Introduction to the use of the AEROCOM web interfaces model/data

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Motivation for web interface(s)

- **Harmonized model evalution tool / Documentation of model progress**

- **Communication tool**
  - Error detection and feedback
  - Transparency of work-up process
  - Publicity for joint efforts (eg AEROCOM/CREATE/INCA)
  - Work tool for joint publications

- **Publication of model results for users, field data scientists**

- **FAST access to model results and observations**
  User can select information for comparisons
  - automated processing of large model data sets
  - currently ca 50000 images

Overview of web interfaces

Several sub-interfaces maintained
to differentiate principal types of data

All under http://nansen.ipsl.jussieu.fr/AEROCOM/DATA/
Michael Schulz

- AEROCOM public — aerocom.html
- AEROCOM internal working interface — aerocom_work.html *
  Christiane Textor
- Comparison to surface observations — surfobs.html *
  Sarah Guibert

Just go to http://nansen.ipsl.jussieu.fr/AEROCOM/DATA/aerocom.html
⇒ list and choice of the different interfaces

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Basics principles for interfaces

Standard name used for any image :
[PARAMETER]_[SPECIES]_an[YEAR]_[PERIOD][_STATIONNAME].ps.png

Choice of each « category » to see the corresponding graph

Examples : OD550_AER
EMI_DUST
CONC_SO4

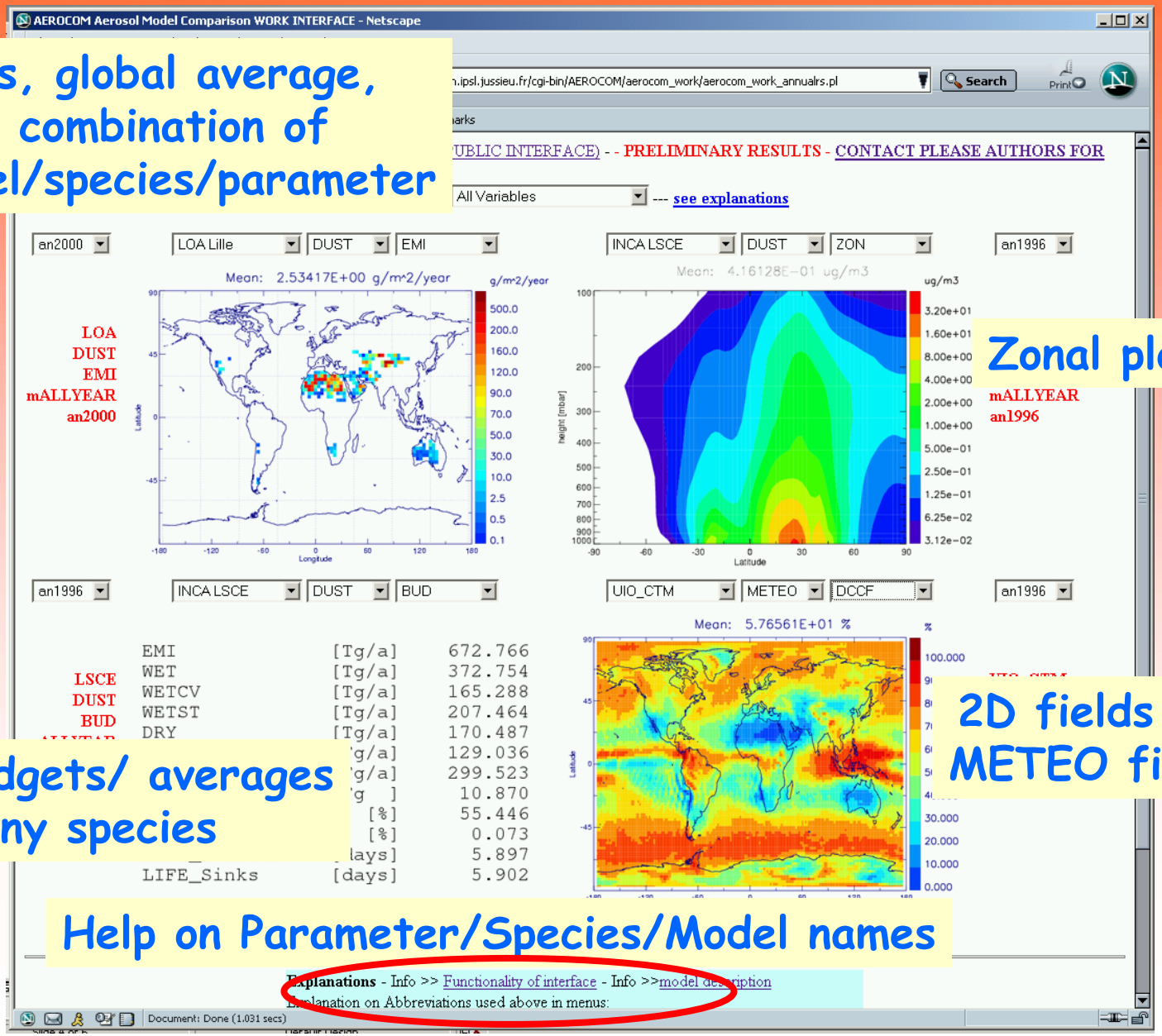
1996/1997/2000/2001/9999*
for AEROCOM internal working interface
2000/96-02/96-02AVG*
for surfobs interface

*climatological run

only for interface with comparison to observations
surfobs.html

AEROCOM internal working interface (1)

2D fields, global average, «any» combination of year/model/species/parameter



Zonal plots

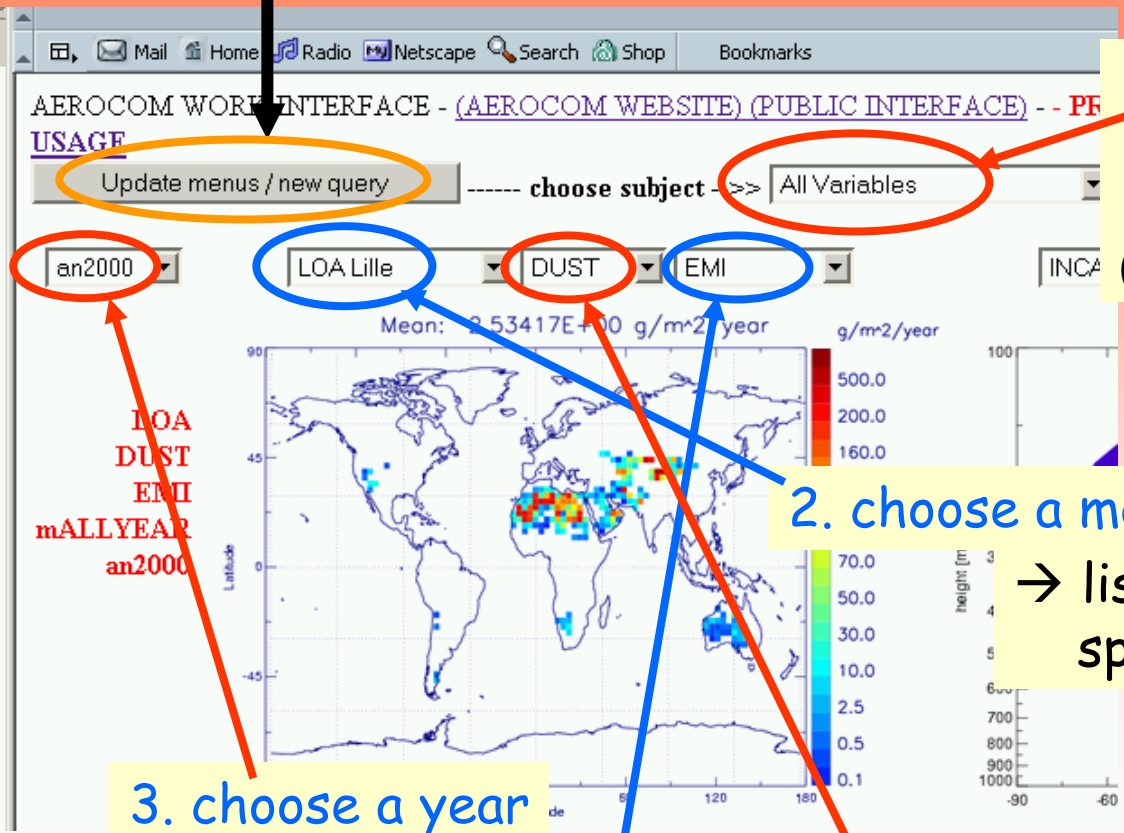
2D fields of METEO fields

Global budgets/ averages of any species

Help on Parameter/Species/Model names

AEROCOM internal working interface (2)

Update button for new selection



1. choose subject + update
→ subselection of parameters or species
(sulfur cycle : species = SO_4,SO_2,DMS)

2. choose a model + update
→ list the years, parameters and species associated to this model

3. choose a year

4. choose a parameter

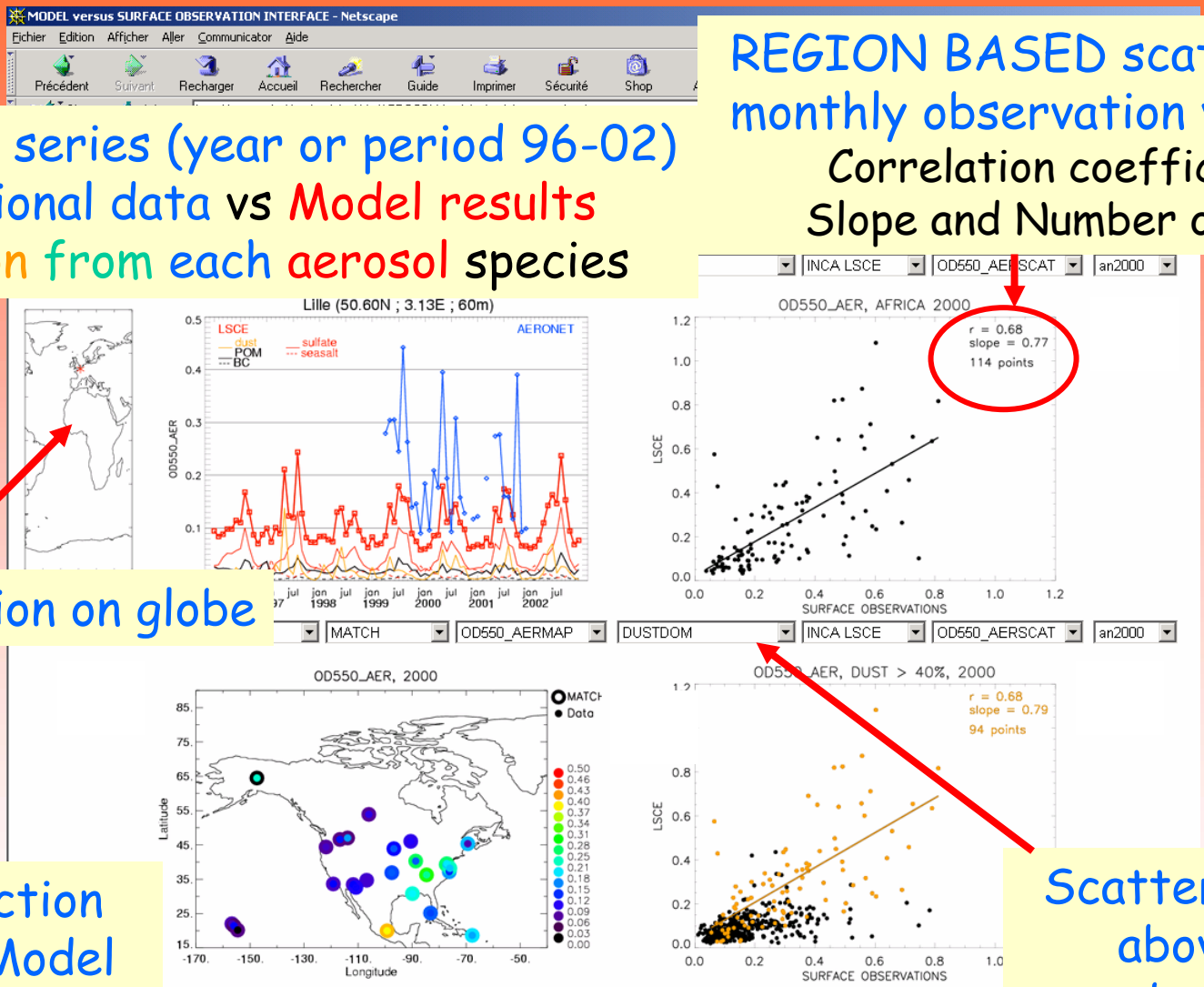
5. choose a specie

6. then update

Surface observations interface (1)

Monthly time series (year or period 96-02)
Observational data vs Model results
Contribution from each aerosol species

REGION BASED scatter plot
monthly observation vs model
Correlation coefficient
Slope and Number of obs



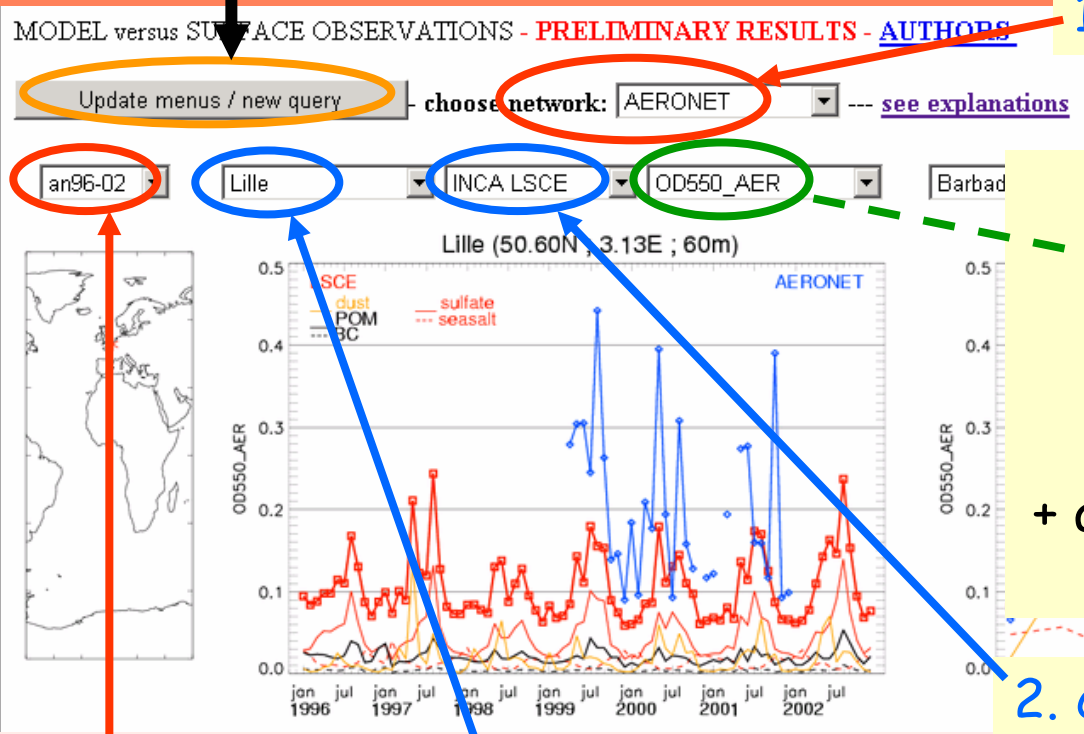
Station location on globe

Region selection
Obs versus Model
mapping of values
(same color -> good)

Scatter plot as above of subsample (colored) obs versus model

Surface observations interface (2)

Update button for new selection



1. choose network + update

automatic selection of [parameter]_[species] associated to this network (except networks all + scatterplots) + associated list of observation stations

2. choose a model + update

→ list the years associated to this model

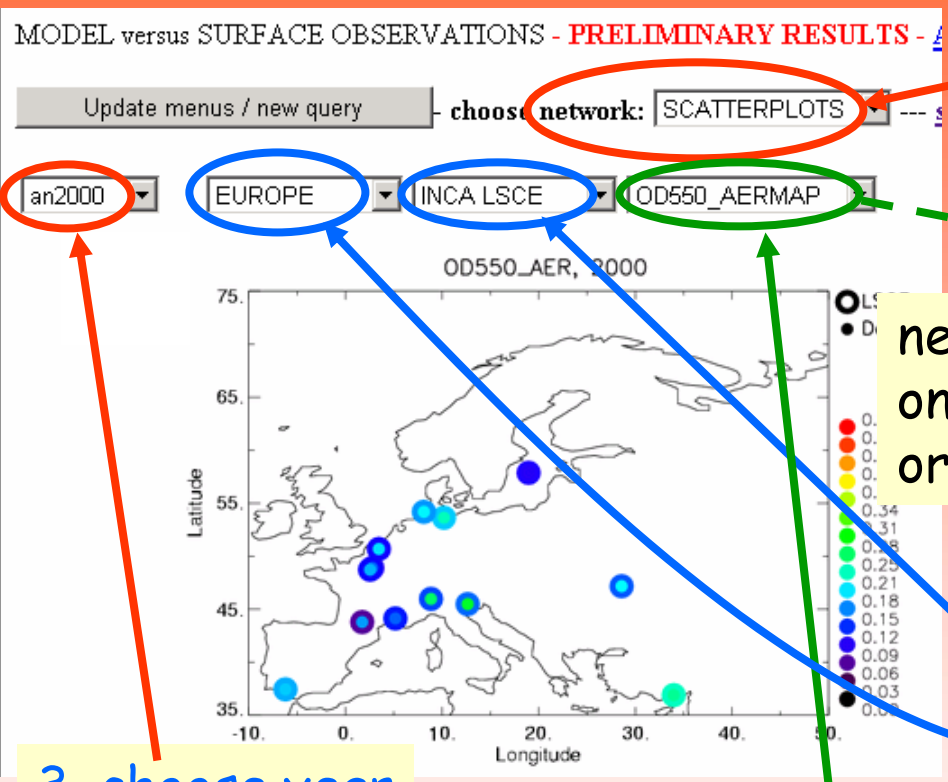
3. choose a year

4. choose a station

5. then update

!! If no graph for the combination model/[param]_[species]/station then error message : « Sorry, this image is not available » !!

Surface observations interface (3)



case network = scatterplots

need to choose [parameter]_[species]
only [parameter]_[species]MAP
or [parameter]_[species]SCAT

2. choose model + update

3. choose year

4. choose [parameter]_[species]

here no station list but continent or subsample selection
[parameter]_[species]MAP → 5. choose continent
[parameter]_[species]SCAT → 5. choose continent or subsample selection

6. then update

Some remarks…

Sometimes need to update 2 or 3 times before it works

Very soon a table will explain all the combinations available for the comparison to surface observations interface

Work in progress so web site in constant progress

All remarks or check up of your model results are welcome !!