

What can a LAM NWP system tell us about the water budget

Findings from the BALTEX reanalysis project

HIRLAM WS on convection and condensation

Tarto 24-25 January 2005

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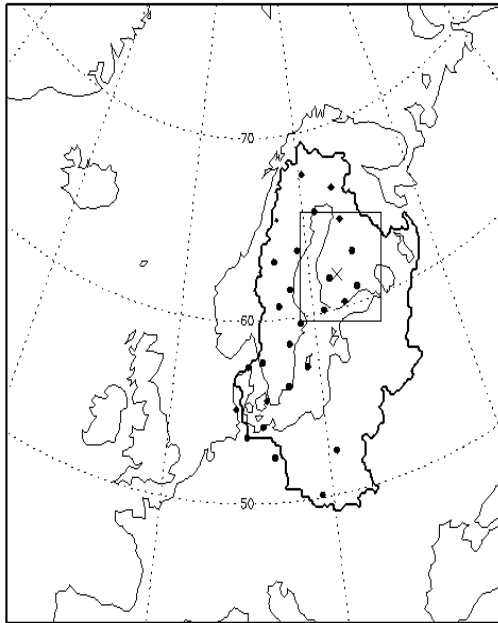


The Baltex reanalysis project

- Generate NWP-products for the Baltex experiment
- Period: September 1999-October 2000
- Fortelius, et al. ,2002: (Boreal Env. Res., 7, 193-201)



The Baltex reanalysis system

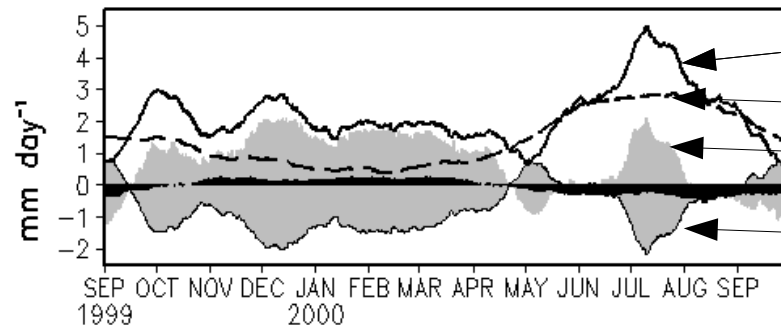


0.2 x 0.2 deg., 31 levels

- Hirlam 4 +
 - Rasch-Kristiansson
 - Kain-Fritsch
 - RCA surface scheme
 - BOBA/PROBE
 - SMHI Lake model
- HIRVDA
 - “Conventional obsbs.”
- LBC: ECMWF, 3h

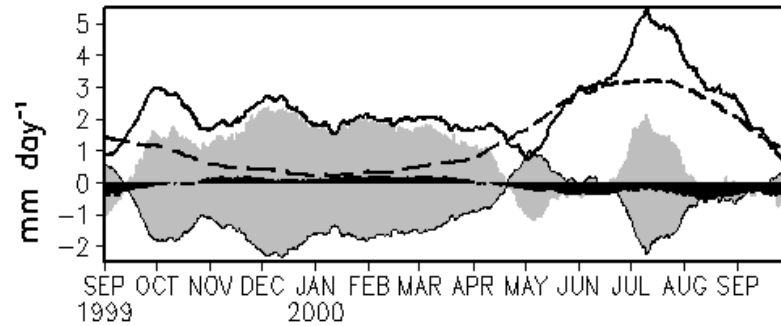


Total drainage basin

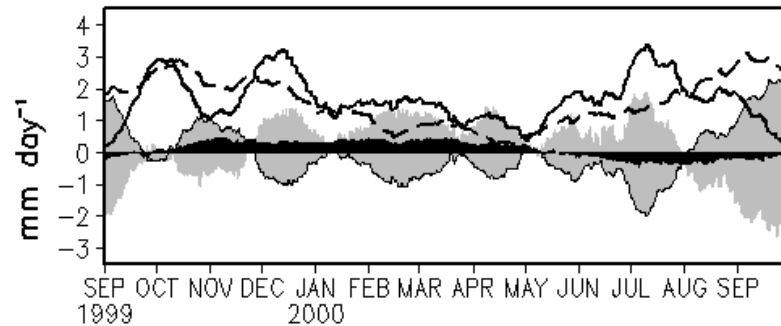


P
E
C
E-P
T - T_{anal.}

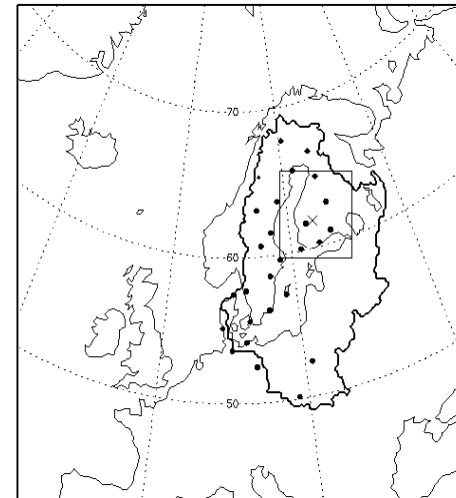
Land fraction



Sea fraction



$$T = C + E - P$$

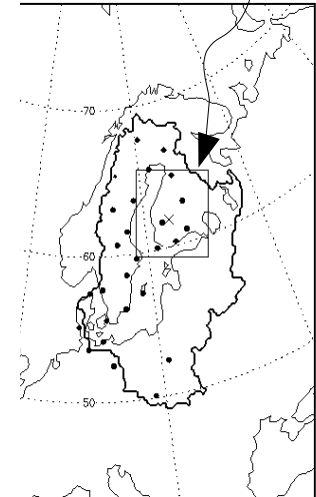
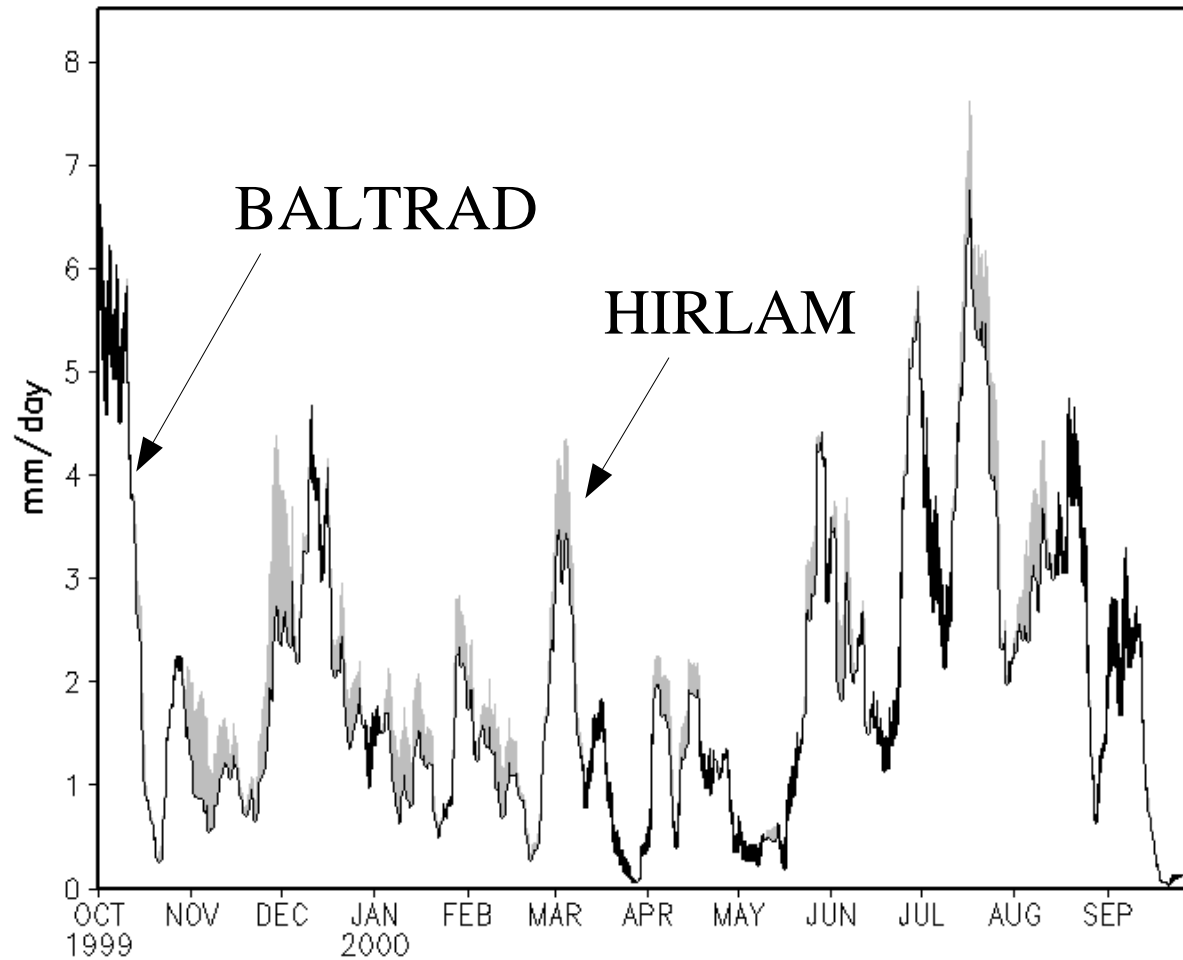


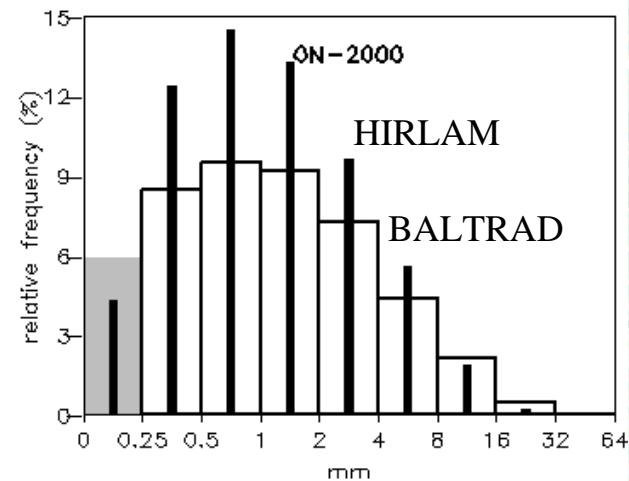
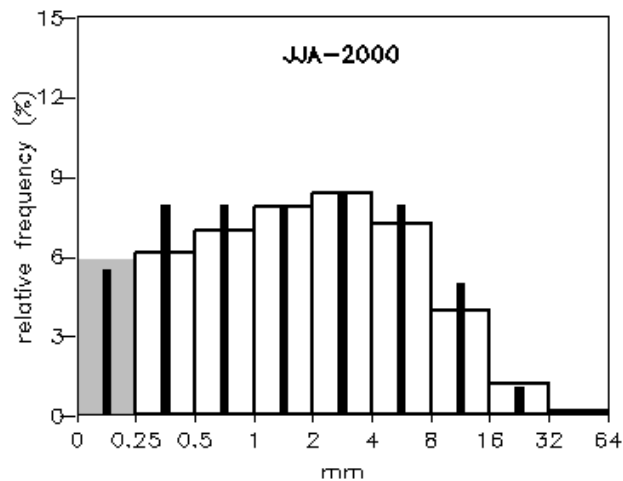
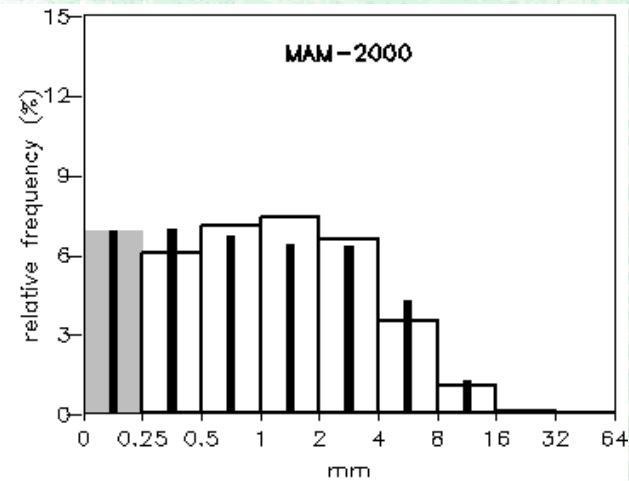
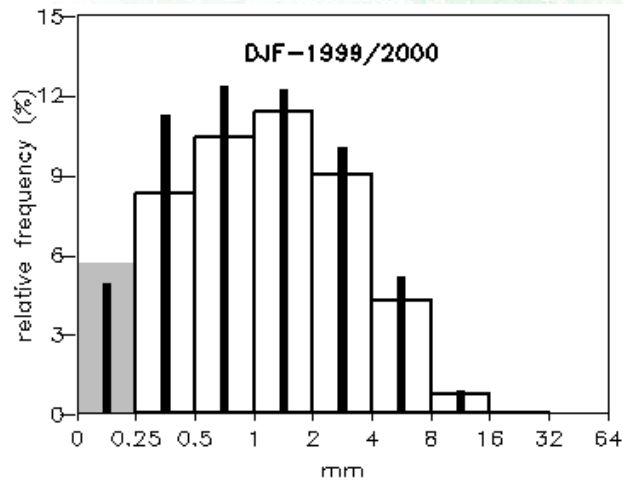
hh 6-12

30-day running ave:s



Areal precipitation





12-h totals, shaded column divided by 10

