

UV-CDAT Diagnostics

ESGF Face-to-Face Meeting
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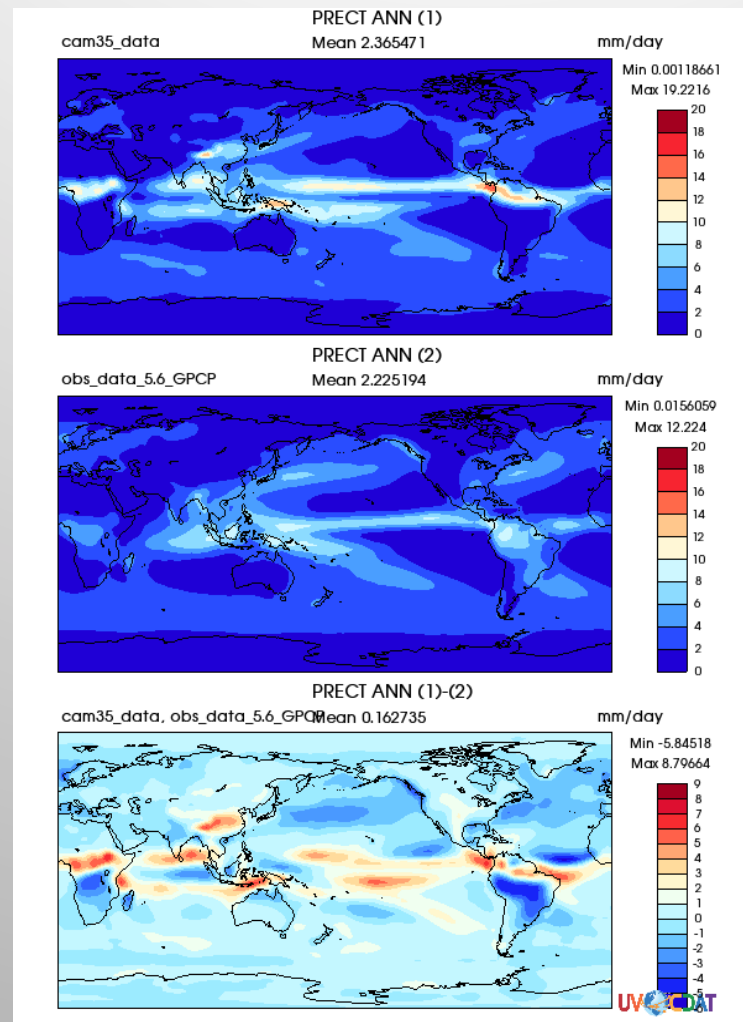


What are diagnostics?

- Compare model output with observations, or another model
- Data is reduced in time and other axes
- Generate plots and tables to show important features of the model
- Plotted quantities may come from a substantial computation, starting with model output.

Example

precipitation: model, observations, and model-observations

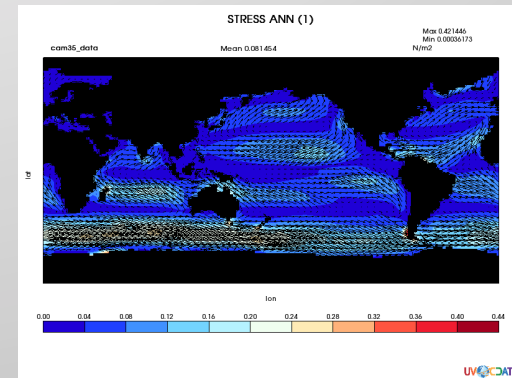
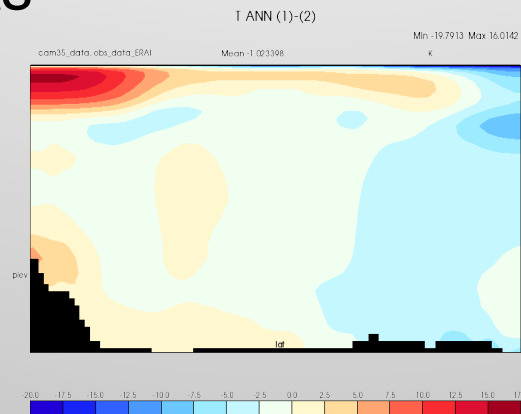
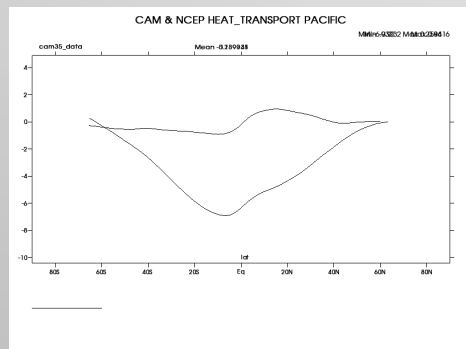


UV-CDAT Diagnostics Features

- Several command-line scripts for static plots
- UV-CDAT GUI with dynamic plots
- Thousands of diagnostics, organized in plot sets like NCAR's NCL-based diagnostics
- Flexible
 - Has been tested on multiple...
 - input data formats (CMIP5 and CCSM/CESM)
 - output (UV-CDAT, JSON, NetCDF, PNG)
 - Highly extensible design

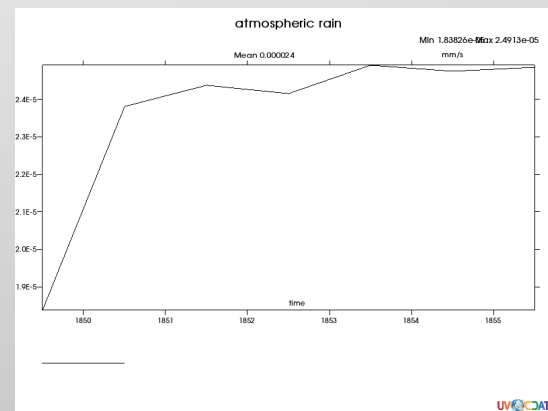
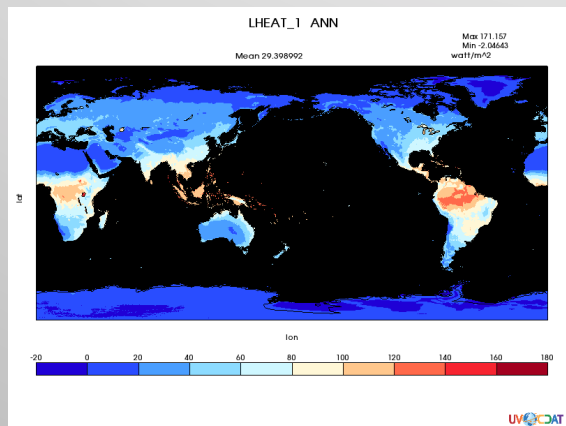
Many types of plots

- 10 atmosphere plot sets done; more partly done.
 - Includes atmosphere Tier 1a sets and (almost) Tier 1b first-priority sets



Many types of plots

- 5 land plot sets done. All but one mostly done.



Transition into Production

- Many small new features and bug fixes. E.g.:
 - User-oriented scripts (c.f. Brian's talk)
 - Concise method for defining derived variables
 - More robust against strange usages, bad data, etc.
- Two “friendly users” are testing the diagnostics.
 - Recent difficulties have been with processing data which meets no standards; some workarounds added.

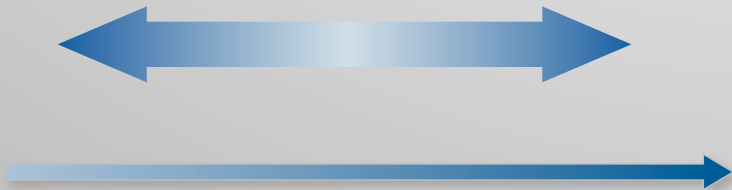
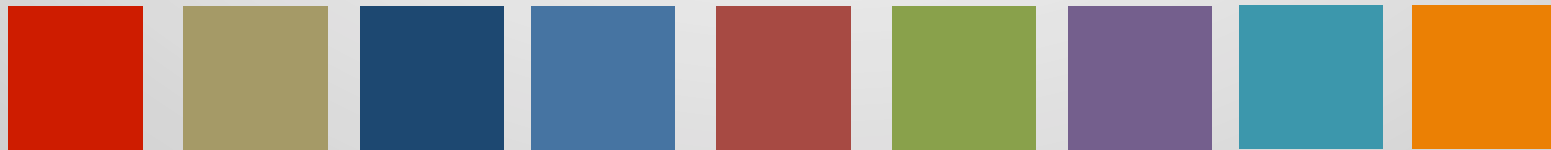
Standard Bulleted Vg

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Colors and arrows



Summary box is now full width bleed