Corrigendum to Weather Clim. Dynam., 5, 1545–1560, 2024
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Corrigendum to "Detection and consequences of atmospheric deserts: insights from a case study" published in Weather Clim. Dynam., 5, 1545–1560, 2024

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During the preparation of the manuscript a small error was made, when visualising the lightning data. This resulted in timestamps shifted by one hour. This affects Figs. 1, 3, and 4, but the results, discussion and conclusions of the paper remain unchanged. The updated versions of the affected figures are shown here.

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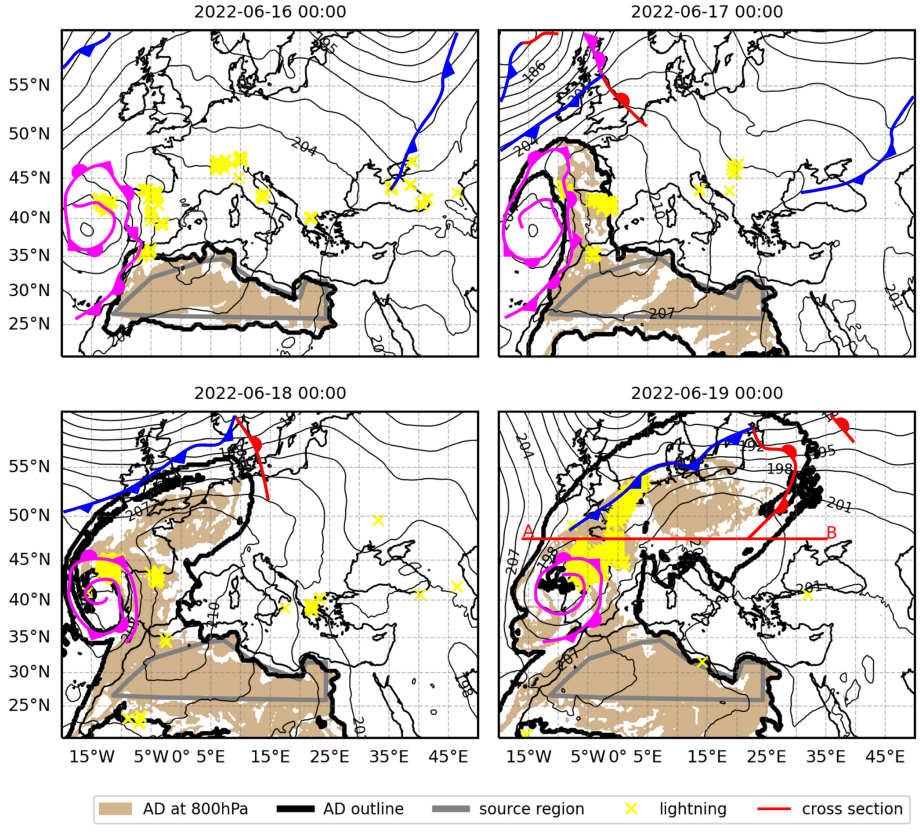

Figure 1. Display of the situation during 16–19 June 2022, 00:00 UTC, respectively. Thin black contours show the 800 hPa geopotential height in decametres, with a spacing of 3 dam. The coloured lines denote the 800 hPa fronts (identified from 800 hPa temperature, relative humidity, divergence, and relative vorticity maps), colours and symbols have their usual meaning. The maximum extent of the AD is outlined in thick black. The extent of the AD in the layer from 800 to 750 hPa is marked in beige. Yellow crosses mark locations where lightning occurred during the hour before and after. Red line (A–B) marks the location of the cross-section depicted in Fig. 4.

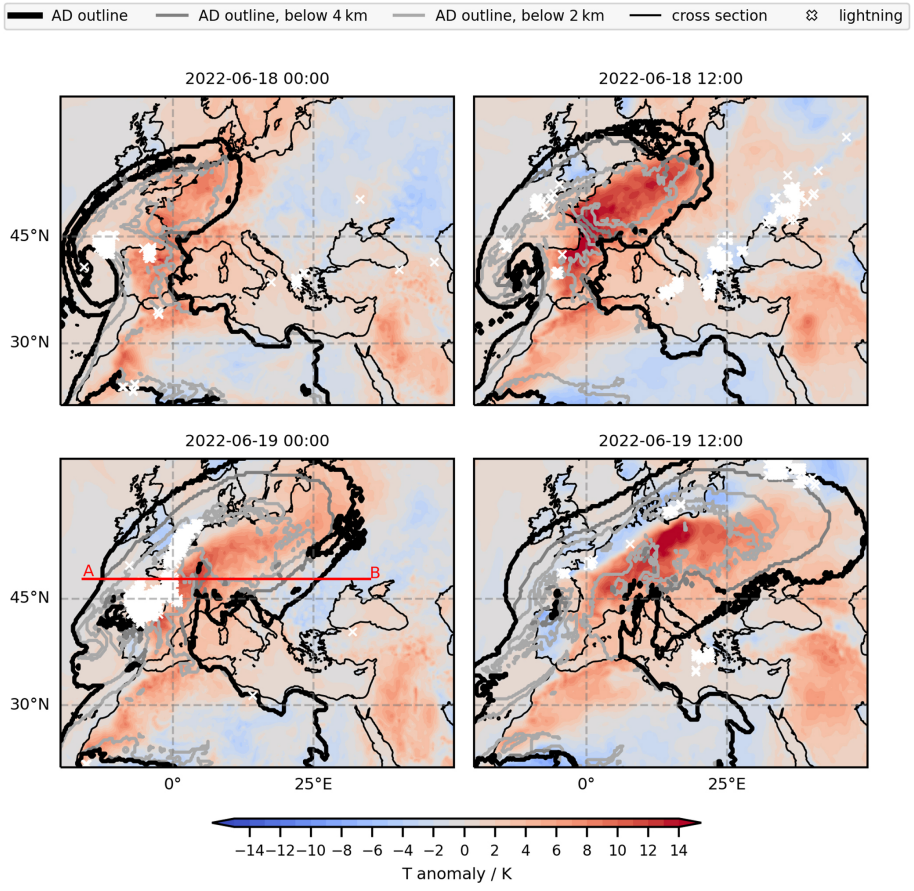

Figure 3. Map showing the spatial extent of the AD and the 2 m temperature anomaly with respect to the 30-year period of 1992–2021 at 00:00 and 12:00 UTC on 18 and 19 June 2022. The entire AD is outlined in black; outlines of the AD cells up to 4 and 2 km are marked in grey. White crosses mark locations where lightning occurred during the hour before and after; 2 m temperature anomalies are coloured with a blue-to-red gradient at 1 K intervals. The red line (A–B) marks the location of the cross-section depicted in Fig. 4, as in Fig. 1.

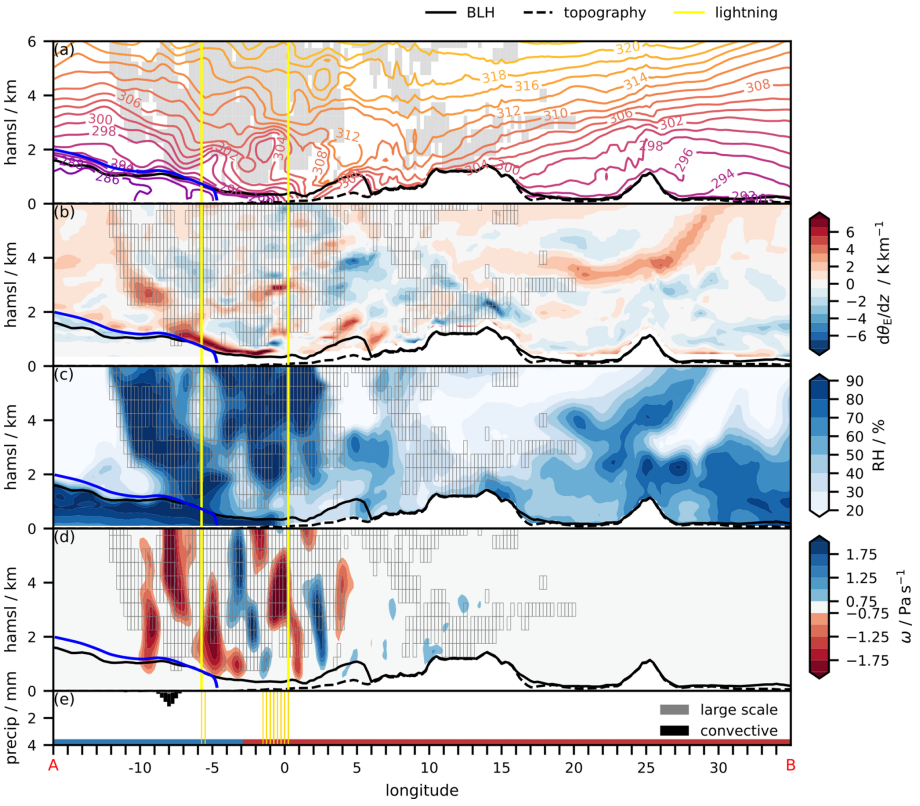

Figure 4. Vertical cross-section along 47.5° N, at 19 June 2022 00:00 UTC (16° W to 35° E, 47.5° N, as denoted by the red line (A–B) in lower left panel in Fig. 1). Shown are **(a)** the potential temperature in K, **(b)** the equivalent potential temperature gradient in K km^{-1}, **(c)** the relative humidity in %, **(d)** the vertical wind component in Pa s^{-1}, and **(e)** the accumulated large scale (gray) and convective (black) precipitation within the previous hour in mm. In panels **(a)–(d)**, the solid black line denotes the BLH, the dashed black line the model topography, and the vertical yellow lines denote the range in which lightning occurred within a 2 h time window centred at 00:00 UTC and a 1° latitude band centred at 47.5° N. All lightning locations within this range are shown in yellow in panel **(e)**. The region occupied by AD air is marked in grey (shading in **a**, grid in **b–d**). The cold front is denoted in blue. Land and ocean surfaces are marked along the x axis in brown and blue, respectively.