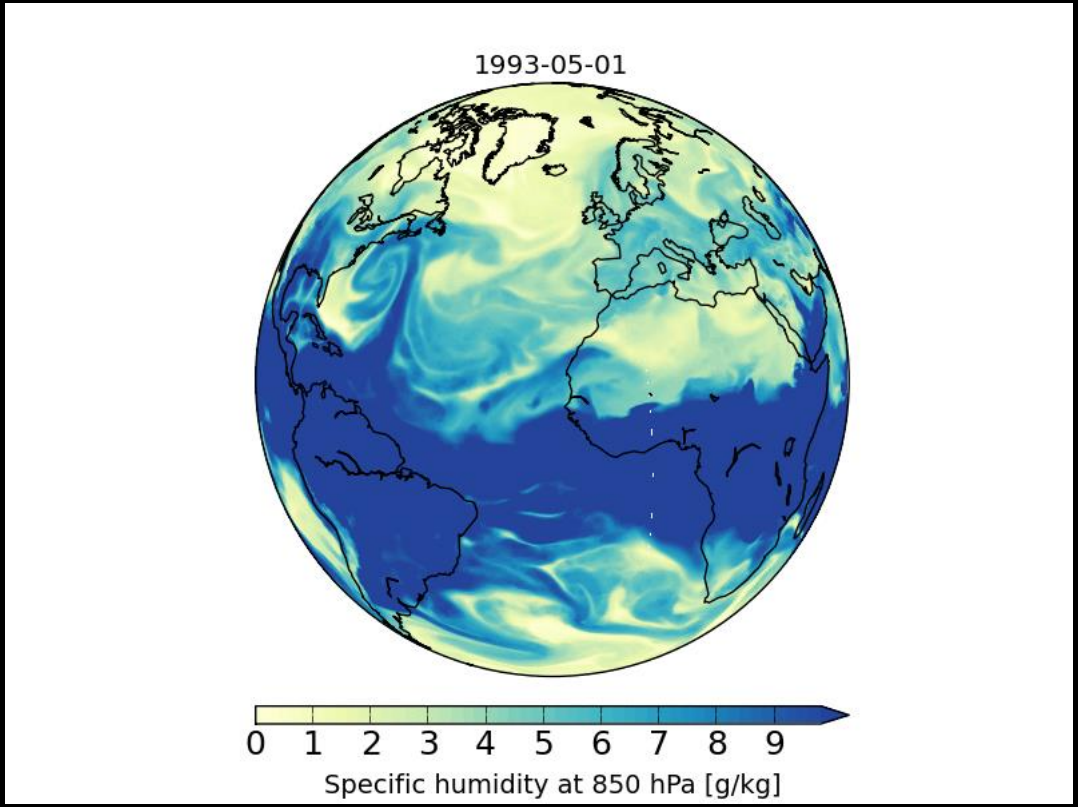
Visualization of Earth System Data

5th June 2015



1. How much time do we want to devote to this effort?

2. What audience are we targeting?

3. To what extent are our simulations unique?

4. What would we like to visualize?

5. Experimental configuration/simulations

6. Visualization software

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1. How much time do we want to devote to this effort?

- This can take literally between 0 and 100% of your time
- Unfortunately, this is currently less rewarded doing actual research (but this is changing)
- Don’t underestimate the time required for learning: this area of work is new to most of us.
- Rule-of-thumb: ~ 1-2 PM for one simple product (not video)

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2. What audience are we targeting?

- For publication in scientific papers, talks, on websites, or general public? All of them? Don't underestimate the convincing power of nice visualizations. People remember images, not numbers.

- Do we want to make the visualizations beautiful, helpful, or useful?

- Do we want to make visualizations explanatory or exploratory?

- « Nested Russian Dolls » approach: reaching multiples audiences http://www.bsc.es/viz/campanian_ignimbrite/

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- EC-Earth simulations are global, long, and with multiple members
- Resolution, even if high, is not on our side. There are already very good animations with ultra-high res.

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- Climate research: SST, specific humidity (tracer), couplings, storm track
- Climate services: winds
- Air quality: ?

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- How long should the simulations be, what should be the output frequency? Horizontal and vertical resolutions?
  - EC-Earth 4 months daily outputs: ~ 800 Mo for one variable at ORCA025/L75
- Format issue: is NetCDF sufficient?
- Who could run, follow and process the simulations?

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- Is there hope to learn, in reasonable time, how to use visualization tools?
- Are the softwares fit to handle large data sets?

Flight plan

- Open webpage on wiki

- One visualization for the time of official merging? (work: sept-oct)?
- July/september: trainings