Some questions on surface issues

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Two questions

- Verifying tiling schemes
- Snow cover and depth analysis

Verification tiling schemes

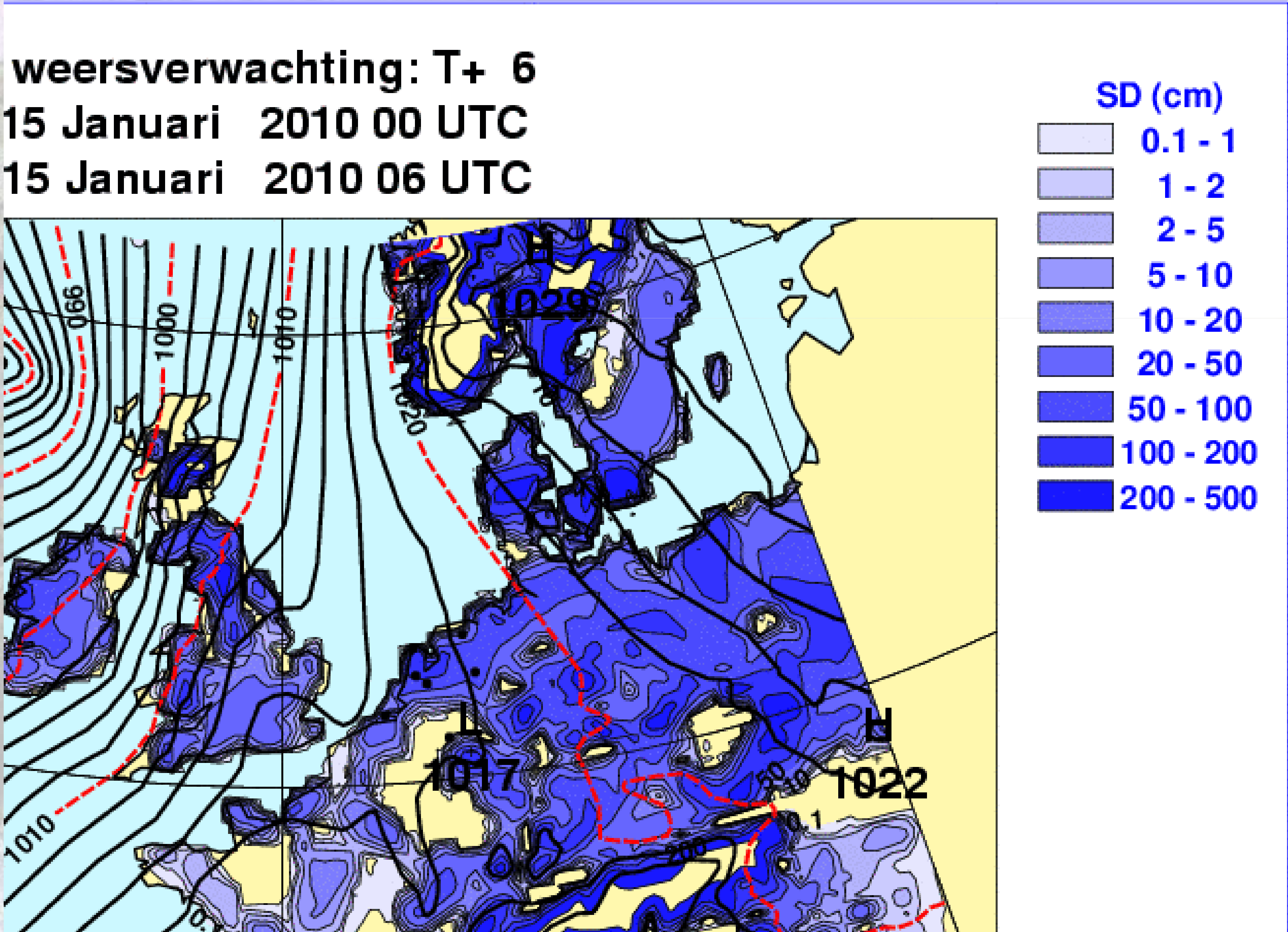
- How to verify that you do correctly in areas with dominant tile in model and small area for tile representing observations
- Especially problem when stability is different in different tiles
- Example melting snow in forest dominated area.

Example

- Trees absorb solar radiation, heat atmosphere to +20° C or higher, incorporated in forest scheme
- Snow covered low vegetation and bare soil, T_s = 0° C.
- T2m(low veg) close to 0° C (stable situation for that tile), observation closer to +10° C
- How to verify?

Snow problems

- Large problems with snow cover, e.g. in ECMWF
- Problems due to lack of snow depth information, interpretation of precipitation sums translated to snow depth
- Automatic snow depth measurements not used due to missing groups in synop



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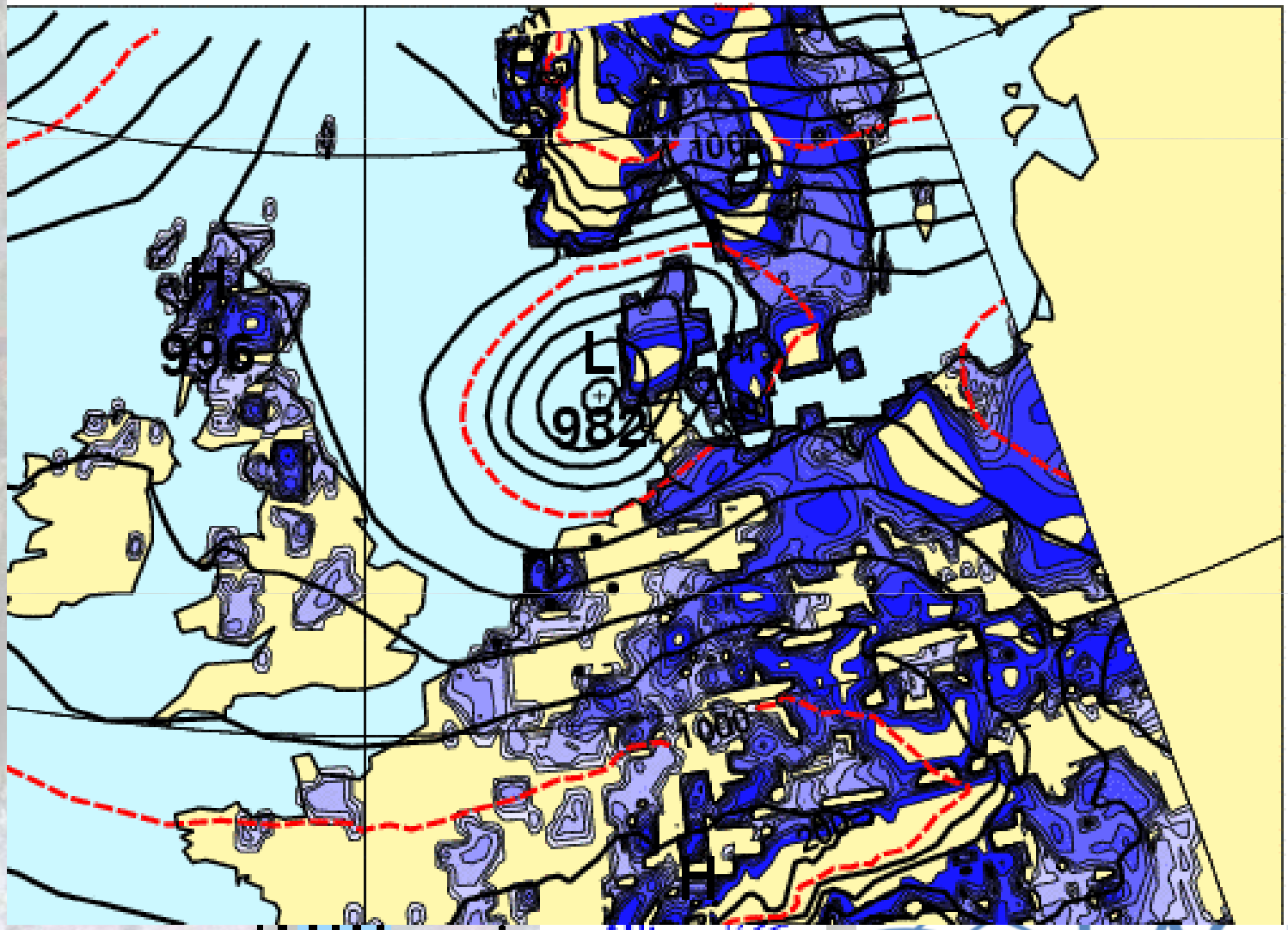
weersverwachting: T+ 6
20 Februari 2010 00 UTC
20 Februari 2010 06 UTC

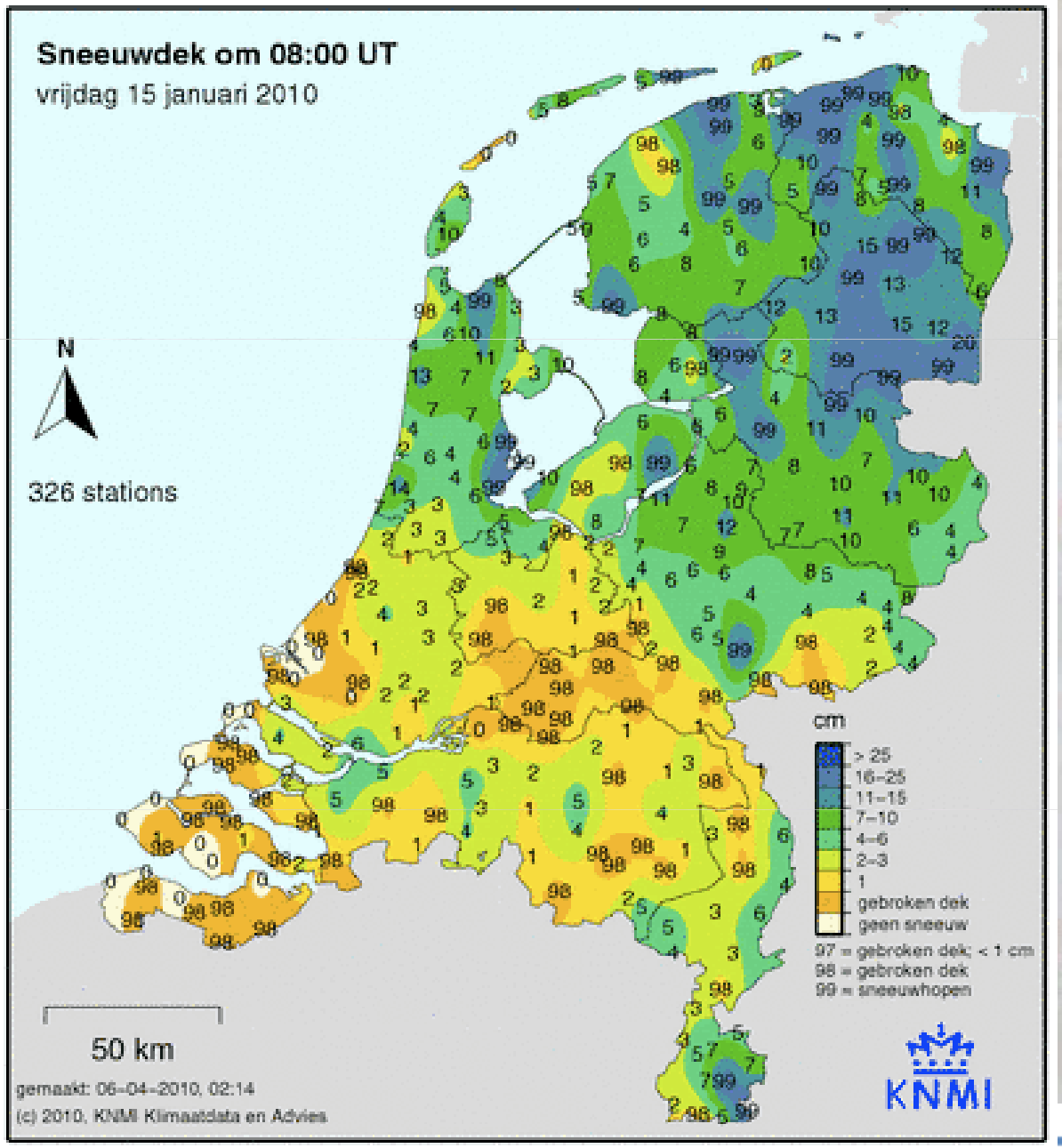


SD (cm)
0.1 - 1
1 - 2
2 - 5
5 - 10
10 - 20
20 - 50
50 - 100
100 - 200
200 - 500

Snow problems

- Much more information available (climatological networks)
  1. Exchange of (all) information to central place for European snow analysis (NWP-SAF?)
  2. Collect data nationally and send out new observations with snow data from climatological stations (Swedish solution)?

Snow problems



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