Evolutions during year 2011

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Review of the matchups facility

- Main aspects
- Combined use of MERMAID+ODESA

Evolutions since last MVT in March 2011 :

Available *in situ* datasets and matchups

- New datasets
- On-going processing

Data policy and condition of use

- Service Level Agreement
- Acknowledgement and citation

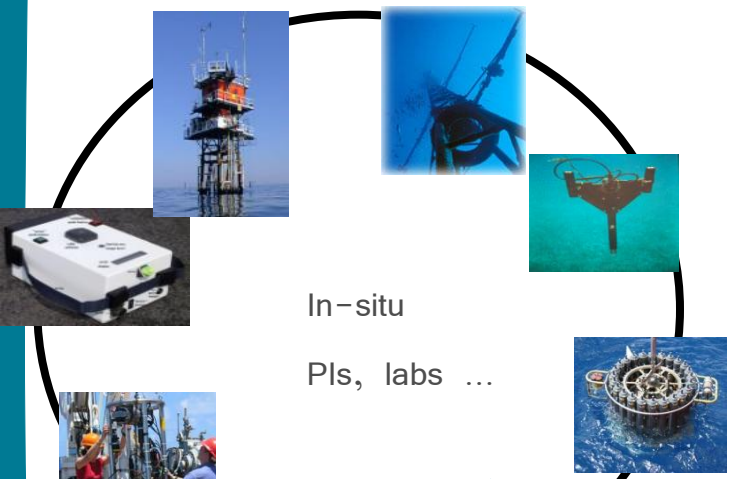
Management of transects in MERMAID

- Inclusion of Helgoland

In situ data processing, new measurements…→ see Kathryn Barker's presentation

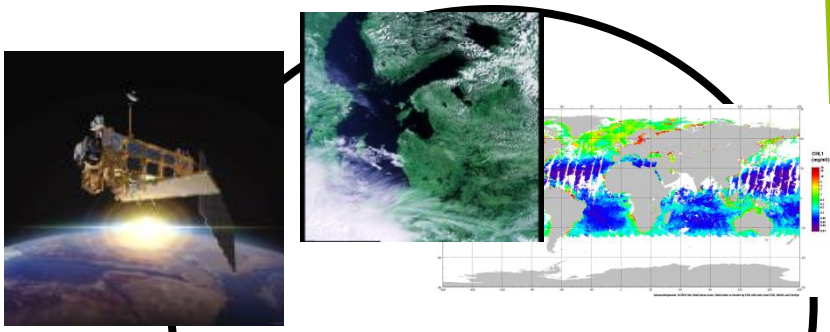
Review of the matchup facility

Match-ups platform for validation of MERIS Ocean Colour products



In-situ

PIs, labs …



MERIS data & processings

ESA, QWG, Alg. Providers …

MERMAID

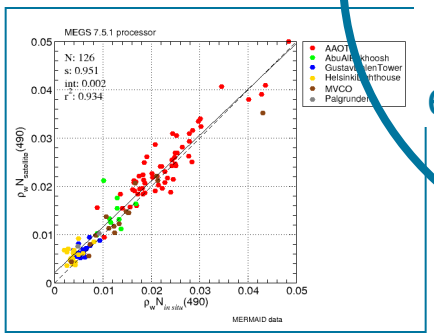
MERis MAtchup In-situ Database

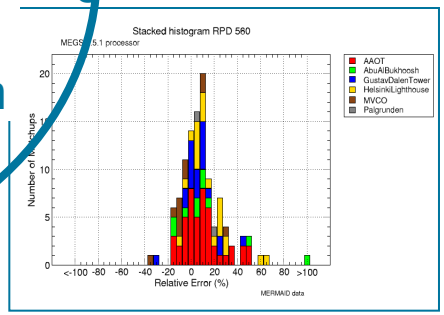
Gathering, storage, processing

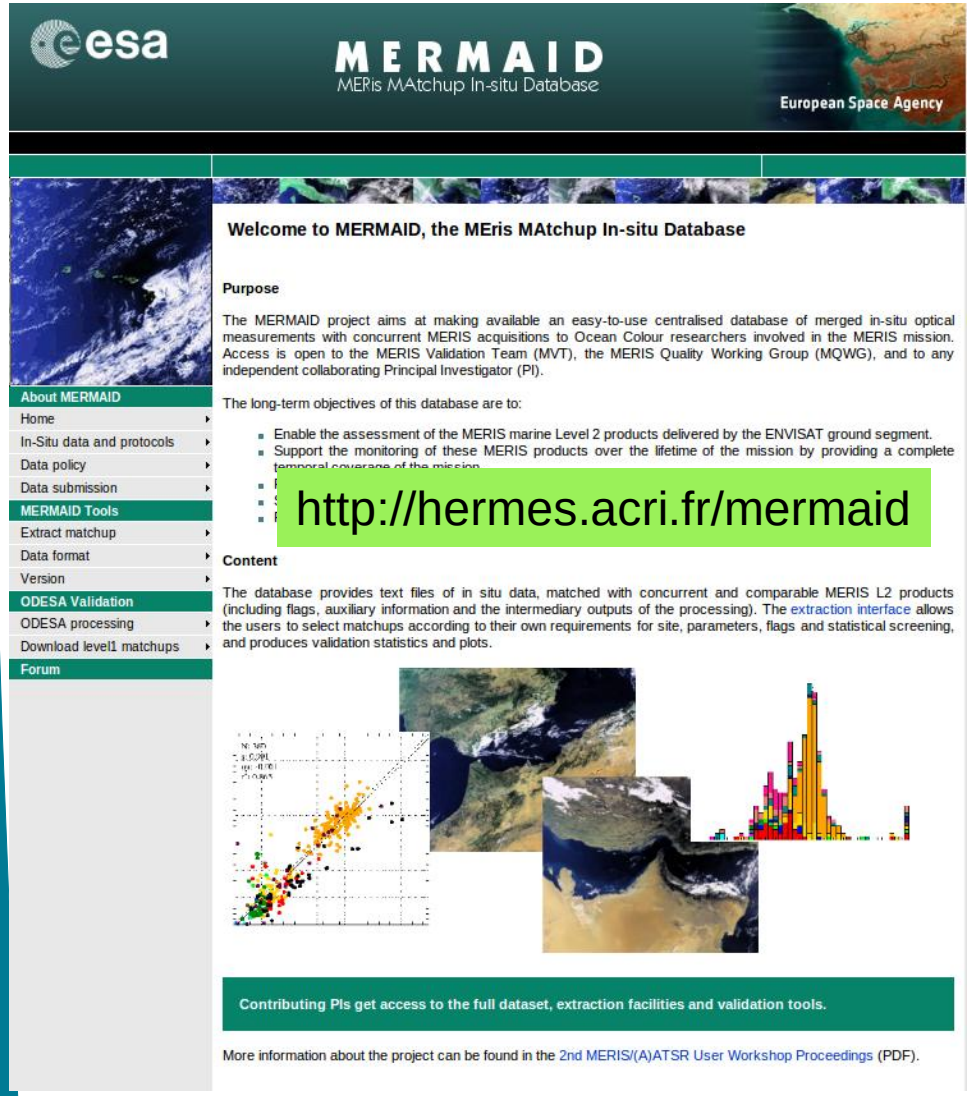
QC, protocols,

extraction, distribution

Validation





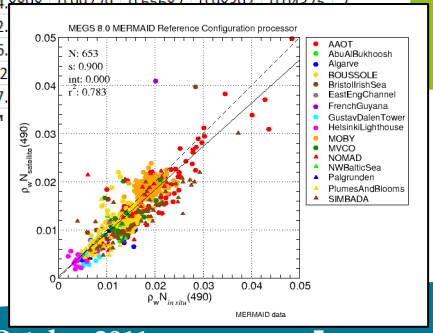


Protocol document
on *in situ* data, written in collaboration with all PIs. It explains the methods, measured quantities, quality checks

Data catalogue
listing all datasets, PI, affiliation, contact. GoogleEarth map to visualise location of all matchups

Tools to build the matchup (size, flag, outliers removal…) on user's own criteria. MERIS **extractions**, stats, validation plots

1	depth	chl1	chl2	TSM	YS	
69	23.0897	1.8888	0.8851	1.43233	0.08905	2.
70	24.8898	0.90729	0.65682	0.98297	0.04275	2.
71	22.					
72	26.					
73	22					
74	27.					
75	24					



Some clarifications on the remote-sensing data and processors

ODESA = Free user interface of MEGS
available at http://earth.eo.esa.int/odesa

MEGS (ACRI)
MERIS Ground Segment prototype

3rd reproc version: MEGS8.0
(includes C2R, vicarious adj…)

Configuration of auxiliary data, jobs, outputs…

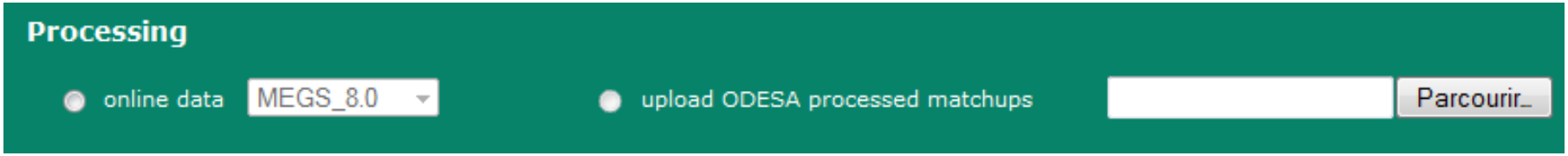
IPF (ESRIN)
Instrument Processing Facility

3rd reproc version: IPF 6.03

In situ

MERMAID
MERis MAtchup In-situ Database

- Nominal version in MERMAID : nominal ODESA = MEGS8.0 = IPF 6.03
- In addition, users can play with ODESA to easily validate their own algorithm on MERMAID matchups – keeping control of the configuration



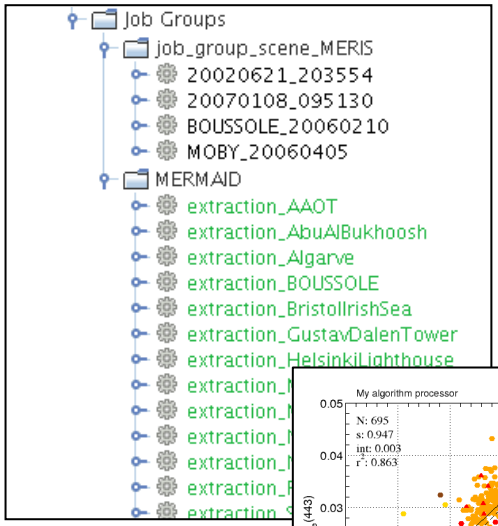
- Quick procedure in four steps :

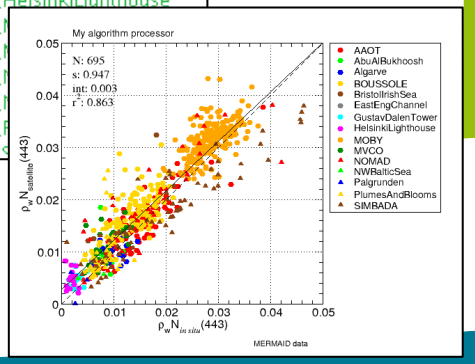
1. Download the « Level1 extraction » from http://hermes.acri.fr/mermaid (csv format)

2. Process directly in ODESA, like an ENVISAT Level1b product

3. Get output « Level2 extraction » file (csv format)

4. Upload to MERMAID website for data screening and validation plot





Example of use: what is the impact of the NIR vicarious adjustment alone ?

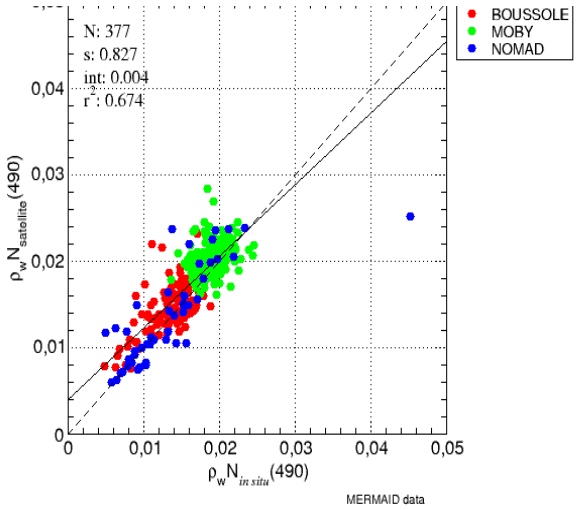
- In ODESA, create two configurations with different vicarious gains

ADF Values | Information

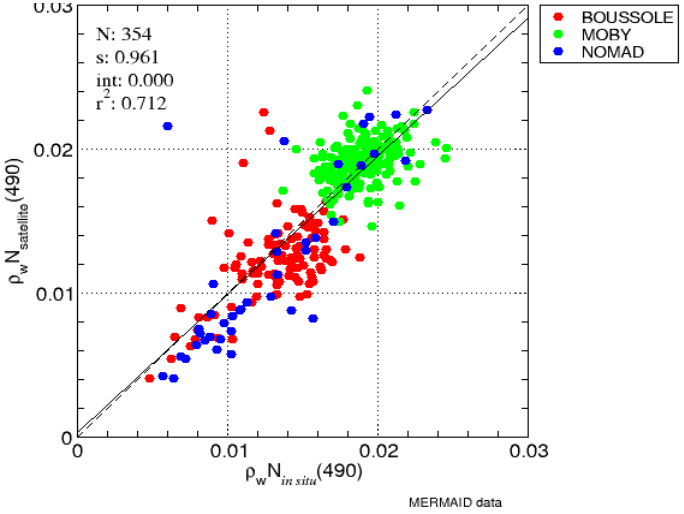
Name	Key	Unit	Value
GADS General			
l tabulated values	R200	nm	412.5, 442.5, 490.0, 510.0, 560.0, 620.0, 665.0, 681.25, 708.75, 753.75, 761.875, 778.75, 865.0, 885
spare	R201	-	0.0, 0.0, 0.0, 0.0, 0.0
qv tabulated values	R203	deg	0.0, 2.84091, 6.52106, 10.22295, 13.92976, 17.63842, 21.34798, 25.05805, 28.76843, 32.47901, 36.
wind tabulated values	R205	m.s-1	1.5, 5.0, 10.0
vicarious adjustment gains	R206	dl	1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0, 1.0

- Launch the jobs, upload results on the website & get results

rhow(490) without NIR adjustment



rhow(490) with NIR adjustment only



Status on the datasets

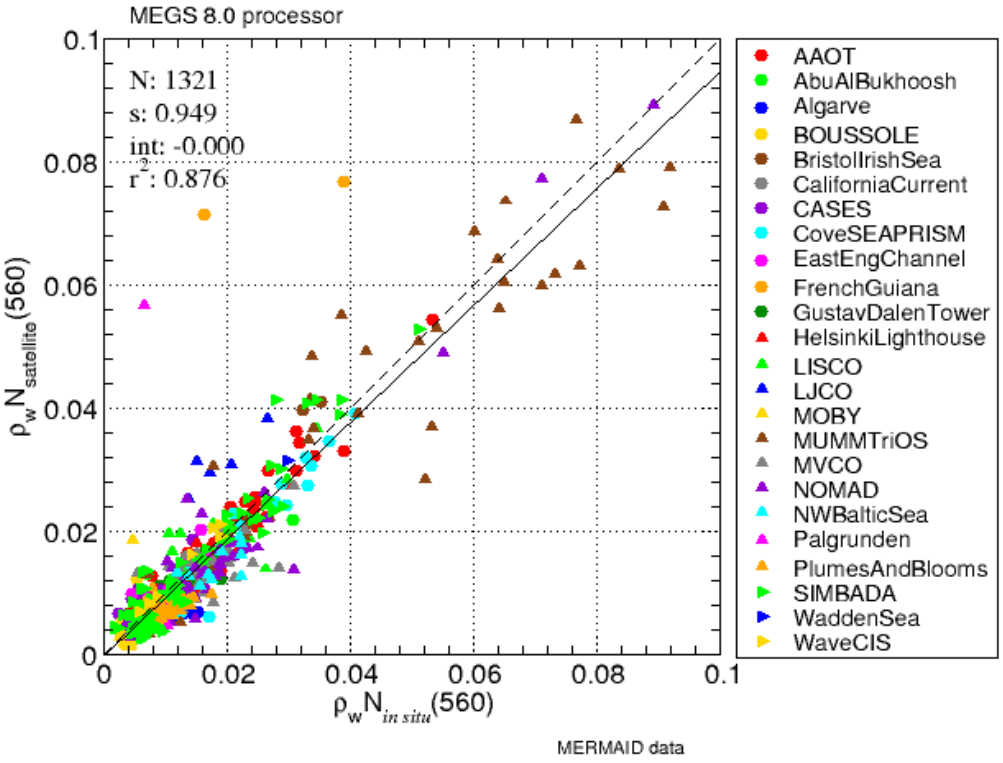
Status on the datasets

In-situ dataset	Principle Investigator	Affiliation	Contact email
AAOT	Giuseppe Zibordi	JRC	giuseppe.zibordi@jrc.it
AbuAlBukhoosh	Giuseppe Zibordi	JRC	giuseppe.zibordi@jrc.it
Algarve	John Icely	University of Algarve	John.Icely@gmail.com
BOUSSOLE	David Antoine	LOV	antoine@obs-vlfr.fr
BristolIrishSea	David McKee	University of Strathclyde	david.mckee@strath.ac.uk
CaliforniaCurrent	Mati Kahru	University of California, San Diego	mkahru@ucsd.edu
CASES	Simon Belanger	UniversitÃ© du QuÃ©bec	simon_belanger@uqar.ca
CoveSEAPRISM	Greg Schuster	NASA GSFC	gregory.l.schuster@nasa.gov
CoveSEAPRISM	Holben, Brent	NASA GSFC	Brent.N.Holben@nasa.gov
EastEngChannel	Hubert Loisel	Universite du Littoral Cote d'Opale	hubert.loisel@univ-littoral.fr
FrenchGuiana	Hubert Loisel	Universite du Littoral Cote d'Opale	hubert.loisel@univ-littoral.fr
GustavDalenTower	Giuseppe Zibordi	JRC	giuseppe.zibordi@jrc.it
Helgoland	Roland Doerffer	HZG	roland.doerffer@hzg.de
HelsinkiLighthouse	Giuseppe Zibordi	JRC	giuseppe.zibordi@jrc.it
LISCO	Sam Ahmed	City college of New York	ahmed@ccny.cuny.edu
LISCO	Alex Gilerson	City college of New York	gilerson@ccny.cuny.edu
LJCO	Vittorio Brando	CSIRO, Australia	Vittorio.Brando@csiro.au
MAREL	Catherine Belin	IFREMER	Catherine.Belin@ifremer.fr
MOBY	Kenneth Voss	University of Miami	voss@physics.miami.edu
MUMMTriOS	Kevin Ruddick	MUMM	k.ruddick@mumm.ac.be
MVCO	Hui Feng	University of New Hampshire	hui.feng@unh.edu
MVCO	Heidi Sosik	Woods Hole Oceanographic Instituition	hsosik@whoi.edu
NOMAD	Jeremy Werdell	NASA	jeremy.werdell@nasa.gov
NWBalticSea	Susanne Kratzer	University of Stockholm	Susanne.kratzer@ecology.su.se
Palgrunden	Susanne Kratzer	University of Stockholm	Susanne.kratzer@ecology.su.se
PlumesAndBlooms	David Siegel	University of California, Santa Barbara	davey@eri.ucsb.edu
PortCoast	Vanda Brotas	Universidade de Lisboa	vbrotas@fc.ul.pt
REPHY	Catherine Belin	IFREMER	Catherine.Belin@ifremer.fr
SIMBADA	Pierre-Yves Deschamps	LOA	pyd@loa.univ-lille1.fr
WaddenSea	Annelies Hommersom	IVM	annelies.hommersom@gmail.com
WaveCIS	Bill Gibson	Coastal Studies Inst. LSU , Louisiana - USA	bgibson@lsu.edu
WaveCIS	Alan Weidemann	Naval Research Laboratory, NRLSSC	Alan.Weidemann@nrlssc.navy.mil

★ = AERONET Ocean Colour instruments

- 28 datasets on line, including 10 new since March:
  - 7 new datasets available to everyone
    - CoveSeaPrism (G. Schuster, NASA)
    - Helgoland (R. Doerffer, HZG)
    - LISCO (S. Ahmed, A. Gilerson, CCNY)
    - LJCO (V. Brando, CSIRO)
    - MUMMTriOS (K. Ruddick, MUMM) (only reflectances)
    - WaveCIS (B. Gibson, LSU)
    - CASES (S. Bélanger, UQAR)
  - 3 new datasets, currently access restricted for final check with PI:
    - PortCoast (V. Brotas, Univ. Lisboa) - Chl
    - MAREL (C. Belin, IFREMER) - Chl
    - REPHY (C. Belin, IFREMER) – Chl
- 5 datasets under processing :
  - NewCaledonia (C. Dupouy, IRD)
  - Chesapeake Bay (M. Ondrusek, NOAA)
  - Baltic Sea (H. Siegel, IOW)
  - NIVATrioS (P. Jacquard, NIVA)
  - SYKE FerryBox (S. Kaitala, SYKE)

Total number of ≈1300 radiometric matchups in MERMAID with less than 50% pixels cloud, ice_haze or high_glint (transects not considered here)



Acknowledgement to
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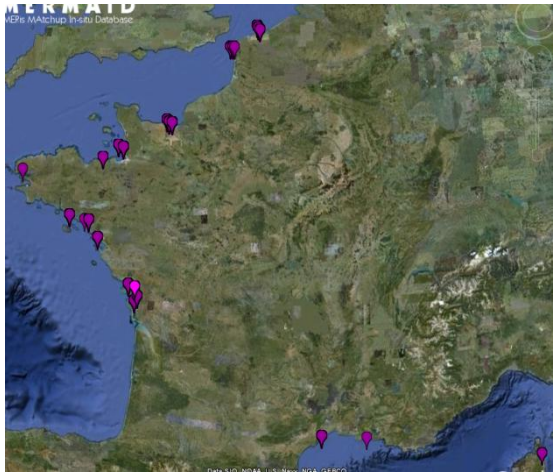
H. Feng & H. Sosik (MVCO),
J. Werdell & NOMAD's PIs,
S. Kratzer (NWBalticSea, Palgrunden),
D. Siegel (PlumesAndBlooms),
P-Y Deschamps (SIMBADA),
A. Hommerson (WaddenSea),
B. Gibson & A. Weidemann (WaveCIS)

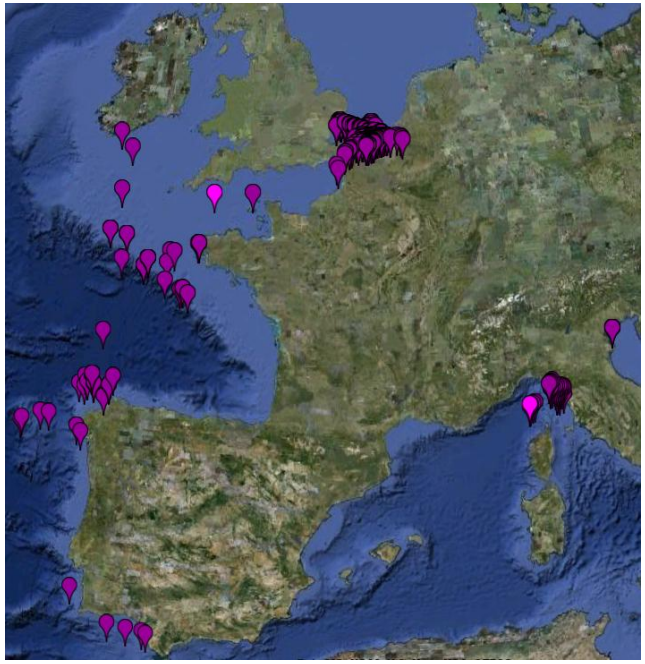
This is only a global view. In situ data are by nature heterogeneous

→ users are free to select their matchups according to the protocol document and other choices (flags…) for their own validation activity

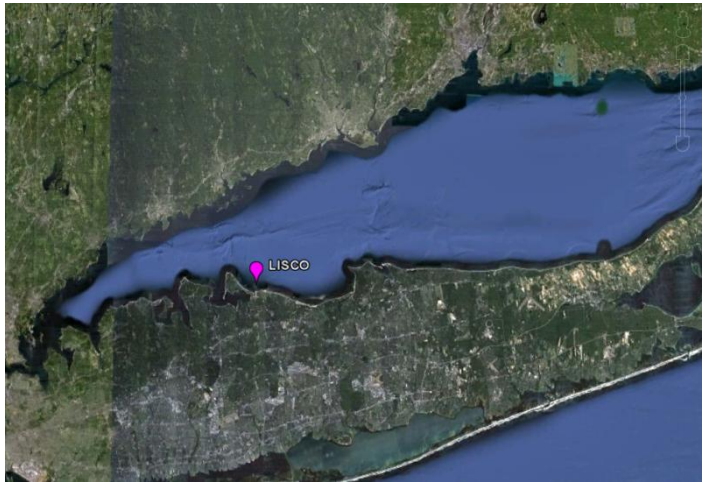
IFREMER



MUMMTriOS



LISCO



→ Most of the matchups in MERMAID are now near the coast

→ A new information, distance to coast, will be provided soon in the extraction (1km resolution). It gives a clue for processing or not with ICOL

Data policy and condition of use

Data policy and condition of use

MERMAID is a validation facility open to any users

with respect of the proprietary rights & acknowledgement of all contributors :

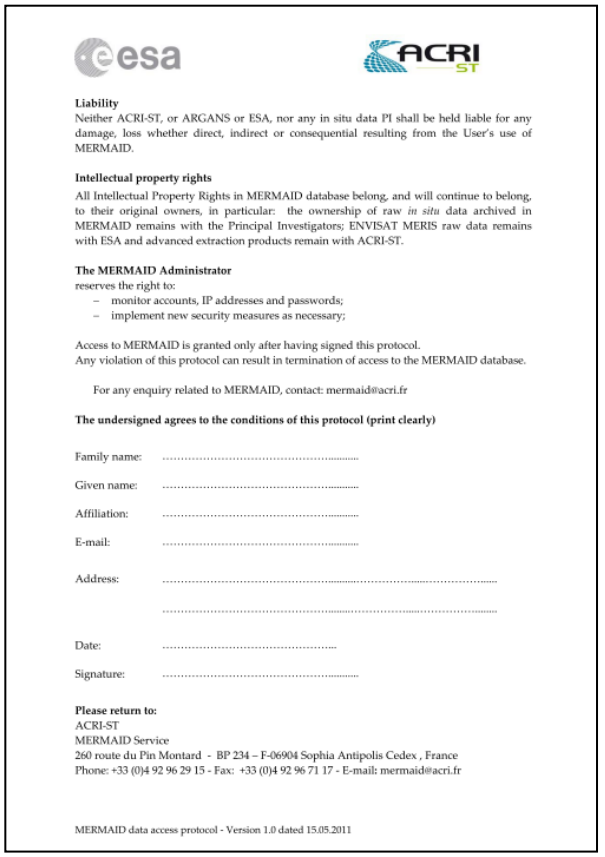
- PIs and asssociated institutions which provide *in situ* measurements
- ACRI-ST, ARGANS and ESA (funding, development and maintenance)

Since the beginning (2007), a strong effort has been put on ensuring a perfect respect of PIs' expectations.

When MERMAID extractions are used in publications the PI must be contacted to

1. Give approval
2. Be offered co-authorship
3. Be acknowledged.

A Service Level Agreement must now be signed for MERMAID use in projects outside the initial QWG's maintenance framework



Liability
Neither ACRI-ST, or ARGANS or ESA, nor any in situ data PI shall be held liable for any damage, loss whether direct, indirect or consequential resulting from the User's use of MERMAID.

Intellectual property rights
All Intellectual Property Rights in MERMAID database belong, and will continue to belong, to their original owners, in particular: the ownership of raw *in situ* data archived in MERMAID remains with the Principal Investigators; ENVISAT MERIS raw data remains with ESA and advanced extraction products remain with ACRI-ST.

The MERMAID Administrator
reserves the right to:
- monitor accounts, IP addresses and passwords;
- implement new security measures as necessary;

Access to MERMAID is granted only after having signed this protocol.
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For any enquiry related to MERMAID, contact: mermaid@acri.fr

The undersigned agrees to the conditions of this protocol (print clearly)

Family name: .....
Given name: .....
Affiliation: .....
E-mail: .....
Address: .....
.....
Date: .....
Signature: .....

Please return to:
ACRI-ST
MERMAID Service
260 route du Pin Montard - BP 234 – F-06904 Sophia Antipolis Cedex , France
Phone: +33 (0)4 92 96 29 15 - Fax: +33 (0)4 92 96 71 17 - E-mail: mermaid@acri.fr

MERMAID data access protocol - Version 1.0 dated 15.05.2011

PIs' contacts (name, affiliation, email) and an acknowledgement template are explicitly displayed before each download

If you intend to use MERMAID extractions in a publication or a report, please:

- Consult the PI(s) via e-mail to get approval of in situ data use, inform him/her/them of his/her /their data use and offer co-authorship.
- Acknowledge the PIs and associated projects, e.g.: We thank (the Project/PI) for the (cruise/experiment) data.
- Acknowledge the MERMAID facility and services, e.g.: We thank ACRI-ST, ARGANS and ESA for access to the MERMAID system. (http://hermes.acri.fr/mermaid)

In-situ dataset	Principle Investigator	Affiliation	Contact email
AAOT	Giuseppe Zibordi	JRC	giuseppe.zibordi@jrc.it
AbuAlBukhoosh	Giuseppe Zibordi	JRC	giuseppe.zibordi@jrc.it
Algarve		University of	

User must accept the data policy to launch the download

If you intend to use their data please consult with them via e-mail.

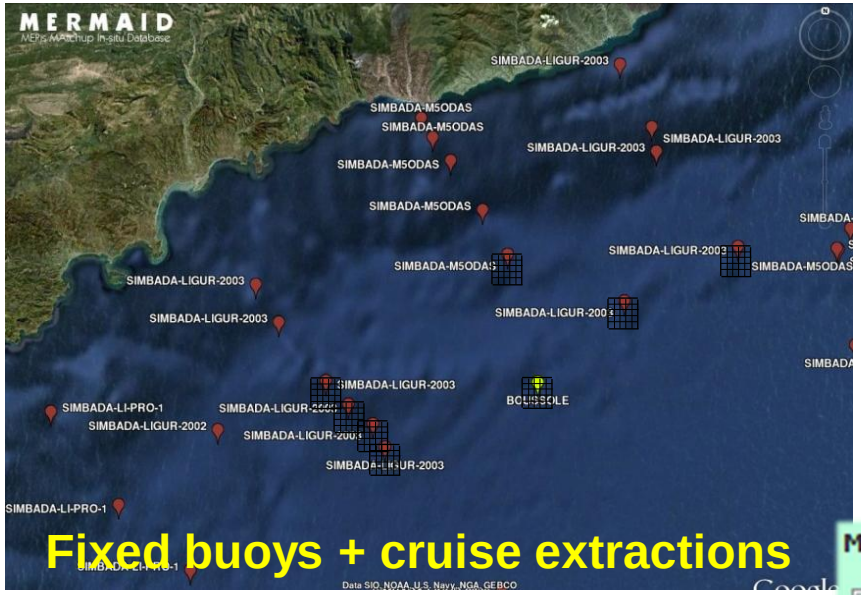
If you accept the above conditions, please check the following box ☐

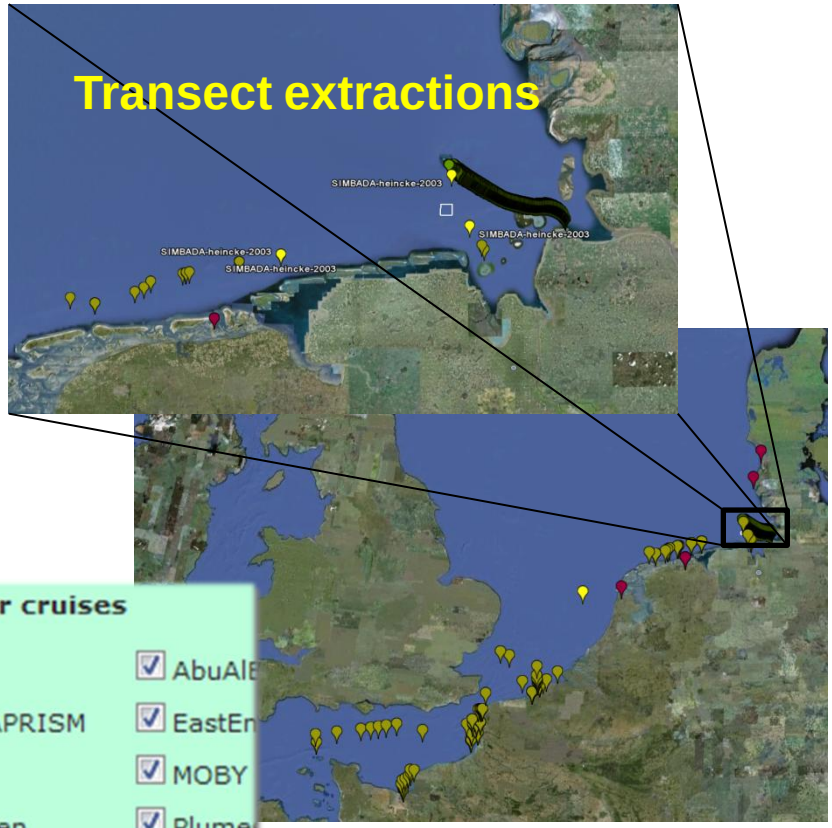
Go on...

Management of transects

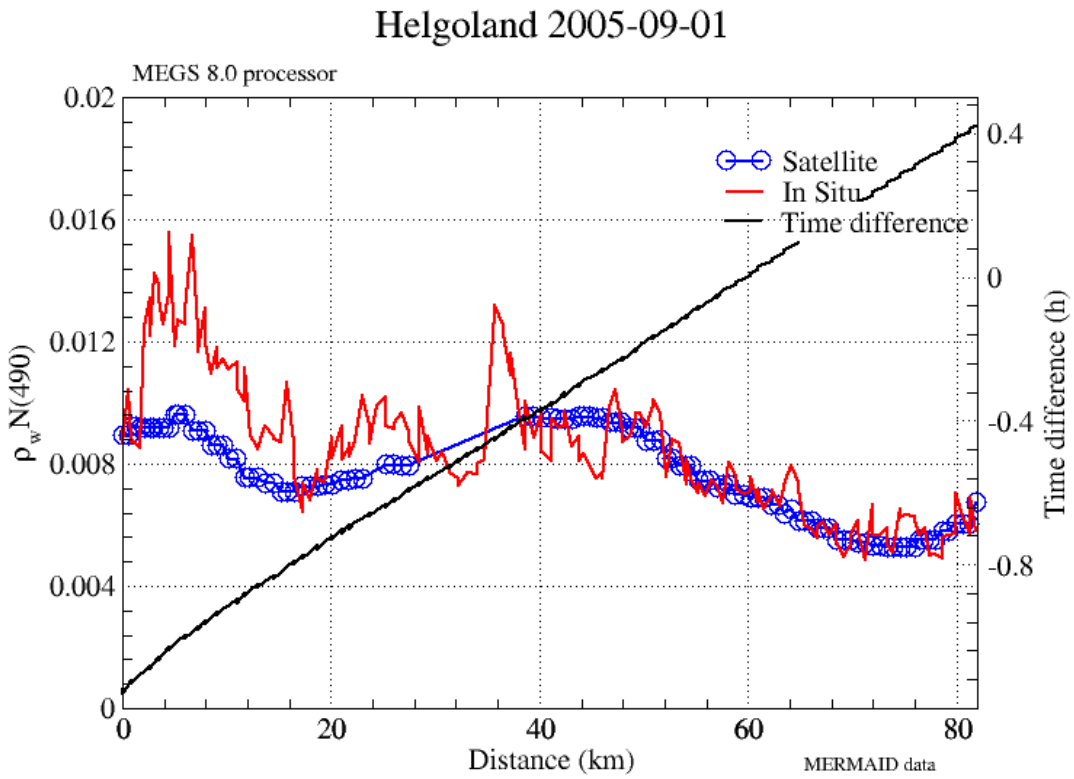
MERMAID now deals with three *in situ* acquisition modes:

1. Fixed buoys (e.g. BOUSSOLE, AERONET-OC towers, etc.)
2. Cruises with scattered stations (e.g. NOMAD, SIMBAD, MUMMTriOS…)
3. Transects (e.g. Helgoland, NIVATriOS)



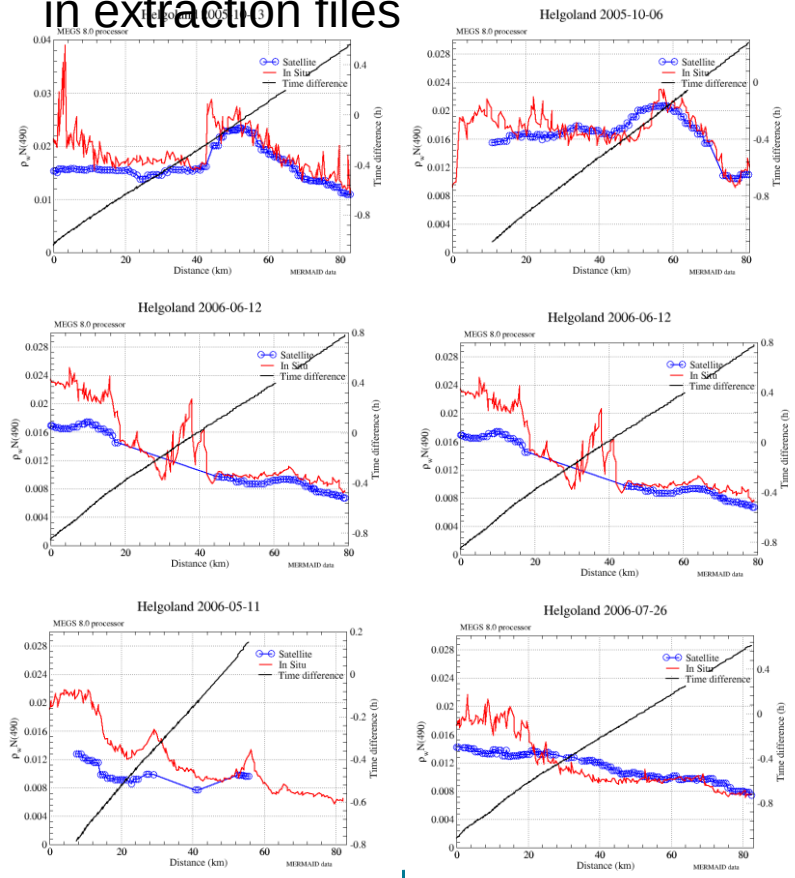


- Extraction of NxN pixels along the transect remains identical to buoys (text file)
- Can be processed in ODESA
- New transect plots, as function of the distance to starting point



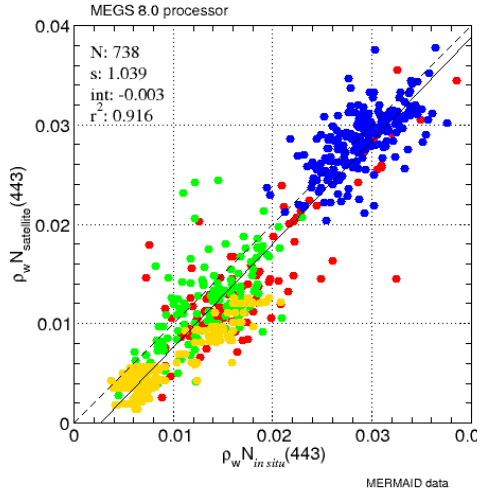
Acknowledgement to R. Doerffer (HZG)

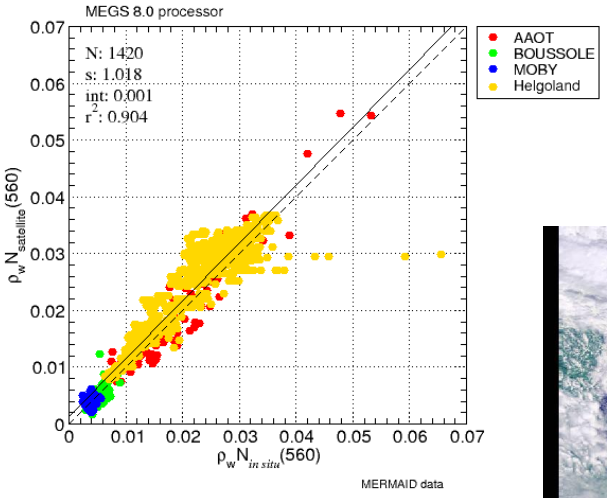
Due to large number of pixels, transects are provided separately in extraction files

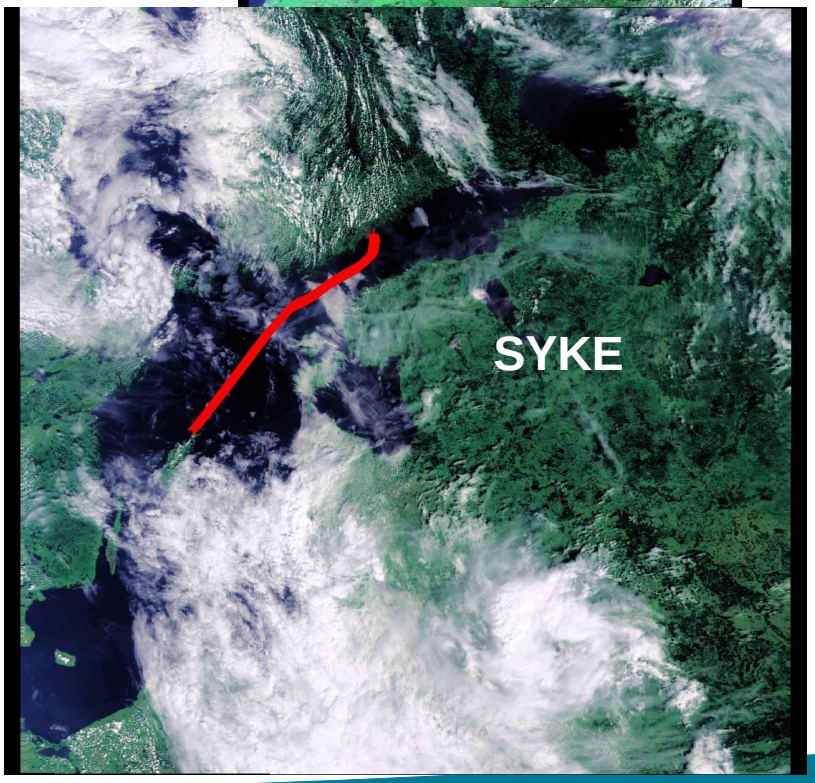


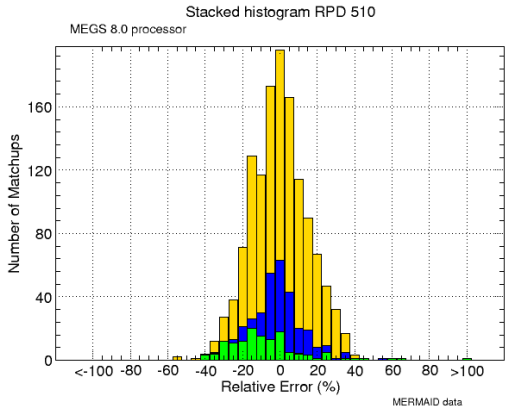
Flags rejected as specified by the user

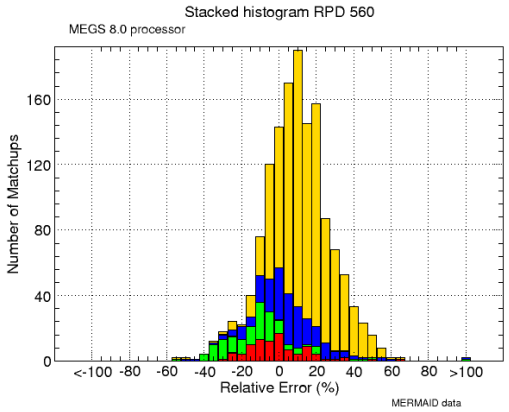
- Keep usual ouputs to allow comparison with other datasets
- Level 1b RGB image











Thanks to all contributing PIs to MERMAID:

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