

**Εργαστήριο Οικολογικής Μηχανικής και Τεχνολογίας
Τμήμα Μηχανικών Περιβάλλοντος
Πολυτεχνική Σχολή
Δημοκρίτειο Πανεπιστήμιο Θράκης**



ΕΡΓΑΣΤΗΡΙΟ ΦΥΣΙΚΗΣ ΩΚΕΑΝΟΓΡΑΦΙΑΣ

Εισαγωγή και Επεξεργασία πολλαπλών προφίλ CTD στο OCEAN DATA VIEW

Εαρινό εξάμηνο 2019

Λήψη αρχείου δεδομένων για τη δημιουργία πολλαπλών προφίλ



Άσκηση 7. Εισαγωγή και Επεξεργασία πολλαπλών προφίλ CTD στο ODV

Επιστροφή

Στοιχεία εργασίας

Τίτλος:	Άσκηση 7. Εισαγωγή και Επεξεργασία πολλαπλών προφίλ CTD στο ODV
Περιγραφή:	<p>Δίνεται το συνημμένο αρχείο επεξεργασμένων δεδομένων CTD Βορείου Αιγαίου. Να εισάγετε τα δεδομένα στο ODV κατά ομάδες:</p> <p>Ομάδα 1: προφίλ 1-12, Ομάδα 2: προφίλ 13-23, Ομάδα 3: προφίλ 24-37, Ομάδα 4: προφίλ 38-50.</p> <p>Να δημιουργηθούν διαγράμματα προφίλ και T-S και να συζητηθούν τα αποτελέσματα της κάθε ομάδας. Τα δεδομένα βρίσκονται στις στήλες Q,R,S ανά φύλλο εργασίας. Θα δημιουργήσετε 1 αρχείο για εισαγωγή στο ODV ανά ομάδα σταθμών.</p>
Αρχείο:	medits2000a.xls
Μέγιστη βαθμολογία:	10
Τύπος Βαθμολογίας:	Αριθμός
Ημερομηνία έναρξης:	06-05-2019 12:00:00
Προθεσμία υποβολής:	18-05-2019 12:00:00 (απομένουν 7 ημέρες 23 ώρες 29 λεπτά)
Τύπος εργασίας:	Ατομική εργασία

Δομή αρχείου δεδομένων για τη δημιουργία πολλαπλών προφίλ



	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V
1																					
2	LINEAR	PROFILE	STEP	0.10																	
3	AREA	CODE	SITE1		Sample	Station	N	40 50 071													
4	ACQUISIT	DATE:	1/1/1970	0:00:00			E	24 49 325													
5																					
6	Press	Temp	Cond	Sal	O2ppm	O2%	pH	eH				Salinity	Temp	Press			Press	Temp	Salin	Dens	GA
7	0.79	22.624	49.302	33.994	21.22	299.1	7.00	-1238.5	1/1/1970	0:00:00		33.994	22.624	0.79		2	22.6085	34.2482	23.4856	0.088	
8	1.59	22.627	49.553	34.186	19.18	270.7	7.00	-1238.6	1/1/1970	0:00:00		34.186	22.627	1.59		3	22.5879	34.275	23.5161	0.1319	
9	1.85	22.611	49.610	34.242	12.66	178.7	7.00	-1238.6	1/1/1970	0:00:00		34.242	22.611	1.85		4	22.5457	34.2871	23.5416	0.1755	
10	2.38	22.602	49.629	34.264	7.89	111.4	6.99	-1238.3	1/1/1970	0:00:00		34.264	22.602	2.38		5	22.4776	34.306	23.5796	0.2189	
11	3.17	22.584	49.629	34.278	7.03	99.2	7.00	-1238.3	1/1/1970	0:00:00		34.278	22.584	3.17		6	22.3986	34.3445	23.6355	0.2619	
12	3.70	22.563	49.618	34.286	6.89	97.1	7.00	-1237.9	1/1/1970	0:00:00		34.286	22.563	3.70		7	22.3234	34.4103	23.711	0.3044	
13	4.50	22.517	49.576	34.289	6.87	96.8	7.00	-1238.5	1/1/1970	0:00:00		34.289	22.517	4.50		8	22.3152	34.4452	23.7441	0.3463	
14	5.82	22.413	49.530	34.334	6.90	97.1	7.00	-1238.5	1/1/1970	0:00:00		34.334	22.413	5.82		9	22.2938	34.4902	23.7886	0.3879	
15	6.82	22.355	49.523	34.374	6.99	98.3	7.00	-1238.3	1/1/1970	0:00:00		34.374	22.355	6.82		10	22.2739	34.4962	23.8031	0.4293	
16	6.88	22.328	49.523	34.396	7.39	103.9	7.00	-1238.5	1/1/1970	0:00:00		34.396	22.328	6.88		11	22.2243	34.5062	23.829	0.4705	
17	7.14	22.318	49.553	34.427	7.24	101.8	7.00	-1238.5	1/1/1970	0:00:00		34.427	22.318	7.14		12	21.5873	34.8279	24.2555	0.5096	
18	7.94	22.318	49.568	34.438	7.18	100.9	7.00	-1238.5	1/1/1970	0:00:00		34.438	22.318	7.94		13	19.7178	35.6696	25.405	0.5413	
19	8.20	22.306	49.595	34.469	7.18	100.9	7.00	-1238.5	1/1/1970	0:00:00		34.469	22.306	8.20		14	17.1757	36.3945	26.6054	0.5618	
20	8.99	22.294	49.610	34.490	7.20	101.1	7.00	-1238.3	1/1/1970	0:00:00		34.49	22.294	8.99		15	15.9448	36.9951	27.3633	0.5731	
21	9.79	22.279	49.610	34.502	7.22	101.5	6.99	-1238.5	1/1/1970	0:00:00		34.502	22.279	9.79		16	15.4511	37.5674	27.9225	0.5782	
22	10.58	22.260	49.565	34.480	7.24	101.7	7.00	-1238.5	1/1/1970	0:00:00		34.48	22.26	10.58		17	15.4161	37.6856	28.0261	0.5802	
23	11.11	22.215	49.561	34.513	7.27	102.1	7.00	-1238.3	1/1/1970	0:00:00		34.513	22.215	11.11		18	15.4306	37.7372	28.067	0.5816	
24	11.11	22.010	49.485	34.617	7.31	102.4	7.00	-1238.6	1/1/1970	0:00:00		34.617	22.01	11.11		19	15.39	37.7589	28.0974	0.5826	
25	12.43	21.284	49.203	34.980	7.44	103.0	7.00	-1238.5	1/1/1970	0:00:00		34.98	21.284	12.43		20	15.3232	37.8535	28.19	0.5831	
26	12.43	20.469	49.085	35.560	0.00	0.0	7.00	-1238.3	1/1/1970	0:00:00		35.56	20.469	12.43		21	15.2122	37.8473	28.2149	0.5832	
27	11.91	20.640	49.245	35.547	2.10	28.8	7.00	-1238.5	1/1/1970	0:00:00		35.547	20.64	11.91		22	14.9918	37.8993	28.3093	0.5826	

- **Acquisition Date:** Ημερομηνία δειγματοληψίας
- **Lon (E):** Γεωγραφικό Μήκος δειγματοληψίας (E-East)
- **Lat (N):** Γεωγραφικό Πλάτος δειγματοληψίας (N-North)
- **Press:** Πίεση, **Temp:** Θερμοκρασία, **Salin:** Αλατότητα, **Dens:** Πυκνότητα

Δομή πρότυπου αρχείου δεδομένων



	A	B	C	D	E	F	G	H	I	J	K	L	M
1	Cruise	Station	Type	mon/day/yr	Lon (E)	Lat (N)	Depth [m]	QF	Temperature [°C]	QF	Salinity [PSU]	QF	
2	MEDITS	1 B		07/16/2000	24.5	38.2	0	0	28.4	0	34.418	0	
3	MEDITS	1 B		07/16/2000	24.5	38.2	10	0	21.101	0	34.849	0	
4	MEDITS	1 B		07/16/2000	24.5	38.2	20	0	19.863	0	34.904	0	
5	MEDITS	1 B		07/16/2000	24.5	38.2	40	0	28.1	0	34.364	0	
6	MEDITS	1 B		07/16/2000	24.5	38.2	50	0	24.61	0	34.306	0	
7	MEDITS	1 B		07/16/2000	24.5	38.2	60	0	29.2	0	34.849	0	
8	MEDITS	1 B		07/16/2000	24.5	38.2	100	0	25.504	0	34.945	0	
9	MEDITS	2 B		07/16/2000	24.6	38.3	0	0	29.1	0	35.1	0	
10													

- **Cruise:** Ονομασία Δειγματοληψίας
- **Station:** Αριθμός του σταθμού (1, αν υπάρχουν περισσότεροι σταθμοί γράφουμε 2, 3, κλπ.)
- **Type:** Τύπος των δεδομένων (B - Bottle profile data, C – CTD, Γενικά πάνω από 250 δείγματα – C)
- **mon/day/yr:** Ημερομηνία δειγματοληψίας
- **Lon (E):** Γεωγραφικό Μήκος δειγματοληψίας
- **Lat (N):** Γεωγραφικό Πλάτος δειγματοληψίας
- **Depth (m):** Βάθος δειγματοληψίας
- **Temperature [°C]:** Θερμοκρασία
- **Salinity [PSU]:** Αλατότητα

Κάθε στήλη δεδομένων διαχωρίζεται από την επόμενη από στήλη που εκφράζει την αξιοπιστία των δεδομένων (**QF**) που αν είναι 0 σημαίνει «υψηλή αξιοπιστία».



Εισαγωγή δειγματοληψιών CTD στο ODV

Εισαγωγή αρχείου δεδομένων στο ODV

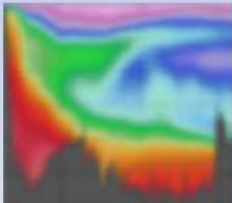


Ocean Data View

File Collection View **Import** Export Tools Help

- ODV Spreadsheet...
- ODV Collection...
- Argo Formats ▶
- GOSUD netCDF v3...
- MedAtlas Formats...
- SeaDataNet Formats...
- Sea-Bird CNV...
- U.S. NODC Formats ▶
- WHP Formats ▶

Ocean Data View

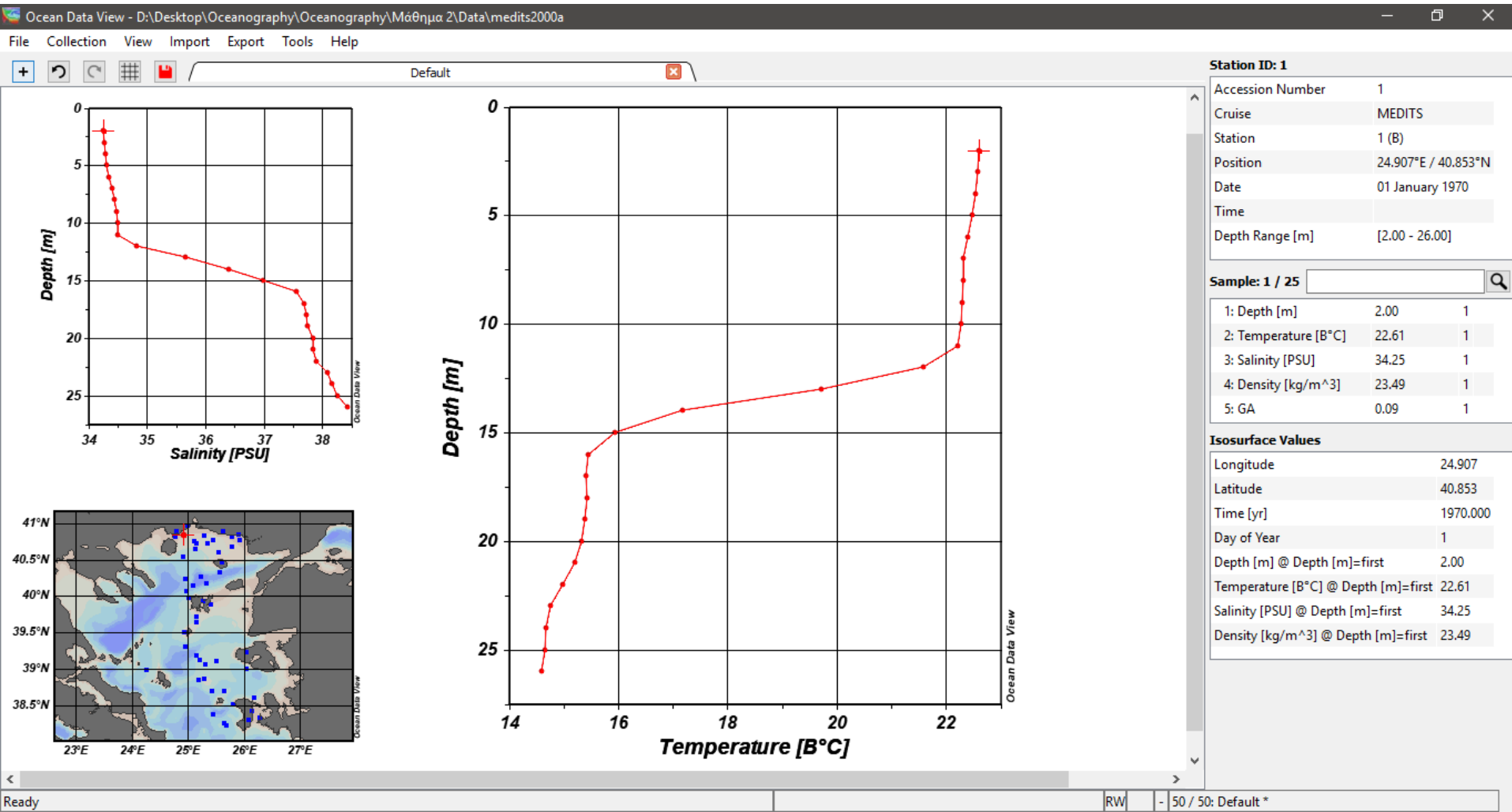


<https://odv.awi.de>

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Imports new data from ODV spreadsheet ASCII file(s).

Εισαγωγή αρχείου δεδομένων στο ODV





Δημιουργία οριζόντιων κατανομών στο ODV

Δημιουργία οριζόντιων κατανομών στο ODV



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Μάθημα 2\Data\medits2000a(1)

File Collection **View** Import Export Tools Help

Undo Redo Station Filter... Alt+S Derived Variables... Alt+D Isosurface Variables... Window Properties Window Layout Alt+W **Layout Templates** Save View As... Save View Load Views... Shift+L Browse Session Log File Settings...

Full Screen Map F8

1 STATION Window
2 STATION Windows
6 STATION Windows F9

1 SCATTER Window
2 SCATTER Windows F10
6 SCATTER Windows

1 SECTION Window
2 SECTION Windows
3 SECTION Windows F11
5 SECTION Windows
6 SECTION Windows

1 SURFACE Window F12
2 SURFACE Windows
3 SURFACE Windows
5 SURFACE Windows
8 SURFACE Windows
11 SURFACE Windows

1 SURFACE + 1 SCATTER Windows
5 MIXED Windows

Depth [m]

Salinity [PSU]

Temperature [B°C]

Station ID: 1

Accession Number	1
Cruise	MEDITS
Station	1 (B)
Position	24.907°E / 40.853°N
Date	01 January 1970
Time	
Depth Range [m]	[2.00 - 26.00]

Sample: 1 / 25

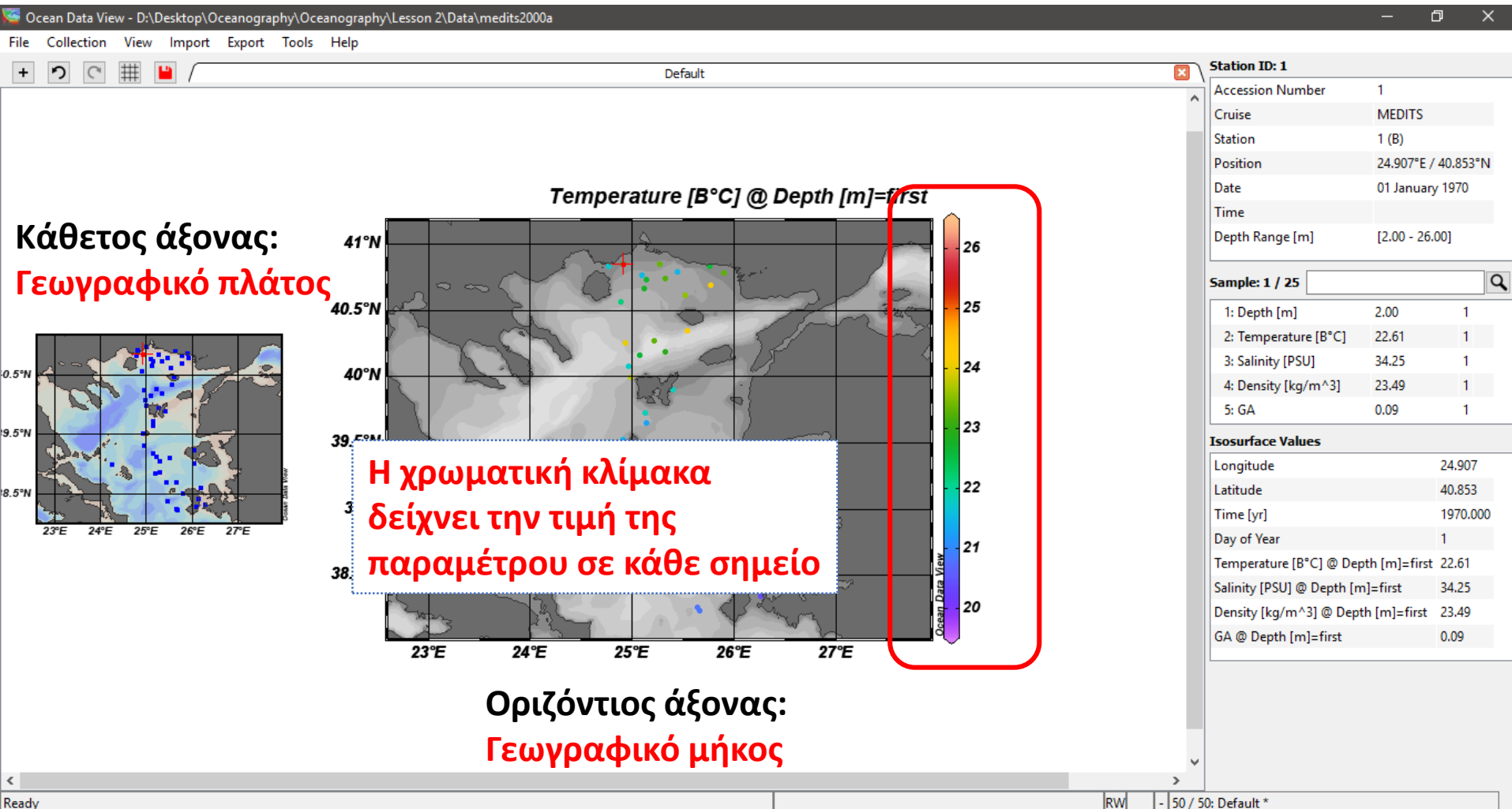
1: Depth [m]	2.00	1
2: Temperature [B°C]	22.61	1
3: Salinity [PSU]	34.25	1
4: Density [kg/m^3]	23.49	1
5: GA	0.09	1

Isosurface Values

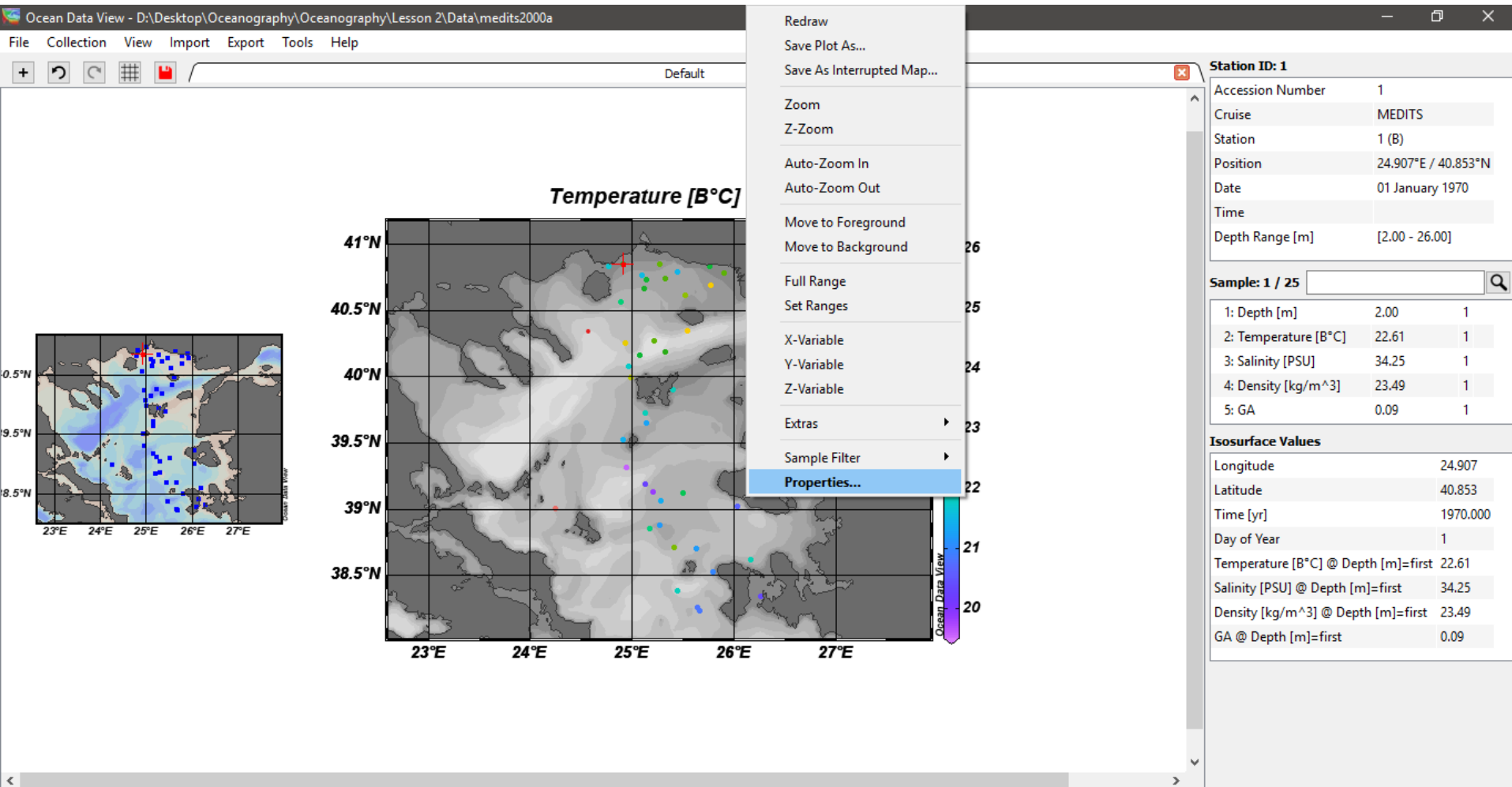
Longitude	24.907
Latitude	40.853
Time [yr]	1970.000
Day of Year	1
Depth [m] @ Depth [m]=first	2.00
Temperature [B°C] @ Depth [m]=first	22.61
Salinity [PSU] @ Depth [m]=first	34.25
Density [kg/m^3] @ Depth [m]=first	23.49

Applies a predefined window layout.

Δημιουργία οριζόντιων κατανομών στο ODV



Δημιουργία ενιαίου χρωματικού χάρτη



Δημιουργία ενιαίου χρωματικού χάρτη



Ocean Data View - D:\Desktop\Oceanography\Oceanograph

File Collection View Import Export Tools Help

Properties Window 1

General Data Display Style Contours Color Mapping DIVA Settings

Data Display Style

Original data

Colored Dots

Symbol size: 18

Symbol color: 0

Line width: thin

Gridded field

Weighted-average gridding

Quick gridding

Weighted-average gridding

DIVA gridding

20 X scale-length [permille]

20 Y scale-length [permille]

Isopycnic gridding

Quality limit: 3.0

Hide bad estimates

Do color shading

Exclude outliers

Data Mark Style

Draw marks

Size: 2

Color: 17

Apply to all windows

Default Settings

Station ID: 1

Accession Number: 1

Cruise: MEDITS

Station: 1 (B)

Position: 24.907°E / 40.853°N

Date: 01 January 1970

Time:

Depth Range [m]: [2.00 - 26.00]

Sample: 1 / 25

1: Depth [m]	2.00	1
2: Temperature [B°C]	22.61	1
3: Salinity [PSU]	34.25	1
4: Density [kg/m^3]	23.49	1
5: GA	0.09	1

Isosurface Values

Longitude	24.907
Latitude	40.853
Time [yr]	1970.000
Day of Year	1
Temperature [B°C] @ Depth [m]=first	22.61
Salinity [PSU] @ Depth [m]=first	34.25
Density [kg/m^3] @ Depth [m]=first	23.49
GA @ Depth [m]=first	0.09

OK Cancel

Ready

50 / 50: Default *

Δημιουργία ενιαίου χρωματικού χάρτη



Properties Window 1

General Data Display Style Contours Color Mapping **DIVA Settings**

Data Display Style

Original data

Colored Dots

Symbol size: 18

Symbol color: 0

Line width: thin

Gridded field

Weighted-average gridding

Quick gridding

Weighted-average gridding

DIVA gridding

X scale-length [permille]: 20

Y scale-length [permille]: 20

Isopycnic gridding

Quality limit: 3.0

Hide bad estimates

Do color shading

Exclude outliers

Color: 17

Default Settings

OK Cancel

Station ID: 1

Accession Number: 1

Cruise: MEDITS

Station: 1 (B)

Position: 24.907°E / 40.853°N

Date: 01 January 1970

Time:

Depth Range [m]: [2.00 - 26.00]

Sample: 1 / 25

1: Depth [m]	2.00	1
2: Temperature [B°C]	22.61	1
3: Salinity [PSU]	34.25	1
4: Density [kg/m^3]	23.49	1
5: GA	0.09	1

Isosurface Values

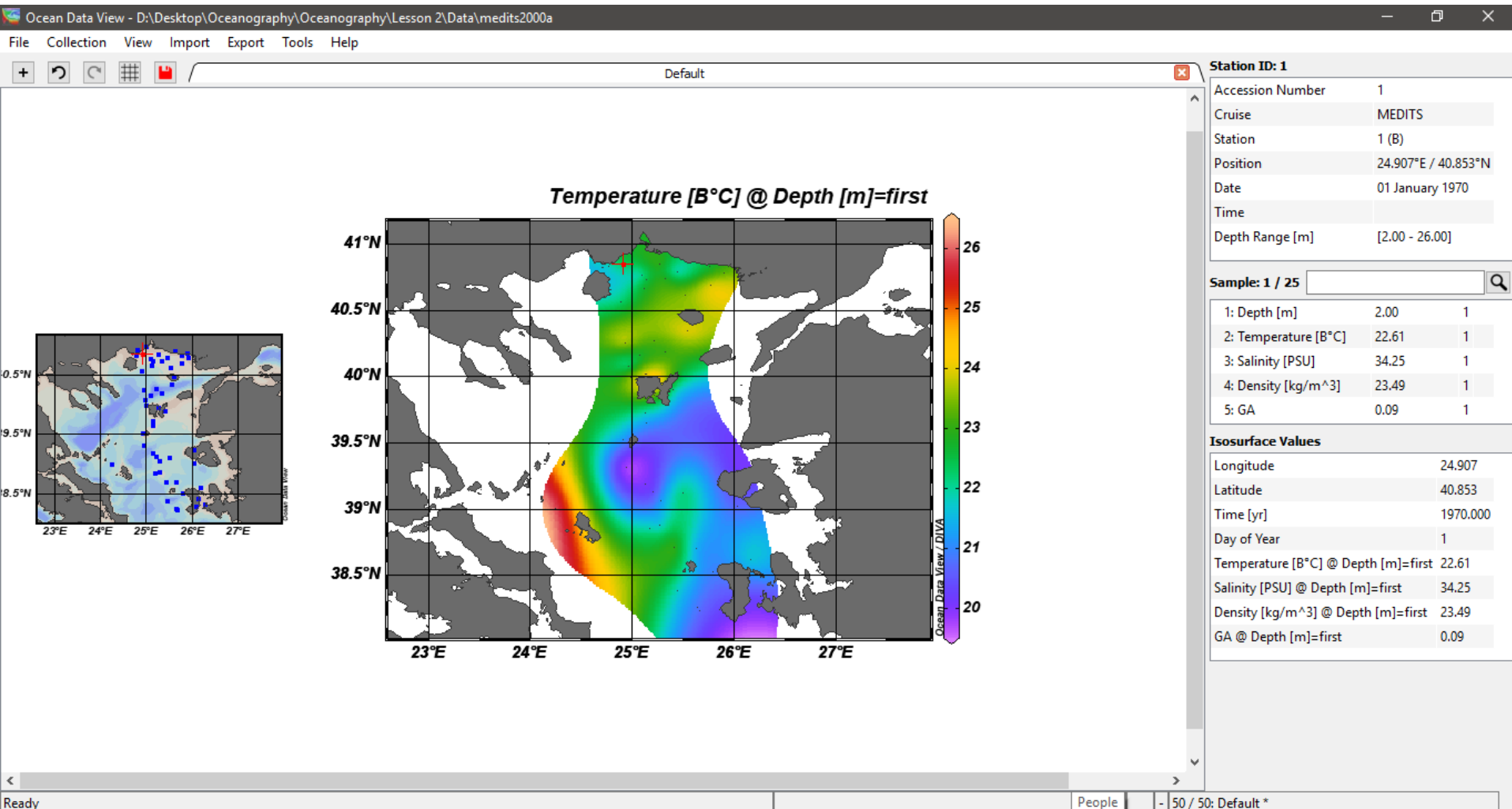
Longitude	24.907
Latitude	40.853
Time [yr]	1970.000
Day of Year	1
Temperature [B°C] @ Depth [m]=first	22.61
Salinity [PSU] @ Depth [m]=first	34.25
Density [kg/m^3] @ Depth [m]=first	23.49
GA @ Depth [m]=first	0.09

Ready

50 / 50: Default *

Η δημιουργία ενιαίου χρωματικού χάρτη με την χρήση της μεθόδου DIVA επιτρέπει την χωρική παρεμβολή μεταξύ των μετρήσεων λαμβάνοντας υπόψη την ακτογραμμή και την βαθυμετρία.

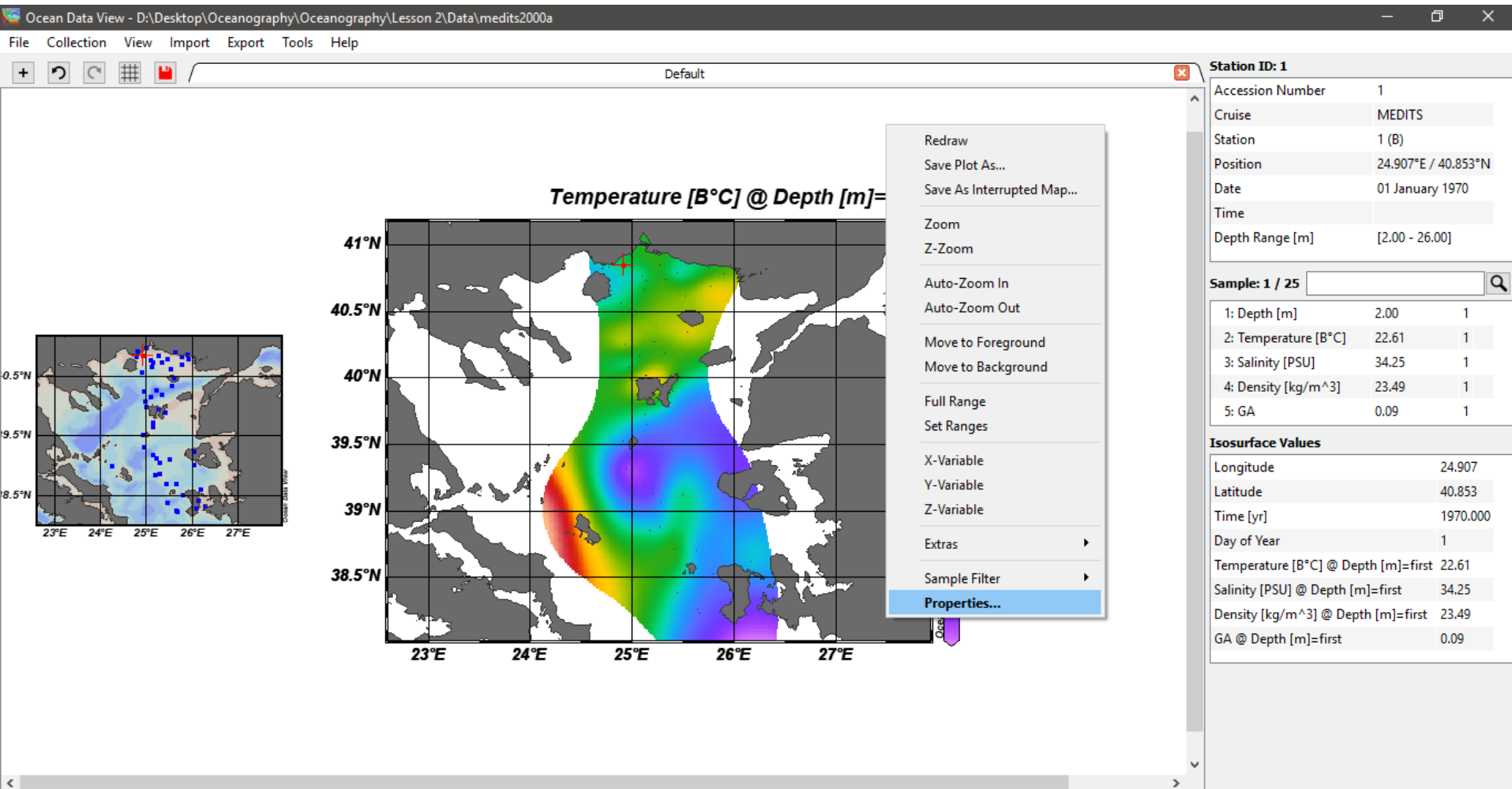
Δημιουργία ενιαίου χρωματικού χάρτη





Δημιουργία ισοκαμπυλών στο ODV

Δημιουργία ισοκαμπυλών



Δημιουργία ισοκαμπυλών



Ocean Data View - D:\Desktop\Oceanography\Oceanograph

File Collection View Import Export Tools Help

Properties Window 1

General Data Display Style Contours Color Mapping DIVA Settings

Δημιουργεί ισοκαμπύλες με το βήμα που του θέτουμε.

Already Defined

19
20
21
22
23
24
25
26
27

New

19 Start
1 Increment
27 End

Line: very thin Labels: few labels
0 8 pt
solid
Fill: (none)

Do contours

Apply to all windows with this Z-variable
Temperature [B°C] @ Depth [m]=first

Station ID: 1

Accession Number 1
Cruise MEDITS
Station 1 (B)
Position 24.907°E / 40.853°N
Date 01 January 1970
Time
Depth Range [m] [2.00 - 26.00]

Sample: 1 / 25

1: Depth [m]	2.00	1
2: Temperature [B°C]	22.61	1
3: Salinity [PSU]	34.25	1
4: Density [kg/m^3]	23.49	1
5: GA	0.09	1

Isosurface Values

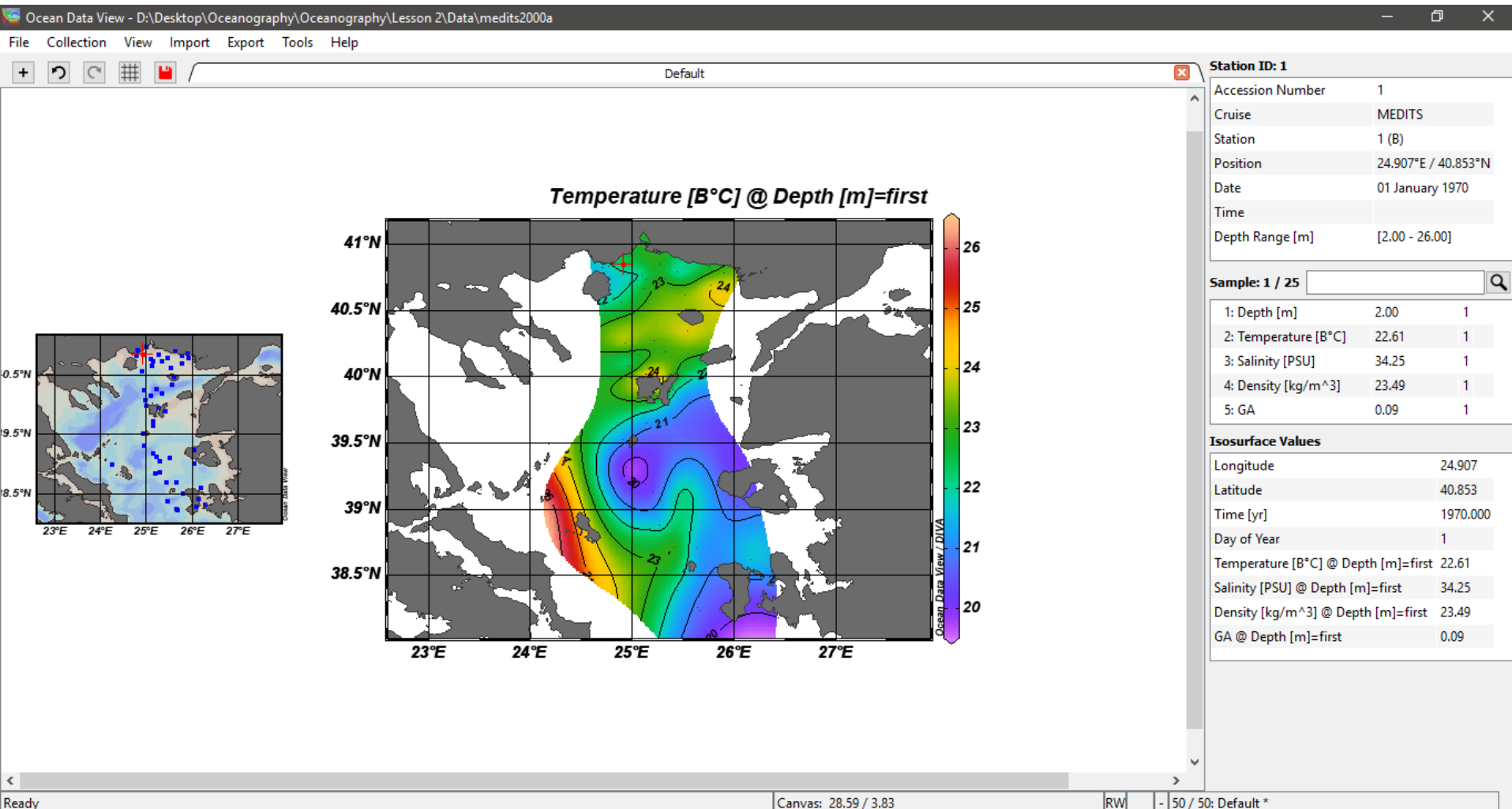
Longitude	24.907
Latitude	40.853
Time [yr]	1970.000
Day of Year	1
Temperature [B°C] @ Depth [m]=first	22.61
Salinity [PSU] @ Depth [m]=first	34.25
Density [kg/m^3] @ Depth [m]=first	23.49
GA @ Depth [m]=first	0.09

Help OK Cancel

Ready

50 / 50: Default *

Δημιουργία ισοκαμπυλών





Δημιουργία κατακόρυφων τομών στο ODV

Δημιουργία κατακόρυφων τομών στο ODV



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Μάθημα 2\Data\medits2000a(3)

File Collection View Import Export Tools Help

Undo
Redo
Station Filter... Alt+S
Derived Variables... Alt+D
Isosurface Variables...
Window Properties
Window Layout Alt+W
Layout Templates
Save View As...
Save View
Load Views... Shift+L
Browse Session Log File
Settings...

Depth [m]

Salinity [PSU]

Temperature [B°C]

Station ID: 1

Accession Number	1
Cruise	MEDITS
Station	1 (B)
Position	24.907°E / 40.853°N
Date	01 January 1970
Time	
Depth Range [m]	[2.00 - 26.00]

Sample: 1 / 25

1: Depth [m]	2.00	1
2: Temperature [B°C]	22.61	1
3: Salinity [PSU]	34.25	1
4: Density [kg/m ³]	23.49	1
5: GA	0.09	1

Isosurface Values

Longitude	24.907
Latitude	40.853
Time [yr]	1970.000
Day of Year	1
Depth [m] @ Depth [m]=first	2.00
Temperature [B°C] @ Depth [m]=first	22.61
Salinity [PSU] @ Depth [m]=first	34.25
Density [kg/m ³] @ Depth [m]=first	23.49

Full Screen Map F8

1 STATION Window
2 STATION Windows
6 STATION Windows F9

1 SCATTER Window
2 SCATTER Windows F10
6 SCATTER Windows

1 SECTION Window
2 SECTION Windows
3 SECTION Windows F11
5 SECTION Windows
6 SECTION Windows

1 SURFACE Window F12
2 SURFACE Windows
3 SURFACE Windows
5 SURFACE Windows
8 SURFACE Windows
11 SURFACE Windows

1 SURFACE + 1 SCATTER Windows
5 MIXED Windows

Applies a predefined window layout.

Δημιουργία κατακόρυφων τομών στο ODV



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Μάθημα 2\Data\medits2000a(2)

File Collection View Import Export Tools Help

Default

Window 1 SECTION

Define a section along a user specified track. L-MSE click adds current point, R-MSE click removes closest point. Press ENTER to accept or ESC to abort.

Station ID: 1

Accession Number	1
Cruise	MEDITS
Station	1 (B)
Position	24.907°E / 40.853°N
Date	01 January 1970
Time	
Depth Range [m]	[2.00 - 26.00]

Sample: 1 / 25

1: Depth [m]	2.00	1
2: Temperature [B°C]	22.61	1
3: Salinity [PSU]	34.25	1
4: Density [kg/m ³]	23.49	1
5: GA	0.09	1

Isosurface Values

Longitude	24.907
Latitude	40.853
Time [yr]	1970.000
Day of Year	1
Depth [m] @ Depth [m]=first	2.00
Temperature [B°C] @ Depth [m]=first	22.61
Salinity [PSU] @ Depth [m]=first	34.25
Density [kg/m ³] @ Depth [m]=first	23.49

Defines a new section along a user specified track. L-MSE click adds current point, R-MSE click removes closest point. Press ENTER to accept or ESC to abort.

Δημιουργία κατακόρυφων τομών στο ODV



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Lesson 2\Data\medits2000a

File Collection View Import Export Tools Help

Default

Section Properties

Section Name: Εδώ δίνουμε το όνομα που θέλουμε

Section Coordinate

Distance [km] Longitude Latitude Time

Bathymetry

No bathymetry

Station bottom depth

File: GEBCO_2014_1x1min_Mediterranean.nc Browse

Mean Width Bathymetry Color

OK Cancel

Station ID: 8

Accession Number 8

Cruise MEDITS

Station 8 (B)

Position 24.894°E / 40.563°N

Date 01 January 1970

Time

Depth Range [m] [2.00 - 69.00]

Sample: 67 / 68

1: Depth [m]	68.00	1
2: Temperature [B°C]	14.02	1
3: Salinity [PSU]	38.85	1
4: Density [kg/m ³]	29.47	1
5: GA	0.44	1
drvd: In situ Density Ano...	29.469	1
drvd: Potential Temperat...	14.00	1

Isosurface Values

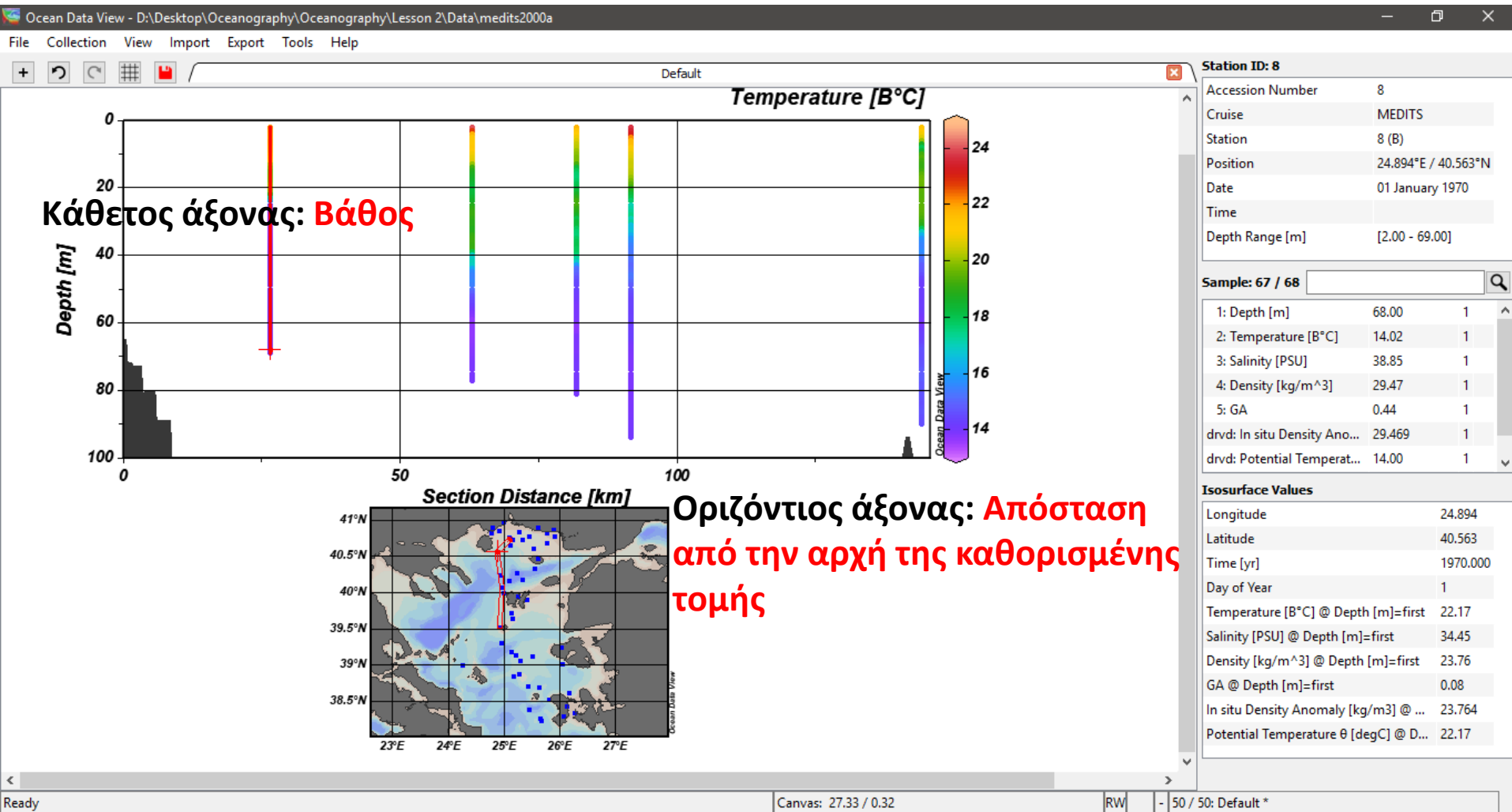
Longitude	24.894
Latitude	40.563
Time [yr]	1970.000
Day of Year	1
Temperature [B°C] @ Depth [m]=first	22.17
Salinity [PSU] @ Depth [m]=first	34.45
Density [kg/m ³] @ Depth [m]=first	23.76
GA @ Depth [m]=first	0.08
In situ Density Anomaly [kg/m ³] @ ...	23.764
Potential Temperature θ [degC] @ D...	22.17

Get Points: L-MSE add point, R-MSE delete point, ENTER accept, ESC abort

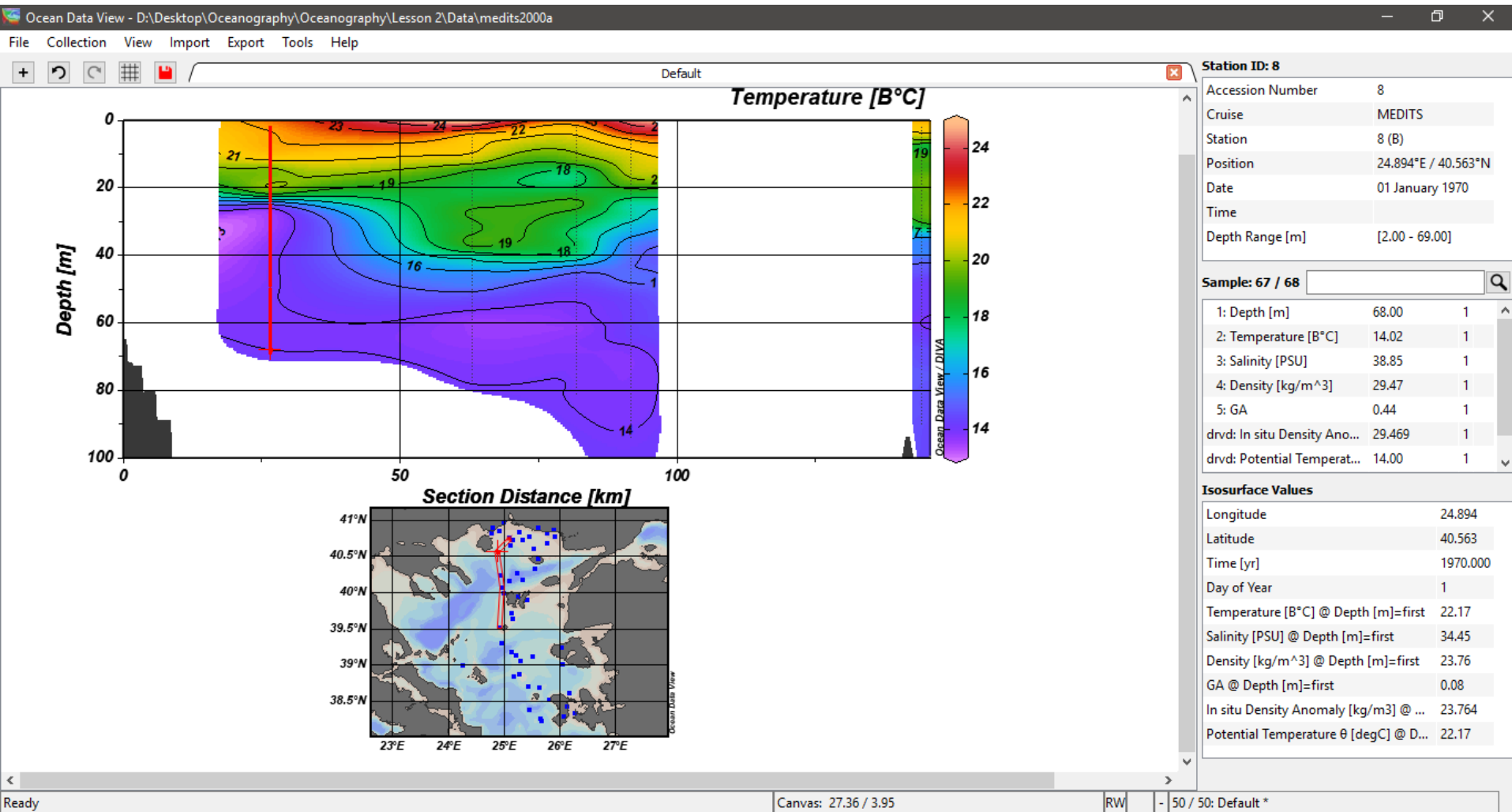
RW - 50 / 50: Default *

Αν δεν υπάρχει πεδίο στο αρχείο μας που να ορίζει το βάθος του πυθμένα επιλέγουμε το αρχείο βαθυμετρίας που δίνει το ODV

Δημιουργία κατακόρυφων τομών στο ODV



Δημιουργία κατακόρυφων τομών στο ODV





Δημιουργία χαρτών με τα δεδομένα του Copernicus (CMEMS)

Εγγραφή στο CMEMS



COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE
Providing PRODUCTS and SERVICES for all marine applications

European Commission

Search terms OK

ABOUT US | USE CASES & MARKETS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO

ACCESS YOUR OCEAN INFORMATION

GETTING STARTED →

OCEAN PRODUCTS
Ocean product catalogue, to download or visualize data across nearly 15 variables, including hindcast, current and forecast data.
DATA →

OCEAN MONITORING INDICATORS
Essential variables monitoring the health of the ocean.
TRENDS →

OCEAN STATE REPORT
Extensive annual analysis on the state of the ocean over nearly 20 years and severe/notable annual events.
EXPERTISE →

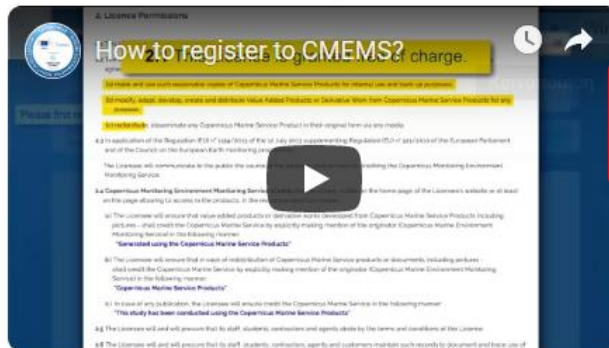
2019 07 MAY.

LATEST NEWS FLASH
CMEMS:9565
APRIL2019 Release - NORTHWESTSHELF_ANALYSIS
- Date time badly interpreted due Time Attributes in content of netCDF file
IN PROGRESS
ALL NEWS FLASH

EVENTS

OCEANPREDICT'19 - COPERNICUS

Εγγραφή στο CMEMS



Register

- Create an account
- You will receive an automatic message to confirm your email address
- Your account will be activated within one business day.
- See our [Service Commitments and Licence](#)



Credentials στα πλαίσια του μαθήματος
Username: nkokkos1
Password: fkr5gnT8_ZDfVyP

Λήψη δεδομένων του CMEMS



COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE
Providing PRODUCTS and SERVICES for all marine applications

European Commission

Search terms OK

ABOUT US | USE CASES & MARKETS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO

ACCESS YOUR OCEAN INFORMATION

GETTING STARTED →

OCEAN PRODUCTS
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TRENDS →

OCEAN STATE REPORT
Extensive annual analysis on the state of the ocean over nearly 20 years and severe/notable annual events
EXPERTISE →

2019 07 MAY.

SHORT-CUT TO SERVICES

- REGISTER NOW!
- SCIENTIFIC QUALITY
- ONLINE TUTORIALS
- COLLABORATIVE FORUM

LATEST NEWS FLASH
CMEMS:9565
APRIL2019 Release - NORTHWESTSHELF_ANALYSIS
- Date time badly interpreted due Time Attributes in content of netCDF file
IN PROGRESS
ALL NEWS FLASH

OCEANPREDICT'19 - COPERNICUS

Λήψη δεδομένων του CMEMS



COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE
Providing PRODUCTS and SERVICES for all marine applications

ABOUT US | USE CASES & MARKETS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO | SHORT-CUT TO SERVICES

Home > Services portfolio > Access to products

OCEAN PRODUCTS → OCEAN MONITORING INDICATORS → OCEAN STATE REPORT → GETTING STARTED → MY CART 0 **Hello, Sign in**

YOUR SEARCH ⓘ
Search by keyword

Found **174 ocean products** matching your criteria. [Export results](#)

GLOBAL_ANALYSIS_FORECAST_PHY_001_024		
GLOBAL OCEAN 1/12° PHYSICS ANALYSIS AND FORECAST UPDATED DAILY		
MODEL	● ● ● ●	GLO
T bottomT S SSH 3DUV MLD SIC SIT SIUV ⓘ		
0.083 degree x 0.083 degree (50 depth levels)		
From 2016-01-01 to Present		
monthly-mean, daily-mean, hourly-mean		
MORE INFO	ADD TO CART	WMS Sub-setting

Λήψη δεδομένων του CMEMS




ABOUT US | USE CASES & MARKETS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO | SHORT-CUT TO SERVICES

Home > Services portfolio > Access to products

OCEAN PRODUCTS → OCEAN MONITORING INDICATORS → OCEAN STATE REPORT → GETTING STARTED → MY CART 1 Hello, Sign in

DATA ACCESS

BACK TO SEARCH

MY CART 

MEDSEA_ANALYSIS_FO
RECAST_BIO_006_014

Log In

Need a CMEMS account? [Create an account](#)

USERNAME

PASSWORD

Remember Me

[Forgot username? - Forgot password?](#)

If you have trouble logging in, make sure your browser is set to accept cookies.

For security reasons, please Exit your web browser when you quit

Λήψη δεδομένων του CMEMS



The screenshot displays the Copernicus Marine Environment Monitoring Service (CMEMS) website. At the top, the European Commission logo is on the left, and the service name 'COPERNICUS MARINE ENVIRONMENT MONITORING SERVICE' is centered, with the tagline 'Providing PRODUCTS and SERVICES for all marine applications'. A search bar on the right contains the text 'Search terms' and 'OK'. Below the header is a navigation menu with links for 'ABOUT US', 'USE CASES & MARKETS', 'NEWS', 'SCIENCE & MONITORING', 'TRAINING & EDUCATION', and 'SERVICES PORTFOLIO'. A 'SHORT-CUT TO SERVICES' dropdown menu is also present.

The main content area shows a breadcrumb trail: 'Home > Services portfolio > Access to products'. Below this is a horizontal navigation bar with buttons for 'OCEAN PRODUCTS', 'OCEAN MONITORING INDICATORS', 'OCEAN STATE REPORT', 'GETTING STARTED', 'MY CART' (with a '0' icon), and 'Hello, Sign in'.

The 'YOUR SEARCH' section is active, showing a search bar with the text 'Search by keyword'. Below the search bar are filter sections: 'REGIONAL DOMAIN' (set to 'All Areas'), 'PARAMETERS', and 'TEMPORAL COVERAGE' (set to 'From 1992-01-01 To 2019-05-20'). A checkbox option is visible: 'If checked, the search results will only show products containing the whole selected time range'. The 'PRODUCT WITH DEPTH LEVEL' filter is also present.

The search results section indicates 'Found 174 ocean products matching your criteria.' and includes an 'Export results' button. The first result is 'GLOBAL_ANALYSIS_FORECAST_PHY_001_024', with a sub-title 'GLOBAL OCEAN 4(1/2)° PHYSICS ANALYSIS AND FORECAST UPDATED DAILY'. The product details include 'All Areas', 'Global Ocean', and a 'Sub-setting' field. A thumbnail image shows a global map with a color-coded temperature or salinity distribution.

Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



ABOUT US | USE CASES & MARKETS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO | SHORT-CUT TO SERVICES

Home > Services portfolio > Access to products

OCEAN PRODUCTS → OCEAN MONITORING INDICATORS → OCEAN STATE REPORT → GETTING STARTED → MY CART 0 Hello, Sign in

YOUR SEARCH ?

Search by keyword

REGIONAL DOMAIN ▶
Mediterranean Sea

PARAMETERS ▶

TEMPORAL COVERAGE

From 1992-01-01 To 2019-05-20

If checked, the search results will only show products containing the whole selected time range

PRODUCT WITH DEPTH LEVEL

hourly-instantaneous

MORE INFO ADD TO CART WMS Sub-setting

MEDSEA_ANALYSIS_FORECAST_BIO_006_014

MEDITERRANEAN SEA BIOGEOCHEMISTRY ANALYSIS AND FORECAST

MODEL

0.042 degree x 0.042 degree (125 depth levels)

From 2017-01-01 to Present

monthly-mean **daily-mean**

MORE INFO ADD TO CART WMS Sub-setting

MEDSEA_REANALYSIS_PHYS_006_004

MEDITERRANEAN SEA PHYSICS REANALYSIS

MODEL


Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



ABOUT US | USE CASES & MARKETS | NEWS | SCIENCE & MONITORING | TRAINING & EDUCATION | SERVICES PORTFOLIO | SHORT-CUT TO SERVICES

Home > Services portfolio > Access to products

OCEAN PRODUCTS →

MY CART  1

Hello, Sign in

You have 1/10 products Empty cart

MEDSEA_ANALYSIS_FORECAST_BIO_006_014	VIEW	DATA DOWNLOAD	REMOVE
			CLOSE X

YOUR SEARCH

Search by keyword

REGIONAL DOMAIN
Mediterranean Sea



PARAMETERS

TEMPORAL COVERAGE
From 1992-01-01 To 20:00

If checked, the search results will only show products containing the whole selected time range

PRODUCT WITH DEPTH LEVEL

monthly-mean, daily-mean

MORE INFO  ADD TO CART  WMS Sub-setting

MEDSEA_REANALYSIS_PHYS_006_004
MEDITERRANEAN SEA PHYSICS REANALYSIS
MODEL MED


Chlorophyll Concentration [mg/m³] 01.01.2017 12:00 UTC

**Μπορούμε να δούμε τα
δεδομένα χωρίς να γίνει η
λήψη τους πατώντας
“VIEW”**


Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



Home > Services portfolio > Access to products

OCEAN PRODUCTS → OCEAN MONITORING INDICATORS → OCEAN STATE REPORT → GETTING STARTED → MY CART  My Account

DATA ACCESS [REPORT ISSUE](#) [BACK TO SEARCH](#)

MY CART  Mediterranean Sea Biogeochemistry Analysis and Forecast

MEDSEA_ANALYSIS_FORECAST_BIO_006_014 DATASET SELECTED

CHOOSE A DATASET

- CHOOSE A DATASET
- MED-OGS-BIO-AN-FC-D**
- MED-OGS-BIO-AN-FC-M
- MED-OGS-CAR-AN-FC-D
- MED-OGS-CAR-AN-FC-M
- MED-OGS-CO2-AN-FC-D
- MED-OGS-CO2-AN-FC-M
- MED-OGS-NUT-AN-FC-D
- MED-OGS-NUT-AN-FC-M
- MED-OGS-PFT-AN-FC-D
- MED-OGS-PFT-AN-FC-M
- MEDSEA_ANALYSIS_FORECAST_BIO_006_014-STATICS

Ο τελευταίος χαρακτήρας υποδηλώνει το χρονικό βήμα των δεδομένων

H – Hourly
D – Daily
M – Monthly

Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



Στα 4 πεδία γύρω από τον χάρτη ορίζουμε την περιοχή όπου θέλουμε να κατεβάσουμε δεδομένα. Ελάχιστο και μέγιστο γεωγραφικό μήκος και πλάτος.

DATASET FILTERS
GEOGRAPHICAL AREA

Intersection between product coverage and area defined by user.

Product coverage.

TIME RANGE
(Default = Last date available)

START DATE search : 2019-05-19 12:00:00
2019-05-19 12:00:00
2019-05-18 12:00:00

END DATE search : 2019-05-19 12:00:00
2019-05-19 12:00:00
2019-05-18 12:00:00



Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



Στα επόμενα 2 πεδία
ορίζουμε το διάστημα όπου
θα αναφέρονται τα
δεδομένα που θα κατέβουν.

TIME RANGE
Default = Last (date available)

START DATE: 2019-05-19 12:00:00
END DATE: 2019-05-19 12:00:00

DEPTH
(Default = Surface depth)

START DEPTH: 1.0181
END DEPTH: 1.0184

VARIABLES
(Default = All variables)

DOWNLOAD	NAME	DESCRIPTION	STANDARD NAME	UNITS
<input checked="" type="checkbox"/>	o2	Mole concentration of Dissolved Molecular Oxygen in sea water	mole_concentration_of_dissolved_molecular_oxygen_in_sea_water	mmol m-3
<input checked="" type="checkbox"/>	nppv	Net Primary Production in sea water	net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water	mg m-3 day-1



Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



TIME RANGE
(Default = Last date available)

search : START DATE 2019-05-19 12:00:00 END DATE 2019-05-19 12:00:00

2019-05-19 12:00:00
2019-05-18 12:00:00
2019-05-17 12:00:00
2019-05-16 12:00:00
2019-05-15 12:00:00
2019-05-14 12:00:00
2019-05-13 12:00:00

2019-05-19 12:00:00
2019-05-18 12:00:00
2019-05-17 12:00:00
2019-05-16 12:00:00
2019-05-15 12:00:00
2019-05-14 12:00:00
2019-05-13 12:00:00

DEPTH
(Default = Surface depth)

START DEPTH 1.0181 END DEPTH 1.0184

VARIABLES
(Default = All variables) Uncheck All

DOWNLOAD	NAME	DESCRIPTION	STANDARD NAME
<input checked="" type="checkbox"/>	o2	Mole concentration of Dissolved Molecular Oxygen in sea water	mole_concentration_of_dissolved_molecular_oxygen_in_sea_water
<input checked="" type="checkbox"/>	nppv	Net Primary Production in sea water	net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water

DOWNLOAD

Στα επόμενα 2 πεδία ορίζουμε τα βάθη όπου θα αναφέρονται τα δεδομένα που θα κατέβουν. Ελάχιστο και μέγιστο βάθος.



Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



TIME RANGE

(Default = Last date available)

search :
START DATE 2019-05-19 12:00:00

- 2019-05-19 12:00:00
- 2019-05-18 12:00:00
- 2019-05-17 12:00:00
- 2019-05-16 12:00:00
- 2019-05-15 12:00:00
- 2019-05-14 12:00:00
- 2019-05-13 12:00:00

search :
END DATE 2019-05-19 12:00:00

- 2019-05-19 12:00:00
- 2019-05-18 12:00:00
- 2019-05-17 12:00:00
- 2019-05-16 12:00:00
- 2019-05-15 12:00:00
- 2019-05-14 12:00:00
- 2019-05-13 12:00:00

DEPTH

(Default = Surface depth)

START DEPTH 1.0181


END DEPTH 1.0184

VARIABLES

(Default = All variables)

DOWNLOAD	NAME	DESCRIPTION	STANDARD NAME	UNITS
<input checked="" type="checkbox"/>	o2	Mole concentration of Dissolved Molecular Oxygen in sea water	mole_concentration_of_dissolved_molecular_oxygen_in_sea_water	mmol m-3
<input checked="" type="checkbox"/>	nppv	Net Primary Production in sea water	net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water	mg m-3 day-1

Τέλος επιλέγουμε τις παραμέτρους που θα κατέβουν.

 DOWNLOAD



Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



Για να κατέβουν πατάμε
“DOWNLOAD OPTIONS”.

search : START DATE 2019-05-19 12:00:00
2019-05-19 12:00:00
2019-05-18 12:00:00
2019-05-17 12:00:00
2019-05-16 12:00:00
2019-05-15 12:00:00
2019-05-14 12:00:00
2019-05-13 12:00:00


search : END DATE 2019-05-19 12:00:00
2019-05-19 12:00:00
2019-05-18 12:00:00
2019-05-17 12:00:00
2019-05-16 12:00:00
2019-05-15 12:00:00
2019-05-14 12:00:00
2019-05-13 12:00:00

DEPTH
(Default = Surface depth)

START DEPTH 1.0181 | END DEPTH 1.0184

VARIABLES
(Default = All variables)

DOWNLOAD	NAME	DESCRIPTION	STANDARD NAME	UNITS
<input checked="" type="checkbox"/>	o2	Mole concentration of Dissolved Molecular Oxygen in sea water	mole_concentration_of_dissolved_molecular_oxygen_in_sea_water	mmol m-3
<input checked="" type="checkbox"/>	nppv	Net Primary Production in sea water	net_primary_production_of_biomass_expressed_as_carbon_per_unit_volume_in_sea_water	mg m-3 day-1

 DOWNLOAD OPTIONS



Λήψη δεδομένων του CMEMS Διαλελυμένο οξυγόνο



OCEAN PRODUCTS → OCEAN MONITORING INDICATORS → OCEAN STATE REPORT → GETTING STARTED → MY CART 1 My Account

DATA ACCESS REPORT ISSUE BACK TO SEARCH

MY CART 1

MED-OGS-BIO-AN-FC-D

You can check the size of your request here

SUBSETTER

The following criteria are taken into account with subsetting:

- Geographical area
- Depth
- Time range
- Variables

VIEW SCRIPT

The maximum amount of data that can be downloaded is 1024 MB.

DOWNLOAD NETCDF FILE SUBSETTED BY ALL CRITERIA
1.457 MB

**και στη συνέχεια
“DOWNLOAD NETCDF
FILE SUBSETTED BY ALL
CRITERIA”.**

**Επιπλέον μπορούμε να
δούμε το μέγεθος του
αρχείου που θα κατέβει.**



Τι είναι το αρχείο netCDF



Παράμετροι

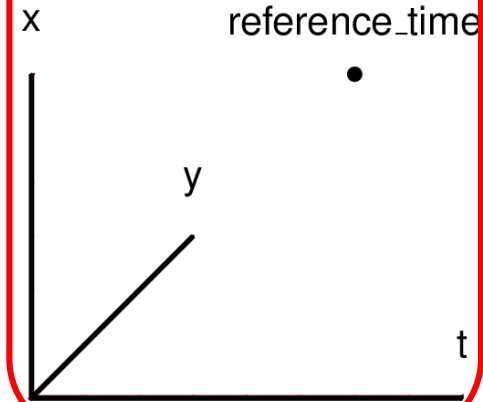
temperature

precipitation

Χωρική
πληροφορία

latitude longitude

Χρόνος



Εισαγωγή αρχείου δεδομένων του CMEMS στο ODV



ή drag and drop

Όταν γίνει η επιλογή του αρχείου πατάμε έως το τέλος "Next" και στο τέλος Finish".

Ocean Data View

 <https://odv.awi.de>

© 2019 Reiner Schlitzer

Εισαγωγή αρχείου δεδομένων του CMEMS στο ODV



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Lesson 2\Data\CMEMS\med-ogs-bio-an-fc-d_15574877321.nc

File Collection View Import Export Tools Help

Default

Window 2 STATION

Press '+' to add the data of the current station to the plot.

<< depth [m]

longitude [degrees_east] >>

Window 1 STATION

Press '+' to add the data of the current station to the plot.

<< depth [m]

latitude [degrees_north] >>

Station ID: 1

Cruise med-ogs-bio-an-fc-d_15574877321...

Station 1 (B)

Position 22°E / 35.021°N

Date 01 May 2019

Time 12:00:00

depth Ra... [1.02 - 4152.90]

Sample: 1 / 125

1: depth [m]	1.02	1
2: latitude [degrees_nor...	35.02	1
3: longitude [degrees_e...	22.00	1
4: o2 [mmol m-3]	243.30	1
5: time [seconds since ...	1.556712e+09	1

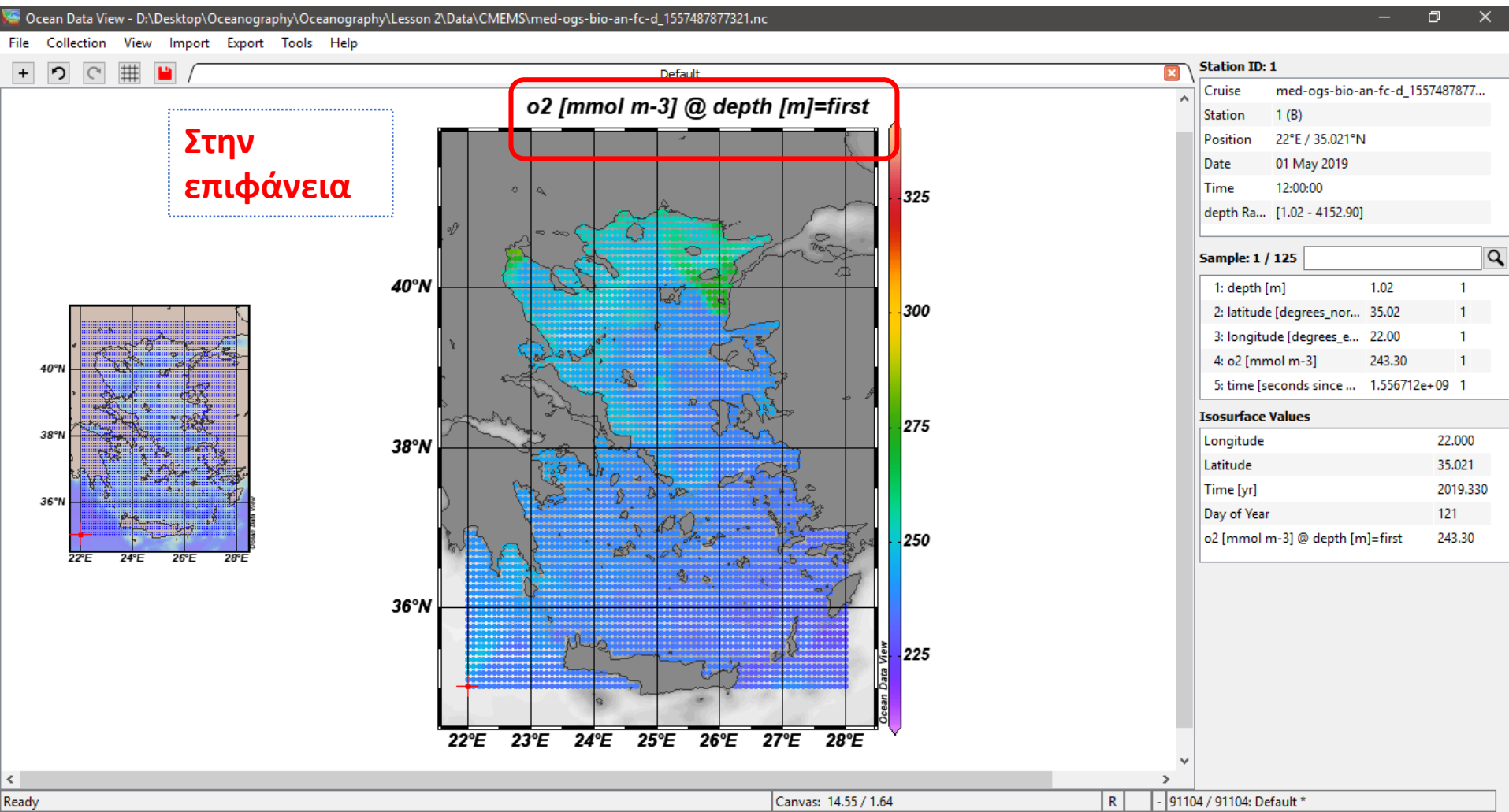
Isosurface Values

Longitude	22.000
Latitude	35.021
Time [yr]	2019.330
Day of Year	121
o2 [mmol m-3] @ depth [m]=first	243.30

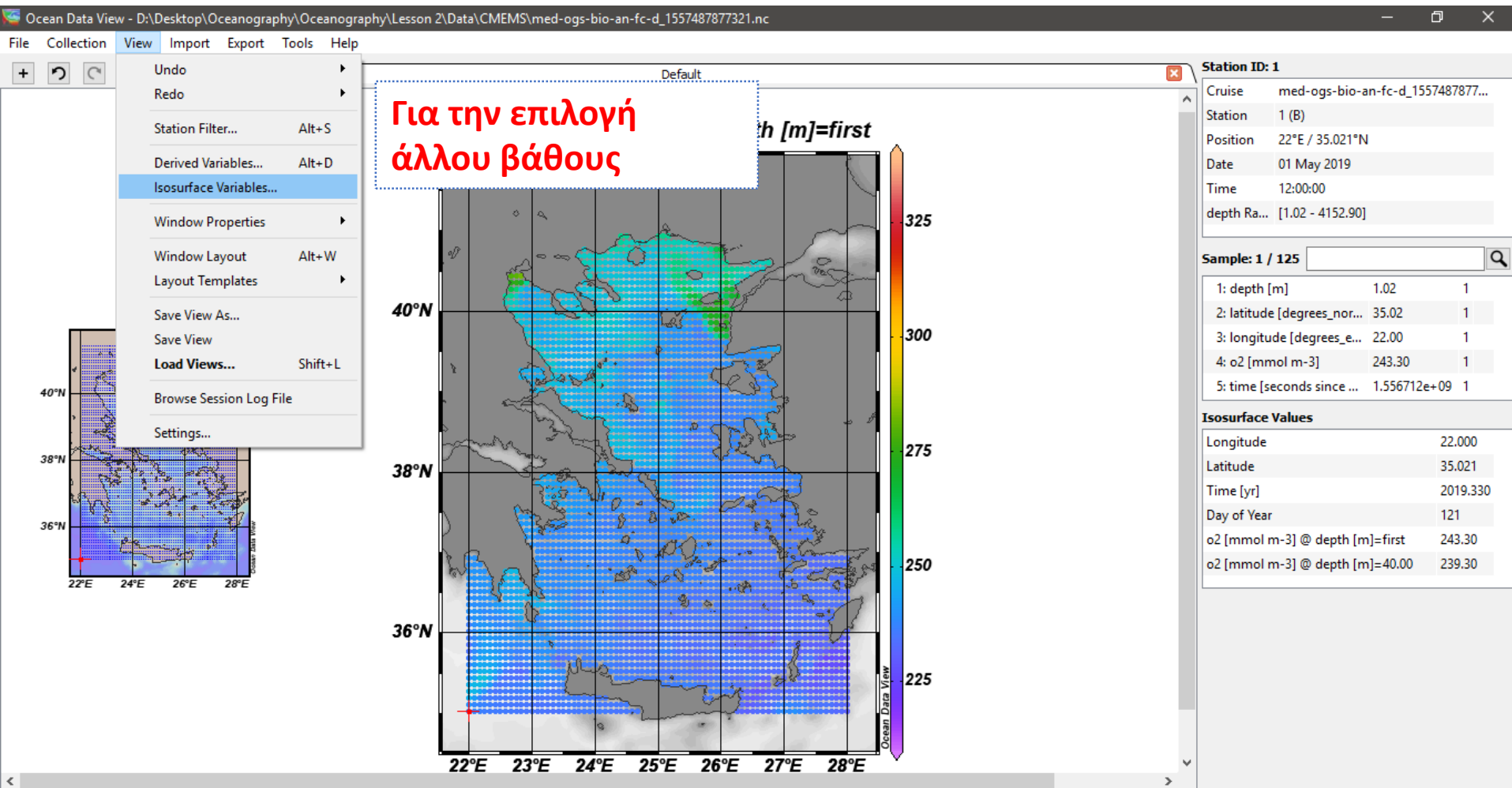
Ready

Window 2: R -|- 91104 / 91104: Default

Οπτικοποίηση δεδομένων του CMEMS στο ODV



Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλου βάθους



Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλου βάθους



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Lesson 2\Data\CMEMS\med-ogs-bio-an-fc-d_155748787321.nc

File Collection View Import Export Tools Help

Default

o2 [mmol m-3] @ depth [m]=first

Isosurface Variables

New

4: o2 [mmol m-3] @ 1: depth [m] = 500

Add

Already Defined:

- Longitude
- Latitude
- Time [yr]
- Day of Year
- o2 [mmol m-3]

Delete Edit V-Sync S-Sync

Help OK Cancel

40°N

38°N

36°N

22°E 24°E 26°E 28°E

22°E 23°E 24°E 25°E 26°E 27°E 28°E

225

Station ID: 1

Cruise med-ogs-bio-an-fc-d_155748787321.nc

Station 1 (B)

Position 22°E / 35.021°N

Date 01 May 2019

Time 12:00:00

depth Ra... [1.02 - 4152.90]

Sample: 1 / 125

1: depth [m]	1.02	1
2: latitude [degrees_nor...	35.02	1
3: longitude [degrees_e...	22.00	1
4: o2 [mmol m-3]	243.30	1
5: time [seconds since ...	1.556712e+09	1

Isosurface Values

Longitude	22.000
Latitude	35.021
Time [yr]	2019.330
Day of Year	121
o2 [mmol m-3] @ depth [m]=first	243.30
o2 [mmol m-3] @ depth [m]=40.00	239.30

Ready

R - 91104 / 91104: Default *

Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλου βάθους



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Lesson 2\Data\CMEMS\med-ogs-bio-an-fc-d_155748787321.nc

File Collection View Import Export Tools Help

Default

o2 [mmol m-3] @ depth [m]=first

Isosurface Variables

New

4: o2 [mmol m-3] @ 1: depth [m] = 500

Already Defined:

- Longitude
- Latitude
- Time [yr]
- Day of Year
- o2 [mmol m-3]

Delete Edit V-Sync S-Sync

Help OK Cancel

40°N

38°N

36°N

22°E 24°E 26°E 28°E

22°E 23°E 24°E 25°E 26°E 27°E 28°E

225

Station ID: 1

Cruise med-ogs-bio-an-fc-d_155748787321.nc

Station 1 (B)

Position 22°E / 35.021°N

Date 01 May 2019

Time 12:00:00

depth Ra... [1.02 - 4152.90]

Sample: 1 / 125

1: depth [m]	1.02	1
2: latitude [degrees_nor...	35.02	1
3: longitude [degrees_e...	22.00	1
4: o2 [mmol m-3]	243.30	1
5: time [seconds since ...	1.556712e+09	1

Isosurface Values

Longitude	22.000
Latitude	35.021
Time [yr]	2019.330
Day of Year	121
o2 [mmol m-3] @ depth [m]=first	243.30
o2 [mmol m-3] @ depth [m]=40.00	239.30

Ready

R - 91104 / 91104: Default *

Εισαγωγή αρχείου δεδομένων του CMEMS στο ODV



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Lesson 2\Data\CMEMS\med-ogs-bio-an-fc-d_155748787321.nc

File Collection View Import Export Tools Help

Default

Station ID: 1

Cruise med-ogs-bio-an-fc-d_1557487877...

Station 1 (B)

Position 22°E / 35.021°N

Date 01 May 2019

Time 12:00:00

depth Ra... [1.02 - 4152.90]

Sample: 1 / 125

1: depth [m]	1.02	1
2: latitude [degrees_nor...	35.02	1
3: longitude [degrees_e...	22.00	1
4: o2 [mmol m-3]	243.30	1
5: time [seconds since ...	1.556712e+09	1

Isosurface Values

Longitude	22.000
Latitude	35.021
Time [yr]	2019.330
Day of Year	121
o2 [mmol m-3] @ depth [m]=first	243.30
o2 [mmol m-3] @ depth [m]=500.00	199.56

Select Variable

Z-Axis Variable: Window 1

- (none)
- Longitude
- Latitude
- Time [yr]
- Day of Year
- o2 [mmol m-3] @ depth [m]=first
- o2 [mmol m-3] @ depth [m]=500.00

OK Cancel

Reverse range

40°N

36°N

22°E 24°E 26°E 28°E

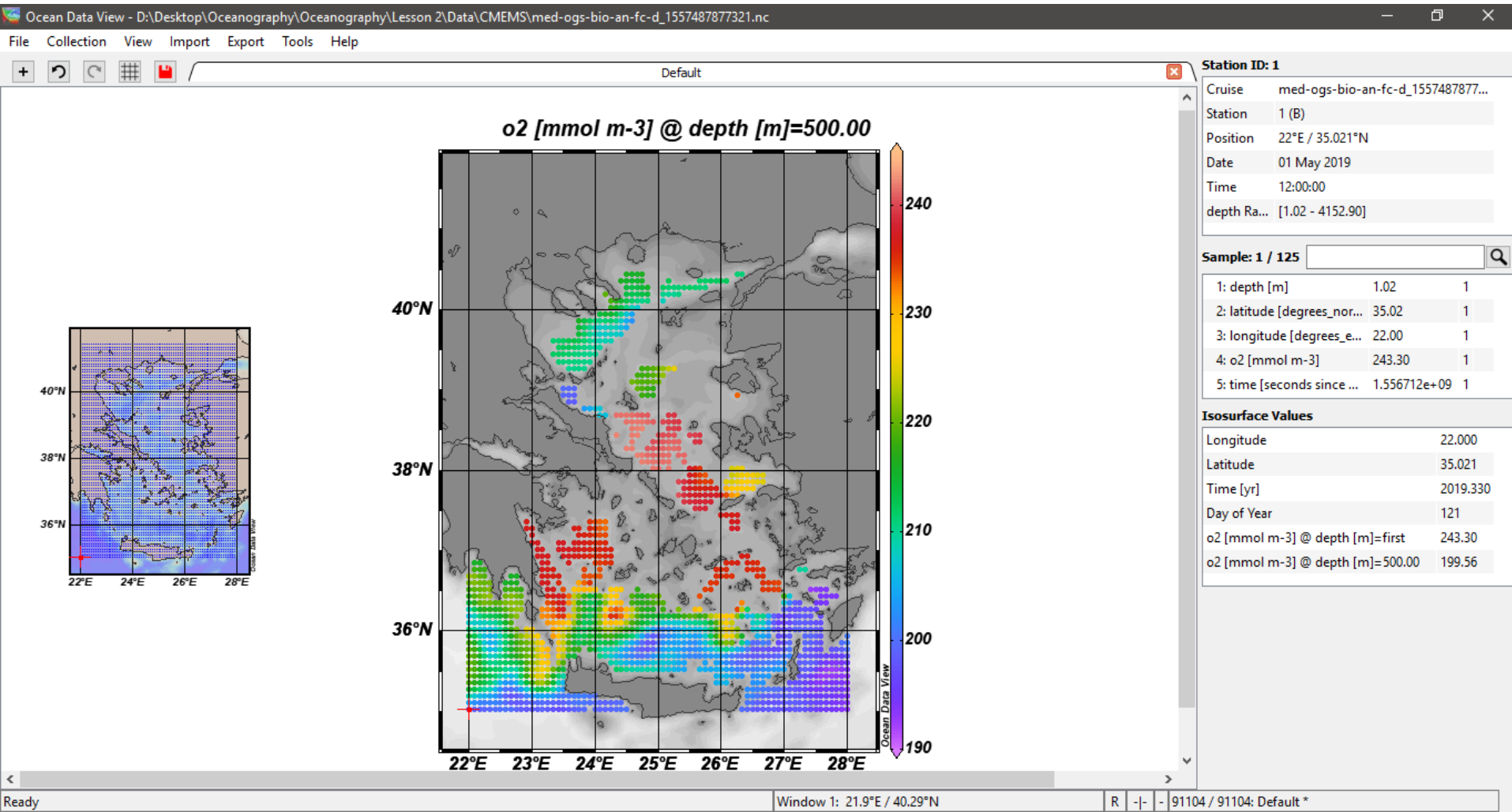
22°E 23°E 24°E 25°E 26°E 27°E 28°E

Ready

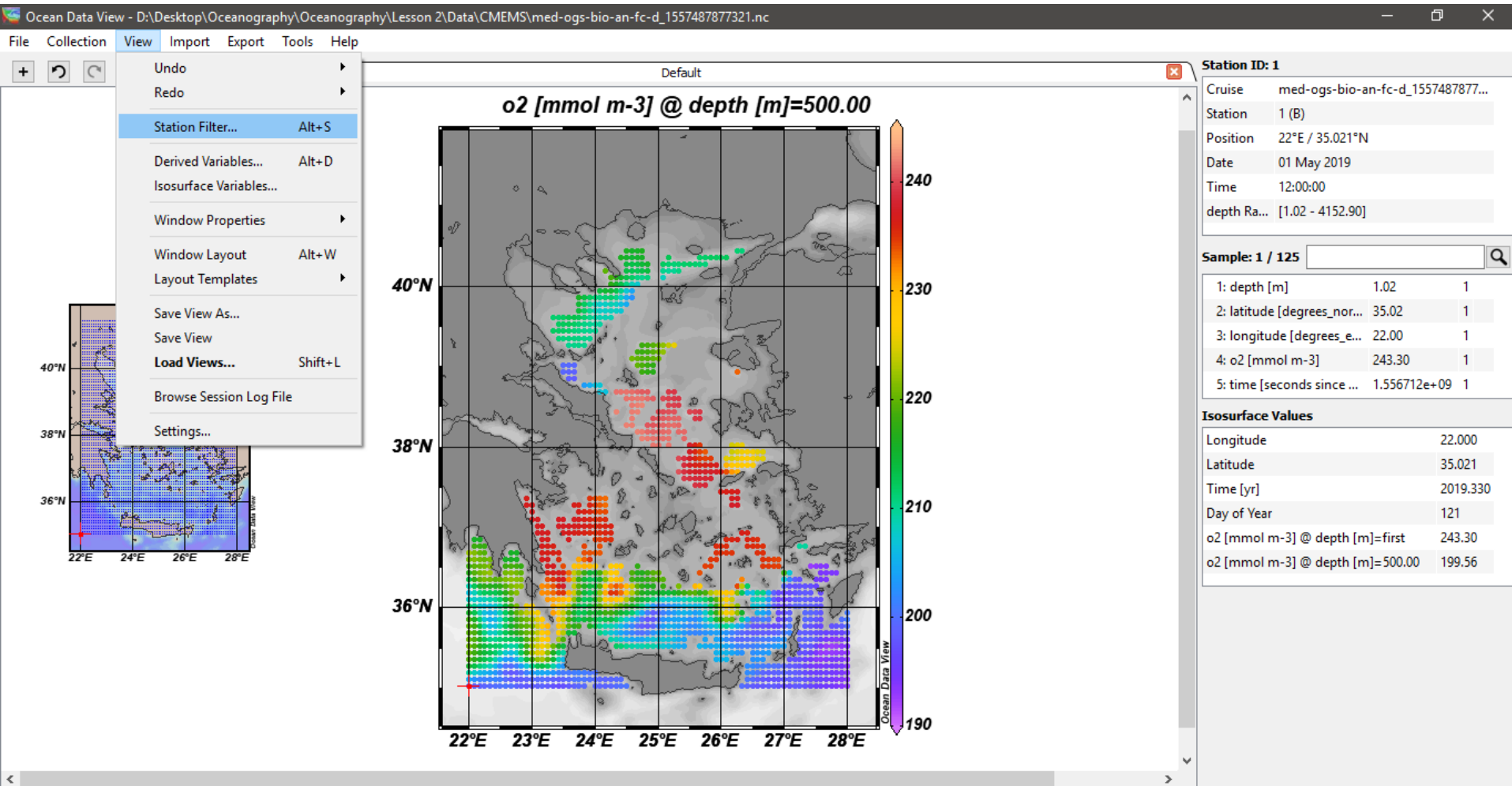
R -|- - 91104 / 91104: Default *

Ορίζουμε ξανά την παράμετρο στον Z άξονα επιλέγοντας την νέα παράμετρο.

Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλου βάθους



Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλης χρονικής στιγμής



Changes station filter settings.

Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλης χρονικής στιγμής



Ocean Data View - D:\Desktop\Oceanography\Oceanography\Lesson 2\Data\CMEMS\med-ogs-bio-an-fc-d_15574877321.nc

File Collection View Import Export Tools Help

Default

o2 [mmol m-3] @ depth [m]=500.00

Station Filter

Name / Range Date / Time * Domain * Meta Data Availability Invert

Period

From: May / 05 / 2019 00 : 00

To: May / 05 / 2019 23 : 59

Relax Criteria

Help OK Cancel

Station ID: 1

Cruise med-ogs-bio-an-fc-d_15574877321...
Station 1 (B)
Position 22°E / 35.021°N
Date 01 May 2019
Time 12:00:00
depth Ra... [1.02 - 4152.90]

Sample: 1 / 125

1: depth [m] 1.02 1
2: latitude [degrees_nor... 35.02 1
3: longitude [degrees_e... 22.00 1
4: o2 [mmol m-3] 243.30 1
5: time [seconds since ... 1.556712e+09 1

Isosurface Values

Longitude 22.000
Latitude 35.021
Time [yr] 2019.330
Day of Year 121
o2 [mmol m-3] @ depth [m]=first 243.30
o2 [mmol m-3] @ depth [m]=500.00 199.56

40°N
38°N
36°N
22°E 24°E 26°E 28°E

22°E 23°E 24°E 25°E 26°E 27°E 28°E

190

Ready R S 5694 / 91104: Default *

Επιλέγουμε την χρονική στιγμή που θέλουμε. Απαιτείται καλή γνώση των δεδομένων που κατεβάσαμε.

Οπτικοποίηση δεδομένων του CMEMS - Επιλογή άλλης χρονικής στιγμής

