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# Benchmarking and JULES versions

Matt Pryor, JULES science meeting, 17 June 2009



# Contents

This presentation covers the following areas

- Update on benchmarking
- JULES version 2.1
- Future work



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# Benchmarking

An overview of the benchmarking tool under development



# Benchmarking overview

- Benchmarks agreed:
  - Evaporation, water and carbon for 10 sites using Fluxnet data
  - NDVI
  - Atmospheric CO<sub>2</sub>
  - River flow
  - Vegetation cover
- Paper about evaporation tests submitted for publication (*Blyth et al*)
- Benchmarking tool being built to automate model runs and tests

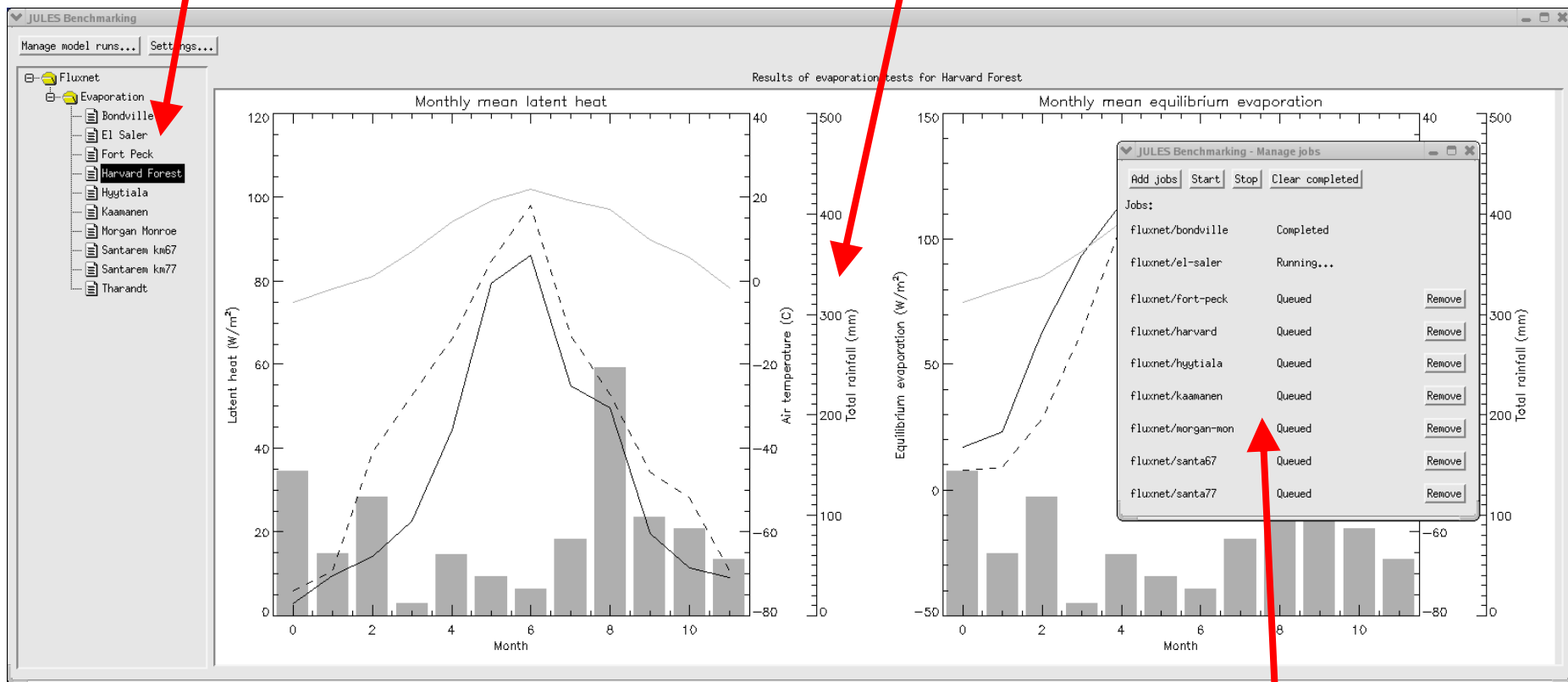


# Benchmarking tool

- Built using IDL and will run on the free virtual machine (no need for a full IDL licence)

Choose a benchmark here

Results appear in this pane



Queue model runs to execute one at a time in the background



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# JULES version 2.1



# JULES version 2.1

JULES v2.1 nearing release. Main changes are:

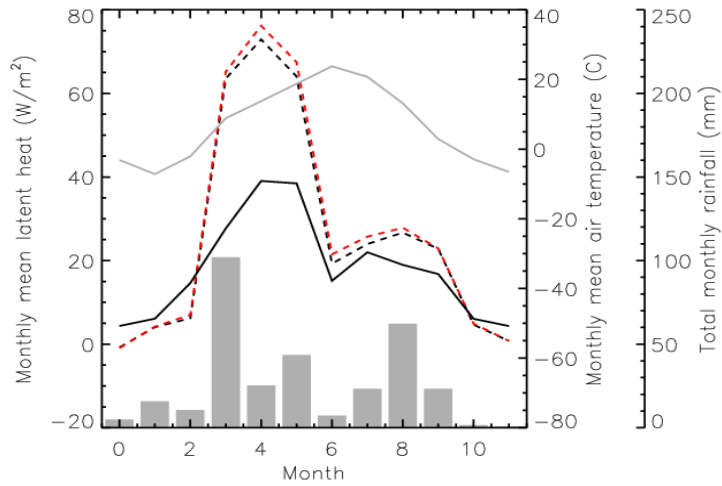
- JULES re-integrated with the Met Office Unified Model (GCM for forecasting and climate runs).
- New layered snow scheme
- Implementation of RothC soil carbon when running with TRIFFID
- Small changes to the numerics
- Bug fixes for problems found in version 2.0



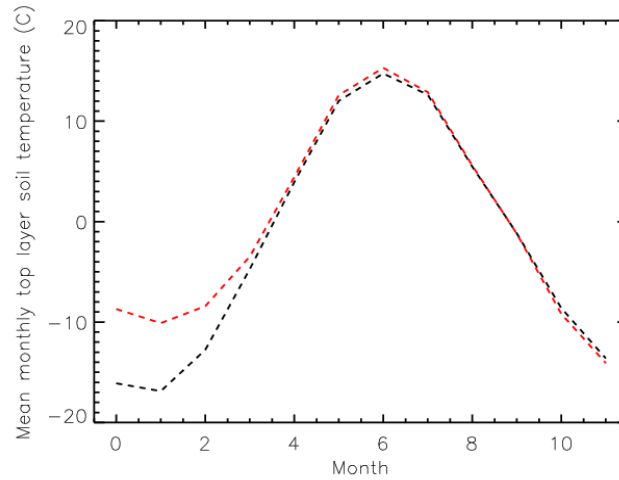
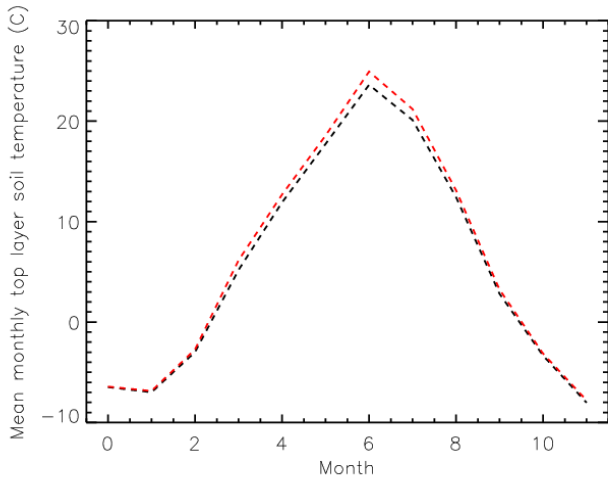
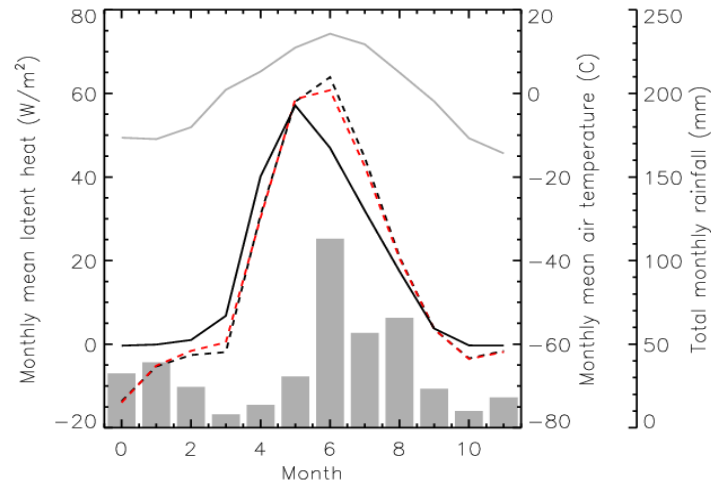
# JULES v2.1 VS JULES v2.0

- Observations
- - - JULES v2.0
- . - JULES v2.1

## Fort Peck



## Kaamanen







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# Questions and answers