

# Evaluation of ECMWF forecasts over Europe

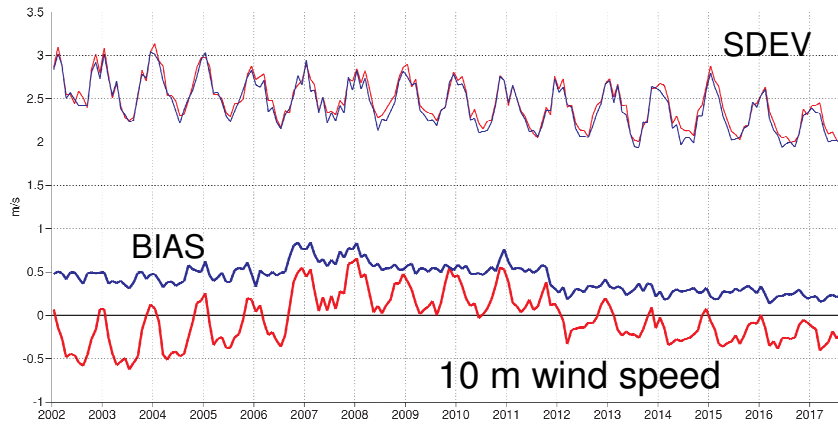
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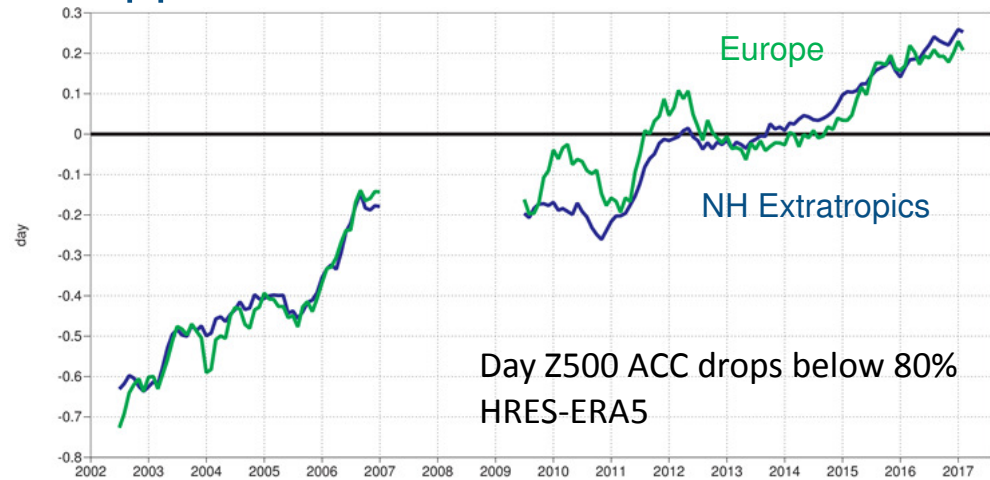
[Thomas.Haiden@ecmwf.int](mailto:Thomas.Haiden@ecmwf.int)



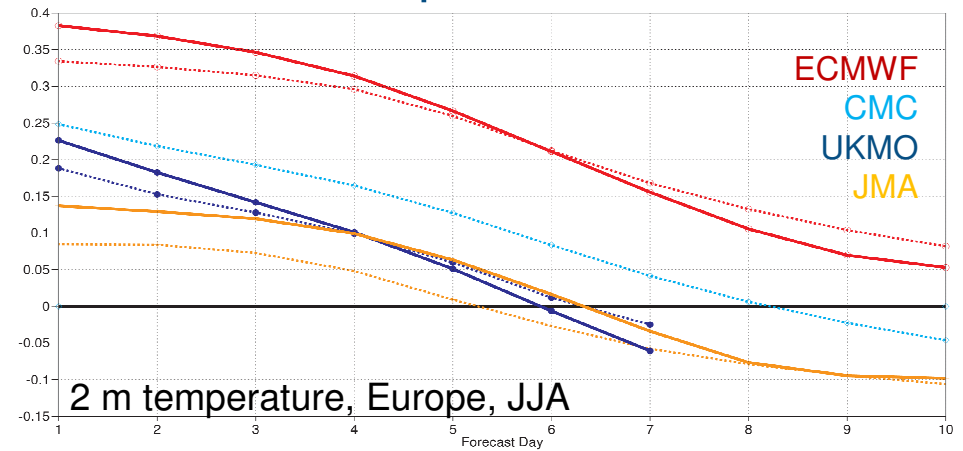
## Long-term monitoring of near-surface skill



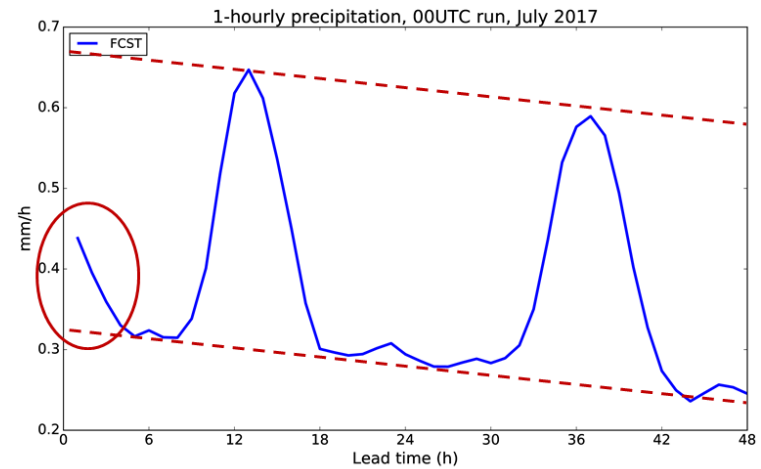
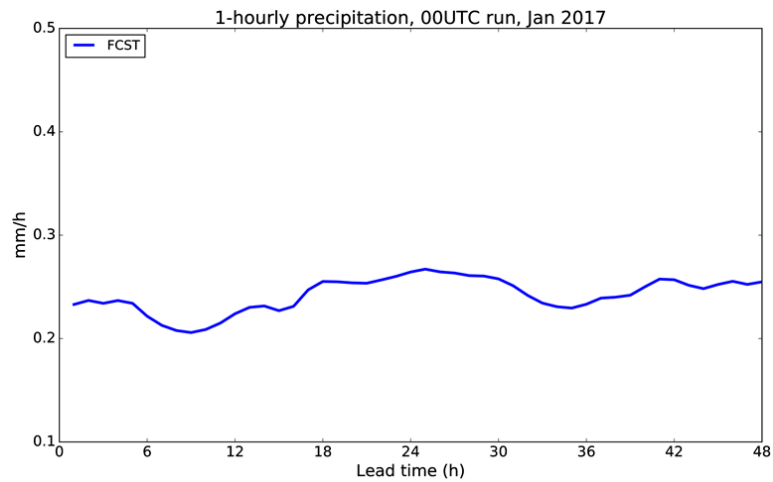
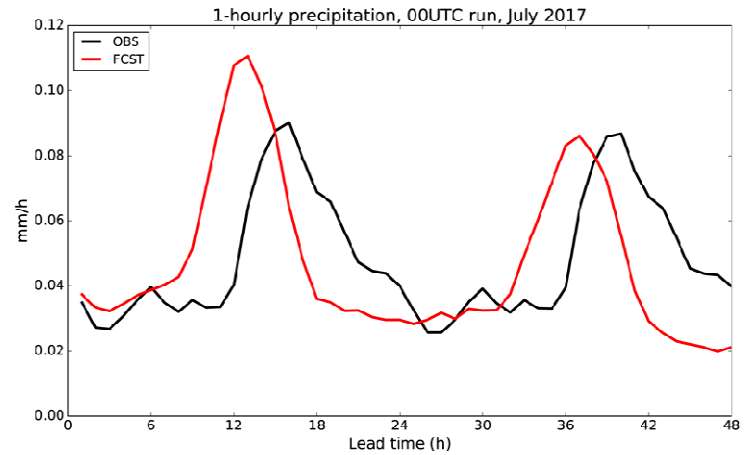
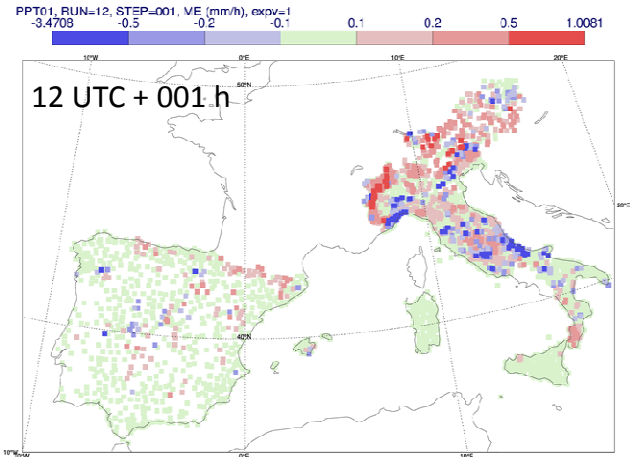
## Upper-air forecast skill



## Model intercomparison

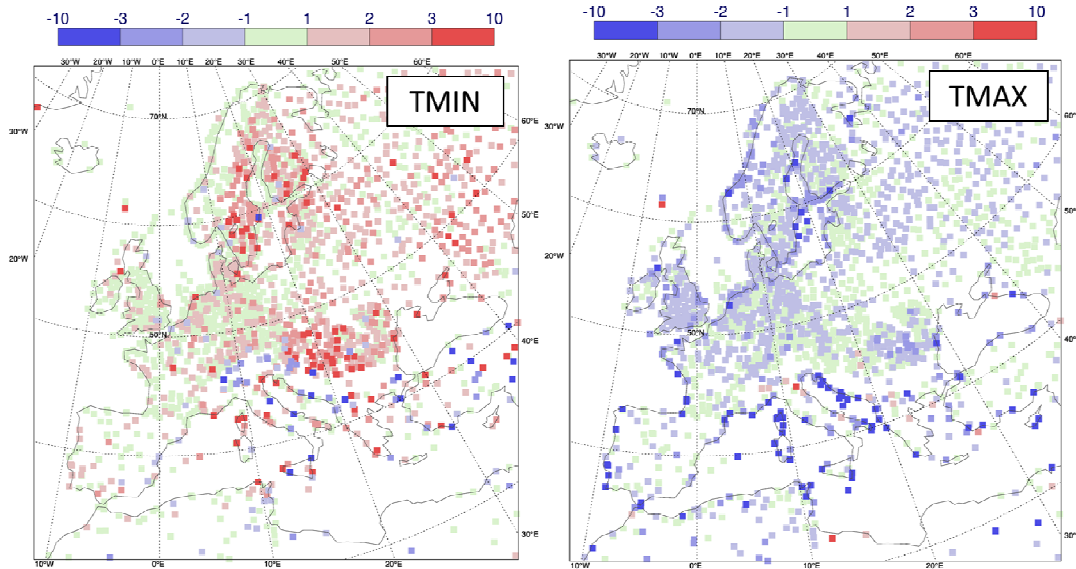
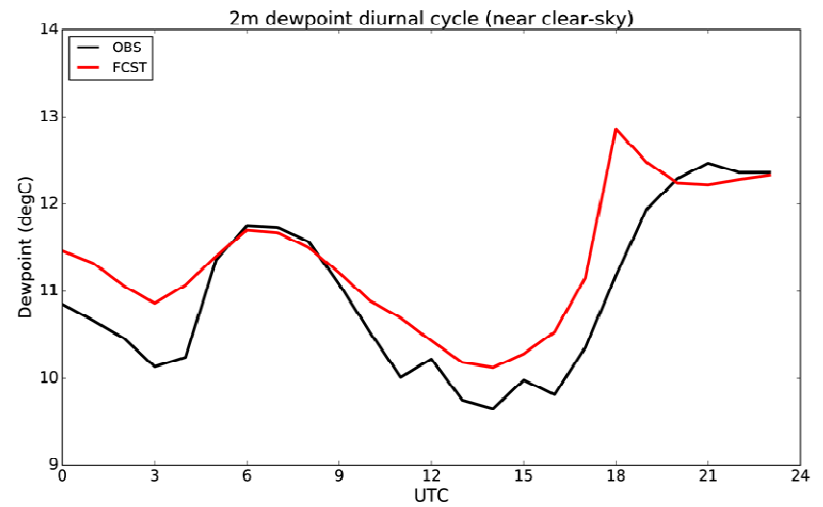
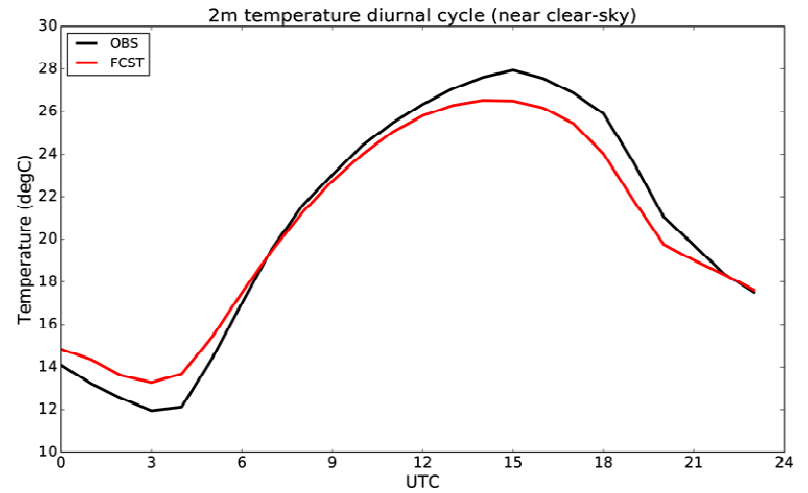


# Use of high-density observations in verification



# Diurnal cycle of 2m temperature and humidity

- Too small amplitude of the diurnal cycle (too warm nights, too cool afternoon temperatures)
- Conditional verification to investigate processes
  - sampling of near clear-sky days



## Cloudiness and radiation

- Verification of cloudiness against SYNOP observations is affected by substantial representativeness errors
- Verification against satellite-derived surface fluxes offers a useful additional means of evaluating cloud forecast skill
- Forecast skill horizon (days) of daily totals of downward solar radiation in 2016 verified against satellite data (Climate Monitoring SAF).

