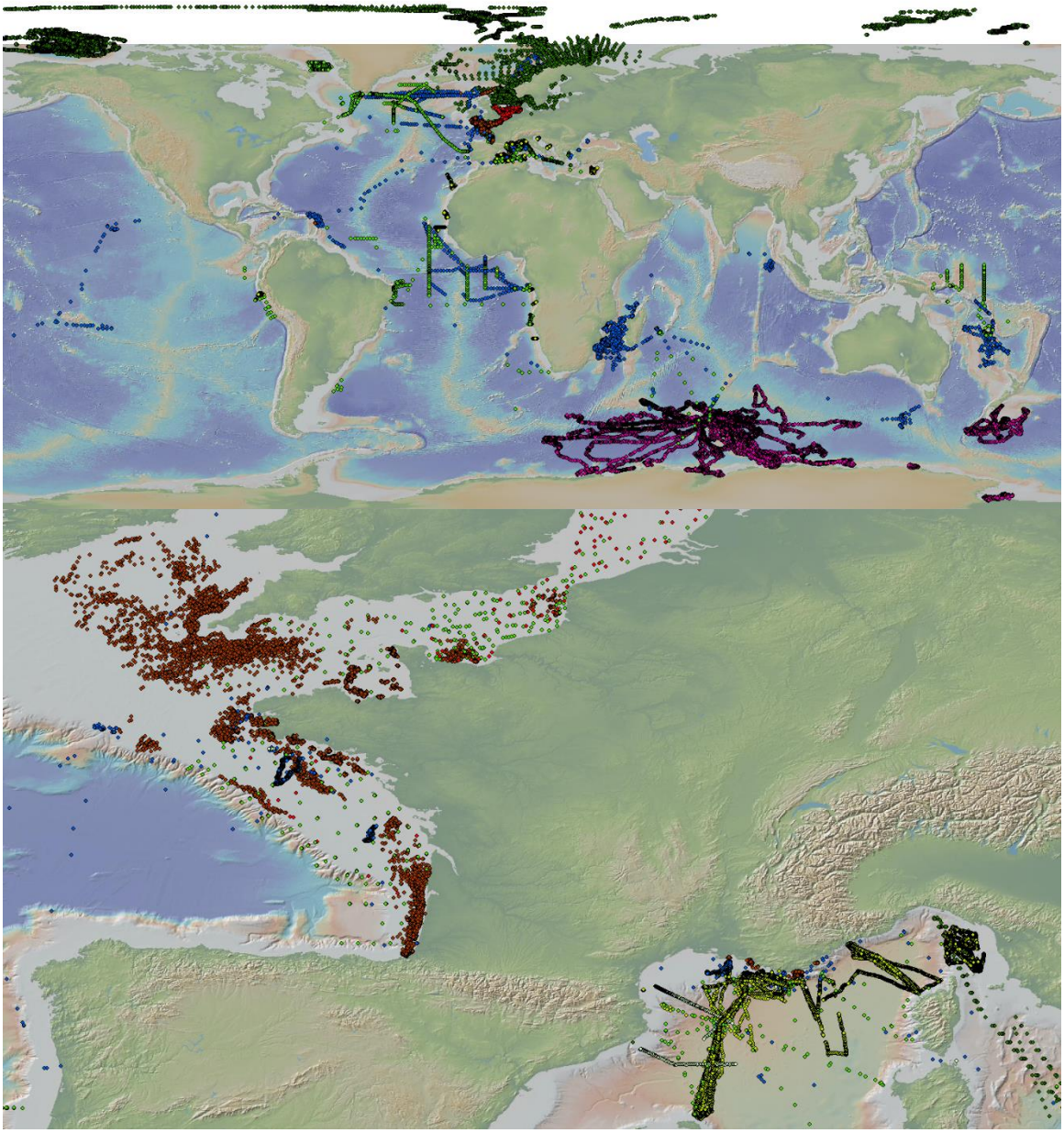
# GTSPP data management report 2016

Coriolis data center
Annual report
Version 1.0
November 7th 2016
DOI http://dx.doi.org/10.13155/46796



GTSPP profiles provided by Coriolis, May 2014 -November 2016

## Introduction

This is the Coriolis data center report on GTSPP activities for the period May 2014 - November 2016 (since the last report was published in May 2014).

## Status

(Please report the progress made towards completing the following tasks and if not yet complete, estimate when you expect them to be complete)

- Data acquired from ships, gliders, sea-mammal
- Data issued to GTS
- Data issued to US-NODC after real-time QC
- Data issued for delayed QC
- Delayed data sent to US-NODC
- Web pages
- Statistics of GTSPP data usage (operational models, scientific applications, number of National PIs…)
- Products generated from GTSPP data …

## Data acquired from ships, gliders, sea-mammals

Between May 2014 and November 2016, **112 015** new profiles from 343 platforms where collected, controlled and distributed.
All profiles processed during that period are available in 4 files on:

- http://www.ifremer.fr/co/gtspp/2016/
- *Overview with GoogleEarth*
  *http://www.ifremer.fr/co/gtspp/2016/co_gtspp_2016.kmz*

| Format | type | nb profiles |
|---|---|---|
| GL | Glider profiles | 43 039 |
| OS | CTD from research vessels by way of Copernicus | 27 474 |
| SM | Delayed mode sea mammal profiles by way of MEOP | 20 297 |
| RE | Fishing boats profiles | 12 844 |
| PF | Coastal profiling floats profiles | 2 737 |
| CT | CTD from research vessels by way of Coriolis | 2 675 |
| XB | XBT profiles by way of Coriolis | 2 039 |
| TO | Towed CTD profiles by way of Coriolis | 640 |
| ME | CTD from research vessels by way of SeaDataNet | 270 |
| **Total** | | **112 015** |

GTSPP new profiles managed by Coriolis between May 2014 and November 2016

Remark on Argo profiles: they are not mentioned in this report, as there is a direct link between GTSPP and Argo global data centers.

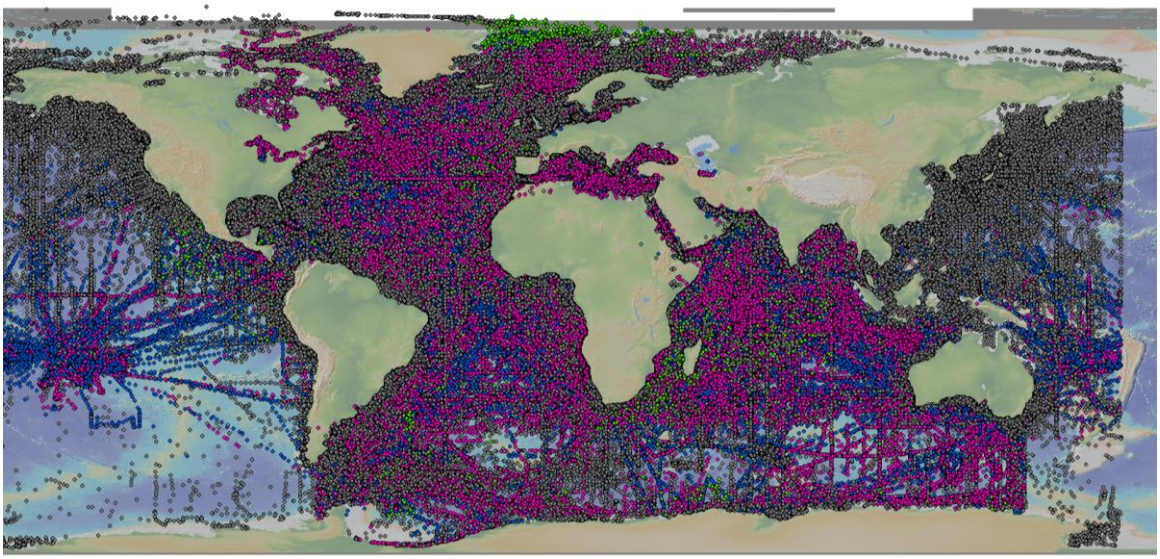
However, coastal profiling floats are not part of Argo, they are included in this report.

## Historical data from SHOM, the French hydrography service

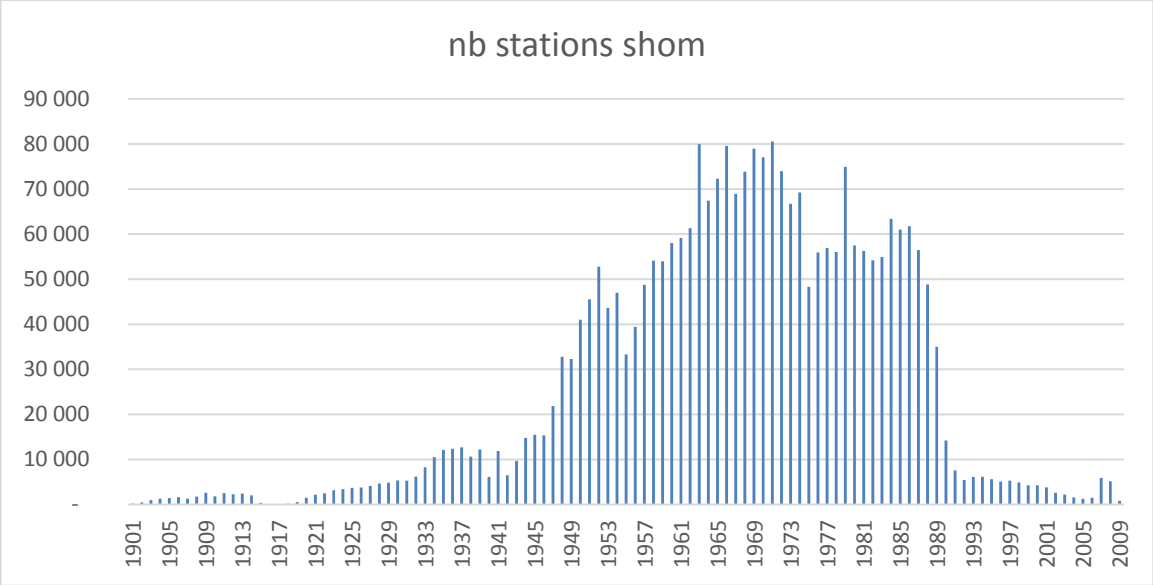
In 2015, Ifremer and SHOM synchronized their respective databases.
Historical data from the French navy became publicly available: 2,7 million profiles.
These data have a 5 years embargo (5 years after observation, they become public).
They are XBTs, MBTs and CTDs from:

- the French navy
- the non-French cruises performed in French territorial waters

Among the 2,7 million profiles from SHOM imported in Coriolis database, some profiles are already present in GTSPP and World Ocean Database. The duplicate control is underway; it should be completed in November 2017.



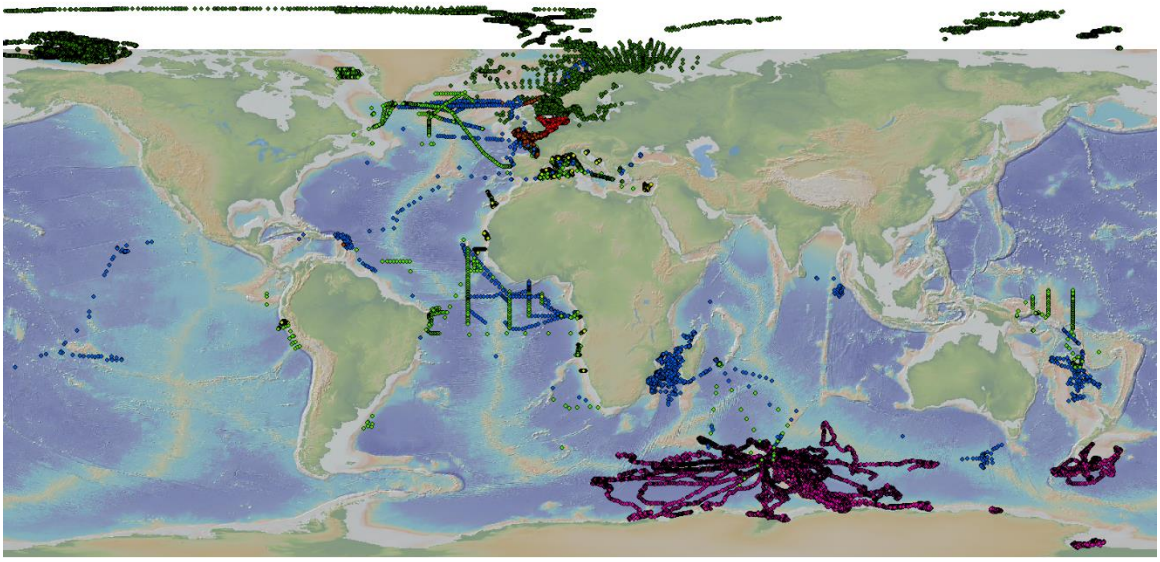
The 2,7 million new profiles from SHOM-Coriolis synchronization



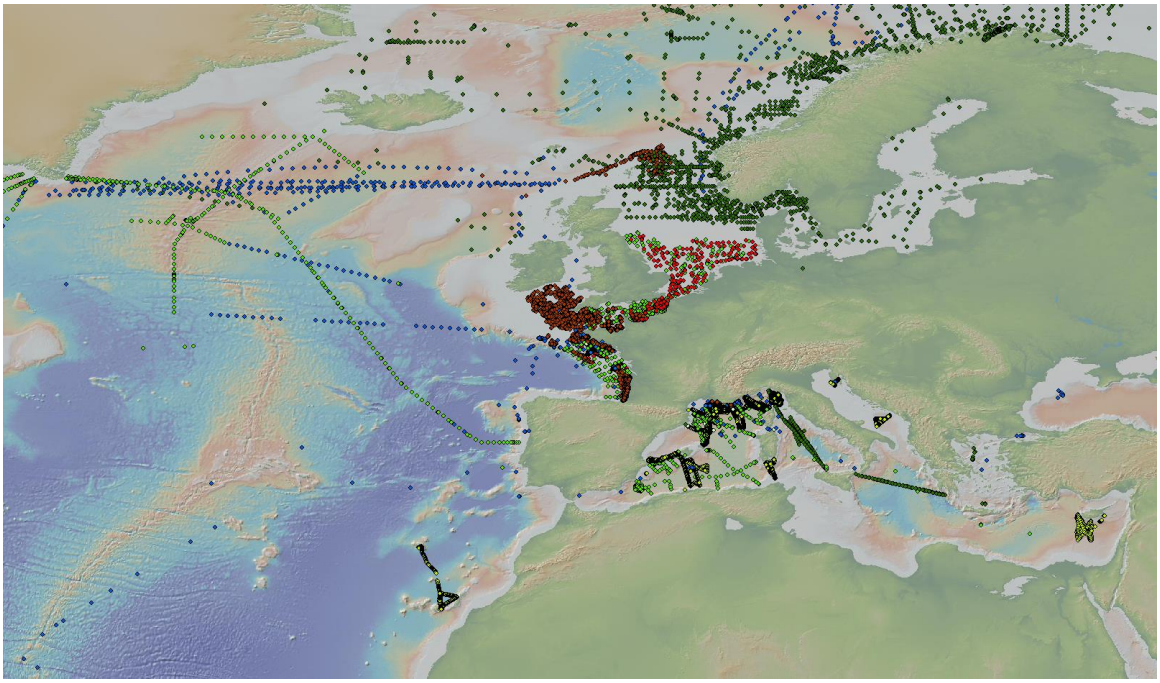

Histogram of the 2,7 million new profiles from SHOM

| Type | nb stations |
|---|---|
| Bottle | 934 098 |
| CTD | 41 122 |
| MBT | 1 105 509 |
| XBT | 701 024 |
| **Total** | **2 781 753** |

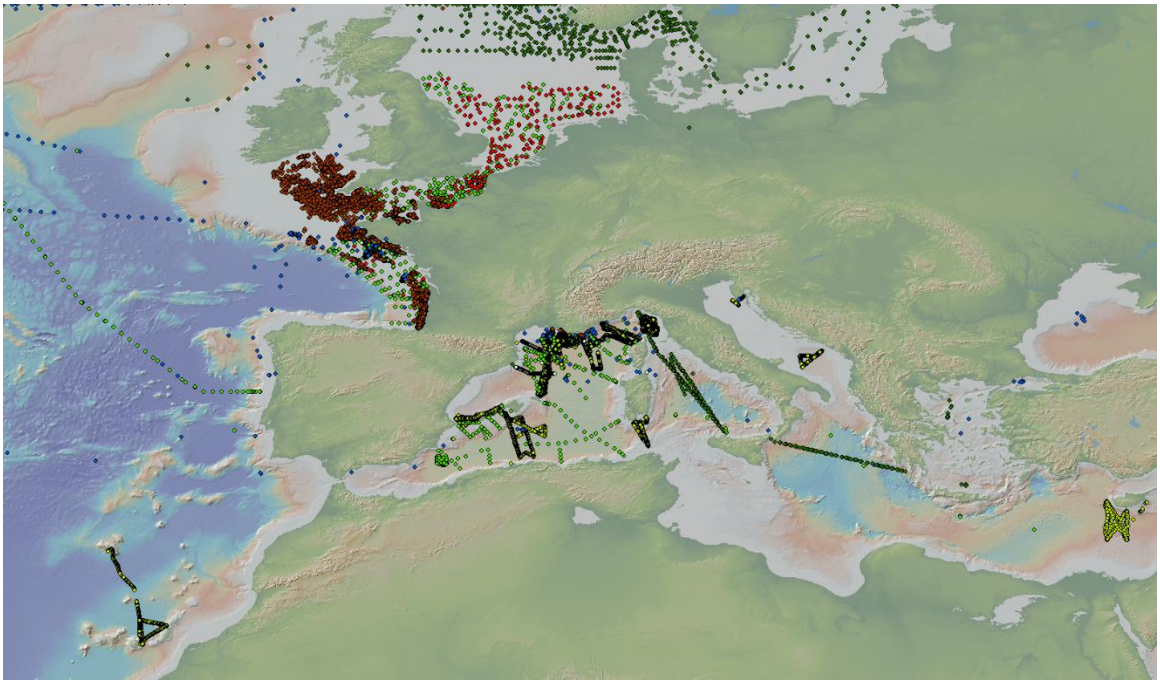
## Maps of observations



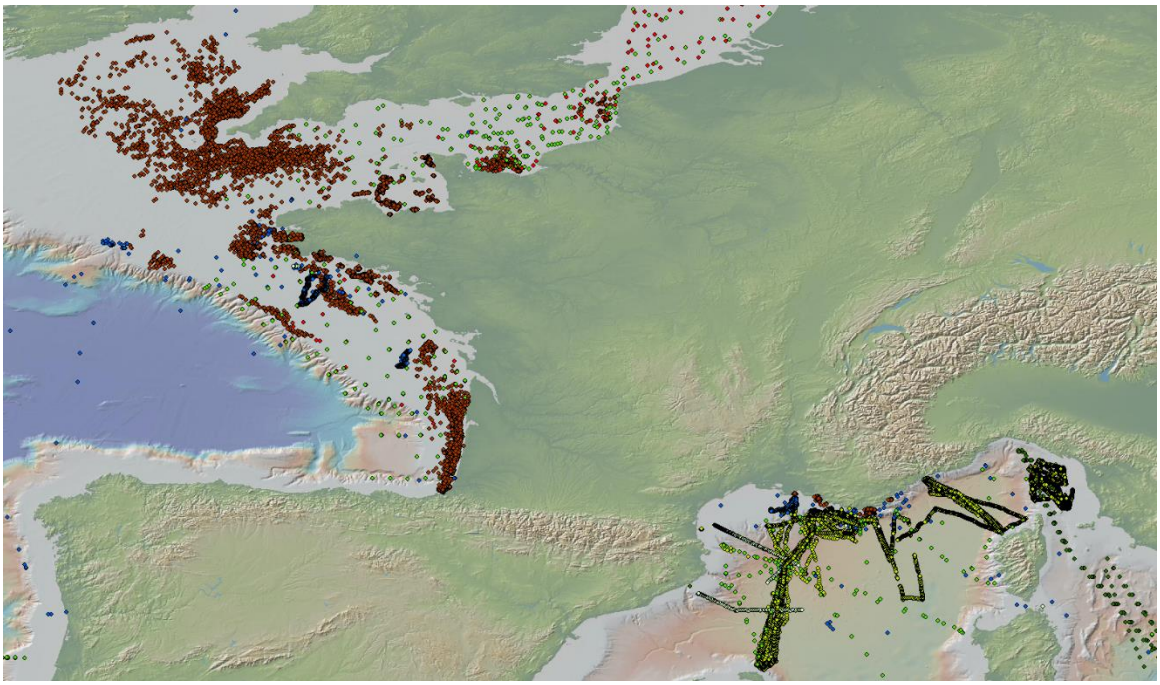
Vertical profiles observed between May 2014 and November 2016 from 343 platforms



Focus on North Atlantic



Focus on West Europe



Focus on France

## List of the platforms that reported temperature and/or salinity profiles

Most of the vertical profiles were performed on research vessels, ships of opportunity, gliders, sea-mammals and fishing boats. The fishing boats are not individually identified. We manage the sensors that may be deployed on different boats.

### Research vessels and ships of opportunity: 28 platforms

| PLATFORM_CODE | NAME | nb profiles |
|---|---|---|
| LDGJ | JOHAN HJORT | 1483 |
| FMCY | POURQUOI PAS? | 1233 |
| FNFP | THALASSA | 1193 |
| LJIT | HAAKON MOSBY | 784 |
| LLZG | G.O. SARS | 678 |
| FNCM | L'ATALANTE | 671 |
| FGTO | TETHYS II | 370 |
| DBBH | METEOR | 355 |
| OXYH2 | NUKA ARCTICA | 258 |
| FZVN | LE SUROIT | 232 |
| FHQB | ALIS | 218 |
| CGDT | AMUNDSEN | 201 |
| EABV | R/V SOCIB | 198 |
| ICGK | LA SUPERBA | 155 |
| EAKF | SARMIENTO DE GAMBOA | 136 |
| FNIN | MARION DUFRESNE | 122 |
| IBIL | LA SUPREMA | 104 |
| FABB | BEAUTEMPS-BEAUPRE | 100 |
| DBBT | Maria S. Merian | 90 |
| FNUR | ANTEA | 82 |
| FPCS | THALIA | 68 |
| DFCG | SONNE | 39 |
| HOWN | PACIFIC ISLANDER2 | 35 |
| TCLA | Daniel A | 33 |
| IBBE | Excellent | 24 |
| EFCP | HESPERIDES | 12 |
| FKJB | L'EUROPE | 7 |
| EASE | ANGELES ALVARINO | 4 |

### Gliders: 27 platforms

| PLATFORM_CODE | NAME | nb profiles |
|---|---|---|
| 68963 | Atalanta Slocum glider | 241 |

| | | |
|---|---|---|
| 18956 | Bonpland slocum glider | 3670 |
| 58970 | Campe slocum glider | 2436 |
| 68451 | Crate glider | 154 |
| 6801661 | Dora Glider | 3257 |
| 6903275 | DOVA Profiling Float | 13 |
| 68950 | Eudoxus slocum glider | 819 |
| 61786A | HIMILCON GLIDER | 1140 |
| 68968 | icoast00 | 64 |
| 68452 | ideep00 | 1108 |
| 68966 | ideep02 | 1661 |
| 61863 | IFM02 Slocum glider Deepy | 1678 |
| 18904 | IFM03 Slocum glider | 1748 |
| 18951 | IFM07 Slocum glider | 1550 |
| 18952 | IFM09 Slocum glider | 1106 |
| 6801660 | Jade Glider | 1781 |
| 18957 | HANNON GLIDER | 1352 |
| 68951 | Milou slocum glider | 1131 |
| 68952 | Nearchos slocum glider | 954 |
| 68458 | p201 deep Slocum glider | 625 |
| 68457 | sdeep00 | 1577 |
| 68967 | sdeep01 | 3402 |
| 68997 | sdeep04 | 437 |
| 68953 | Tenuse Slocum glider | 6941 |
| 68453 | Theque glider | 91 |
| 68954 | Tintin slocum glider | 2498 |
| 6800957 | unit_403 glider | 1618 |

## Coastal floats: 10 platforms

| PLATFORM_CODE | NAME | nb profiles |
|---|---|---|
| 6901749 | ARVOR-C Profiling Float | 152 |
| 6902716 | ARVOR-C Profiling Float | 125 |
| 6902679 | ARVOR-C Profiling Float | 114 |
| 6901682 | ARVOR-C Profiling Float | 210 |
| 6901572 | ARVOR-C Profiling Float | 87 |
| 6902717 | ARVOR-C Profiling Float | 118 |
| 6901681 | ARVOR-C Profiling Float | 326 |
| 6901748 | ARVOR-C Profiling Float | 380 |
| 6902680 | ARVOR-Cm Profiling Float | 1115 |
| IF000586 | PROVOR Profiling Float | 110 |

## ITP (Ice tethered platforms): 21 platforms

| PLATFORM_CODE | NAME | nb profiles |
|---|---|---|
| EXMY1784 | ITP68 | 10 |

| | | |
|---|---|---|
| EXMY1125 | ITP_70 | 830 |
| EXMY1796 | ITP_74 | 188 |
| EXMY1126 | ITP_76 | 968 |
| EXMY1127 | ITP_77 | 1723 |
| EXMY1128 | ITP_78 | 1072 |
| EXMY1129 | ITP_79 | 1152 |
| EXMY1507 | ITP_80 | 3832 |
| EXMY1508 | ITP_81 | 906 |
| EXMY1509 | ITP_82 | 3401 |
| EXMY1618 | ITP_83 | 1098 |
| EXMY1797 | ITP_84 | 191 |
| EXMY1510 | ITP_85 | 834 |
| EXMY1511 | ITP_86 | 1048 |
| EXMY1512 | ITP_87 | 954 |
| EXMY1743 | ITP_88 | 38 |
| EXMY1744 | ITP_89 | 433 |
| EXMY1712 | ITP_90 | 10 |
| EXMY1699 | ITP_91 | 303 |
| EXMY1702 | ITP_92 | 2099 |
| EXMY1713 | ITP_93 | 1948 |

## Fishing boats: 93 sensors deployed on various vessels

| PLATFORM_CODE | nb profiles | PLATFORM_CODE | nb profiles | PLATFORM_CODE | nb profiles |
|---|---|---|---|---|---|
| EXRE0010 | 1002 | EXRE0167 | 132 | EXRE0133 | 33 |
| EXRE0213 | 821 | EXRE0147 | 125 | EXRE0198 | 32 |
| EXRE0122 | 720 | EXRE0005 | 120 | EXRE0108 | 31 |
| EXRE0172 | 697 | EXRE0139 | 119 | EXRE0203 | 31 |
| EXRE0129 | 421 | EXRE0176 | 114 | EXRE0027 | 26 |
| EXRE0190 | 408 | EXRE0192 | 108 | EXRE0017 | 21 |
| EXRE0173 | 407 | EXRE0178 | 108 | EXRE0171 | 21 |
| EXRE0204 | 405 | EXRE0099 | 105 | EXRE0156 | 20 |
| EXRE0155 | 351 | EXRE0134 | 82 | EXRE0100 | 19 |
| EXRE0191 | 320 | EXRE0055 | 78 | EXRE0054 | 19 |
| EXRE0114 | 314 | EXRE0128 | 77 | EXRE0126 | 19 |
| EXRE0187 | 308 | EXRE0212 | 77 | EXRE0180 | 18 |
| EXRE0135 | 294 | EXRE0169 | 72 | EXRE0200 | 18 |
| EXRE0189 | 293 | EXRE0197 | 67 | EXRE0082 | 17 |
| EXRE0157 | 282 | EXRE0186 | 66 | EXRE0216 | 17 |
| EXRE0174 | 273 | EXRE0201 | 65 | EXRE0208 | 16 |
| EXRE0161 | 265 | EXRE0206 | 63 | EXRE0182 | 15 |
| EXRE0179 | 250 | EXRE0194 | 61 | EXRE0215 | 15 |
| EXRE0111 | 236 | EXRE0092 | 59 | EXRE0205 | 14 |
| EXRE0112 | 217 | EXRE0102 | 58 | EXRE0210 | 14 |
| EXRE0193 | 188 | EXRE0137 | 54 | EXRE0170 | 14 |
| EXRE0211 | 182 | EXRE0098 | 52 | EXRE0188 | 14 |

| | | | | | |
|---|---|---|---|---|---|
| EXRE0105 | 176 | EXRE0149 | 48 | EXRE0148 | 13 |
| EXRE0013 | 171 | EXRE0115 | 45 | EXRE0199 | 13 |
| EXRE0185 | 170 | EXRE0183 | 45 | EXRE0121 | 12 |
| EXRE0083 | 166 | EXRE0124 | 43 | EXRE0107 | 10 |
| EXRE0202 | 161 | EXRE0209 | 41 | EXRE0207 | 8 |
| EXRE0036 | 160 | EXRE0138 | 40 | EXRE0195 | 7 |
| EXRE0011 | 152 | EXRE0110 | 36 | EXRE0181 | 5 |
| EXRE0033 | 146 | EXRE0072 | 36 | EXRE0214 | 5 |
| EXRE0153 | 136 | EXRE0196 | 36 | EXRE0175 | 3 |

## Delayed mode sea mammals: 62 animals

Delayed mode sea-mammals data from MEOP.
*Roquet Fabien, Guinet Christophe, Charrassin Jean-Benoit, Costa Daniel P., Kovacs Kit M, Lydersen Christian, Bornemann Horst, Bester Marthan N., Muelbert Monica C., Hindell Mark A., Mcmahon Clive R., Harcourt Rob, Boehme Lars, Fedak Mike A. (2014).* ***MEOP-CTD in-situ data collection: a Southern ocean Marine-mammals calibrated sea water temperatures and salinities observations***. *SEANOE.* http://doi.org/10.17882/45461

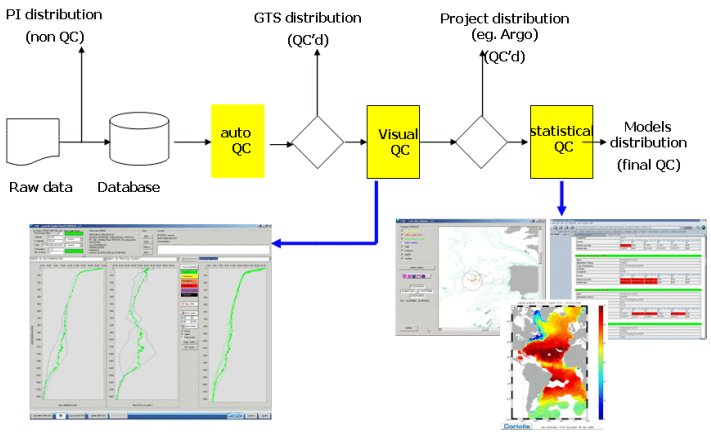
| PLATFORM_CODE | nb profiles | PLATFORM_CODE | nb profiles |
|---|---|---|---|
| 9900716 | 845 | 9900733 | 303 |
| 9900722 | 821 | 9900624 | 301 |
| 9900719 | 779 | 9900745 | 298 |
| 9900721 | 773 | 9900747 | 290 |
| 9900715 | 763 | 9900736 | 286 |
| 9900720 | 664 | 9900699 | 285 |
| 9900729 | 471 | 9900749 | 283 |
| 9900619 | 459 | 9900697 | 281 |
| 9900618 | 458 | 9900685 | 266 |
| 9900609 | 455 | 9900691 | 260 |
| 9900615 | 442 | 9900751 | 243 |
| 9900694 | 438 | 9900739 | 227 |
| 9900614 | 432 | 9900752 | 226 |
| 9900607 | 419 | 9900654 | 218 |
| 9900732 | 419 | 9900627 | 212 |
| 9900621 | 414 | 9900717 | 207 |
| 9900744 | 379 | 9900731 | 201 |
| 9900620 | 377 | 9900626 | 200 |
| 9900690 | 368 | 9900628 | 190 |
| 9900741 | 353 | 9900730 | 189 |
| 9900718 | 346 | 9900712 | 175 |
| 9900748 | 346 | 9900622 | 163 |
| 9900746 | 344 | 9900698 | 154 |
| 9900750 | 342 | 9900713 | 137 |
| 9900735 | 337 | 9900714 | 123 |
| 9900743 | 336 | 9900692 | 108 |

| | |
|---|---|
| 9900742 | 328 |
| 9900738 | 325 |
| 9900610 | 317 |
| 9900612 | 308 |
| 9900696 | 303 |

| | |
|---|---|
| 9900728 | 93 |
| 9900631 | 78 |
| 9900734 | 64 |
| 9900630 | 50 |
| 9900693 | 25 |

## Data issued to GTS

All profiles processed by Coriolis are distributed on the GTS by way of Meteo-France. This operation is automatically performed. After applying the automatic GTSPP QC procedure, the profiles are inserted on the GTS every 2 hours. GTSPP profiles are inserted on the GTS 365 days per year, 24 hours a day.




**CORIOLIS DAC: GTSPP data flow**

## *Data issued to US-NODC after real-time QC*

*The vertical profiles are available in real-time from MyOcean in-situ thematic assembly centre. These data are publicly available. However, a registration is required.*

*More on MyOcean: http://www.myocean.eu*
*Registration form: http://www.myocean.eu/web/56-user-registration-form.php*

## Data issued for delayed QC

All profiles are visually controlled by a Coriolis operator. XBT are particularly scrutinized by SHOM experts (the French Hydrography service).

## Delayed mode data sent to US-NODC

A total of, 112 015 new profiles from 343 platforms is available in a meds-ascii data file:

- http://www.ifremer.fr/co/gtspp/2016/

Most of these profiles have a GTSPP unique ID.

## Statistics of GTSPP data usage (operational models, scientific applications, number of National Pis…)

Operational oceanography models: all profiles are distributed to:

- French model Mercator (global operational model)
- French model Previmer (coastal operational oceanography)
- French model Soap (navy operational model)
- EU Copernicus models (Foam, Topaz, Moon, Noos, Black-Sea)
- EuroGoos projects

## Delayed Mode QC

(Please report on the progress made towards providing delayed mode GTSPP data, how it's organized and the difficulties encountered and estimate when you expect to be pre-operational.)

- The SHOM provided a very important number of CTDs and XBTs from national cruises and foreign cruises performed in French territorial area.