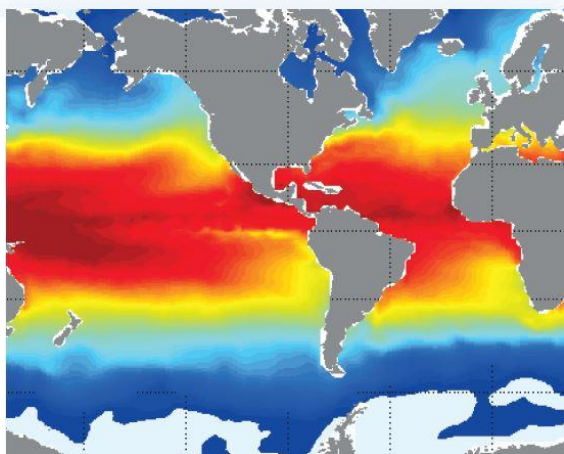


NATIVE GRID PRODUCT - REANALYSIS - GLOBAL OCEAN - PHY - 1°



This product contains reanalysis of the Global Ocean Physics at 1° (111 km at the equator) – Temperature, Salinity, Sea Surface Height, Mixed layer Thickness, Currents, Sea Ice thickness, Concentration and drift - with a yearly update. The numerical files are displayed on the native grid 1°.

Reference: GLORYSV4R1

<ul style="list-style-type: none"> Variables 	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">PHY</div>	Sea water salinity	psu
		Sea water potential temperature	°C
		Sea surface height above geoid	m
		Sea water x velocity	m/s
		Sea water y velocity	m/s
		Mixed layer thickness (sigma theta)	m
		Mixed layer thickness (temp)	m
		Mixed layer thickness (turbocline)	m
		Amplitude of SST diurnal cycle	°C
	Amplitude of mldr10_1 diurnal cycle	m	
	<div style="border: 1px solid black; padding: 5px; width: fit-content; margin: 0 auto;">ICE</div>	Sea ice thickness	m
		Sea ice fraction	[0;1]
<ul style="list-style-type: none"> Geographical coverage 	Global Ocean (180°W-180°E; 77°S-90°N)		
<ul style="list-style-type: none"> Grid and spatial horizontal resolution 	1°~111km at the equator on ORCA Native Grid (ARAKAWA C, no interpolation)		
<ul style="list-style-type: none"> Spatial vertical resolution 	75 vertical levels (from -5500.0m to 0.0m)		
<ul style="list-style-type: none"> Temporal resolution 	Daily-mean		
<ul style="list-style-type: none"> Temporal coverage 	Analyses (01/01/1992) up to real time		
<ul style="list-style-type: none"> Update frequency 	Daily update		

	<p>Domain : Global Ocean (180°W-180°E ; 77°S-90°N) Physic or Biogeochemistry : Physic Code and Version : Nemo3.6</p> <hr/> <p>Grid and resolution : ORCA [1°; 75 levels] Grid size : 362*294 *75 (z-coordinates) Data Assimilation: No Sea Ice : GELATO7 Tide : No Bathymetry: ETOPO2 Time step : 1800s Update : weekly</p>
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Reference GLORYSV4R1

Forcing and Data Assimilation	
Data assimilation	No
Data assimilation scheme	No
Data assimilated	No
Atmospheric or Biogeochemical forcings:	<ul style="list-style-type: none"> - 1993-2015 : 3 hours ECMWF ERA-interim forcings or 24 hours for radiative flux; - 2016-now : 3h ECMWF IFS - Bulk formulation: CORE
Runoff:	Dai and Trenberth monthly climatology (2009)
Open boundary conditions:	No
Initial Conditions and Relaxation	
Initial conditions	- Strong relaxation to SST (of Glorys2v4/PSY3v4r2, first ocean level) (231.5W/m2/K)
Surface relaxation	- SST Reynolds
Deep relaxation	- Anomalies nudging: nudging to interannual anomalies of GLORYS2V4 or PSY3V4R2 for T and S.
Convection	- By intensification of vertical mixing (diffusion term)
Parametrisation	
Surface Physics parametrisation	- Free surface (explicit+filtering)
Bottom friction	- No linear (constant bottom friction)
Lateral friction	- Free slip (shlat = 0)
Vertical mixing	- TKE 1.5 closure scheme
Advection	- TVD 2nd order centered scheme
Tracer diffusion	- Isopycnal laplacian
Momentum diffusion	- Horizontal laplacian
Horizontal diffusion coefficient for tracers and momentum	<ul style="list-style-type: none"> - aht0 = 1000 m2/s - ahm0 = 20000 m2/s
Vertical diffusion coefficient for tracers and momentum	<ul style="list-style-type: none"> - avt0 = 1.2 10-5 m2/s - avm0 = 1.2 10-4 m2/s