

SEA LEVEL STATION MONITORING FACILITY

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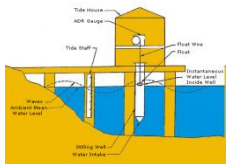
Flanders Marine Institute (VLIZ)

Sea Level Station Monitoring Facility

- SLSMF collects and processes **real time data** from 1028 stations operated by 182 institutes world wide.

www.ioc-sealevelmonitoring.org

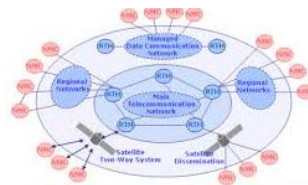
- Managed by Flanders Marine Institute (VLIZ) for IOC as part of the GLOSS and Tsunami programs to inform about
 - operational **status** and coverage of sea level **stations networks**
 - **performance** and speed of a station
 - **quality** of the sensor data and metadata
 - Integration and exchange of **high frequency** sea level data
 - support **Tsunami** warning centers
- High frequency data center for GLOSS
- Workshops for regional station operators
- Workshops on use of the data tools



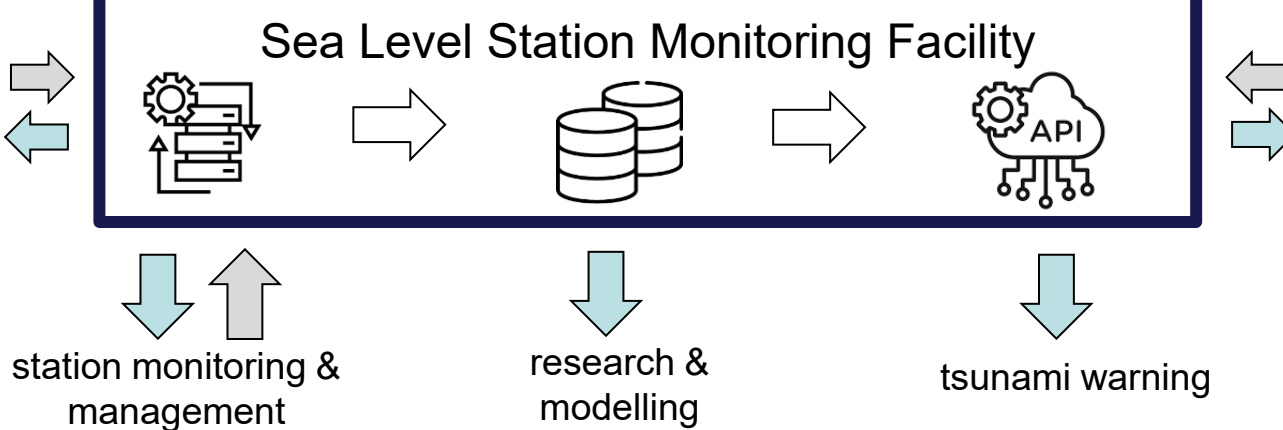
METEOSAT
GOES
IRIDIUM



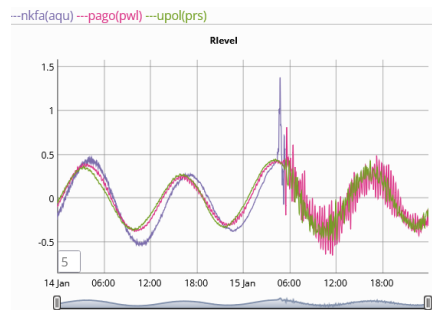
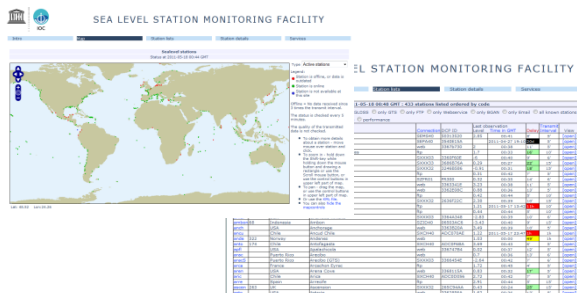
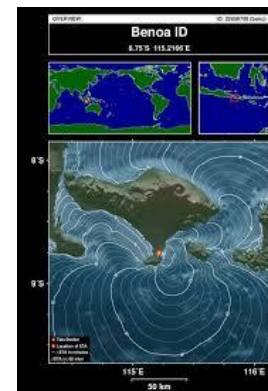
WMO GTS



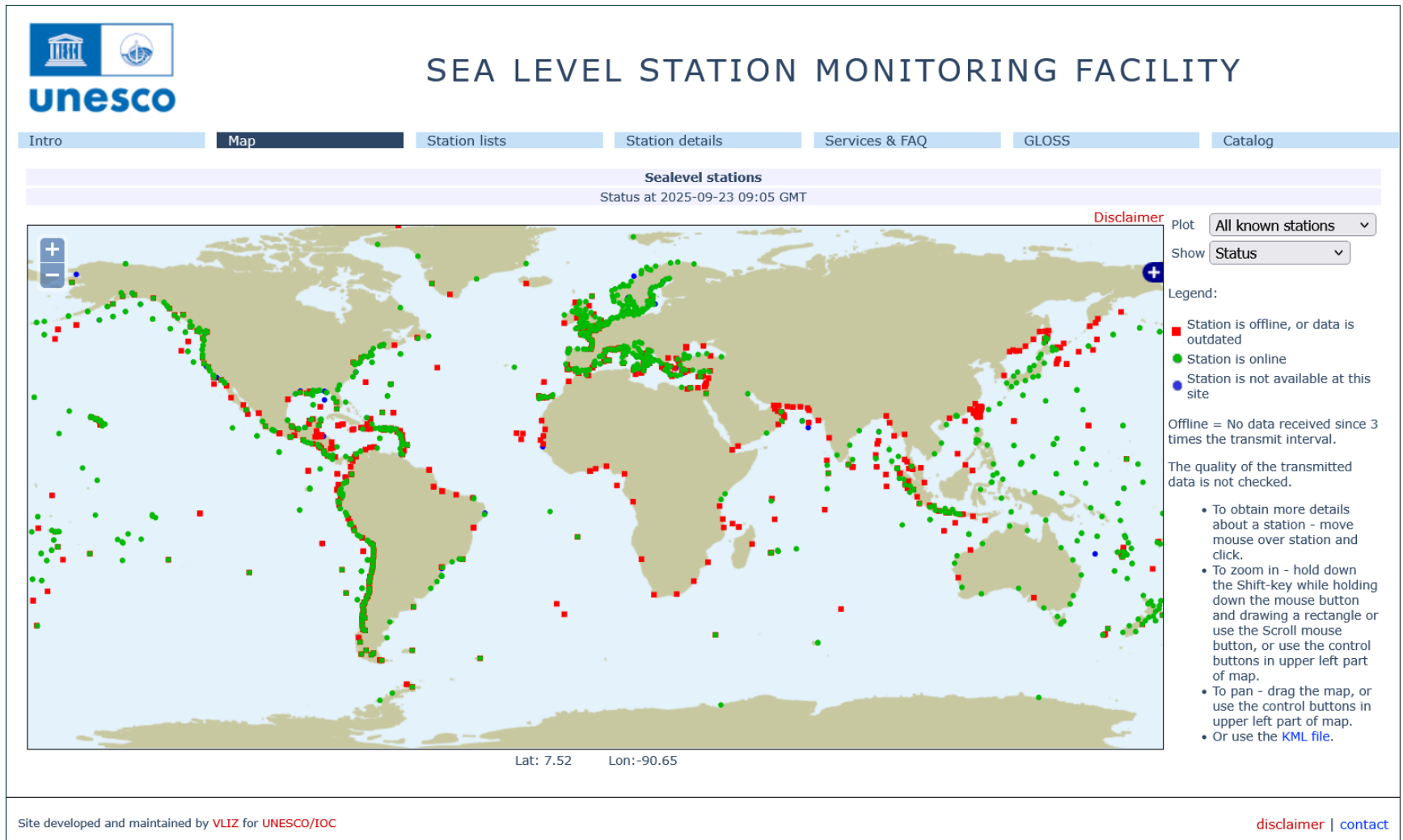
NOAA, INGV,
SHOM, SHOA
> 182 institutes



Tide tool



status & coverage



performance & speed



SEA LEVEL STATION MONITORING FACILITY

Intro Map Station lists Station details Services & FAQ GLOSS Catalog

Status at 2025-09-23 09:09 GMT : 1308 stations listed ordered by code																
Show:	Active stations				Info:	Performance statistics										
Code	GLOSS ID	Country	Location	Connection	Added to system	Observations per 7days			Observations past month			24h Ratio	Sample int.	Avg. delay per 24h	Transmit Interval	View
						Arrived	Expected	Ratio	Arrived	Expected	Ratio					
aarh		Denmark	Aarhus	ftp	2025-07-15 13:30:01	992	1008	98%	4404	4464	99%	97%	10'	5'	10'	[open]
abas	327	Japan	Abashiri	SWJP40	2012-03-21 09:54:59	9980	10080	99%	44150	44640	99%	97%	1'	7'	10'	[open]
abed		UK	Aberdeen	ftp	2012-09-04 21:04:28	652	672	97%	2970	2976	100%	100%	15'	25'	15'	[open]
abur	82	Japan	Aburatsu	SWJP40	2012-03-21 10:09:41	9980	10080	99%	44150	44640	99%	97%	1'	7'	10'	[open]
acaj	182	El Salvador	Acajutla SV	SZXX01	2008-06-20 12:17:00	8770	10080	87%	41645	44640	93%	85%	1'	5'	5'	[open]
acap2	267	Mexico	Acapulco API	SOMX10	2014-05-19 10:50:47		10080	-			-	-	1'		10'	[open]
acnj	220	USA	Atlantic City NJ	web	2008-06-06 00:00:00	7812	10080	78%	30214	44640	68%	100%	1'	2'	6'	[open]
acnj2	220	USA	Atlantic City NJ	SXXX03	2012-12-05 18:19:24	7542	10080	75%	14628	44640	33%	94%	1'	4'	6'	[open]
acor1		Spain	A Coruña	web	2019-12-07 10:12:36		10080	-			-	-	1'		5'	[open]
adak	302	USA	Adak AK	web	2010-03-30 11:04:00	7738	10080	77%	44390	44640	99%	81%	1'	4'	6'	[open]
adak2	302	USA	Adak AK	SXXX03	2012-12-05 18:19:24	9192	10080	91%	42336	44640	95%	88%	1'	4'	6'	[open]
agua		Puerto Rico	Aguadilla (Crash Boat)	SOVI10	2015-04-14 10:36:08	9510	10080	94%	42318	44640	95%	90%	1'	4'	6'	[open]
ajac		France	Ajaccio	ftp	2009-09-18 10:30:15	8243	10080	82%	44523	44640	100%	100%	1'	1'	5'	[open]
ajac2		France	Ajaccio2	SZFR01	2011-01-10 17:04:35		10080	-	43876	44640	98%	-	1'		6'	[open]
alac1		Spain	Alicante1	web	2019-12-07 10:17:22		1008	-			-	-	10'		10'	[open]
alac2		Spain	Alicante2	web	2019-12-07 10:20:22	1008	1008	100%	4462	4464	100%	100%	10'	2'	10'	[open]
alak		USA	Alitak US	web	2008-06-19 00:00:00	10072	10080	100%	44619	44640	100%	100%	1'	5'	6'	[open]
alak2		USA	Alitak US	SXXX03	2012-12-05 18:19:24	9558	10080	95%	42498	44640	95%	91%	1'	4'	6'	[open]
alam		USA	Alameda CA	web	2006-06-07 04:30:00	10055	10080	100%	44591	44640	100%	100%	1'	2'	6'	[open]
alawa		USA	Ala Wai Hbr	SZXX01	2023-03-29 04:51:39	8590	10080	85%	41550	44640	93%	81%	1'	4'	5'	[open]
alcu		Spain	Alcudia	ftp	2009-10-11 21:45:00	9466	10080	94%	44476	44640	100%	93%	1'	3'	4'	[open]
aler	333	Canada	Alert	web	2009-01-09 05:00:00		10080	-	1363	44640	3%	-	1'		10'	[open]
ales		Norway	Ålesund	web	2023-06-28 13:34:20	1008	1008	100%	4464	4464	100%	100%	10'	6'	10'	[open]
alex		Egypt	Alexandria	SXXX32	2009-11-04 03:54:00		10080	-			-	-	1'		6'	[open]
alex1		Egypt	Alexandria	bgan	2018-06-04 07:38:37		10080	-			-	-	1'		1'	[open]
alex2		Egypt	Alexandria	web	2023-06-01 22:55:53	35514	60479	59%	174663	267835	65%	40%	0.16667'		1'	[open]

quality & metadata



SEA LEVEL MONITORING FACILITY

[Intro](#) [Map](#) [Station lists](#) [Station details](#) [Services & FAQ](#) [GLOSS](#) [Catalog](#)

[previous station] Station **Point LaRue** at GMT [next station]

[\[more details\]](#) [\[GTS message\]](#) [\[show data\]](#) [\[show on map\]](#) [\[monitor\]](#)

Station metadata	
Code	laru2
Country	Seychelles
Location	Point LaRue
Status	Operational
Local Contact	Seychelles National Meteorological Services (Seychelles)
Other Contact	University of Hawaii Sea Level Center (USA)
GLOSS core ID	339 [goto handbook]
Long-term MSL data	UHSLC 111 (1977-1992) UHSLC 121 (1993-2018) PSMSL 1846 (1993-2018)
Latitude	-4.5
Longitude	55.5
Connection	GTS message
GTS message type	SXXX32

Sensor 1	
Type of sensor	prs (pressure)
Sampling rate (min)	1

Sensor 2	
Type of sensor	rad (radar)
Sampling rate (min)	3

Sensor 3	
Type of sensor	enc (float sensor with encoder)
Sampling rate (min)	6

Sensor 4	
Type of sensor	ra2 (2nd radar)

Period: ☒ 12h ☐ day ☐ 7 days ☐ 30 days

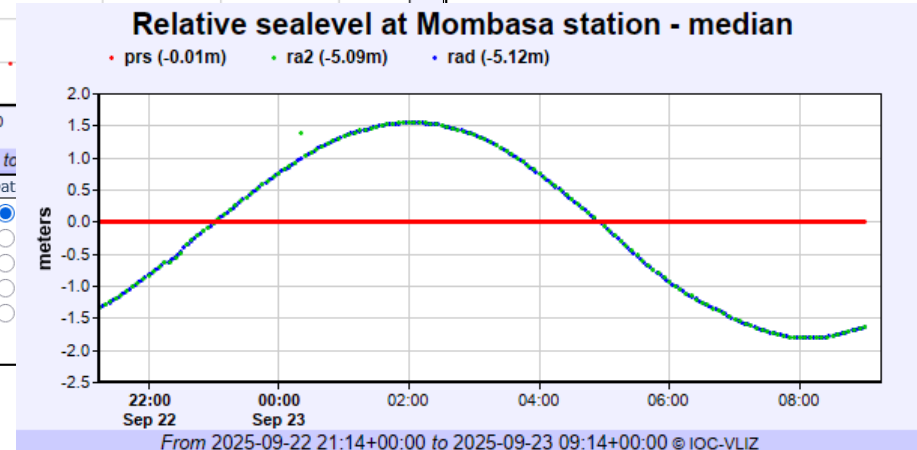
Signals: ☒ prs (pressure) ☒ rad (radar) ☒ enc (float sensor with encoder) ☒ ra2 (2nd radar) ☐ Remove outliers ☐ Remove spikes

Tip: use left icons to zoom & scroll

Relative sealevel at Point LaRue station - median

• prs (-1.84m) • ra2 (-5.1m) • rad (-6.11m)

From 2025-09-22 21:12+00:00 to 2025-09-23 09:14+00:00





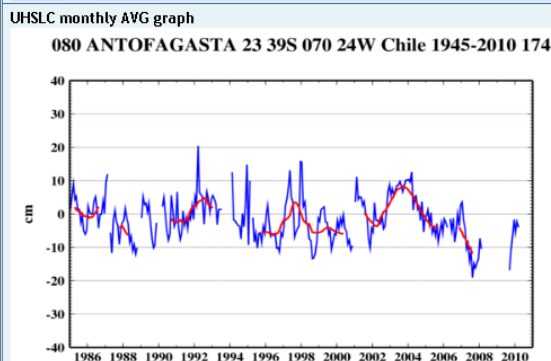
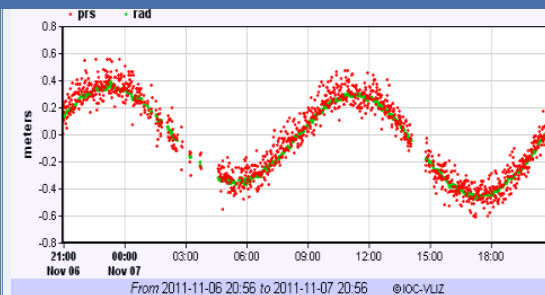
data integration & exchange

Stored
in SSC

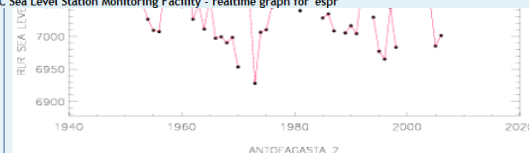
Station catalog metadata [edit]		[station overview]		
SSC ID	SSC-AR-espr			
Station Name	Bahia_Esperanza			
Country	Argentina			
Latitude	-63.33			
Longitude	-56.9166			
DateLastModified	2011-07-17 20:52:53			
Linked codes				
Codes	IOC:espr	GLOSS:185	UHSLC:601	PTWC:espr
Location	Bahia Esperanza AR	Bahia Esperanza	Esperanza	Bahia Esperanza AR
Latitude	-63.33	-63.3	-63.395 (= 63 23.7)	-63.3977
Longitude	-56.9166	-56.91666	-56.995 (= 056 59.7 W)	-56.9958
Sensors	pwl, bwl	Acoustic	N/A	pwl, bwl

Compare
metadata

Linked
via
Web-
service



Distributed metadata source: GLOSS Station Handbook	
Ocean	Southern
Operational	Yes
Responsible country	Argentina
Additional parameters	water/air temperature, wind direction/speed,
Tide gauge benchmarks	Benchmark bolt inside tide gauge hut adjacent
Benchmark relationships	Tide gauge zero (TGZ): Local Chart Datum TG;
Auxiliary benchmarks	AUX: Pilar de referencia ubicado en cercas de
Other relevant codes	UHSLC 601
Distributed metadata source: PTWC COMP META file	
DCP ID	33404708
WMO	XXXXXX
Samp Rate	30
Num# Samp	2
Unit	F
Scale	1.0000
Xmt Int.	060
Fst Min.	0028
HAR	0
Owner	UHSLC
Data availability	
IOC Sea Level Station Monitoring Facility - realtime graph for 'espr'	



station operators workshops

- data streams
- data protocols
- station configuration and maintenance
- data and analysis
- qc and troubleshooting

The screenshot shows the 'SEA LEVEL STATION MONITORING FACILITY' web interface. At the top, there's a UNESCO logo and a header bar. Below the header, a 'Select gauge:' dropdown is set to 'hani - Hanimadhoo', with a link to '[Add gauge]'. The left sidebar contains navigation links: 'Reques', 'SLS', 'API of the', 'Contact inf', 'CC-BY 4.0', 'Servers', 'resea', 'GET', and 'statio'. The main content area is titled 'Gauge details' and contains the following fields:

- Code:** hani [view]
- *Location:** Hanimadhoo
- Country:** Maldives Islands
- *Type:** GTS
- *Latitude:** 6.7667
- *Longitude:** 73.1667
- Message interval:** 15 min
- Local contact:** Maldives Meteorological Department (Maldives)
- Other contact 1:** University of Hawaii Sea Level Center (USA)
- Other contact 2:** (Pick)
- WMO type (GTS):** SXXX32
- DCP ID (GTS):** 26CB10AC
- GlossID:**
- OperatorID:** (for webservice only)
- Status:** Operational
- Status description:**
- Message example:** ^A SXXX32 EUMS 050031 26CB10AC :PRS 1 / 1 2202 2180 2204 2234 2233 2206 2214 2210 2218 2221 2231 2240 2229 2221 2221 2221 2242 2270 2260 2249 2246 2254 2261 2268 2283 2279 2264 2265 2283 2276
- URL (more info):**

Below the 'Gauge details' section, there are two sensor configuration blocks:

- Sensorid 22:**
 - Sensor:** prs
 - Unit:** meter
 - Samples/message:** 30
 - Sample interval:** 1 min
 - Offset:** 4
- Sensorid 82:**
 - Sensor:** rad
 - Unit:** meter
 - Samples/message:** 10
 - Sample interval:** 3 min
 - Offset:** 37



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PLATFORM FOR MARINE RESEARCH

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research tools

Lifewatch Data Explorer

About

Build data frame

Data table

Map

Time plots

Plots

Dashboard

Download

[TJESS]

load

enhance

Stations

- ☒ Alofi_Niue(alofi)
- ☒ Leava (Futuna Island, Wallis & Futuna)(futu)
- ☒ Lautoka_FJ(levu)
- ☒ Nukualofa_TO(nkfa)
- ☒ Nuku'Alofa Harbour wharf(nkfa2)
- ☒ Pago_Pago_AS(pago)
- ☒ Pago_Pago_AS(pagx)
- ☒ Apia_Upolu_WS(upol)
- ☒ Vatia, Viti Levu(vati)
- ☒ Suva_Viti_Levu_FJ(viti)
- ☒ Mata-Utu (Wallis island)(wall)

Use position and distance to change station list. Toggle button to select or unselect all stations in the list. Then load data for selected time period.

Latitude

-21

Longitude

-175

Distance

0

935

10,000

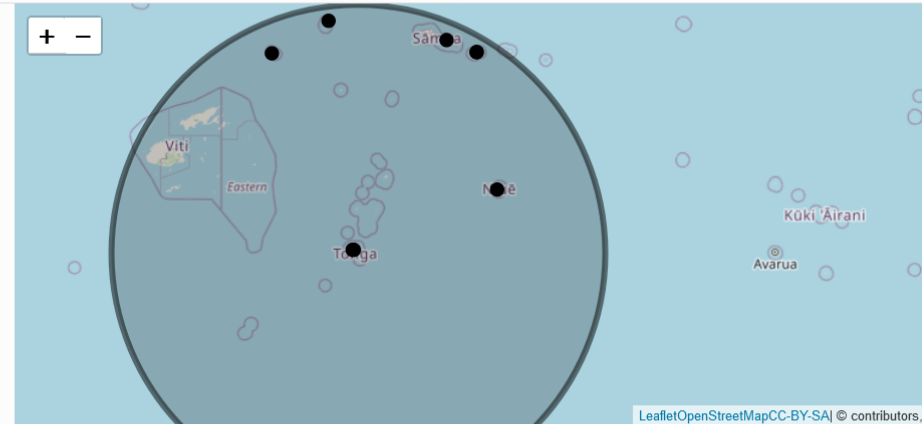
Timeframe

2022-01-14

2022-01-16

Toggle

Load data

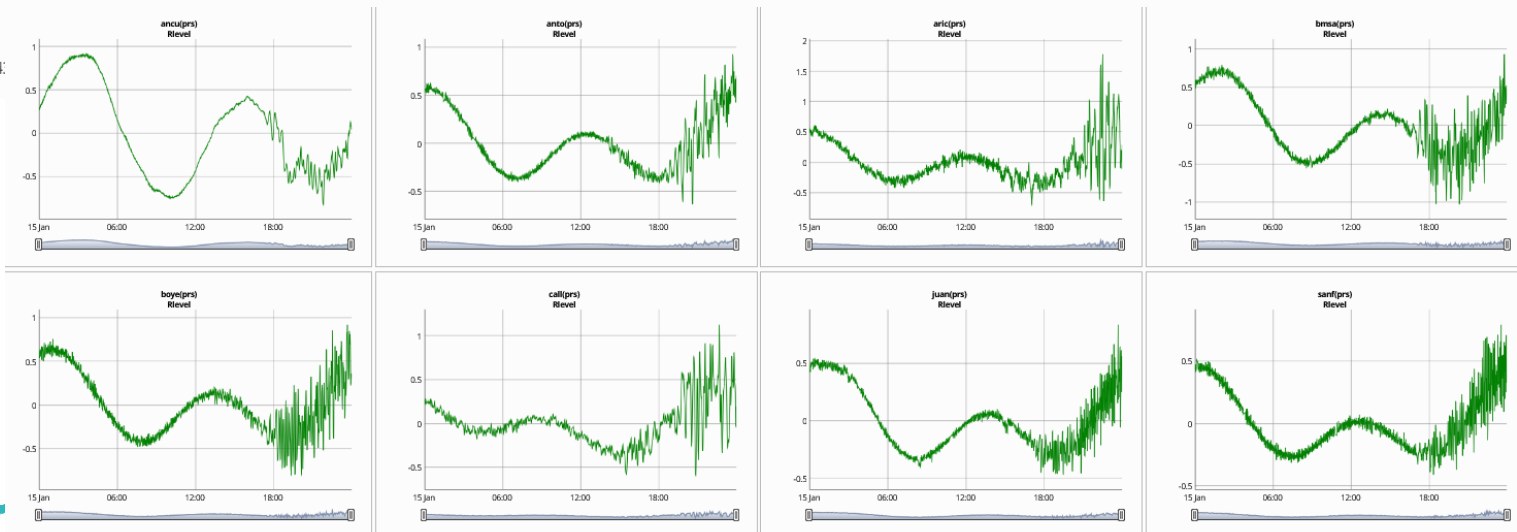


LeafletOpenStreetMapCC-BY-SA © contributors,

summary

Dim: 19908 x 11

After filter: 1134:



Thank you
Questions

www.ioc-sealevelmonitoring.org

info@ioc-sealevelmonitoring.org