

ICON-LES during FESSTVaL

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- 22h long simulations
- various realistic conditions

Simulated days:

25.06.2021
17.06.2021
13.06.2021
10.06.2021
30.05.2021
28.05.2021
05.08.2020
26.07.2020
13.07.2020

Domains similar to these:

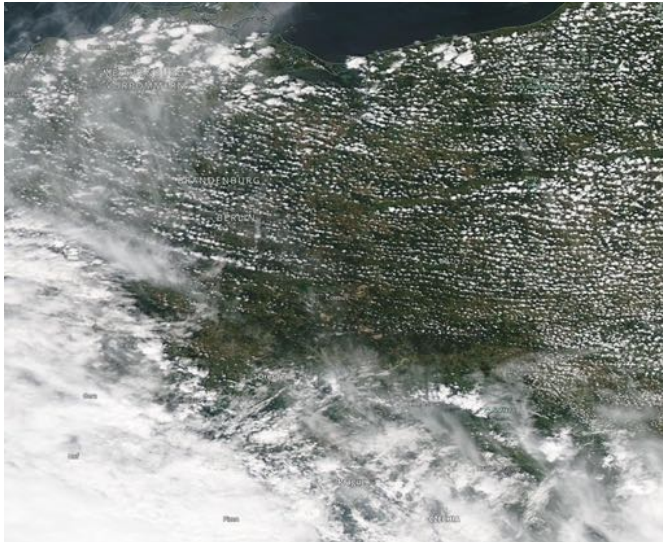


Contact: mirjana.sakradzija@dwd.de

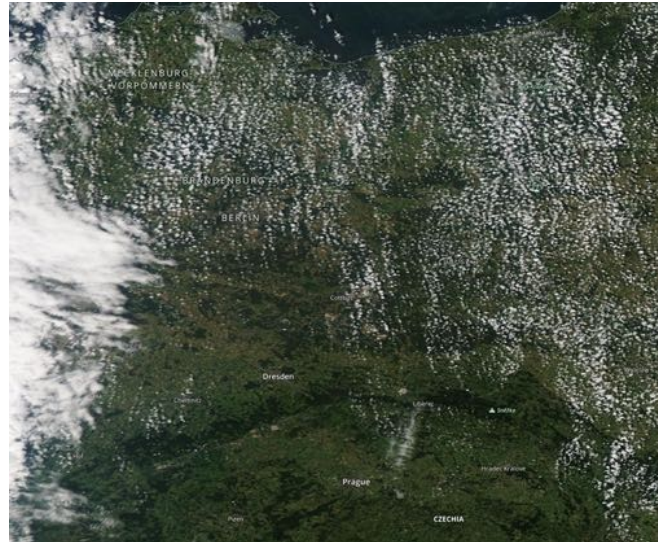
More interesting cases?

MODIS Aqua

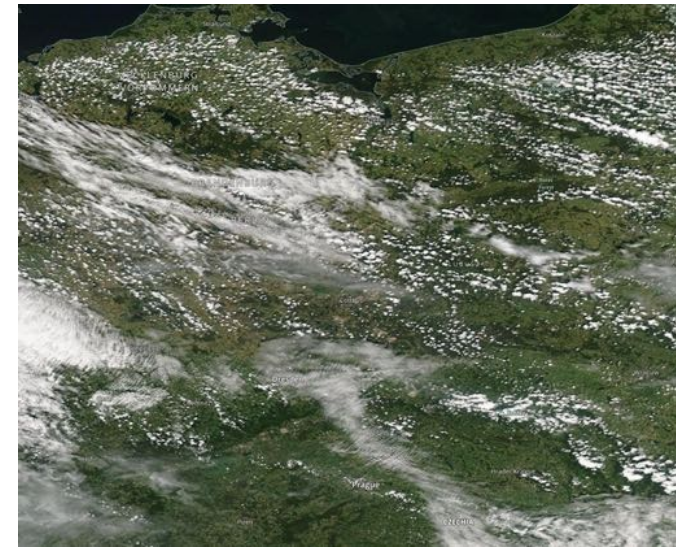
11.7.2021



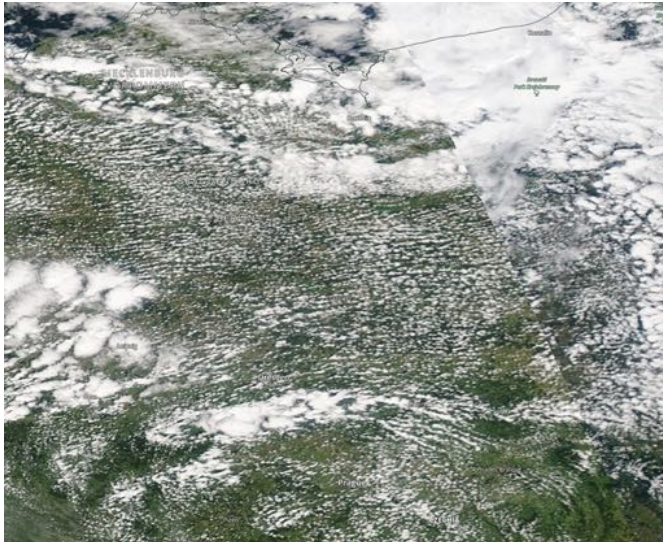
6.7.2021



28.6.2021

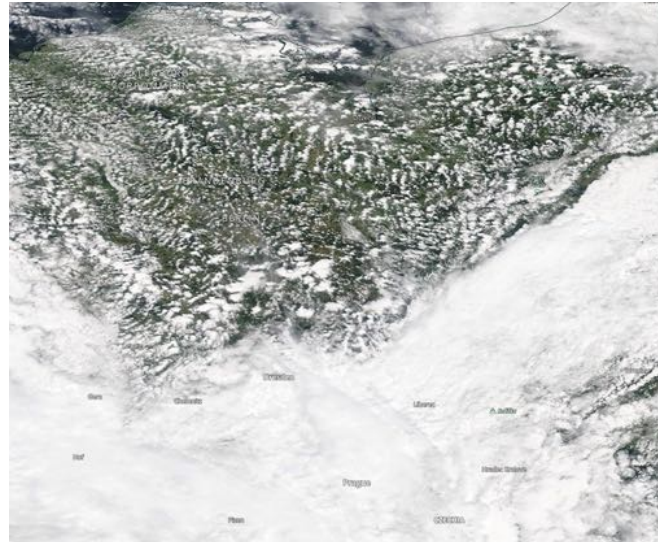


10.7.2021

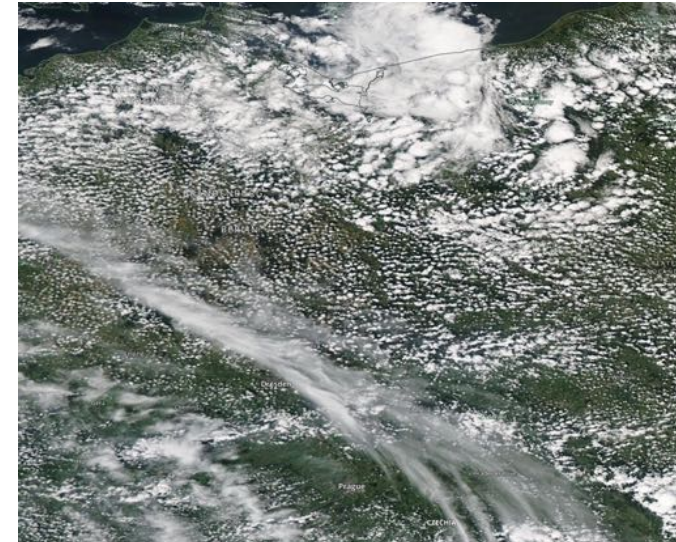


TERRA

2.7.2021



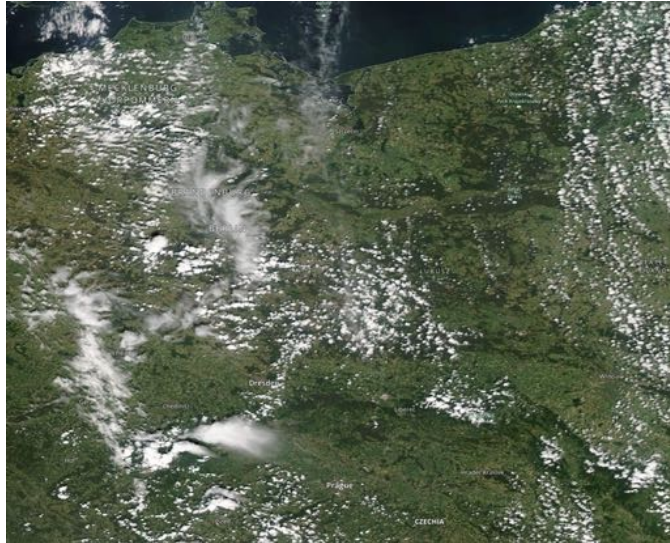
27.6.2021



More interesting cases?

MODIS Aqua

19.6.2021



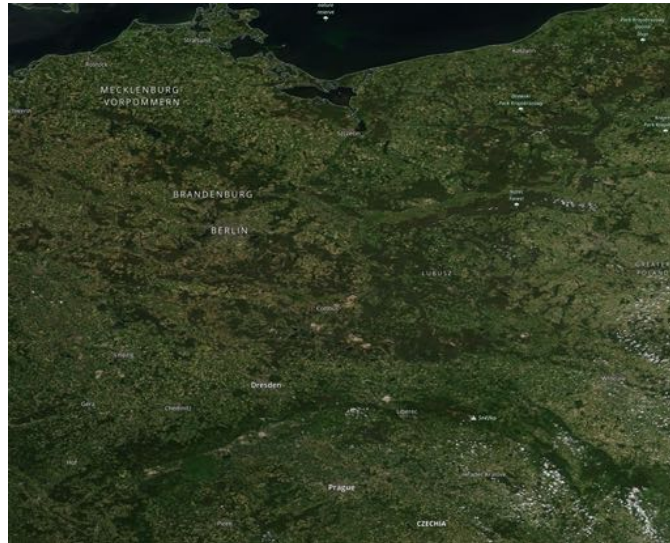
18.6.2021



16.6.2021



14.6.2021

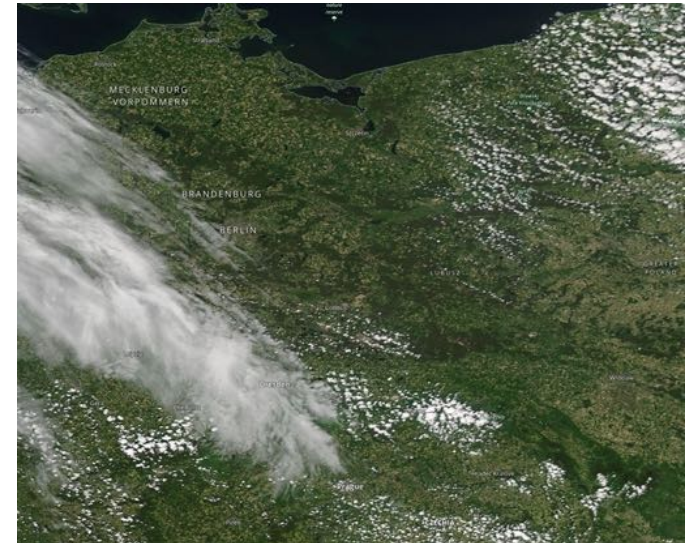


TERRA

9.6.2021



3.6.2021

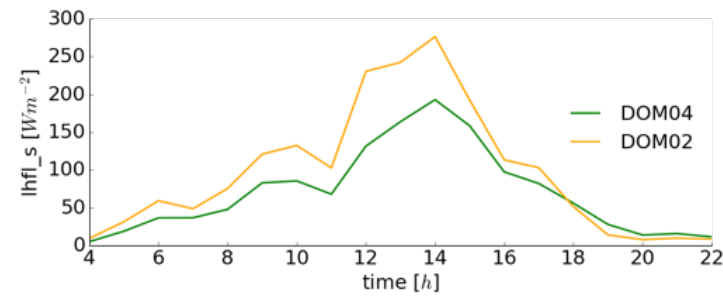
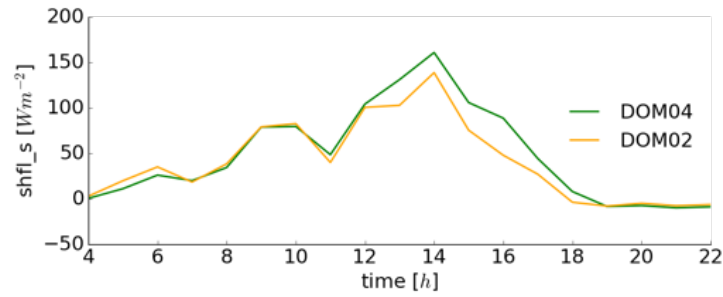
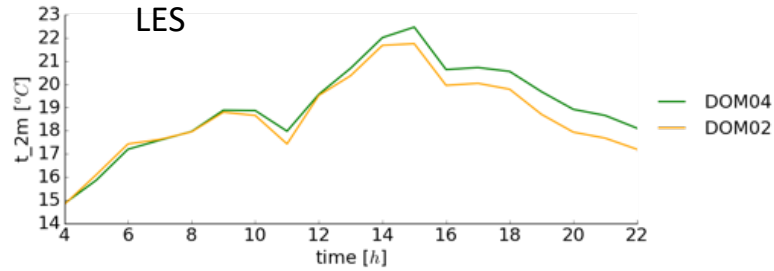


CASE 1: 25.06.2021

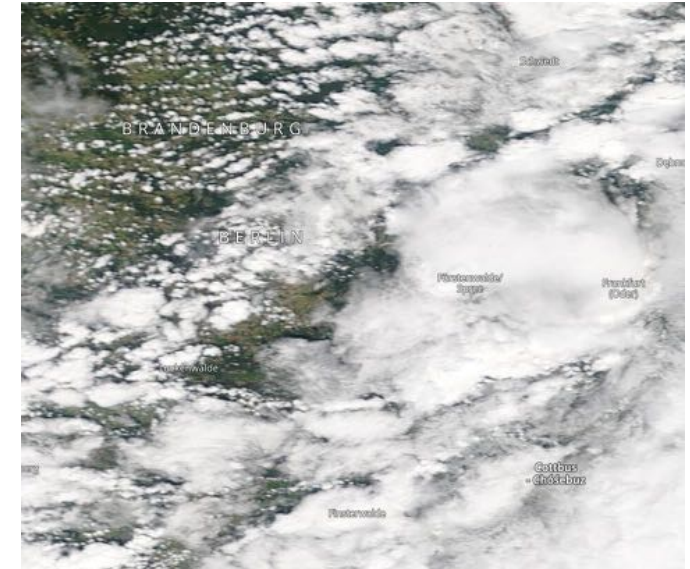
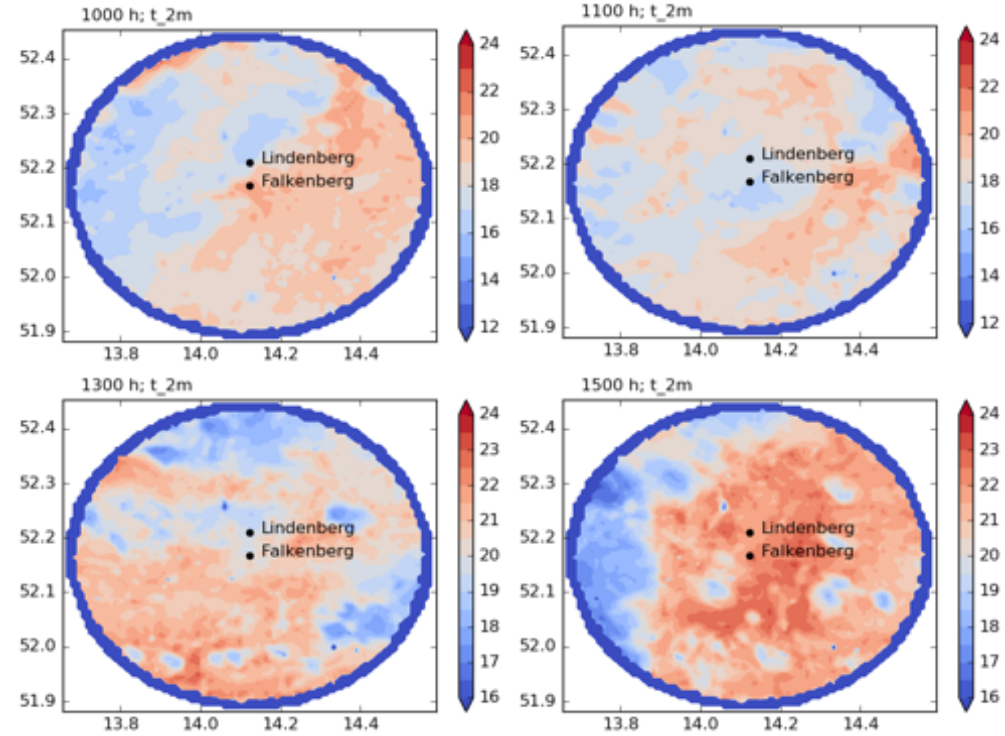
Forced by ICON-D2

MODIS Aqua

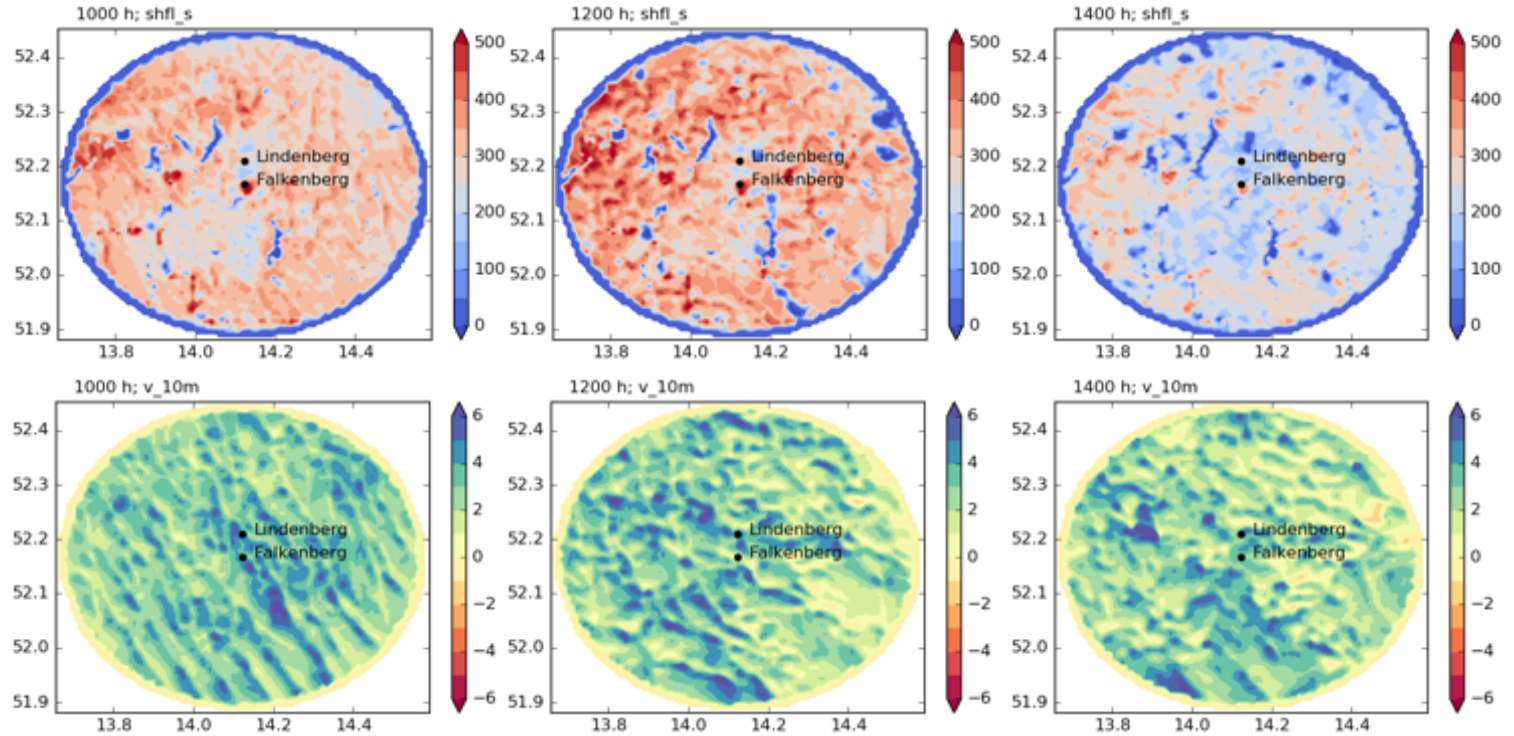
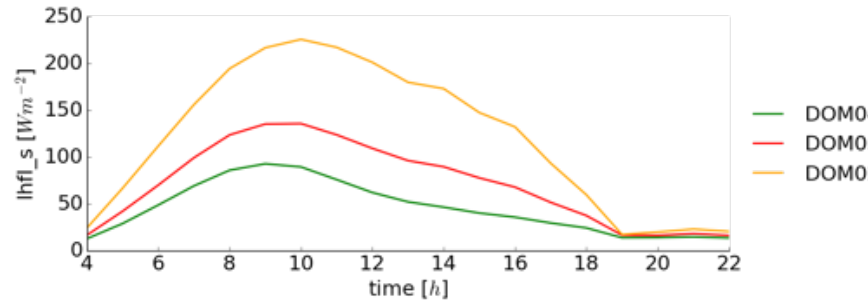
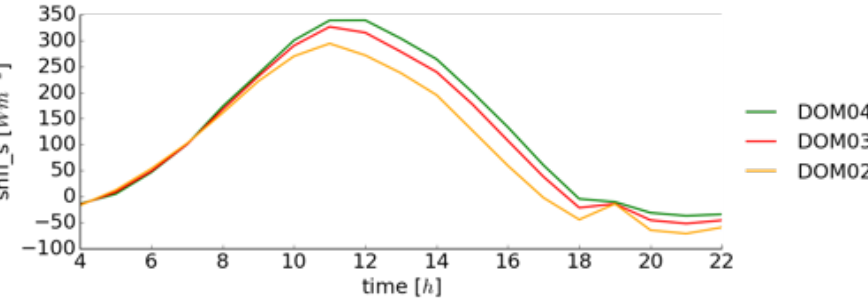
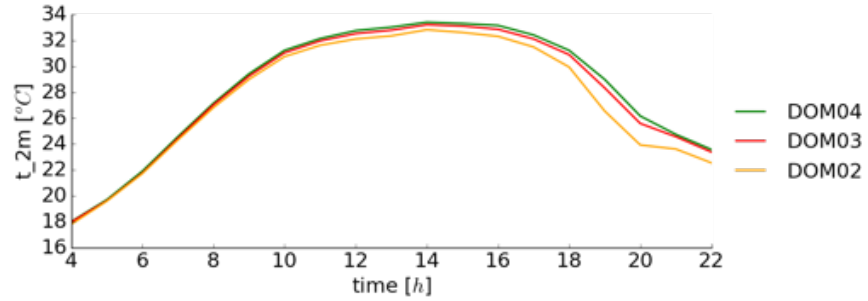
t_{2m} averaged over the inner-most domain
(small area around Lindenberg, Falkenberg)



LES cold pools, t_{2m}:



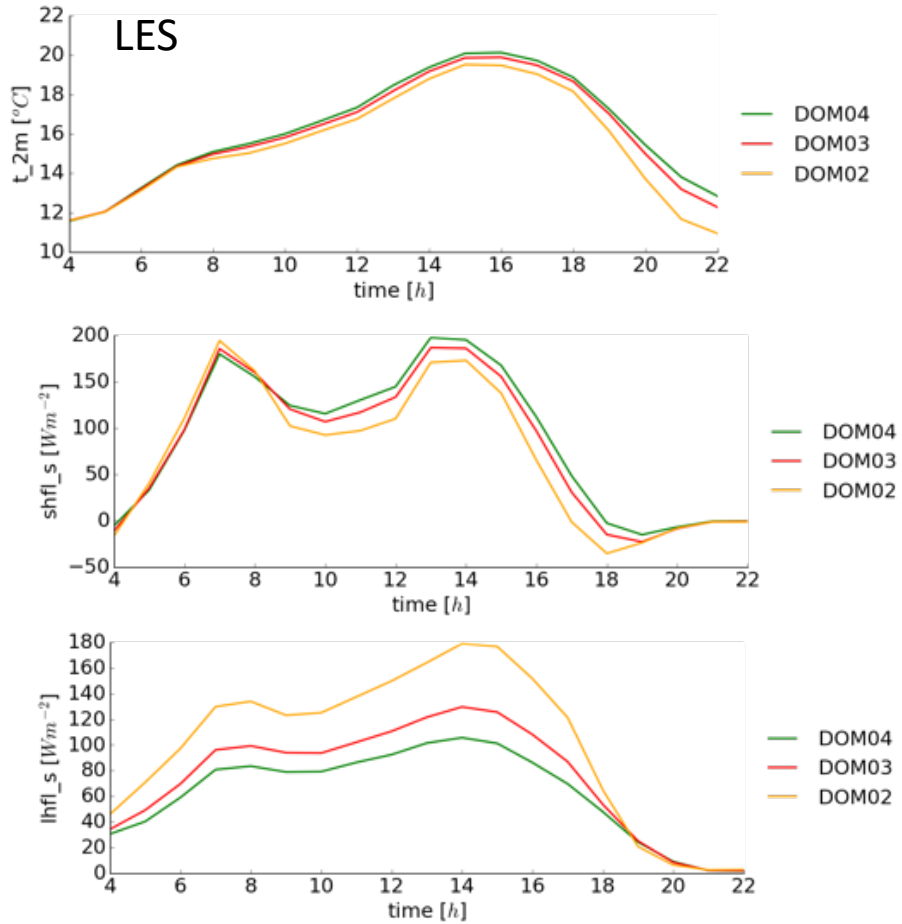
CASE 2: 17.06.2021



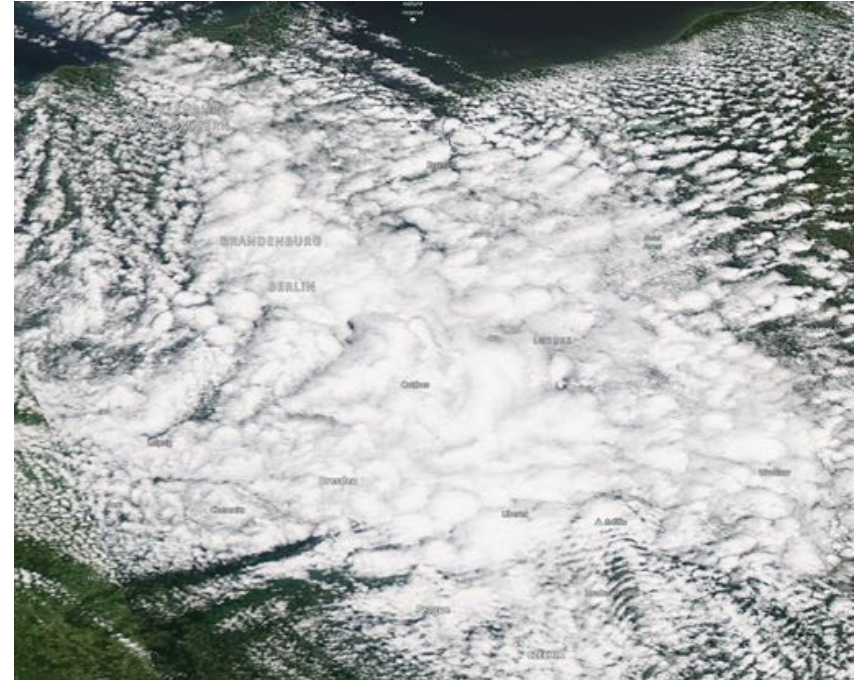
CASE 3: 13.06.2021

Forced by ICON-D2

t_{2m} averaged over the inner-most domain
(small area around Lindenberg, Falkenberg)



MODIS Aqua

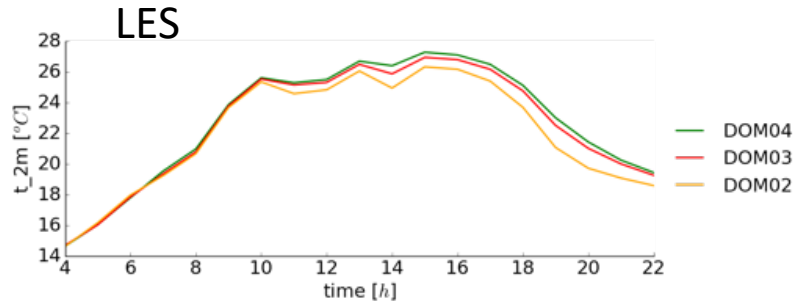


CASE 4: 10.06.2021

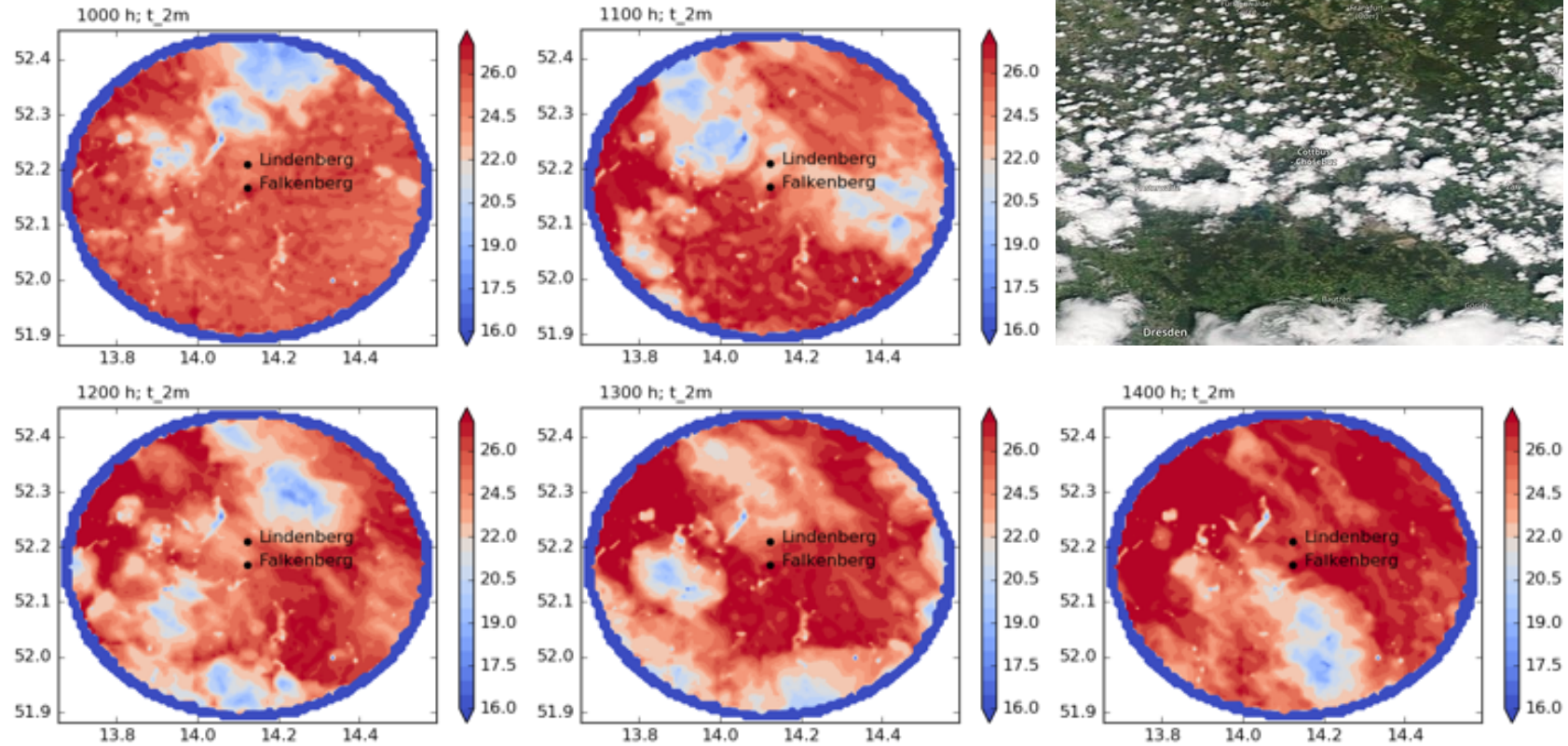
Forced by ICON-D2

MODIS Aqua

t_{2m} averaged over the inner-most domain
(small area around Lindenberg, Falkenberg)



LES simulates small cold pools, t_{2m}:



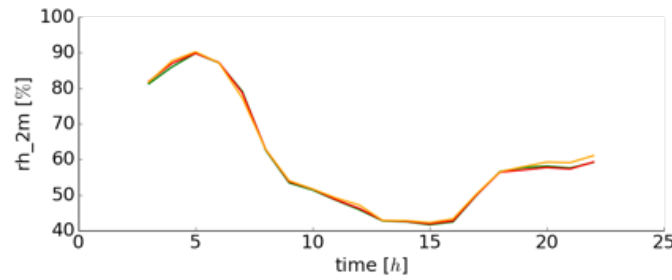
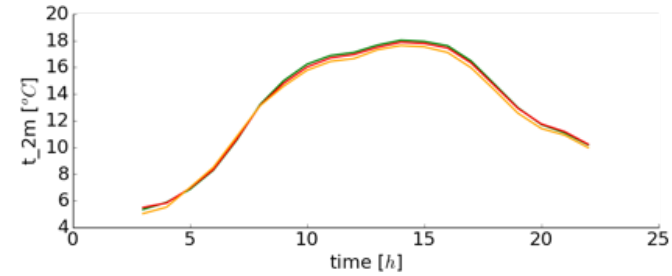
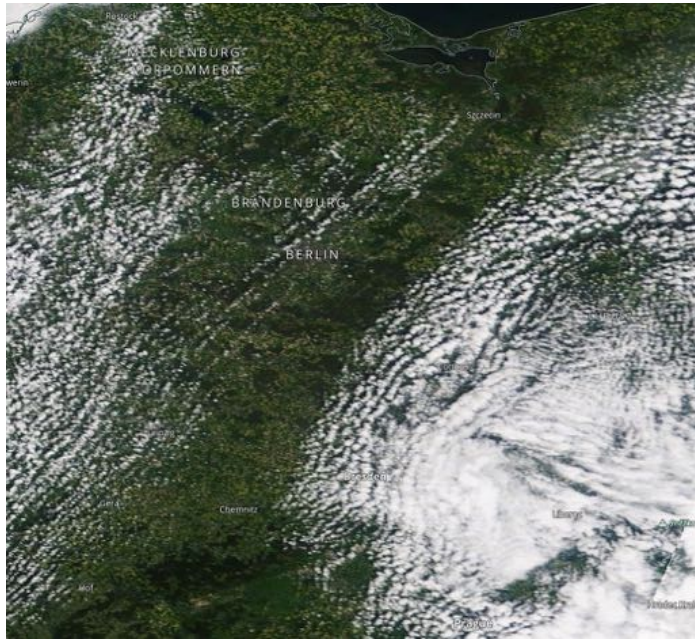
Lindenberg Meteorological Observatory - Richard Aßmann Observatory

Falkenberg Boundary Layer Field Site 2021/05/28

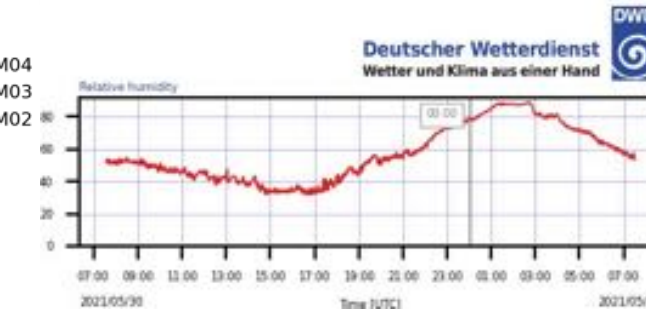
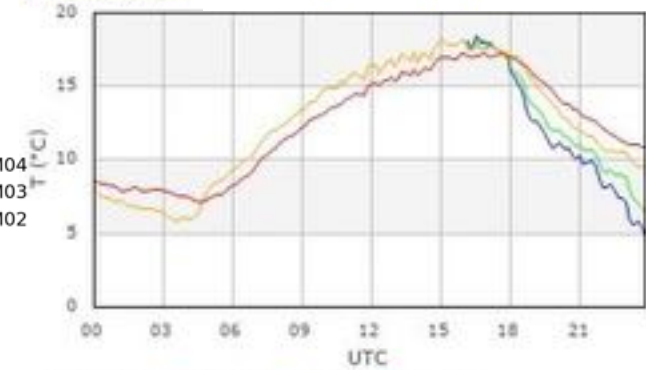
DWD
Deutscher Wetterdienst
Wetter und Klima aus einer Hand

CASE 5: BL rolls/shallow convection 30.05.2021

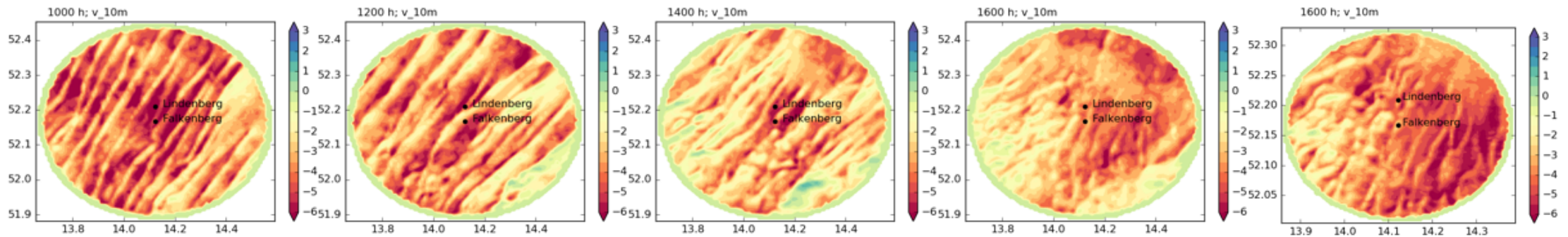
MODIS Terra



Air Temperature Falkenberg Boundary Layer Field Site 2021/05/30



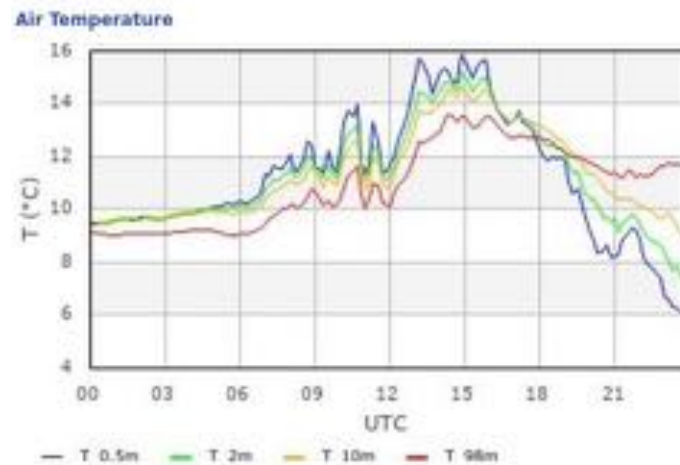
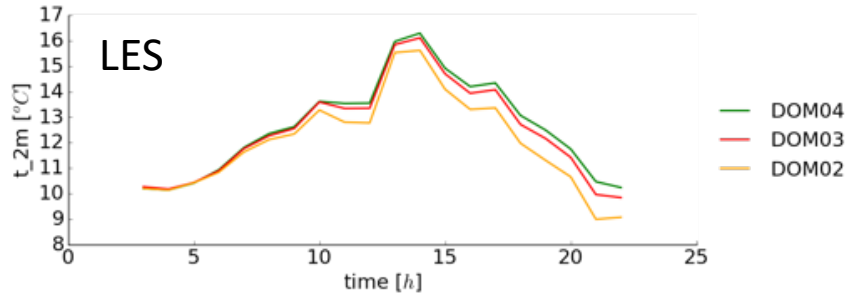
Wind patterns
(v_{10m} wind component)



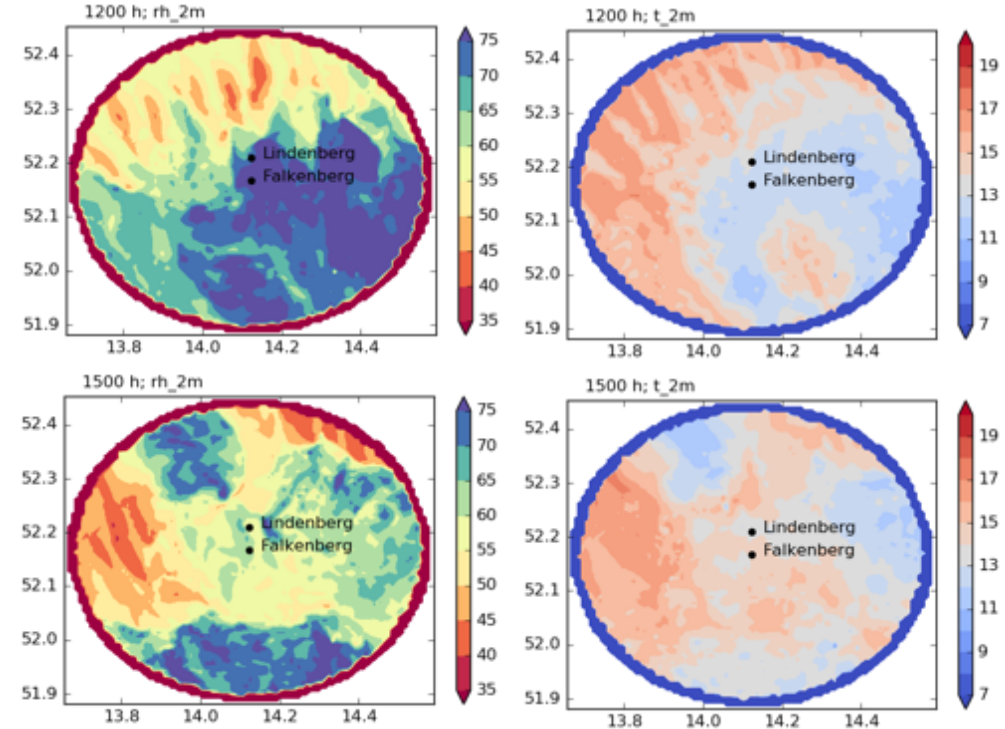
CASE 6: Deep-convective day: 28.05.2021

ICON-D2 forcing

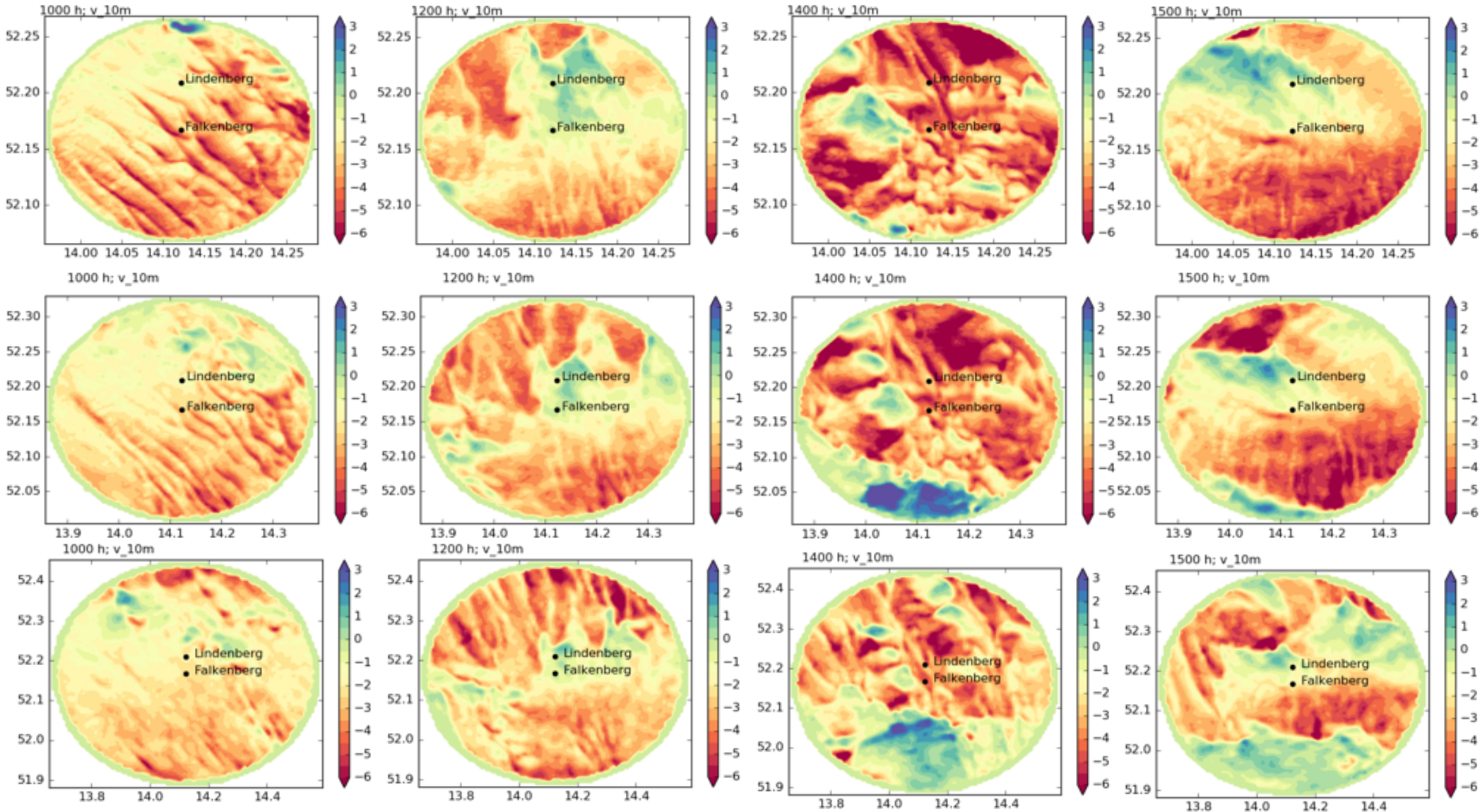
t_{2m} averaged over the inner-most domain
(small area around Lindenberg, Falkenberg)



Cold pools modelled within the domain;
might not match the exact position of the real events

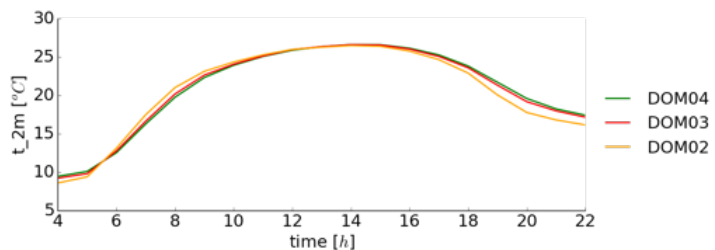
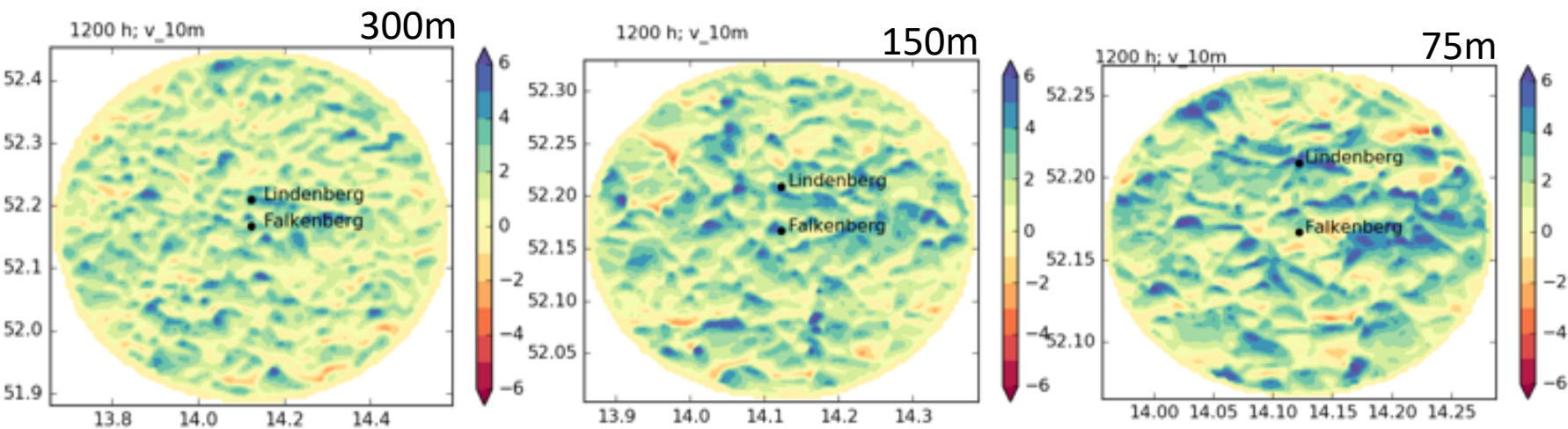
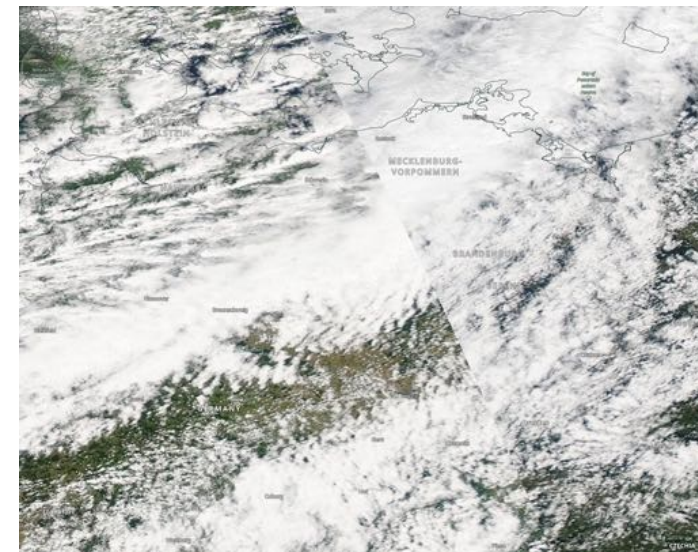


CASE 6: Deep-convective day: 28.05.2021

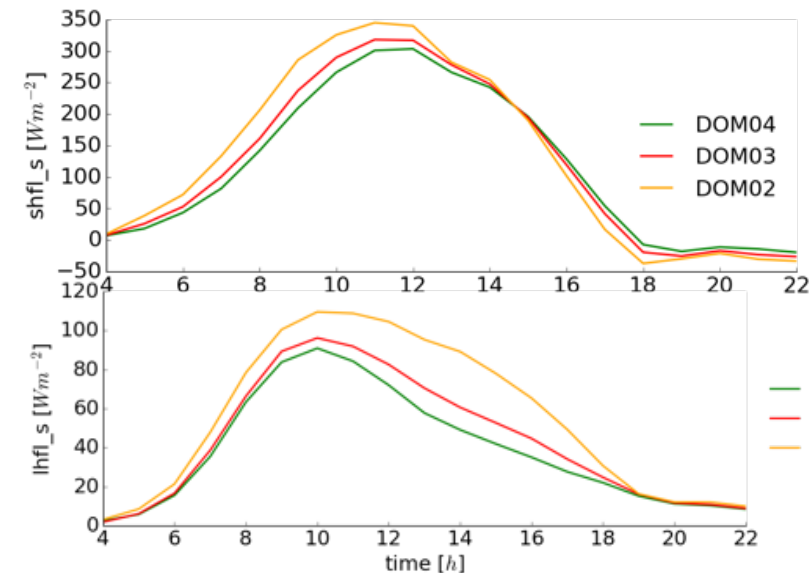
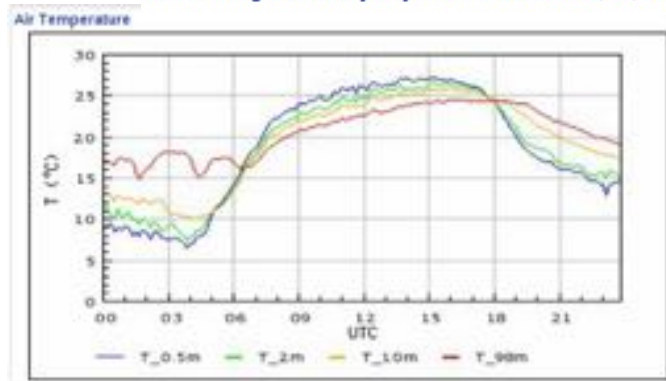


Wind patterns
(v_10m wind
component)

CASE 7: 05.08.2020

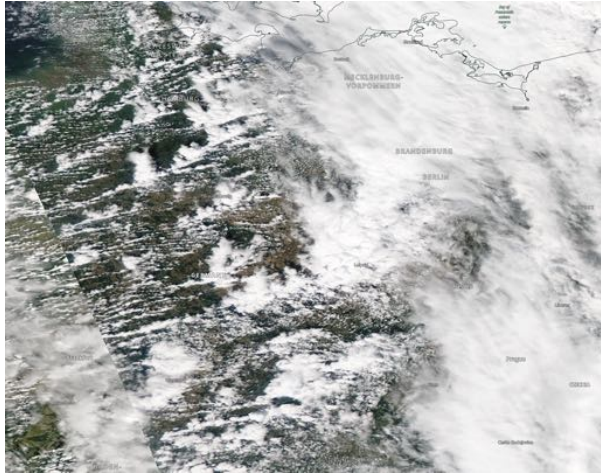


Falkenberg Boundary Layer Field Site 2021/05/28

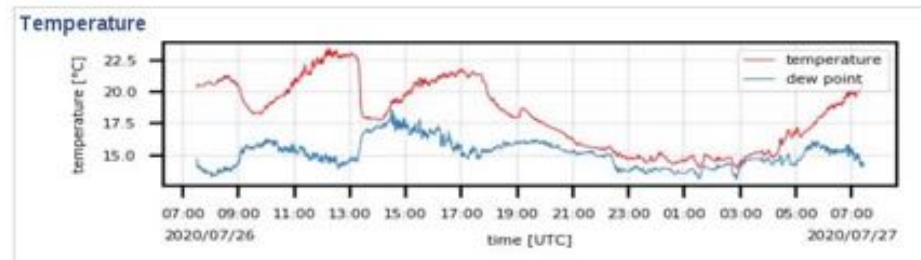
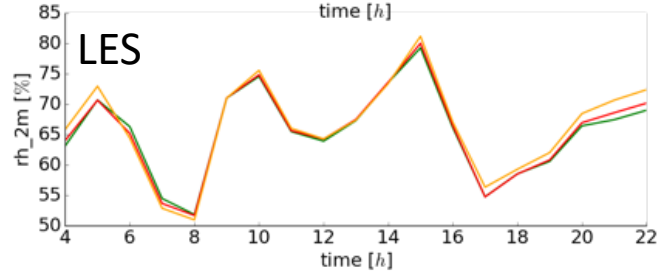
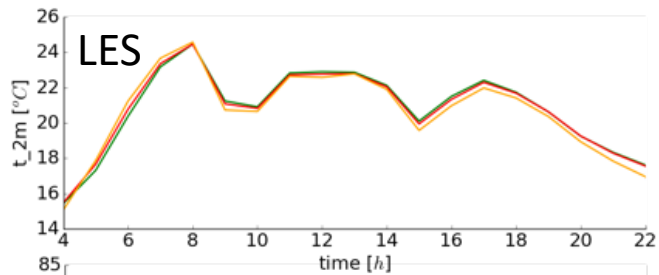
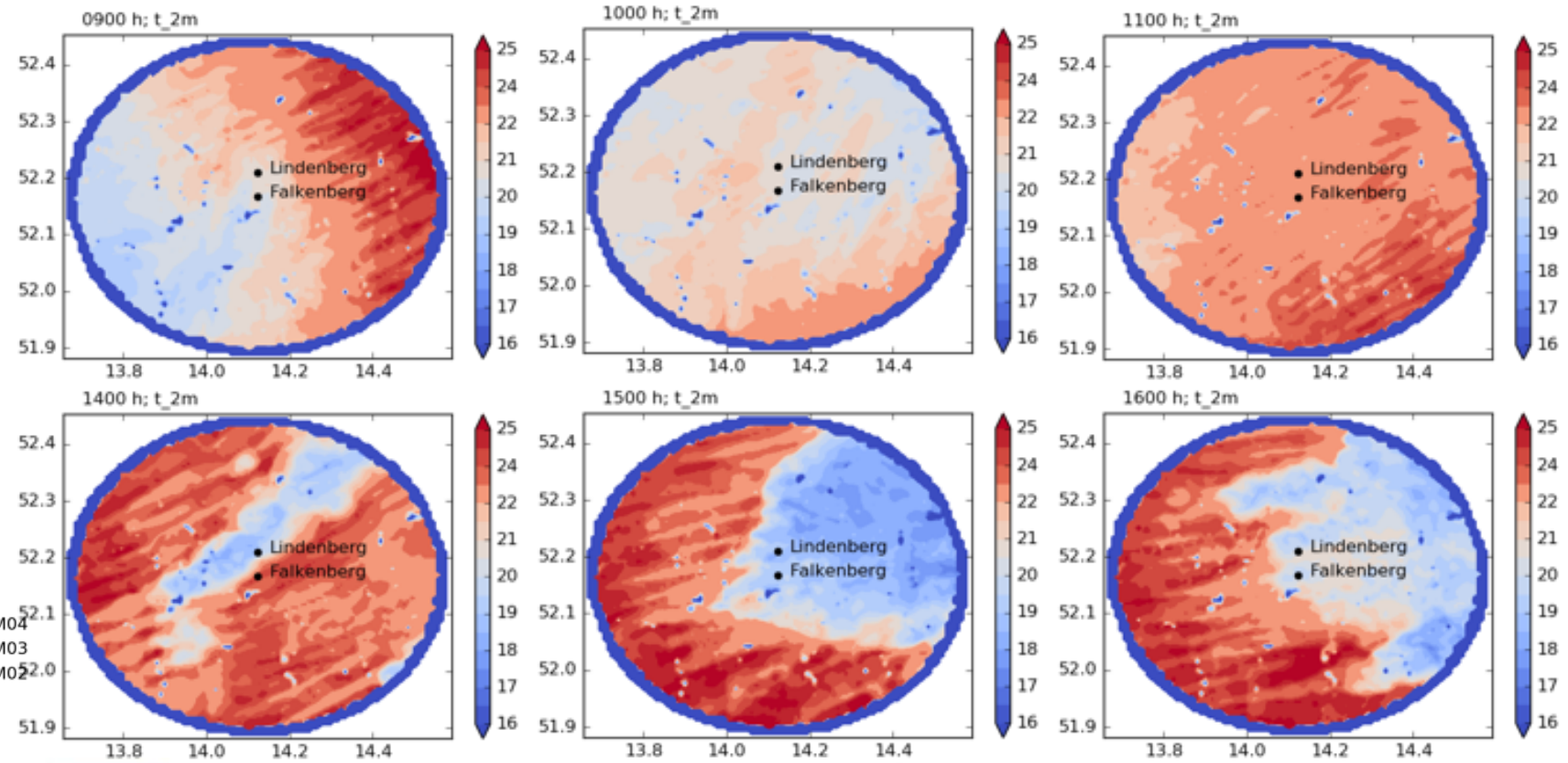


CASE 8: FEST@MOL 2020 cold pool 26.07.2020

MODIS Aqua

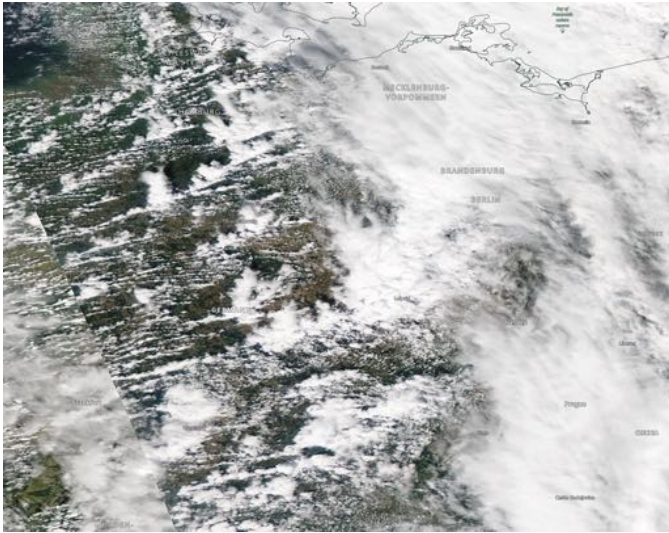


T 2m, DOM02 300m res



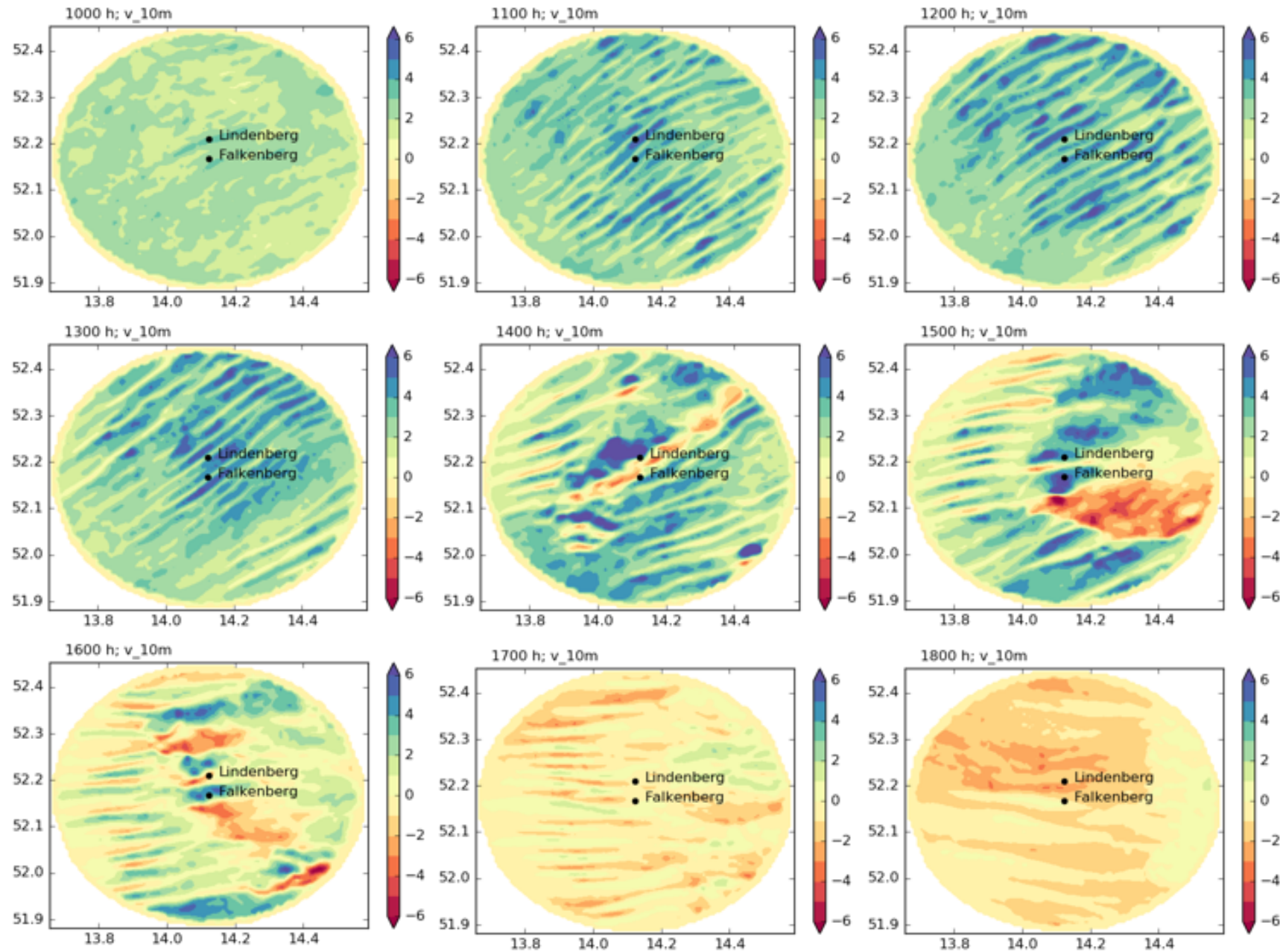
CASE 8: 26.07.2020

MODIS Aqua



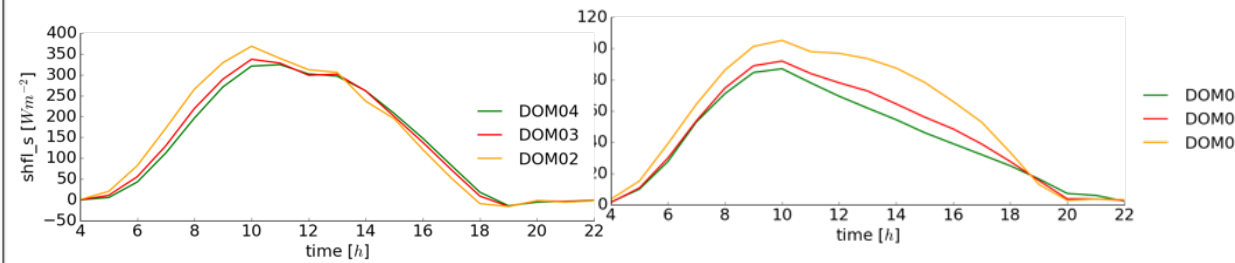
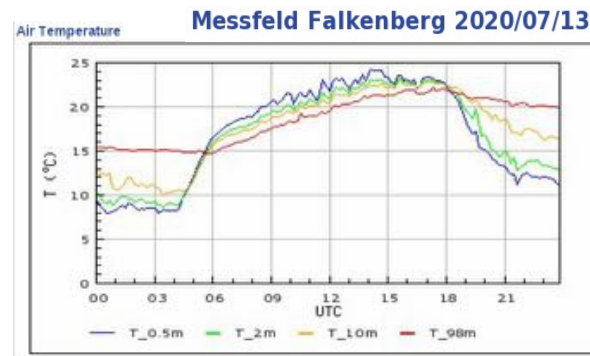
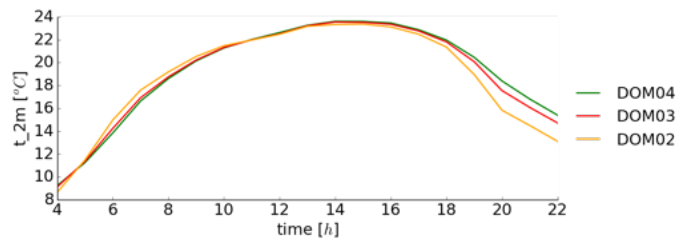
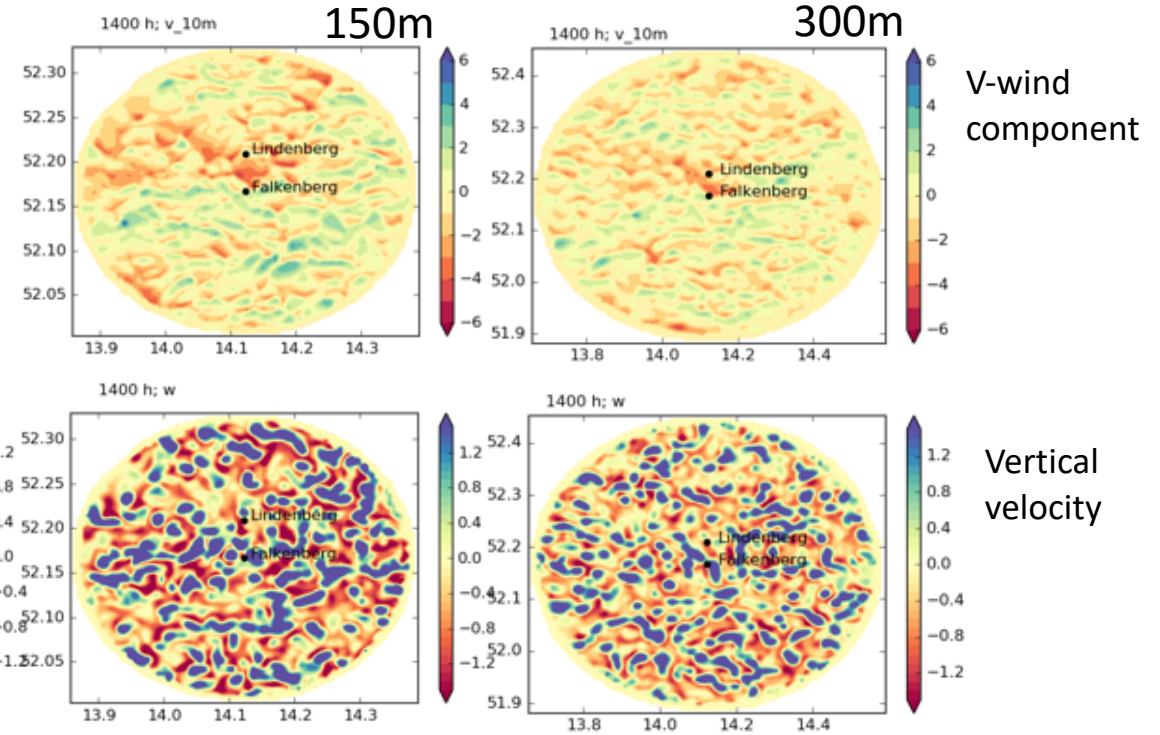
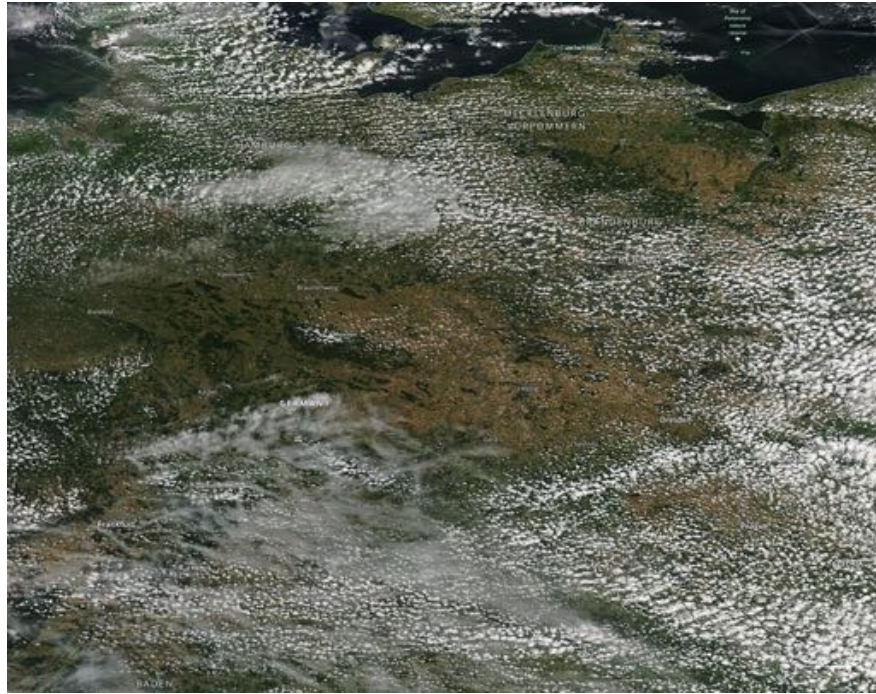
Wind patterns
(v_10m wind component)

DOM02 300m res



CASE 9: shallow convection 13.07.2020

MODIS



ICON-LES: EXTPAR Surface input static data

