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University of Reading

WP B.1: Improving convective parameterisation

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WP B.1: Objective and methods

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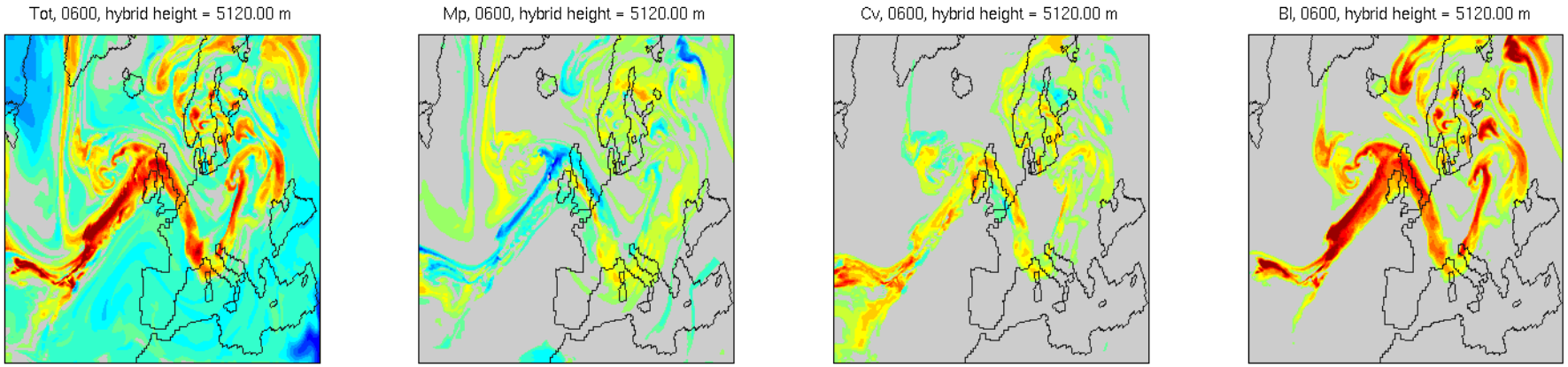
- To assess the adequacy of current convection parameterisation schemes to represent convective processes in mesoscale processes in the extratropics.
- The intended tools are
  - Tracer diagnostics such as those for PV. New variables include theta and moist-related variables (q, q_{cl}, q_{cf}).
  - Includes code update from MetUM 6.1 (modsets) to 7.x (FCM).
  - Decomposition of bulk mass flux schemes into spectral components (Lawrence and Rasch 2005).

Example: Heating/cooling



Cumulative heating /cooling (including advection effects) since 00 UTC 22 November 2009. Simulation using LAM MetUM at 12 km grid spacing.

- Pilot campaign case: 24 November 2009.
- Jeffrey has already analysed this case using PV.
- This set of tools is nearly complete and ready to be used by other users.
- Care must be taken regarding growth of balance errors.