



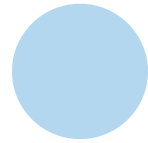
**megx**  ©

*marine ecological* *enomics*

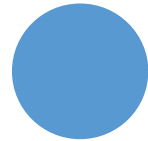


***What is it?***





***(meta)genomes***



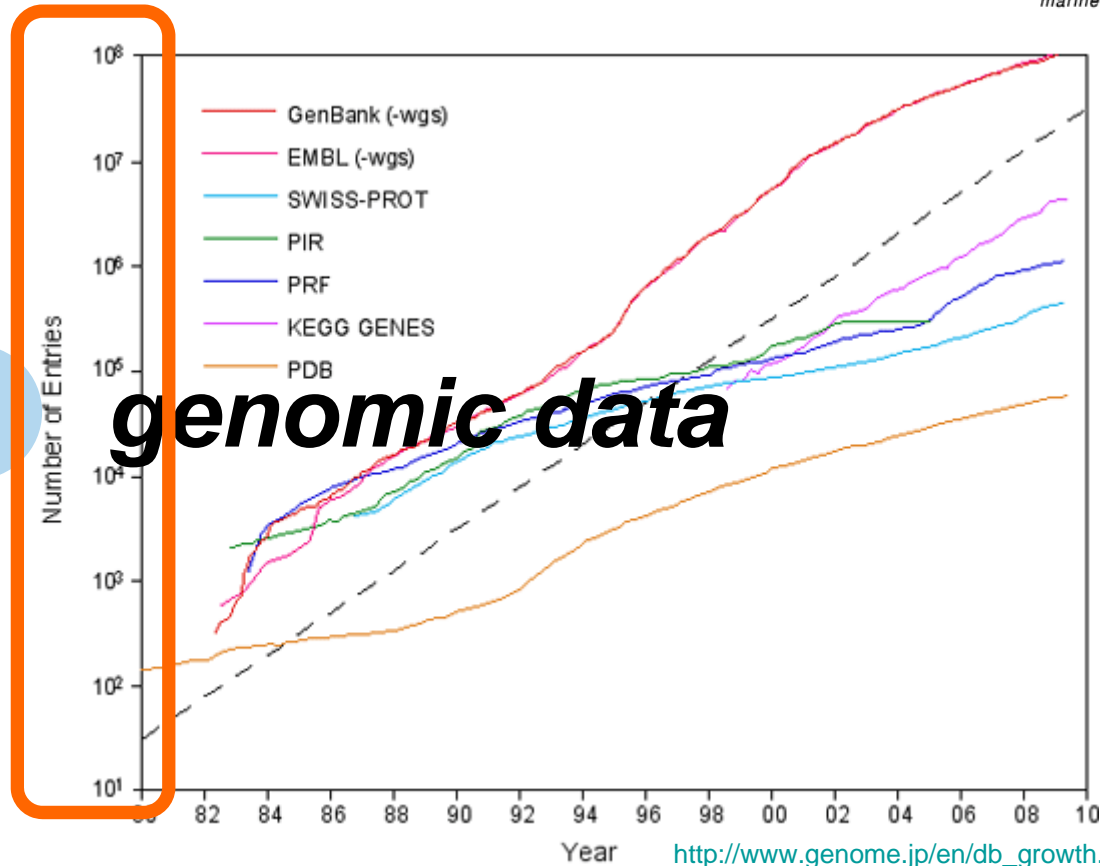
***organisms***



***environment***



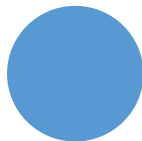
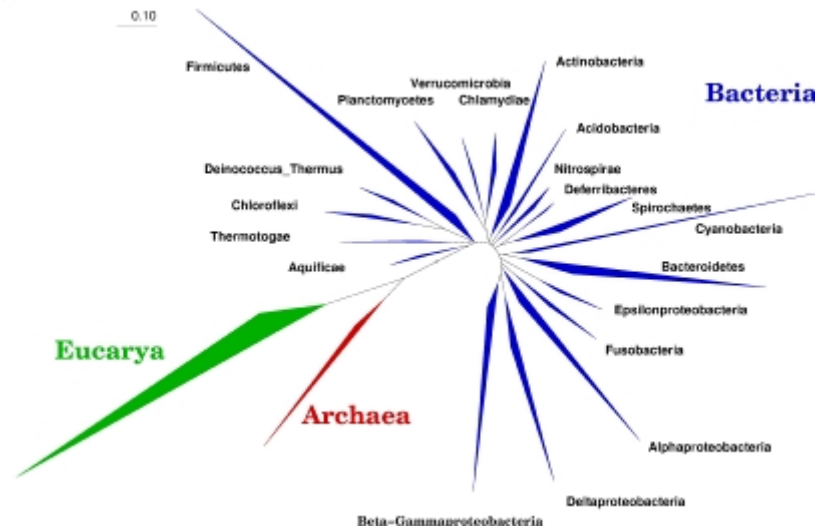
Logarithmic scale



[http://www.genome.jp/en/db\\_growth.html](http://www.genome.jp/en/db_growth.html)

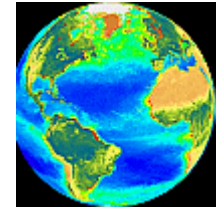


**silva**  
comprehensive ribosomal RNA databases

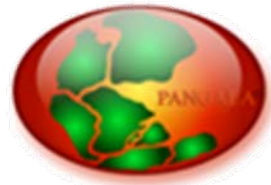




lite  
**Environment**

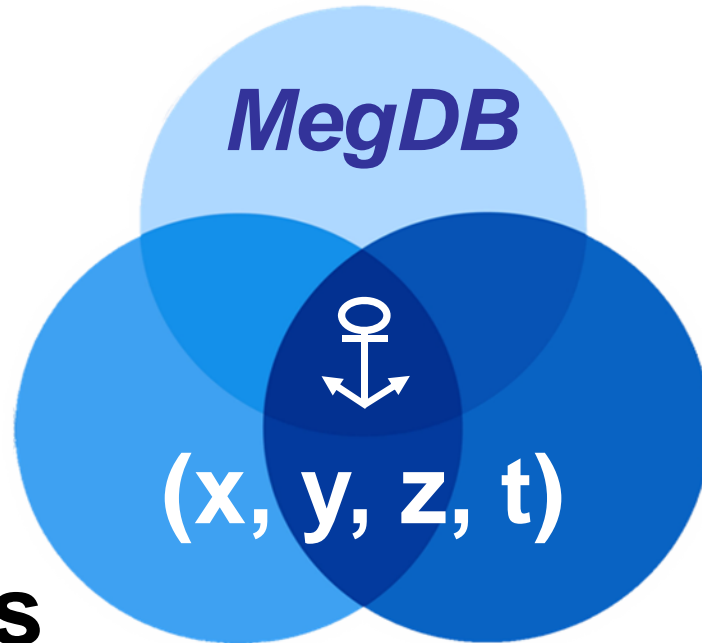


**SeaWiFS**





# (meta)genomes



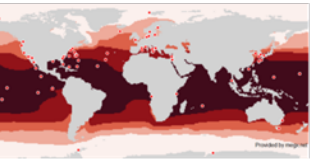
**organisms**

**environment**



***What can megx.net  
do for me?***

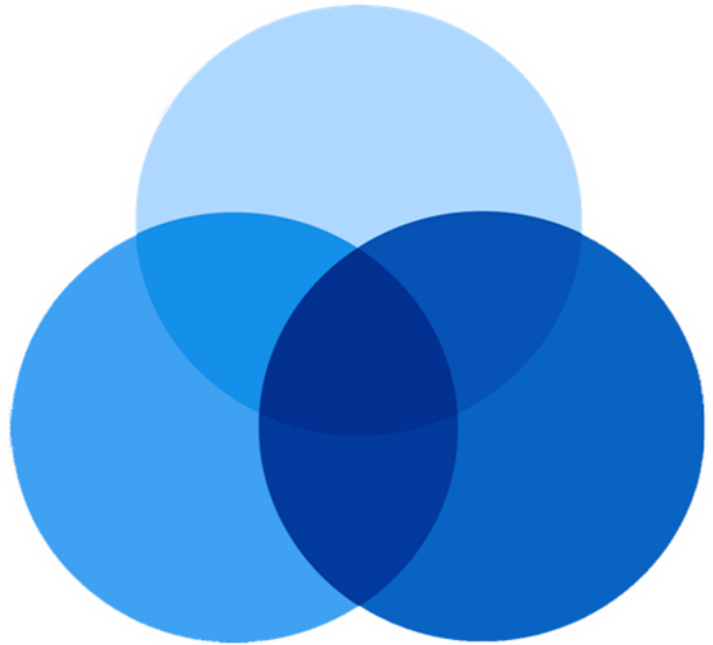




*mapserver*

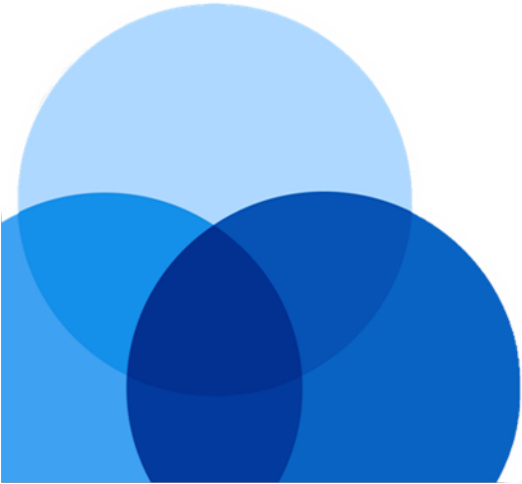


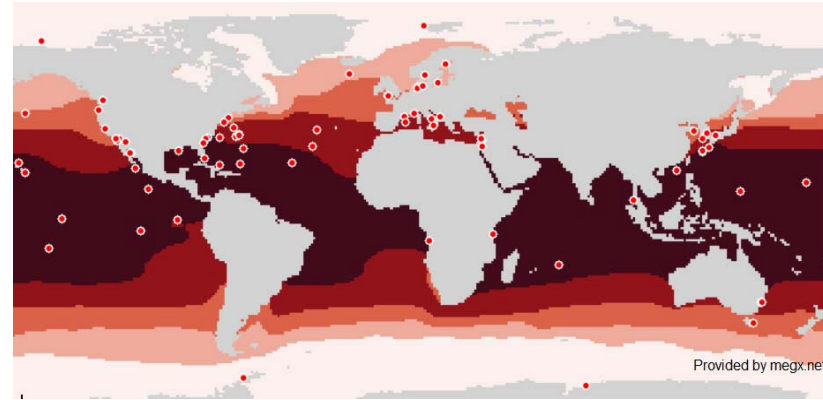
*GeoBLAST*





***How can I use it?***

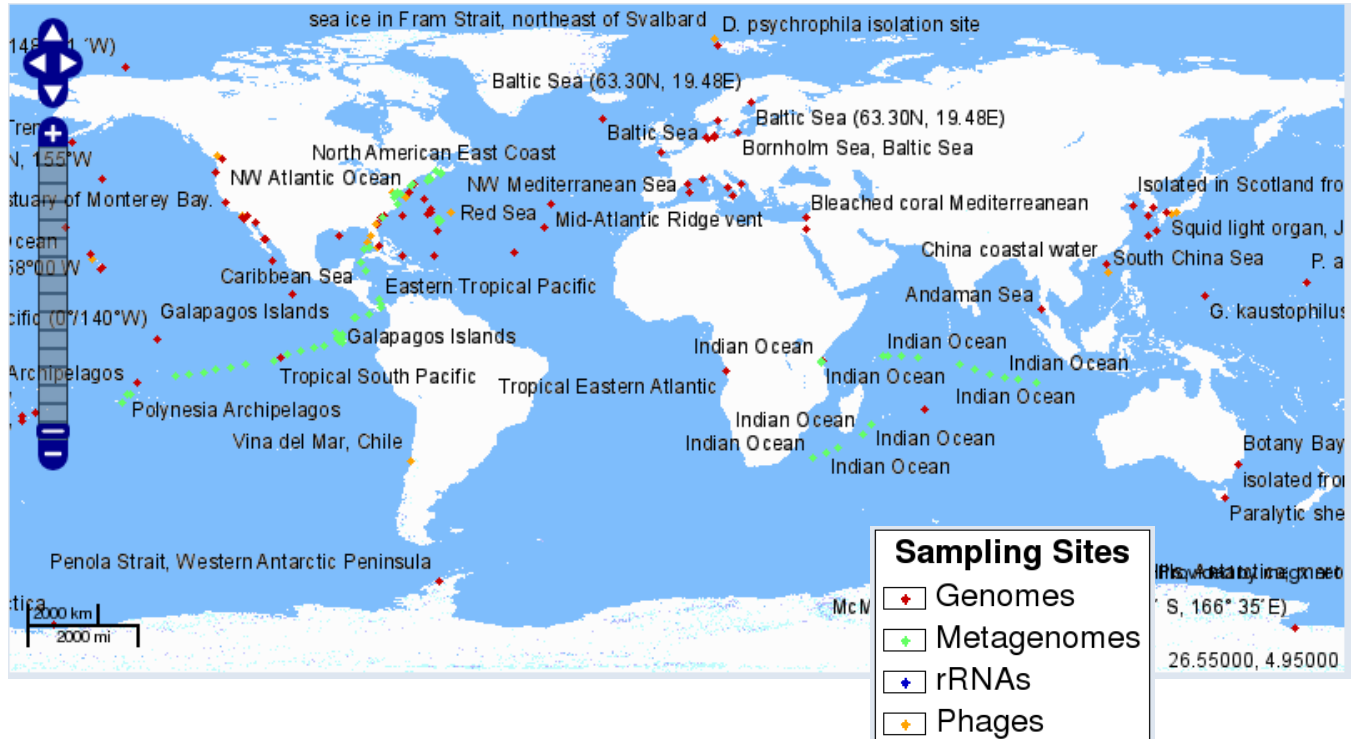




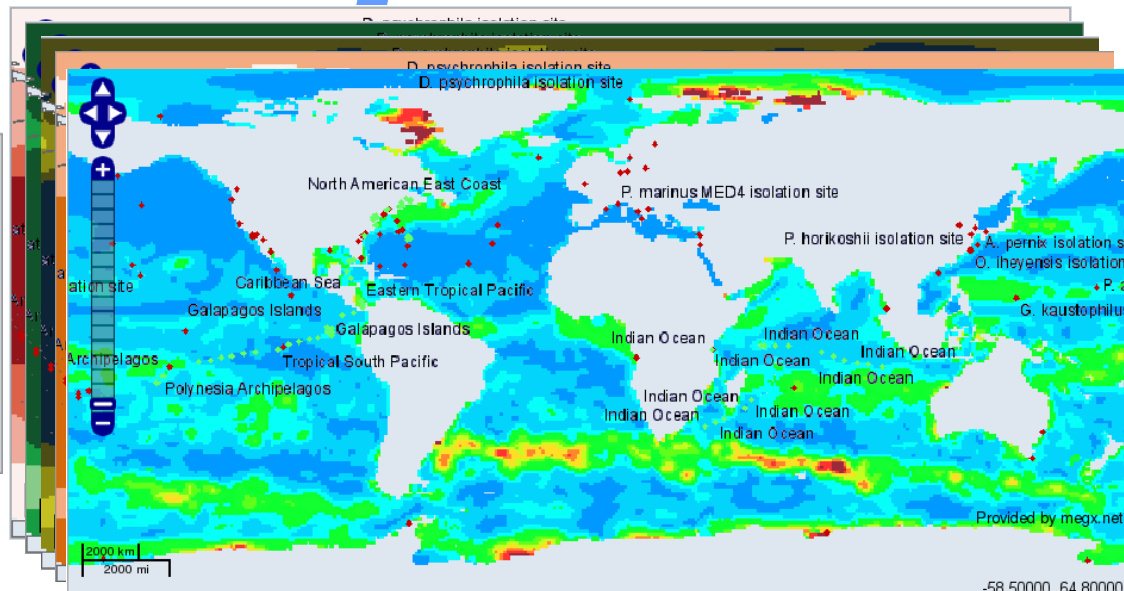
*map*server



# mapserver



# mapserver



**Physicochemical & Biological Layers**

Environment Stability ▾

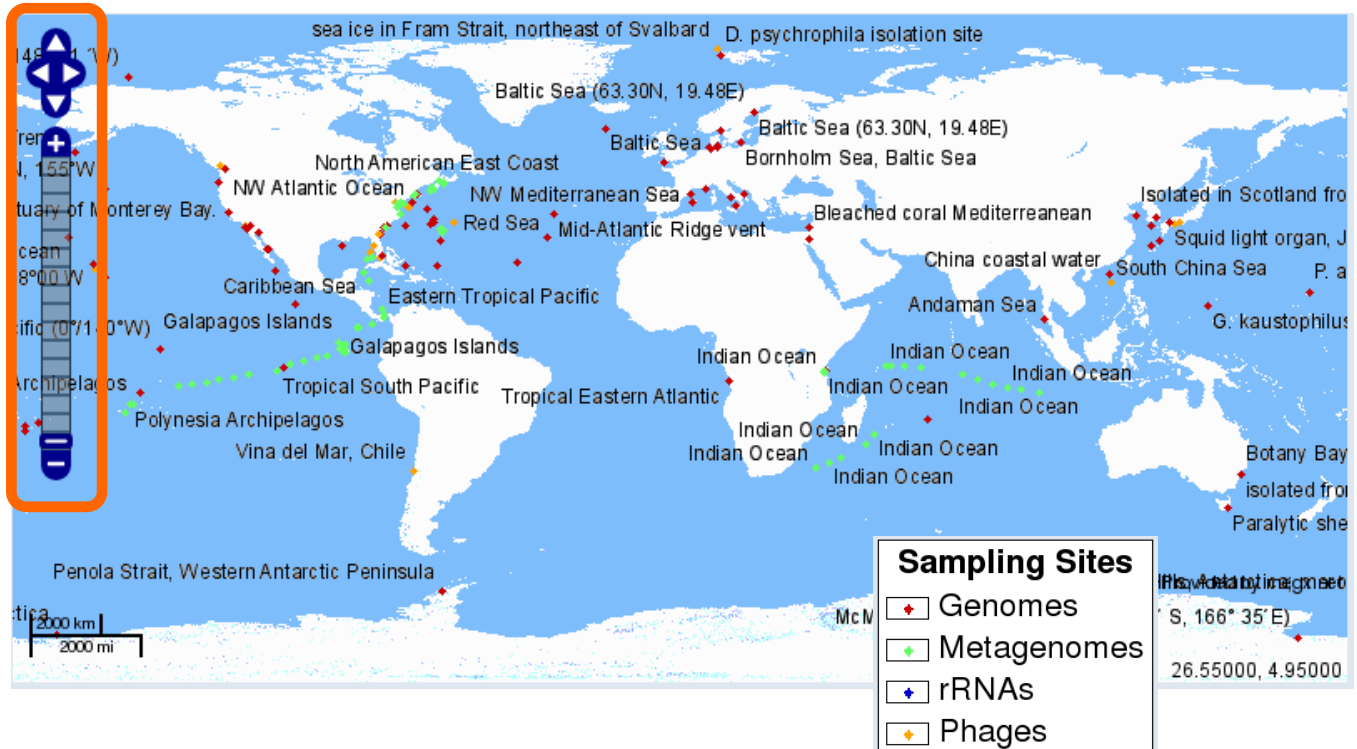
Temperature ▾

300m ▾

Map it!

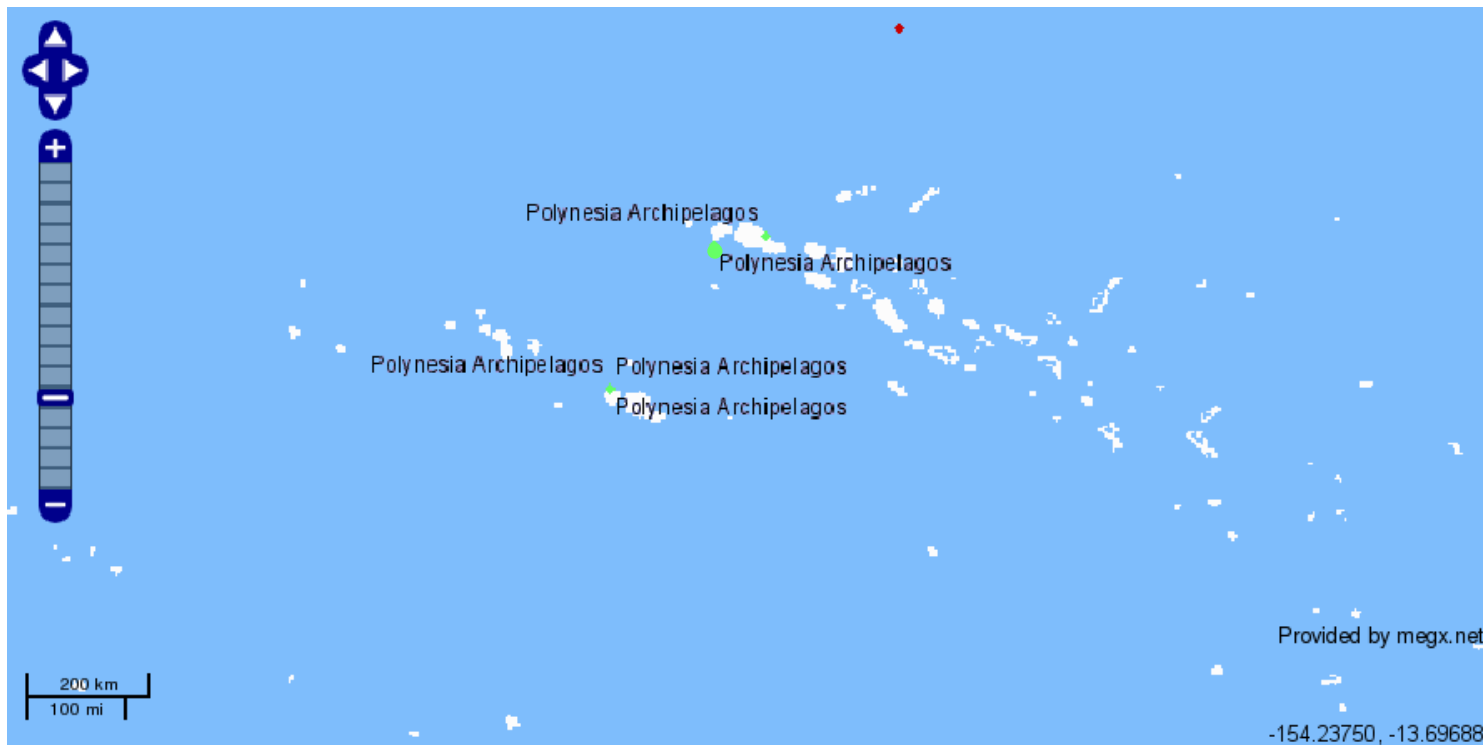
-58.50000, 64.80000

# mapserver

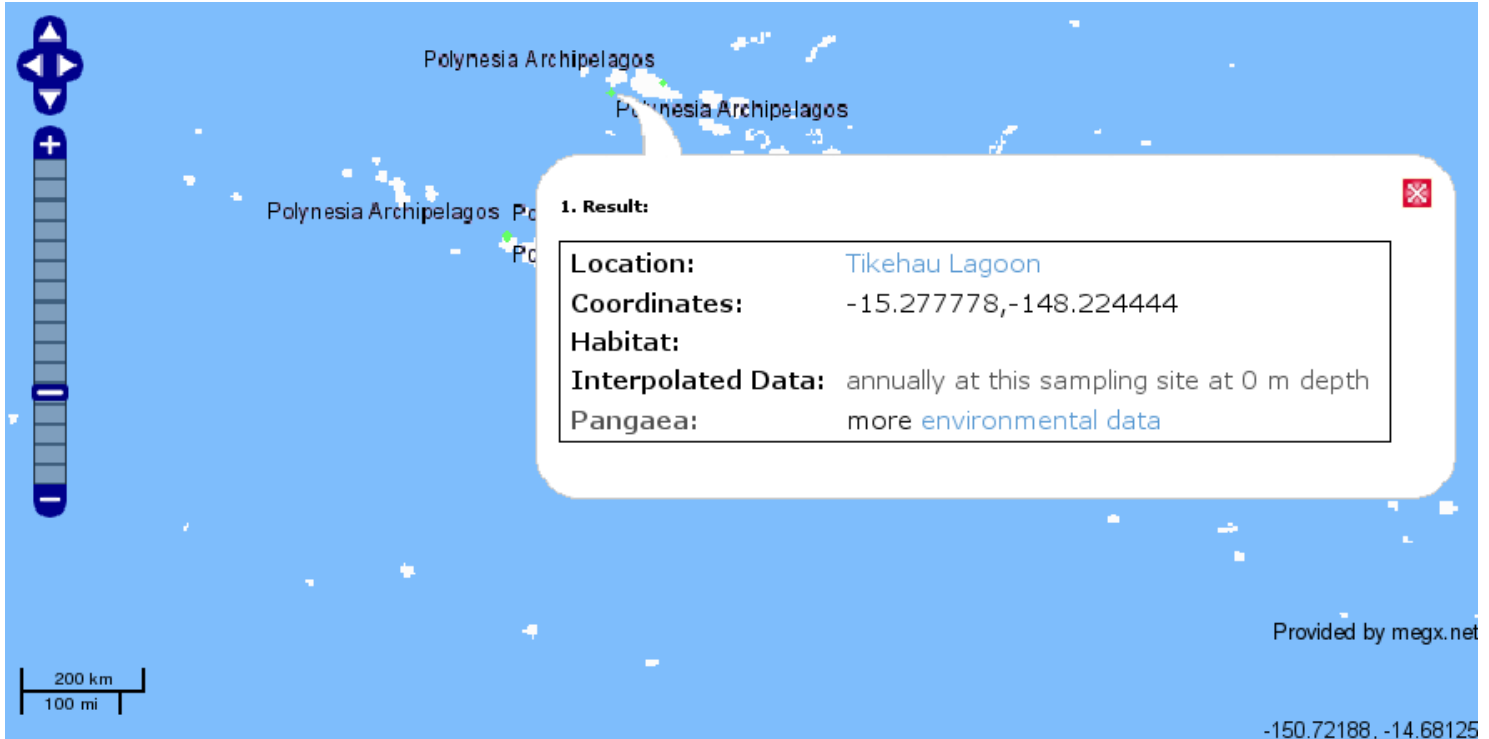




# mapserver



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# mapserver

**Location:** Polynesia Archipelagos

**Coordinates:** 15.277778 S 148.224444 W

## Samples taken at this site:

Sample	Type	Depth	Date Sampled	EnvO-Lite	In situ measurements		
					Temperature	Salinity	Chlorophyll
GS050	metagenome	1.2 m	NA	marine habitat	27.8 degree Celsius	NA	NA

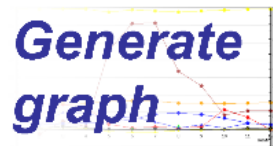
## Environmental data:

**Annual interpolated data from WOA05**

[\(adjust interpolation parameters\)](#)

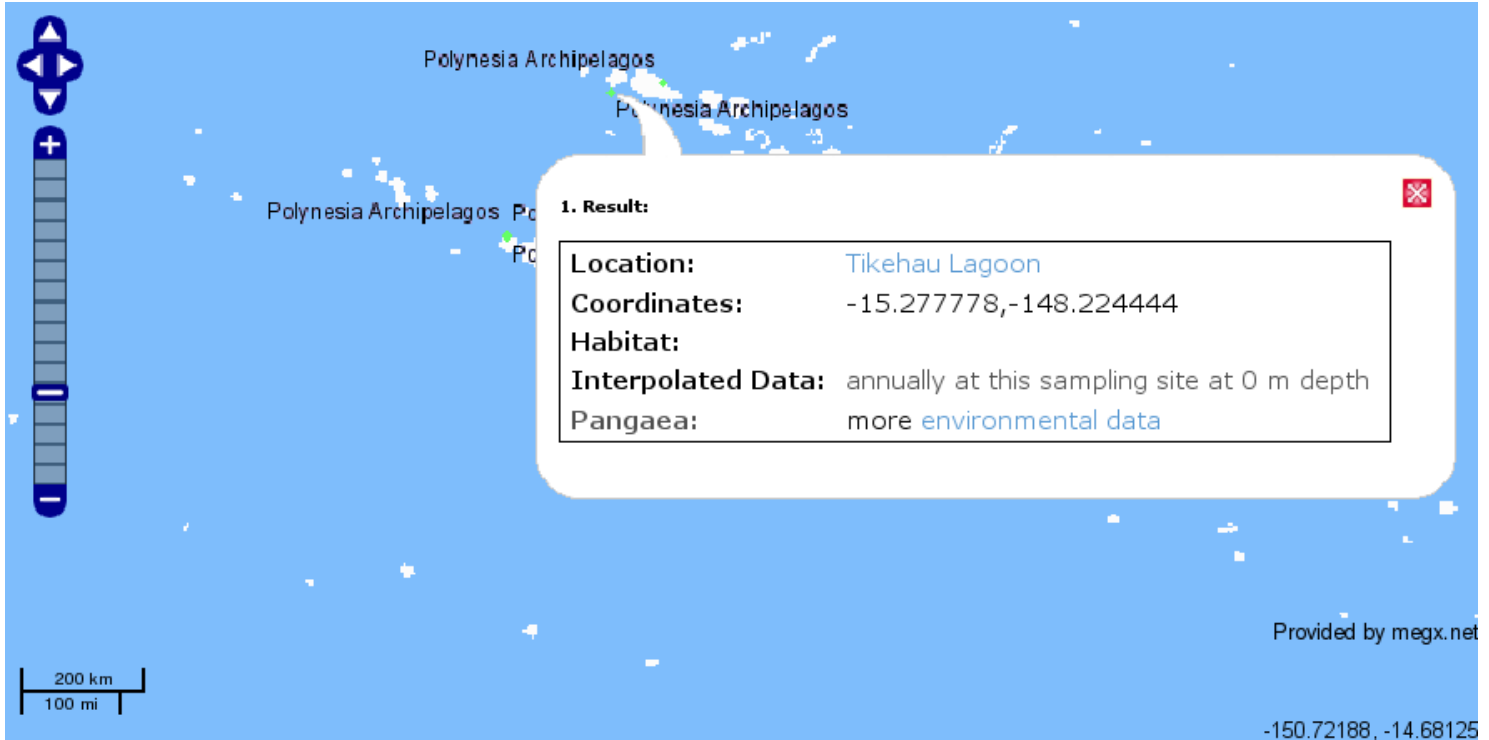
Latitude: -15.277778 / Longitude: -148.224444 / Depth: 0 m / Time period: Annual

Parameter	Value	Unit
temperature	28.04	degrees Celsius
salinity	35.9	PSU
nitrate	0.27	micromole/L
phosphate	0.27	micromole/L
oxygen_dissolved	4.59	mL/L
oxygen_saturation	102.34	mL/L
oxygen_utilization	-0.1	mL/L
silicate	1.36	micromole/L



[Click here for a detailed graph of all parameters](#)  
(might take 2-3 minutes).

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::: WOA05 data interpolation :::

Latitude:   
90.0/-90.0  
Give the geographic latitude  
in decimal degrees

Longitude:   
180.0/-180.0

Depth:   
0.0/5500.0

Variable:

Period:

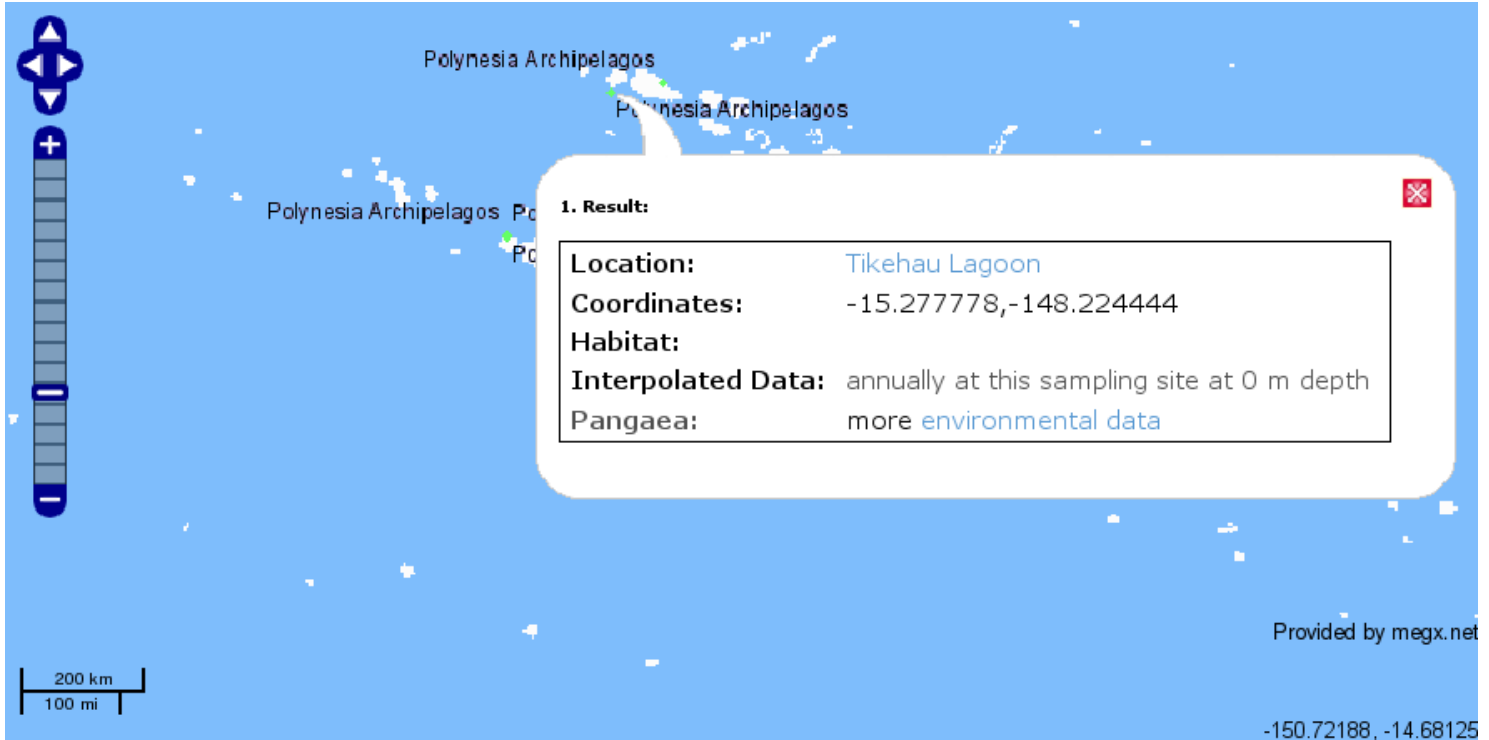
Latitude: -15.277778/ Longitude: -148.224444/ Depth: 0 m / Time period: Annual

Parameter	Value	Unit
temperature	28.04	degrees Celsius
salinity	35.9	PSU
nitrate	0.27	micromole/L
phosphate	0.27	micromole/L
oxygen_dissolved	4.59	mL/L
oxygen_saturation	102.34	mL/L
oxygen_utilization	-0.1	mL/L

### Warnings:

1. The following values are water physico-chemical parameters - not applicable to sediment samples.
2. Some coastal samples might have currently no available data.
3. Values for chlorophyll are only measured at the **ocean surface** and extracted from SeaWiFS data.

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[All](#) [Water](#) [Sediment](#) [Ice](#) [Atmosphere](#)

[Help](#) [Advanced Search](#) [Preferences](#) [more...](#)

You are not logged in ([LOG IN](#))

Always quote citation when using data!

1 datasets found on search with **geographic bounding box** (clear)

Show Map

<< PREV | 1 | NEXT >>

1. [Gattuso, J-P; Bellerby, RGJ; Delille, B et al. \(2009\): EPOCA/EUR-OCEANS data rescue and transformation on ocean acidification compilation](#)

Reference: **Allgaier, M; Riebesell, U; Vogt, M et al. (2008):** Coupling of heterotrophic bacteria to phytoplankton bloom development at different pCO<sub>2</sub> levels: a mesocosm study. *Biogeosciences*

**Antia, A; Suffrian, K; Holste, L et al. (2008):** Dissolution of coccolithophorid calcite by microzooplankton and copepod grazing. *Biogeosciences Discussions*  
**Barcelos e Ramos, J; Biswas, H; Schulz, KG et al. (2007):** Effect of rising atmospheric carbon dioxide on the marine nitrogen fixer *Trichodesmium*. *Global Biogeochemical Cycles (and more)*

Size: 50 datasets

doi:10.1594/PANGAEA.722549 - Score: 100% - Similar datasets

<< PREV | 1 | NEXT >>

Contact



Envio **lite**



Organism Name	EnvO-Lite	Location	Date Sampled	TaxID	Genome PID
<a href="#">Octadecabacter arcticus 238</a>	marine habitat	<a href="#">73.02 N 148.52 W</a>	-	391616	19331
<a href="#">Vibrio campbellii AND4</a>	marine habitat	<a href="#">7.8 N 98.21 E</a>	-	314289	13564
<a href="#">Brevundimonas sp. BAL3</a>	marine habitat	<a href="#">63.52 N 19.82 E</a>	-	391600	19287
<a href="#">Pedobacter sp. BAL39</a>	marine habitat	<a href="#">63.52 N 19.82 E</a>	-	391596	19337
<a href="#">Idiomarina baltica OS145</a>	marine habitat	<a href="#">59.32 N 20.05 W</a>	-	314276	13408
<a href="#">Loktanella vestfoldensis SKA53</a>	marine habitat	<a href="#">58.94 N 11.08 E</a>	-	314232	13444
<a href="#">Photobacterium sp. SKA34</a>	marine habitat	<a href="#">58.94 N 11.08 E</a>	-	121723	13566
<a href="#">Sphingomonas sp. SKA58</a>	marine habitat	<a href="#">58.94 N 11.08 E</a>	-	314266	13584
<a href="#">Stenotrophomonas sp. SKA14</a>	marine habitat	<a href="#">58.94 N 11.08 E</a>	-	391601	19369
<a href="#">Nodularia spumigena CCY9414</a>	marine habitat	<a href="#">55.53 N 16.62 E</a>	-	313624	13447
<a href="#">Rhodospirillum baltica SH 1</a>	marine habitat	<a href="#">54.5 N 10.3 E</a>	-	243090	413



unclassified (11) air (1) **animal-associated habitat (876)** aquatic habitat (43)  
 cultured habitat (38) extreme habitat (21) food (62) freshwater habitat (28) hot spring (61) hydrothermal vent (27) marine  
 habitat (227) organism-associated habitat (21) plant-associated habitat (90) sediment (85) sludge (17) soil (171)  
 terrestrial habitat (42) waste water (12)

Organism Name	EnvO-Lite	Location
<i>Desulfotalea psychrophila</i> LSv54	sediment	79 N 11 E
<i>Octadecabacter arcticus</i> 238	marine habitat	73.02 N 148.52 W
<i>Vibrio campbellii</i> AND4	marine habitat	7.8 N 98.21 E
<i>Pedobacter</i> sp. BAL39	marine habitat	63.52 N 19.82 E
<i>Brevundimonas</i> sp. BAL3	marine habitat	63.52 N 19.82 E
<i>Idiomarina</i> <b>lite</b> <i>baltica</i> OS145	marine habitat	59.32 N 20.05 W
<i>Strombomonas</i> sp. SKA14	marine habitat	58.94 N 11.08 E
<i>Sphingomonas</i> sp. SKA58	marine habitat	58.94 N 11.08 E



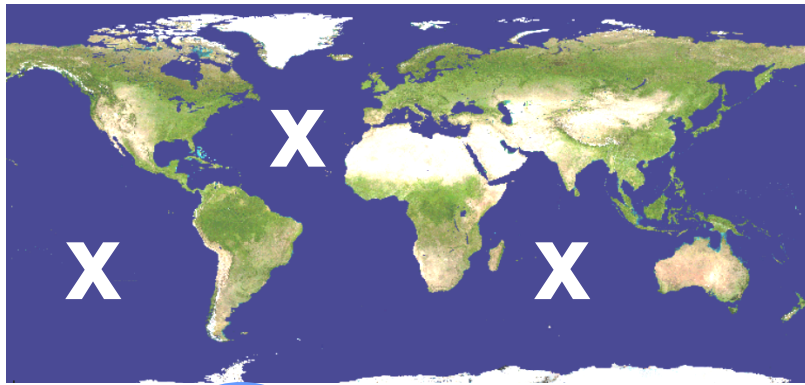
Organism Name ▲	EnvO-Lite	Location ▼
<i>Aciduliprofundum boonei</i> T469	hydrothermal vent	22.17 S 176.6 W
<i>Aeropyrum pernix</i> K1	hydrothermal vent	29.22 N 129.33 E
<i>Beggiatoa</i> sp. Orange Guaymas	hydrothermal vent	27 N 111 W
<i>Caminibacter mediatlanticus</i> TB-2	hydrothermal vent	36.23 N 33.9 W
<i>Hydrogenivirga</i> sp. 128-5-R1-1	hydrothermal vent	20.75 S 176.57 W
<i>Idiomarina loihiensis</i> L2TR	hydrothermal vent	18.9 N 155.3 W
<i>Ignicoccus hospitalis</i> Kin4/I	hydrothermal vent	-
<i>Marinitoga camini</i> MV1075	hydrothermal vent	-
<i>Methanocaldococcus jannaschii</i> DSM 2661	hydrothermal vent	20.85 N 109.1 W
<i>Thermoplasma kandleri</i> AV19	hydrothermal vent	27 N 111.4 W



**sampling site details**



[www.environmentontology.com](http://www.environmentontology.com)



**GeoBLAST**



## 1. Enter your sequence (unformatted or in fasta format)

```
MNFRNVRNLVWVMAVAWMSVACNSSMASEQPNFLVILADDLGFSDPGCYGGEIATPNLDA  
LAAGGLRYTQFYNTARCWPTRAAVMTGYYPQQVRRDSMPGATRQYGGGGKRPDWAQTLAE  
YLRPAGYRTYHSGKWHIDGKPTDNGFDLSEATRSPGFFDSIRKKNRDPKEYRTTATAQH  
AIDCLQEHAEEHADQPFFHFLAFHAPHFPLHALPEDIERYRDRYFAGWDALREERKHRQR  
ELGMDVGPLSPITEQEVGPPYAFPDQIEVLGEGEITRPLPWDELTKKQQFQATKMAIHAA  
MVDKMDQEI GRVLAQLKEMGQFENTWICFLSDNGASAEIMVRGEGHDPASPGSAATYLC  
LGGPFSSAANTPFRRHKTWVHEGGISTPFI VHWPEGIRSKNELRTNPGHAIDIAPT VLDL  
ARVELDETAGPPMSGQSLKPSFDDSDATIHDELWIFYHEGNWALRQGDWKI IHSNI SRPFP  
WLRSETAANESKEDGDWQLYHLANDRAEQNDVADKHPERVOQMADRWWELRDQFLRDSMD  
GSNPSKRAN
```

Clear

Or choose a FASTA File:

Browse...

Note: Only one sequence no longer than 5000 characters per search possible.

## 2. Select your database

*Click on the database name to learn about its content.*

- Prokaryotic Genomes (blastp)
- Global Ocean Sampling Metagenomes (blastn)
- 16S/18S rRNA (blastn)
- 23S/28S rRNA (blastn)
- Marine Phage Genomes (blastp)

# GeoBLAST



### 3. **Select** BLAST options

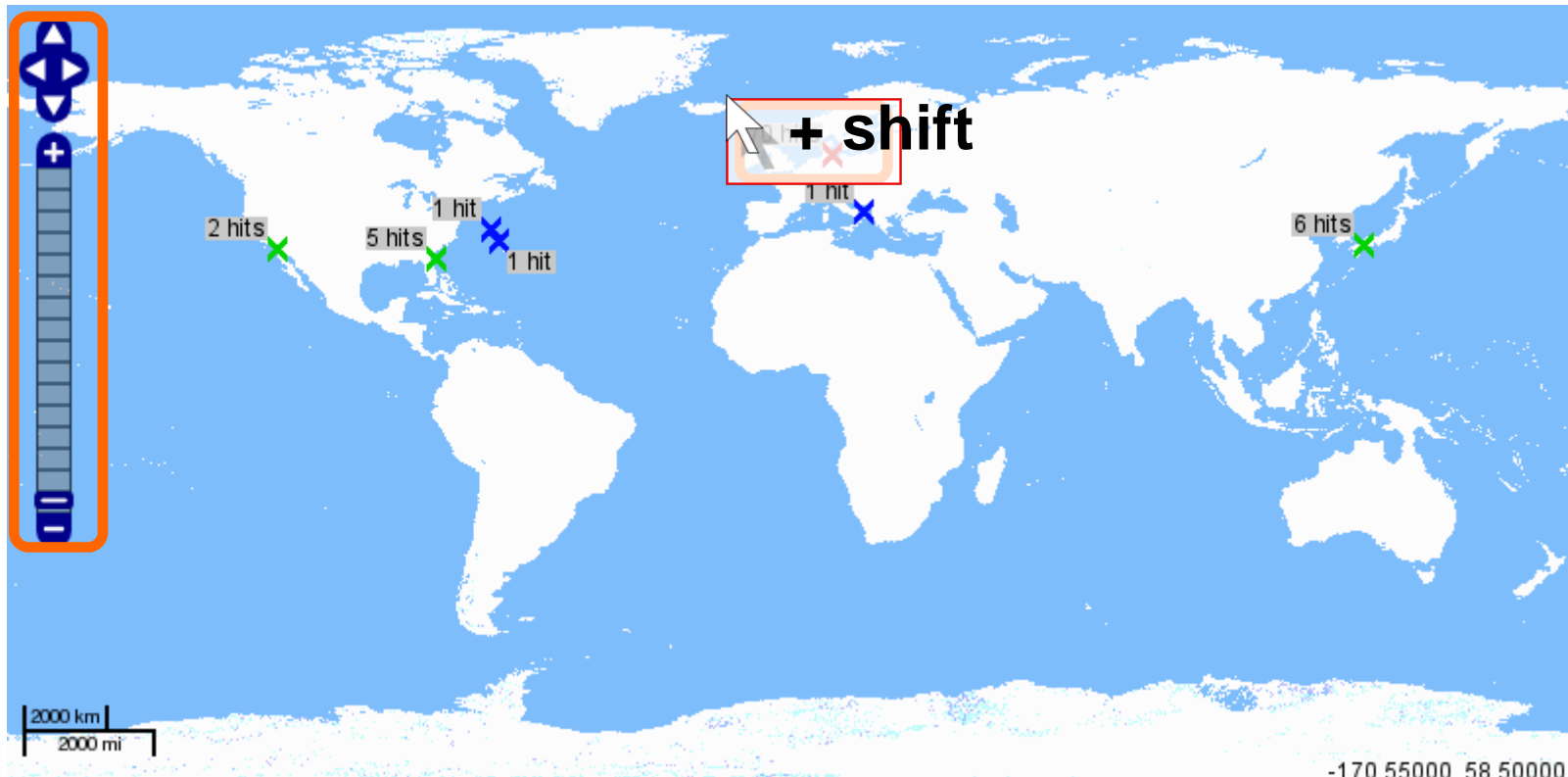
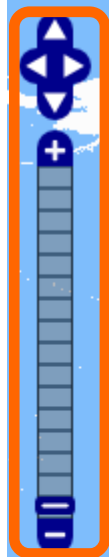
Low Complexity Filter

ON  OFF

E-value-cutoff

4.

# GeoBLAST



2000 km  
2000 mi

-170.55000, 58.50000

# GeoBLAST



**GeoBLAST**



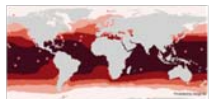
Map interface showing a data popup window with BLAST results and location details. The popup window contains the following information:

BLAST e-value:	1E-67
BLAST hit length:	549
Location Details:	Rhodopirellula baltica SH 1 at - depth
Coordinates:	54.5 N 10.3 E
Temperature ( <i>in situ</i> ):	-
Habitat:	marine habitat
Interpolated Data:	annually at this sampling site at 0 m depth

5. Georeferenced BLAST Hit:

BLAST e-value:	9E-67
BLAST hit length:	541
Location Details:	Rhodopirellula baltica SH 1 at - depth
Coordinates:	54.5 N 10.3 E

Map interface includes a scale bar (200 km / 100 mi) and a coordinate label (6.35625, 50.62500).



mapserver



# GeoBLAST



Target description	Target acc	Target length	Depth	E-value	Location	EnvO-Lite
sulfatase [Sinorhizobium medicae WSM419]	150397266	542	-	6.247e-73	-	soil
arylsulfatase [Rhodopirellula baltica SH 1]	32475025	707	-	5.115e-72	54.5 N 10.3 E	marine habitat
arylsulfatase (aryl- sulfate sulphohydrolase) [Bacteroides thetaiotaomicron VPI-5482]	29348502	540	-	1.428e-70	-	animal-associated habitat
arylsulfatase [Rhodopirellula baltica SH 1]	32476797	549	-	1.015e-67	54.5 N 10.3 E	marine habitat
arylsulfatase [Silicibacter pomeroyi DSS-3]	56698110	535	-	1.282e-67	30.8 N 81 W	marine habitat

# GeoBLAST



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[portal](#)



Kottmann R, Kostadinov I, Duhaime M, Buttigieg PL, Yilmaz P, Hankeln W, Waldmann J and Glöckner FO. (2010). Megx.net: integrated database resource for marine ecological genomics. *Nucleic Acids Res.* **38**:D391-D395

***∴ Reference***

