



Supplement of

Analysis of sulfate aerosols over Austria: a case study

Camelia Talianu and Petra Seibert

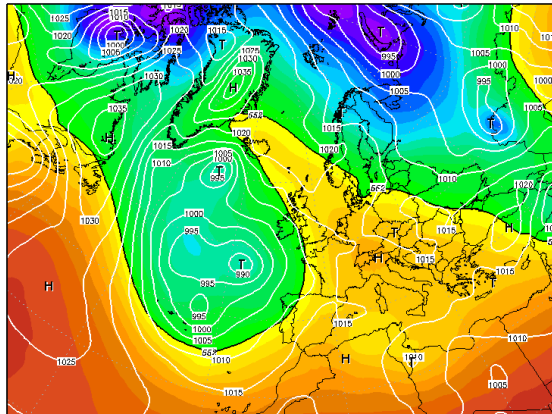
Correspondence to: Camelia Talianu (camelia.talianu@boku.ac.at)

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Figure S1. Map of EARLINET lidar stations. The lidar stations used in this study are represented as: Leipzig (green circle), Munich (magenta triangle), Garmisch (blue rhombus), Bucharest (black square). The in situ station Pillersdorf (red star) is also shown on the map.

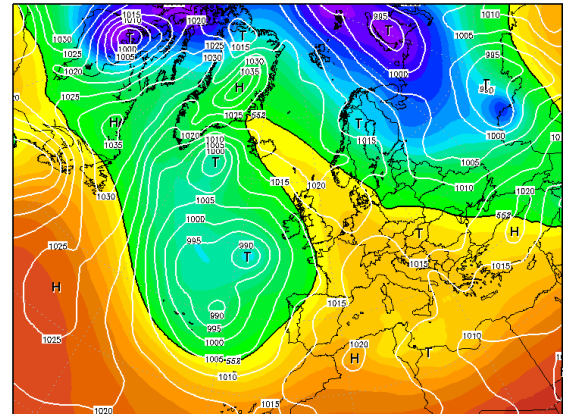
31MAR2014 00Z
500hPa Geopotential (gdam), Bodendruck (hPa)



Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(a) 31 March 2014, 00:00 UTC

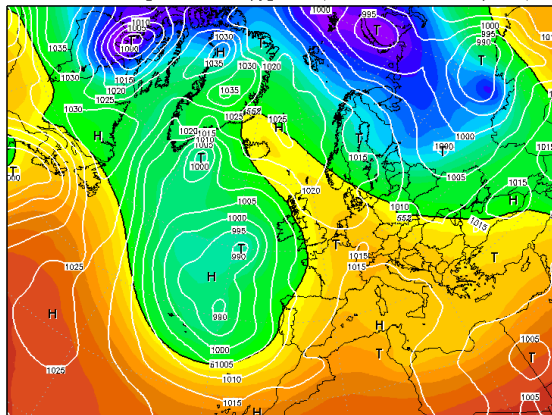
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Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(b) 31 March 2014, 06:00 UTC

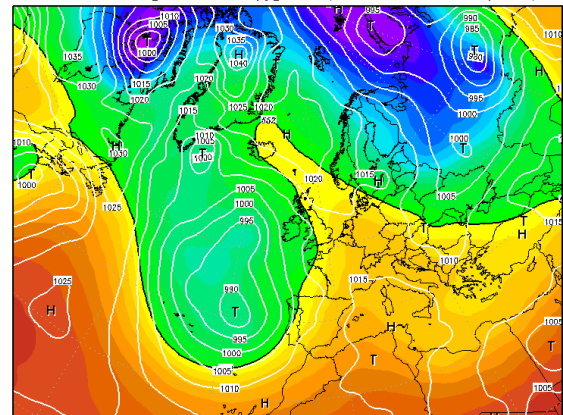
31MAR2014 12Z
500hPa Geopotential (gdam), Bodendruck (hPa)



Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(c) 31 March 2014, 12:00 UTC

31MAR2014 18Z
500hPa Geopotential (gdam), Bodendruck (hPa)

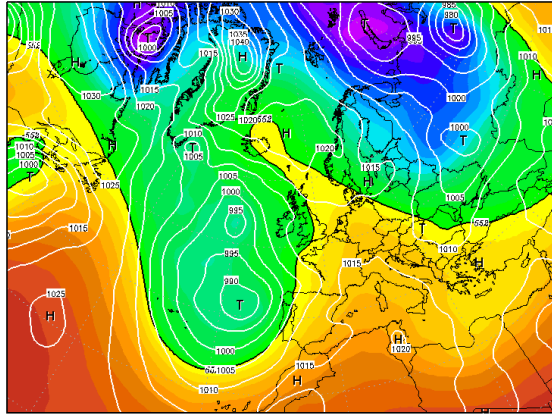


Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(d) 31 March 2014, 18:00 UTC

Figure S2. Meteorological map for 31 March 2014. Source: www.wetterzentrale.de

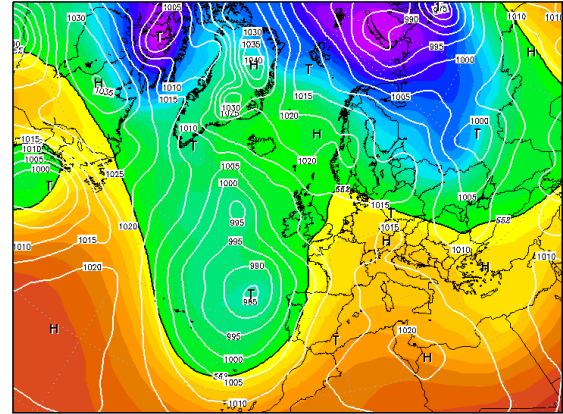
01APR2014 00Z
500hPa Geopotential (gpdam), Bodendruck (hPa)



Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(a) 01 April 2014, 00:00 UTC

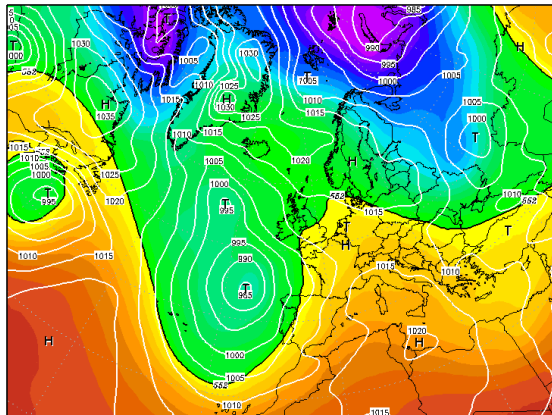
01APR2014 06Z
500hPa Geopotential (gpdam), Bodendruck (hPa)



Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(b) 01 April 2014, 06:00 UTC

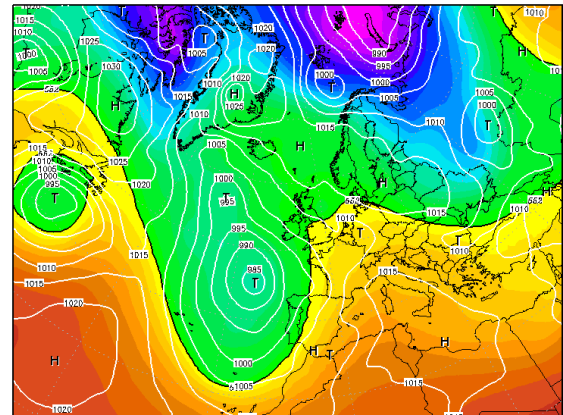
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Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(c) 01 April 2014, 12:00 UTC

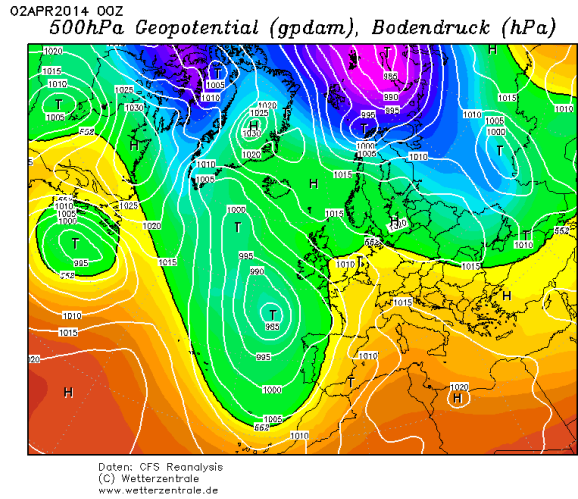
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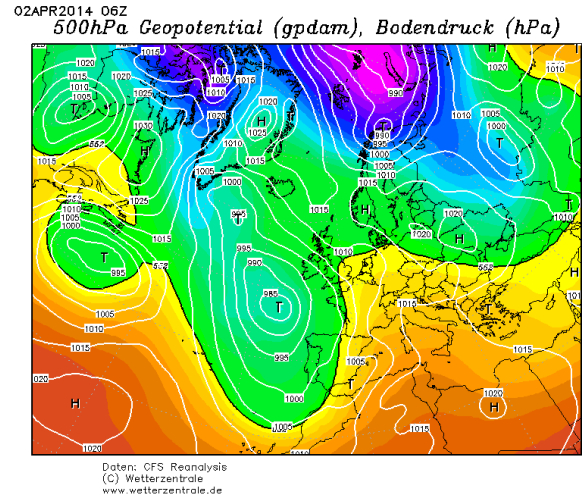
Daten: CFS Reanalysis
(C) Wetterzentrale
www.wetterzentrale.de

(d) 01 April 2014, 18:00 UTC

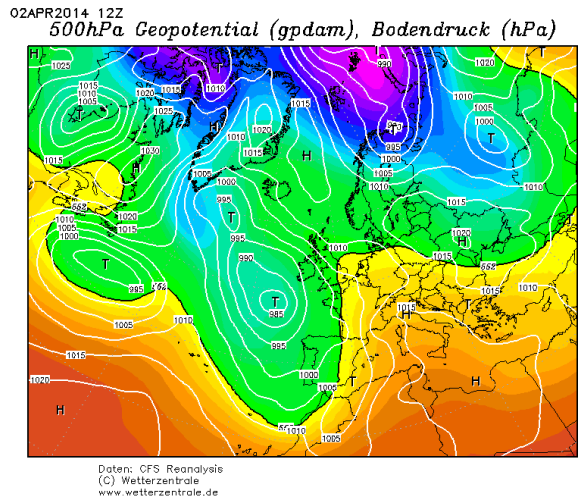
Figure S3. Meteorological map for 01 April 2014. Source: www.wetterzentrale.de



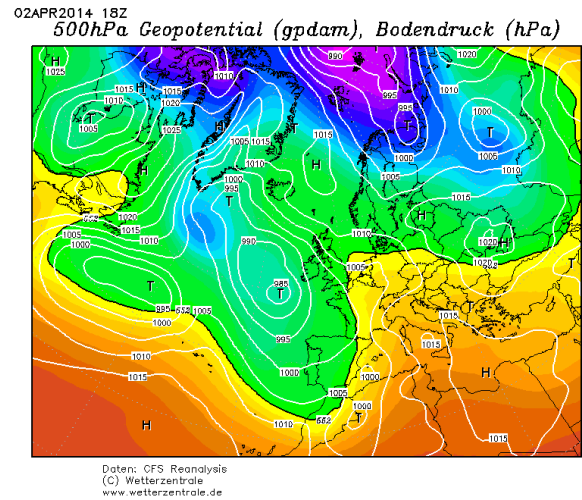
(a) 02 April 2014, 00:00 UTC



(b) 02 April 2014, 06:00 UTC



(c) 02 April 2014, 12:00 UTC



(d) 02 April 2014, 18:00 UTC

Figure S4. Meteorological map for 02 April 2014. Source: www.wetterzentrale.de

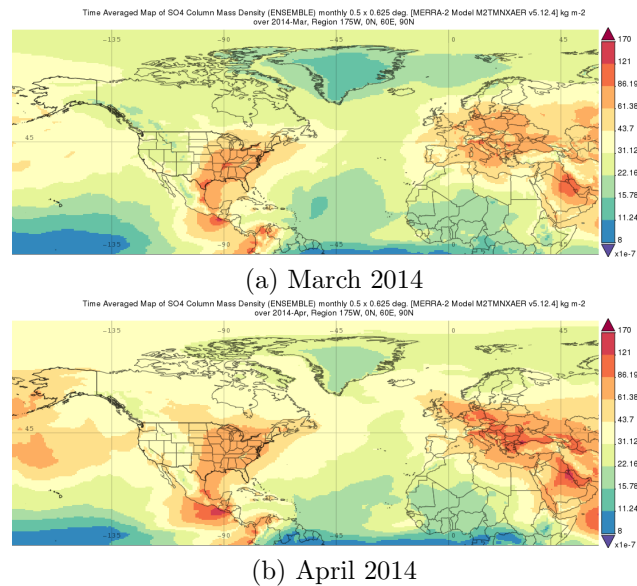


Figure S5. GIOVANNI time averaged map of sulphate column mass density for March 2014 (a) and April 2014 (b).

Time averaged maps of sulfate column mass density, monthly, are available from EarthData NASA GIOVANNI online data system (NASA, 2018). For short-time events, they can be used only for a qualitative interpretation, being monthly averaged. The map of sulfate column mass density for March 2014, Fig. S5 (a), shows an increased density over South–Eastern and Eastern US and a reduced density over Central Europe. For April 2014, shown in Fig. S5 (b), the density increases over Central Europe.

Acknowledgements. The sulfate column mass density maps were produced with the Giovanni online data system, developed and maintained by the NASA GES DISC. We also acknowledge the mission scientists and Principal Investigators who provided the data used in this research effort.

References

- 10 NASA: GIOVANNI The bridge between data and Science, <https://giovanni.gsfc.nasa.gov/giovanni/>, 2018.