

CANDHIS

French national centre
for archiving coastal
swell measurement

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DBCP WORKSHOP
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Ressources, territoires, habitats et logement
Énergie et climat Développement durable
Prévention des risques Infrastructures, transports et mer

**Présent
pour
l'avenir**



Ministère de l'Écologie, de l'Énergie, du Développement durable et de la Mer
en charge des Technologies vertes et des Négociations sur le climat

www.developpement-durable.gouv.fr

CETMEF

- Maritime and fluvial technical service of French authorities
 - Diffusion and promotion of different maritime and fluvial technical items
 - Works about
 - Marine signalisation
 - Vessel traffic system
 - Harbour concern
 - Flood forecast
 - Evolution of coast morphology
 - ...
 - Evaluation of sea state parameters
 - Main manager of in situ swell measurement since 1972

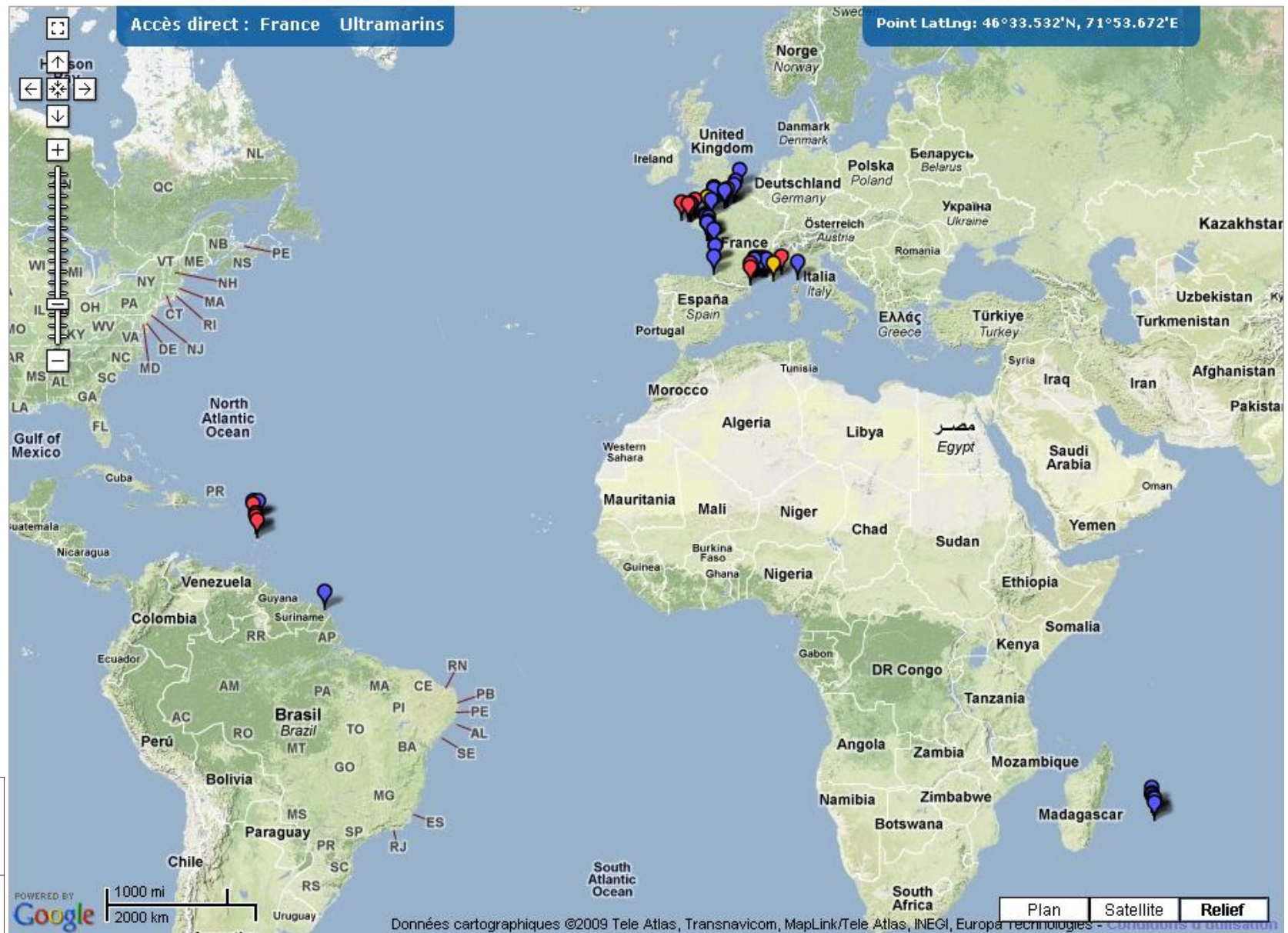
CANDHIS

- CANDHIS
 - French national centre for archiving swell measurements
- Refers both to :
 - The national network of coastal measurements of waves
 - Website
 - Database archiving measures
- Purpose of the programme
 - To maintain a long duration wave measurement network along the coast of the French mother and overseas territories coasts and to centralize the French wave data

Archiving of 65 site of measurement

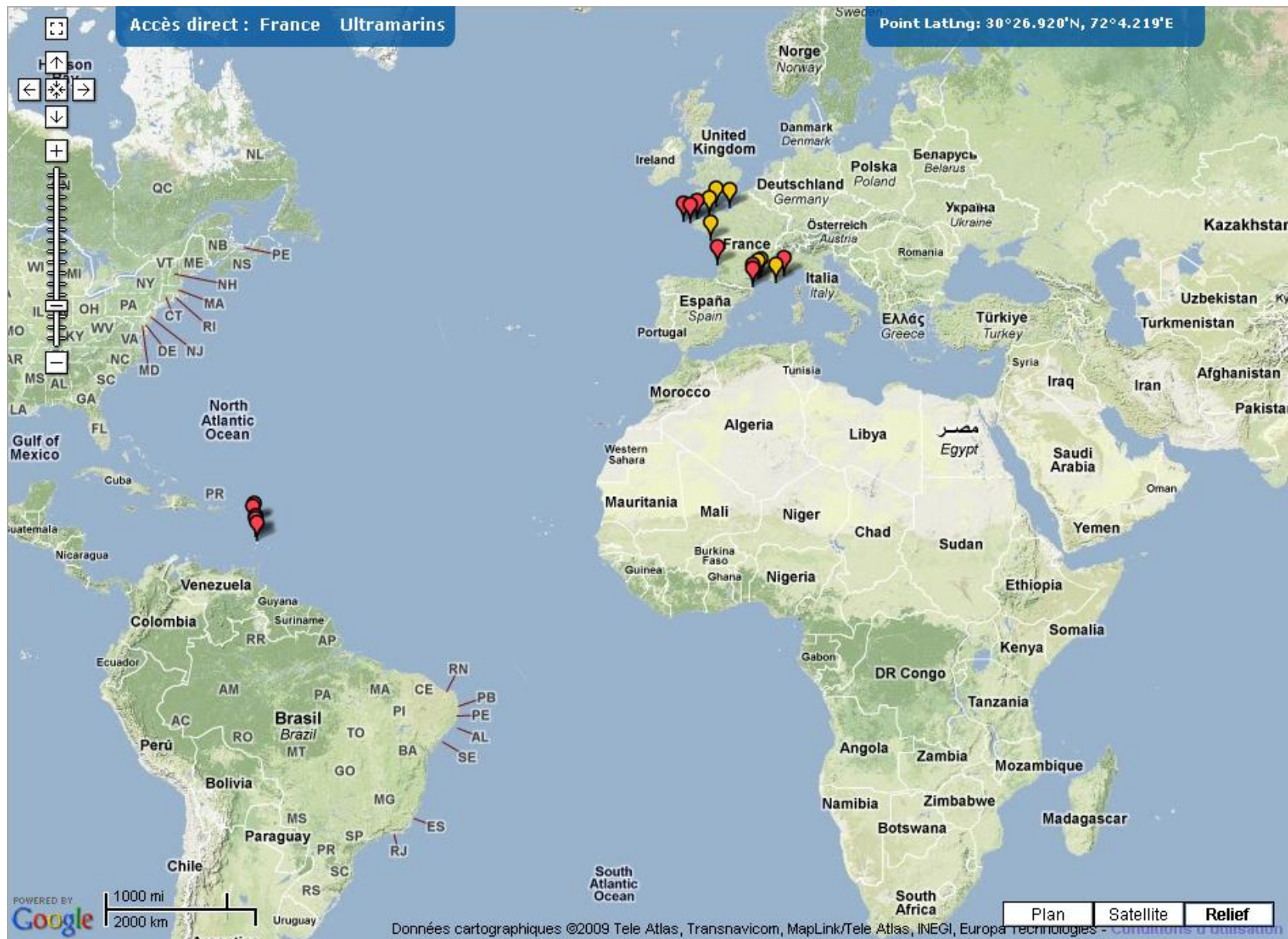
- Every days
- On server, data tape magnetic, strongbox

Archiving of 65 sites of measurement old and actual



19 real time data buoys

Directional wave buoys



Quality of time series data

Control of order of magnitude of sea state parameters

- Number of waves > 75 (for 30mn of time series)
- Vertical acceleration $< 0,5 g$
- $H_{max} < 3 H_{1/3}$
- $TH_{1/3} < 30s$

Test of normality

- Control of distribution of $H_{1/3}$ with kurtosis and skewness tests
 - $-0.3 < Skew < +0.3$
 - $Kurt < 5$

Introduction of a quality factor

- Percentage of wave removed
- Result of test of normality

Diffusion of information

Internet Website : <http://candhis.cetmef.developpement-durable.gouv.fr/>



Welcome to the National Center for Archiving Swell Measurements



Candhis (National Center for Archiving Swell Measurements) refers both to the national network of coastal in situ measurements of waves, the website and database archiving measures.

The information available on this site are:

- Real-time data
- Monthly evolution of the waves heights
- Statistical data (histograms and correlograms)

All the available data and the cautions of use are detailed in the "documentation".

ACTUALITES

>> Ile d'Yeu Nord <<

Problème de réception des mesures de la bouée. Les données ne sont plus disponibles. [25/08/09]

>> Cherbourg <<

En raison d'un arrêt du houlographe pour maintenance annuelle, les données ne sont plus accessibles. [24/08/09]

>> Espiguette <<

Suite à un problème technique, les données du houlographe ne sont plus accessibles. [24/08/09]

>> Antifer <<

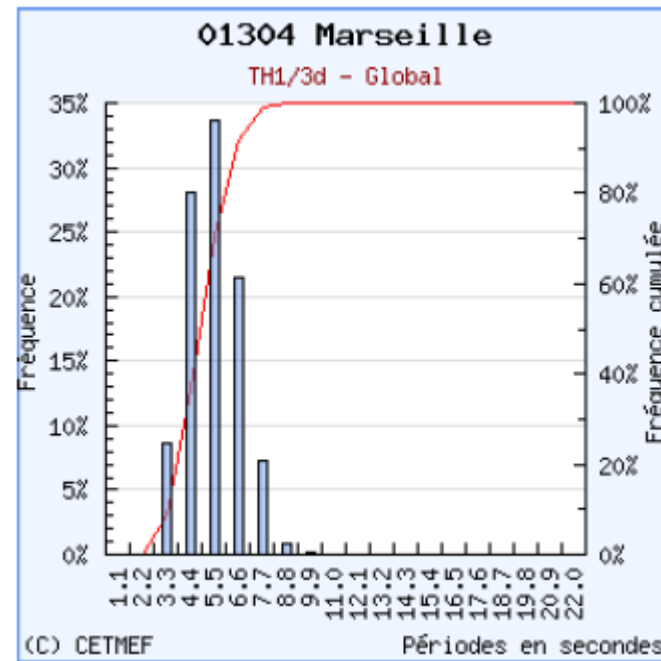
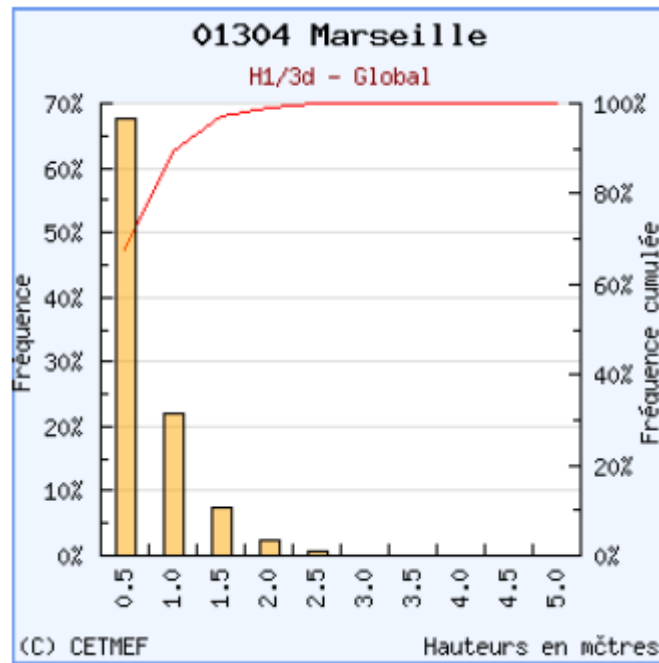
Les données ne sont plus disponibles, suite au déradage de la bouée. [07/08/09]

>> Sainte-Lucie <<

Remise en service du houlographe. [06/08/09]

Diffusion of information

Histograms : $H_{1/3}$, $H_{1/10}$, H_{max} , $T_{H1/3}$, T_{avd} and T_{Hmax}



Diffusion of information

Correlograms : $H_{m0}-T_{02}$, $H_{m0}-T_p$, $H_{m0}-T_E$ and $H_{m0}-Dir$

Corrélogramme - Hm0/Tp - GLOBAL

(Hauteur significative spectrales des vagues / Période de pic barycentrique)

hm0 (m)	tp (Secondes)																				Total
0	1.4	2.8	4.2	5.6	7	8.4	9.8	11.2	12.6	14	15.4	16.8	18.2	19.6	21	22.4	23.8	25.2	26.6	28	Total
0.5		1044	1783	3389	2281	1059	644	81	14	7	1										10243
1		40	315	1388	2078	264	90	5	3												4183
1.5			13	99	1141	315	14														1582
2				1	235	228	17	5													486
2.5					17	138	12	4									1				172
3					1	26	6	1							1						35
3.5						3	7	1													11
4							2														2
Total		1084	2111	4857	5733	2033	792	77	17	7	1				1		1				

Les valeurs du tableau sont exprimées en nombre d'éléments - Les case vides correspondent à des valeurs nulles.

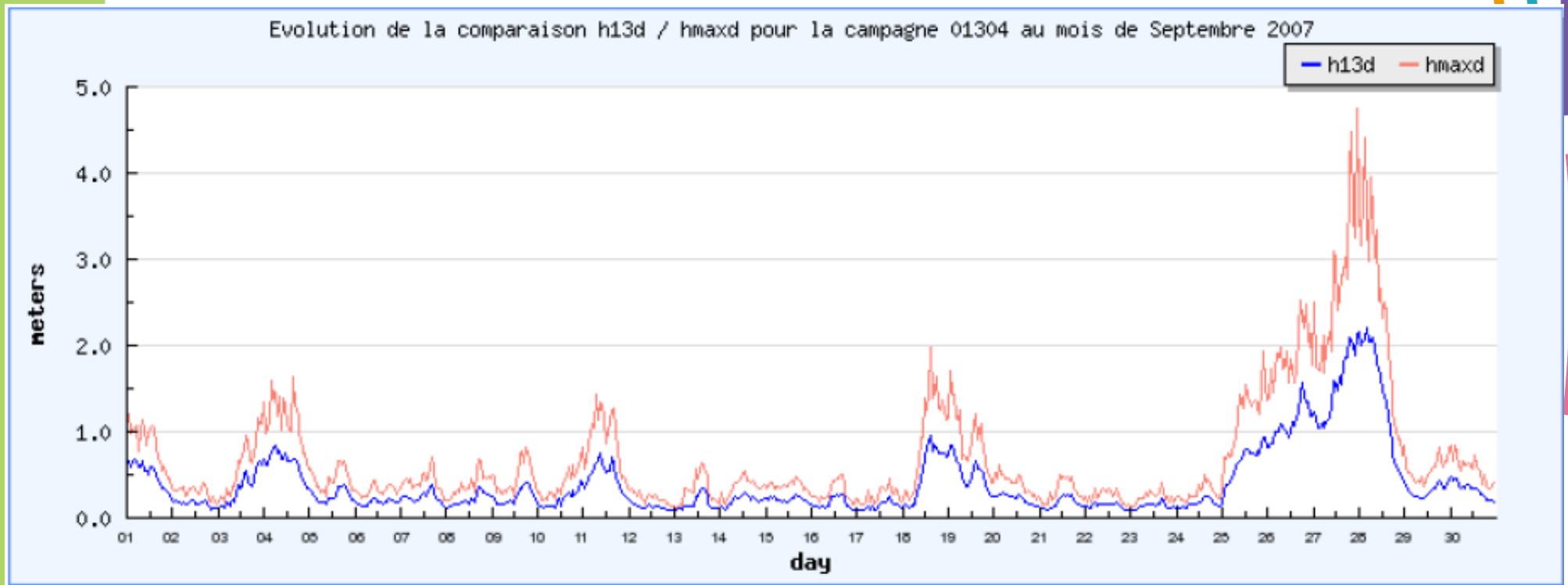
Code des couleurs

>= 10 ‰ >= 30 ‰ >= 50 ‰



Diffusion of information

Monthly evolution of parameters : $H_{1/3}$, $T_{H1/3}$, H_{m0} and H_{max}

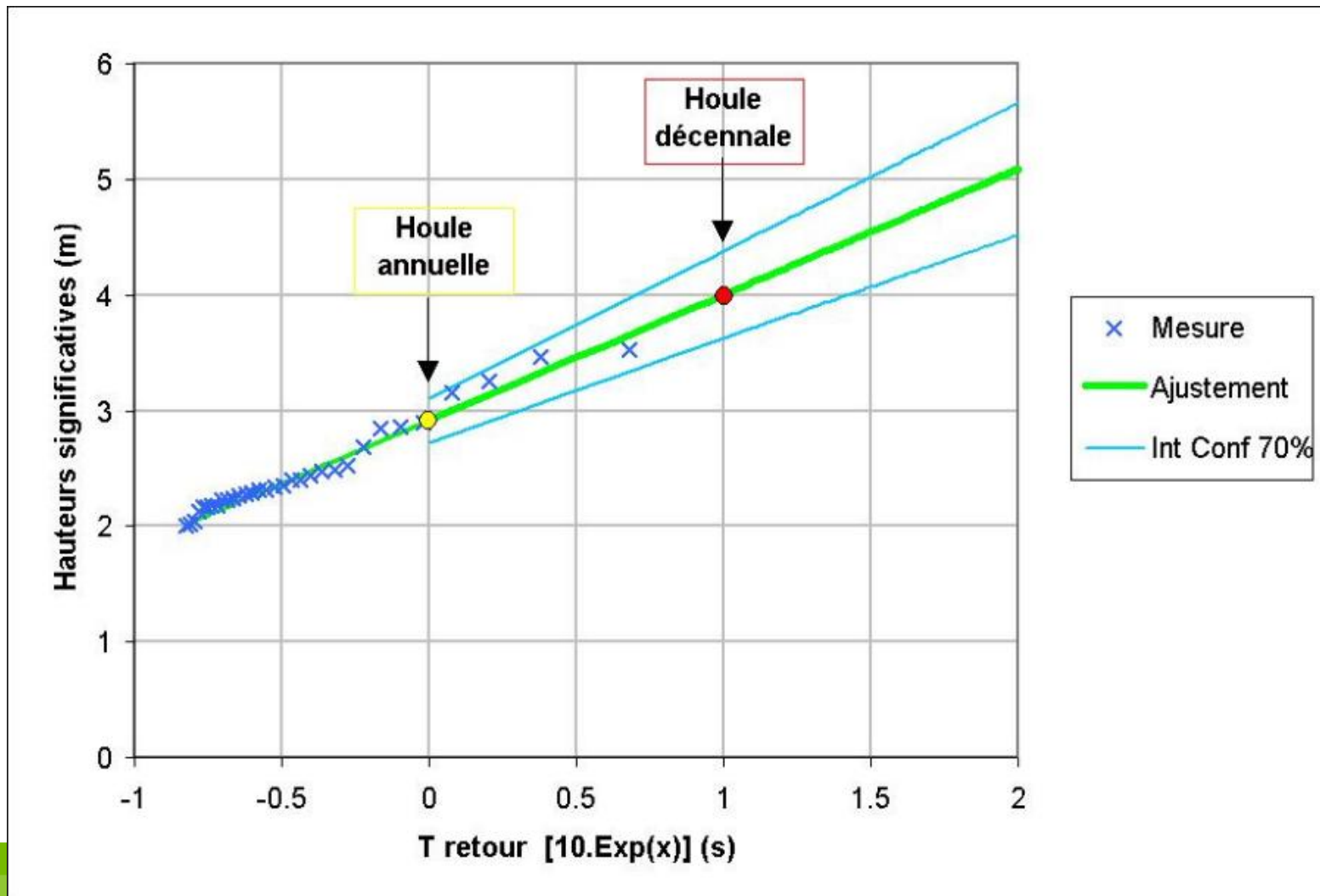


Diffusion of information

Evolution

Determination of return period of extreme values

- Software Astex (EDF/LNHE)

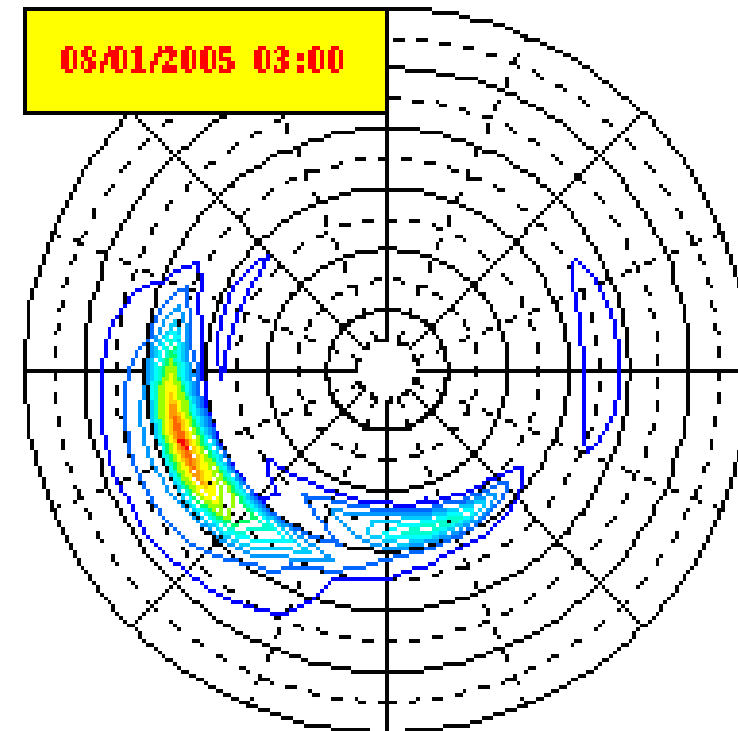
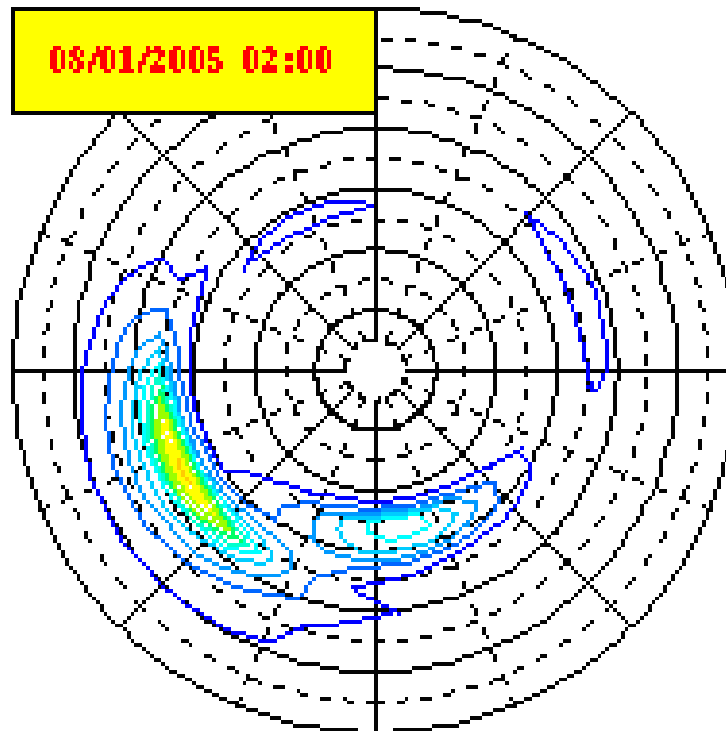
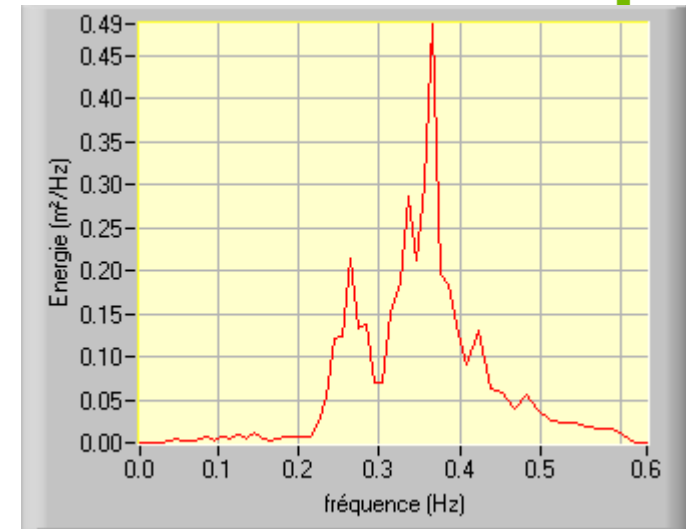


Diffusion of information Evolution

Directional spectrum

Identification of wave system

- Software Padine (EDF/LNHE & CETMEF)



THANK YOU

CANDHIS

candhis.cetmef@developpement-durable.gouv.fr

- Manager : Xavier KERGADALLAN / CETMEF
- Person in charge of the network : Guy AMIS / CETMEF
- Person in charge of treatment of measures : Alain LE BERRE / CETMEF
- Identification of wave system, analysis of extreme values : Michel BENOIT / EDF