

**GLOSS**  
**French contribution up to 2003**  
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The 15 stations under the responsibility of French agencies are:

Gloss 242	Brest	responsibility	SHOM
Gloss 205	Marseille		IGN
Gloss 123	Nouméa		SHOM /Univ. de Hawaii
Gloss 142	Nuku Hiva (Marquises)		Univ. de Hawaii
Gloss 138	Rikitea (Gambier)		„
Gloss 140	Matavai (Tahiti)		„
Gloss 23	Kerguelen		INSU-IFRTP
Gloss 24	Amsterdam St Paul		„
Gloss 21	Crozet		„
Gloss 131	Dumont D'Urville		„
Gloss 165	Clipperton		not installed
Gloss 204	Fort de France (Martinique)		SHOM/METEO-FRANCE
Gloss 17	Pointe des Galets (La Réunion)		SHOM/DDE
Gloss 202	Ile Royale instead of Cayenne		SHOM/DDE
Gloss 96	Dzaouzi Mayotte		?

**GLOSS 205 and 242:**

The data from the two stations are collected by SHOM and transmitted to PSMSL.

Brest has been equipped with a new acoustic station since 1993. A radar sensor has been installed since 2003 and is going to replace the acoustic sensor.

Marseille was equipped with such an acoustic station in June 1998.

**GLOSS 123:**

The station 123 (Nouméa) is composed of an American tide gauge, under US responsibility, and a French one, under SHOM responsibility. The data from the American tide gauge is sent regularly to the University of Hawaii via satellite. The French tide gauge is used only to control the American tide gauge. People from the the hydrographic base in Nouméa (depending from SHOM), and people from IRD have a regular look after the two tide gauges.

Work is under progress in Numbo (20 kms from Chaleix) in order to install a new modern tide gauge in order to replace the two presently in place, which get older. This tide gauge will be included in the French network of permanent tide gauges (currently 20 tide gauges). It could be equipped with permanent GPS by IRD.

### **GLOSS 138, 140, 142**

The University of Hawaii maintains these three stations.

### **GLOSS 21, 23, 24, 131**

The four stations of the South Indian Ocean are part of the ROSAME network (Réseau d'Observation Subantarctique et Antarctique du Niveau de la Mer). They are equipped with pressure sensor (water level pressure, seawater temperature, and atmospheric pressure). These stations are automatic and transmit the data through ARGOS. The hourly data, after validation, are transmitted to the Hawaii Centre.

-Station 23 (Kerguelen) is operational since April 1993, with only a short gap of a few days in January 2000.

-Station 21 (Crozet) is in place since December 1994. It has been operational from November 1995 to February 1997, from December 1998 to June 1999, from March 2000 to June 2000. It is now again operational since September 2000.

-Station 24 (Amsterdam-St Paul) is operational since October 1994, with a gap from April 1999 to June 1999.

-Station 131 (Dumont d'Urville) was installed in February 1997. It has been operational from February 1997 to August 1997, from February 1998 to May 1998, and from February 1999 up to now, with a short gap in January and February 2000.

### **GLOSS 165**

Nothing new at Clipperton.

### **GLOSS 204**

Tide sheets from 1993 to 1998 are being digitised. Since 1998, SHOM does not receive any more tide sheet. The tide gauge was repaired in 1999 by SHOM, but it disappeared just after this intervention. Since this date, there is no tide gauge in Fort-de-France. A meeting took place at Fort-de-France between SHOM, Meteo-France and the French Navy in order to install a permanent radar gauge. This tide-gauge will be added to RONIM French network and managed from the SHOM in Brest. A contract is about to be passed between those three parties and the tide gauge should be installed in 2004.

### **GLOSS 202**

Contacts have been taken between SHOM and the DDE of Guyana in order to install a digital tide-gauge at " Ile Royale " in Guyana. This permanent digital gauge will be added to RONIM French network and managed from the Hydrographic Service in Brest. A contract is about to be passed between those three parties and the tide gauge should be installed in 2004.

### **GLOSS 17**

SHOM received two years of tide-sheets (1998 and 2000). They have not been digitised yet. A permanent radar gauge should be installed in the next years but no contact has been taken yet. This permanent digital gauge will be added to RONIM French network and managed from the Hydrographic Service in Brest.

### **GLOSS 96**

Some tide sheets are to be digitised at SHOM. Non regular reception, doubt about quality of data. There is no project of a new tide-gauge there.

## **GPS Stations**

GPS campaigns were carried out in Brest (86, 89, 93, 94, 97), Crozet (92, 94, 95), Dumont d'Urville (95), Kerguelen (1992, 94, 95 and 2002), Marseille (86, 88, 93, 94), Nouméa (90, 91), Papeete (90, 91) and Pointe des Galets (93). The following stations are now equipped with permanent GPS receivers (G), and DORIS (D): Ajaccio (G), Brest (G), Dumont d'Urville (G, D), Kerguelen (G, D), La Rochelle (G), Marseille (G), Nouméa (G, D) and Papeete (G, D). Saint Jean-de-Luz permanent GPS and tide gauge stations are planned for early 2004.

## **PSMSL**

In July of 2000, SHOM has sent to PSMSL the daily, monthly and annually average level for the following stations : Dunkerque (98, 99), Calais (98, 99), Le Havre (99), Cherbourg (99), Roscoff (99), Le Conquet (99), Brest (97-98-99), Concarneau: 1971 (4months), 1973 (9 months), 1987 (4 months), 1999 (7 months), Les Sables d'Olonne (99, 99), La Rochelle-Pallice (97, 98, 99), Bayonne-Boucau (99), Sète (96, 97, 98, 99), Marseille (98, 99), Toulon (81 - 7mths, 82 - 10 months, 84 - 10 months, 91 - 3 months), 92 - 3 months, 93, 94, 95, 96, 97, 98, 99), Nice (98, 99)

## **Tide gauge and GPS@TG data archives**

- Data from the ROSAME network are available at the anonymous ftp site:

Spike.cst.cnes.fr  
Login: anonymous  
Password: email address  
Cd pub/techine/rosame

- SONEL data servers are operational : since April 2001 for continuous GPS observations at tide gauges (CGPS@TG), since January 2002 for hourly tide gauge data.

GPS observations at tide gauges are collected daily and are made available to the wide user community freely. This activity supports the IGS TIGA pilot project and is expected to contribute to ESEAS infrastructure as well. Data from more than 120 CGPS@TG stations are available via anonymous FTP ([ftp.sonel.org](ftp:sonel.org)).

In agreement with PSMSL and UHSLC, and for a pilot phase, tide gauge data from these stations are also collected, when available. The objective is to propose a comprehensive and simple access point to users interested by the synergy of tide gauges and space geodesy. By copying data from PSMSL or UHSLC, SONEL data centre implicitly acts as a distant geographical backup. But by no means it can supplant PSMSL or UHSLC in the many activities they carry out to maintain their archives up-to-date (contacts, data exchanges, fluxes, quality controls...). The main contribution of SONEL to these data centres is certainly the free availability of the hourly tide gauge data coming from the French SHOM/RONIM tide gauge network. The whole data sets from this network (currently 20 tide gauges) are available through SONEL internet data servers (see [www.sonel.org](http://www.sonel.org)).