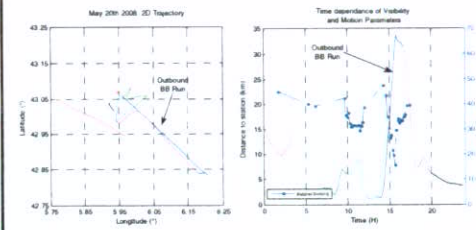


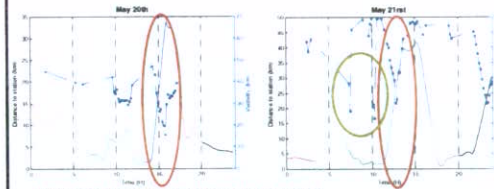
### May 20th case



AEREX

RD

### Black-Body Run Cases



A visibility drop occurs during both events  
Drops also occur while at constant distance (low velocity) on May 21st

AEREX

RD

### Investigating the results

1. What is a visibility drop?
  - What reference data could be used?
2. Is velocity often linked to a drop?
  - Can spray really reach the analyzed zone?
3. Are visibility drops linked to motion parameters, in general?
  - Is velocity the only candidate?

AEREX

RD

### Visibility drop

To define visibility variation events and identify those specific to the boat require reference data.

- The visibilimeter at the Miramer site was defective
- Neighbouring Meteo France stations provided data.

Station	Dist (km)	Min Vis (km)	Max Vis (km)
Miramer Base	-	-	-
Hyères	17.3	8.2	20
Toulon	4.1	3.0	30
Cap Cépet	1.2	8.0	50
L'Atalante	0-120	3.0	50*

AEREX

RD

### Validity of comparison data



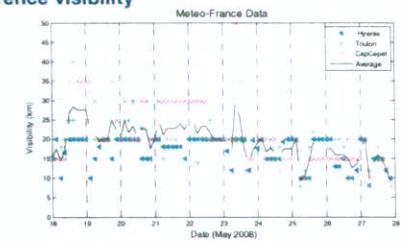
<http://www.bernet.fr/medias/PhotosWeb/WFHyeres.jpg?noir=atlatnte>

- From distance criteria, Meteo France data is as valid as the lost Miramer-base data would have been.

AEREX

RD

### Reference visibility

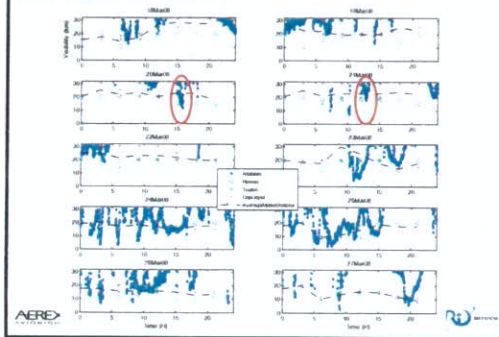


- The large variation between stations demonstrates the pertinence of using local (L'Atalante) data instead of shore info.
- Reference (average) is of little help for comparison purposes.

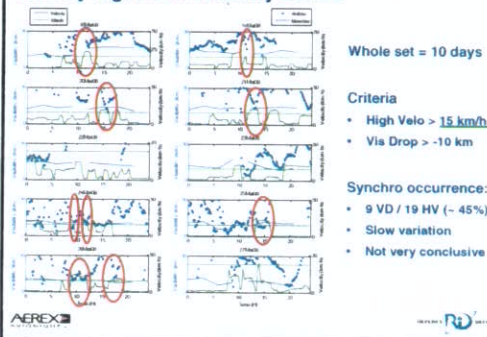
AEREX

RD

### Visibility data available



### Velocity highs and Visibility downs



Whole set = 10 days

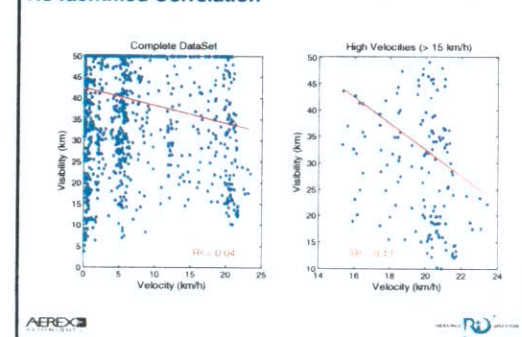
#### Criteria

- High Velo > 15 km/h
- Vis Drop > -10 km

#### Synchro occurrence:

- 9 VD / 19 HV (~ 45%)
- Slow variation
- Not very conclusive

### No Identified Correlation



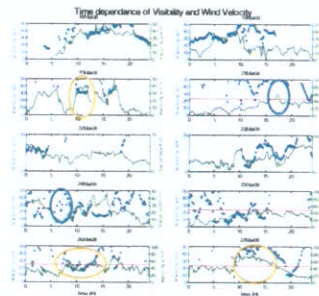
### Could spray really reach the meter?



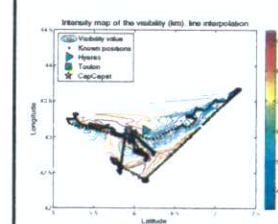
- According to Beaufort scale, to create and carry spray wind must be at least 27 knots (50 km/h)
- High spray creation by the boat at velocities remaining under 25km/h seems unlikely
- The mast height would probably prevent spray to reach zone

### Wind velocity

- High Wind is not the predominant condition during Miramar campaign
- The criterion could have impact in few cases
- There are also counter-examples



### Spatial dependence



- Space-dependence determination would require a well defined grid or data from other ships sailing the area at the same period.

