Aviso products

an overview

Aviso user service
aviso@cls.fr

When Aviso first released its data in 1993, those were "only" Geophysical Data Records (GDR), from Topex and Poseidon-1, distributed on CD-ROMs. Today, things are at the same time much more complicated, and much easier. More complicated, since there are several different datasets, available either in delayed and/or in near-real time, on different media, for different satellites. And much easier, because the data, their format and the tools required to use them are now simpler.

Datasets

Two main types of datasets are available:

Mono-altimeter data, mainly from the SSALTO "basic" ground processing segment, CMA (*Centre Multi-mission Altimétrique*). These include:

- Wind/Wave data and Operational Sensor Data Records (OSDR, along-track data)
- (Interim) Geophysical Data Records ((I)GDR, along-track data)
- Waveforms: Sensor Geophysical Data Records (SGDR, along-track data)
- Maps of Wind/Wave data (NRT-MWind and NRT-MSWH, gridded data)

SSALTO/DUACS multimission altimeter data, which involve post-processing, homogenization, and so forth (see article p.10). These include:

- Maps of Sea Level Anomalies (DT- and NRT-MSLA, gridded data)
- Maps of Absolute Dynamic Topography (NRT-MADT, gridded data)
- Sea Level Anomalies (DT- and NRT-SLA, along-track data)
- Absolute Dynamic Topography (NRT-ADT, along-track data)

where :

- **DT (delayed time)** means that data used to compute the product were processed using a precise orbit
- **NRT (near-real-time)** means that data use a DIODE onboard navigator orbit (for OSDR), or preliminary orbit (produced in two days)

Media

Since the CD-Roms of 1993, data distribution media have evolved. With the Internet, and higher bandwidth, online dissemination is possible even for large files. Moreover, interactive techniques have been developed so that now only minimum computer skills are needed to plot a map from altimetry data.

- **CD/DVD-Rom:** Aviso delayed-time data are now mostly distributed on DVD-Rom (DVD-R) rather than CD-Rom. Jason-1 + T/P GDR are thus sent on DVD every two months (six cycles of both missions) to registered users.
- **FTP:** anonymous FTP, except for Near-Real-Time SSALTO/DUACS data less than 30 days old (which require a license agreement).
- **Live Access Server:** interactive on-line visualization tool for plotting gridded data over the whole Earth or on selected regions, as a map, Hovmoller diagram or along-time evolution curve, some statistical functions are also available (temporal and geographical averages, variance). http://las.avisos.oceanobs.com
- **Opendap** enables access to remote data sets through familiar data analysis and visualization packages (e.g. Matlab, IDL, Ferret, ncBrowse, Live Access Server), just as if they reside locally on the user's machine. Opendap handles transport, translation and subsetting of data. http://opendap.aviso.oceanobs.com
- **Images** are maps plotted with some of the data.

PRODUCT TYPE	SATELLITE					
	Jason-1	Topex/Poseidon	Envisat	ERS-1 & 2	GFO	Merged
Gridded Sea level anomalies (1/3°x1/3° on a Mercator grid) study of ocean variability	DT-MSLA - NRT-MSLA	- DT-MSLA - NRT-MSLA	- NRT-MSLA		- NRT-MSLA	- DT-MSLA - NRT-MSLA
Gridded Absolute Dynamic Topography (1/3°x1/3° on a Mercator grid) study of the general circulation						- NRT-MADT
Along-track Sea level anomalies study of ocean variability	- DT-SLA - NRT-SLA	- DT-SLA - NRT-SLA	- DT-SLA - NRT-SLA	- DT-SLA	- NRT-SLA	
Along-track Absolute Dynamic Topography study of the general circulation	- NRT-ADT	- NRT-ADT	- NRT-ADT		- NRT-ADT	
Along-track Wind / Wave data marine meteorology, ocean-atmosphere gas tranfer studies	- Wind/Waves - OSDR	- Wind/Waves	- RA2 WWV			
Gridded Wind / Wave data (on a 1°x1° grid) marine meteorology, ocean-atmosphere gas tranfer studies	- NRT-MWind - NRT-MSWH	- NRT-MWind - NRT-MSWH	- NRT-MWind - NRT-MSWH		- NRT-MWind - NRT-MSWH	
Geophysical Data geophysical studies, operational oceanography	- GDR - IGDR	- GDR - IGDR	- GDR - IGDR			
Geophysical and sensor data expert use; coastal, ice studies or anything requesting a different retracking function than the one used for ocean	- SGDR	- Poseidon-1 waveforms	- SGDR			
Gridded geostrophic currents (1/3°x1/3° on a Mercator grid) study of ocean variability and circulation						- NRT-MSLA - NRT-MADT

Table 1: Aviso products availability per satellite. See text for acronym signification.