



Cook's Crossing



the next underwater adventure

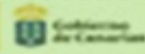
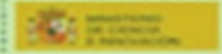
Caribbean Regional Association

CARA



PLOCAN

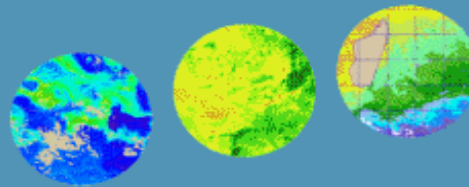
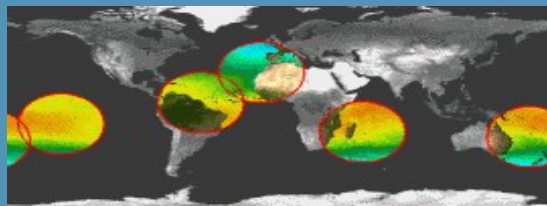
PLATAFORMA OCEANICA DE CANARIAS



Cook Crossing 2010: A transnational platform of research, cooperation and formation for future transoceanic glider missions: *The Northeastern Segment.*

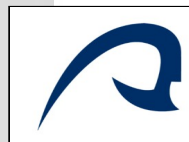
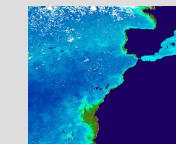
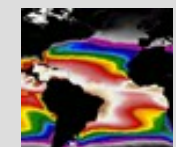
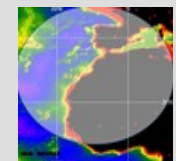
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Antonio RAMOS¹, Scott GLENN², Oscar SCHOFIELD², Josh KOHUT², Jorge CABRERA¹, Dave KAMINSKY², Shannon HARRISON², Enrique FERNÁNDEZ¹, Josep COCA¹, Daniel HERNANDEZ¹, Carlos BARRERA³, Alexander REDONDO¹, Antonio DOMINGUEZ¹, Josep ISERN¹ and Álvaro LORENZO³.



SEASnet

Réseau de stations de réception et
d'exploitation de données des satellites
d'observation de la Terre



RSOC Division

www.fcm.ulpgc.es

www.iusiani.ulpgc.es

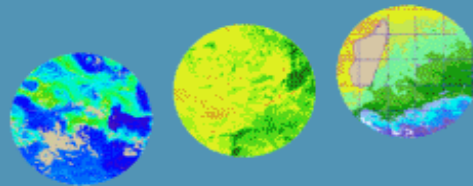
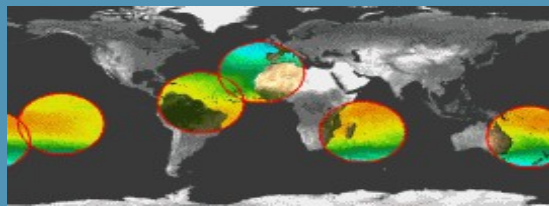


UMR ESPACE

www.espace.ird.fr

www.seasnet.org

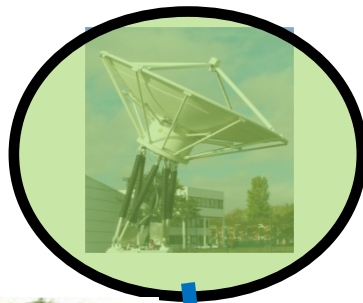




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*Le réseau de stations de réception
de l'IRD et ses partenaires*

French Guyane, 05



French Polynesia, 04



French Guyane, 98



Canarias, 96

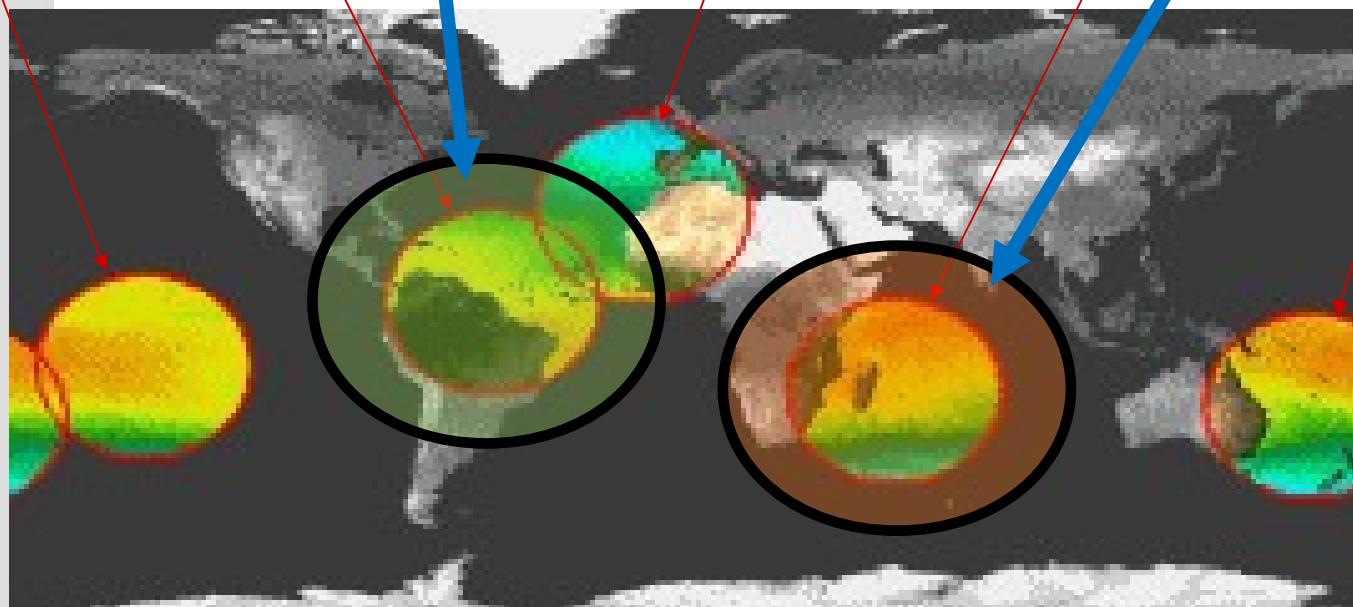


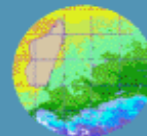
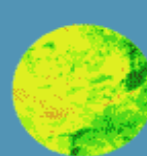
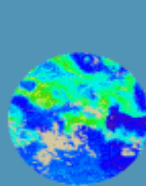
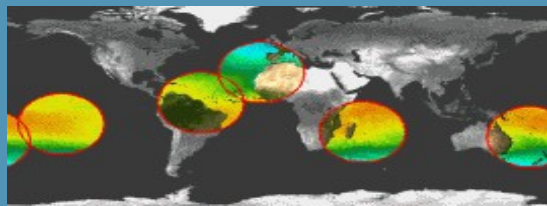
Réunion, 91



Réunion I, 11

New Caledonia, 97





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de l'IRD et ses partenaires

1.- ANTECEDENTS

○ *RU-17 Slocum. Across the Pond. (May – Oct 08)*

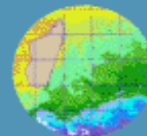
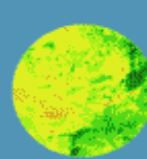
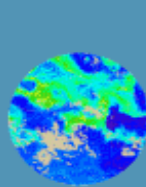
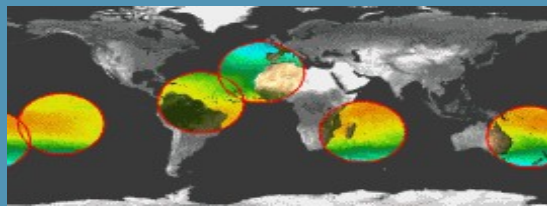
● *RU-27 Slocum. Atlantic Crossing. (Apr – Dec 09)*

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image IBCAO

© 2011 Cnes/Spot Image

Image © 2011 TerraMetrics

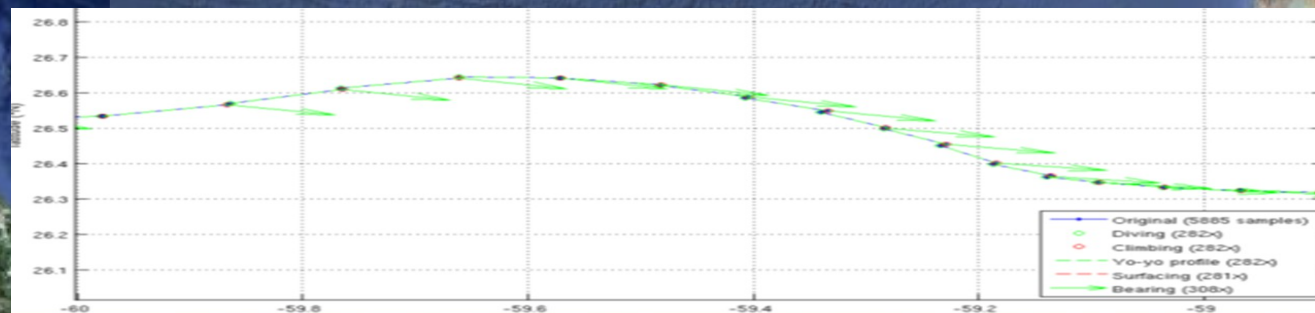


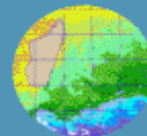
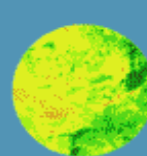
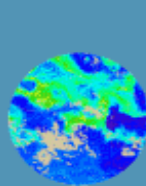
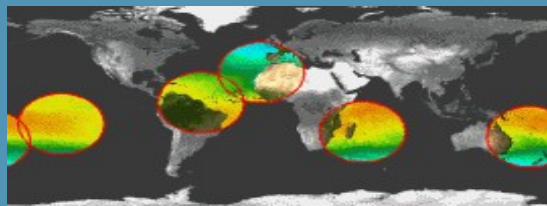
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de l'IRD et ses partenaires

2.- COOK 2010's Mission

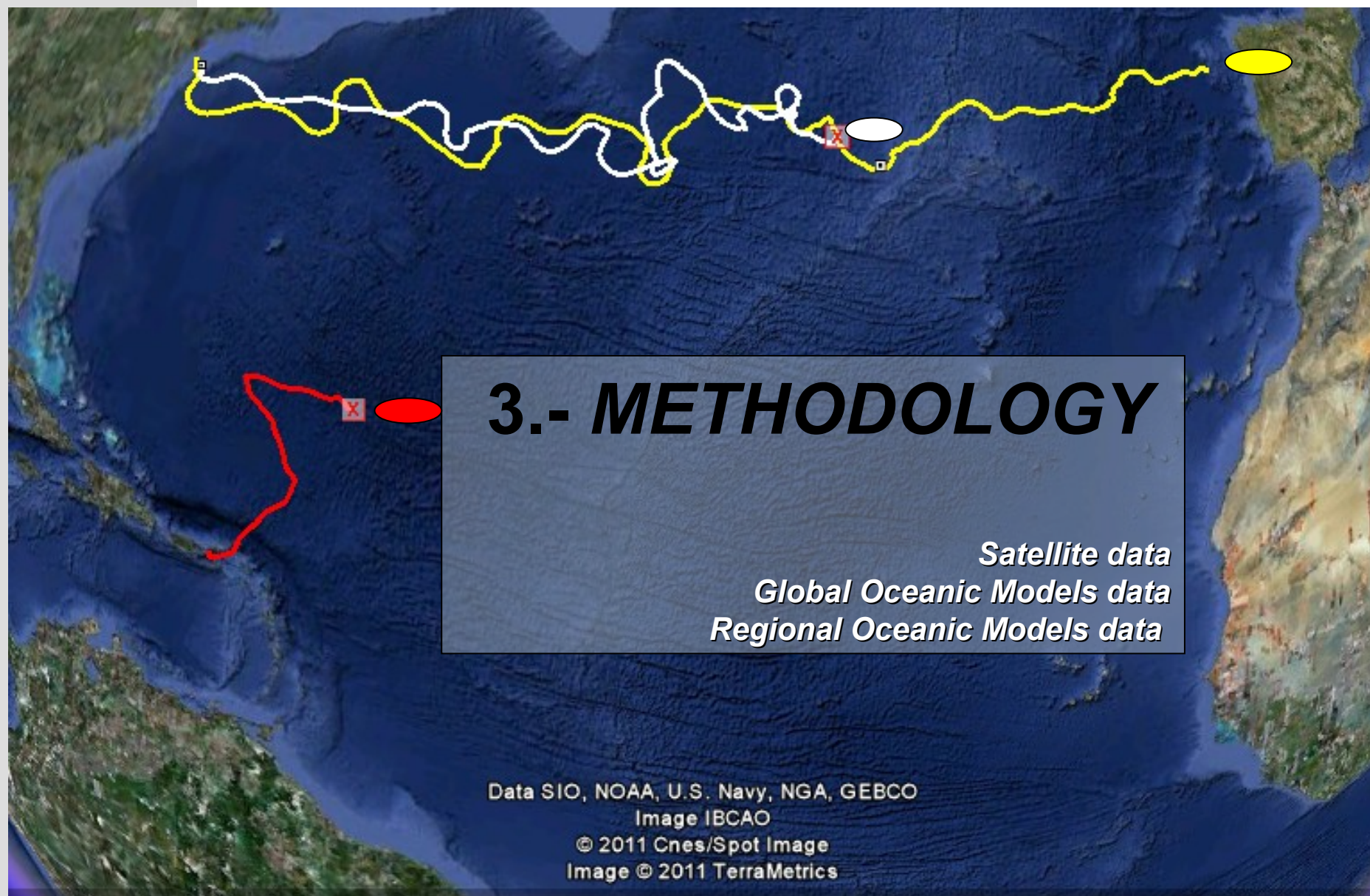
- 1st Transoceanic Crossing (Thermal Glider)
- Meteoceanic Heat Fluxes (NE Atlantic)
- 26°-27°N 0-1200 m
- **Provide/Evaluate/Compare multisource data sets**
- **Glider Schooling (Blogging / Skyping)**





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*Le réseau de stations de réception
de l'IRD et ses partenaires*



3.- METHODOLOGY

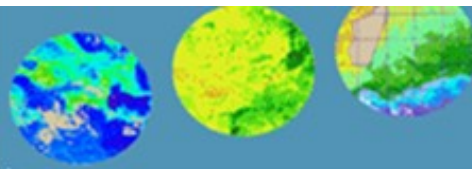
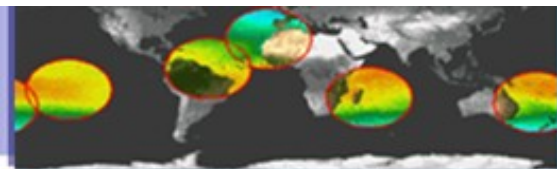
Satellite data
Global Oceanic Models data
Regional Oceanic Models data

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image IBCAO

© 2011 Cnes/Spot Image

Image © 2011 TerraMetrics



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Le réseau de stations de réception
de l'IRD et ses partenaires

3.- METHODOLOGY

SATELLITE DATA. Ground segment. NE Atlantic Domain.



Real time



PLOCAN

BLOGGING
Cook Crossing

SKIPPING

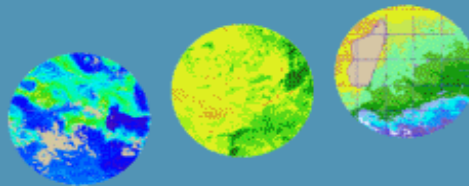
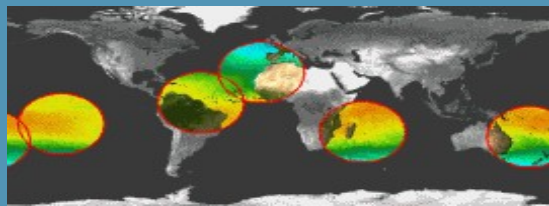


Segment A
Receiving

Segment B
Processing

Segment C
Com

Segment D
I+D+i



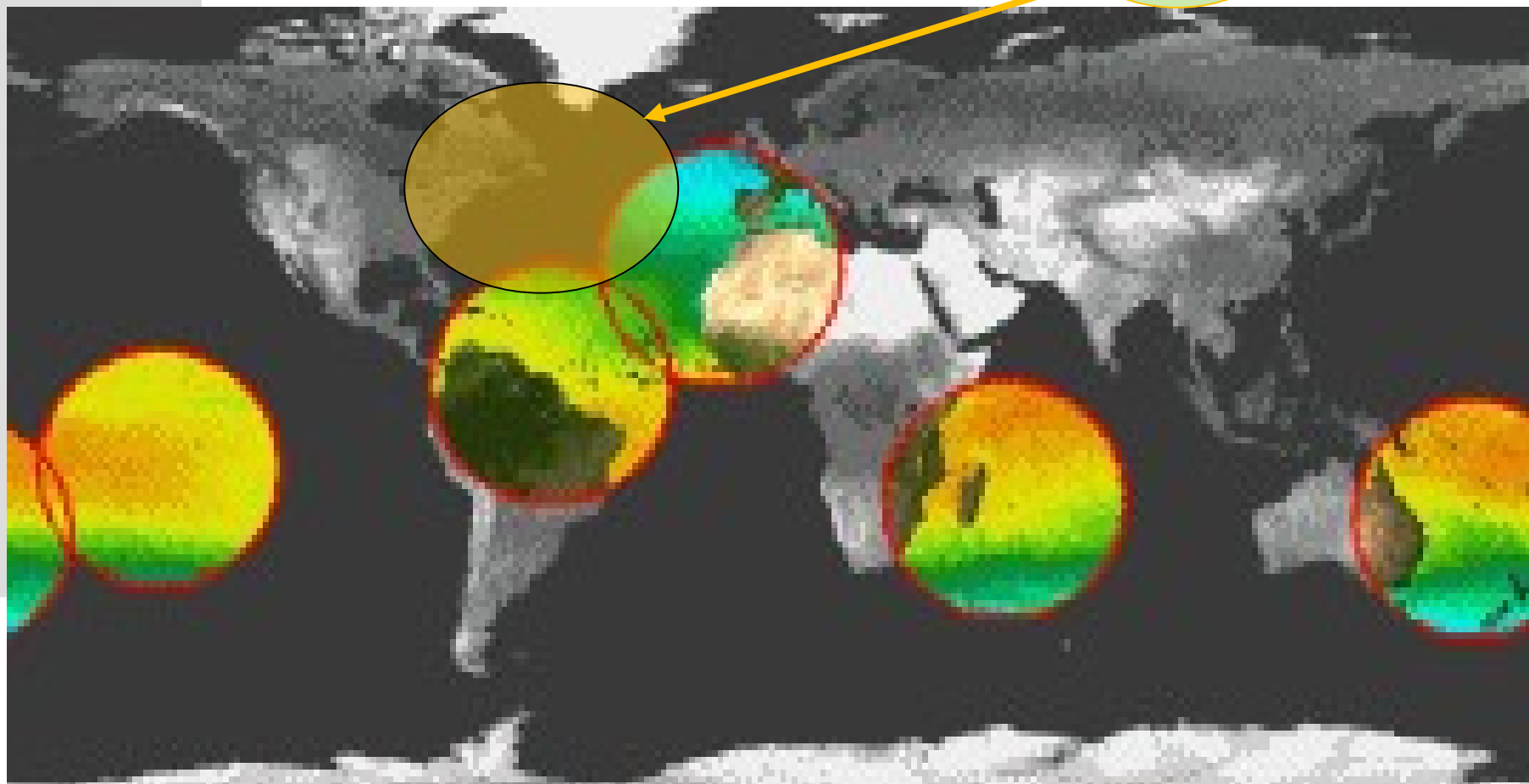
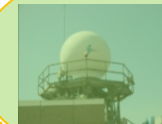
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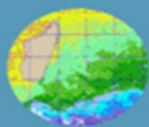
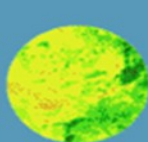
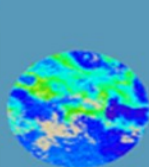
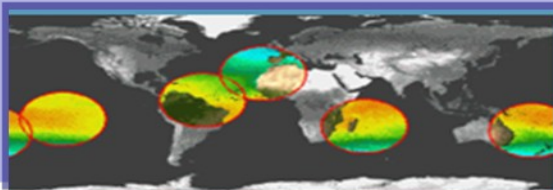
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3.- METHODOLOGY

SATELLITE DATA. *Ground segment.*

RU COOL





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CONSTELLATION

ASAR

ASAR/ENVISAT



Wind scatterometer

Quiksat



Ascat/METOP



Multispectral EHR

SPOT 2



Altimeter

GEOSAT



JASON



ENVISAT



Aqua



Noaa 15



Noaa 17



Noaa 18



SPOT 4



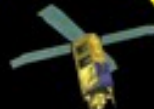
MERIS/ENVISAT



Aqua



Orb View



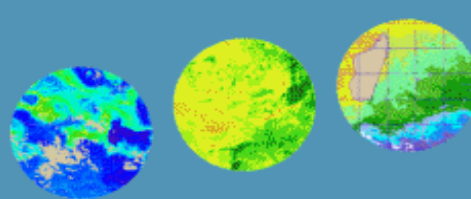
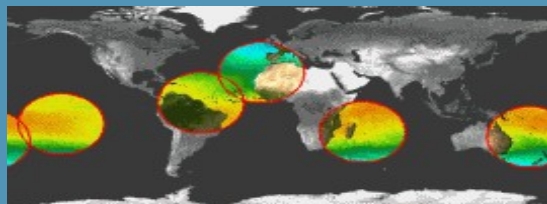
NOAA 19



SPOT 5



Multispectral VIS / IR

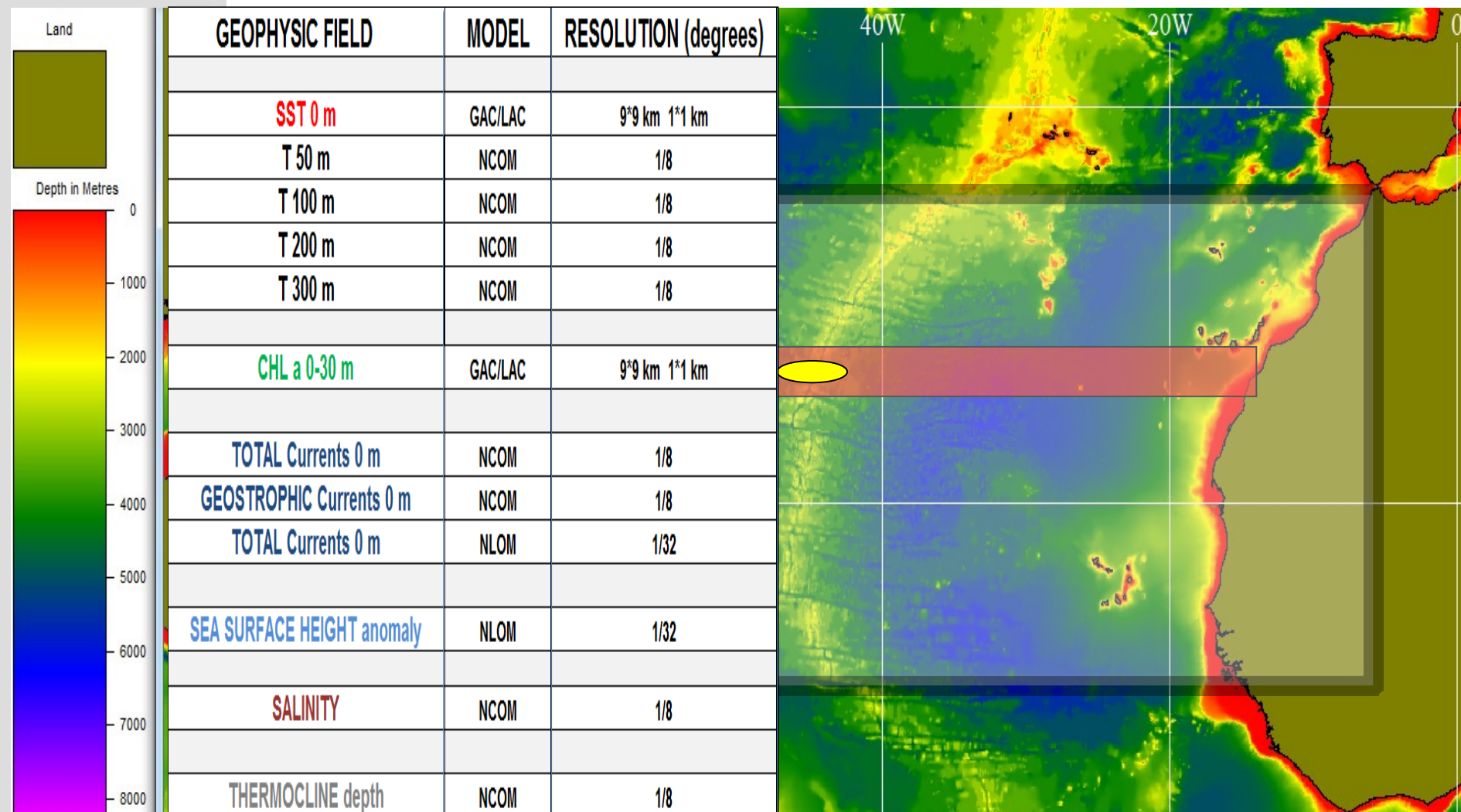


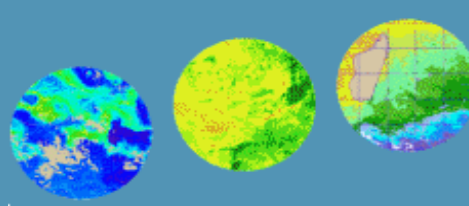
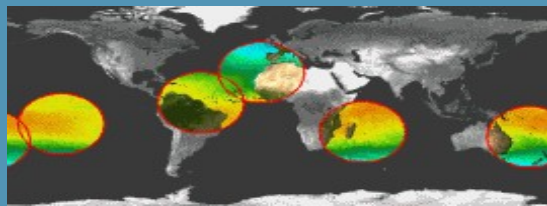
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de l'IRD et ses partenaires

3.- METHODOLOGY

GLOBAL OCEAN MODELS. Geo Domain. Data Sets.



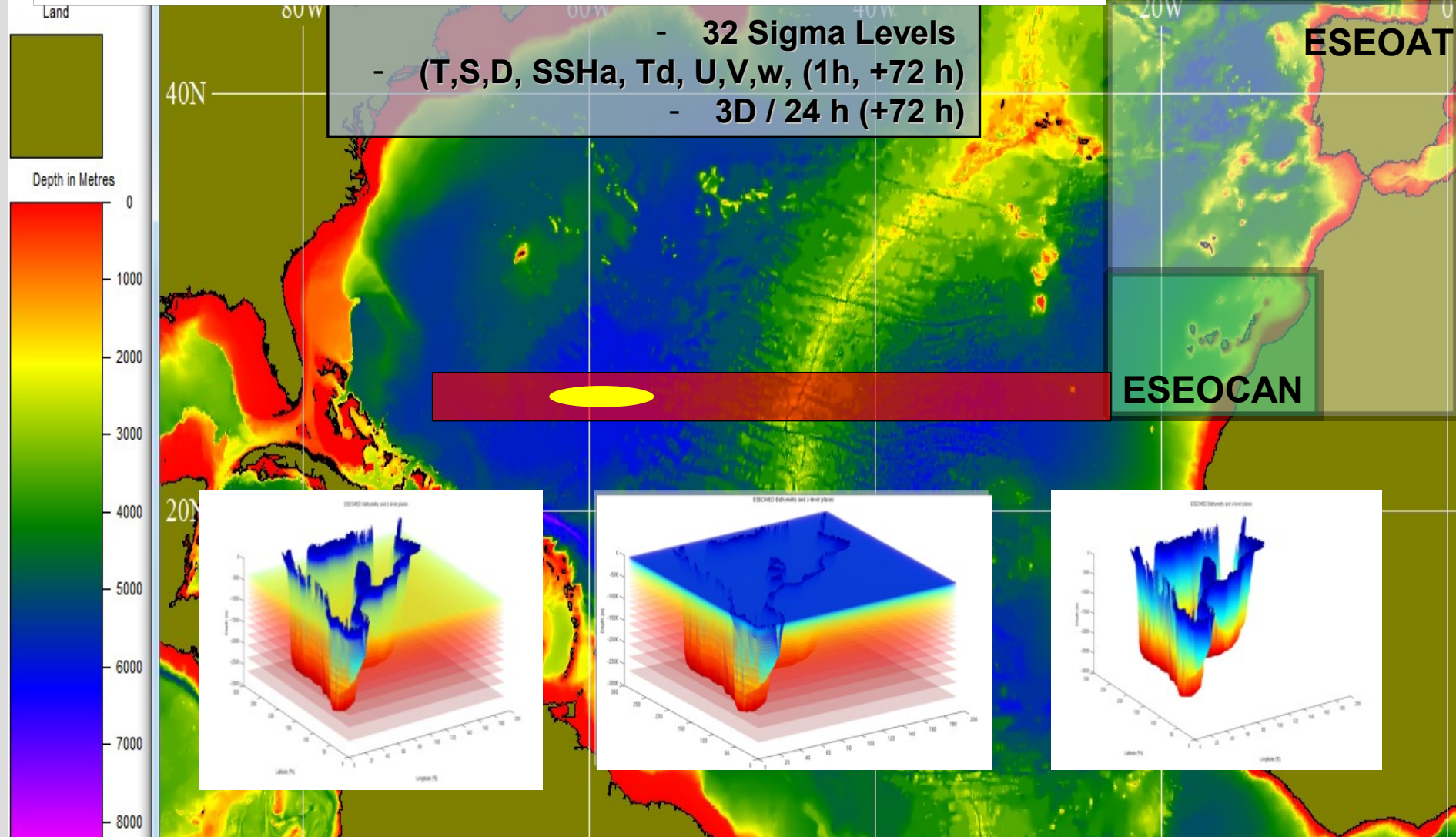


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3.- METHODOLOGY

REGIONAL OCEAN MODEL. ESEOO domain. Data Sets.





:: Products ::

» [Modelling](#)

» [Observation](#)

MARINEMET project

Overall objective

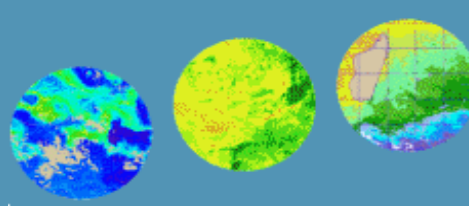
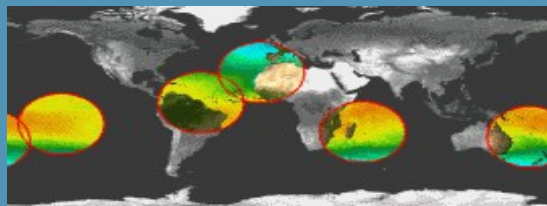
Specific Objectives

Expected Benefits

Recognizing the weakness revealed by a WMO survey in those countries regarding a lack of expertise in marine meteorology in their national meteorological services, as well as an absence of an effective warning and disaster mitigation strategy.

Taking into account that an important part of the population of West African countries lives in coastal cities, with their economic activities in the coastal zones, thus having growing demand for marine meteorology services and an urgent needs to enhance their operational capacity in this field.

The overall objective of this Project is therefore, to enhance the capacity of the NMHSs of West African coastal countries and provide them with the relevant tools that will allow them to contribute to the sustainable development of their respective countries and enhance the delivery of products and services to the various socioeconomic sectors related to marine activity as it is essential for them.

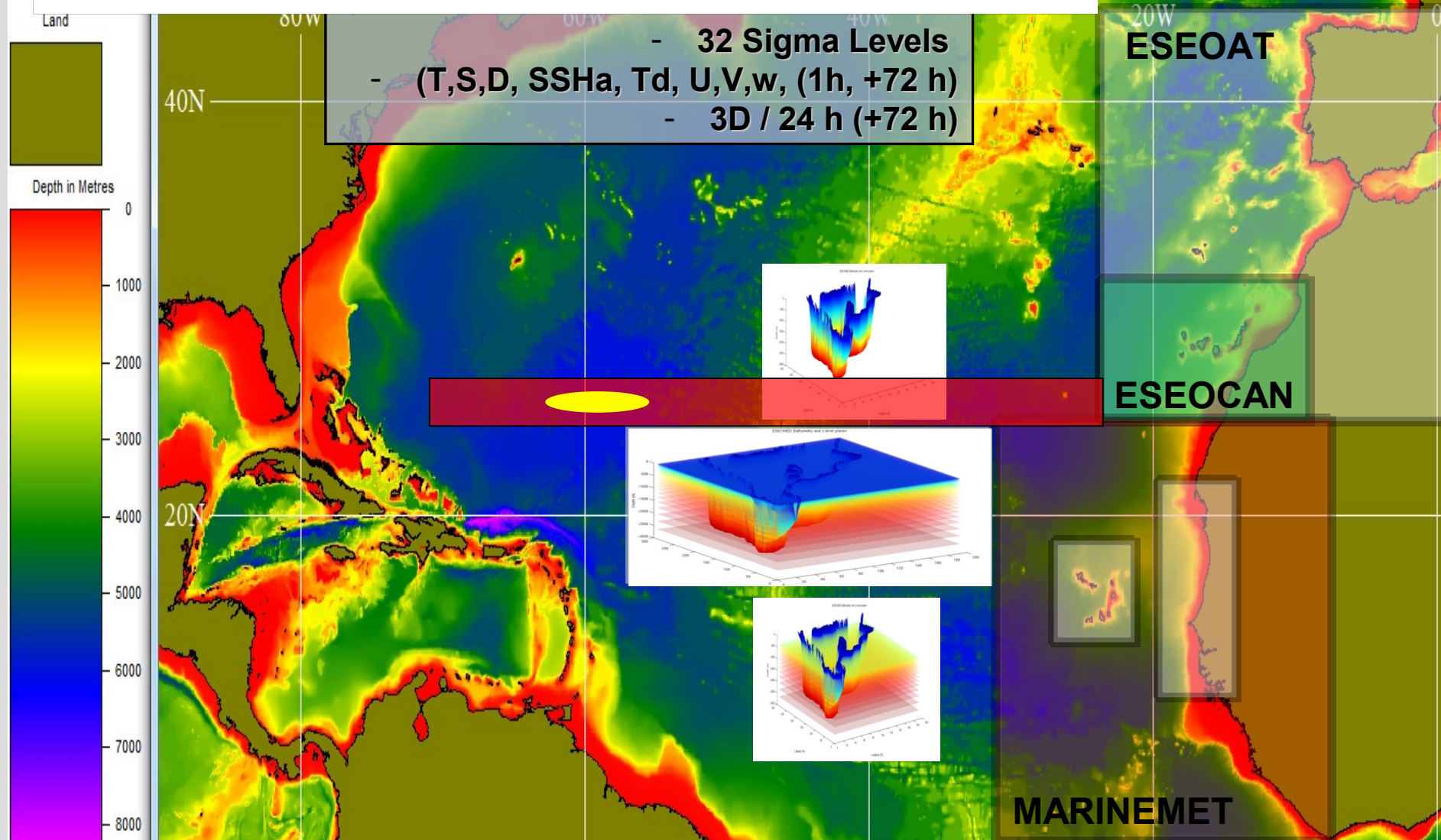


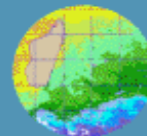
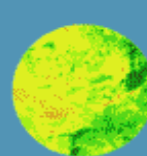
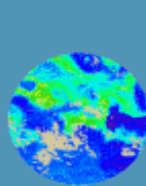
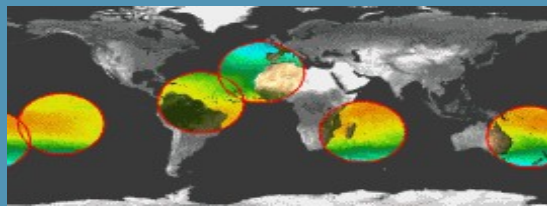
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3.- METHODOLOGY

REGIONAL OCEAN MODEL. ESEOO domain. Data Sets.





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de l'IRD et ses partenaires*



4.- RESULTS

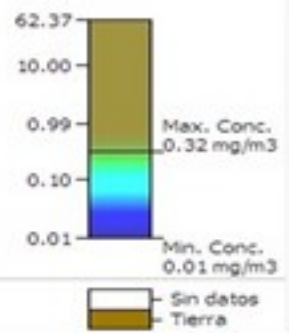
Data SIO, NOAA, U.S. Navy, NGA, GEBCO

Image IBCAO

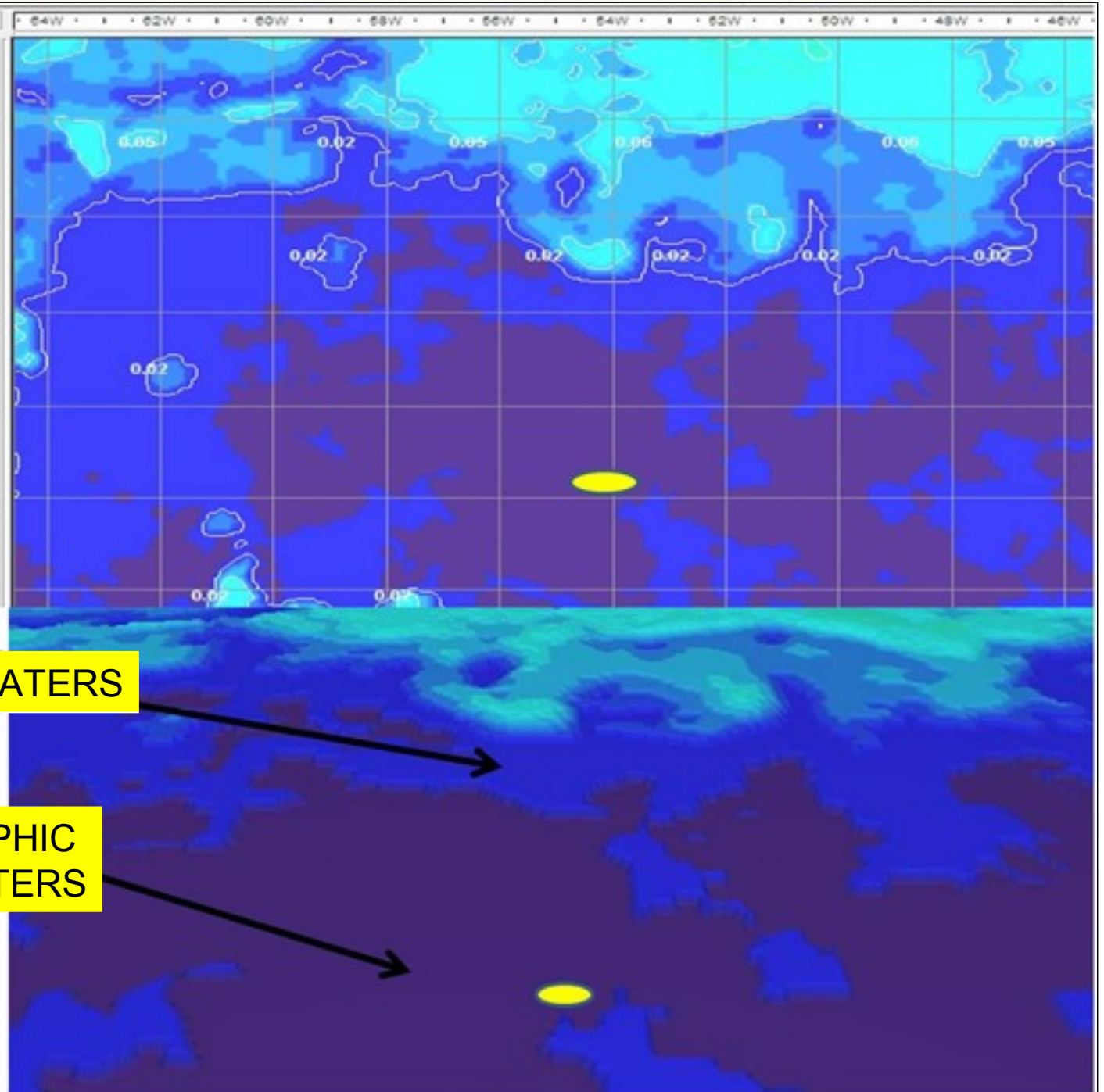
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Image © 2011 TerraMetrics

Leyenda colores plancton



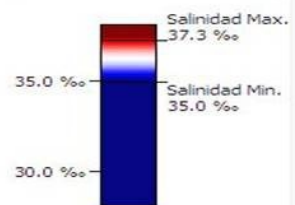
Capas visibles:
Plancton - JUN 30 2010



OLIGOTROPHIC WATERS

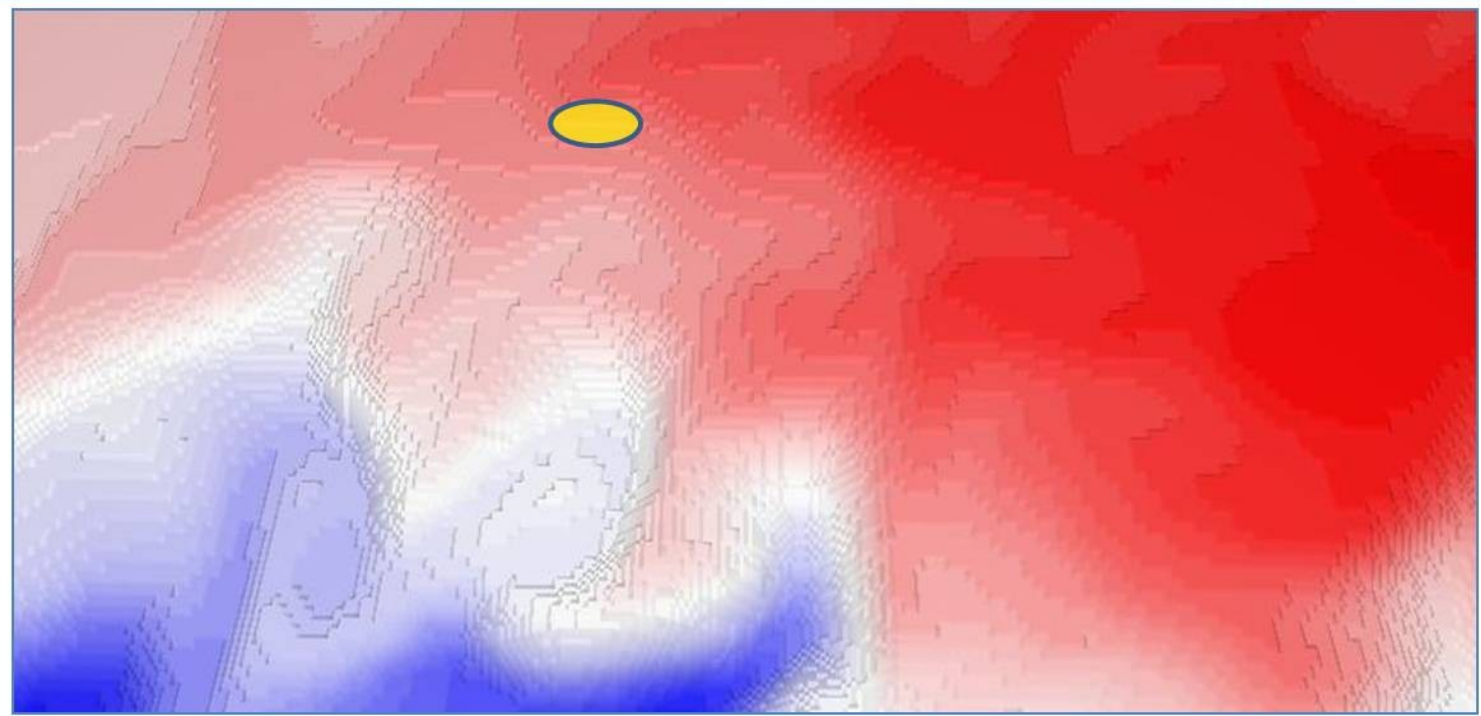
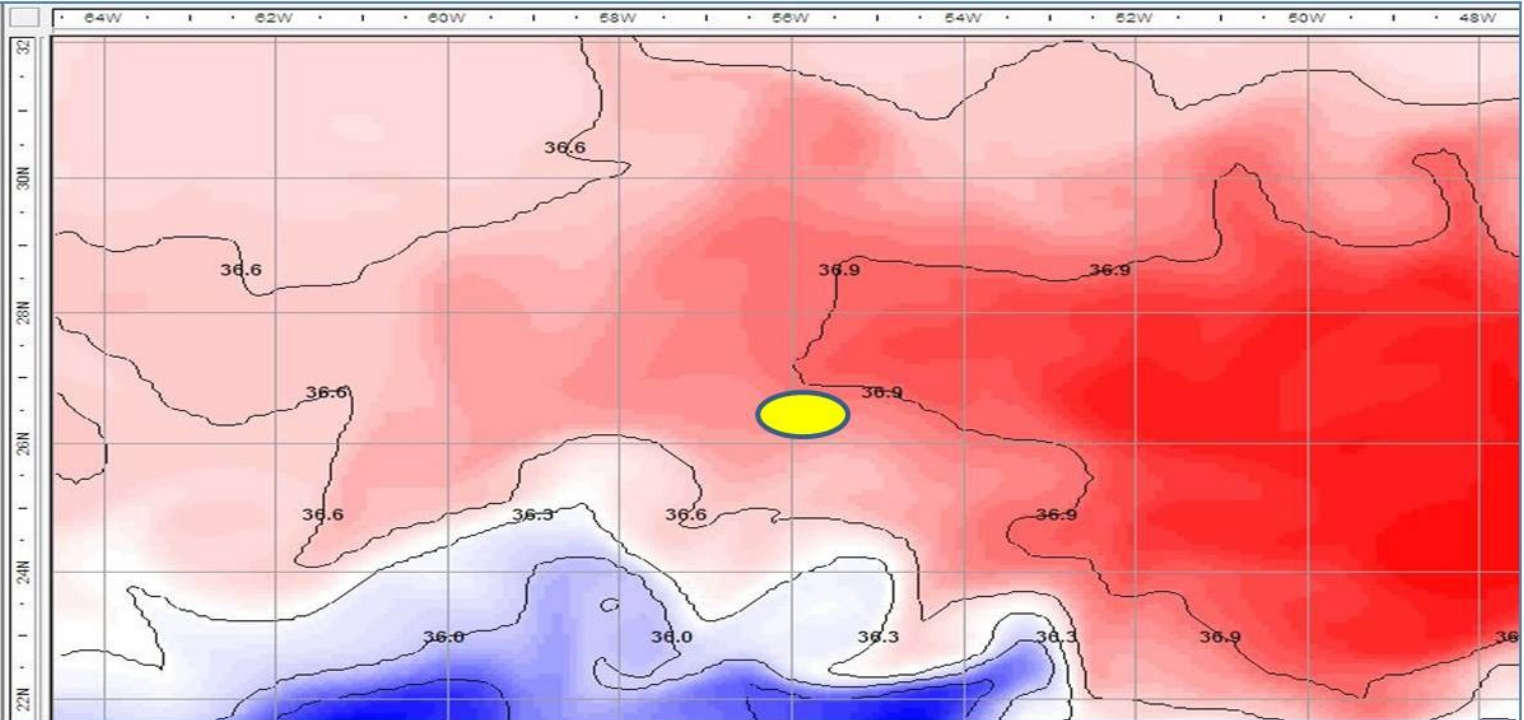
HYPEROLIGOTROPHIC WATERS

Salinidad Leyenda del Color

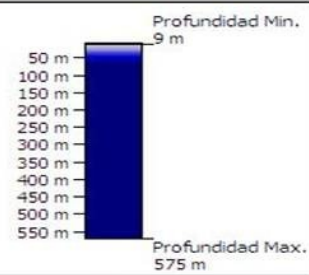


Sin datos
 Tierra

Capas visibles:
 Salinidad - JUN 21 2010

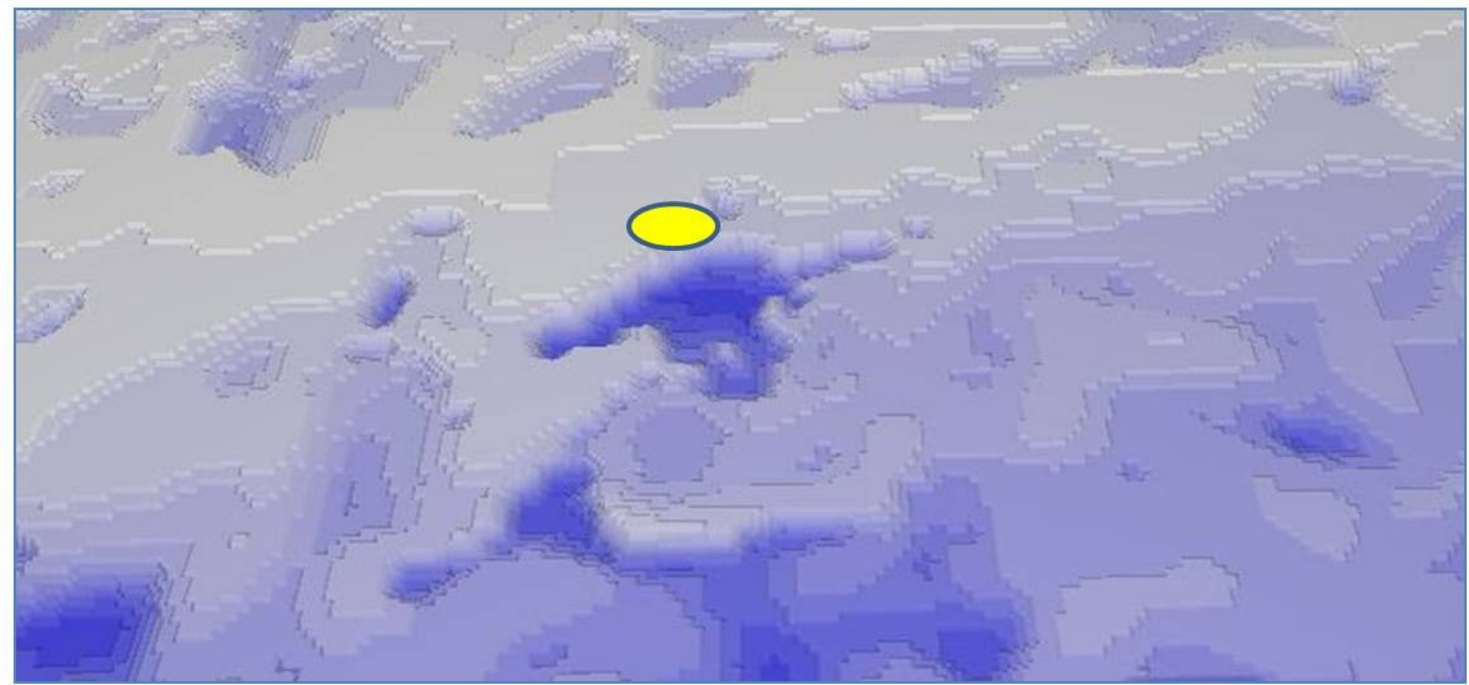
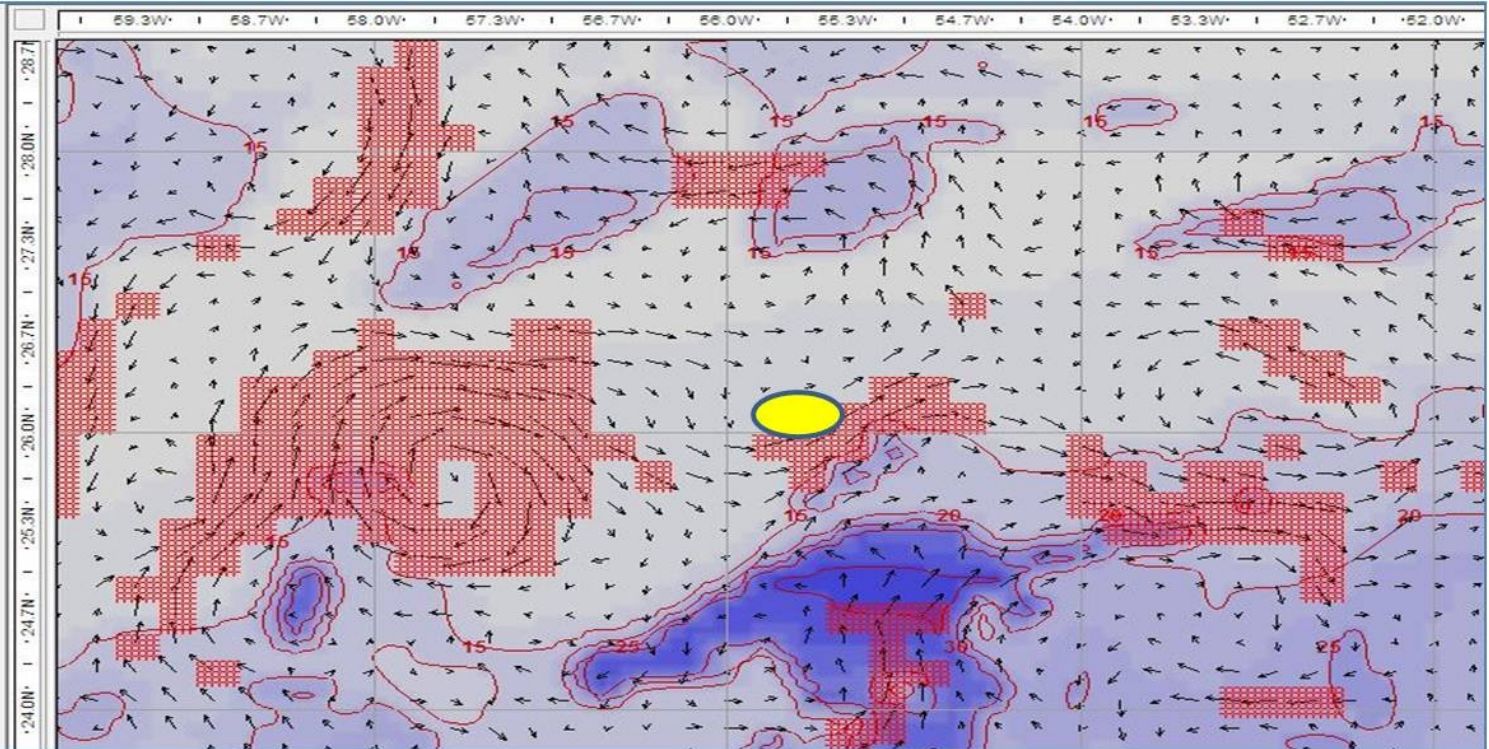


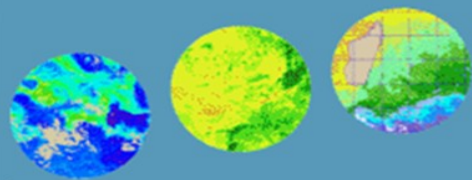
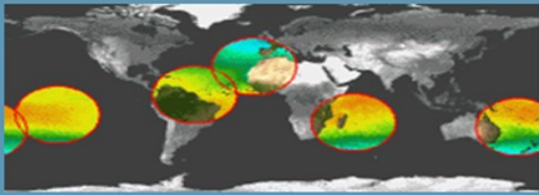
Leyenda de Profundidad de Termoclina



Sin datos
Tierra

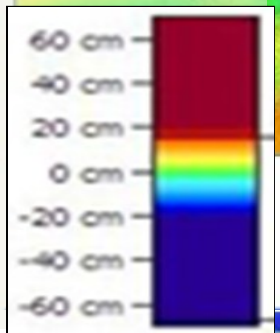
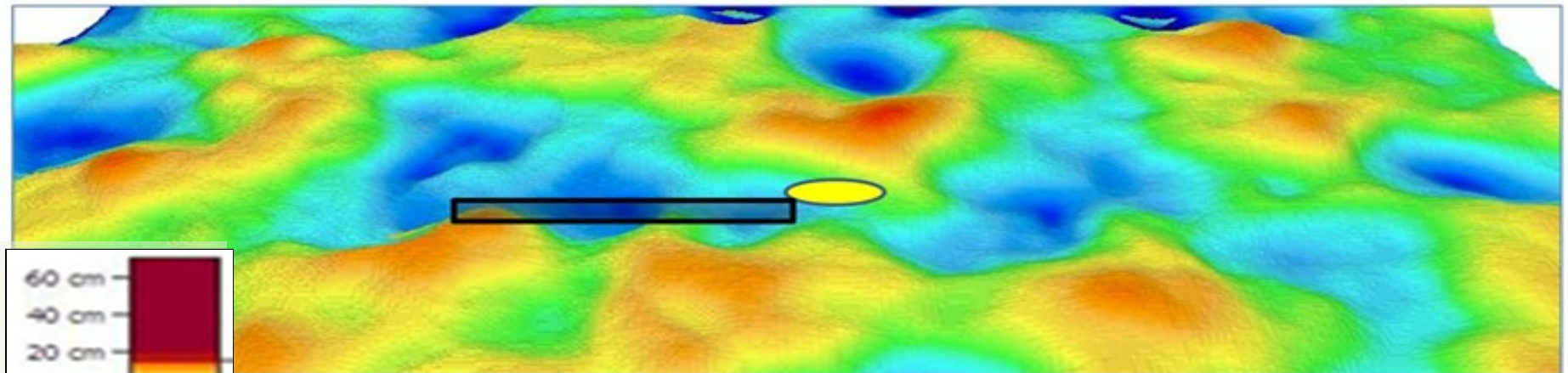
Capas visibles:
Profundidad de Termoclina - JUN 21 2010
Corrientes - JUN 21 2010
MasterCast - JUN 21 2010



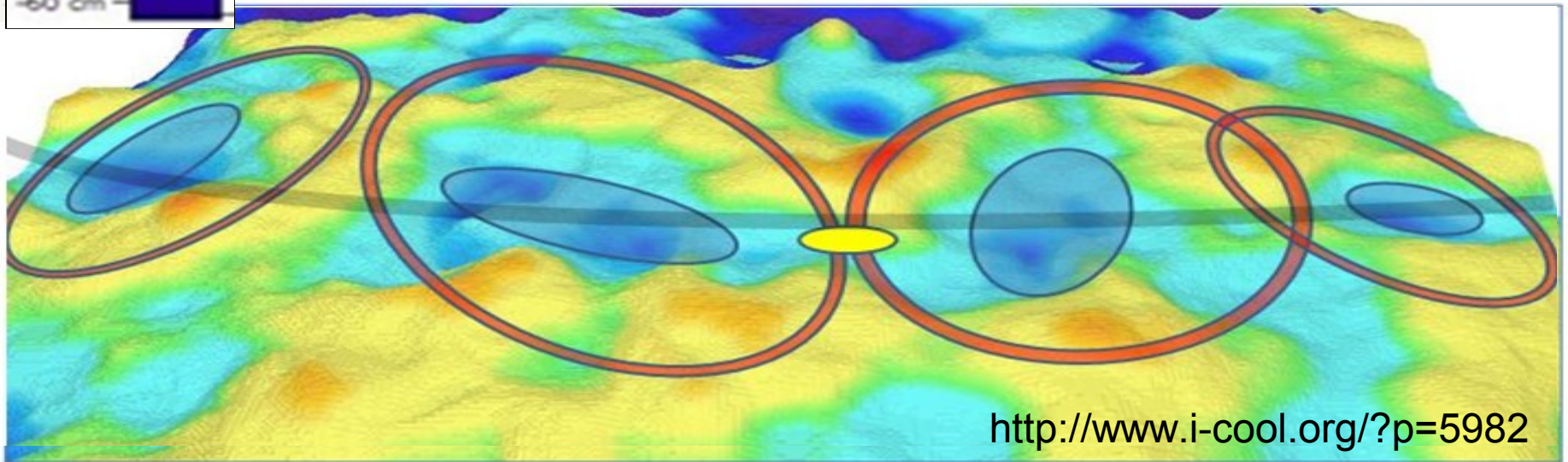


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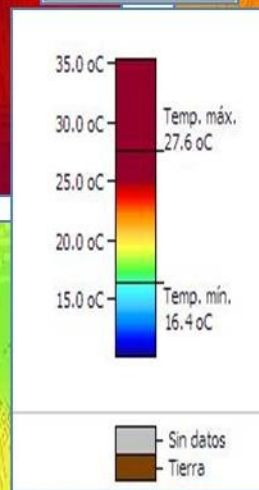
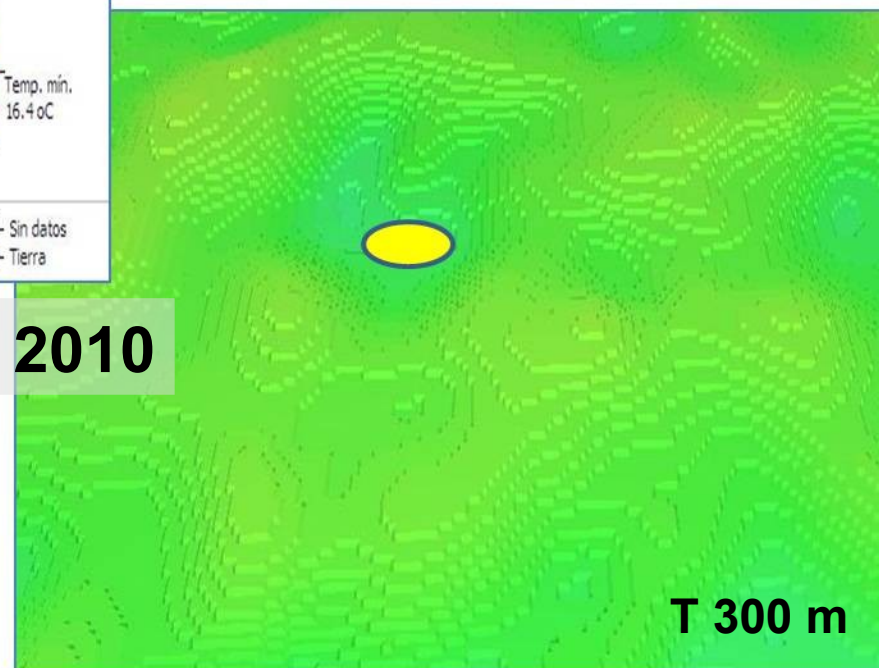
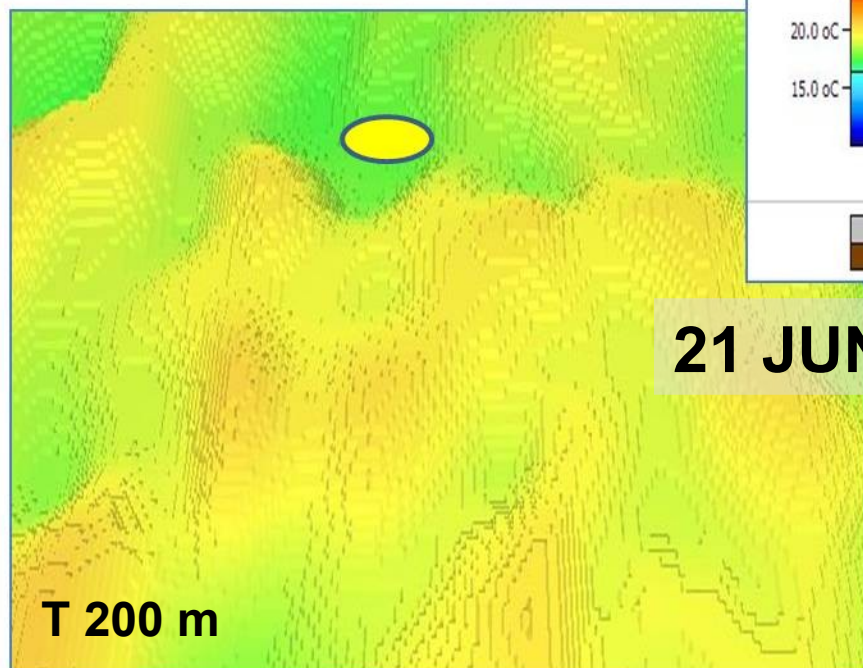
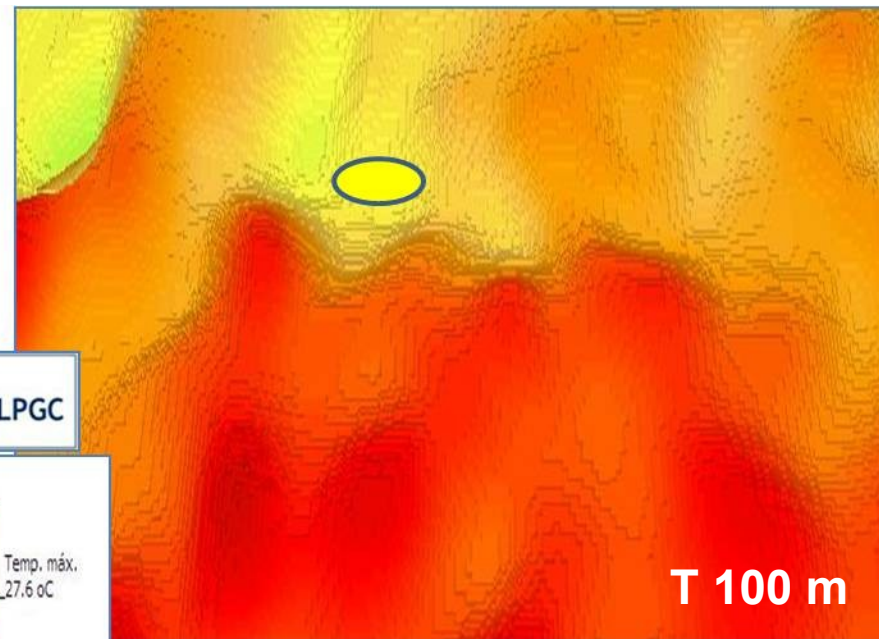
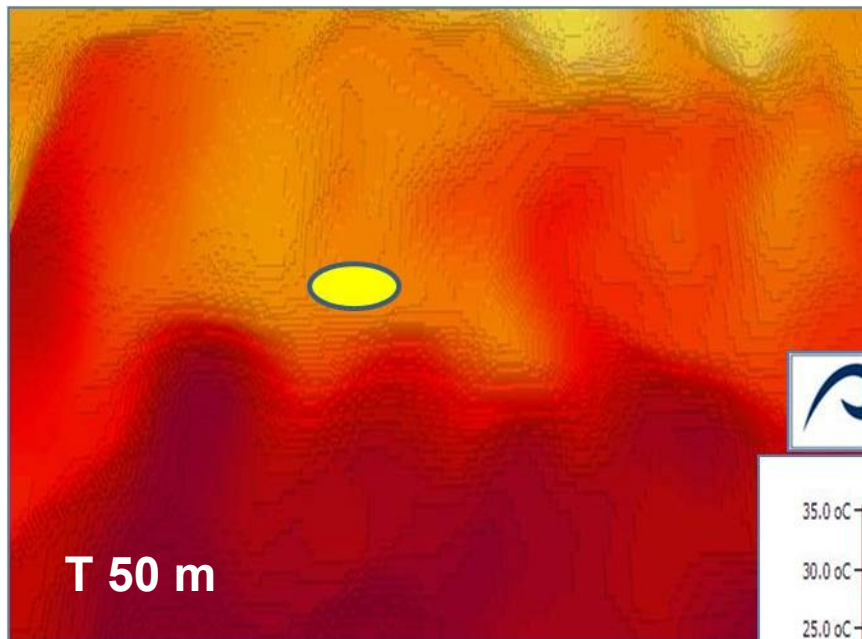
Réseau de stations de réception et
d'exploitation de données des satellites
d'observation de la Terre



59° W – 53° W (1 Jun-7 Jul 2010)

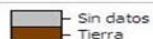
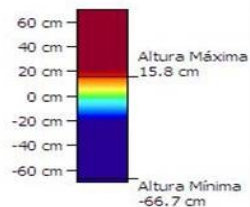


<http://www.i-cool.org/?p=5982>

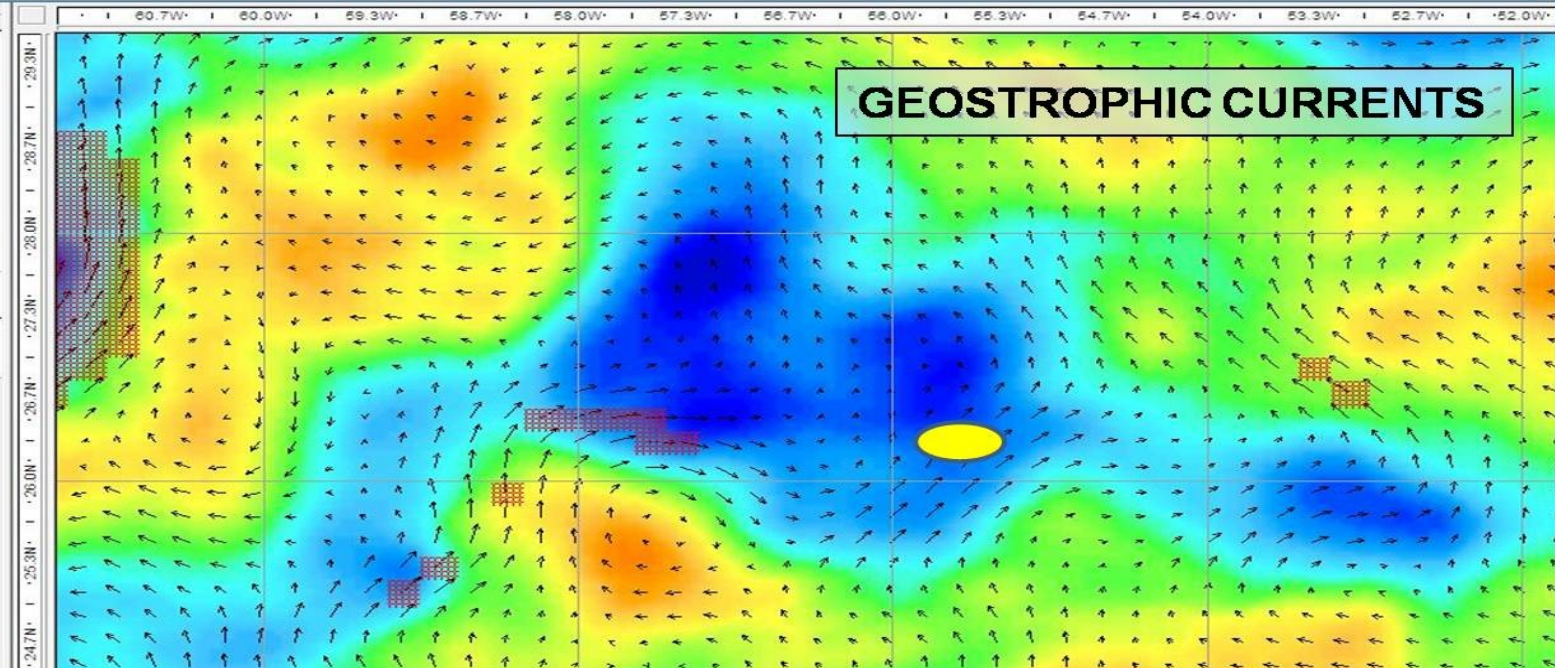


21 JUN 2010

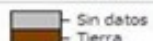
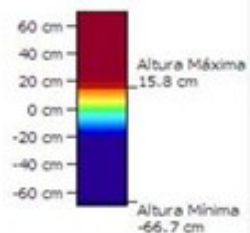
Leyenda de Color de SSHa



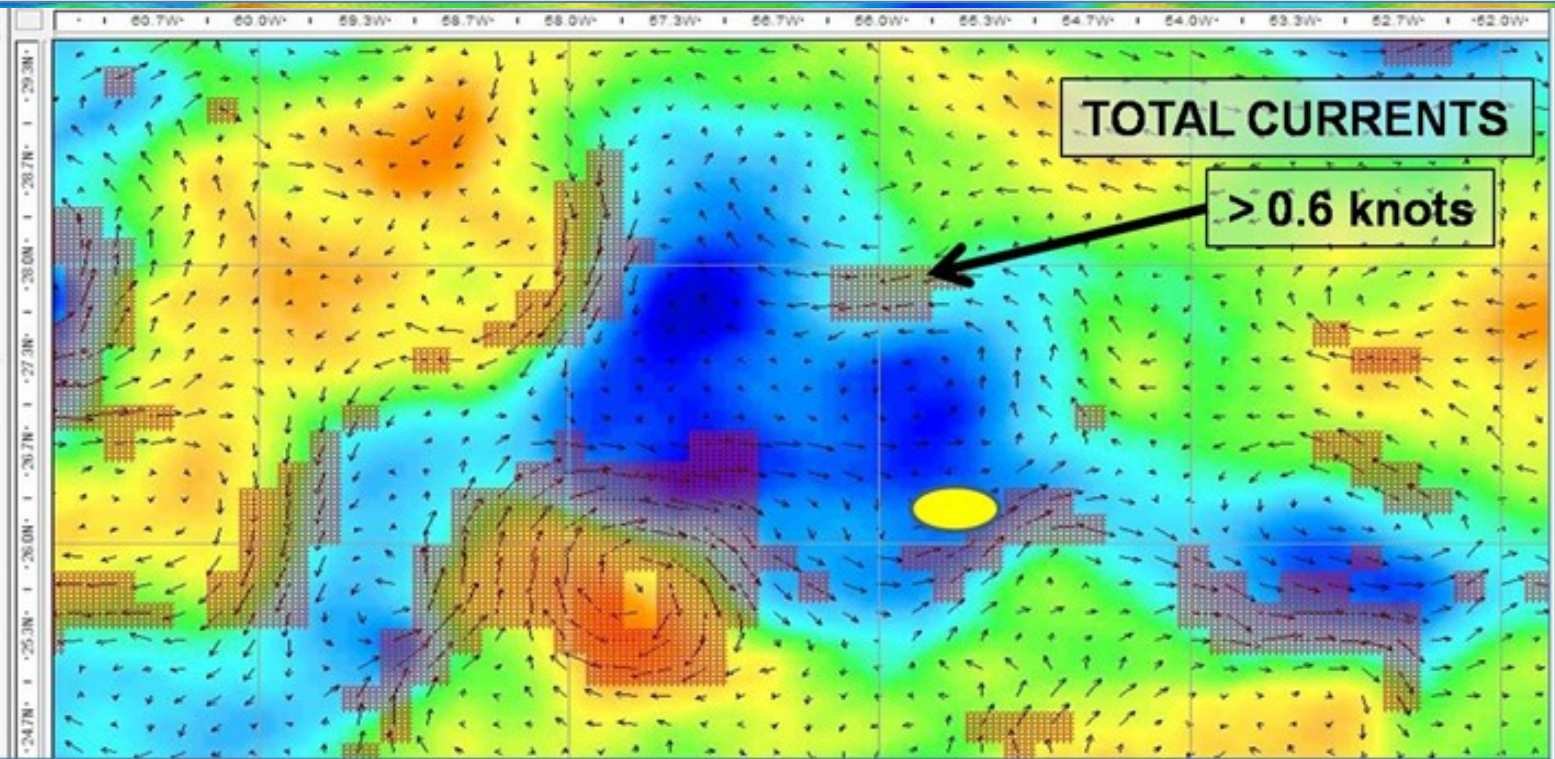
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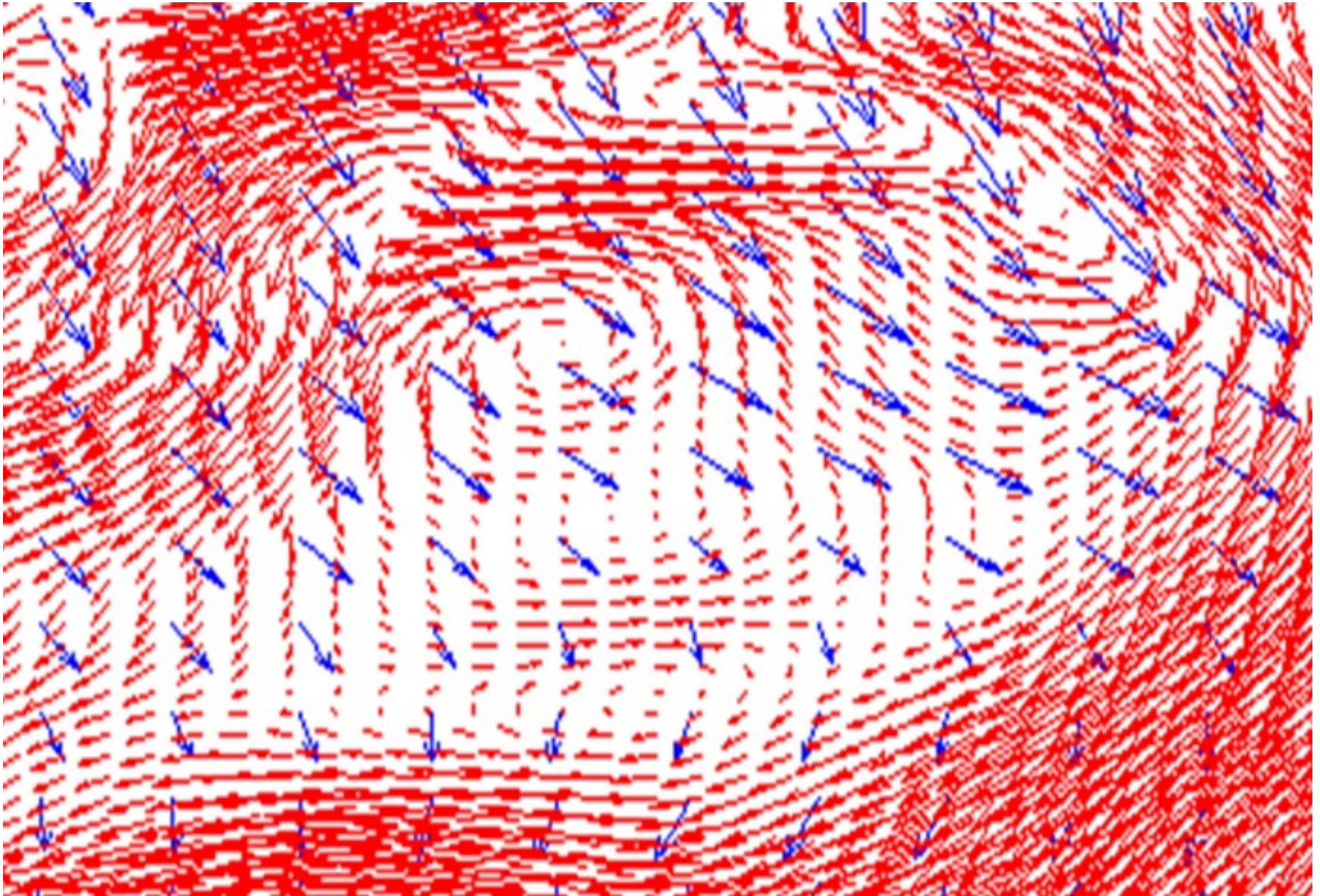


Leyenda de Color de SSHa



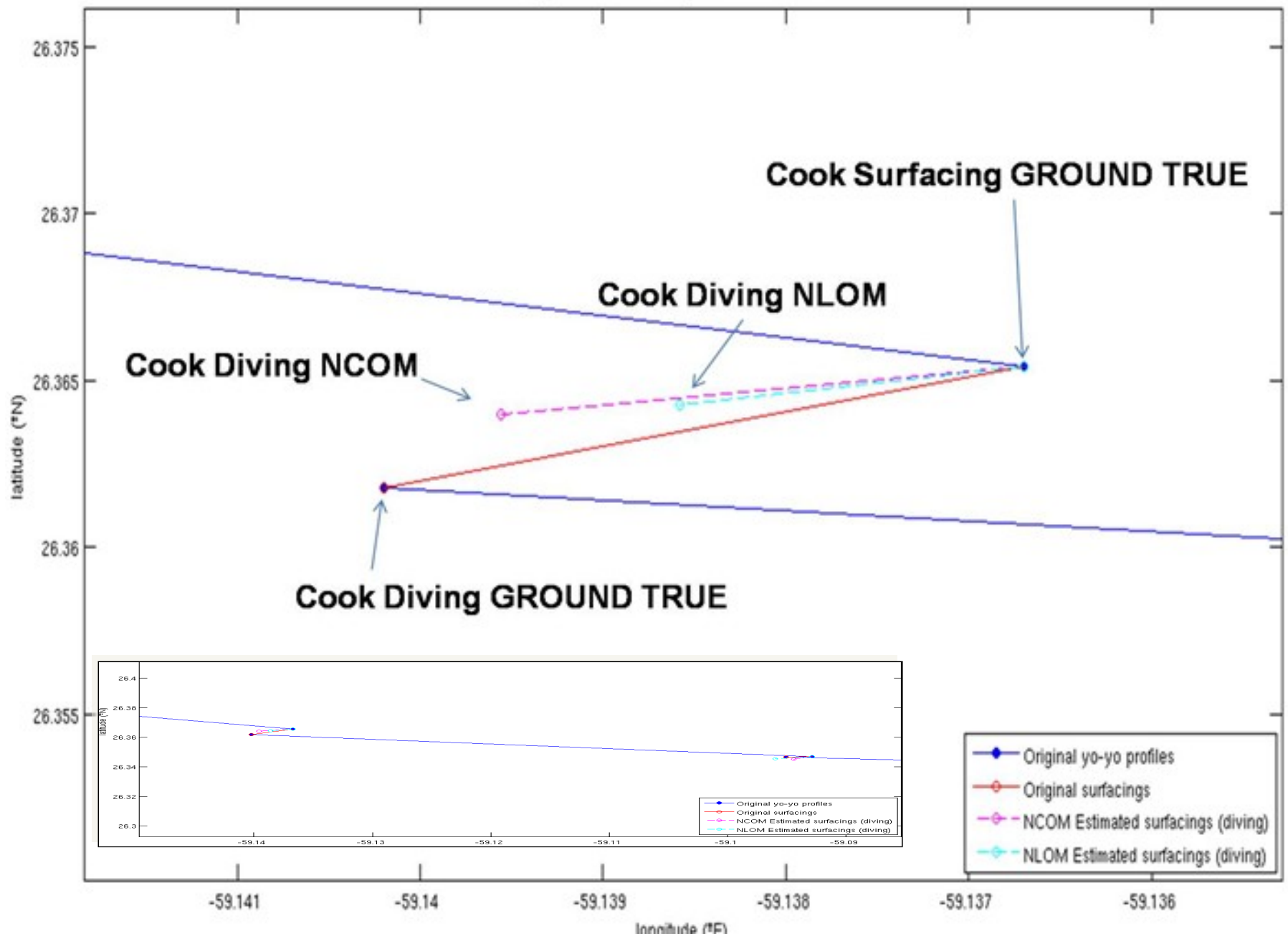
Capas visibles:
Corrientes - JUN 21 2010
MasterCast - JUN 21 2010



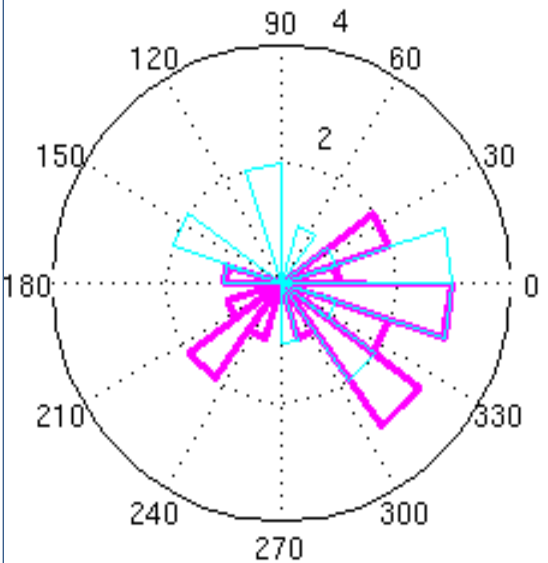


TOTAL currents NLOM 1/32 vs ***TOTAL currents*** NCOM 1/8

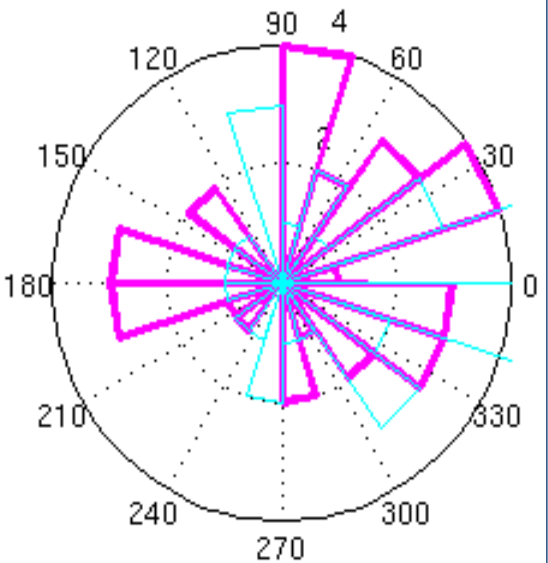
Original vs. Estimated trajectories and locations



Heading error from -59.18°E to -57.90°E

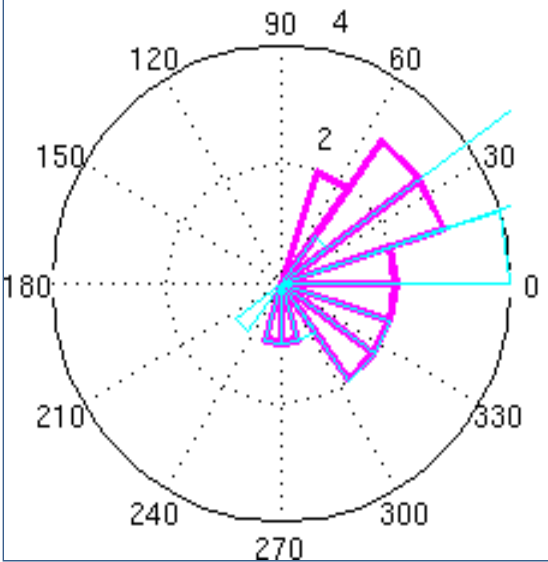


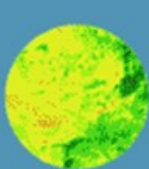
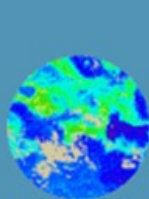
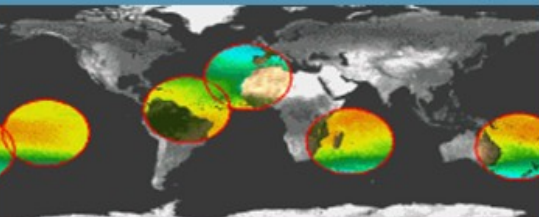
Heading error from -57.90°E to -53.93°E



— NCOM surfacings (diving) error
— NLOM surfacings (diving) error

Heading error from -53.93°E to -53.03°E





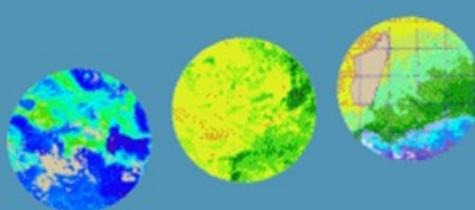
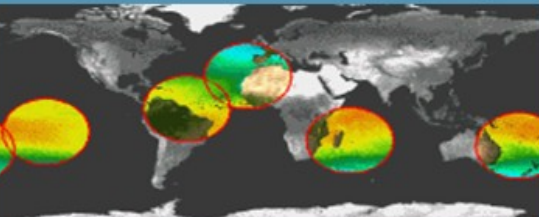
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Réseau de stations de réception et
d'exploitation de données des satellites
d'observation de la Terre



5.- DISCUSSION

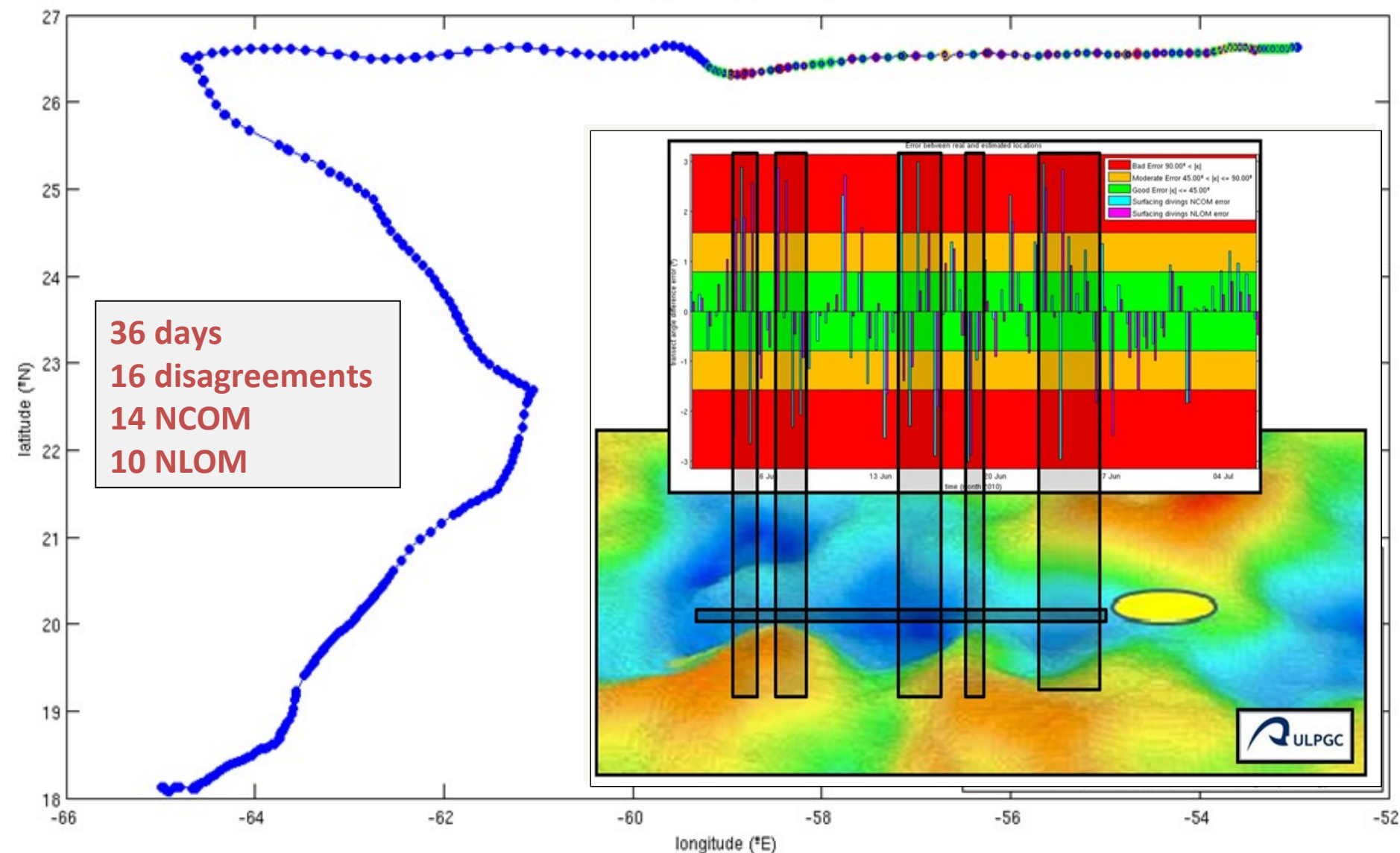
Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image IBCAO
© 2011 Cnes/Spot Image
Image © 2011 TerraMetrics

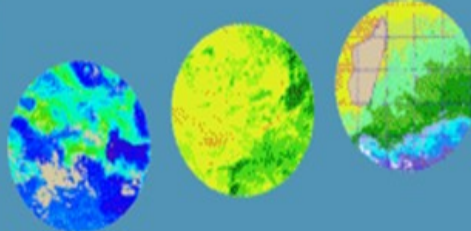
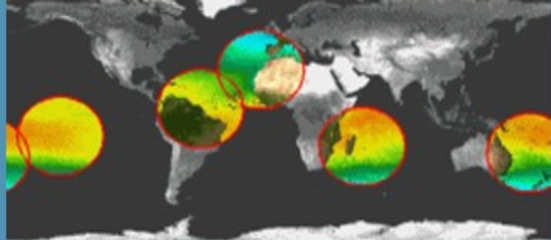


SEASnet

Réseau de stations de réception et d'exploitation de données des satellites d'observation de la Terre

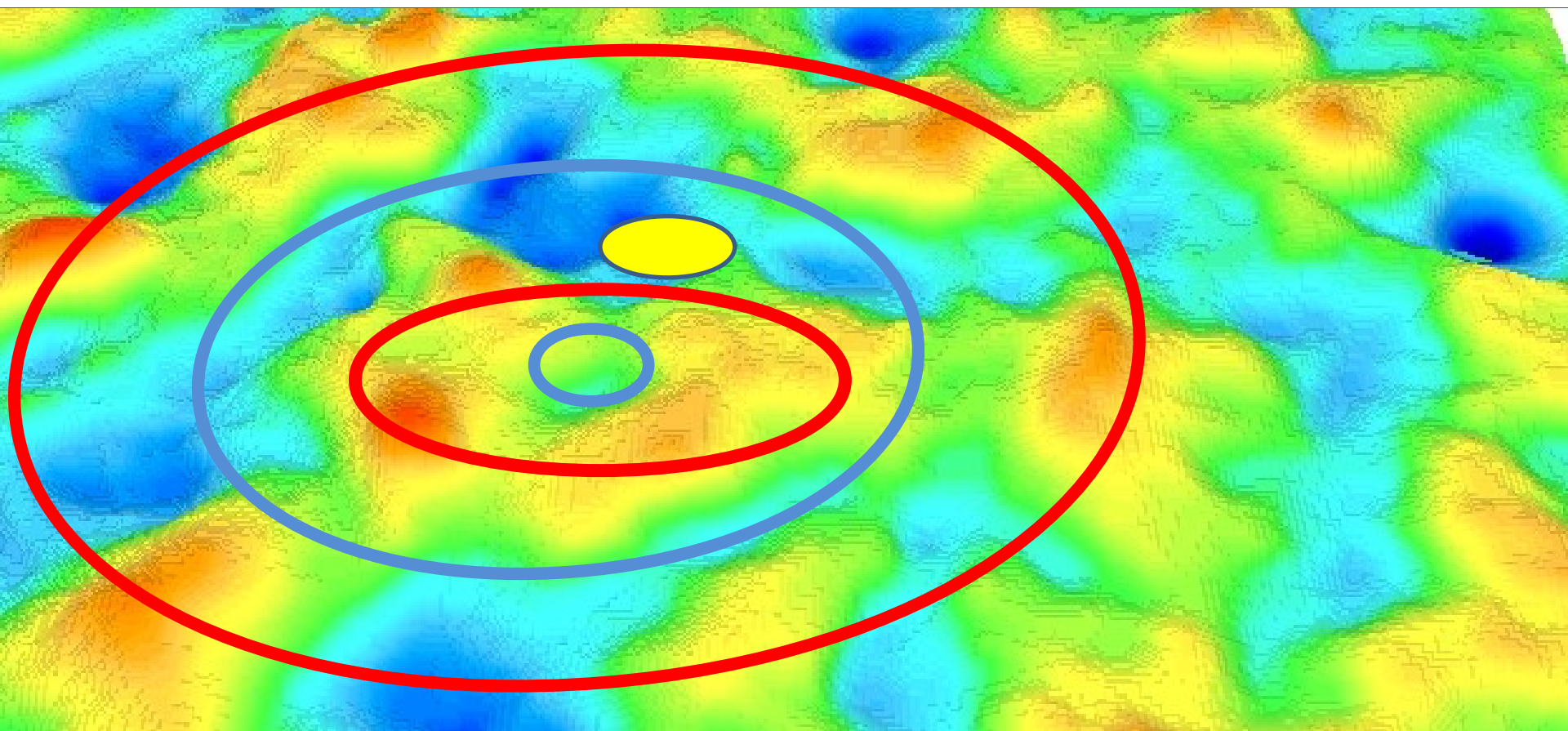
Classification of location estimation



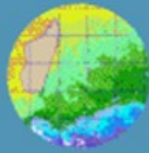
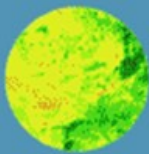
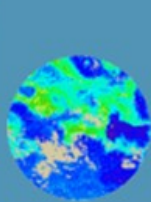
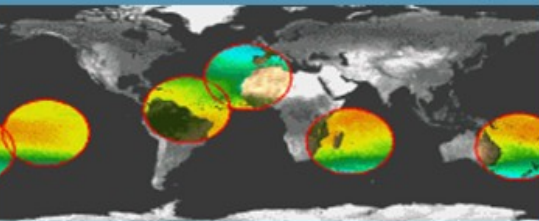


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Réseau de stations de réception et
d'exploitation de données des satellites
d'observation de la Terre

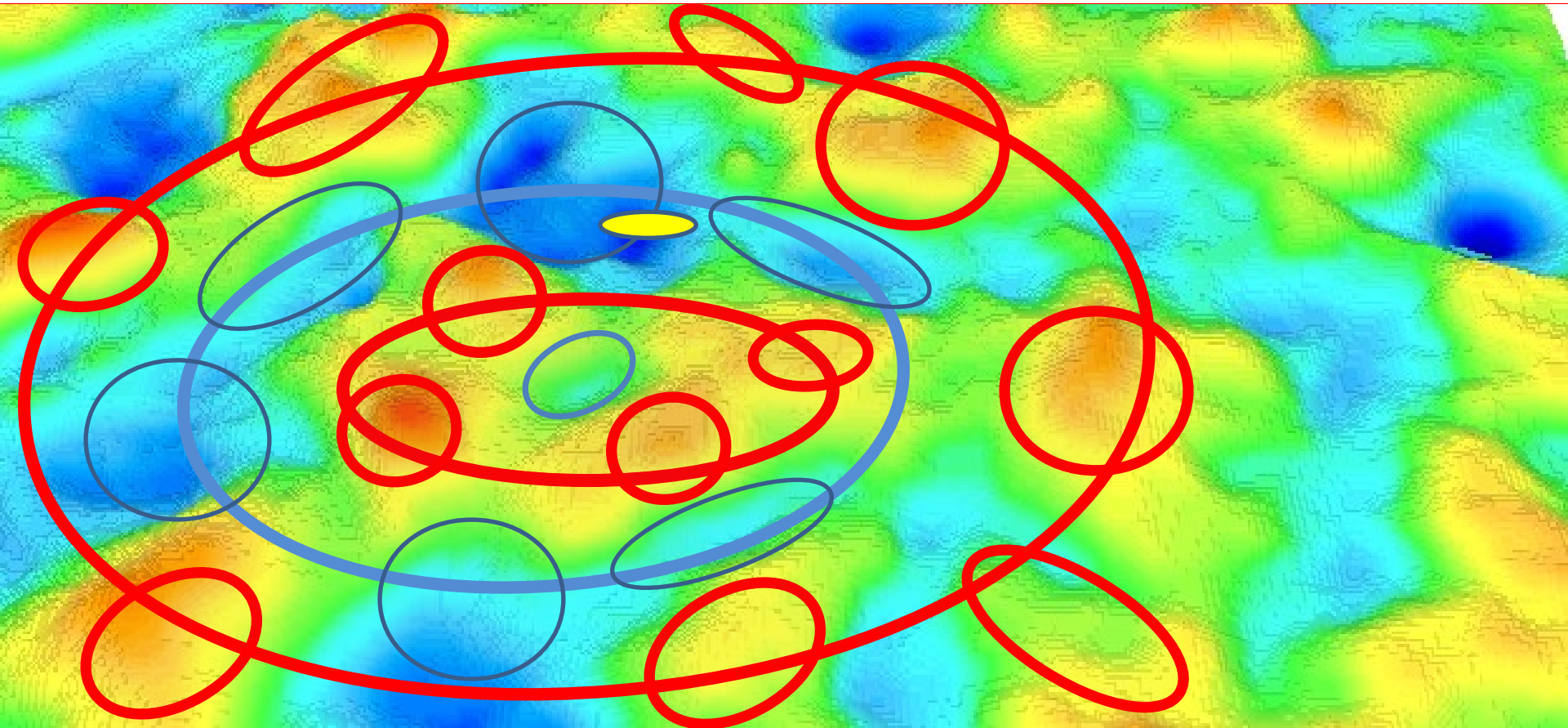


MESOESCALE Dynamic

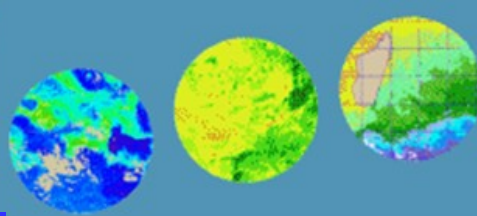
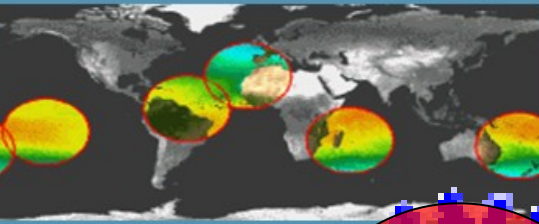


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Réseau de stations de réception et
d'exploitation de données des satellites
d'observation de la Terre

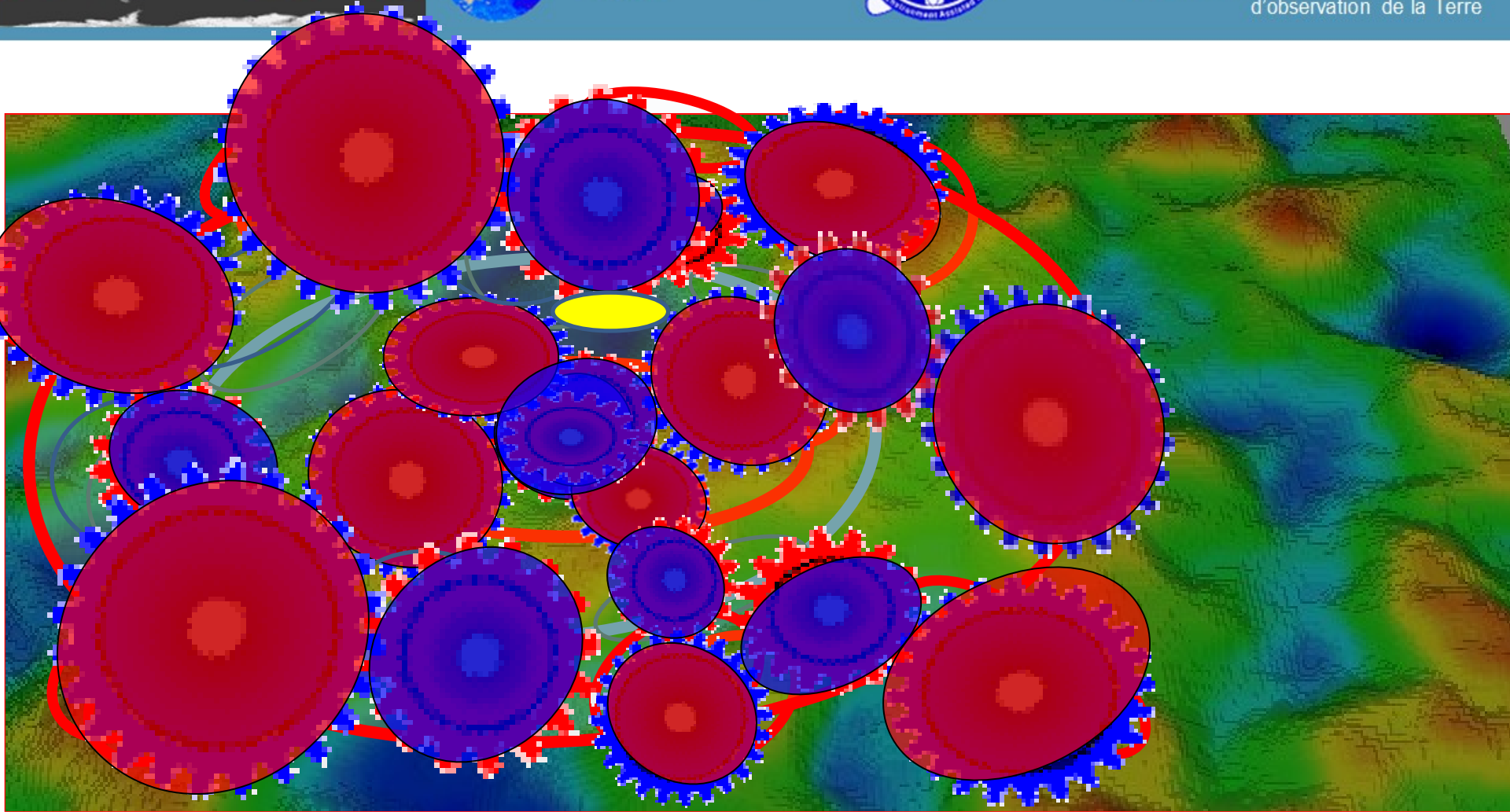


SUBMESOESCALE *Dynamic*



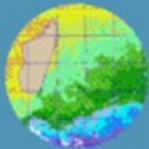
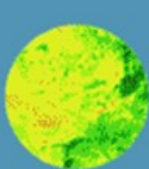
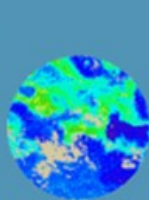
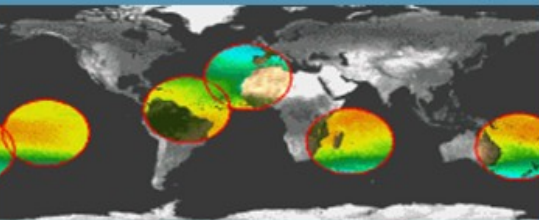
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d'exploitation de données des satellites
d'observation de la Terre



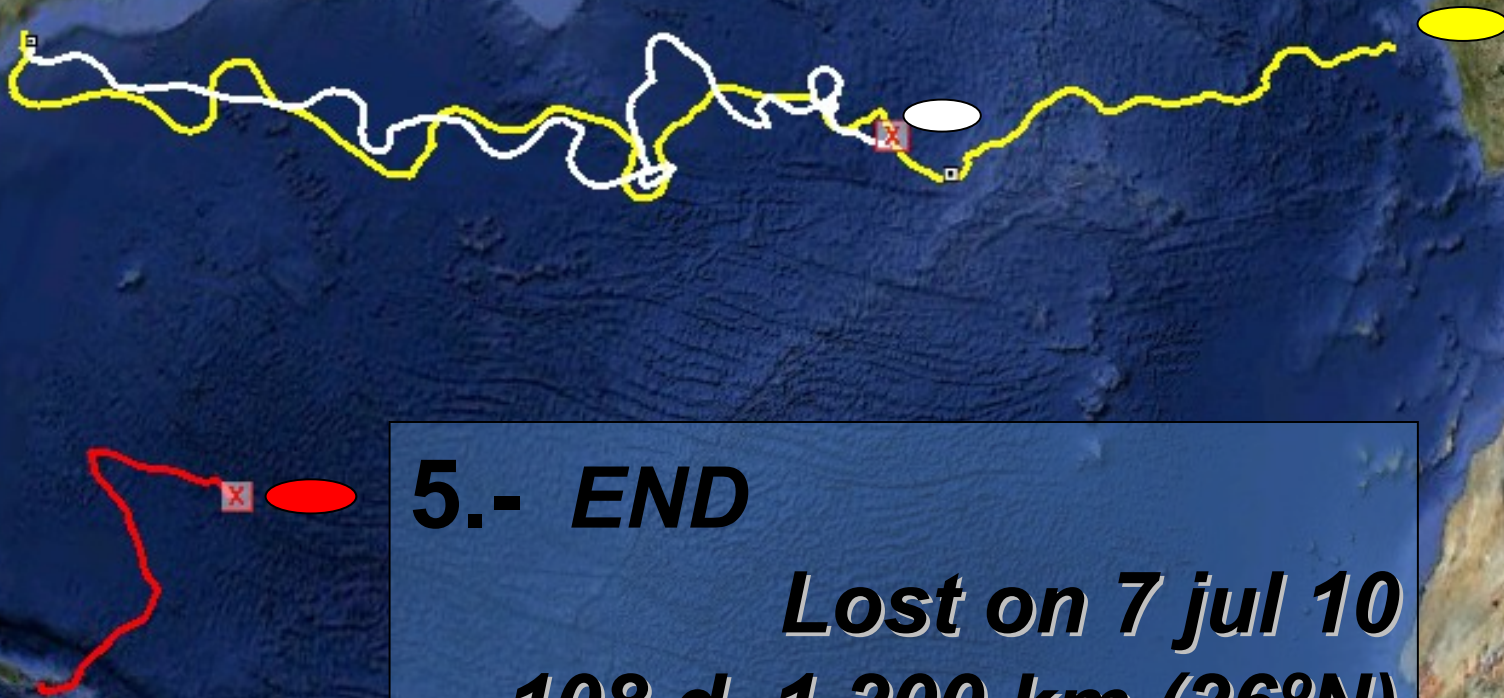
a fractal *Liquid Meccano*....

<http://www.i-cool.org/?p=5874>



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d'exploitation de données des satellites
d'observation de la Terre



5.- END

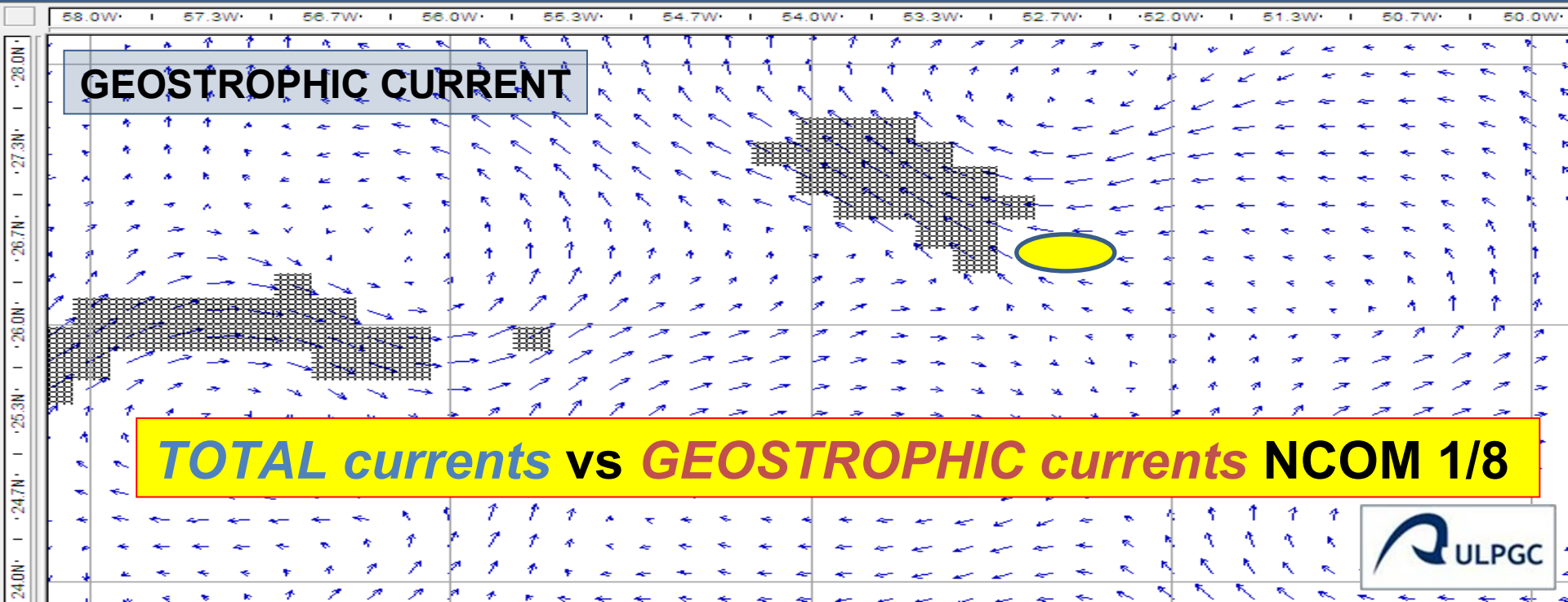
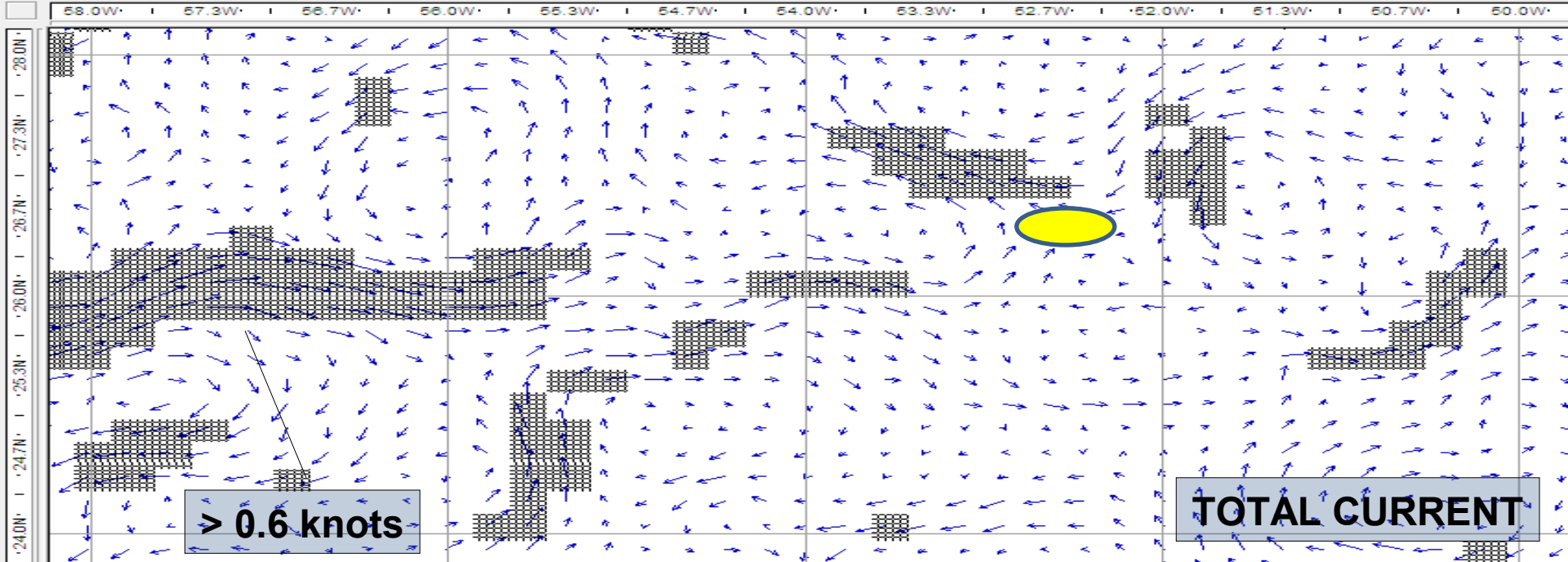
***Lost on 7 jul 10
108 d, 1,200 km (26°N)
A BRAVE GLIDER !!!!***

Data SIO, NOAA, U.S. Navy, NGA, GEBCO
Image IBCAO
© 2011 Cnes/Spot Image
Image © 2011 TerraMetrics

<http://www.i-cool.org/?p=5874>
<http://www.i-cool.org/?p=5982>
<http://www.i-cool.org/?p=6007>

Force, wind, sea and honor

Gracias a todos....



***TOTAL* currents vs *GEOSTROPHIC* currents NCOM 1/8**