

Observing the Channel and the Bay of Biscay:
Satellite for assimilation, in situ based climatology

Contributions:
Dyneco – Physed
ACTIMAR



Experiments for data assimilation

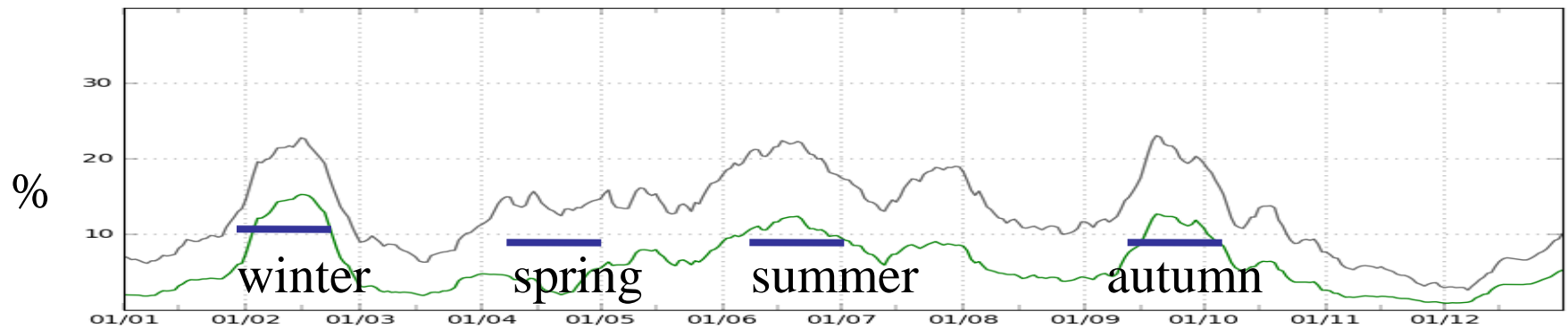
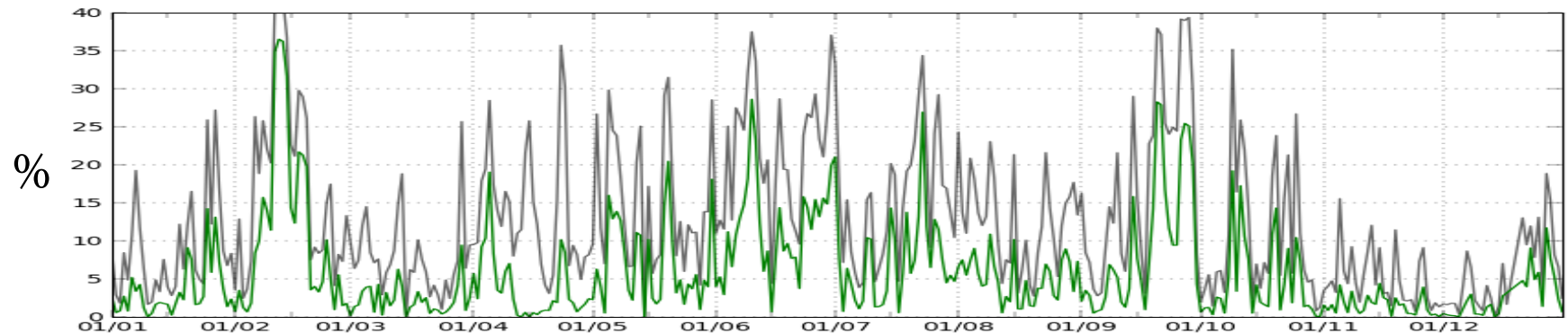
Satellite data and cluster analysis ...

SEVIRI SST data – 2008

Coverage rates

— 0h
— 22h à 6h

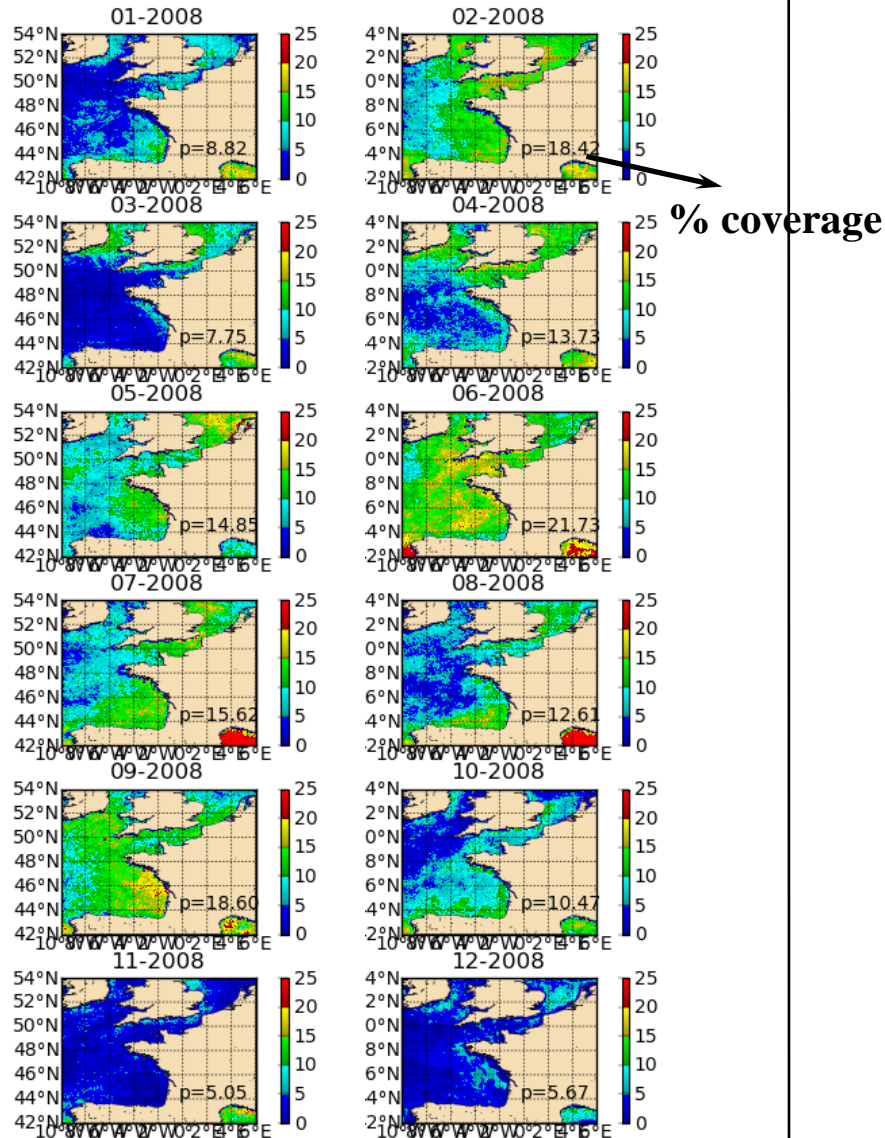
Disponibilité données SEVIRI (minuit): MANGA 2008



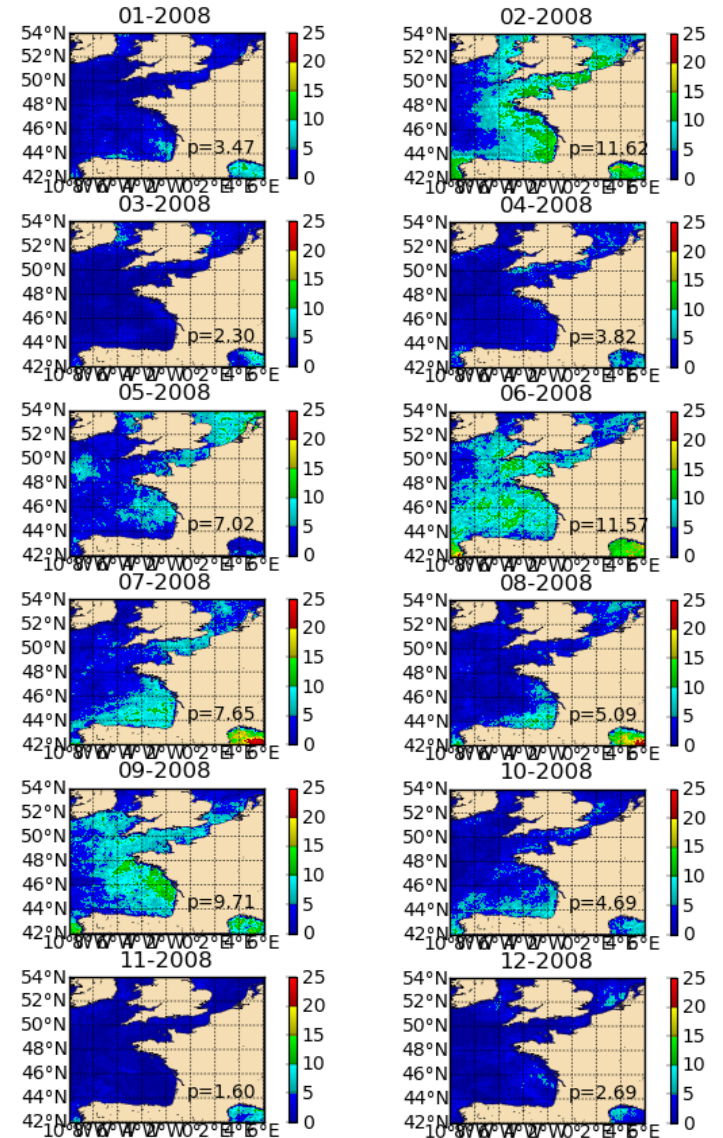
Running mean on 21 days

Number of valid pixels by month

Data between 22h and 6h



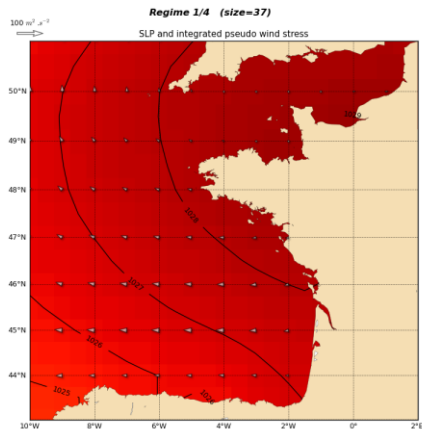
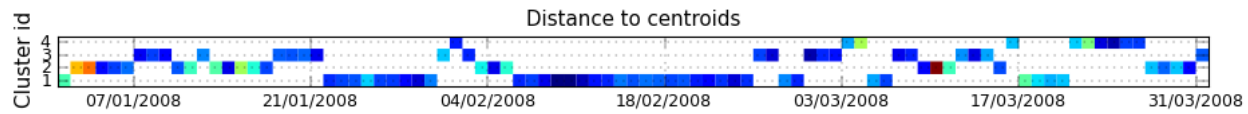
Data at 0h



Cluster analysis

- Principle :
 - K-means :
 - Given a number of cluster
 - Normalised data.
 - Convergence loop towards a minimal error
 - Representation : centroids + errors
- Application :
 - ARPEGE analysis: daily averaged (wind+SLP)
 - Guideline for assimilation experience in 2008.
 - Tries using 4, 5 and 10 clusters

Clusters: winter 2008



Bobyclim – Bay of Biscay climatology

- **Extent of the climatology** to include the whole Channel
Northern boundary from 50°N to 53°N
Eastern boundary from 1°W to 5°E
then ... integration of historical data over the new extent
(from 50°N to 53°N and from 15°W to 5°W)
- Correction of non-physical anomalies in the salinity field
- In progress: **improvement of the objective analysis**
from several successive analyses with influence rays smaller
and smaller (results of each analysis are used as the reference state
for the next one)

Thanks for your attention ...

