

JULES Evaluation

Tristan Quaife

+ the attendees of the JULES Eval meeting

Evaluation meeting 14th June

- Took stock of where we are at
- Discussed where we might go

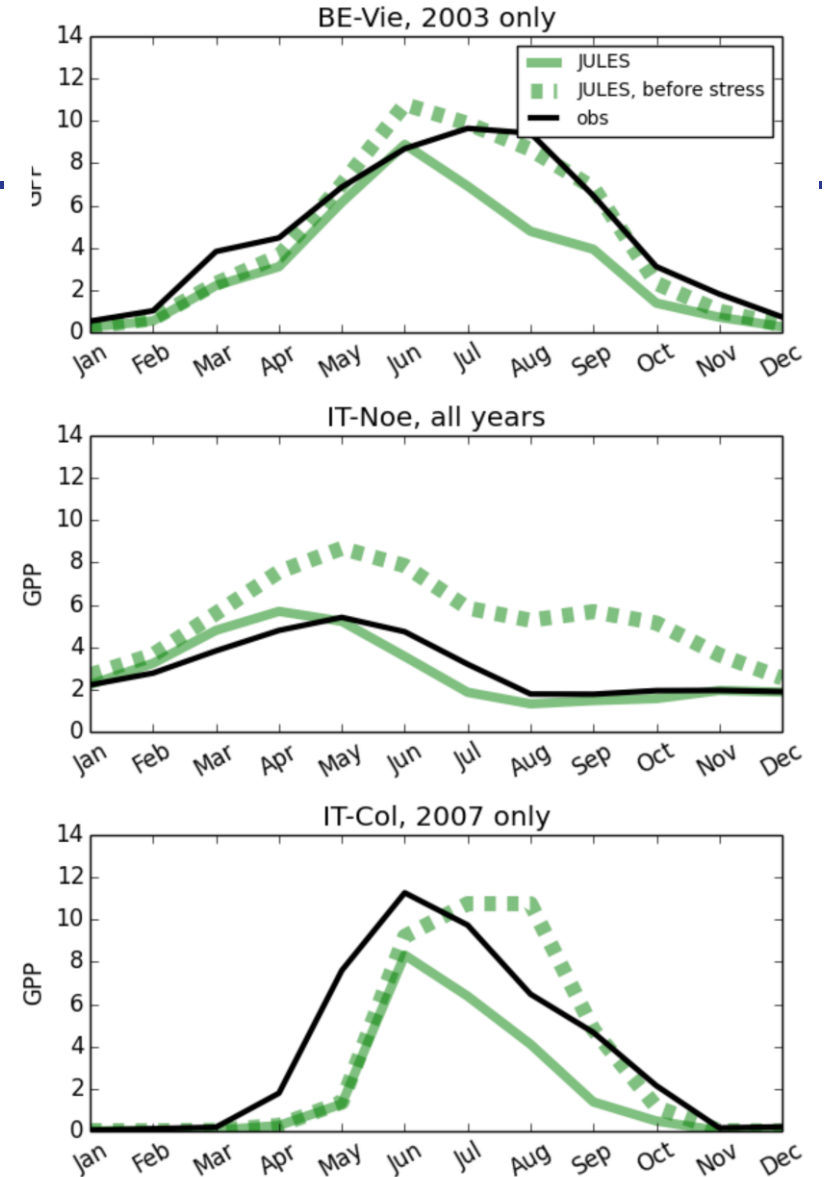
- Draft evaluation strategy in prep.
- Lots of people working on evaluation, but very little directable resource

Objectives

- To provide a set of tests for benchmarking
- Specific to each configuration:
 - GLX.X
 - ESX.X
- Updated with source and configuration releases as necessary
- **Clearly document so anyone with a JASMIN account can run benchmarks**

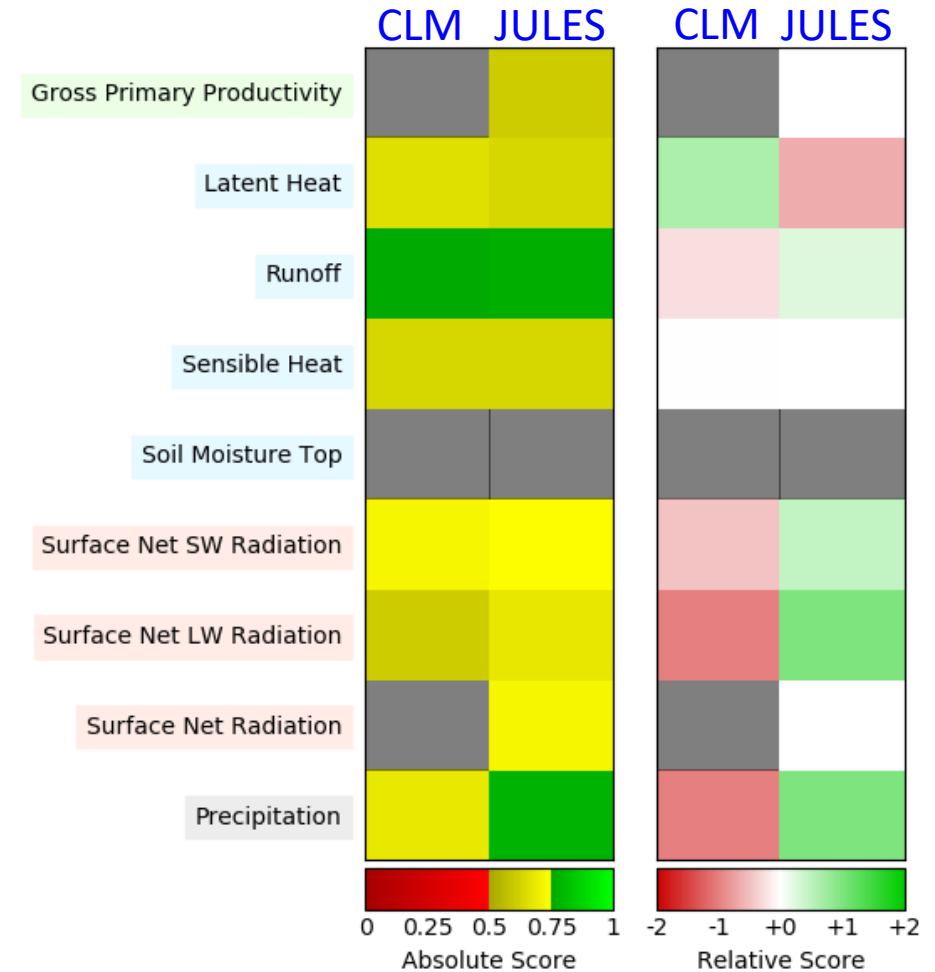
Existing capability: Fluxnet suite

- suite u-al752
- Suite incorporates site observations e.g. soil parameters, LAI, soil moisture and advice from site PIs.
 - Golden site: Mead Nebraska
- <https://code.metoffice.gov.uk/trac/jules/wiki/FluxnetandLbaSites>
- Karina Williams, Anna Harper, Patrick McGuire, Carolina Duran Rojas, Eddy Comyn-Platt



Existing capability: ILAMB

- On-line tutorial webpage developed for running ILAMB in a Rose/Cylc suite on CEDA JASMIN
- <https://research.reading.ac.uk/landsurfaceprocesses/software-examples/ilamb-tutorial/>
- Patrick McGuire, Carolina Duran Rojas and Eddy Robertson.

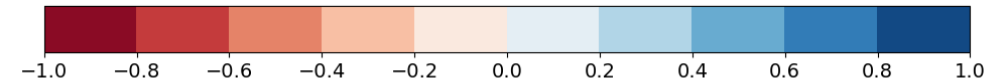
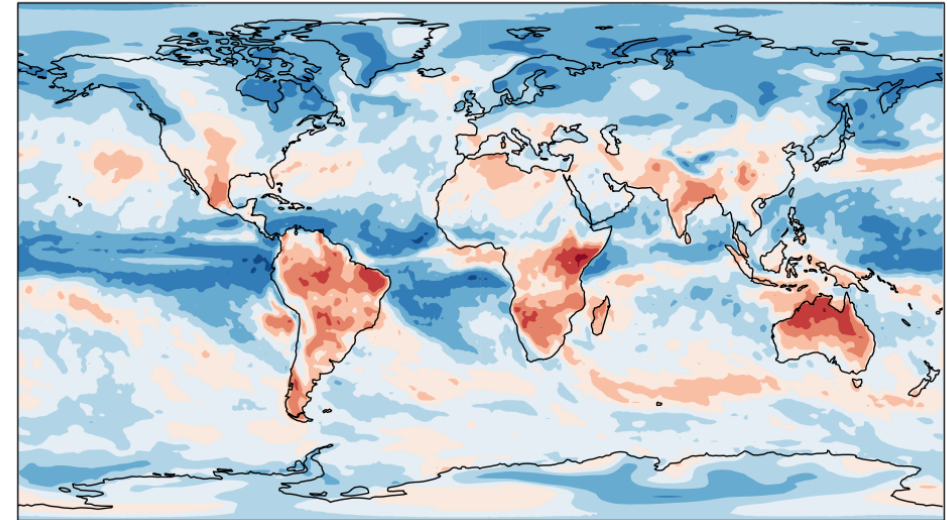


Daniele Peano (CMCC) and Omar Müller (U.Reading)

Future: ESMValTool

- Large investment across JWCRP community
 - In part driven by UKESM
- Primarily designed to work with CMIP model output but in principle can work with any gridded data
- Steep learning curve, but we are working to simplify
- Ultimately very flexible, could embed other tools within ESMValTool

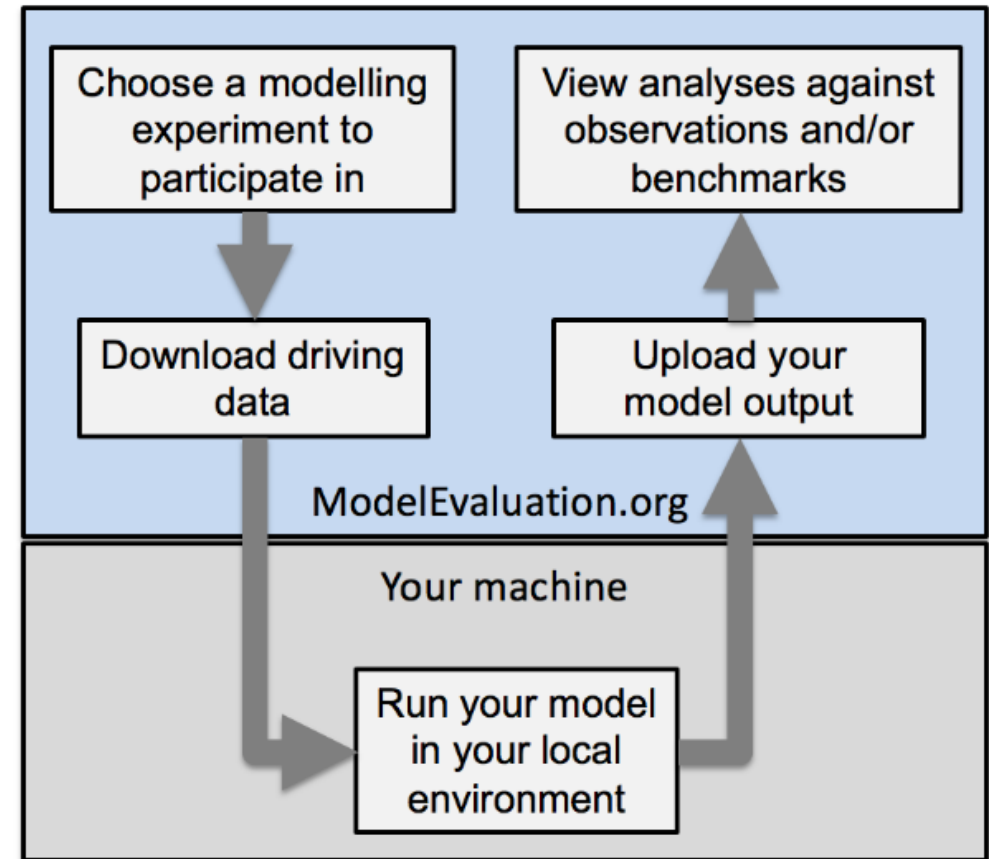
DJF Anomaly Corr: pr and tas for BCC-CSM2-MR-r1i1p1f1



Ranjini Swaminathan (University of Reading)

Future: PALS

- <https://modevaluation.org/>
- Not ideal for benchmarking JULES configurations because, e.g., driving data is imposed
- Some advantages for model evaluation:
 - Carefully quality control on drivers and observation performed dedicated project
 - Easy comparison against other models that have taken part in the same experiments



Conclusions

- Large effort bringing together fluxnet and ilamb suites and associated tutorial material
- Some steps needed before these become benchmarks for specific configurations
- ESMValTool and PALS being explored
- Draft evaluation strategy to be presented to JLMP this summer