

# Les nouveautés dans Litto3D®

Yves Pastol SHOM

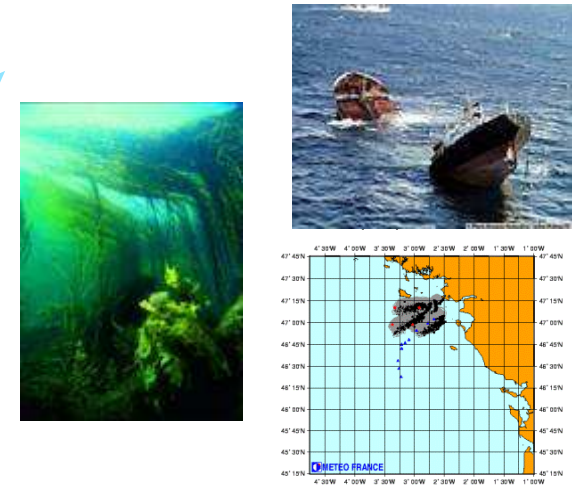




Prévention et gestion des risques

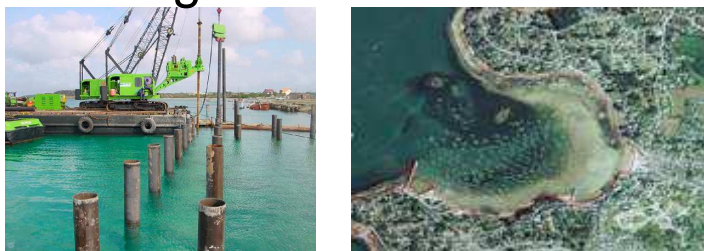


Protection de l'environnement

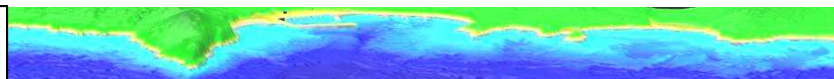


**Nécessité de disposer d'un socle de données de référence utilisable par le maximum d'acteurs**

Aménagement du littoral

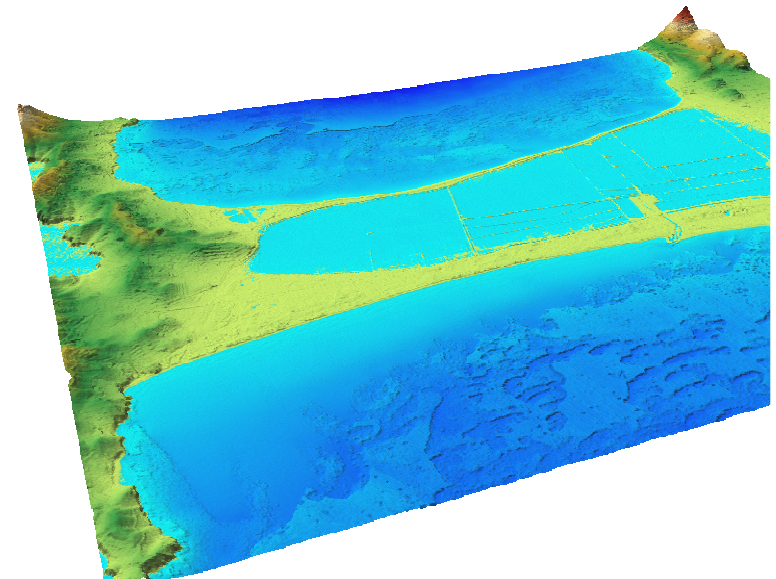


Développement économique

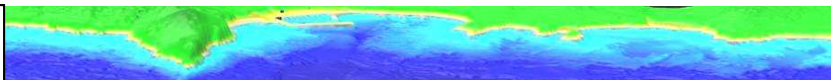


Établir un modèle altimétrique de précision, continu terre-mer, sur l'ensemble du littoral et constitué :

- ✓ de données vérifiées et qualifiées
- ✓ de données standardisées, et libres de droit (Open Data Etalab) facilitant le partage d'expériences, le développement d'applications et leur utilisation




Programme mené en partenariat par l'IGN et le SHOM.



# Litto3D<sup>®</sup> : nouvelles acquisitions

Lidar = Light Detection And Ranging  
« Mesure de distance par détection de lumière »

## TOPOGRAPHIE Lidar Topographique

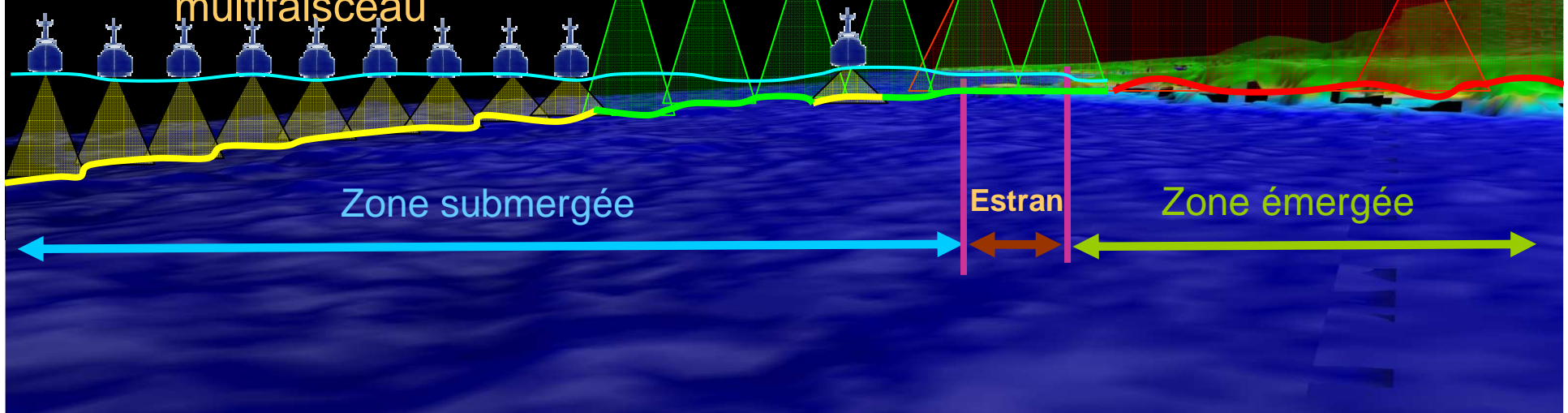
  $v = 80\text{m/s}$   
 $H \sim 1200\text{m}$   
 $L \sim 800\text{m}$

## BATHYMETRIE

$v = 70\text{ m/s}$   
 $H \sim 400\text{m}$   
 $L \sim 220\text{m}$

### Lidar Bathymétrique

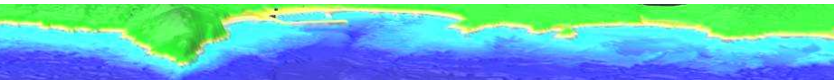
Sondeur  
multifaisceau







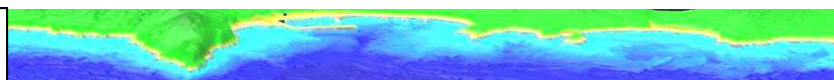
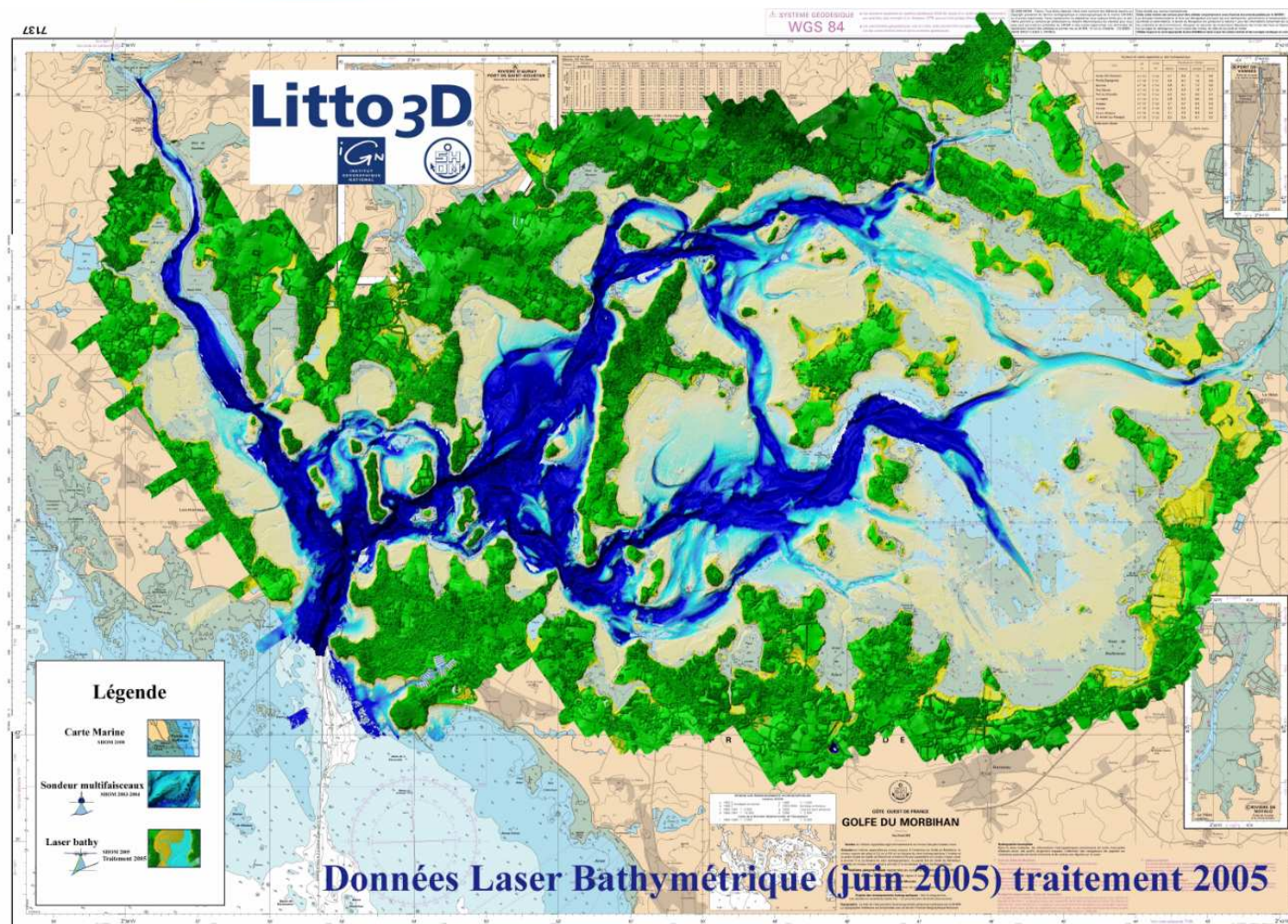
*Levés au LAB du SHOM*



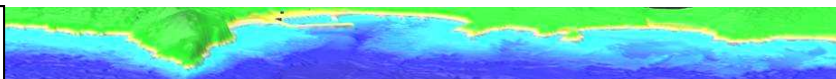
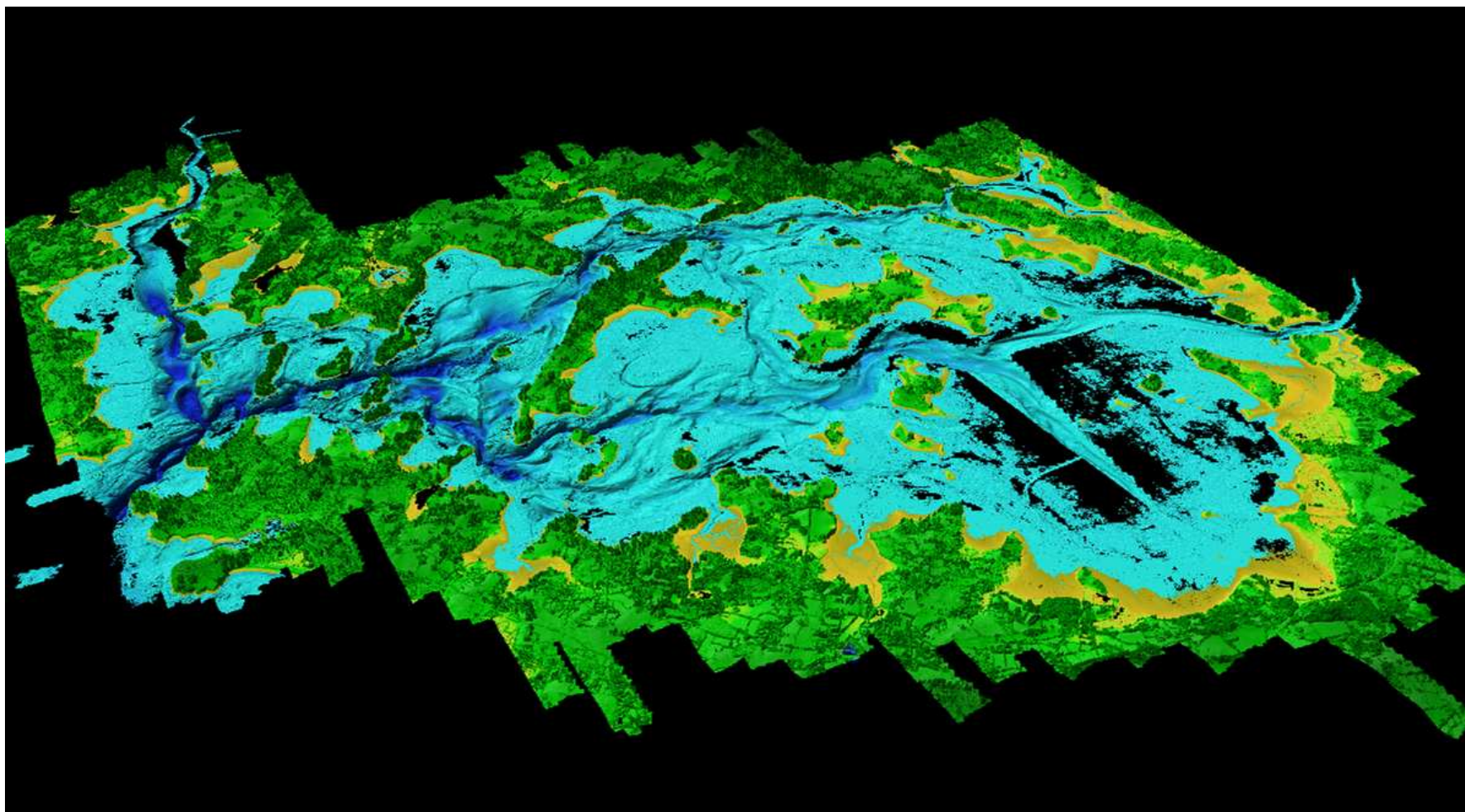


# Golfe du Morbihan 2005 SHOALS 1000T (Optech)

# Litto3D®

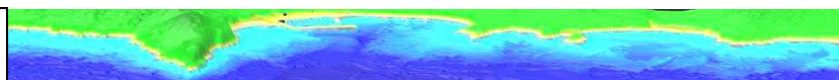
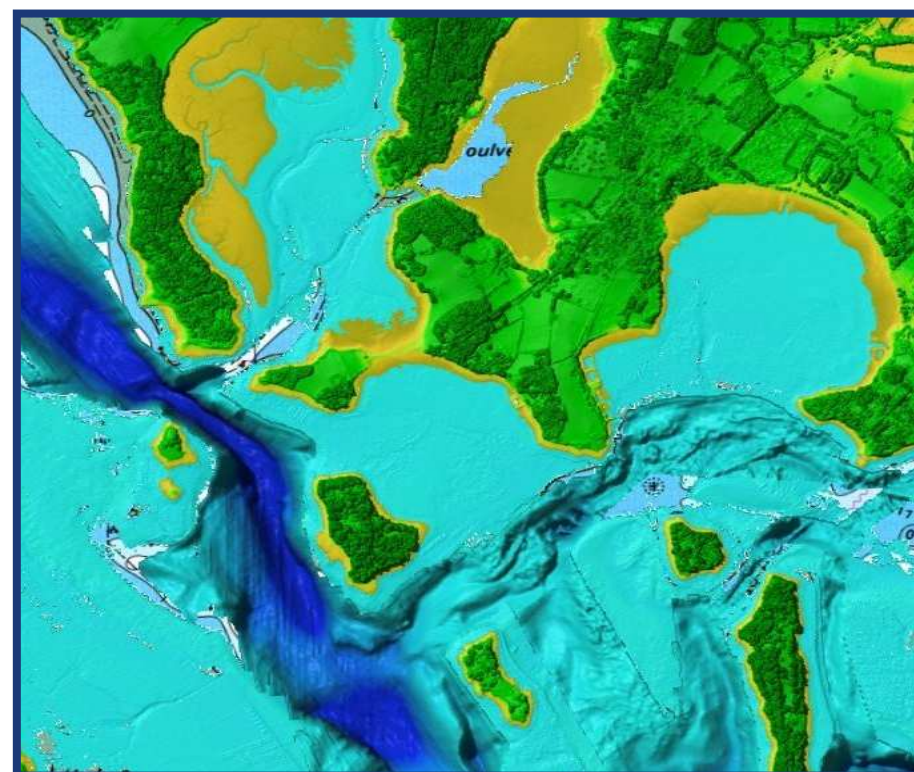
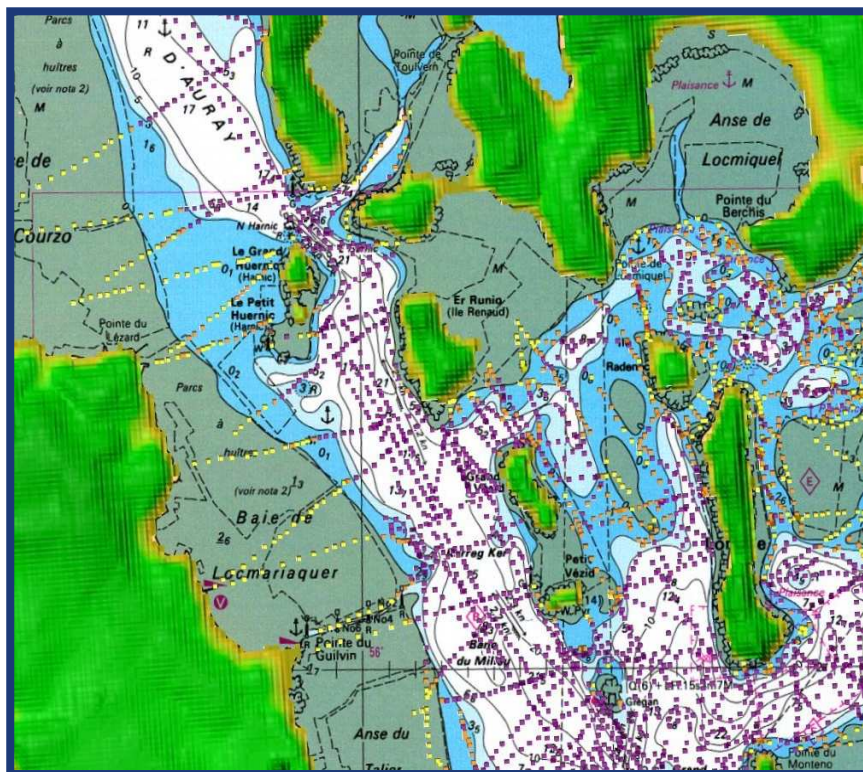




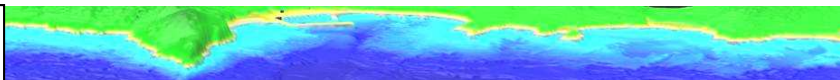
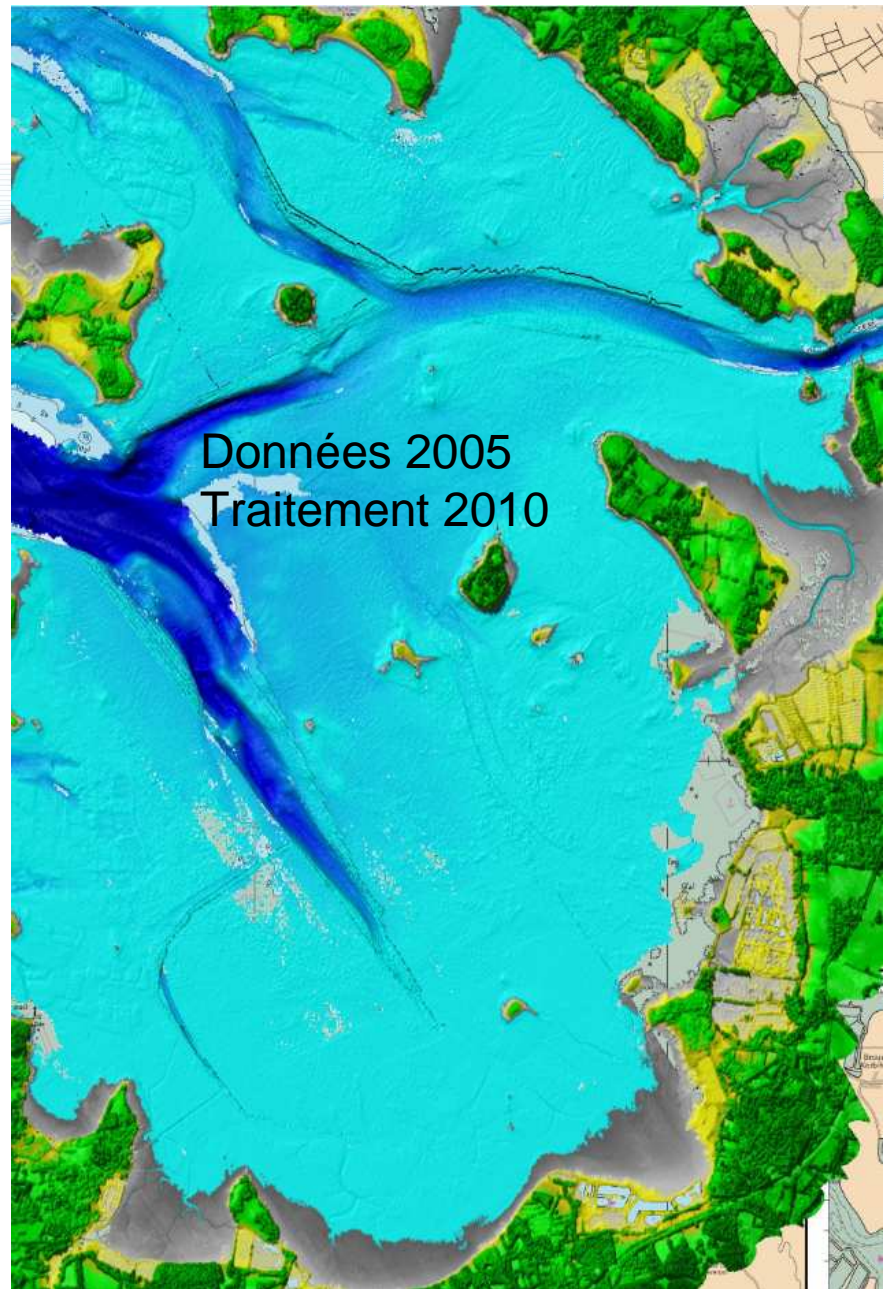
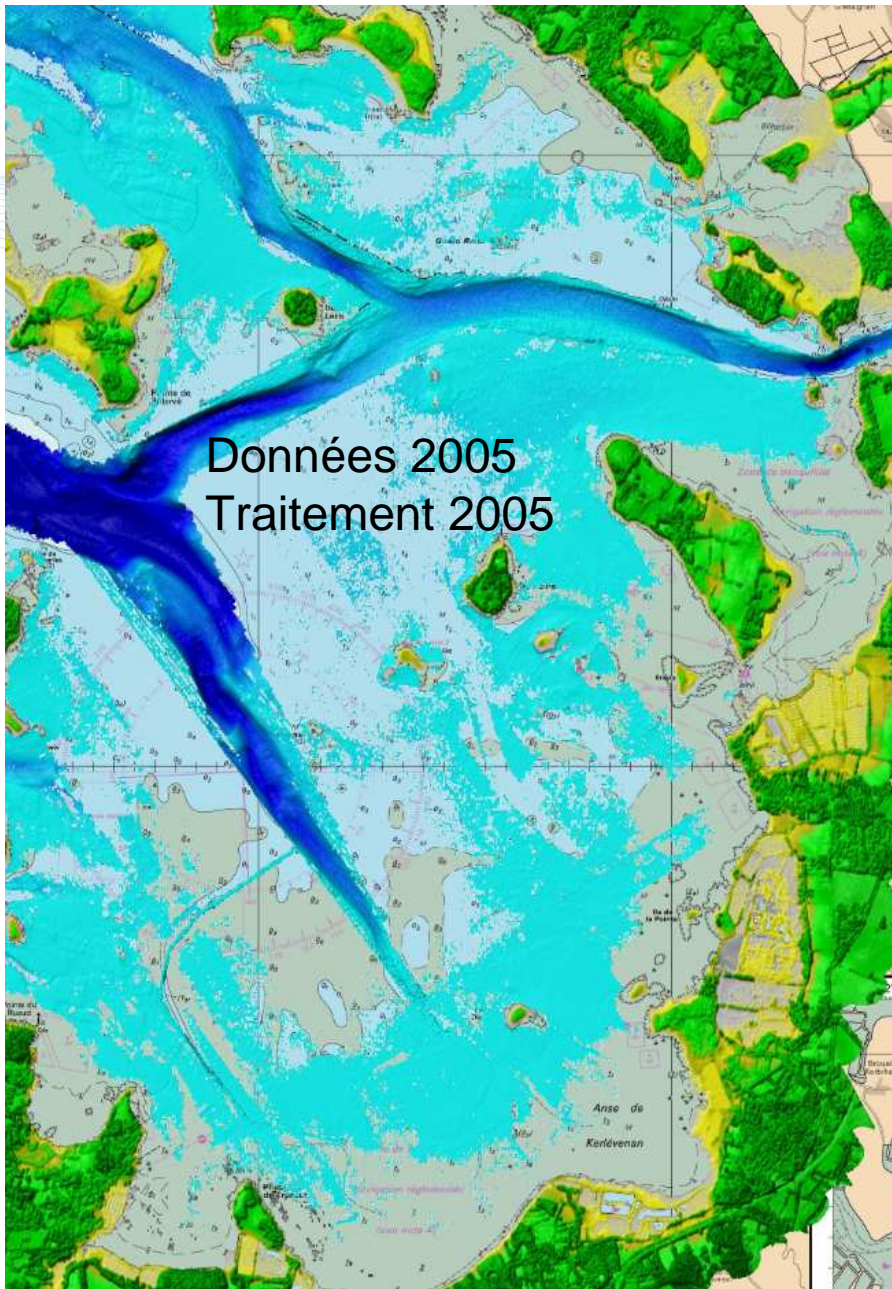




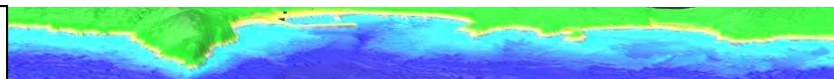
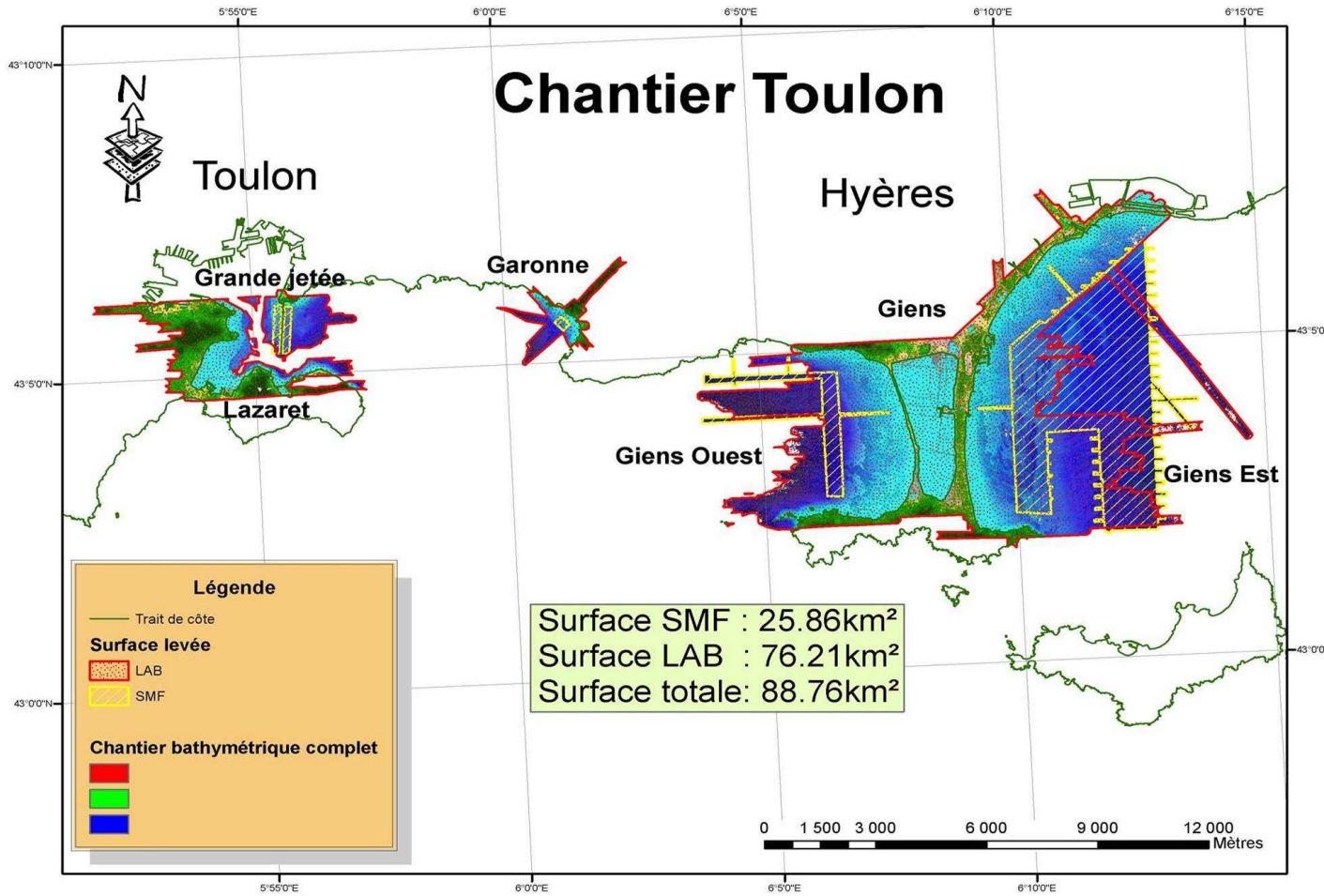
### Histolitt comparé à Litto3D













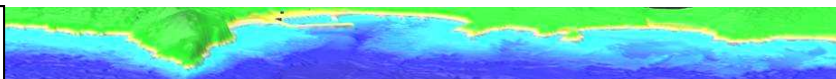
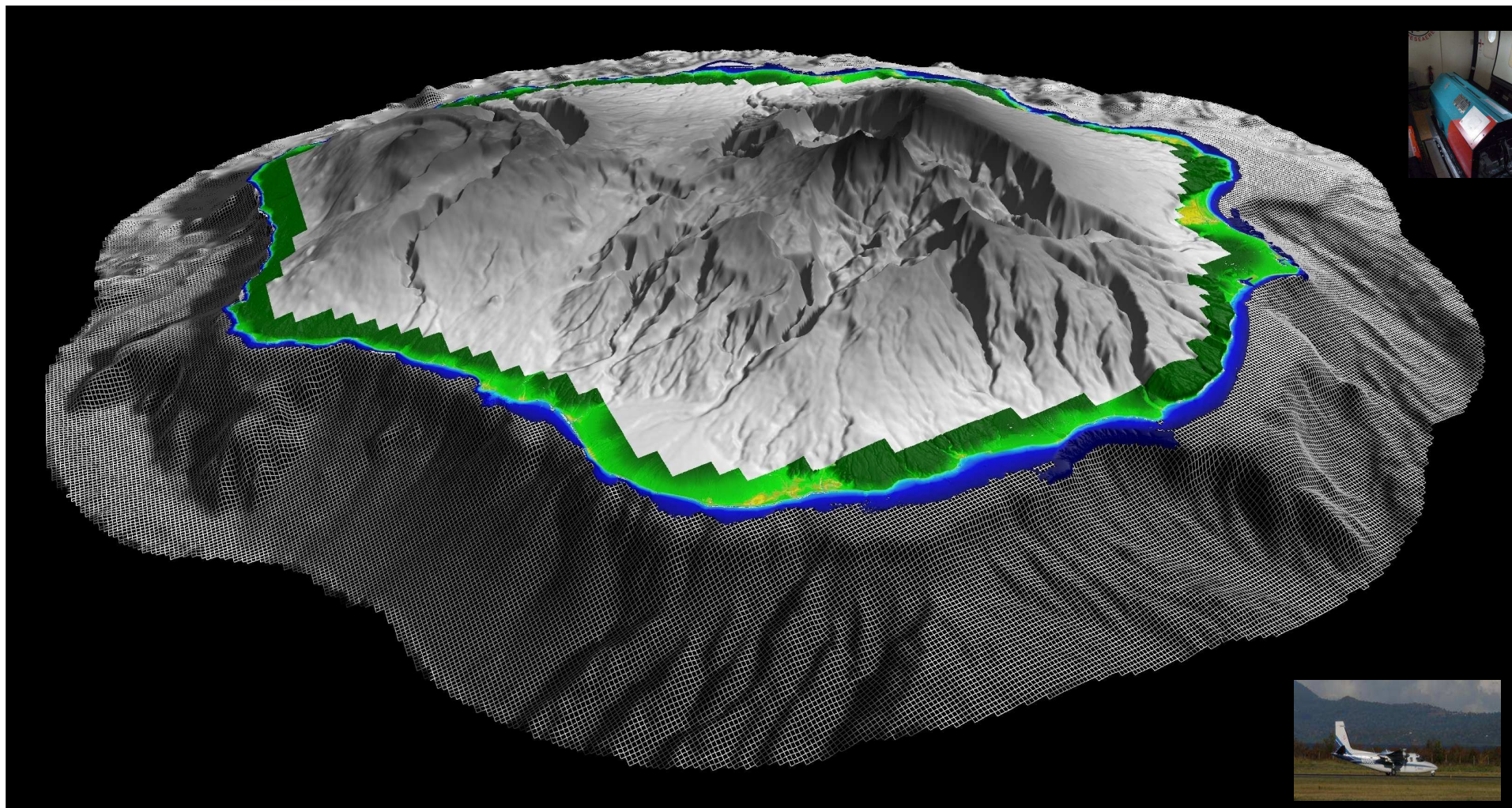




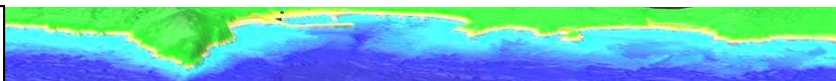
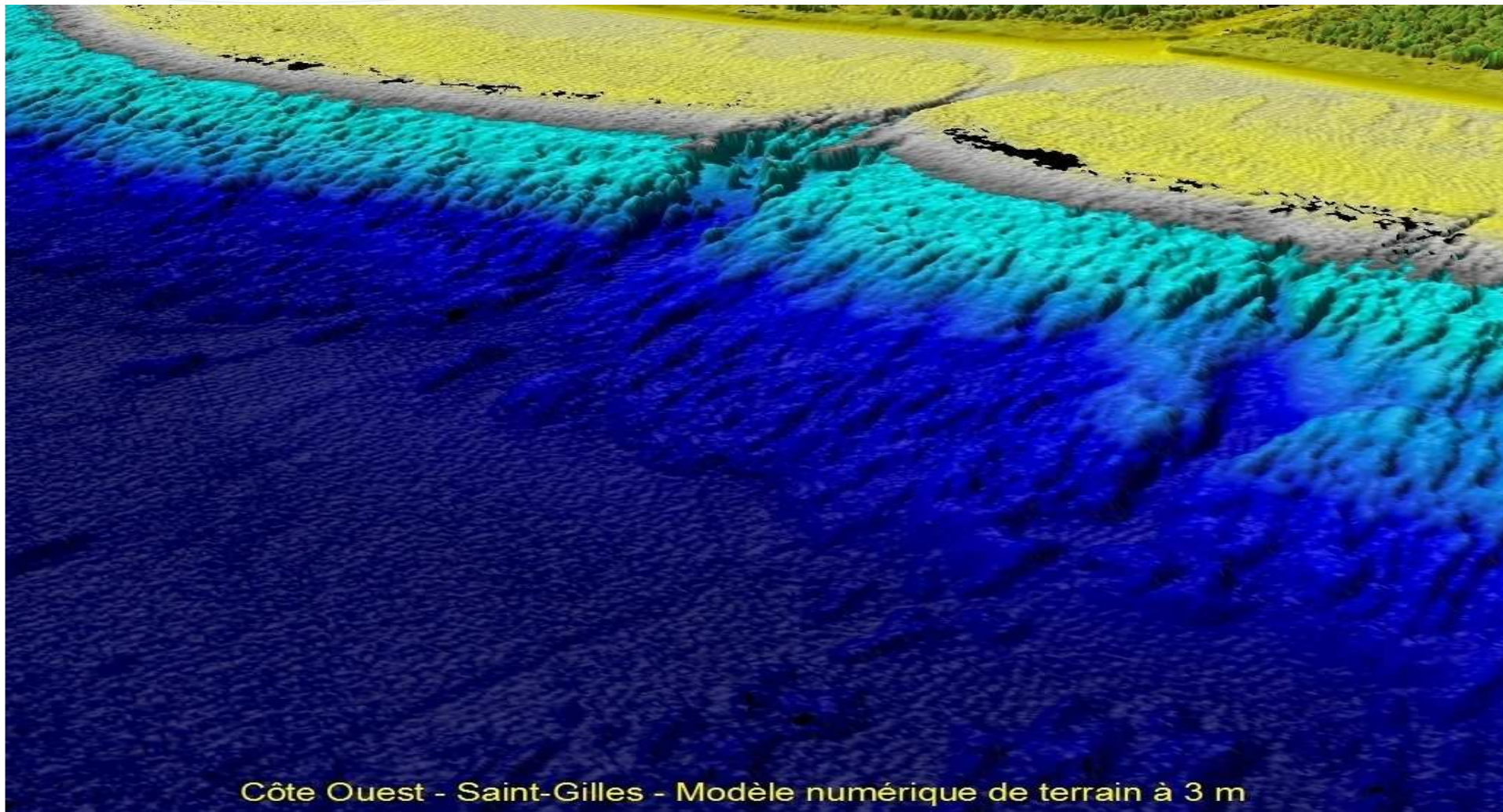


TPM 2009

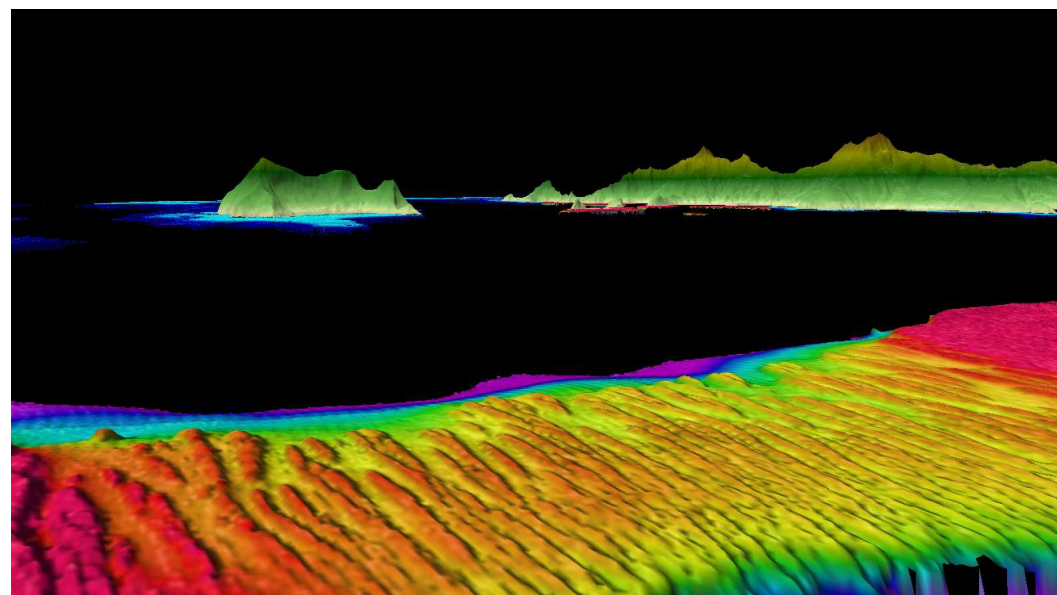
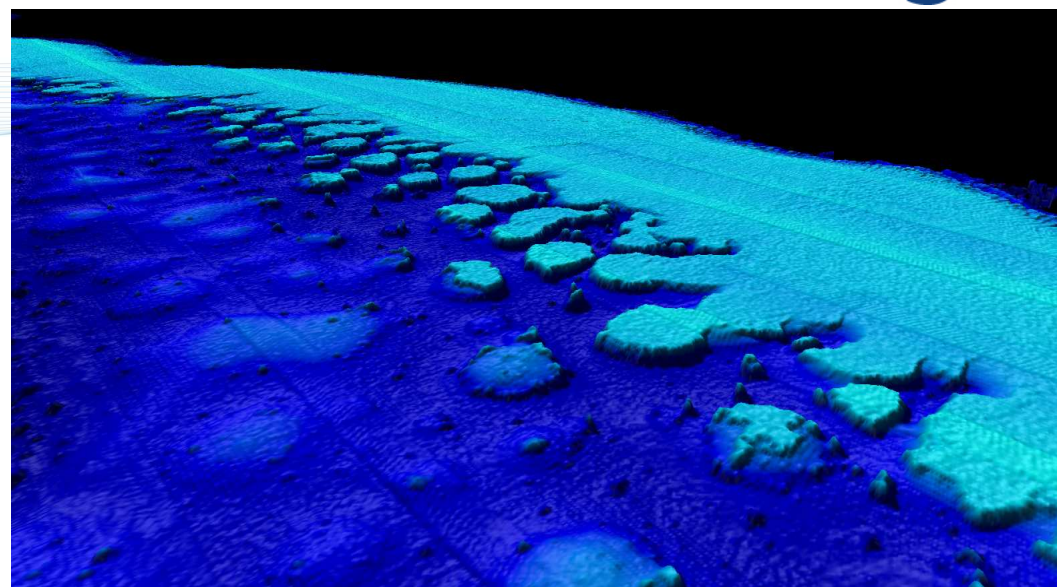
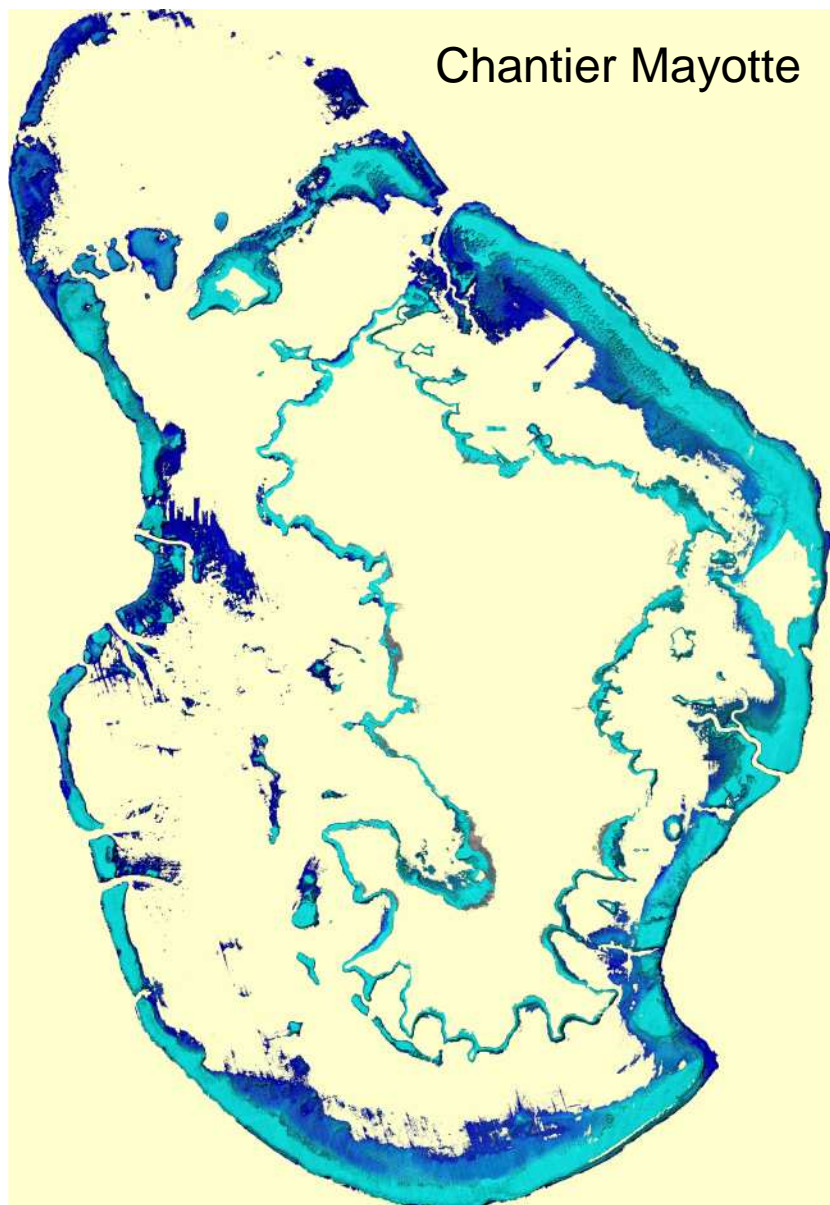






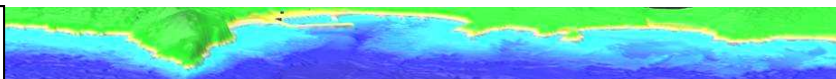
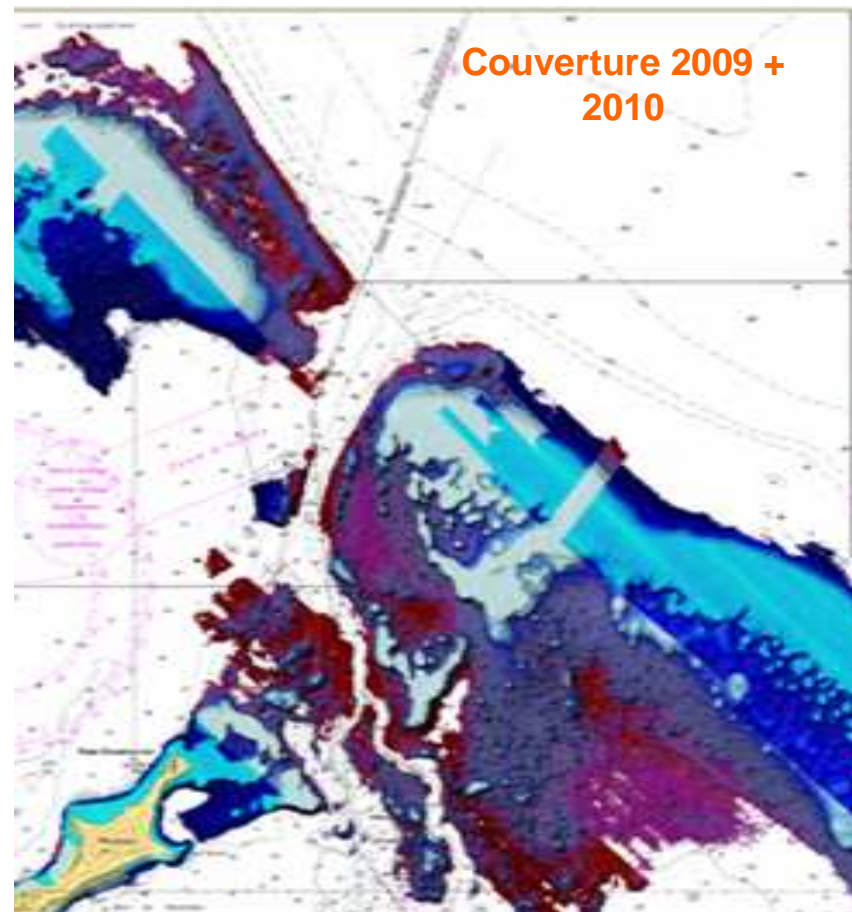
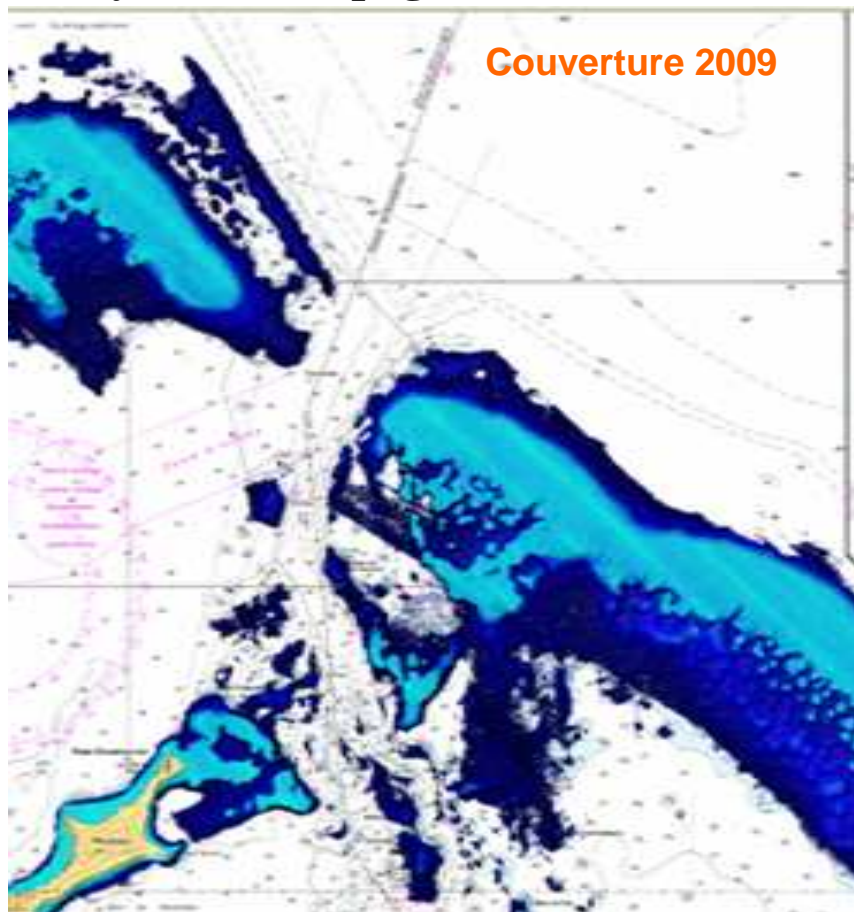




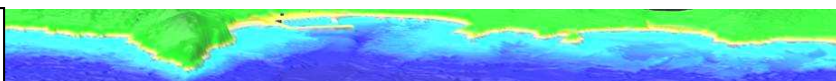
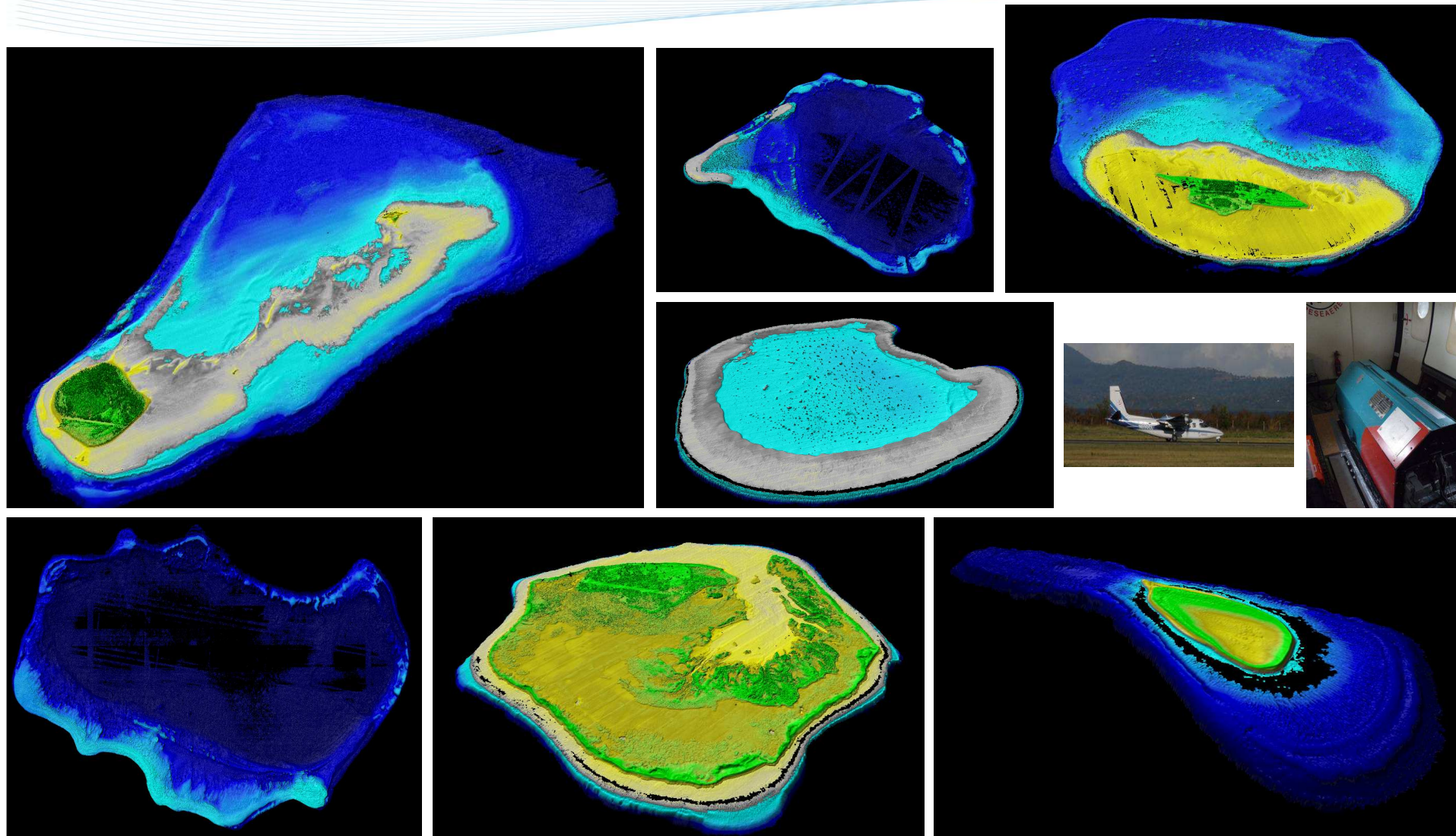




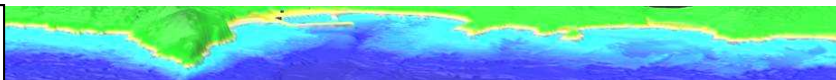
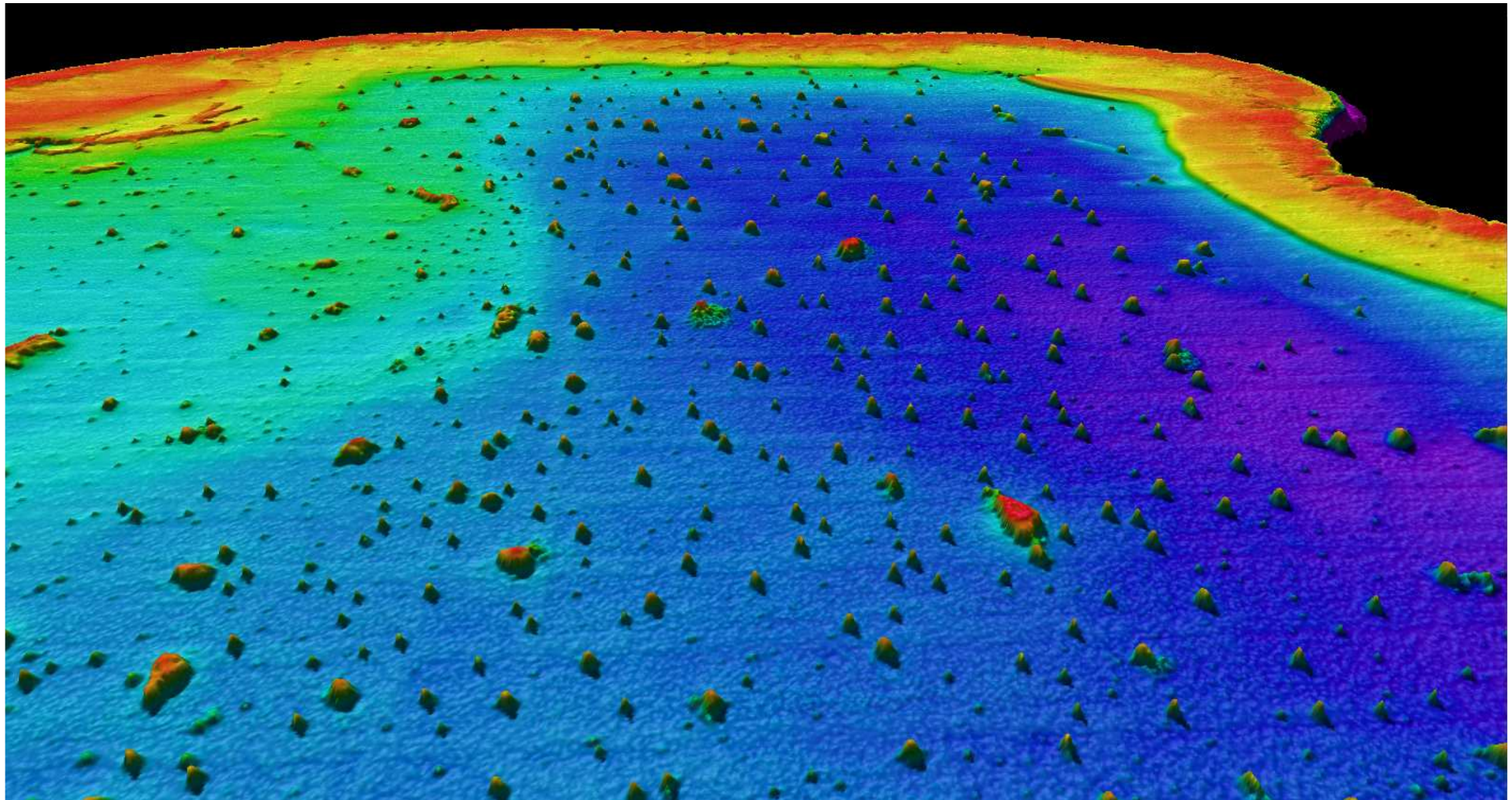
Mayotte - Campagne 2010 – amélioration de la couverture



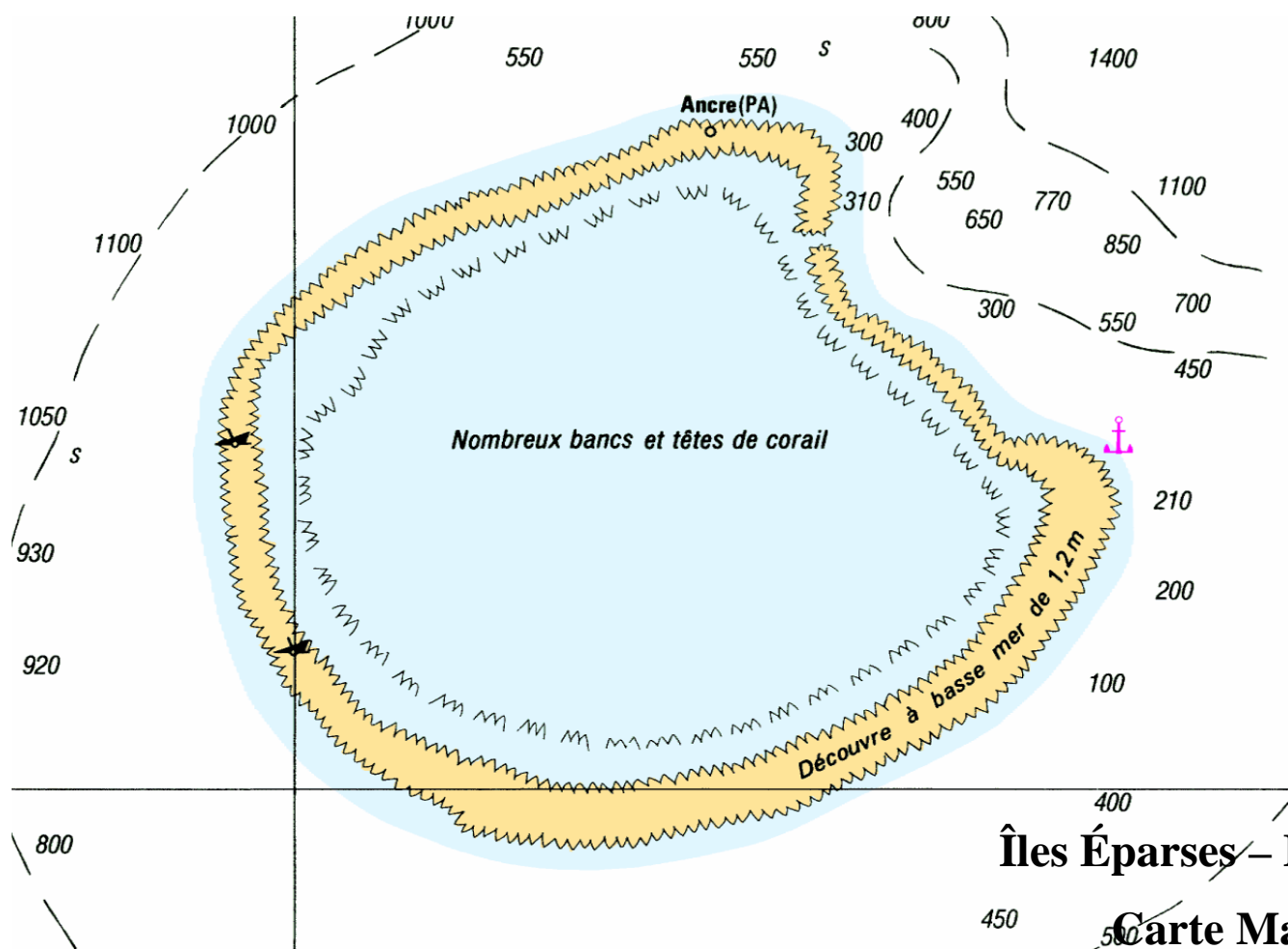




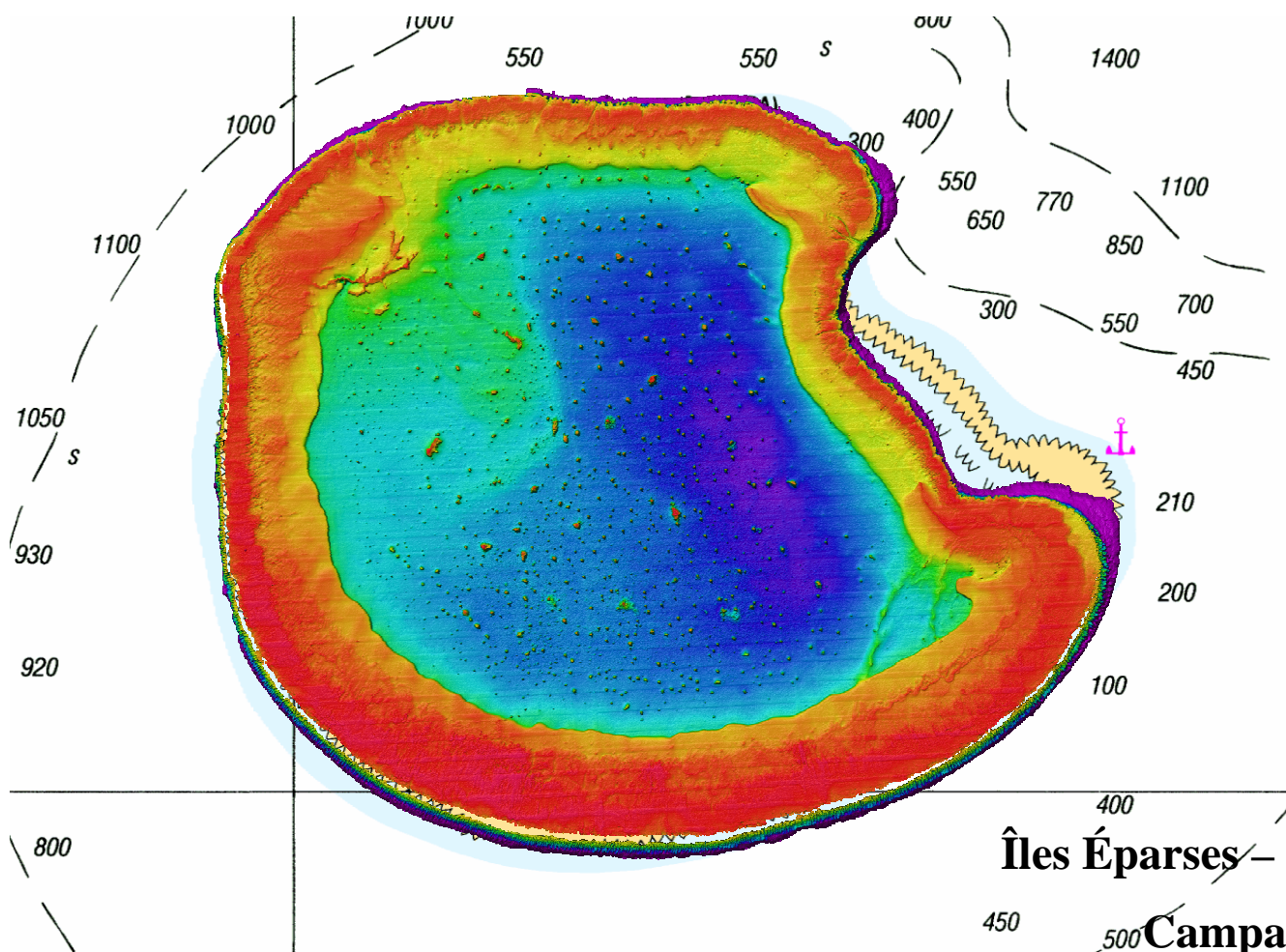




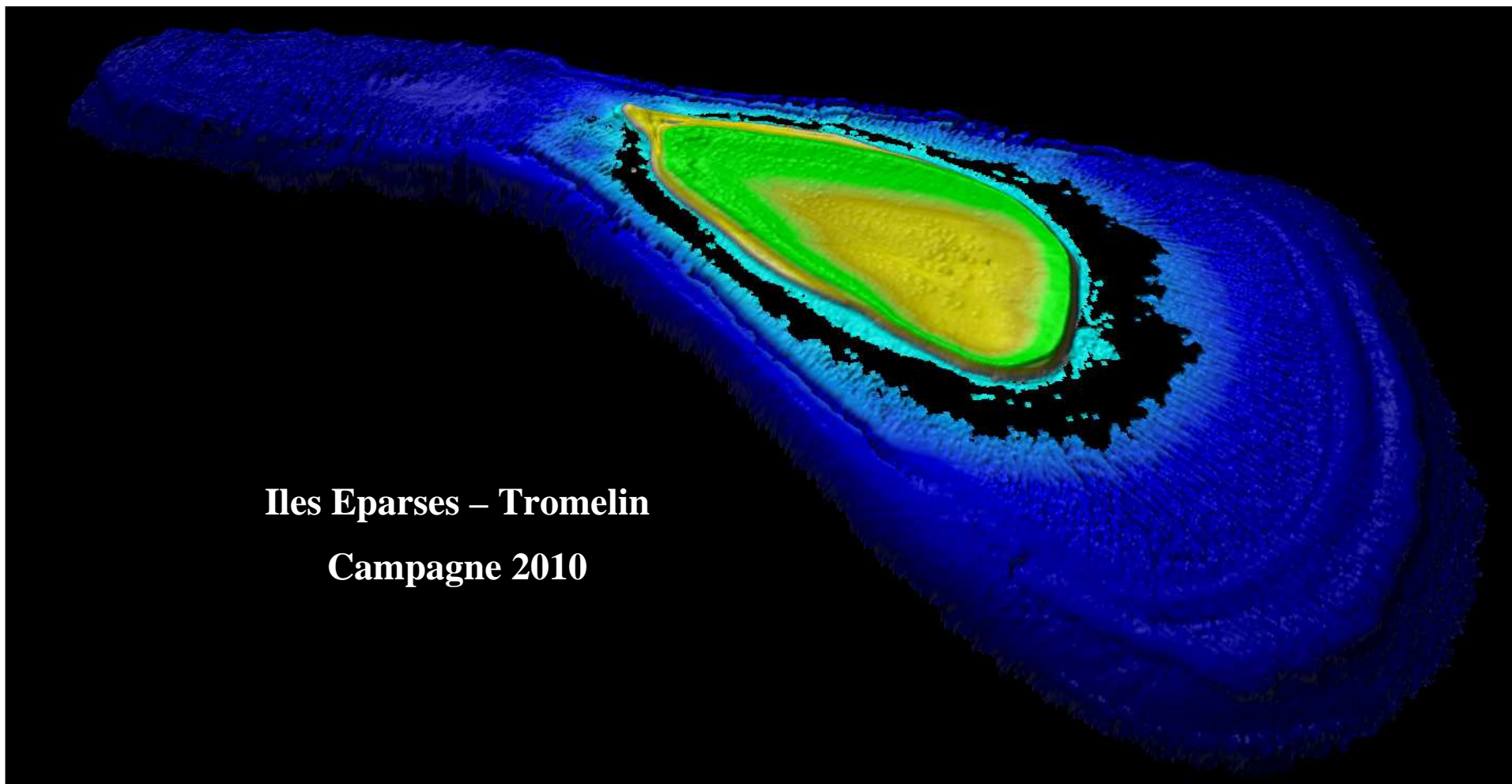




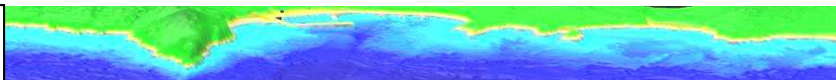




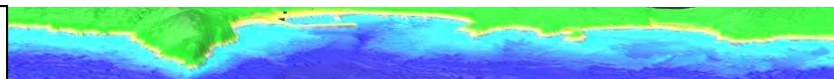
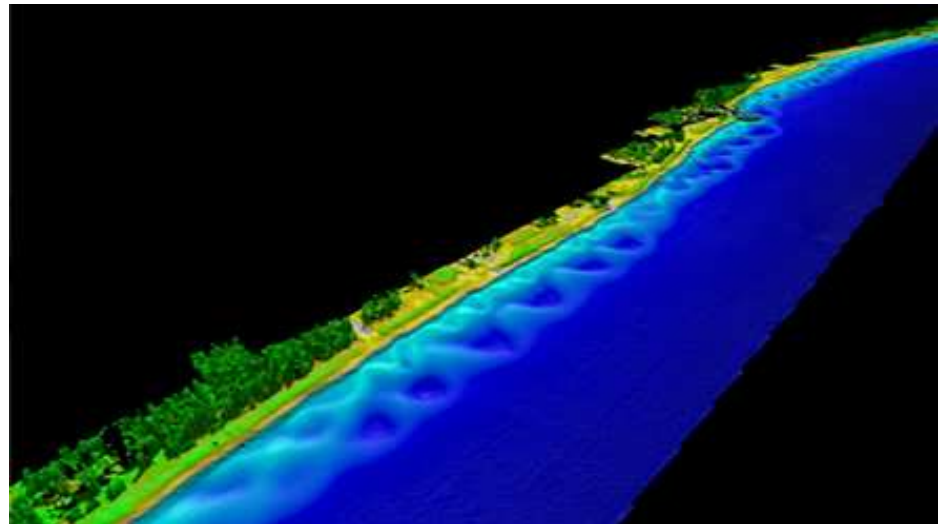
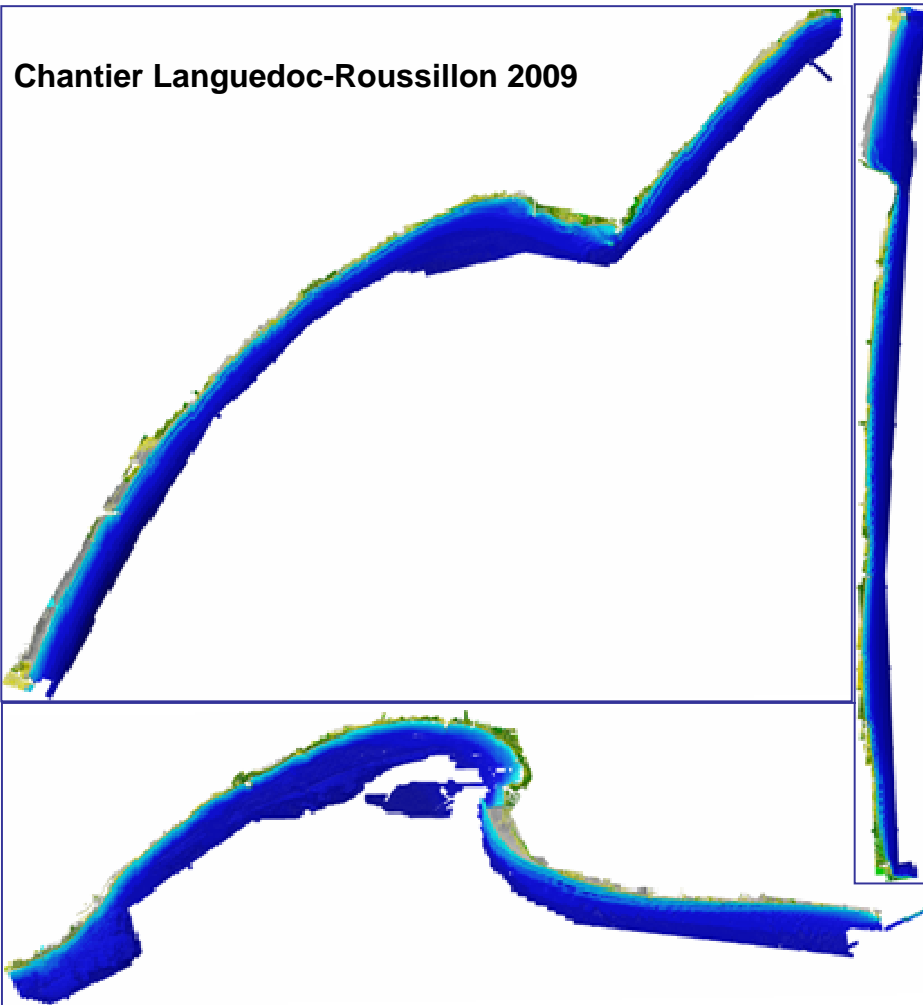




Îles Éparses – Tromelin  
Campagne 2010



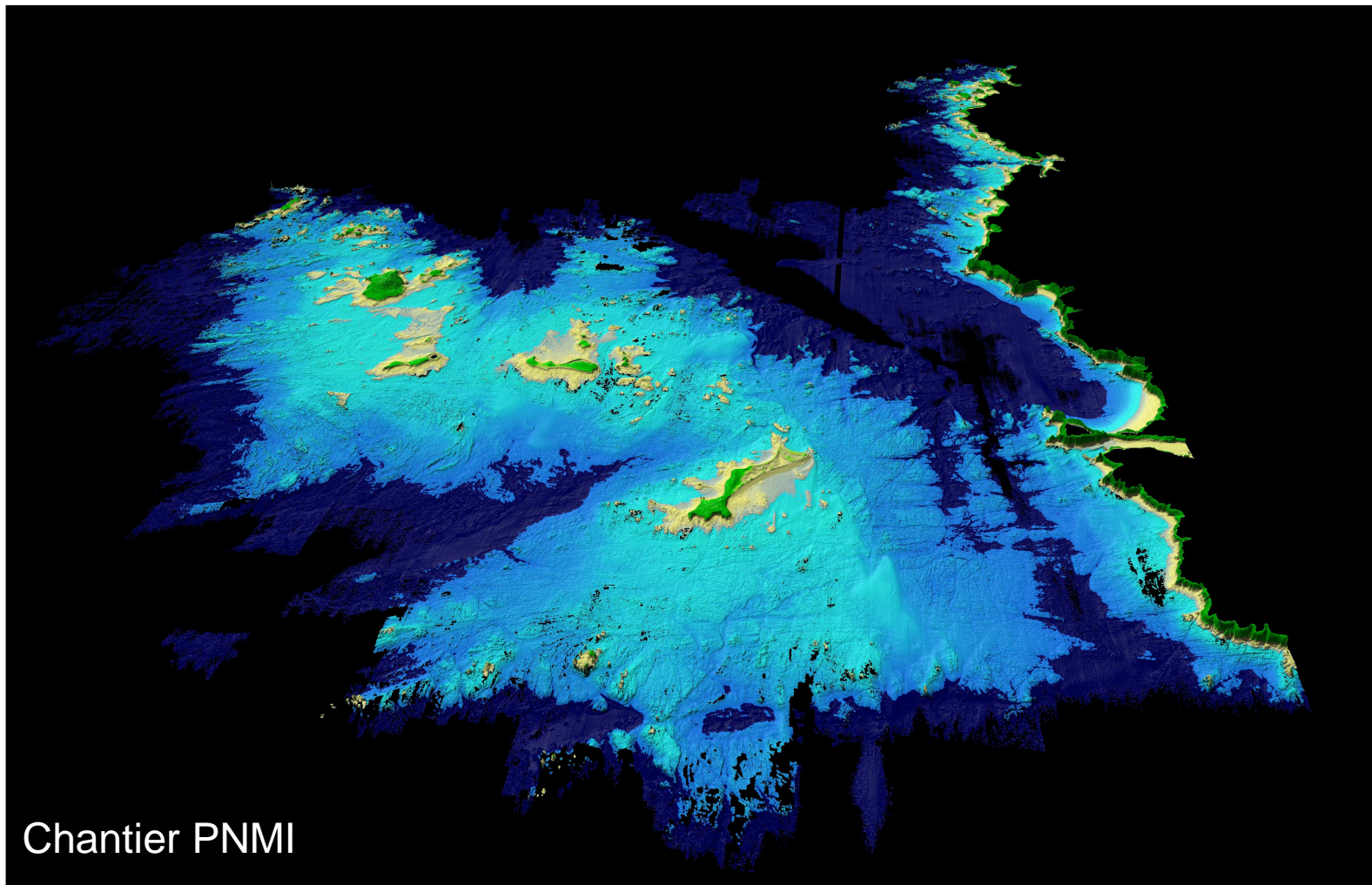




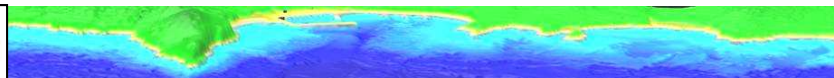


# Parc National Marin d'Iroise 2010 HawkEye Ila (AHAB)

# Litto3D®

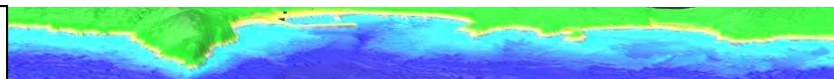
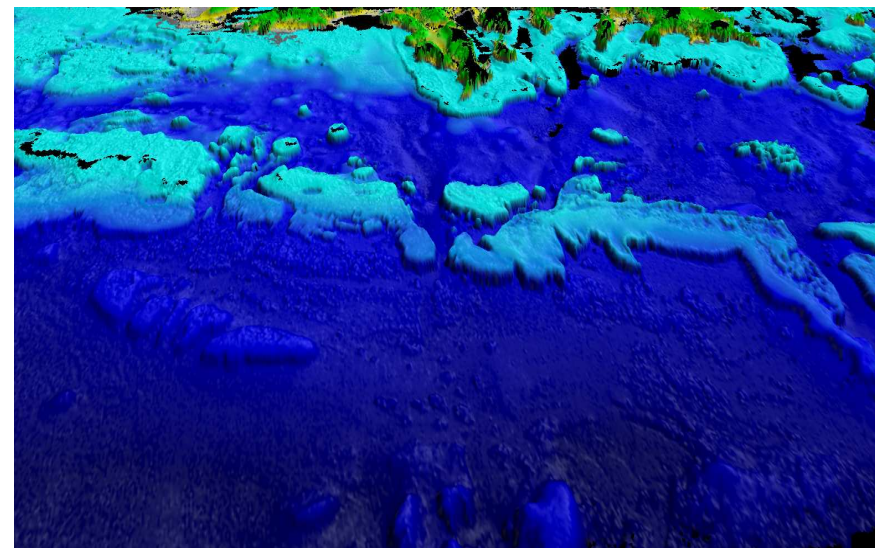
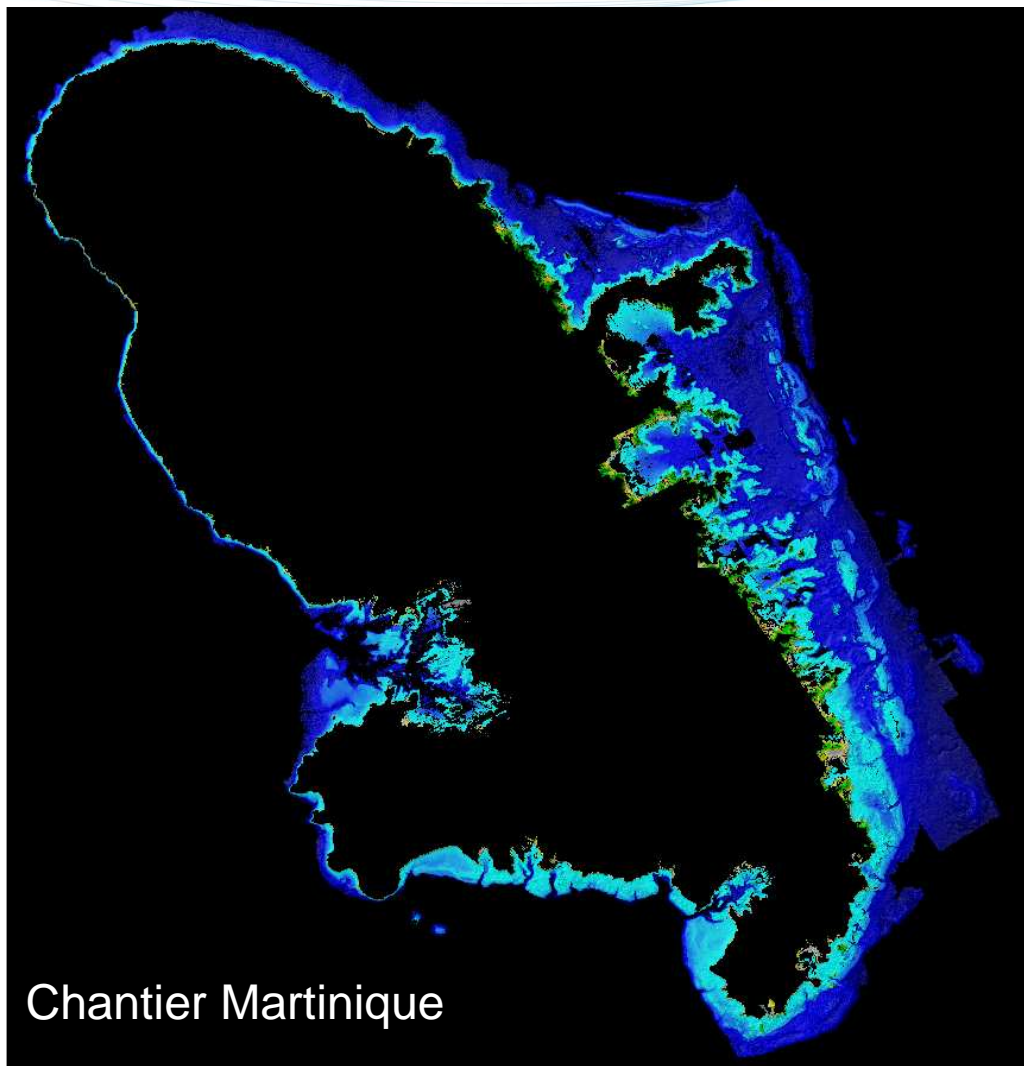


Chantier PNMI



10 Octobre 2012

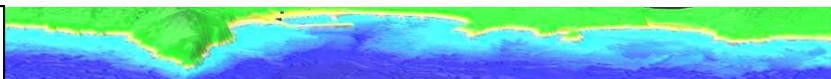
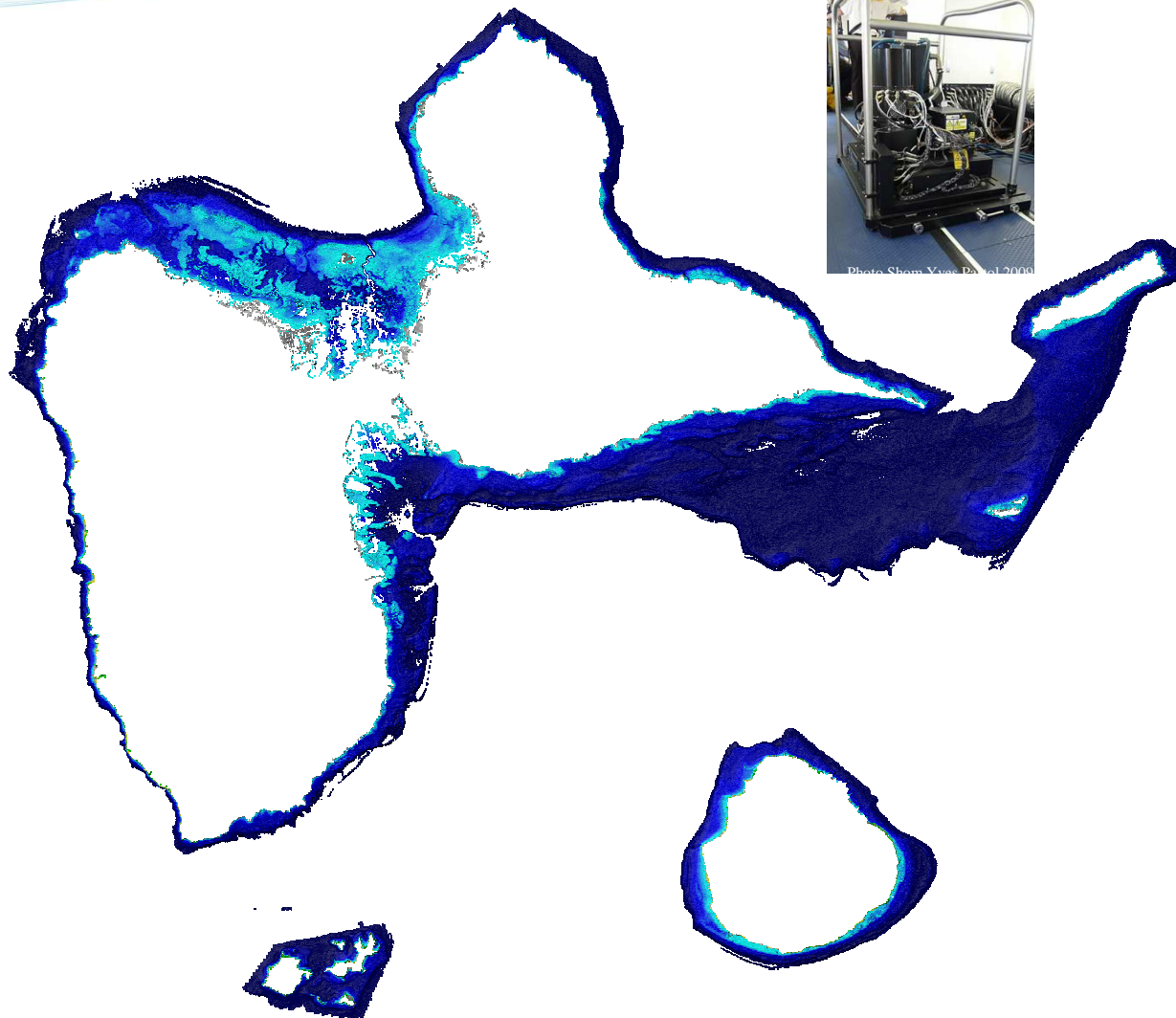
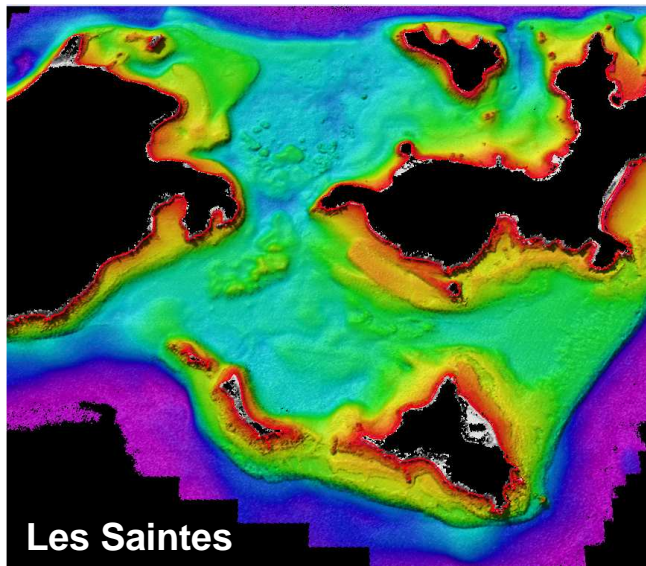






# Guadeloupe 2010 LADS MKII (FugroLads)

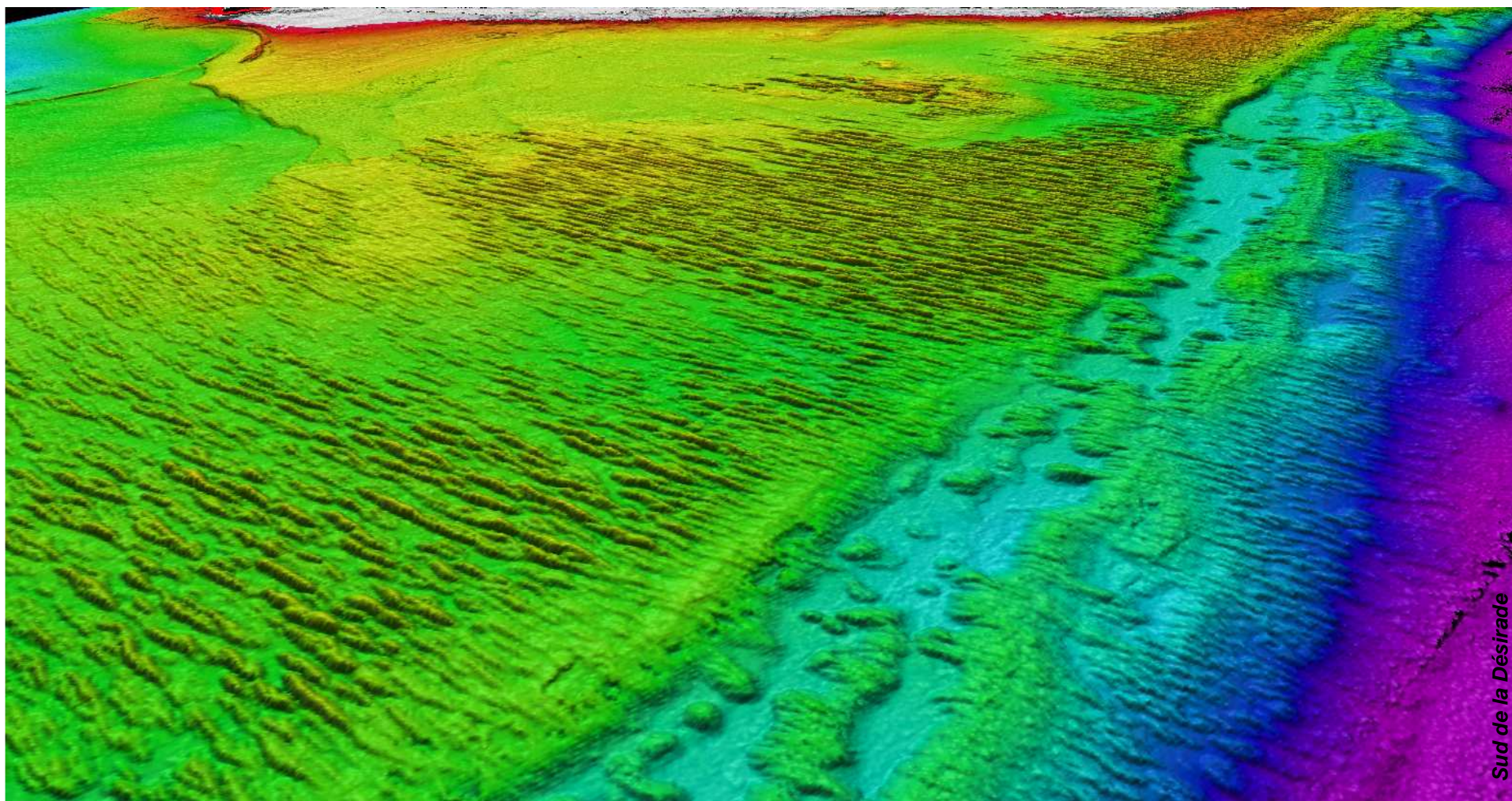
# Litto3D®



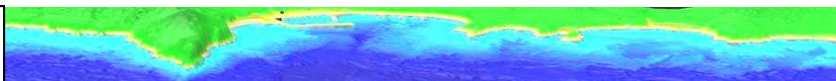


# Guadeloupe 2010 LADS MKII (FugroLads)

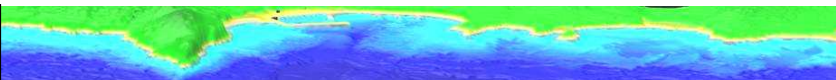
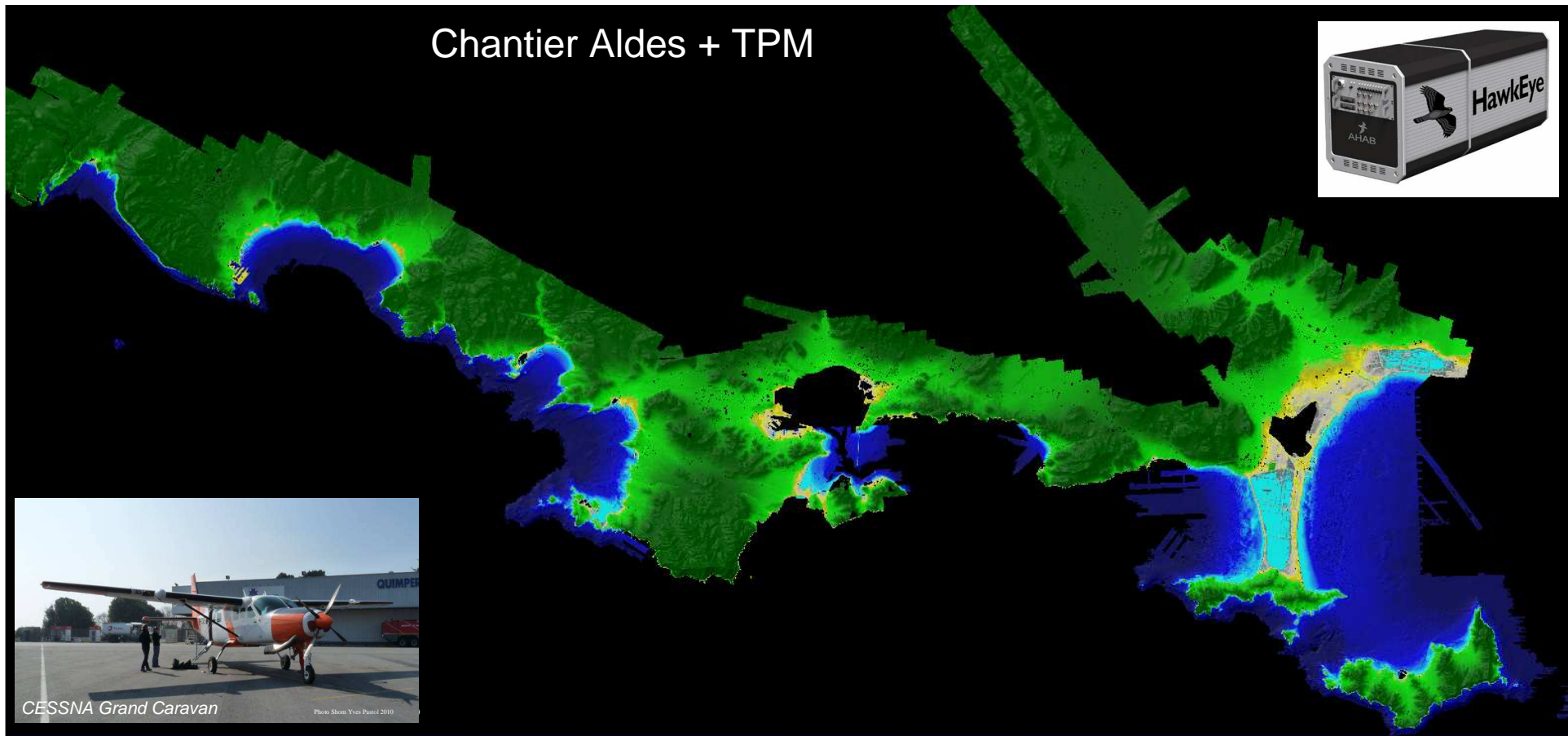
# Litto3D®



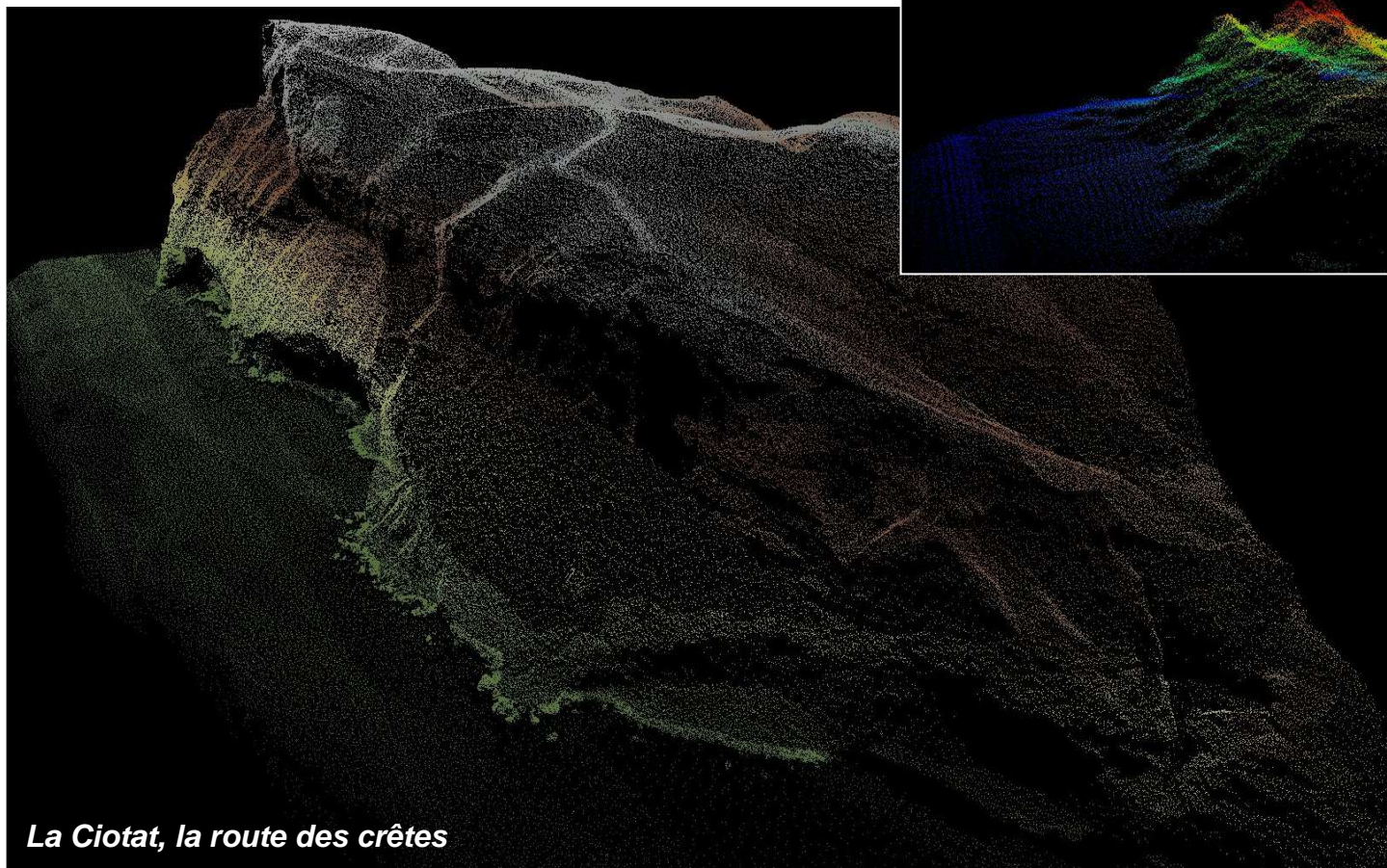
Sud de la Désirade



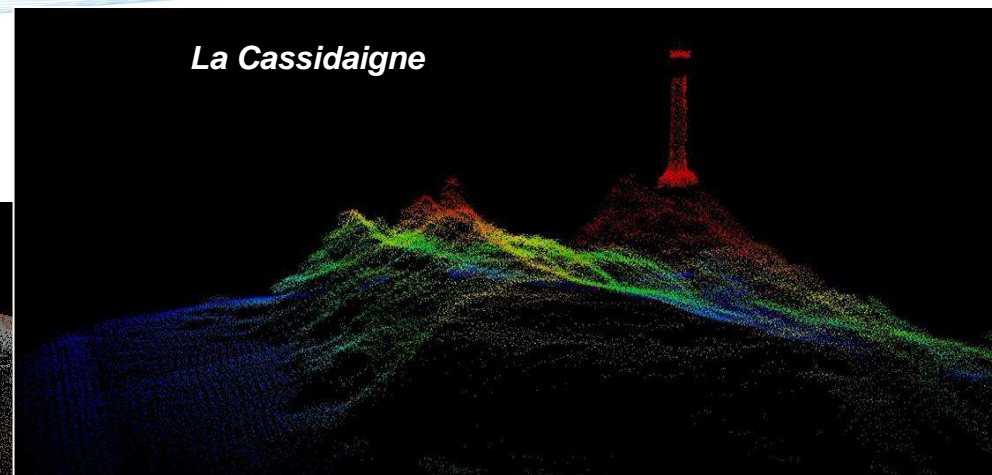








*La Ciotat, la route des crêtes*



*La Cassidaigne*

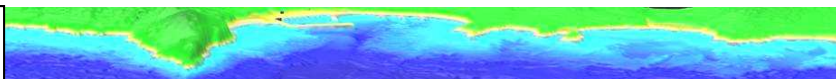
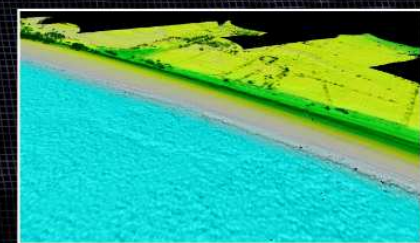
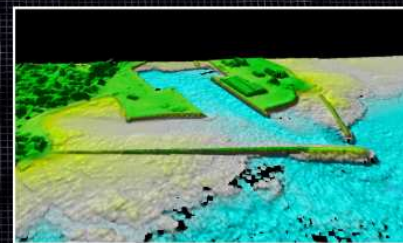
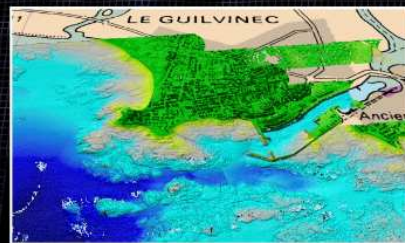
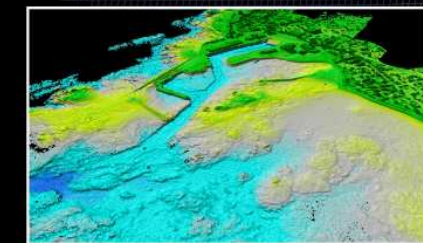
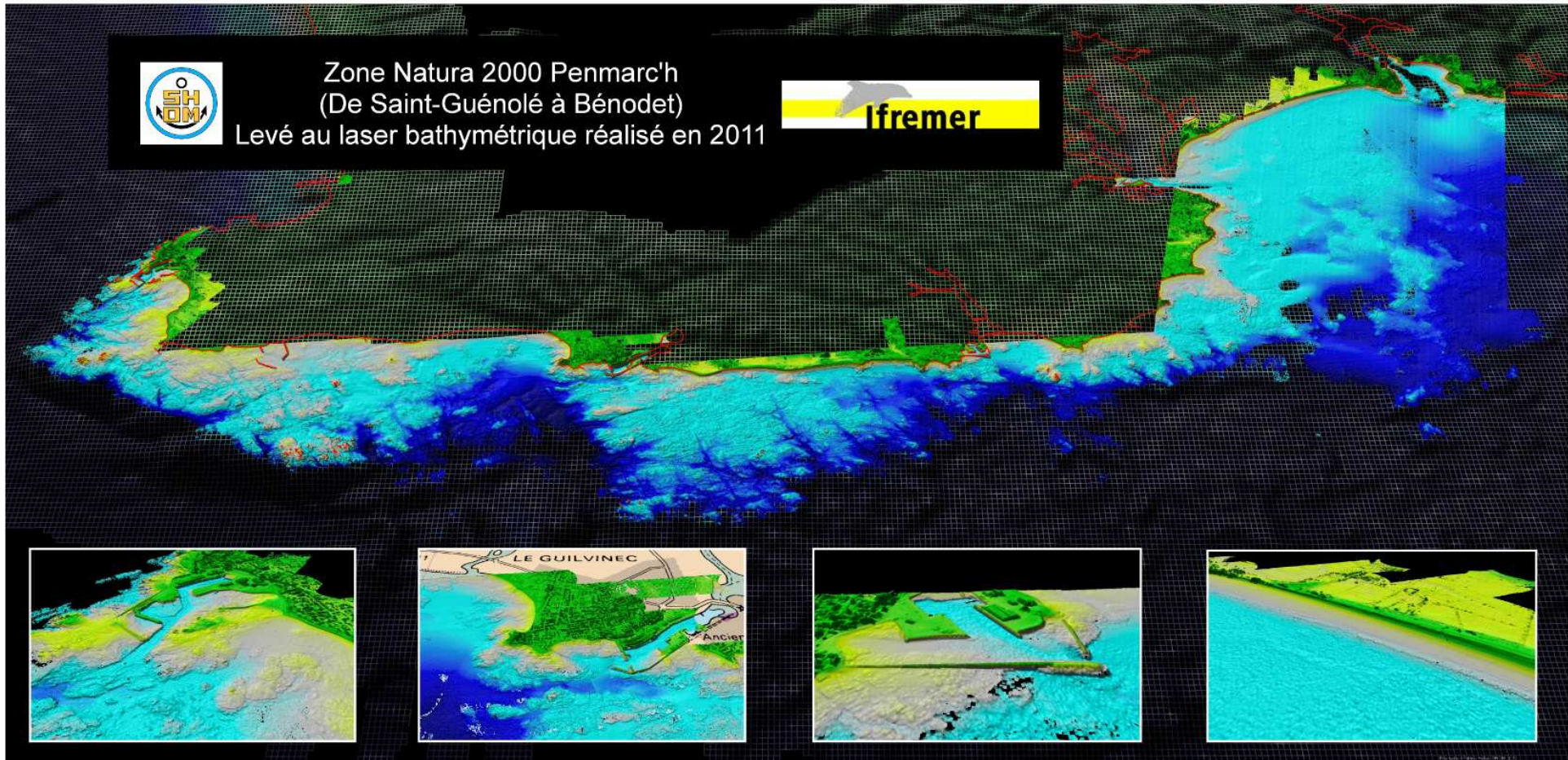


# Penmarch 2011 HawkEye IIb (AHAB)

# Litto3D®

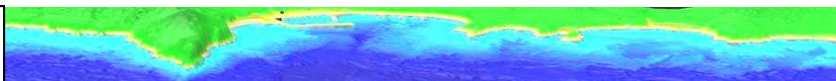
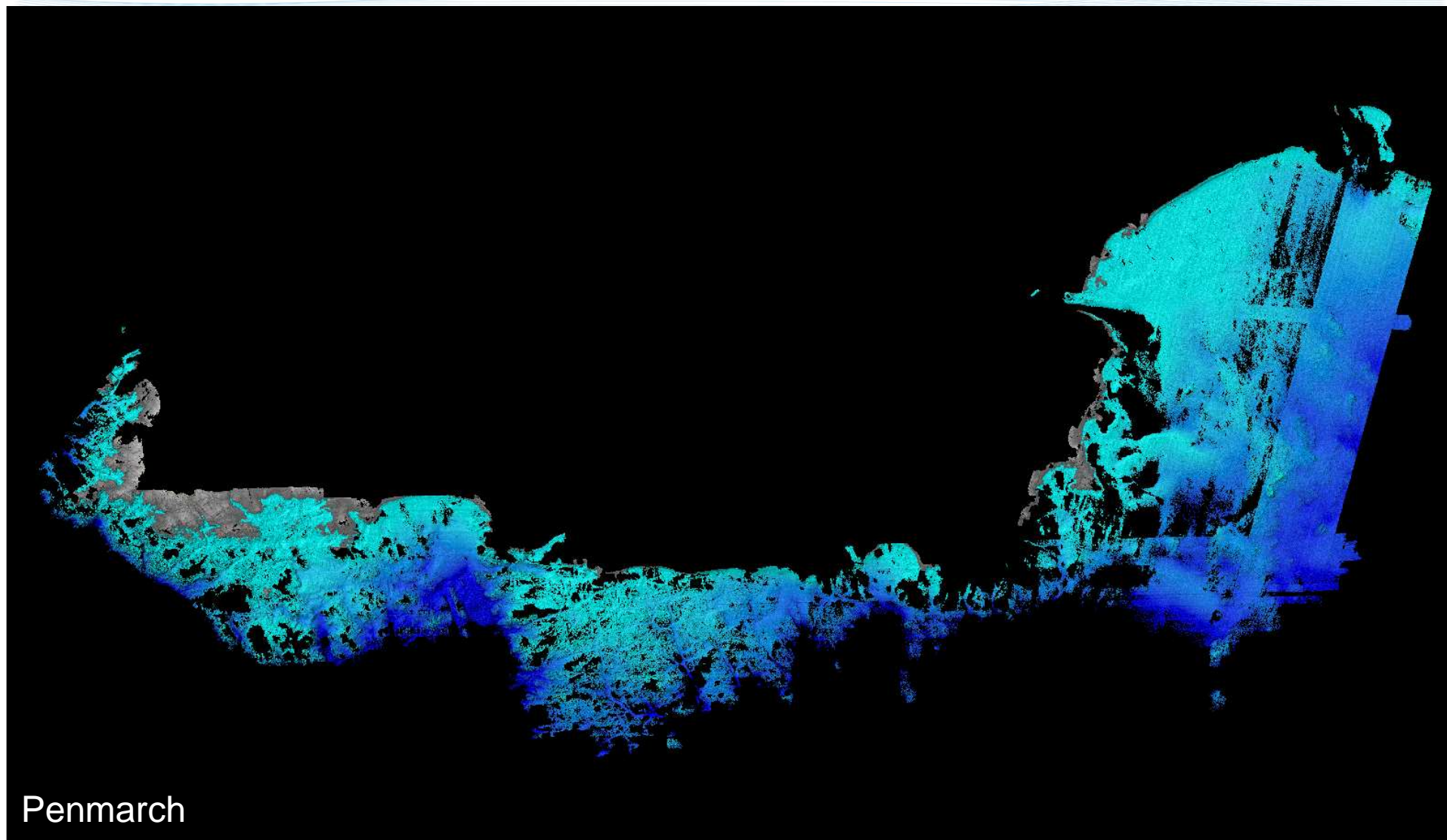


Zone Natura 2000 Penmarc'h  
(De Saint-Guérolé à Bénodet)  
Levé au laser bathymétrique réalisé en 2011





Résultat fourni par le prestataire

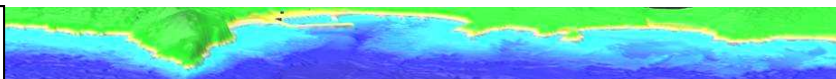
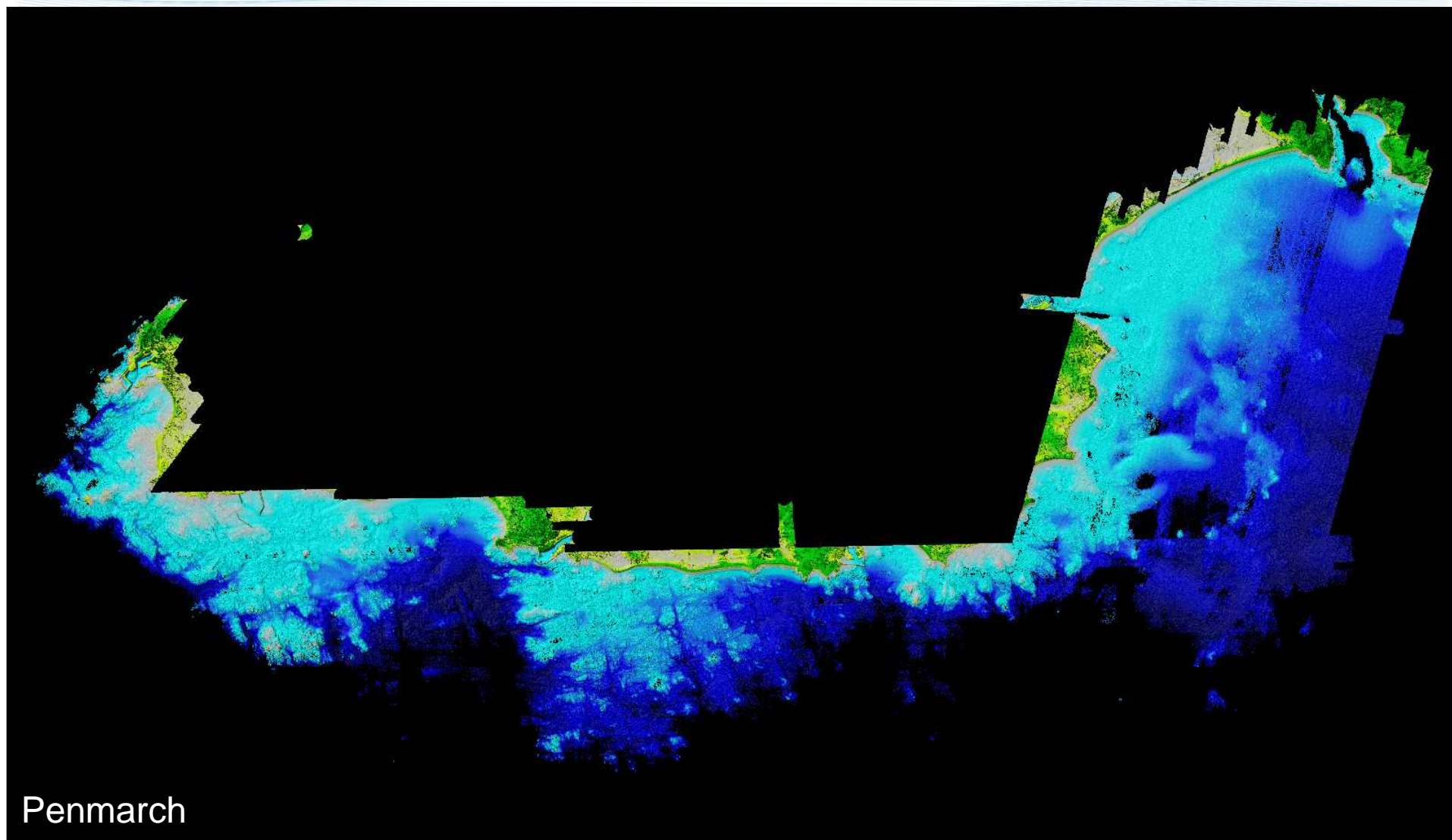




# Penmarch 2011 HawkEye IIb (AHAB)

# Litto3D®

Après retraitement par le SHOM

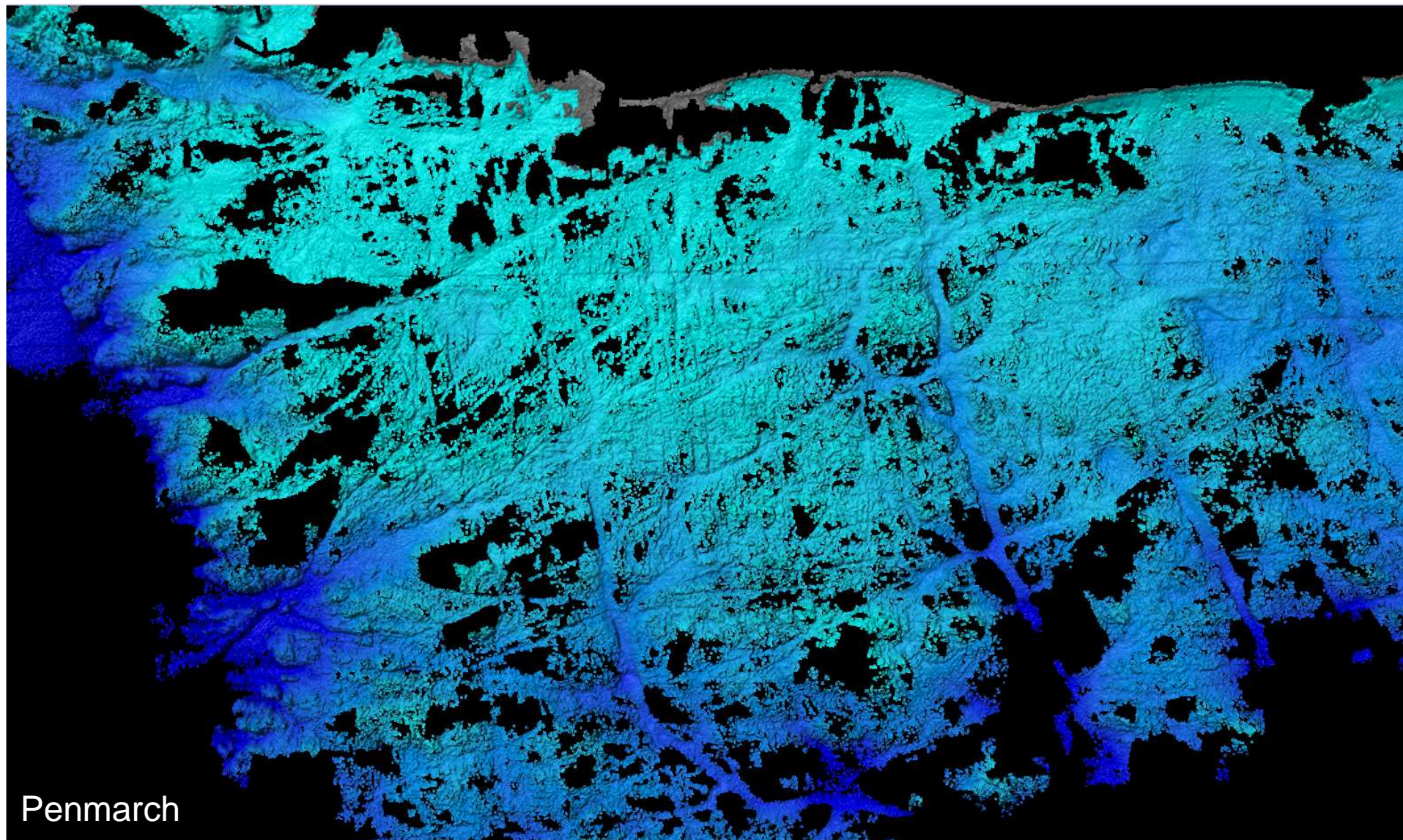




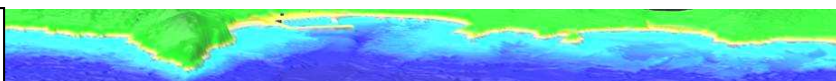
# Penmarch 2011 HawkEye IIb (AHAB)

# Litto3D®

Résultat fourni par le prestataire



Penmarch

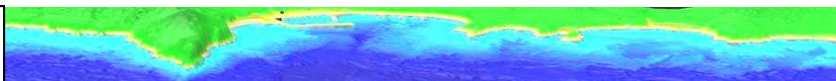
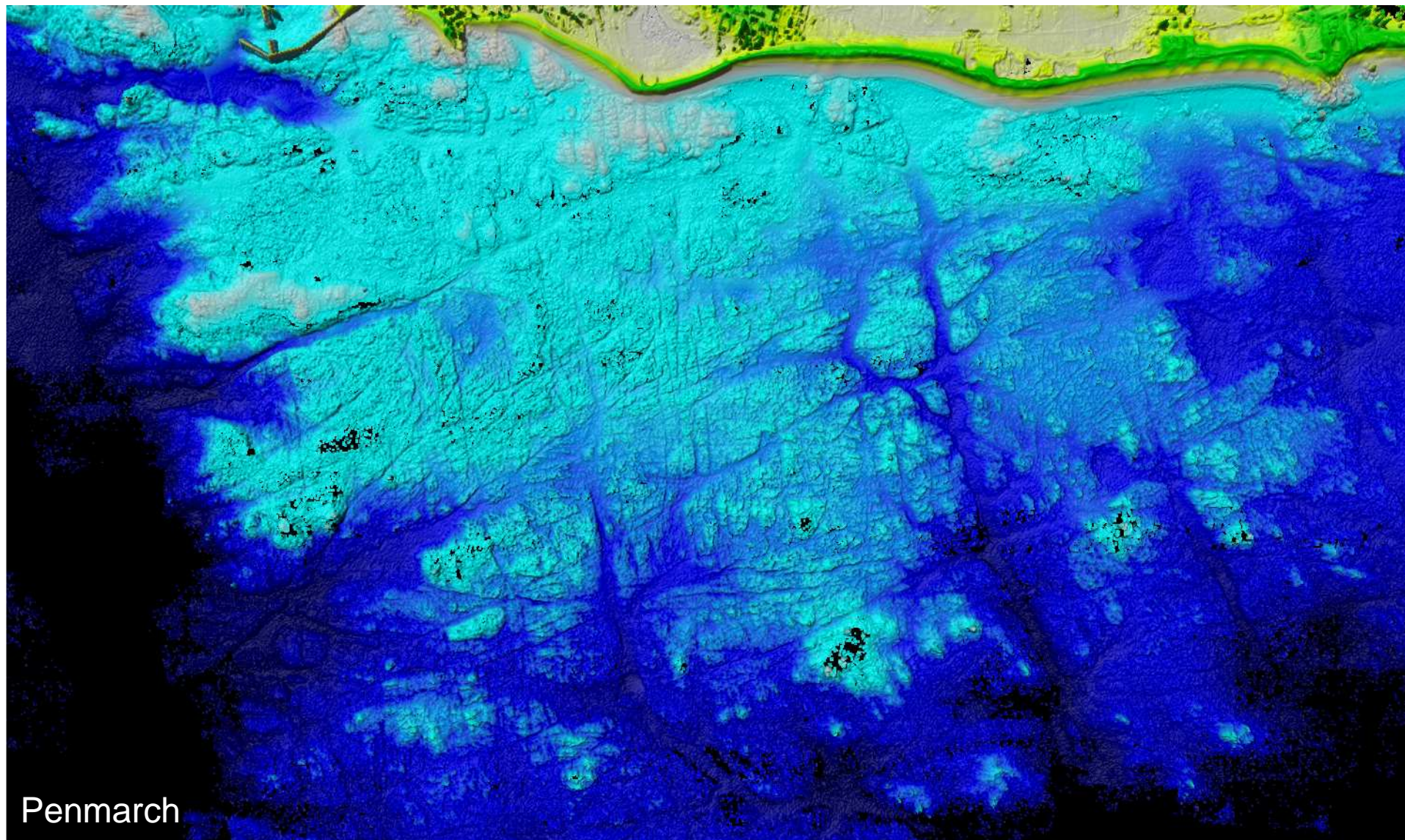




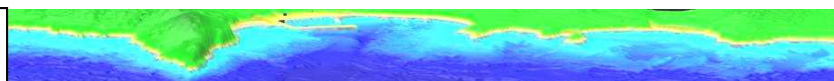
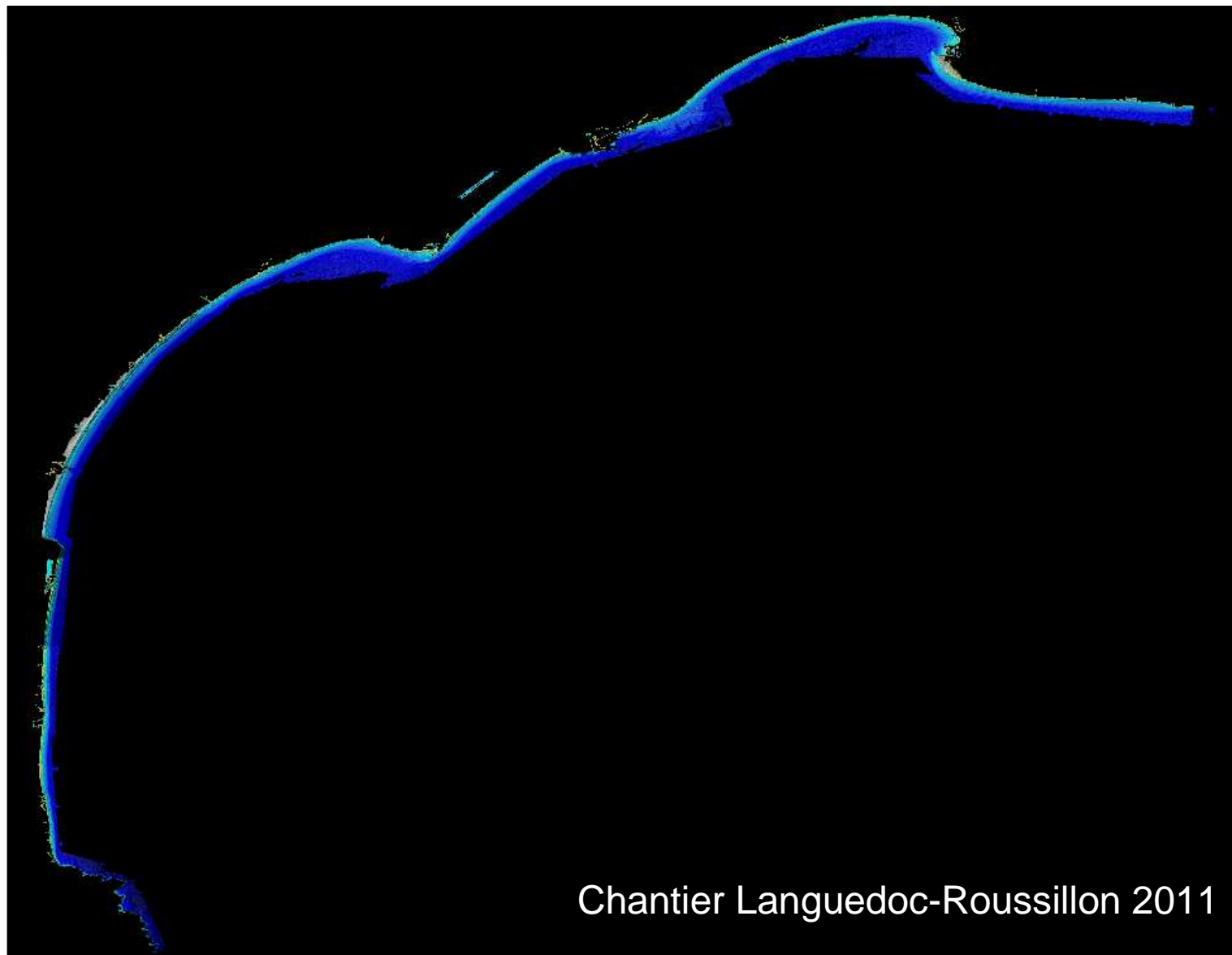
# Penmarch 2011 HawkEye IIb (AHAB)

Après retraitement par le SHOM

# Litto3D®

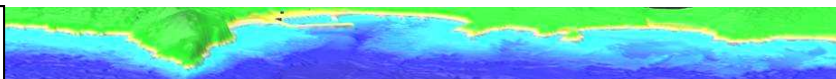
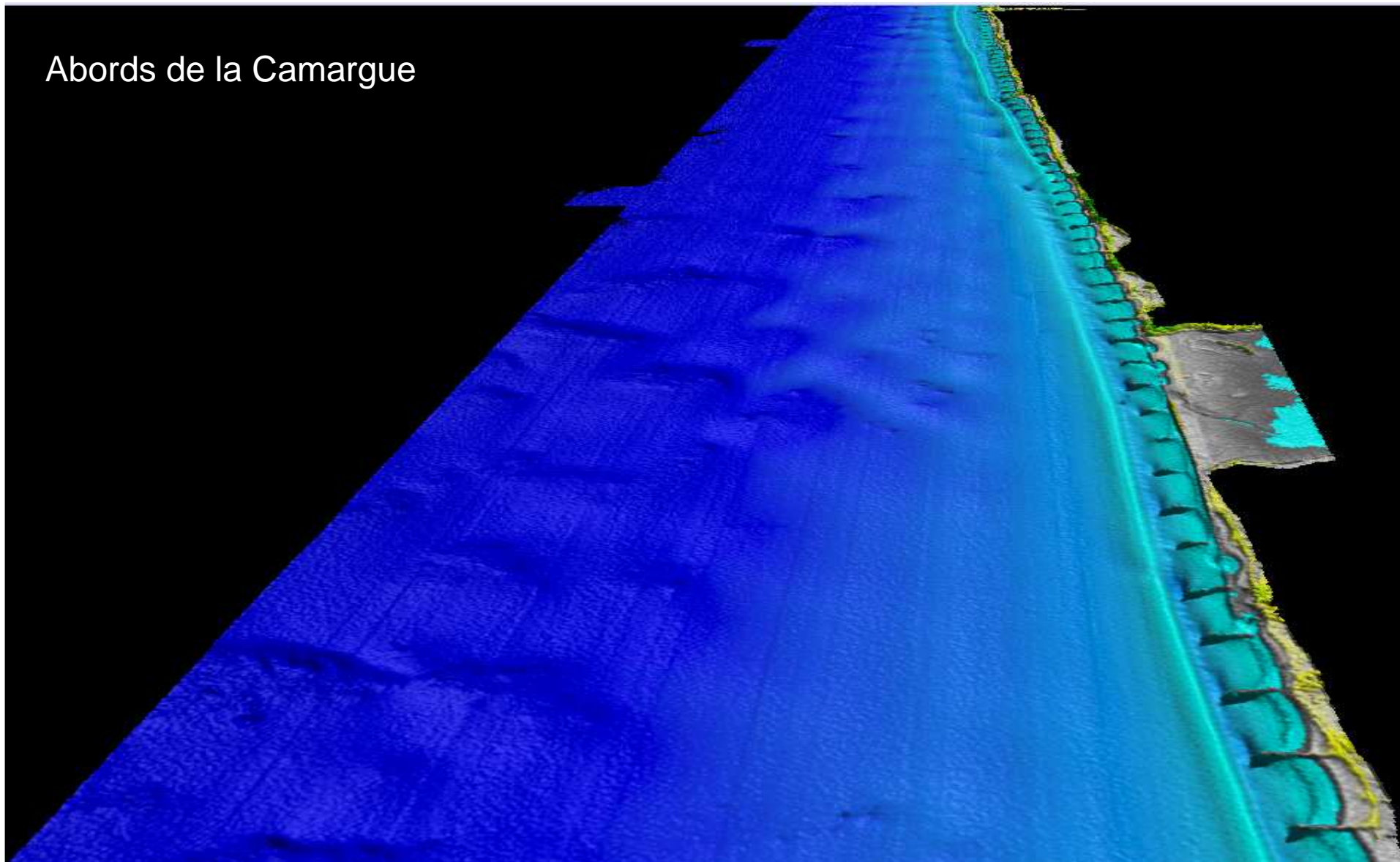








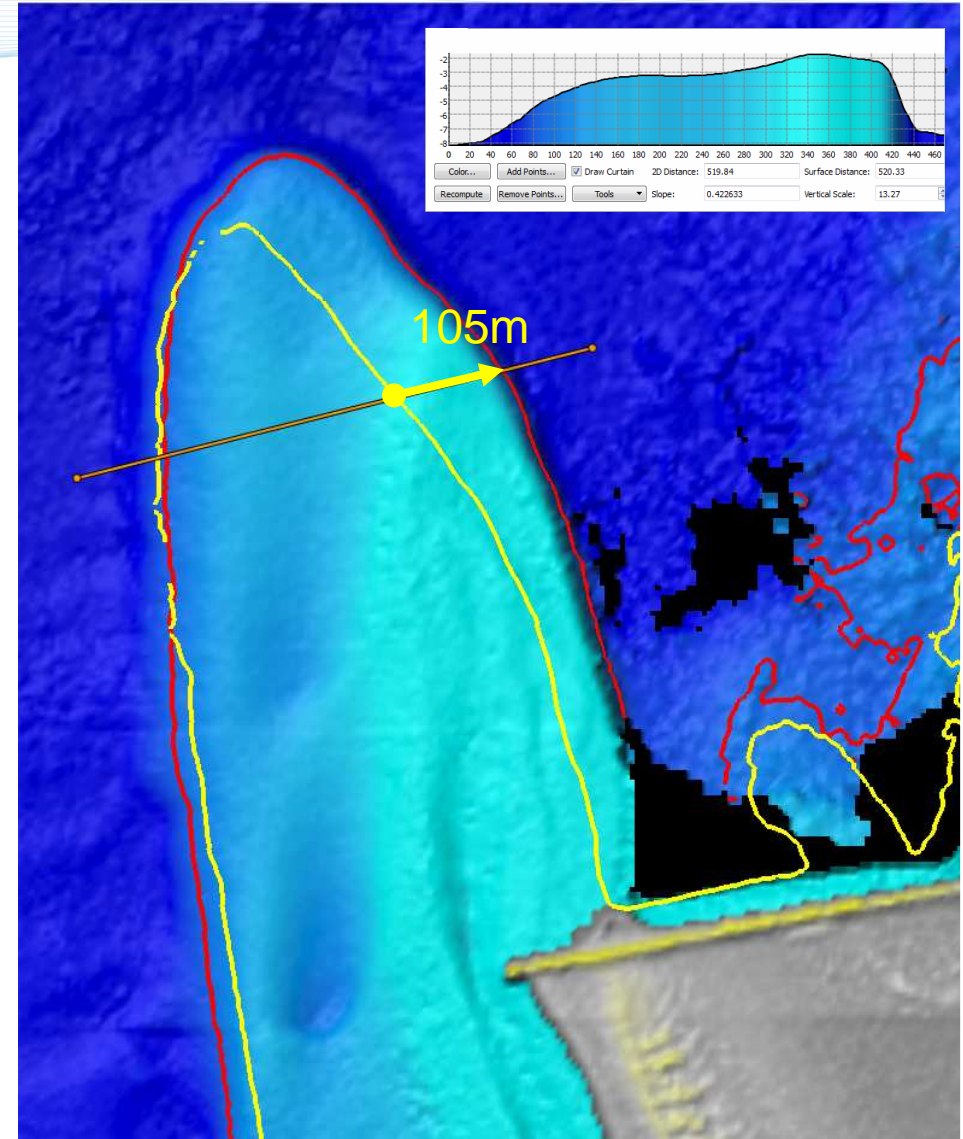
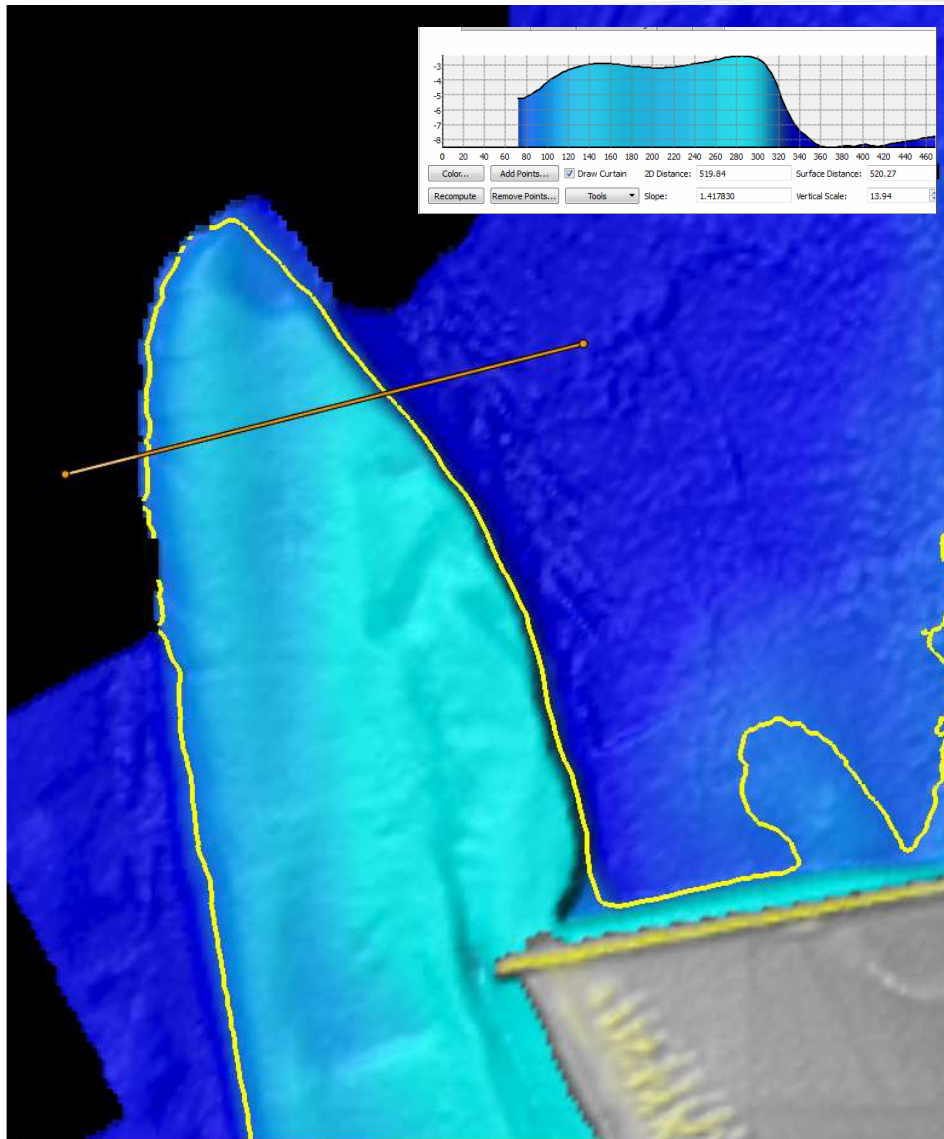
Abords de la Camargue





LR 2009 LADS MKII

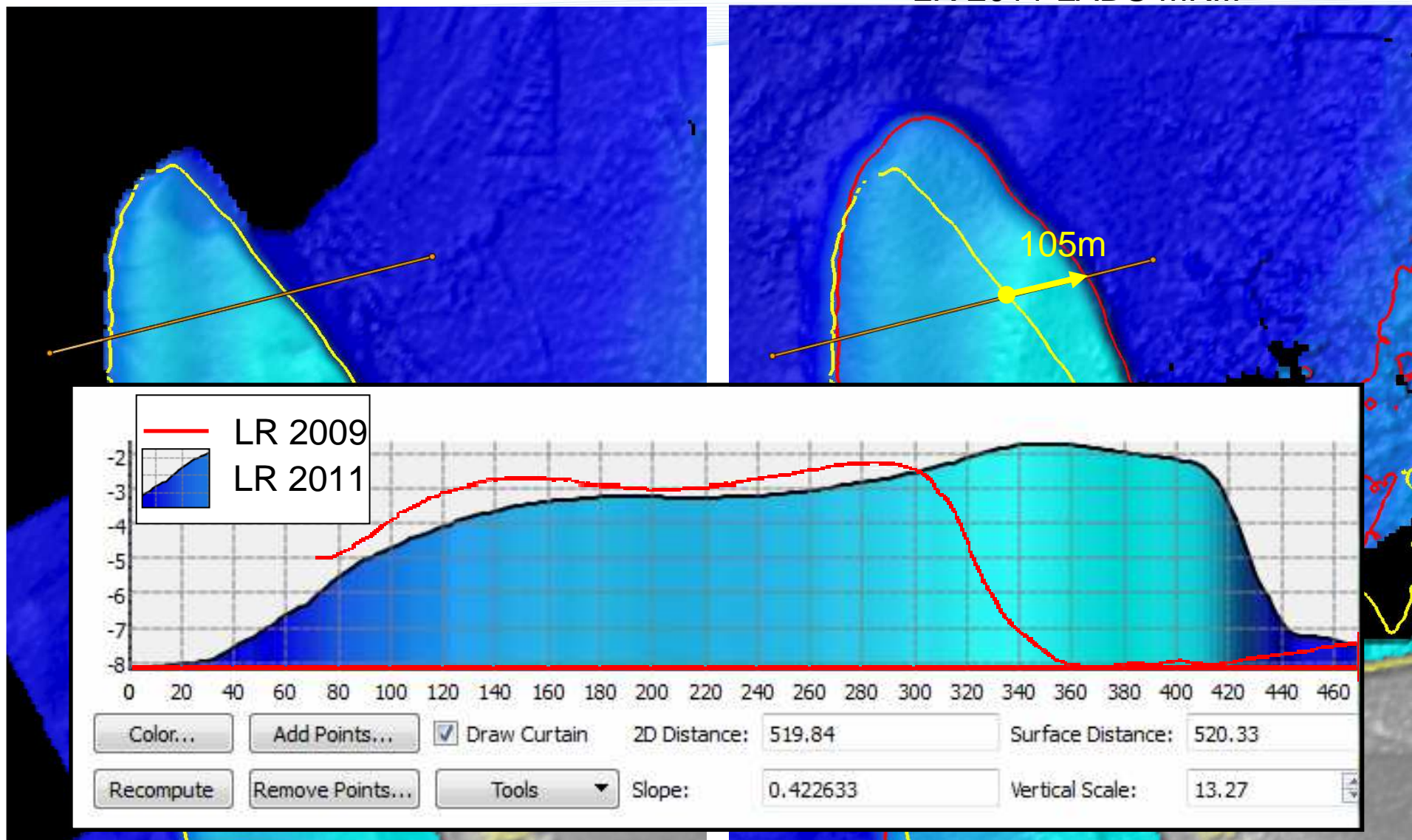
LR 2011 LADS MKIII





LR 2009 LADS MKII

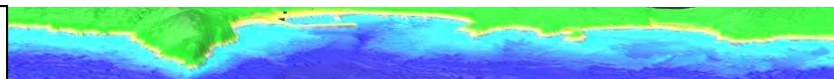
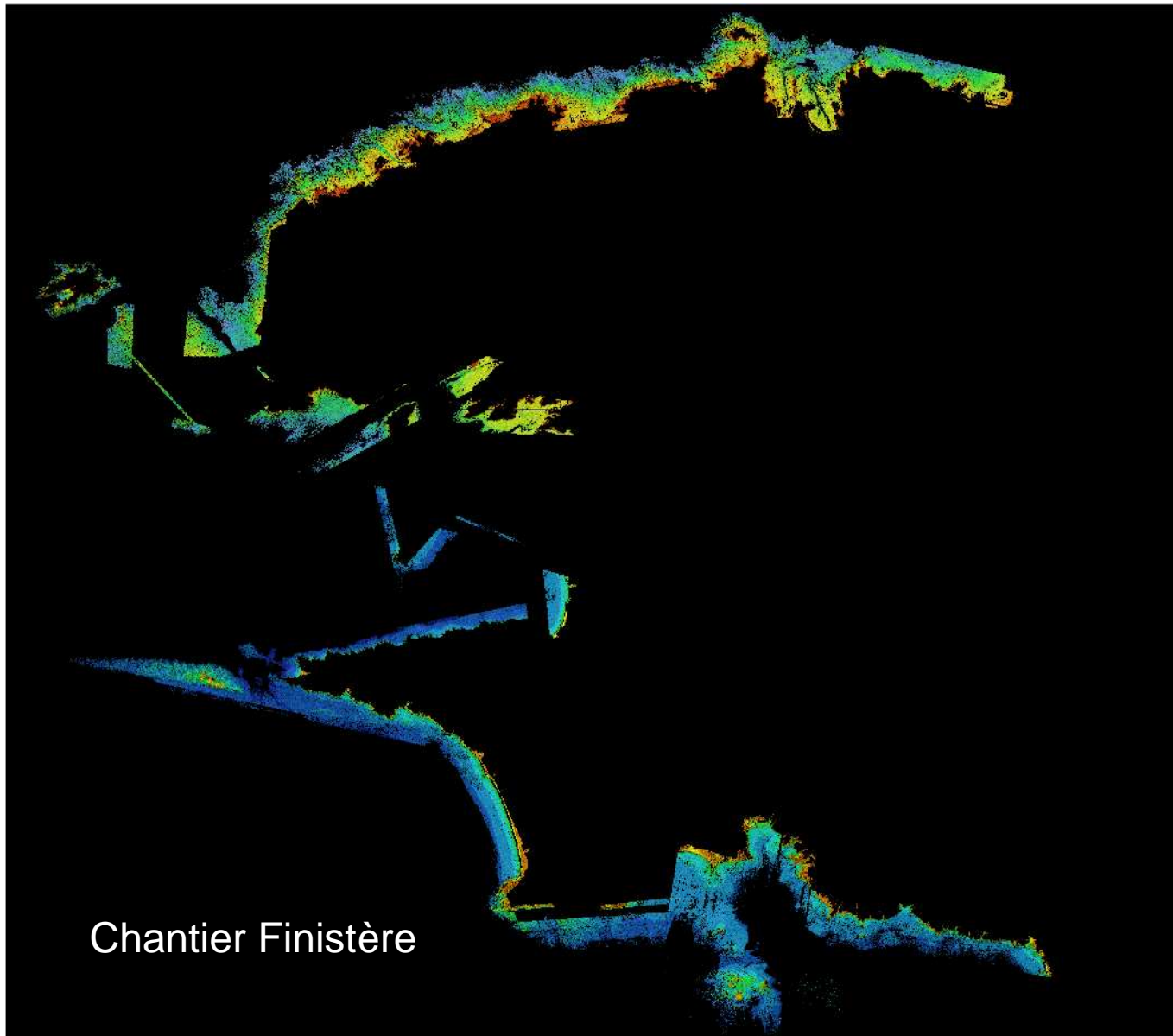
LR 2011 LADS MKIII





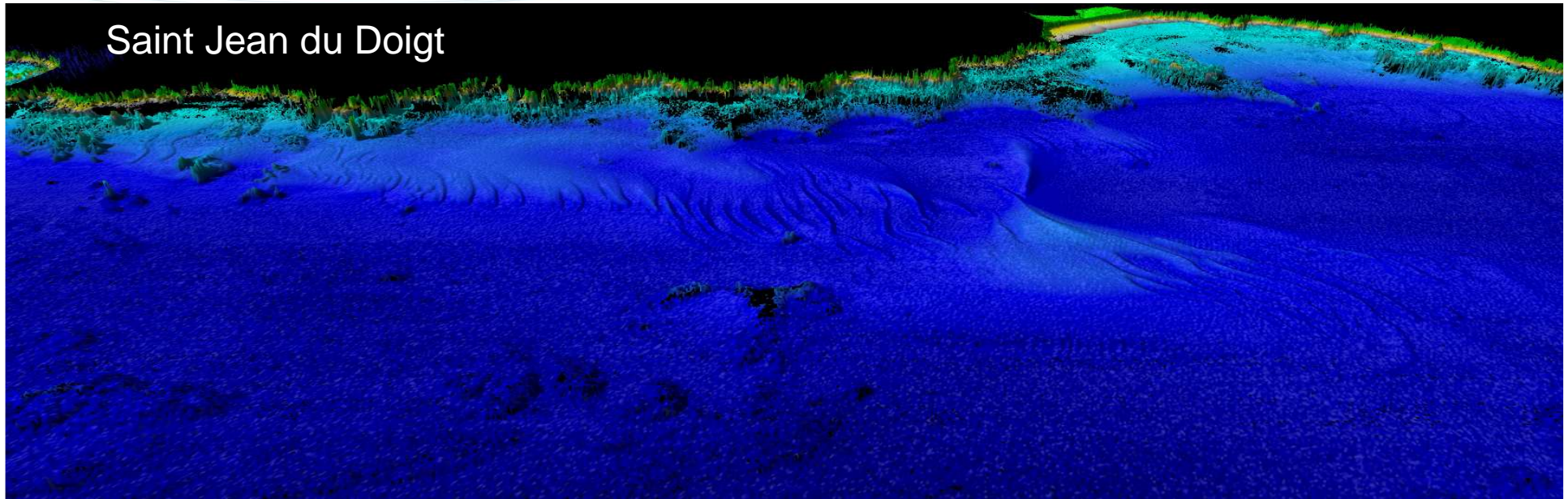
# Finistère 2012 LADS MKIII (FugroLads) + VQ-820-G (RIEGL)

# Litto3D®

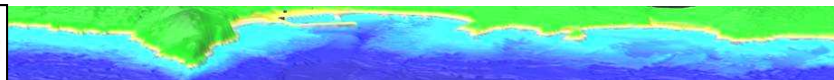
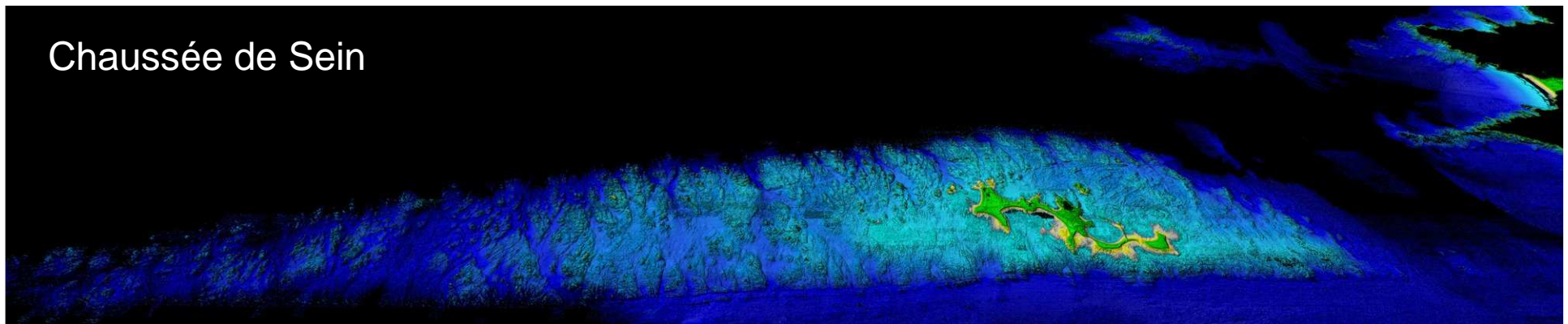




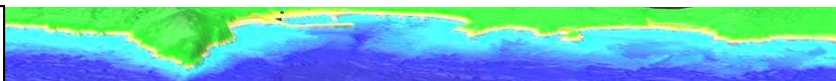
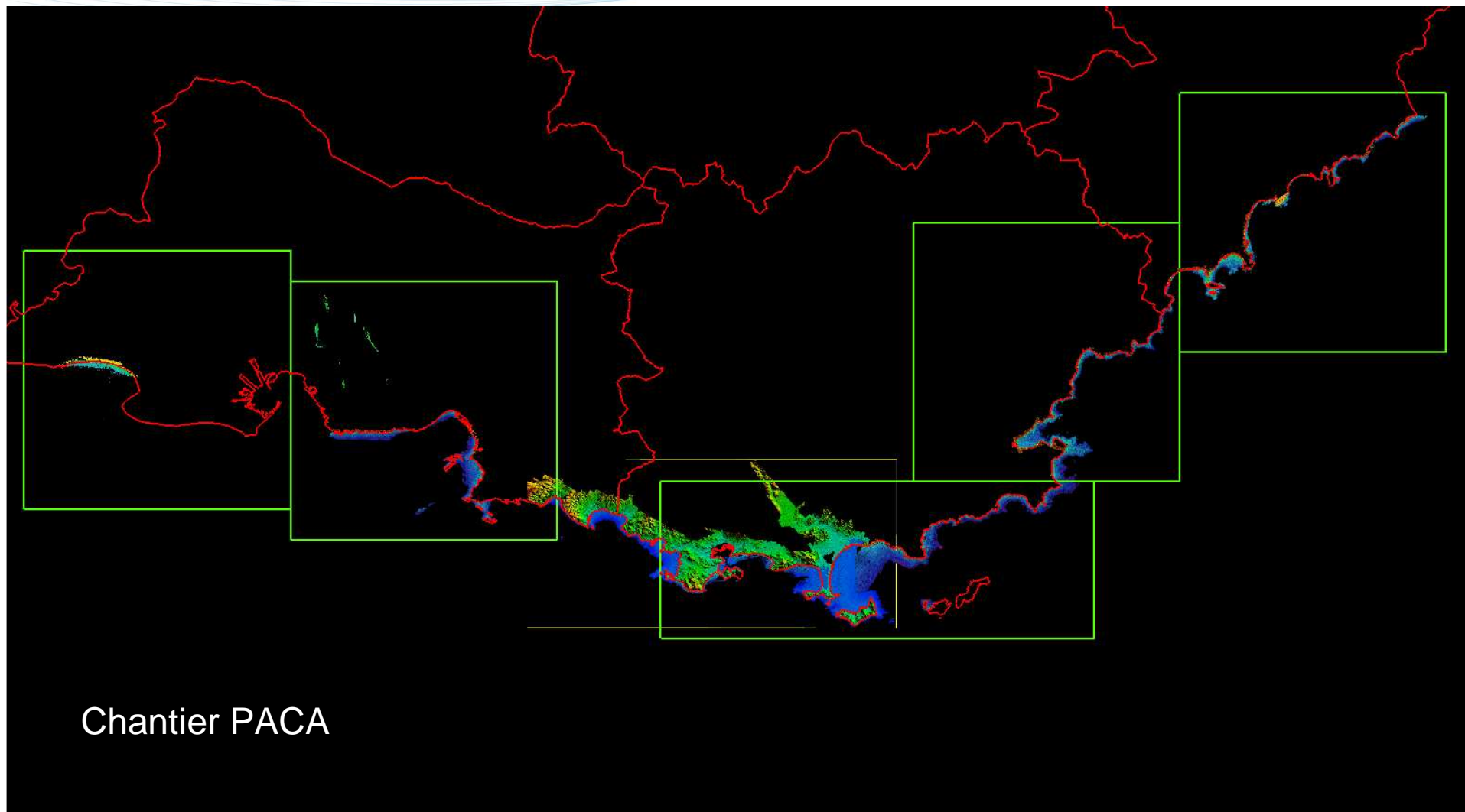
Saint Jean du Doigt



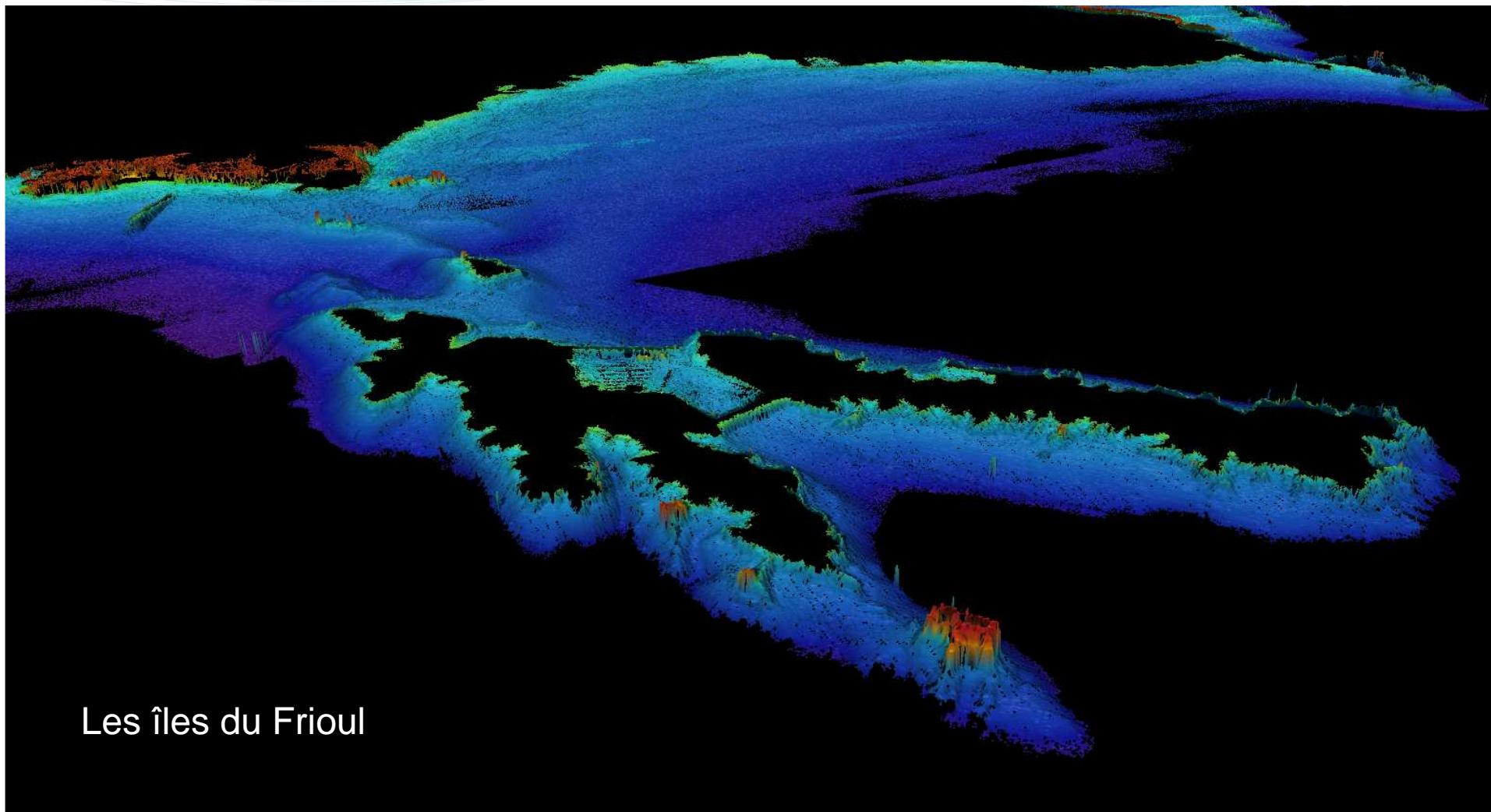
Chaussée de Sein



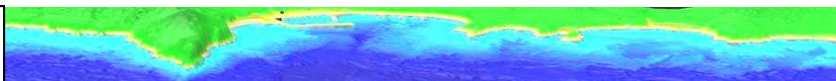




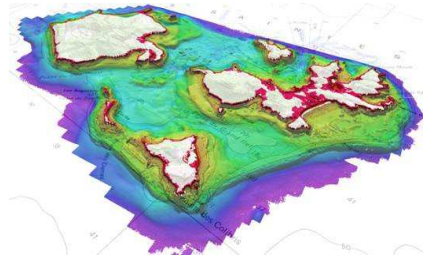
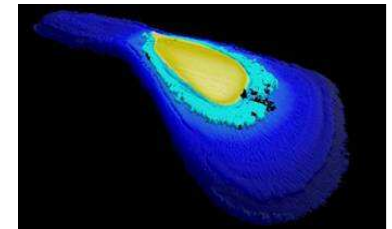
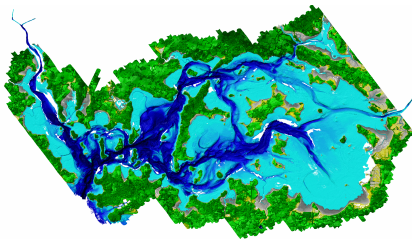
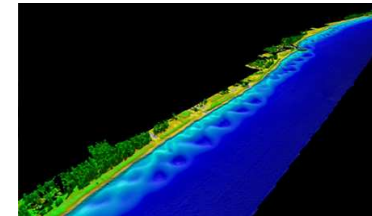
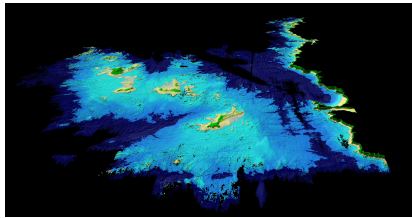
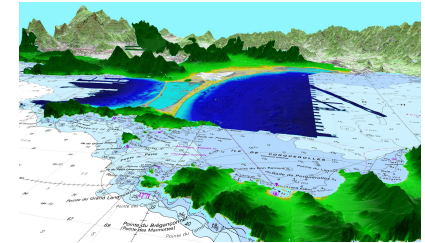
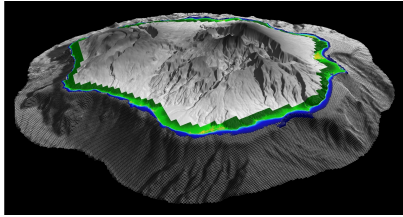
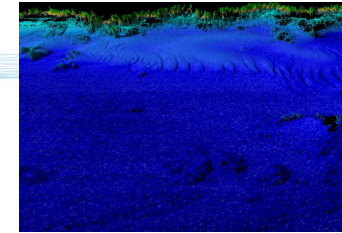
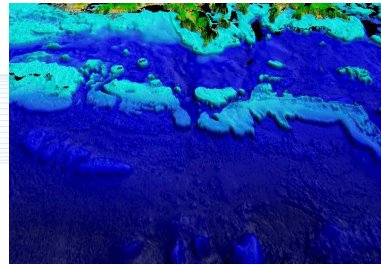
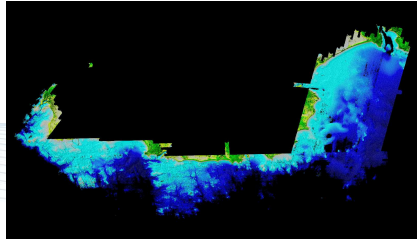




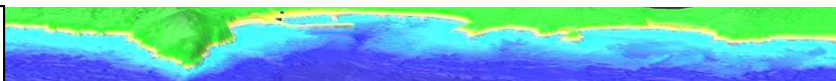
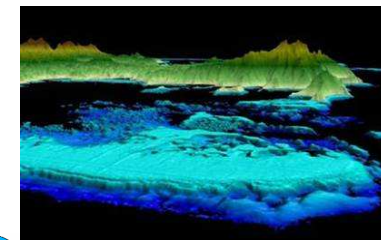
Les îles du Frioul







**14 levés depuis 2005...**

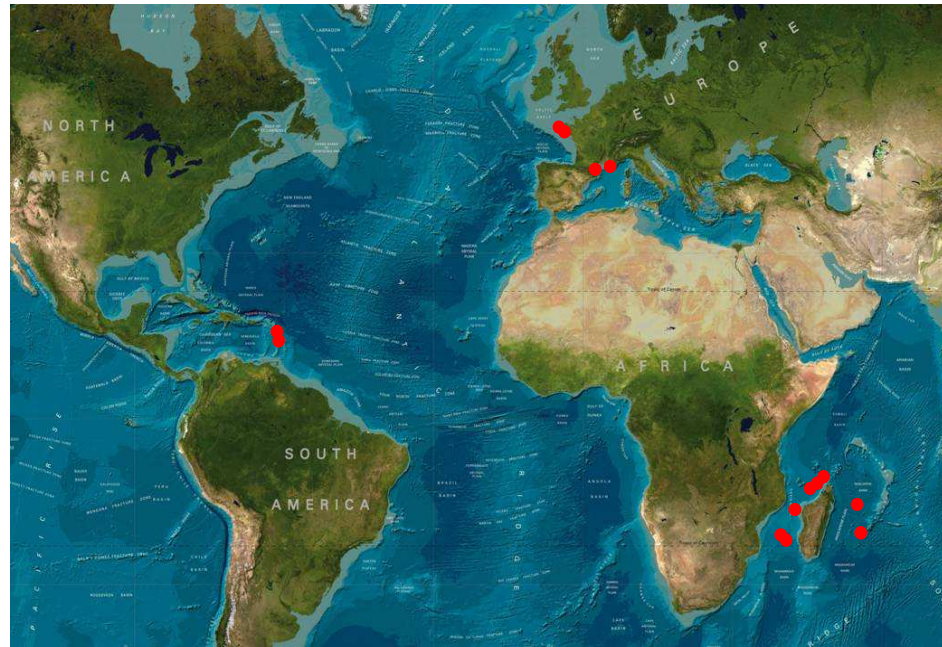




# Litto3D®



Fugro LADS Corporation



Laptop Control

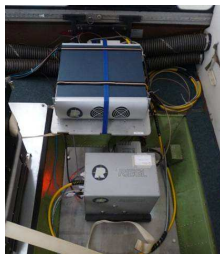


Pilot Display

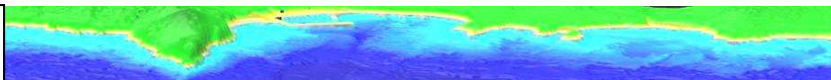
Operator Control Rack



Optech



## 7 systèmes différents utilisés



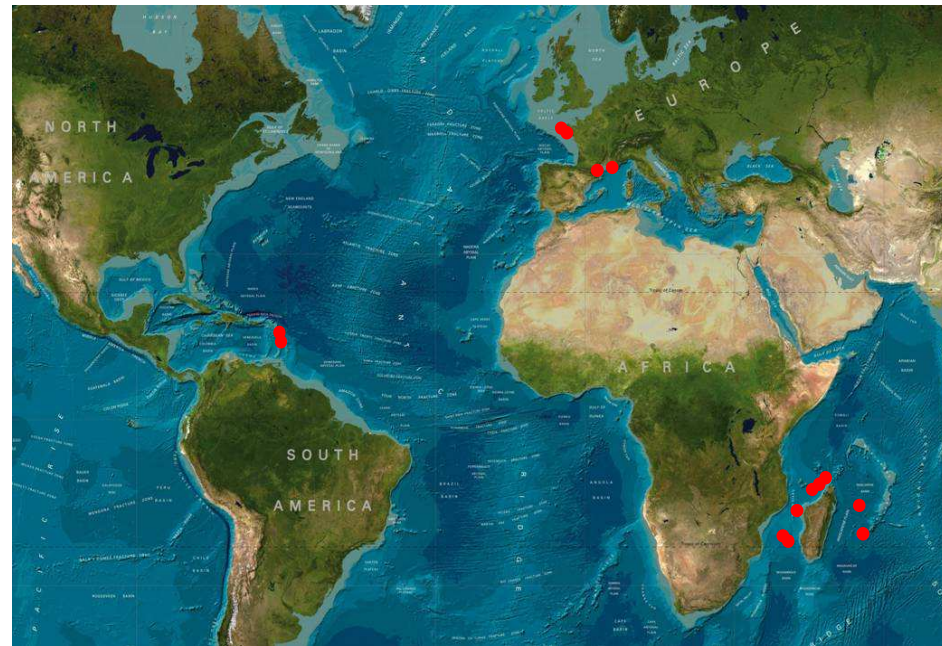




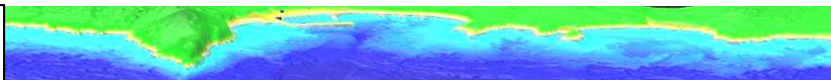
Fugro LADS Corporation



Fugro Pelagos

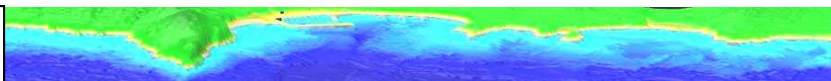


## ***Nombreux prestataires différents***





| Levé                             | Terrain                 | Contrôle SHOM | Produit bathymétrique     | Produit Litto3D | Observations                             |
|----------------------------------|-------------------------|---------------|---------------------------|-----------------|--|
| <b>Golfe du Morbihan 2005</b>    | <b>X</b>                | <b>X</b>      | <b>X</b>                  |                 | <i>En attente de Topo Morbihan</i>       |
| <b>Toulon (TPM) 2007</b>         | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <b>X</b>        | <i>Disponible</i>                        |
| <b>Îles Éparses 2009-2010</b>    | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <b>X</b>        | <i>Disponible</i>                        |
| <b>La Réunion 2009-2010</b>      | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <b>X</b>        | <i>Disponible</i>                        |
| <b>Mayotte 2009-2010</b>         | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <i>En cours</i> | <i>Livraison prévue Octobre 2012</i>     |
| <b>Languedoc-Roussillon 2009</b> | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <i>En cours</i> | <i>Livraison prévue Novembre 2012</i>    |
| <b>PNM Iroise 2010</b>           | <b>X</b>                | <b>X</b>      | <i>Version provisoire</i> |                 | <i>En attente de Levé Finistère</i>      |
| <b>Martinique 2009-2010</b>      | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <i>En cours</i> | <i>Livraison prévue Octobre 2012</i>     |
| <b>Guadeloupe 2010</b>           | <b>X</b>                | <b>X</b>      | <i>En cours</i>           |                 | <i>Livraison prévue Octobre 2012</i>     |
| <b>ALDES VAR 2010</b>            | <b>X</b>                | <b>X</b>      | <b>X</b>                  | <b>X</b>        | <i>Disponible</i>                        |
| <b>Penmarch 2011</b>             | <b>X</b>                | <b>X</b>      | <i>Version provisoire</i> |                 | <i>En attente de Levé Finistère</i>      |
| <b>Languedoc-Roussillon 2011</b> | <b>X</b>                | <b>X</b>      | <i>En traitement</i>      |                 |  |
| <b>Finistère 2012-2013</b>       | <i>En prétraitement</i> |               |                           |                 | <i>Fin des travaux terrain Mars 2013</i> |
| <b>PACA 2012-2013</b>            | <i>En prétraitement</i> |               |                           |                 | <i>Fin des travaux terrain Mars 2013</i> |





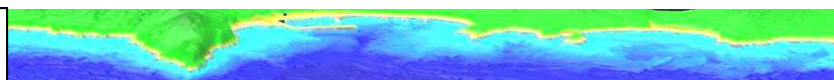
# Produits existants : catalogue PPML



The slide features the SHOM logo at the top left with the tagline "L'océan à la carte". Below it, the text "Soutien aux politiques publiques et aux acteurs de la mer et du littoral" is displayed. A central banner reads "GAMME DE PRODUITS ET SERVICES". The main content area contains five icons: a 3D bathymetric map, a 2D topographic map, a contour map, a cross-section profile, and a tide/current diagram. A "2012" label is positioned at the bottom right of the slide.

■ **Gammes de produits :**

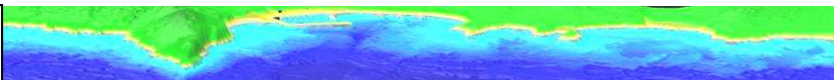
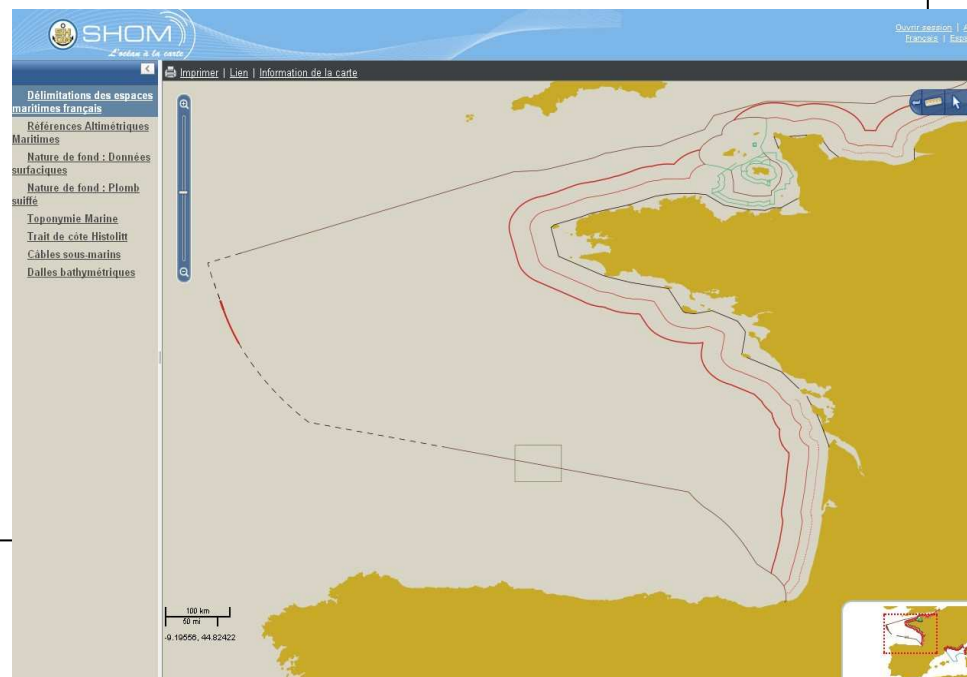
- Bathymétrie
- Marée et courants
- Cartographie
- Bases de données





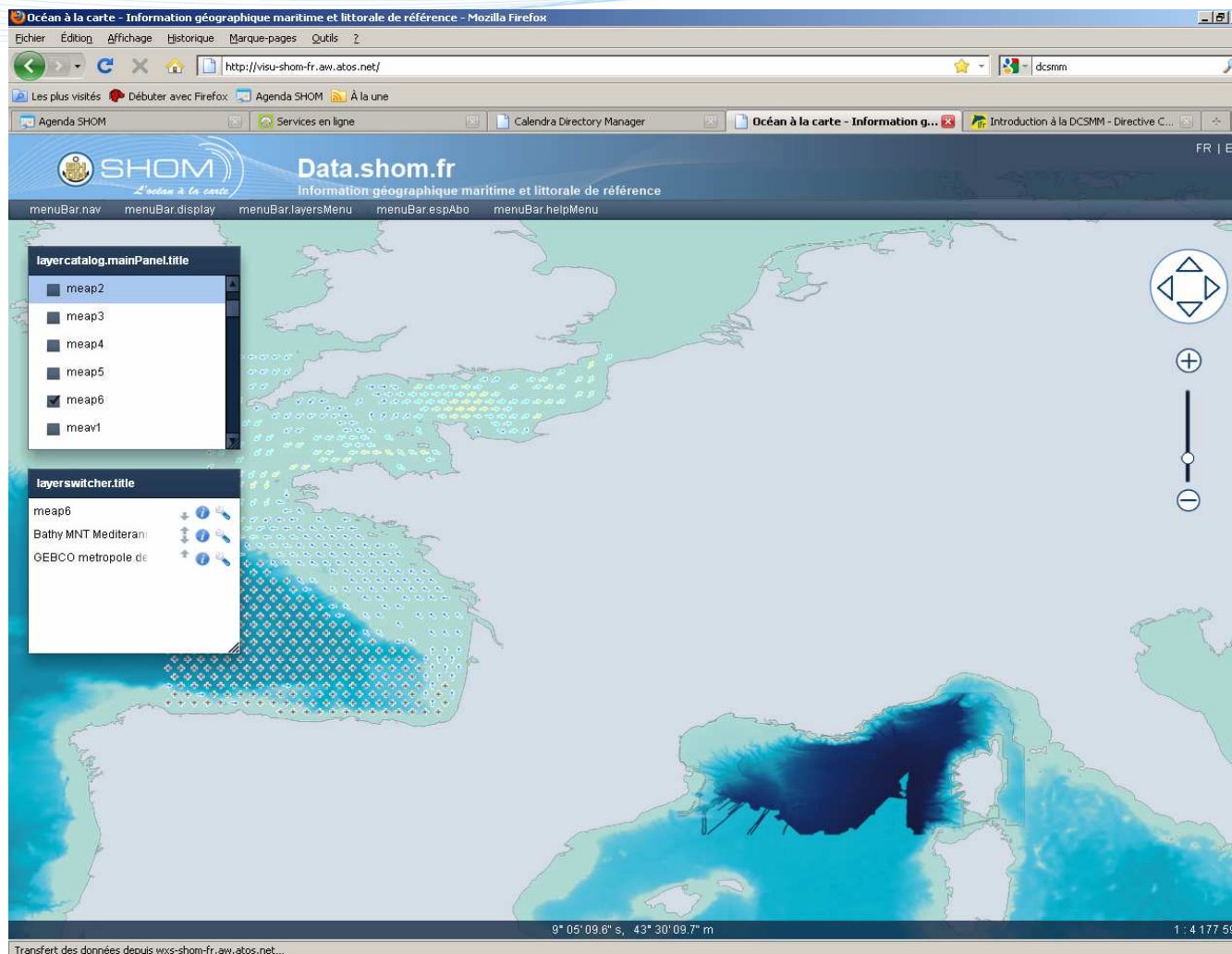
## Accès aux données SHOM : portail Inspire

- Les données SHOM sont également visualisables sur le portail : <http://data.shom.fr>
- Ce portail permet à ce jour d'accéder par flux WMS aux données :
  - Délimitations des espaces maritimes français
  - Références altimétriques Maritimes
  - Nature de fond
  - Toponymie marine
  - Trait de côte Histolitt
  - Câbles sous-marins
  - Dalles bathymétriques
  - MNT
- URL dans Géocatalogue





# Le portail SHOM : première illustration...





*Merci pour votre attention.  
Questions?*