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Corrigendum to "Aerosol midlatitude cyclone indirect effects in observations and high-resolution simulations" published in Atmos. Chem. Phys., 18, 5821–1, 2018

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In the original text we stated that compositing was performed using the algorithm in Field and Wood (2007). In order to help researchers who may wish to repeat our analysis we realized that some additional clarifications of modifications that were made to the algorithm but not noted in the text need to be described. In Field and Wood (2007) the slope and curvature of the anomaly in the sea level pressure (SLP) field were used to identify cyclone centers. The anomaly in SLP used in Field and Wood (2007) was calculated relative to the sliding monthly mean of the SLP. In the text, the anomaly of the SLP pressure field was not used to find candidate grid points. Instead, candidate grid points were found using the following criteria:

$$\frac{\mathrm{dSLP}}{\mathrm{d}x}\frac{\mathrm{dSLP}}{\mathrm{d}y} < 3\cdot 10^{-5}\ \mathrm{hPa\,km^{-2}}, \quad (1)$$

and

$$\frac{d^2\,\mathrm{SLP}}{\mathrm{d}x^2} + \frac{d^2\,\mathrm{SLP}}{\mathrm{d}y^2} > 6\cdot 10^{-5}\ \mathrm{hPa\,km^{-2}}, \quad (2)$$

where SLP < 1015 hPa. It is also useful to note that the criteria for curvature and slope are somewhat more relaxed than the values used in Field and Wood (2007). As in Field and Wood (2007), the minimum SLP within 2000 km was found for these candidate points. Following identification of cyclone centres, data were averaged into an equal-area grid with approximately 200 km × 200 km regions.

References

Field, P. R. and Wood, R.: Precipitation and cloud structure in midlatitude cyclones, J. Clim., 20, 233–254, https://doi.org/10.1175/jcli3998.1, 2007.