

BLLAST operation center website, metadata and data bases

SEDOO - Service DOnnées OMP



Jean-Luc
Boichard

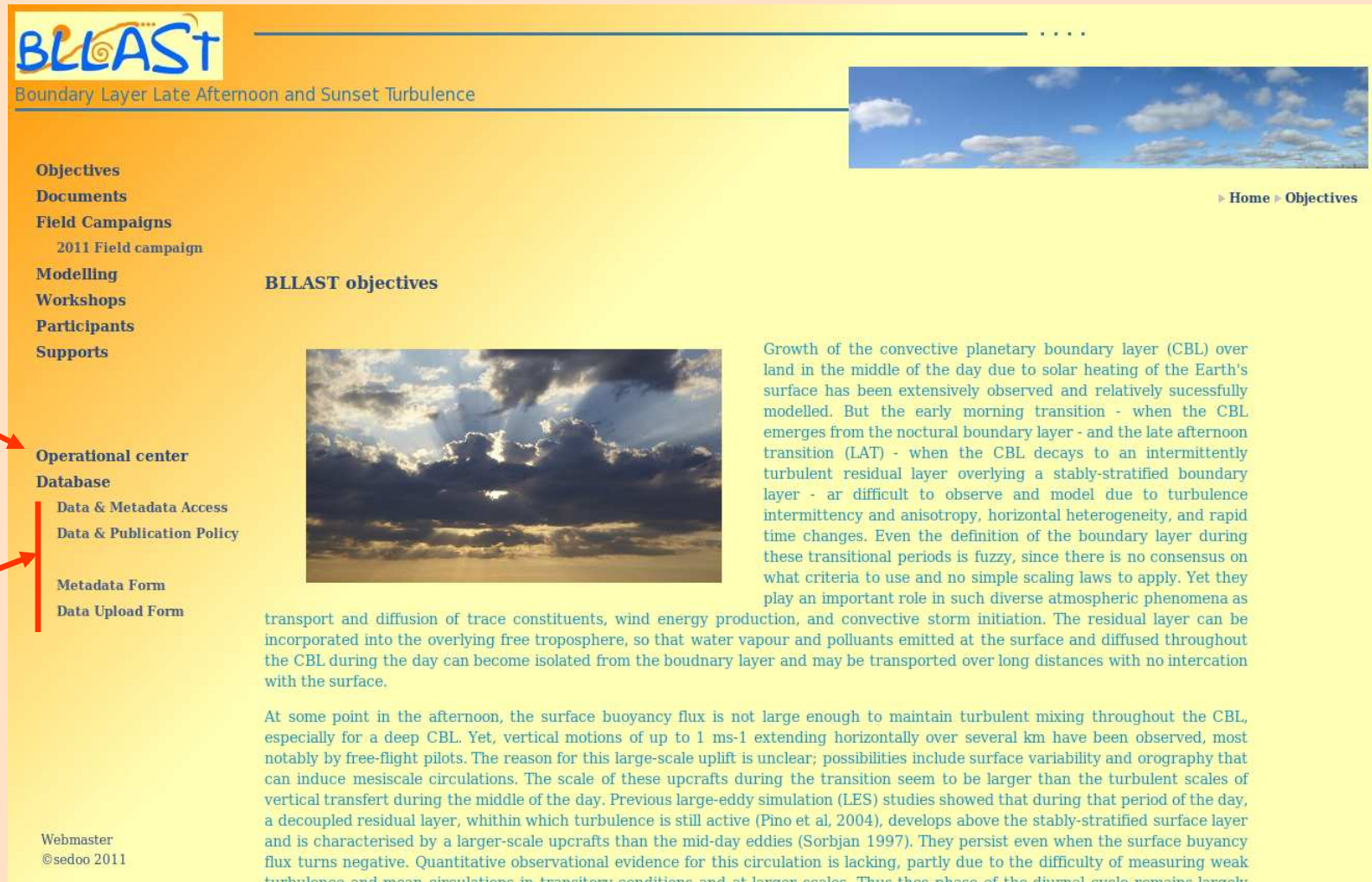
Bayero
Barry

Laurence
Mastrorillo

Laurence
Fleury

and Yves Meyerfeld, **LA**

BLLAST Web site - <http://bllast.sedoo.fr/>




BLLAST
Boundary Layer Late Afternoon and Sunset Turbulence

Objectives
Documents
Field Campaigns
2011 Field campaign
Modelling
Workshops
Participants
Supports

Operational center
Database
Data & Metadata Access
Data & Publication Policy
Metadata Form
Data Upload Form

Webmaster
©sedoo 2011

BLLAST objectives



Growth of the convective planetary boundary layer (CBL) over land in the middle of the day due to solar heating of the Earth's surface has been extensively observed and relatively successfully modelled. But the early morning transition - when the CBL emerges from the nocturnal boundary layer - and the late afternoon transition (LAT) - when the CBL decays to an intermittently turbulent residual layer overlying a stably-stratified boundary layer - are difficult to observe and model due to turbulence intermittency and anisotropy, horizontal heterogeneity, and rapid time changes. Even the definition of the boundary layer during these transitional periods is fuzzy, since there is no consensus on what criteria to use and no simple scaling laws to apply. Yet they play an important role in such diverse atmospheric phenomena as transport and diffusion of trace constituents, wind energy production, and convective storm initiation. The residual layer can be incorporated into the overlying free troposphere, so that water vapour and pollutants emitted at the surface and diffused throughout the CBL during the day can become isolated from the boundary layer and may be transported over long distances with no interaction with the surface.

At some point in the afternoon, the surface buoyancy flux is not large enough to maintain turbulent mixing throughout the CBL, especially for a deep CBL. Yet, vertical motions of up to 1 ms⁻¹ extending horizontally over several km have been observed, most notably by free-flight pilots. The reason for this large-scale uplift is unclear; possibilities include surface variability and orography that can induce mesoscale circulations. The scale of these upcrafts during the transition seem to be larger than the turbulent scales of vertical transport during the middle of the day. Previous large-eddy simulation (LES) studies showed that during that period of the day, a decoupled residual layer, within which turbulence is still active (Pino et al, 2004), develops above the stably-stratified surface layer and is characterised by a larger-scale upcrafts than the mid-day eddies (Sorbjan 1997). They persist even when the surface buoyancy flux turns negative. Quantitative observational evidence for this circulation is lacking, partly due to the difficulty of measuring weak turbulence and mean circulations in transitional conditions and at larger scales. Thus this phase of the diurnal cycle remains largely

BOC

Database pages

Coming soon: **a BLLAST photo gallery**
Marie Lothon collects the pictures!

http://boc.sedoo.fr

July Home> BOC> Base Time: 07-08-2011
Jun: 07-08-09-10-11-12-13-14-15-16-17-18-19-20-21-22-23-24-25-26-27-28-29-30-
Jul: 01-02-03-04-05-06-07-08- Login

Bllast Operating Center (BOC) - day: 2011-Jul-08

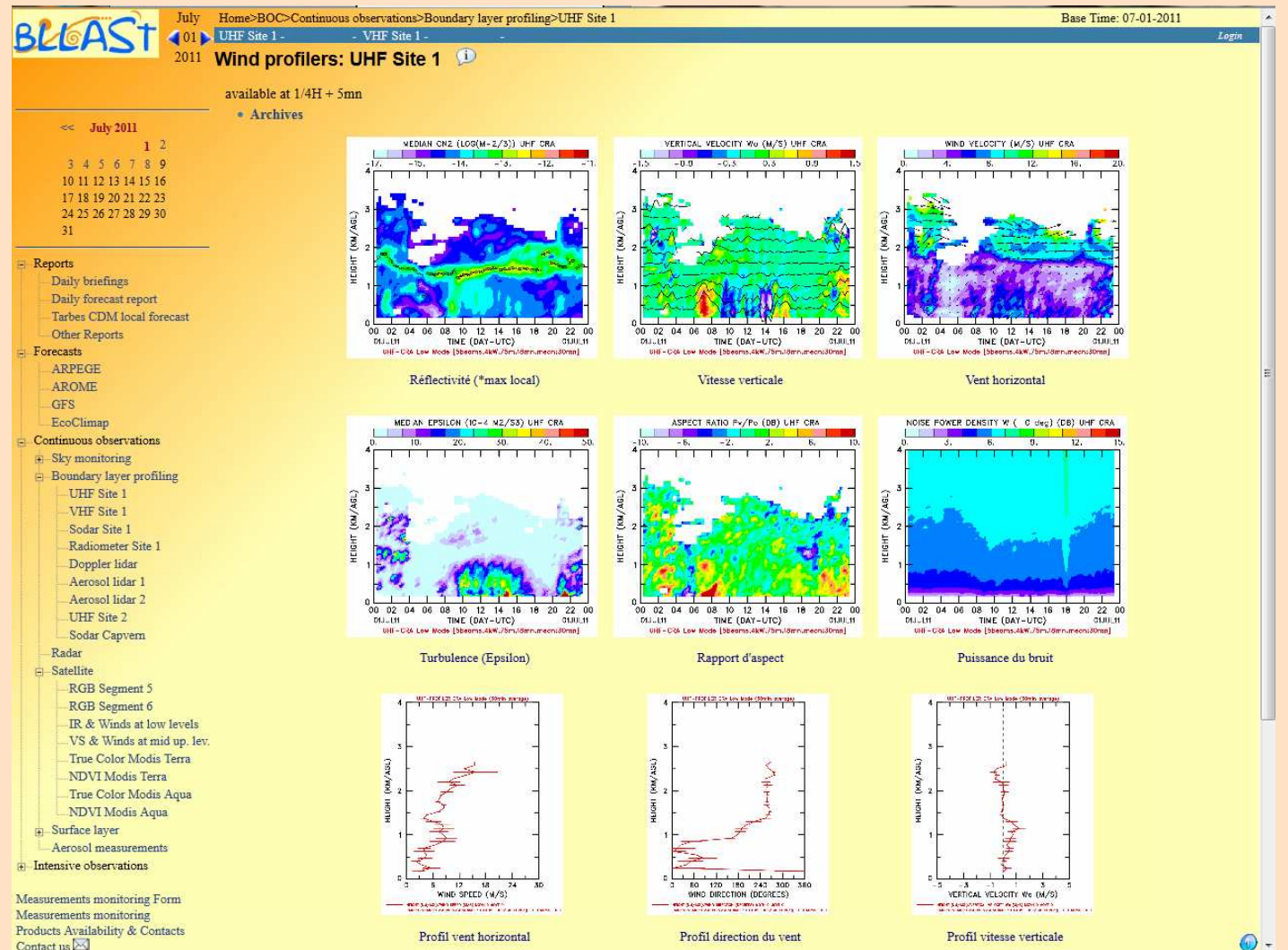
Reports			
Daily briefings	Daily forecast report	Tarbes CDM local forecast	Other Reports
Forecasts			
ARPEGE	AROME	GFS	EcoClimap
Continuous observations			
Sky monitoring	Total Sky	Ceilometer	
Boundary layer profiling	UHF Site 1	Doppler lidar	Sodar Capvem
	VHF Site 1 Sodar Site 1 Radiometer Site 1	Aerosol lidar 1 Aerosol lidar 2 UHF Site 2	
Composite Radar			
Satellite	RGB Segment 5	VS & Winds at mid up. lev.	True Color Modis Aqua
	RGB Segment 6	True Color Modis Terra	NDVI Modis Aqua
	IR & Winds at low levels	NDVI Modis Terra	
Surface layer	Edge site	Moor and Corn sites	Scintillometers
	Divergence site 60m Tower Small heterogeneities site	Forest site Surf. temp. network Microbarometers	Basic meteorological var. Surface Characteristics
Aerosol measurements			
Intensive observations			
Balloons	Operational radiosoundings	Frequent radiosoundings	
	Standard radiosoundings	Tethered balloons	
Unmanned Aerial Vehicles	MASC	Sirius	Multi-copter
	M2AV	SUMO	
Aircrafts	Piper Aztec	Sky Arrow	

Measurements monitoring Form
Measurements monitoring
Products Availability & Contacts
Contact us

Date selection

Product selection

- Operational during the field campaign
 - Final version online
- testimonial view
investigation tool



Adding **new quick looks possible but**

- the file naming convention has to be strictly respected
- standard display only

Please contact: Jean-Luc.Boichard@obs-mip.fr

BLLEAST July Home> BOC> Base Time: 07-01-2011
 01 2011 Measurements monitoring

<< July 2011 1 2
 3 4 5 6 7 8 9
 10 11 12 13 14 15 16
 17 18 19 20 21 22 23
 24 25 26 27 28 29 30
 31

Reports
 - Daily briefings
 - Daily forecast report
 - Tarbes CDM local forecast
 - Other Reports

Forecasts
 - ARPEGE
 - AROME
 - GFS
 - EcoClimap

Continuous observations
 - Sky monitoring
 - Boundary layer profiling
 - UHF Site 1
 - VHF Site 1
 - Sodar Site 1
 - Radiometer Site 1
 - Doppler lidar
 - Aerosol lidar 1
 - Aerosol lidar 2
 - UHF Site 2
 - Sodar Capvern
 - Radar
 - Satellite
 - RGB Segment 5
 - RGB Segment 6
 - IR & Winds at low levels
 - VS & Winds at mid up. lev.
 - True Color Modis Terra
 - NDVI Modis Terra
 - True Color Modis Aqua
 - NDVI Modis Aqua
 - Surface layer
 - Aerosol measurements
 - Intensive observations

Measurements monitoring Form
 Measurements monitoring
 Products Availability & Contacts
 Contact us

Date:	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	01	02	03	04	05	06	07	08	
Continuous observations																																	
Full Sky Imagery s1								top	top				top	top				top	top	top	top			top	top	top							
Ceilometer Site 1																																	
Wind profilers: UHF Site 1																																	
Wind profilers: VHF Site 1																																	
HATPRO Radiometer s1																																	
mini-sodar site 1																																	
Wind profilers: UHF Site 2																																	
Wind profilers: Sodar Capvern (site 3)																																	
Doppler lidar Site 1																																	
Aerosol lidar Site 1																																	
Aerosol lidar Site 2																																	
Edge site																																	
Divergence site																																	
Skin flow tower s1																																	
60 m tower Site 1: Meteorological parameters																																	
60 m tower Site 1: Infrared Camera																																	
9 m profile tower small heterogeneity site																																	
2 m temp HR profile s1																																	
energy balance small heterogeneity site																																	
6 m tower Maize Site 2																																	
6 m tower Moor Site 2																																	
30 m tower - forest																																	
Ground surface temperature network																																	
Continous observations of microbarometers																																	
Scintillometer Edge-site																																	
Scintillometer Church																																	
Scintillometer KNOF																																	
Aerosols chemistry site 1																																	
Aerosol size measurements s1																																	
Radiation Budget (PMOD/WRC)																																	
Intensive observations																																	
RS MODEM site 1																																	
RS GRAW-Davis site 1																																	
RS GRAW-Davis site 3																																	
Piper Aztec flight																																	

Doodle form



New information about instrument status

- fill the doodle form
- mail to: Jean-Luc.Boichard@obs-mip.fr

Database tools: data upload page

Upload Form

Datasets	Data to upload
Aircraft	
Piper-Aztec core meteorological in-situ measurements	<input type="text"/> Parcourir...
Piper-Aztec high-frequency and raw measurements	<input type="text"/> Parcourir...
Piper Aztec Turbulence	<input type="text"/> Parcourir...
Sky Arrow	<input type="text"/> Parcourir...
Balloons	
Radiosoundings	
Frequent soundings Site 2	<input type="text"/> Parcourir...
GRAW UC Davis	<input type="text"/> Parcourir...
GRAW Univ Bonn	<input type="text"/> Parcourir...
MODEM Radiosoundings	<input type="text"/> Parcourir...
Tethered balloons	
Tethered balloons Bonn Site 2	<input type="text"/> Parcourir...
Tethered balloons CNRM Site 1	<input type="text"/> Parcourir...
Tethered balloons IA Site 2	<input type="text"/> Parcourir...
Tethered balloons UTAH site 2	<input type="text"/> Parcourir...

Status

41 expected datasets

27 datasets provided to the db

→ Recovering ratio : **66%**

+ bonus:

3 COST UAVs datasets

Many formats

- Selfdescriptive: Netcdf...
- ASCII + ReadMe / pdf file
- For some instrument types: same format for all the representers.

BLLAST data policy:

Quality controlled data must be submitted **by 31st December 2011**.

For datasets corresponding to a **second-level processing and quality control**, a second deadline is set to **30 June 2012**.

Database tools: metadata form

Please **complete the metadata** before / while providing data (about 10 – 15 minutes)

Bllast Metadata Registration

Contact informations	
Point of contact	
Organisation name	<input type="text"/>
Individual name	<input type="text"/>
E-mail	<input type="text"/>
Responsible party role	<input type="text" value="Point of contact"/>

Identification	
Resource title	<input type="text"/>
Resource abstract	<input type="text"/>

Geographic Location	
Platform type	<input type="text" value="-- level1 --"/>
Platform name	<input type="text"/>
Geographic bounding box	
North Bound Latitude	<input type="text"/>
East Bound Longitude	<input type="text"/>
South Bound Latitude	<input type="text"/>
West Bound Longitude	<input type="text"/>
Sites	

Among the 27 provided datasets: 9 without metadata information.

→ users have to download data to access information

→ unregistered users can't get any information

→ context of DOI set up

Digital Object Identifier set up

- DOI: usual for publications
increasing use for datasets
(cf. **DataCite gateway**: 500 000 references)
- Dataset is **referenced** in Datacite as soon as it is provided.
- Dataset DOI **can be cited in publications**, listed in the references.
- Datacite displays very few information but the **URL of the metadata** (of no use if they are not filled...)
- DOI is composed of a numerical prefix (delivered by INIST to SEDOO - done) / an **alphabetic code to be defined** by the BLLAST scientists (e.g.: bllast.instrumentshortname ?)

Metadata Search beta

[Options](#) | [Advanced Search](#) | [About Us](#) | [Contact](#)

DataCite

Filter

allocator

TIB (4)

prefix

resourceType

contributor

creator

publicationYear

publisher

language

refQuality

has_metadata

Active filters (x clear all): x datacentre TIB.PANGAEA - PANGAEA - Publishing Network for Geoscientific and Environmental Data

4 documents found in 13ms

Page 1 of 1

[Hydrology dataset based on 111 CTD stations in the North Aegean Sea during June 1998 from the project INTERREGAEGEAN](#)

doi:10.1594/PANGAEA.683833 Collection : Collection of Datasets

Georgopoulos, Dimitrios • Zervakis, Vassilis

Hydrology dataset based on 111 CTD stations in the North Aegean Sea during June 1998 from the Sea, at the northern extremes of the eastern **Mediterranean**. 1 combination of brackish water inflow

[Large-particle distribution at time series station DYFAMED, supplement to: Stemmann, Lars; Gorsky, Gabriel; Marty, Jean-Claude; Picheral, Marc; Miquel, Juan-Carlos \(2002\): Four-year study of large-particle vertical distribution \(0-1000 m\) in the NW Mediterranean in relation to hydrology, phytoplankton, and vertical flux. Deep-Sea Research Part II-Topical Studies in Oceanography, 49\(11\), 2143-2](#)

doi:10.1594/PANGAEA.738576 Collection : Supplementary Collection of Datasets

Stemmann, Lars • Gorsky, Gabriel • Marty, Jean-Claude • Picheral, Marc • Miquel, Juan-Carlos

-particle vertical distribution (0-1000 m) in the NW **Mediterranean** in relation to **hydrology**, phytoplankton, and Data on large particles (LP; >0.15 mm), phytoplankton communities, vertical fluxes, and **hydrology Mediterranean** Data Archaeology and Rescue (MEDAR/MEDATLAS)

[Sedimentology on profile Co1202 from Lake Ohrid, supplement to: Vogel, Hendrik; Wagner, Bernd; Zanchetta, Giovanni; Sulpizio, Roberto; Rosén, Peter \(2010\): A paleoclimate record with tephrochronological age control for the last glacial-interglacial cycle from Ohrid, Albania and Macedonia. Journal of Paleolimnology, 44, 295-310](#)

doi:10.1594/PANGAEA.770107 Collection : Supplementary Collection of Datasets

Vogel, Hendrik • Wagner, Bernd • Zanchetta, Giovanni • Sulpizio, Roberto • Rosén, Peter

, and **hydrology** of the lake. Warm interglacial and cold glacial climate conditions can be clearly

[Age models, ostracods and trace elements of five gravity cores from the NW Black Sea, supplement to: Bahr, André; Lamy, Frank; Arz, Helge W; Major, C; Kwiecien, O; Wefer, Gerold \(2008\): Abrupt changes of temperature and water chemistry in the late Pleistocene and early Holocene Black Sea. Geochemistry Geophysics Geosystems, 9, Q01004](#)

doi:10.1594/PANGAEA.726790 Collection : Supplementary Collection of Datasets

Bahr, André • Lamy, Frank • Arz, Helge W • Major, C • Kwiecien, O • (et. al.)

hydrology and water chemistry for the period between 30 to 8 ka B.P. (calibrated radiocarbon years). The

Page 1 of 1



doi:10.1594/PANGAEA.683833

This page represents DataCite's metadata for doi:10.1594/PANGAEA.683833. For a landing page of this dataset please follow <http://dx.doi.org/10.1594/PANGAEA.683833>

Citation Georgopoulos, Dimitrios; Zervakis, Vassilis (2008): Hydrology dataset based on 111 CTD stations in the North Aegean Sea during June 1998 from the project INTERREGAEGEAN. PANGAEA - Data Publisher for Earth & Environmental Science. <http://dx.doi.org/10.1594/PANGAEA.683833> [BiBTeX](#) [RIS](#)

Descriptions

Abstract The combination of two research projects offered us the opportunity to perform a comprehensive study of the seasonal evolution of the hydrological structure and the circulation of the North Aegean Sea, at the northern and the eastern Mediterranean. The combination of brackish water inflow from the Dardanelles and the sea-bottom relief dictate the significant differences between the North and South Aegean water columns. The relatively highly saline South Aegean waters enter the North Aegean through the dominant cyclonic circulation of the basin. In the North Aegean, three layers of distinct water masses of very different properties are observed: The thick surface layer is occupied mainly by Black Sea Water, modified on its way through the Bosphorus, the Sea of Marmara and the Dardanelles. Below the surface layer there is warm and highly saline water originating in the Aegean and the Levantine, extending down to 350-400 m depth. Below this layer, the deeper-than-400 m basins of the North Aegean contain locally formed, very dense water with different *is*S characteristics at each site. The circulation is characterised by a series of permanent, semi-permanent and transient mesoscale features, overlaid on the general slow cyclonic circulation of the Aegean. The mesoscale activity, while not necessarily improving isopycnal mixing in the region, in combination with the very high stratification of the upper layers, however, increases the residence time of the water of the upper layers in the general area of the North Aegean. As a result, water having out-flowed from the Black Sea in the winter, forms a separate distinct layer in the region in spring (lying between "younger" BSW and the Levantine origin water), and is still traceable in the water column in summer.

Resource type

Collection Collection of Datasets

Subjects

Campaign INTERREG-JUNE-1998
Basis Aegean
Project Invest. of new marine biol. resources in deep waters of Ionian and Aegean Seas (INTERREG)

License Creative Commons Attribution 3.0 Unported (CC-BY)

Size 117 datasets

Language eng

Formats application/zip

Related identifiers

Cites [url:http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/05-20.pdf](http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/05-20.pdf)
Cites [url:http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/43-54.pdf](http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/43-54.pdf)
Cites [doi:10.1016/S0967-0637\(02\)00144-9](https://doi.org/10.1016/S0967-0637(02)00144-9)
Cites [url:http://www.gnest.org/Journal/vol3_No2/pavlidou71-84.pdf](http://www.gnest.org/Journal/vol3_No2/pavlidou71-84.pdf)
Cites [url:http://www.psp-parlar.de/details_artikel.asp?tabelle=FEBArtikel&artikel_id=738&jahr=2001](http://www.psp-parlar.de/details_artikel.asp?tabelle=FEBArtikel&artikel_id=738&jahr=2001)
Cites [url:http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/65-78.pdf](http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/65-78.pdf)
Cites [doi:10.1016/j.dsr.2007.11.002](https://doi.org/10.1016/j.dsr.2007.11.002)

Contributors

HostingInstitution Centre de Formation et de Recherche sur l'Environnement Marin, Universite de Perpignan

Other metadata formats

x-datacite+xml <http://data.datacite.org/application/x-datacite+xml/10.1594/PANGAEA.683833>



Data Description

Show Map Google Earth

Citation: Georgopoulos, Dimitrios; Zervakis, Vassilis (2008): Hydrology dataset based on 111 CTD stations in the North Aegean Sea during June 1998 from the project INTERREGAEGEAN. *Centre de Formation et de Recherche sur l'Environnement Marin, Université de Perpignan*. doi:10.1594/PANGAEA.683833

Reference(s): Zervakis, Vassilis; Georgopoulos, Dimitrios (2002): Hydrology and circulation in the North Aegean (eastern Mediterranean) throughout 1997 and 1998. *Mediterranean Marine Science*, 3(1), 5-19, <http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/05-20.pdf>

Krasakopoulou, Evangelia; Zervakis, Vassilis; Souvermezoglou, Ekaterini; Georgopoulos, Dimitrios (2002): North-eastern Aegean sea: an effort to estimate steady-state N & P budgets during September 1998. *Mediterranean Marine Science*, 3(1), 43-53, <http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/43-54.pdf>

Zervakis, Vassilis; Krasakopoulou, Evangelia; Georgopoulos, Dimitrios; Souvermezoglou, Ekaterini (2003): Vertical diffusion and oxygen consumption during stagnation periods in the deep North Aegean. *Deep-Sea Research Part I-Oceanographic Research Papers*, 50(1), 53-71, doi:10.1016/S0967-0637(02)00144-9

Pavlidou, Alexandra; Georgopoulos, Dimitrios (2001): Dissolved Oxygen and Nutrients in coastal waters impacted by the Strymon River plume, North Aegean Sea, Greece. *Global Nest*, 3(2), 71-84, http://www.gnest.org/Journal/vol3_No2/pavlidou71-84.pdf

Pavlidou, Alexandra; Papadopoulou, V; Zervakis, Vassilis (2001): Hydrology and nutrient - dissolved oxygen distributions in coastal waters affected by the Nestos River plume, north Aegean Sea, Greece. *Fresenius Environmental Bulletin*, 10(11), 823-831, http://www.psp-parlar.de/details_artikel.asp?tabelle=FEBArtikel&artikel_id=738&jahr=2001

Pavlidou, Alexandra; Papadopoulou, V; Hatzianestis, I; Sklivagou, E; Zervakis, Vassilis (2002): Hydrology and pollution assessment in a coastal Estuarine system. The case of Strymonikos Gulf (North Aegean Sea). *Mediterranean Marine Science*, 3(1), 65-78, <http://www.medit-mar-sc.net/contents/pdf/PDF%20FILES%20vol%203%20numb%201/65-78.pdf>

Karageorgis, Aristomenis P; Gardner, Wilford; Georgopoulos, Dimitrios; Mishonov, Alexey V; Krasakopoulou, Evangelia; Anagnostou, Christos L (2008): Particle dynamics in the Eastern Mediterranean Sea: A synthesis based on light transmission, PMC, and POC archives (1991-2001). *Deep-Sea Research Part I-Oceanographic Research Papers*, 55(2), 177-202, doi:10.1016/j.dsr.2007.11.002

Abstract: The combination of two research projects offered us the opportunity to perform a comprehensive study of the seasonal evolution of the hydrological structure and the circulation of the North Aegean Sea, at the northern extremes of the eastern Mediterranean. The combination of brackish water inflow from the Dardanelles and the sea-bottom relief dictate the significant differences between the North and South Aegean water columns. The relatively warm and highly saline South Aegean waters enter the North Aegean through the dominant cyclonic circulation of the basin. In the North Aegean, three layers of distinct water masses of very different properties are observed: The 20-50 m thick surface layer is occupied mainly by Black Sea Water, modified on its way through the Bosphorus, the Sea of Marmara and the Dardanelles. Below the surface layer there is warm and highly saline water originating in the South Aegean and the Levantine, extending down to 350-400 m depth. Below this layer, the deeper-than-400 m basins of the North Aegean contain locally formed, very dense water with different *i*/S characteristics at each subbasin. The circulation is characterised by a series of permanent, semi-permanent and transient mesoscale features, overlaid on the general slow cyclonic circulation of the Aegean. The mesoscale activity, while not necessarily important in enhancing isopycnal mixing in the region, in combination with the very high stratification of the upper layers, however, increases the residence time of the water of the upper layers in the general area of the North Aegean. As a result, water having out-flowed from the Black Sea in the winter, forms a separate distinct layer in the region in spring (lying between "younger" BSW and the Levantine origin water), and is still traceable in the water column in late summer.

Project(s): Invest. of new marine biol. resources in deep waters of Ionian and Aegean Seas (INTERREG)

Coverage: Median Latitude: 40.211214 * Median Longitude: 24.783954 * South-bound Latitude: 39.050000 * West-bound Longitude: 23.730000 * North-bound Latitude: 40.830000 * East-bound Longitude: 25.990000

Date/Time Start: 1998-06-15T17:00:00 * Date/Time End: 1998-06-23T07:10:00

Event(s): JUNE-1998-EV01 * Latitude: 40.750000 * Longitude: 25.910000 * Date/Time: 1998-06-19T10:20:00 * Campaign: INTERREG-JUNE-1998 * Basis: Aegaeo * Device: CTD/Rosette

JUNE-1998-EV02 * Latitude: 40.760000 * Longitude: 25.990000 * Date/Time: 1998-06-19T09:40:00 * Campaign: INTERREG-JUNE-1998 * Basis: Aegaeo * Device: CTD/Rosette

JUNE-1998-EV02A * Latitude: 40.760000 * Longitude: 25.990000 * Date/Time: 1998-06-19T09:45:00 * Campaign: INTERREG-JUNE-1998 * Basis: Aegaeo * Device: CTD/Rosette

License: Creative Commons Attribution 3.0 Unported

Size: 117 datasets



Database tools: metadata / data access

95 registered users
(cf. bllast diffusion list)

Dataset access monitoring
being set up.

Please report any problem
with the data access tool
or the data format.

Datasets (metadata access)	Data Access	Data received at 16/01/2012
Aircraft		
Piper-Aztec core meteorological in-situ measurements		24 files (12 Mb) received between 02/12/11 and 05/12/11
Piper-Aztec high-frequency and raw measurements		0 files (0 Mb)
Piper Aztec Turbulence		2 files (0 Mb) received between 05/12/11 and 05/12/11
Sky Arrow		17 files (1026 Mb) received between 09/11/11 and 10/11/11
Balloons		
Radiosoundings		
Frequent soundings Site 2		63 files (8 Mb) received between 13/12/11 and 13/12/11
GRAW UC Davis		0 files (0 Mb)
GRAW Univ Bonn		0 files (0 Mb)
MODEM Radiosoundings		89 files (50 Mb) received between 23/11/11 and 29/11/11
Tethered balloons		
Tethered balloons Bonn Site 2		0 files (0 Mb)
Tethered balloons CNRM Site 1		14 files (20 Mb) received between 05/01/12 and 16/12/11

Status and 2012 tasks

- The different tools are developed and online.
Please report any problem or suggestion.
- Planned improvements:
 - **DOI set up**
 - **Data access monitoring**
 - **Photo gallery set up**
- Updates
 - More **metadata and datasets**
 - **New versions** of the datasets already provided
 - New « instrument »: **MODEL** (but volume constraints)
 - New documents, pages in the **BLLAST website**
- User support
- Contact: **laurence.mastrorillo@obs-mip.fr**