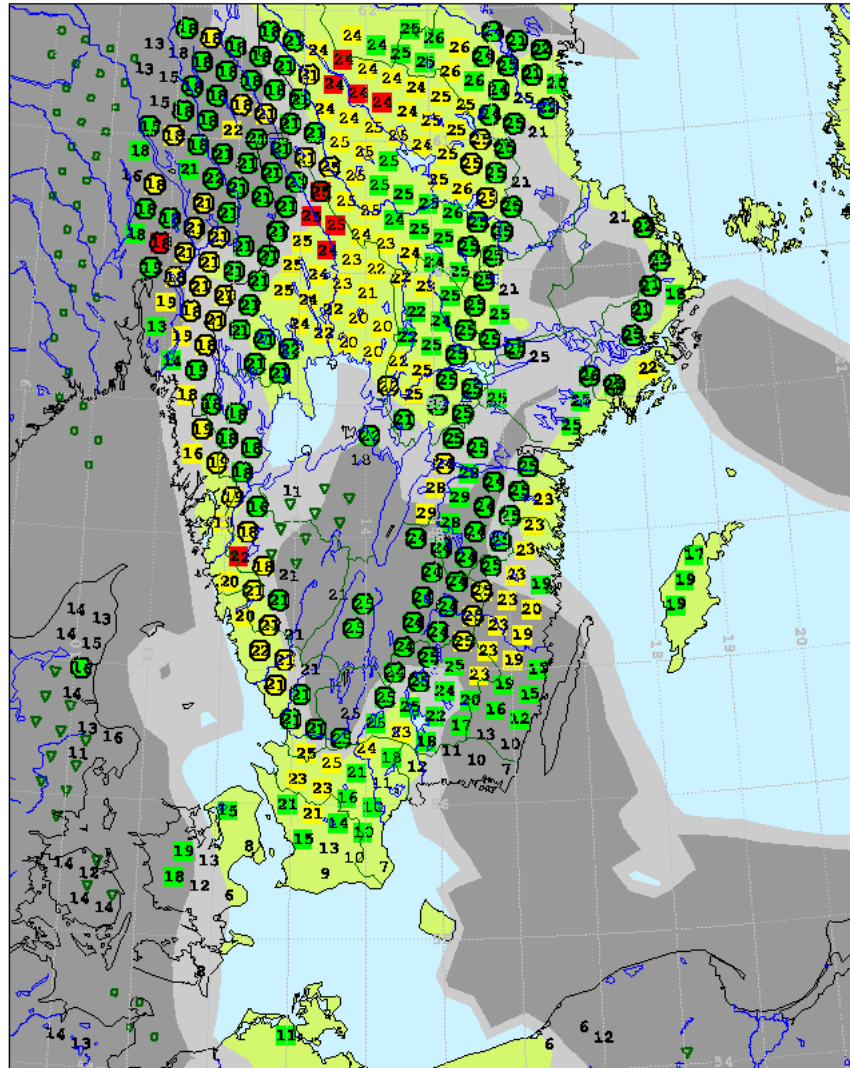


SWEDTHERM

THERMAL FORECAST FROM THE SWEDISH
HIRLAM MODEL

Bernt Olofsson and Esbjörn Olsson

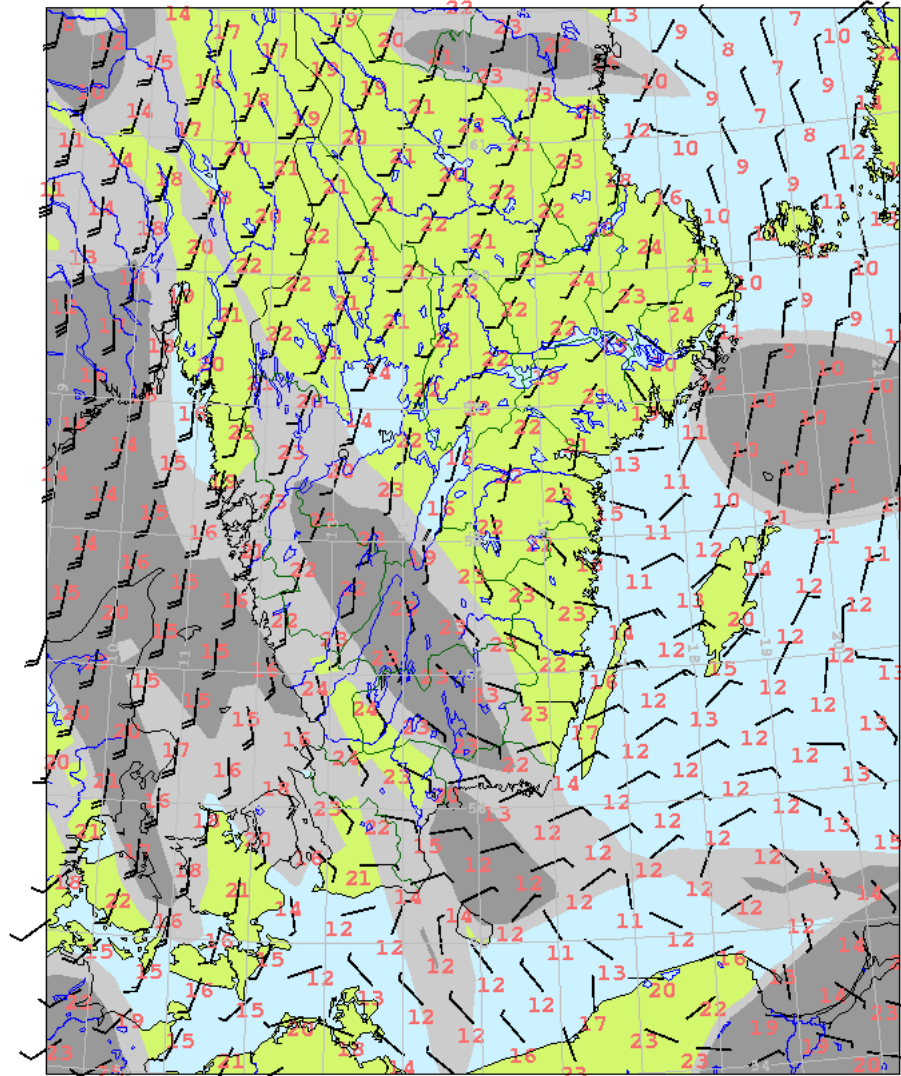
Forecast THURSDAY 16 JUN 2005 00Z +15
 valid: THURSDAY 16 JUN 2005 15Z



Total cloudcover (grey-shading) and precipitation (symbols)
 Top of thermals (dry thermals or Cu-base) in hundreds of meters
 Mean rate of climb (colorcoded)

1-2 m/s	2-3 m/s	>3 m/s
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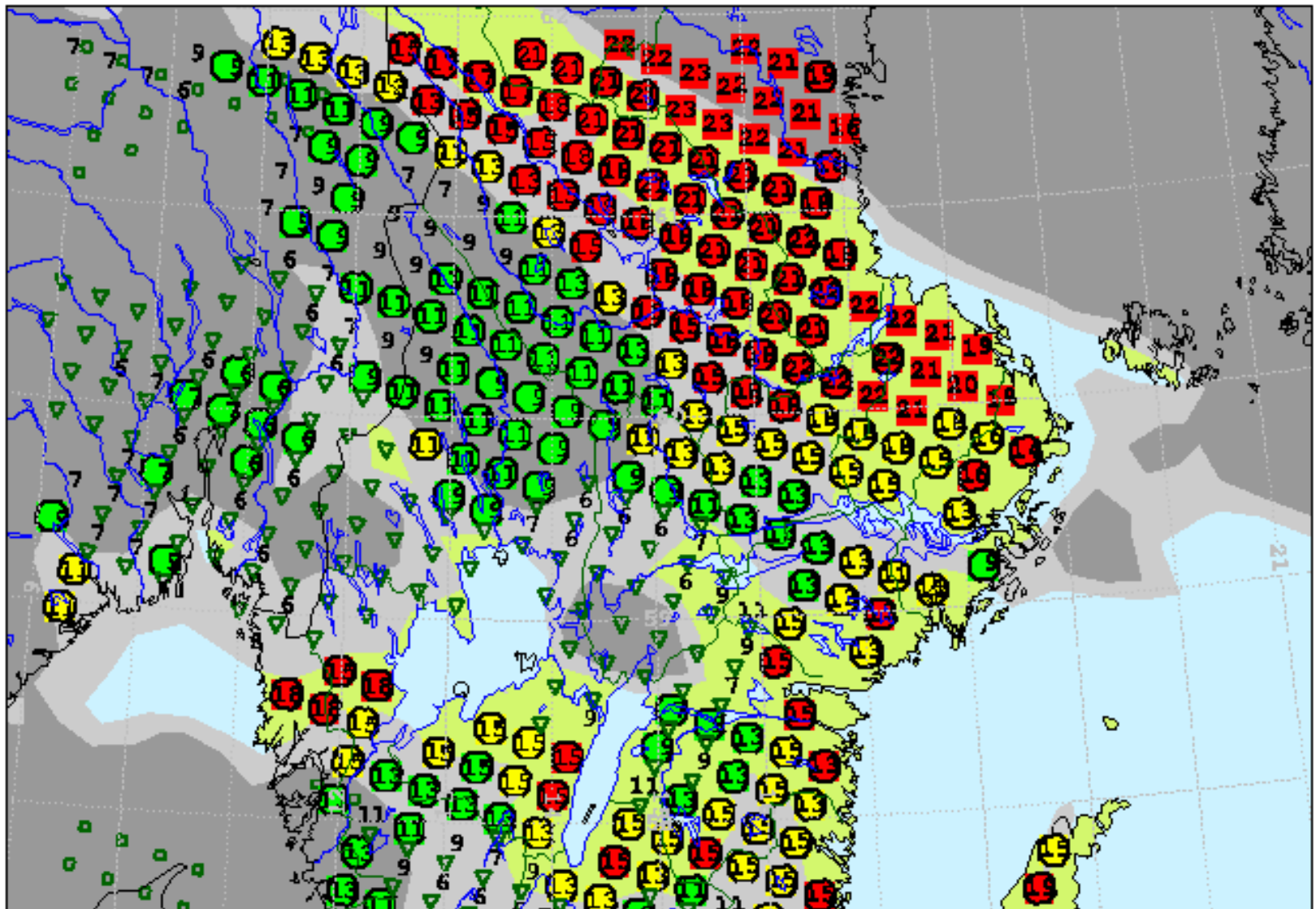
Forecast THURSDAY 16 JUN 2005 00Z +12
valid: THURSDAY 16 JUN 2005 12Z



Cloudiness - medium and high clouds only (grey-shading)
Wind at 1000 m (knots) and air temperature (at 2 m)

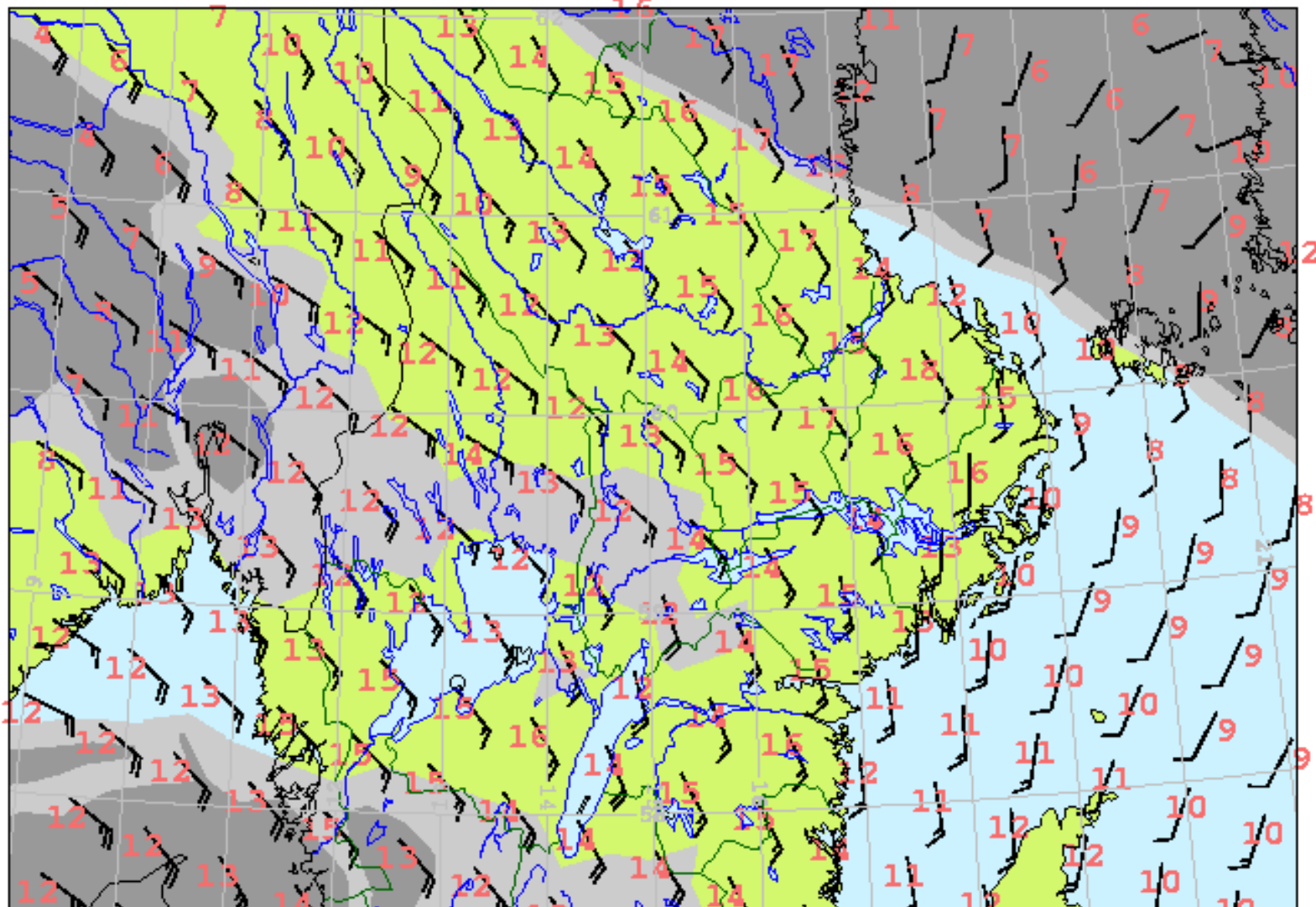
Forecast
valid:

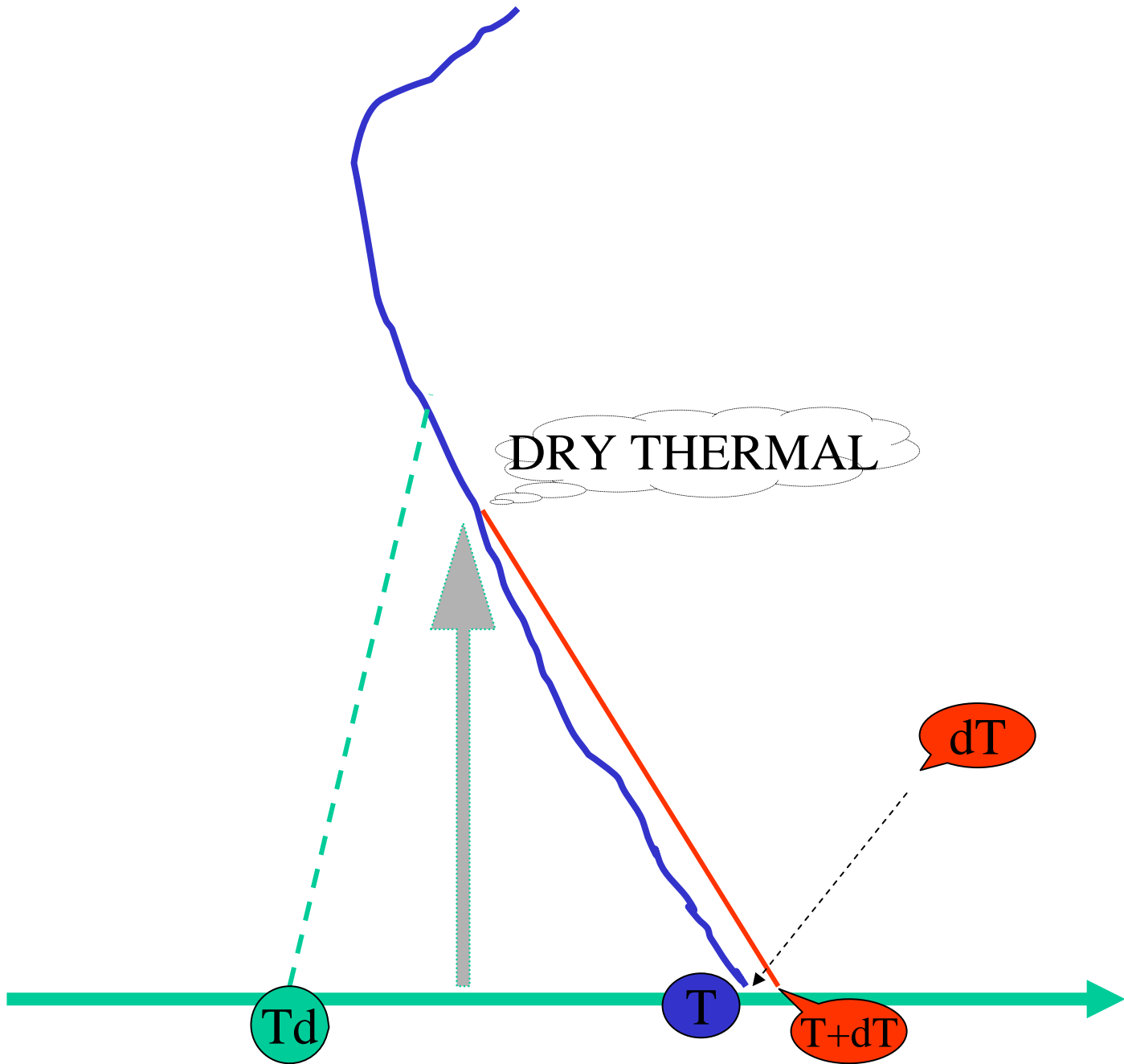
MONDAY 13 JUN 2005 00Z +12
MONDAY 13 JUN 2005 12Z

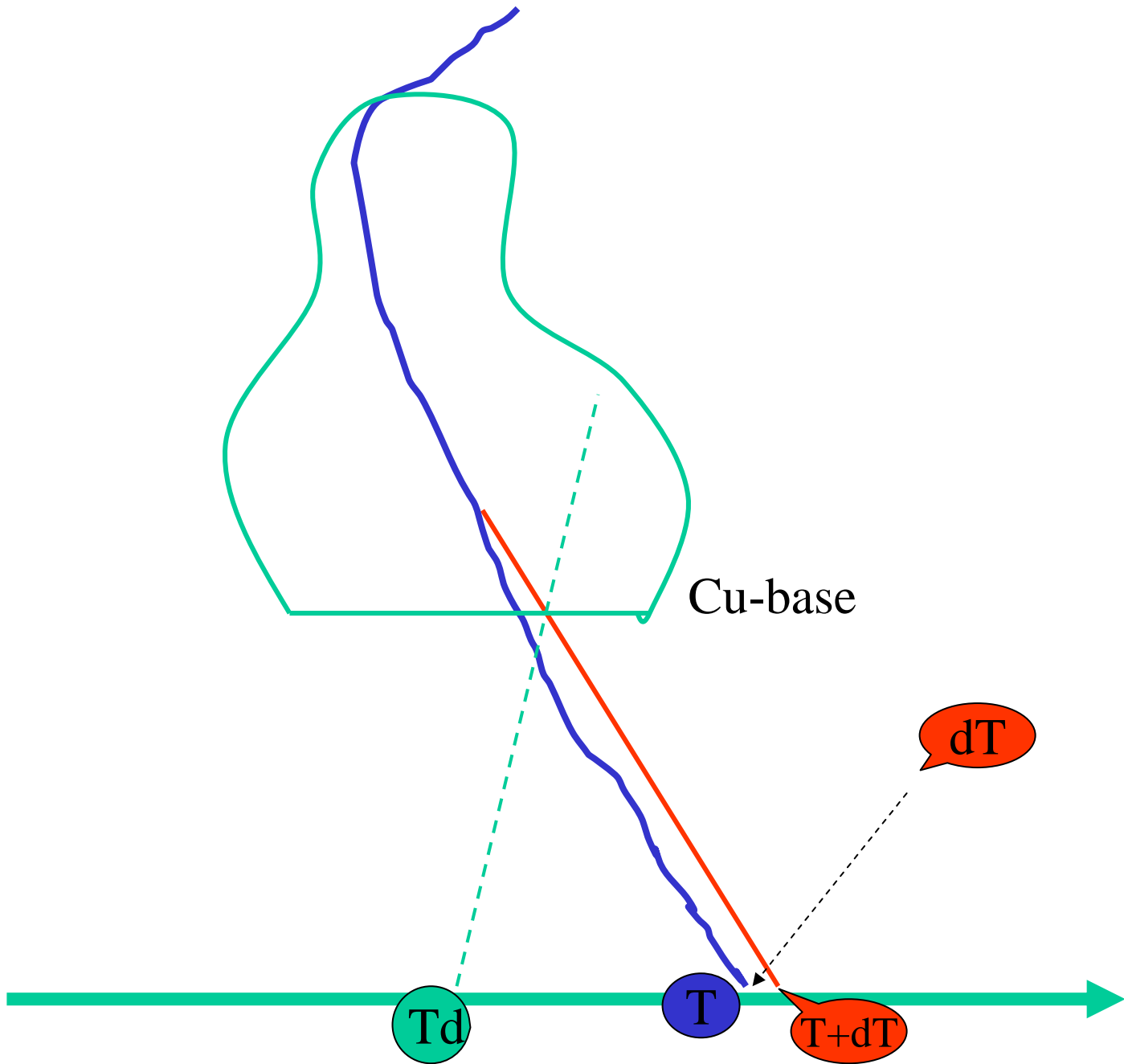


Forecast
valid:

MONDAY 13 JUN 2005 00Z +12
MONDAY 13 JUN 2005 12Z







Formula for dT

$$dT = 0.4 \times (1 + W/200) \times (1 + H/1000) \times 20/ff$$

W = net sensible heat flux near ground in W/m²

H = model terrain altitude (max 300) in m MSL

ff = wind velocity near ground (10 m) in km/h

(*ff* is never set less than 20)

Mean rate of climb

$$= h/1000 \times W/200 \times (1 + H/750) \times (1 - TADV/2) \times 20/FF$$

h = calculated thermal height in m GND

W = net sensible heat flux near ground in W/m²

H = model terrain altitude (max 300) in m MSL

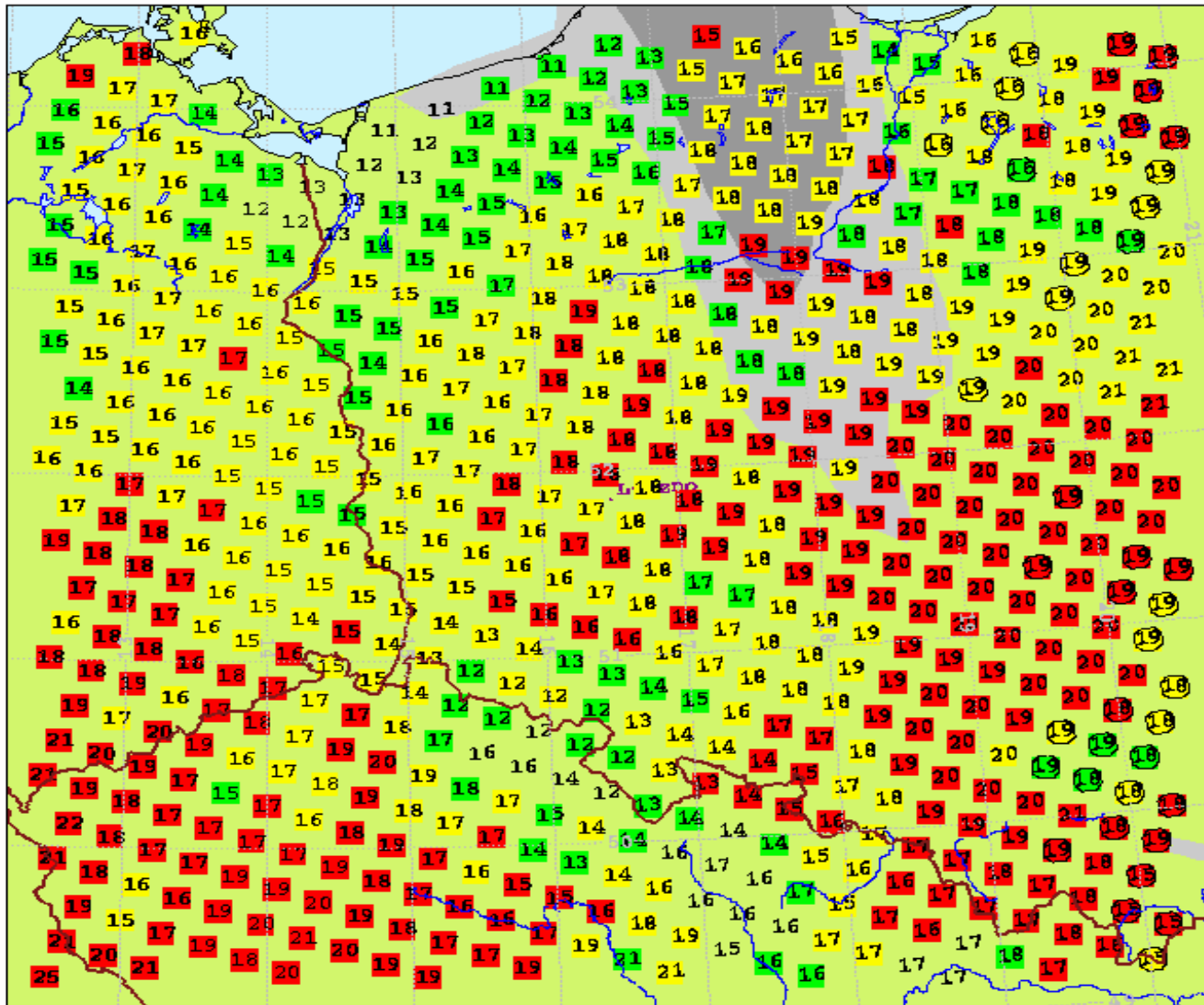
TADV = temperature advection at 1000 m in C/h

FF = wind velocity at 1000 m in knots

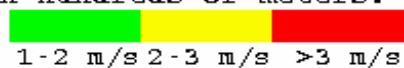
(*ff* is never set less than 20)

Forecast
valid:

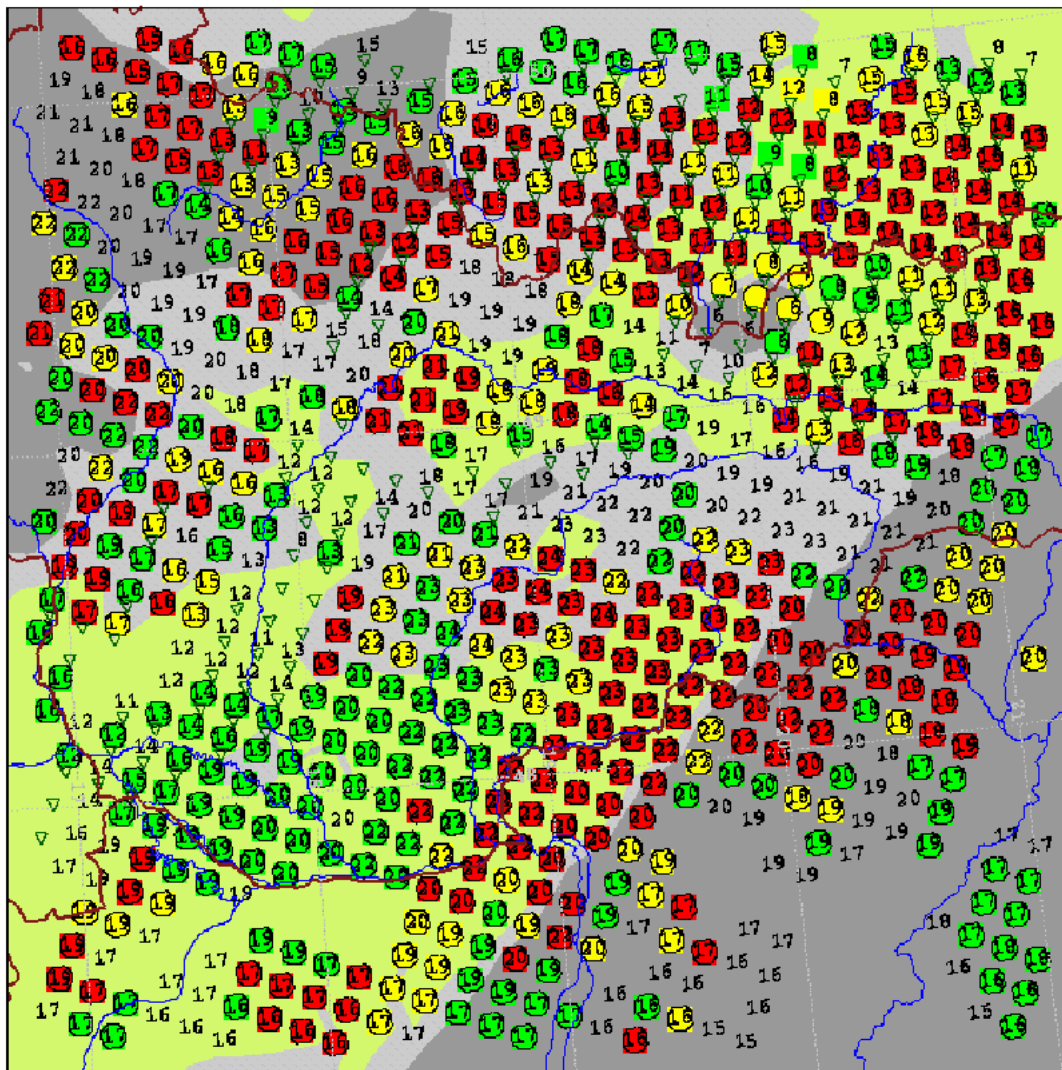
MONDAY 11 AUG 2003 00Z +12
MONDAY 11 AUG 2003 12Z



Color-coded mean rate of climb m/s, total cloudcover.
Dry thermals or cu-base, levels in hundreds of meters.



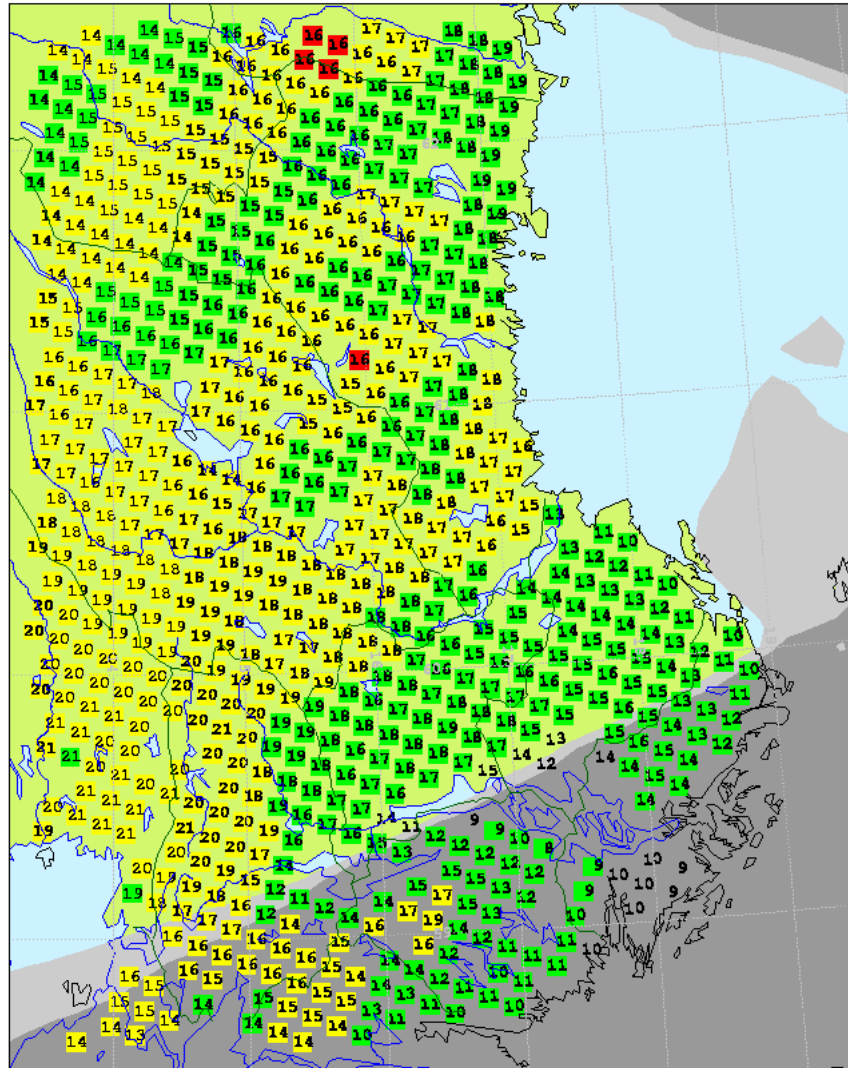
Forecast WEDNESDAY 13 JUL 2005 00Z +12
valid: WEDNESDAY 13 JUL 2005 12Z



Color-coded mean rate of climb m/s, total cloudcover.
Dry thermals or cu-base, levels in hundreds of meters.

1-2 m/s 2-3 m/s >3 m/s

Forecast SATURDAY 10 SEP 2005 00Z +12
valid: SATURDAY 10 SEP 2005 12Z



Total cloudcover (grey-shading) and precipitation (symbols)
Top of thermals (dry thermals or Cu-base) in hundreds of meters
Mean rate of climb (colorcoded)

1-2 m/s 2-3 m/s >3 m/s

Have a look!

[http://produkter.smhi.se/sparv/klsoar/
index.htm](http://produkter.smhi.se/sparv/klsoar/index.htm)

Username: klsoar

Password: vigggen03

Comments and suggestions for
improvements very much
appreciated

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