

## ICON-LES during FESSTVaL

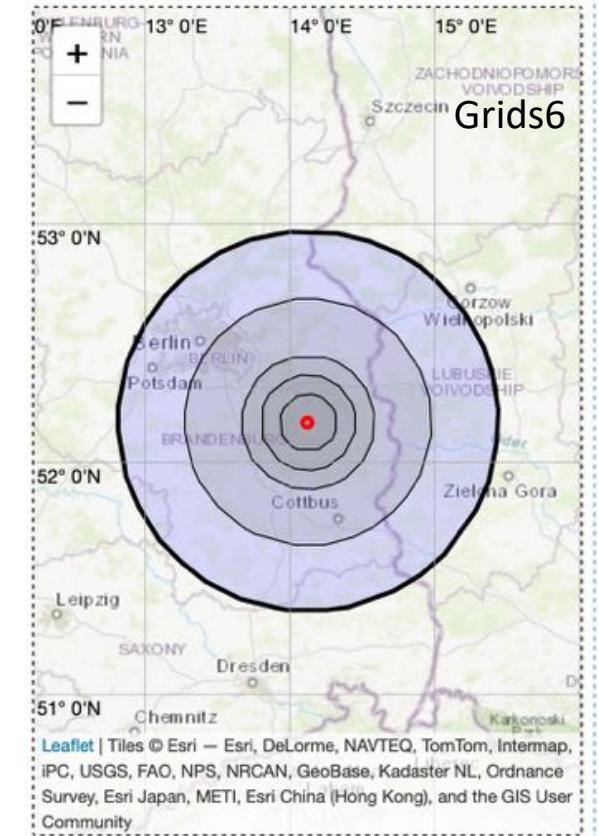
*M. Sakradzija, D. Klocke, L. Schlemmer, G. Zängl, et al.*

- 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:

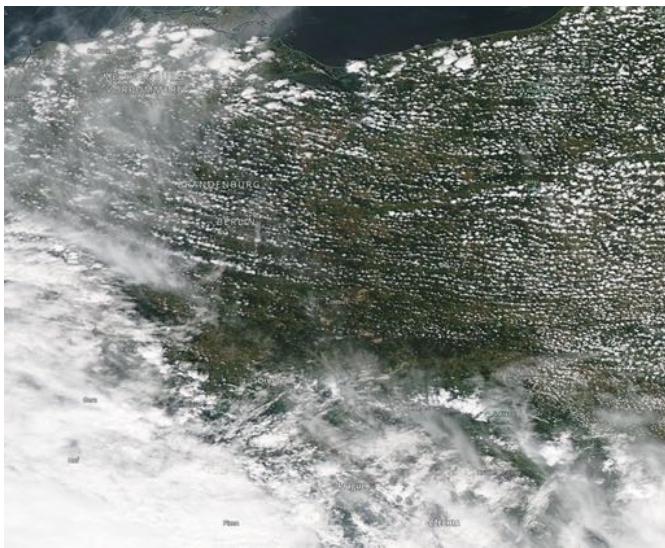


Contact: [mirjana.sakradzija@dwd.de](mailto:mirjana.sakradzija@dwd.de)

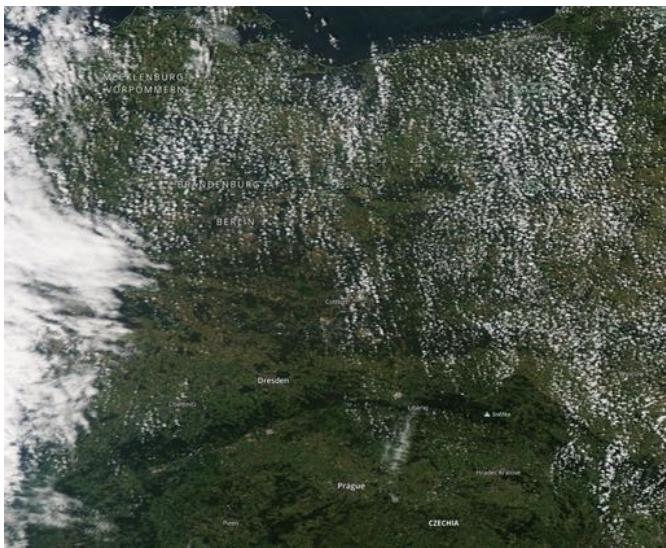
# More interesting cases?

MODIS Aqua

11.7.2021



6.7.2021



28.6.2021

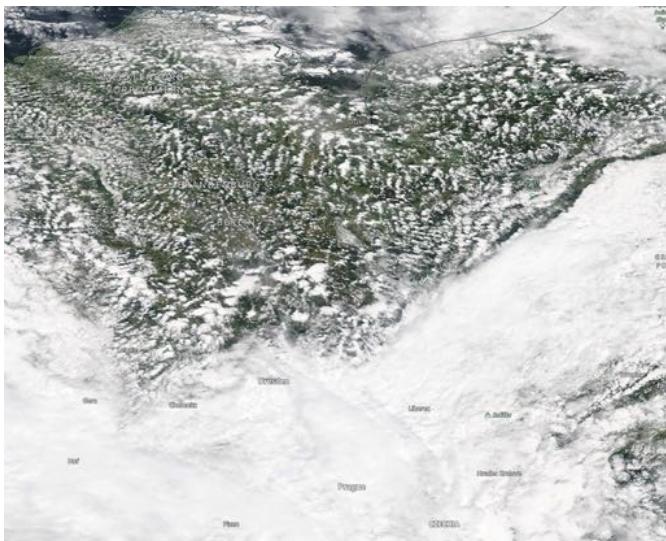


10.7.2021

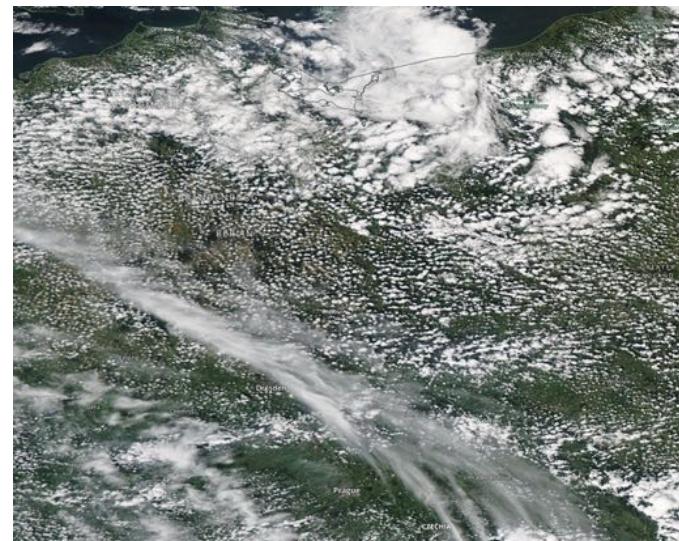


TERRA

2.7.2021



27.6.2021



# More interesting cases?

MODIS Aqua

19.6.2021



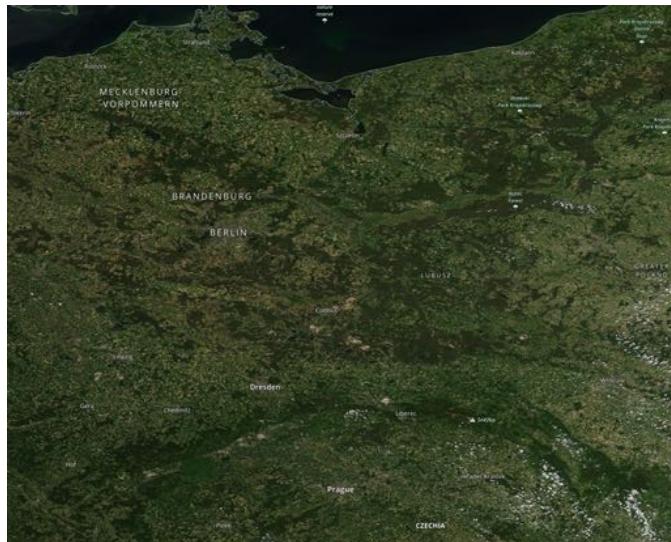
18.6.2021



16.6.2021



14.6.2021

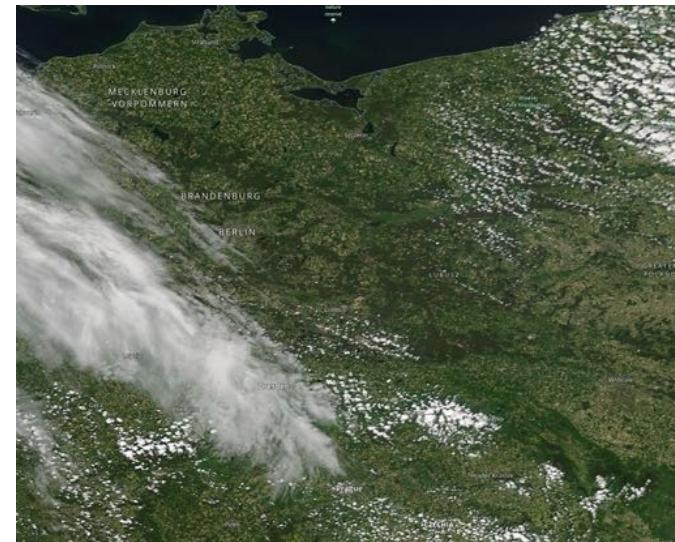


TERRA

9.6.2021



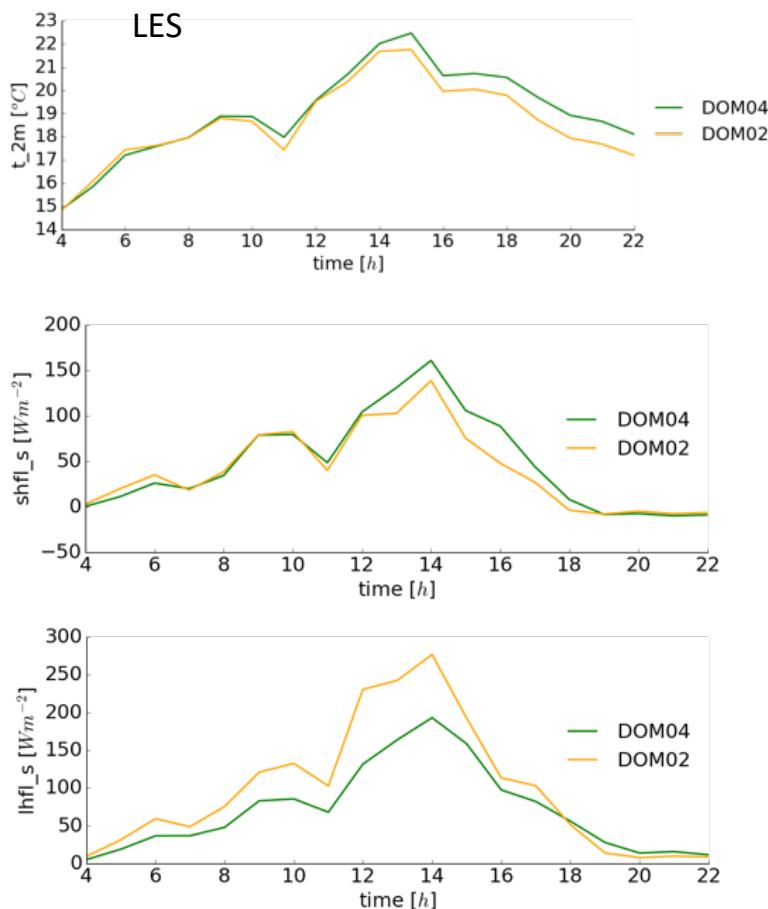
3.6.2021



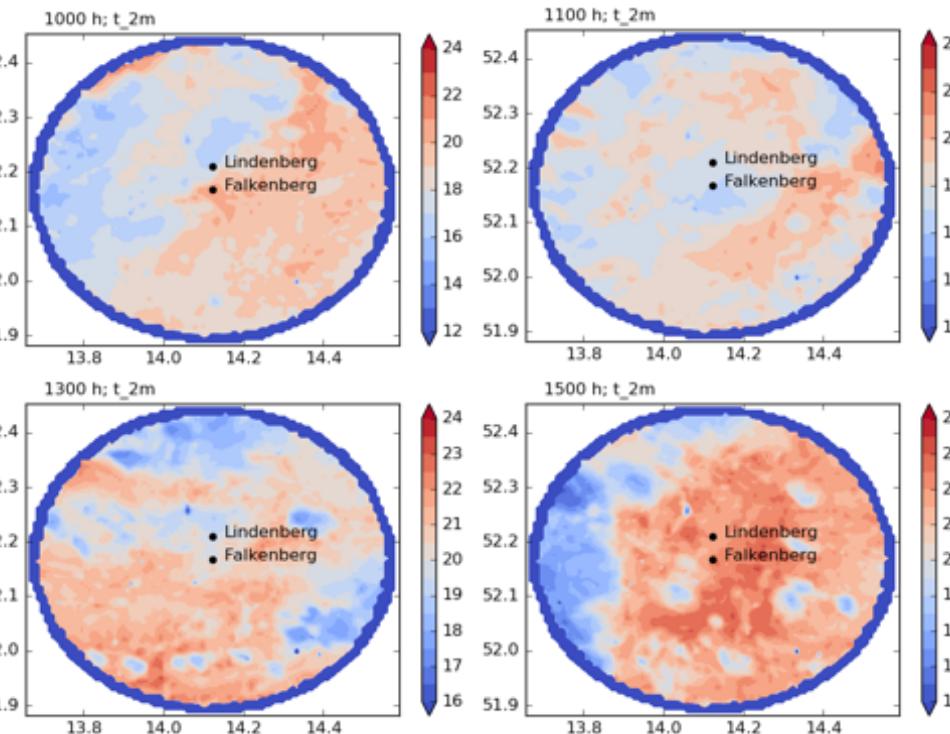
# CASE 1: 25.06.2021

Forced by ICON-D2

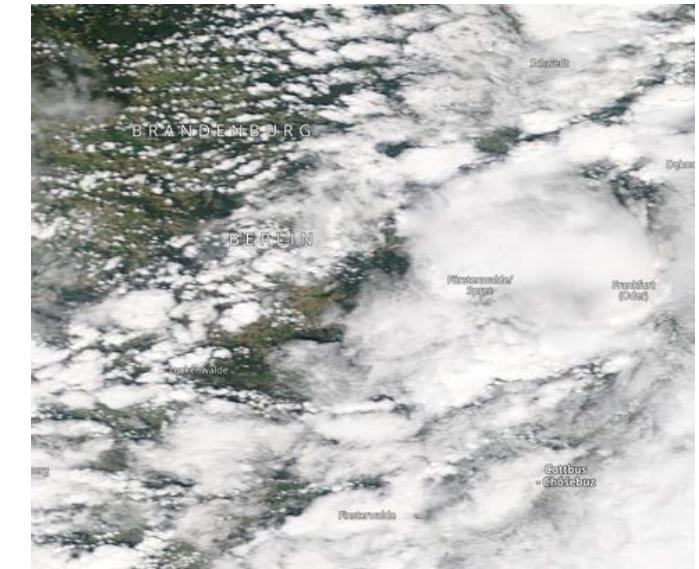
$t_{2m}$  averaged over the inner-most domain  
(small area around Lindenberg, Falkenberg)



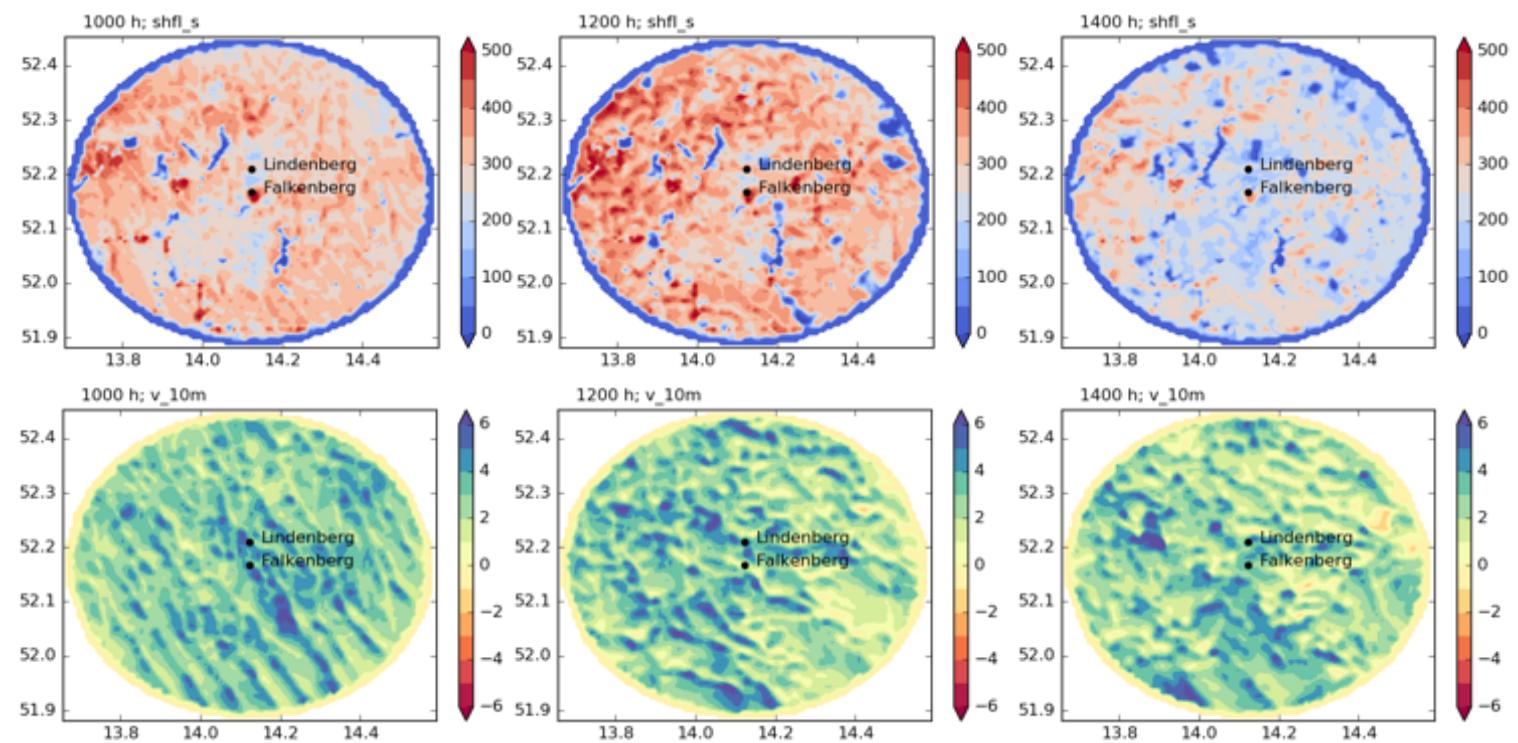
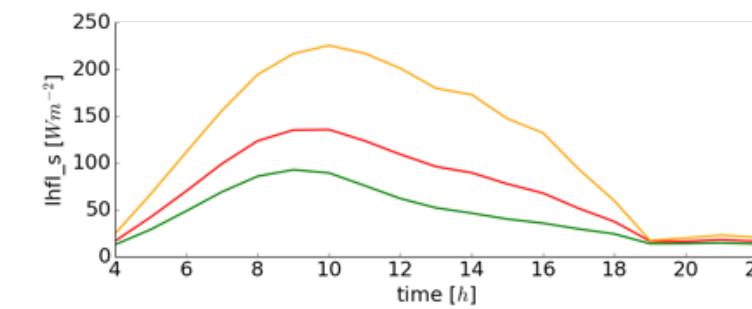
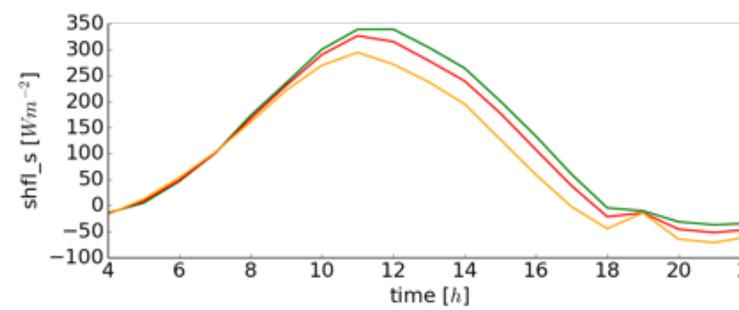
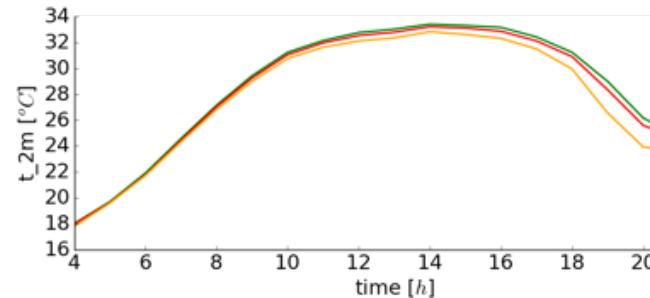
LES cold pools,  $t_{2m}$ :



MODIS Aqua



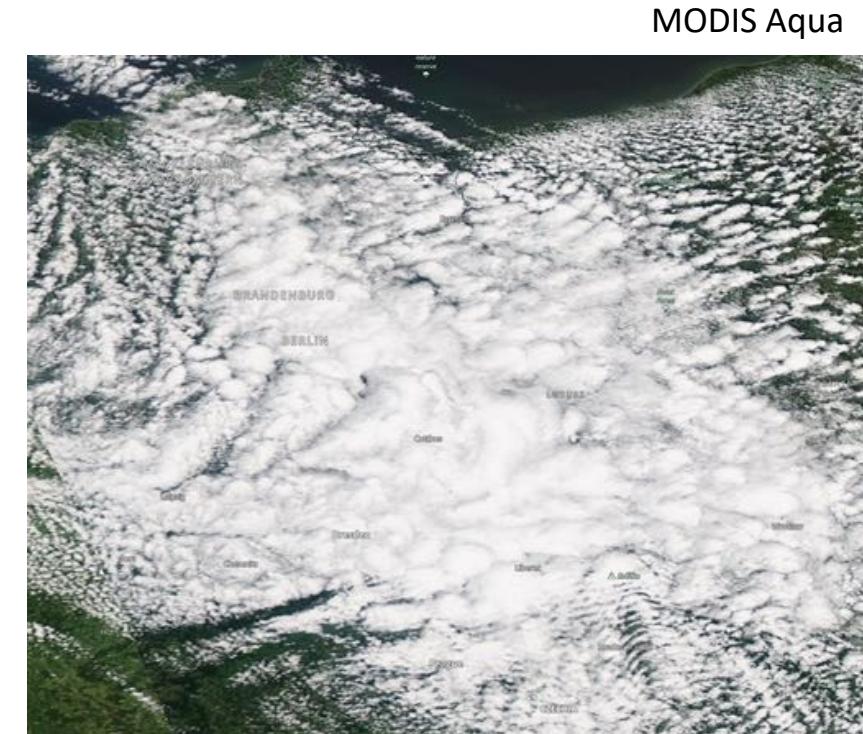
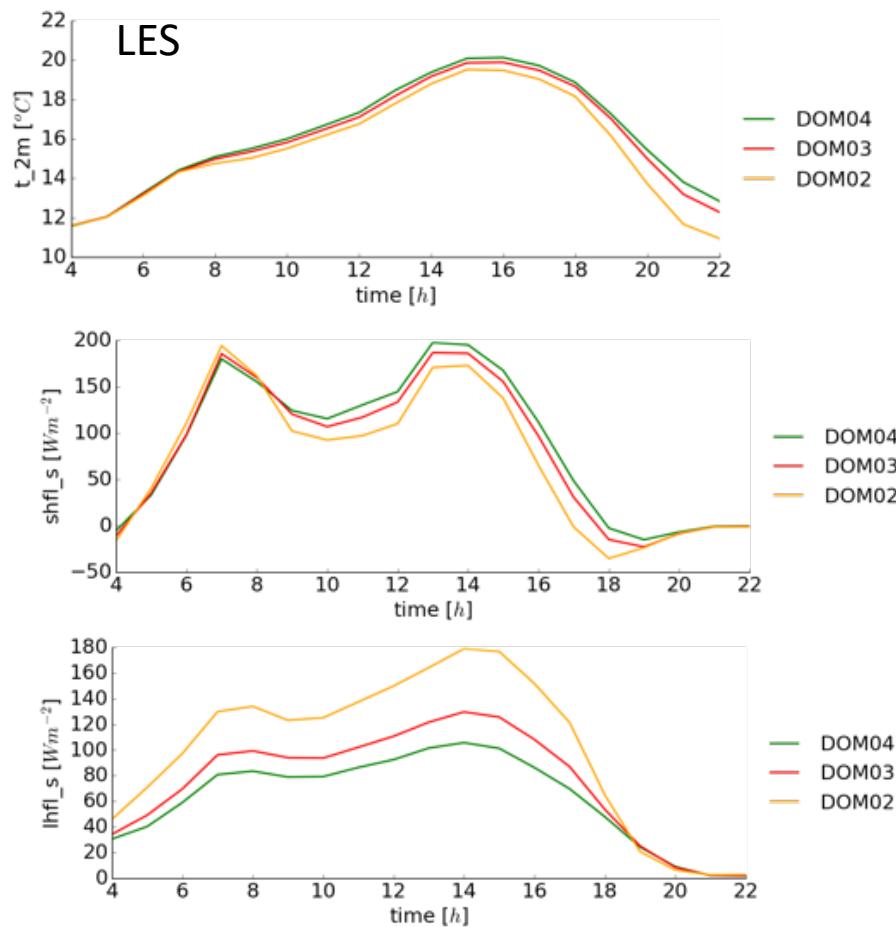
# CASE 2: 17.06.2021



# CASE 3: 13.06.2021

Forced by ICON-D2

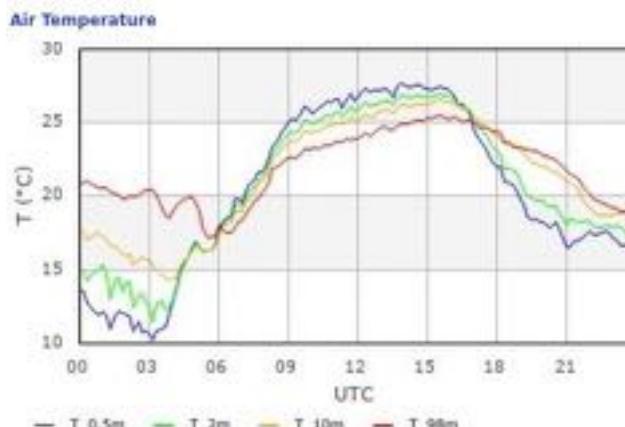
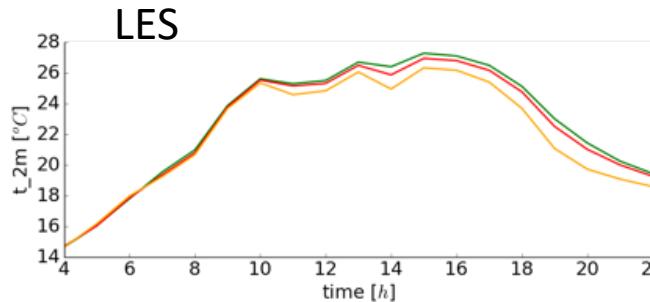
$t_{2m}$  averaged over the inner-most domain  
(small area around Lindenberg, Falkenberg)



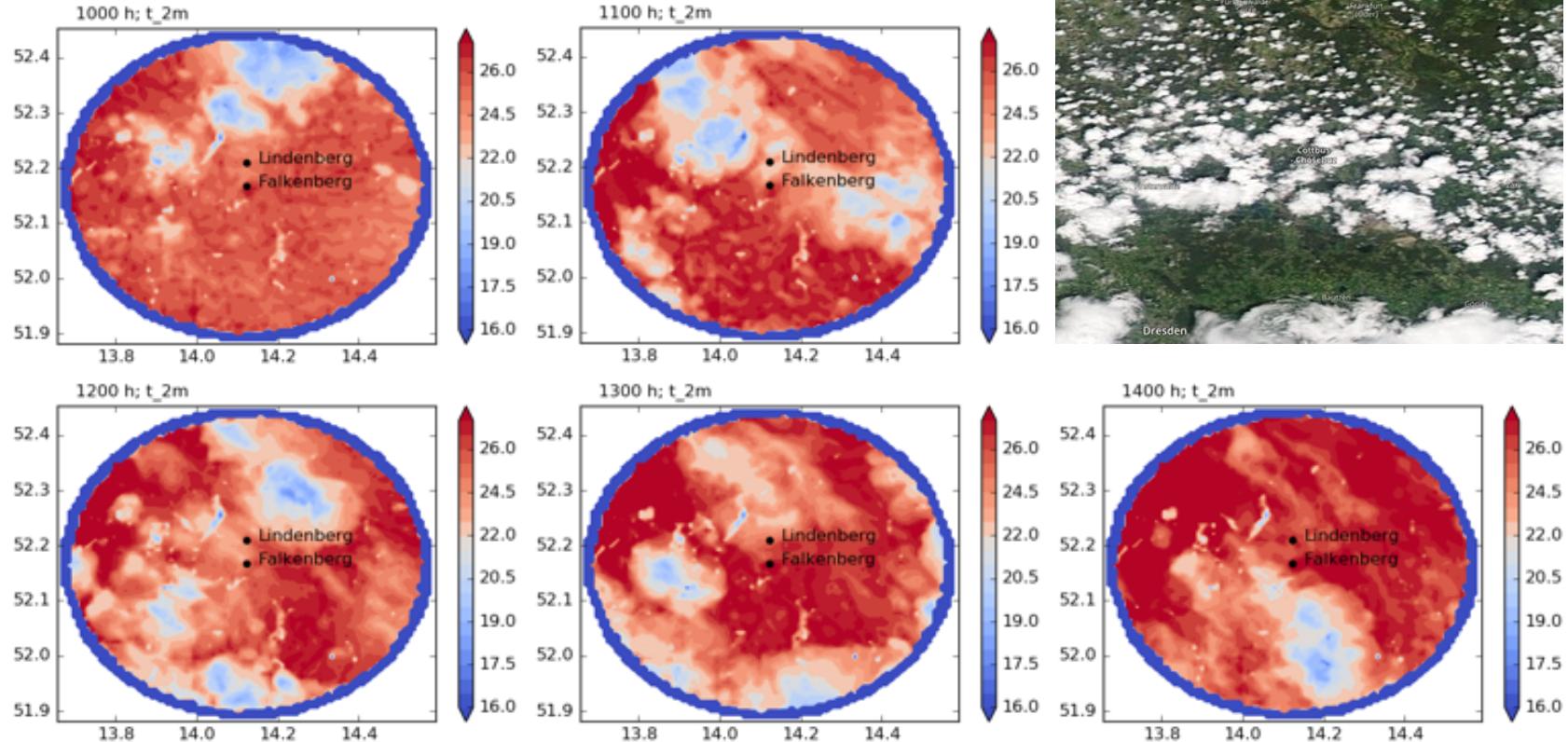
# CASE 4: 10.06.2021

Forced by ICON-D2

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



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



Lindenberg Meteorological Observatory - Richard Aßmann Observatory

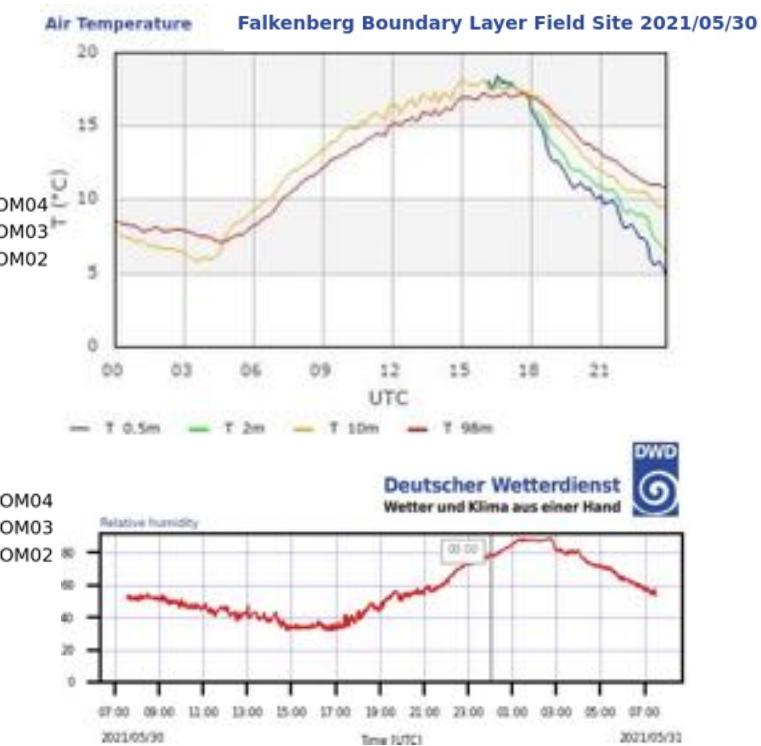
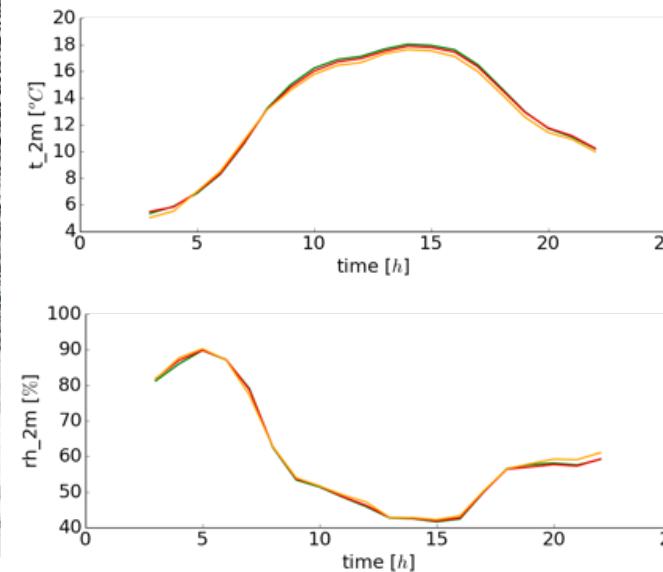
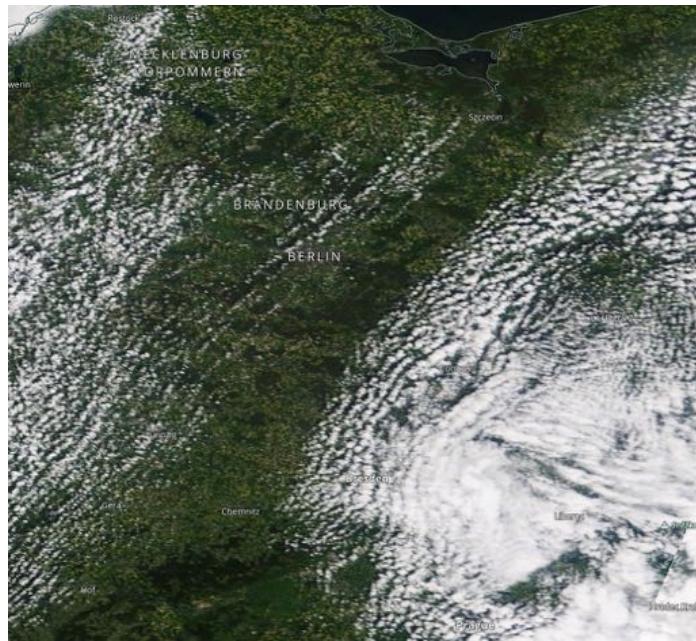
Falkenberg Boundary Layer Field Site 2021/05/28

Deutscher Wetterdienst  
Wetter und Klima aus einer Hand

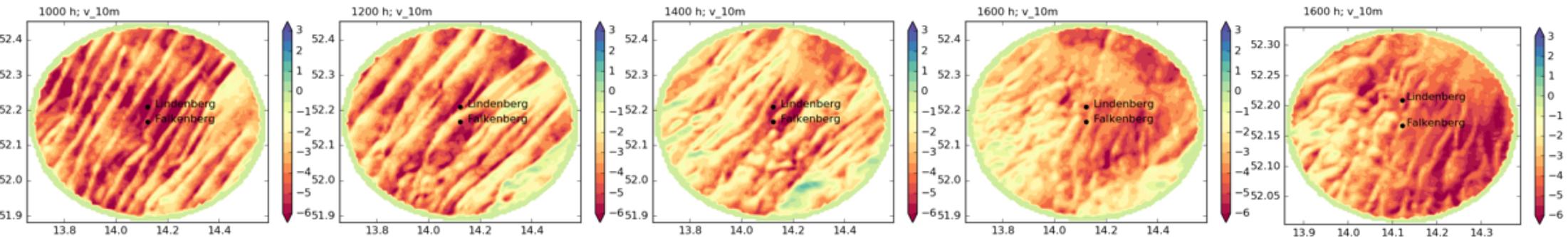


# CASE 5: BL rolls/shallow convection 30.05.2021

MODIS Terra



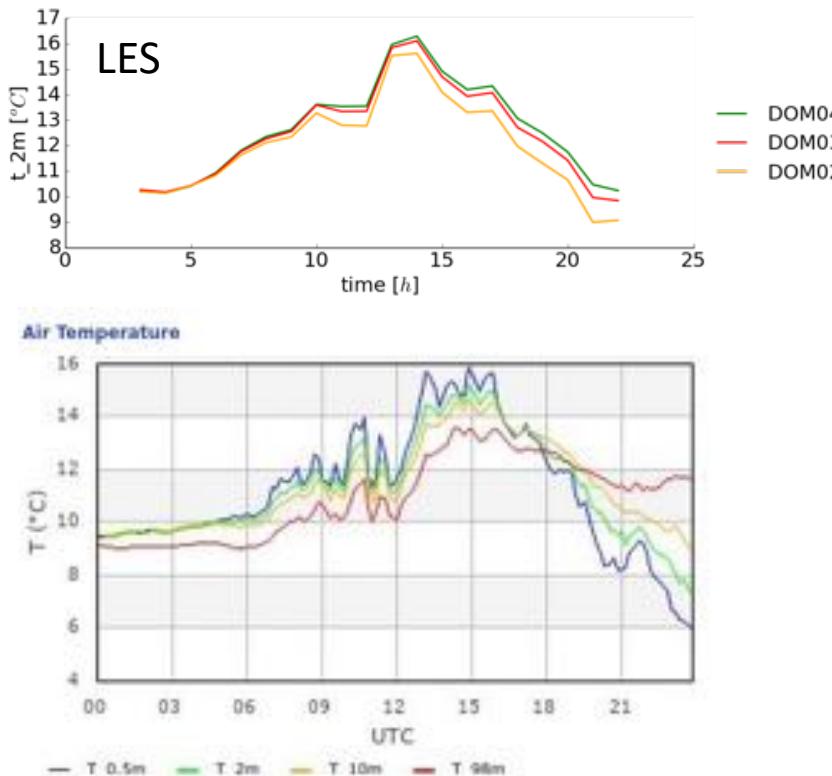
Wind patterns  
(v\_10m wind component)



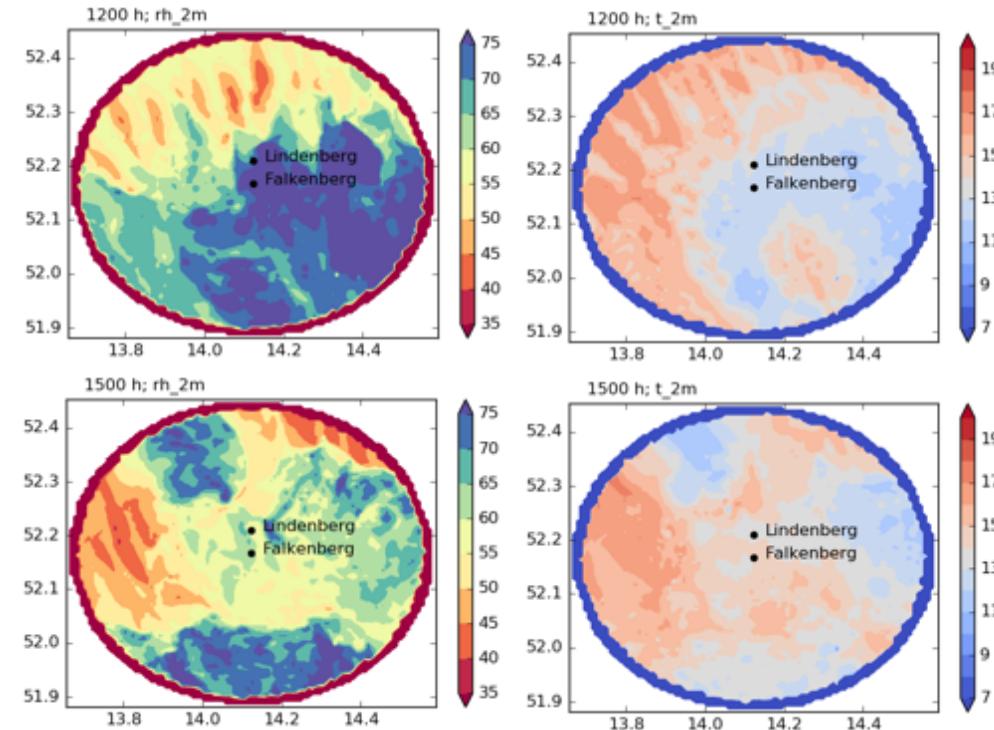
# CASE 6: Deep-convective day: 28.05.2021

## ICON-D2 forcing

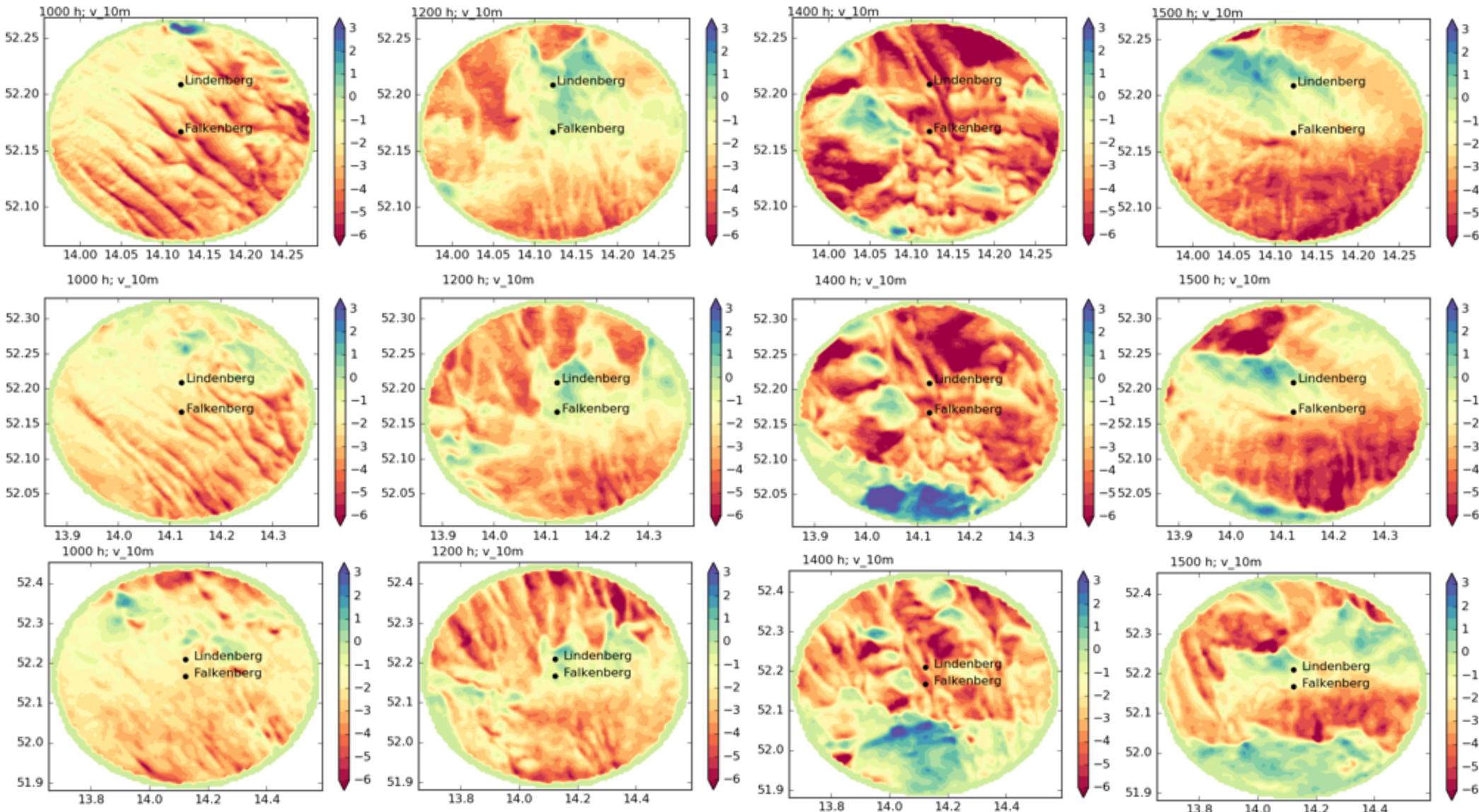
$t_{2m}$  averaged over the inner-most domain  
(small area around Lindenberg, Falkenberg)



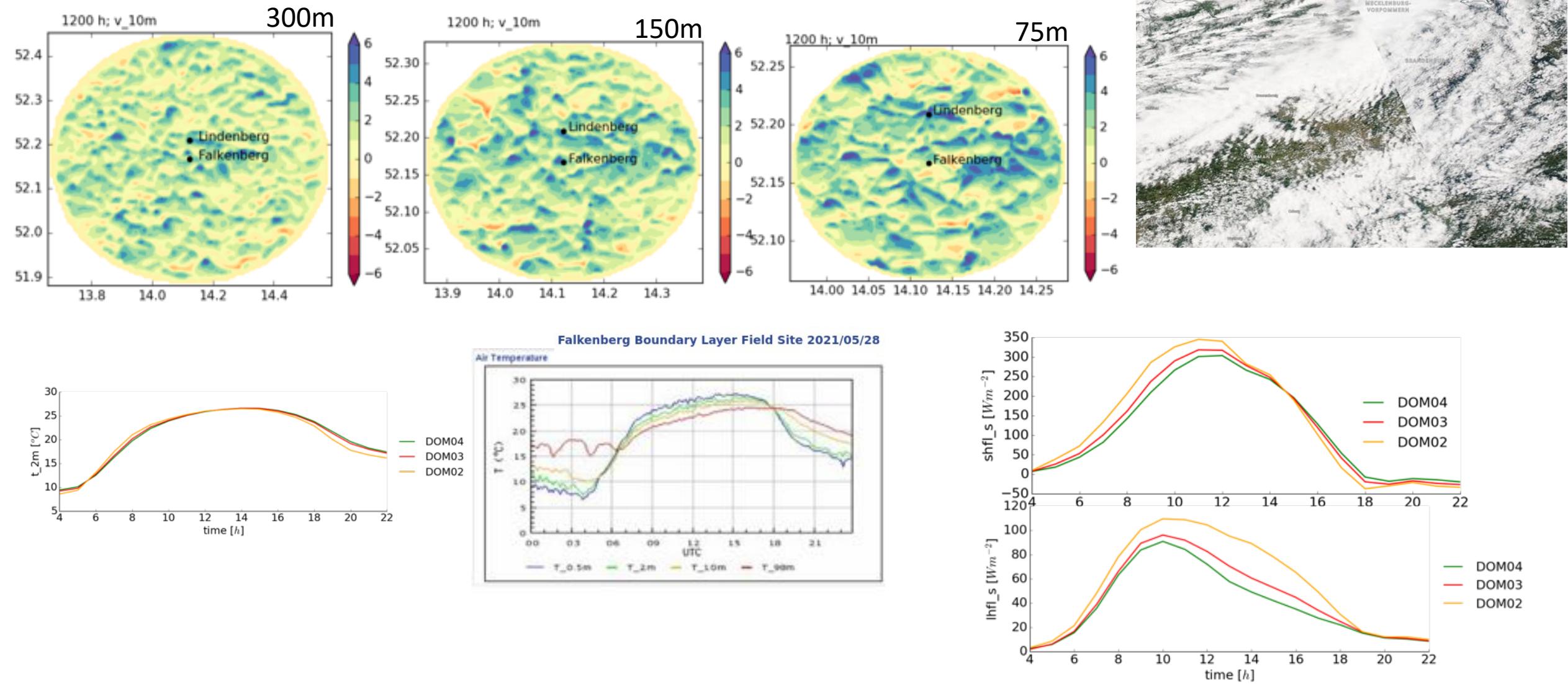
Cold pools modelled within the domain;  
might not match the exact position of the real events



# CASE 6: Deep-convective day: 28.05.2021

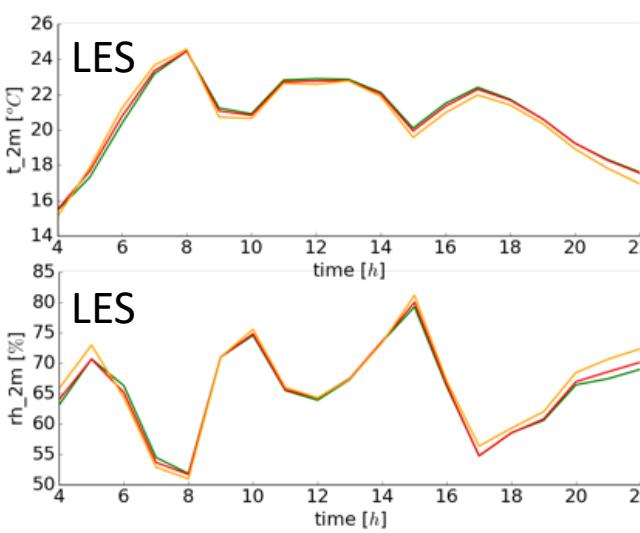
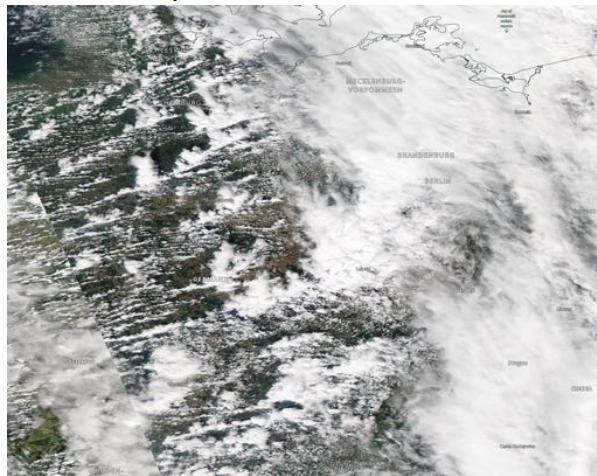


# CASE 7: 05.08.2020

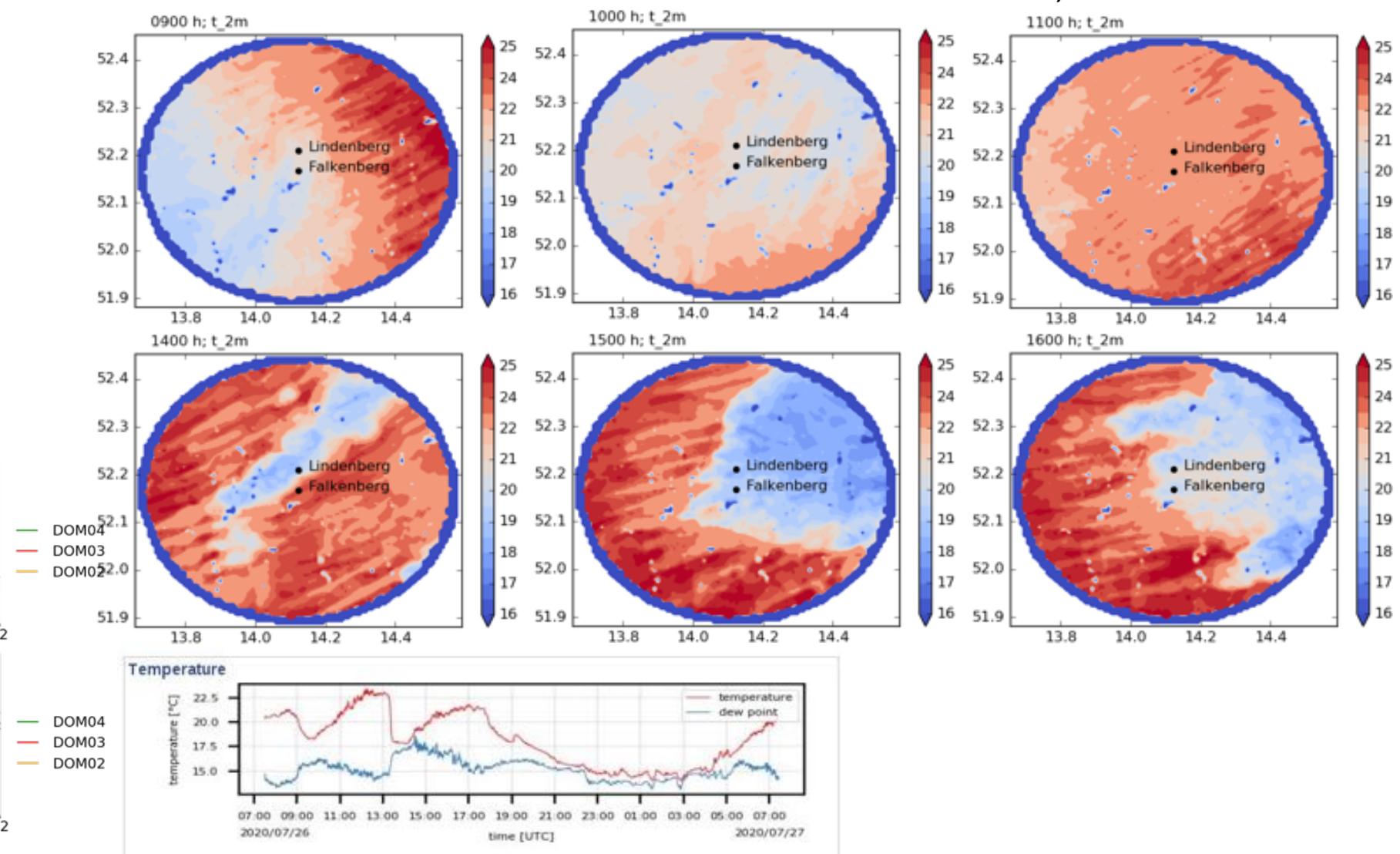


CASE 8: FEST@MOL 2020 cold pool 26.07.2020

## MODIS Aqua

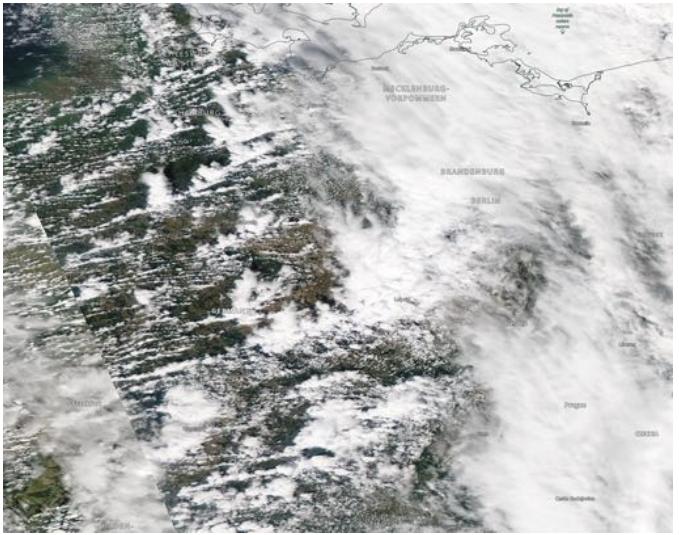


## T 2m, DOM02 300m res



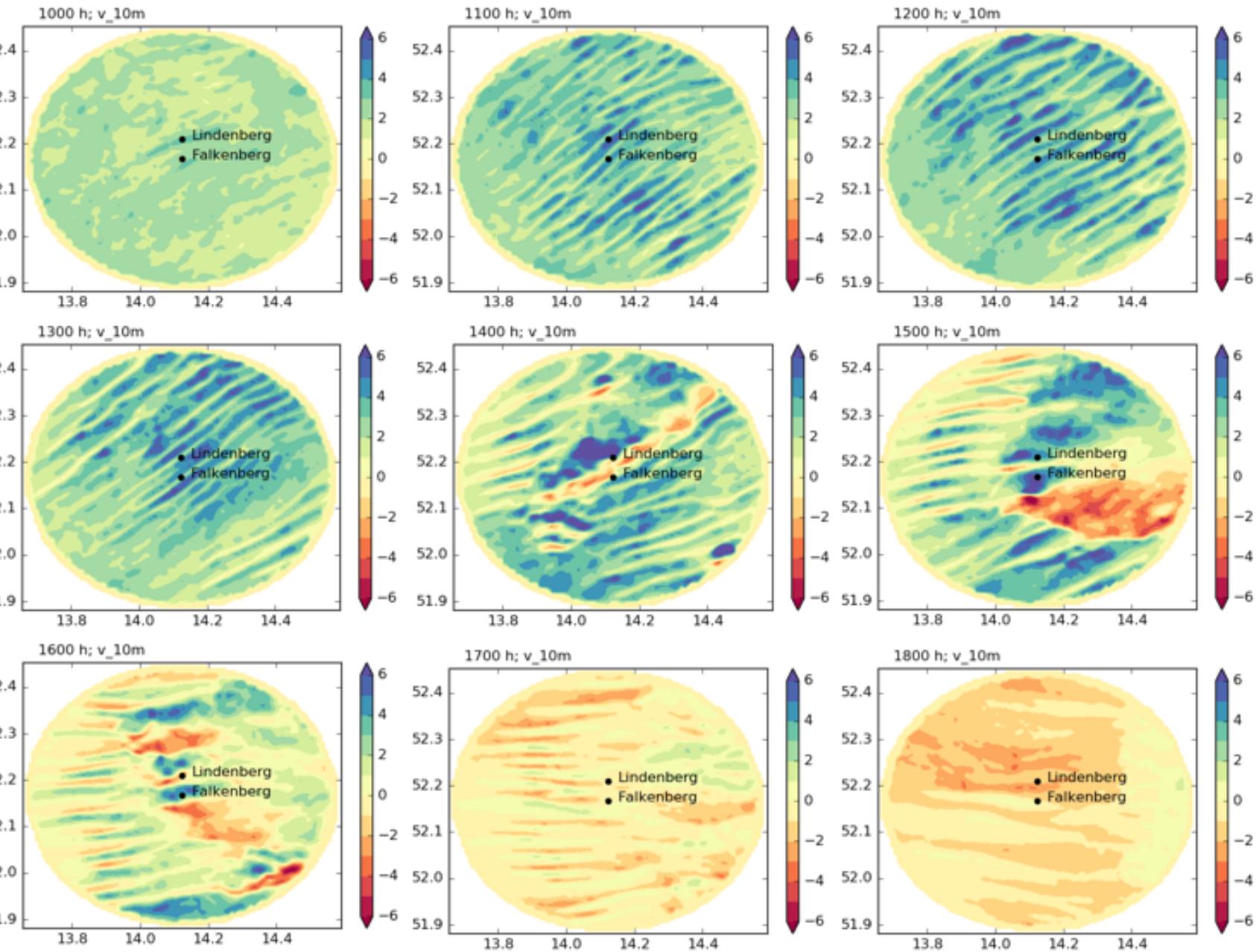
# CASE 8: 26.07.2020

MODIS Aqua



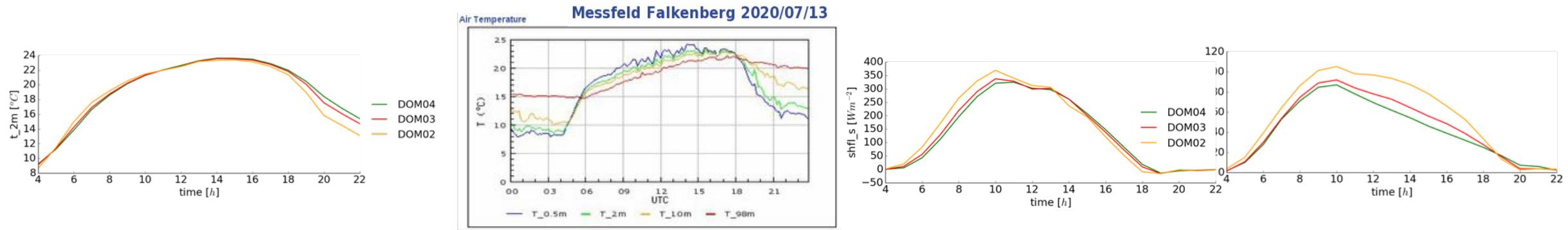
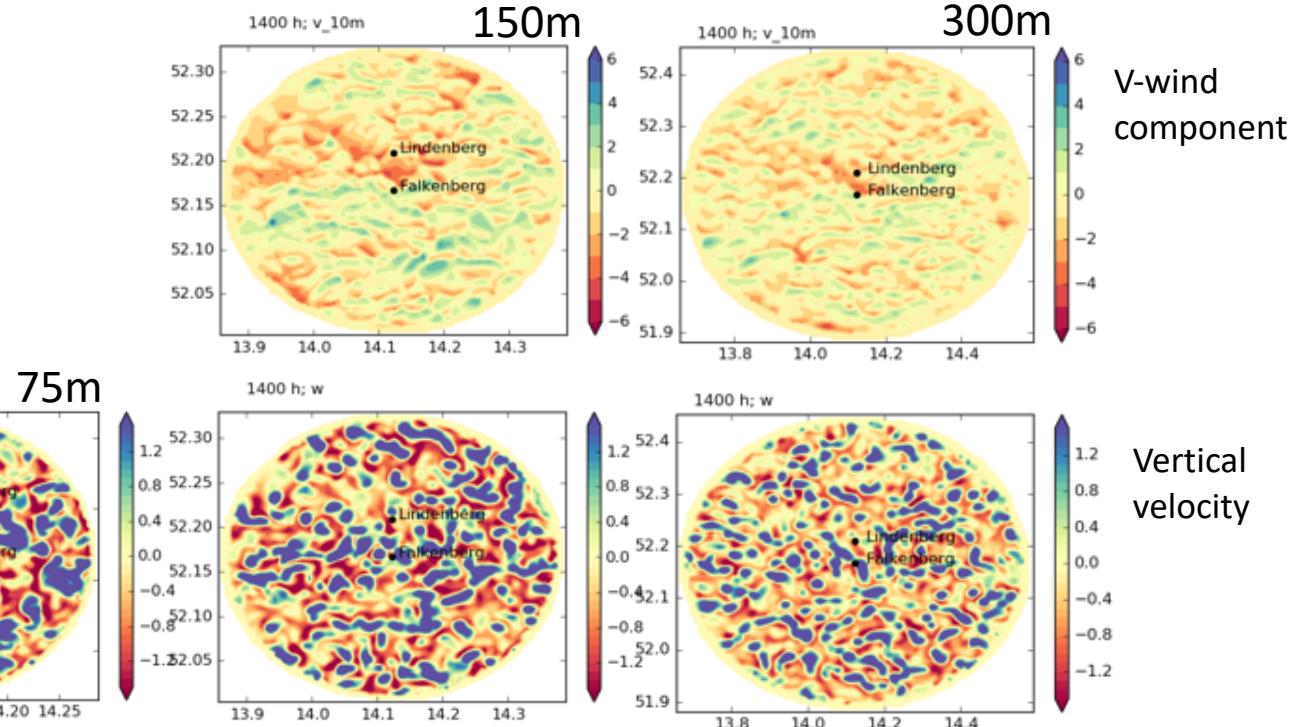
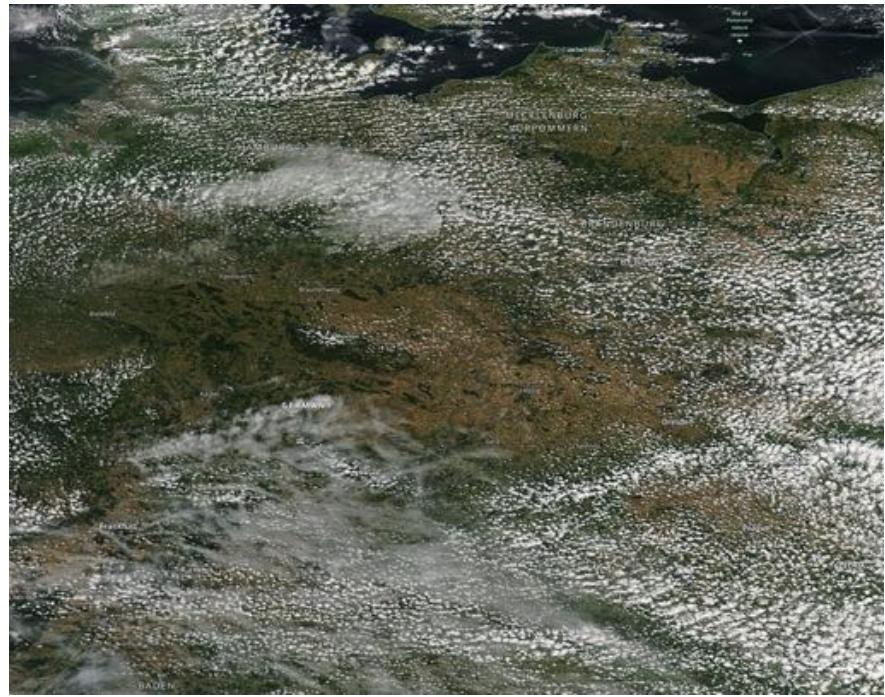
Wind patterns  
(v\_10m wind component)

DOM02 300m res



# CASE 9: shallow convection 13.07.2020

MODIS



# ICON-LES: EXTPAR Surface input static data

