S1. Seasonal B_K vs. DTL diagrams
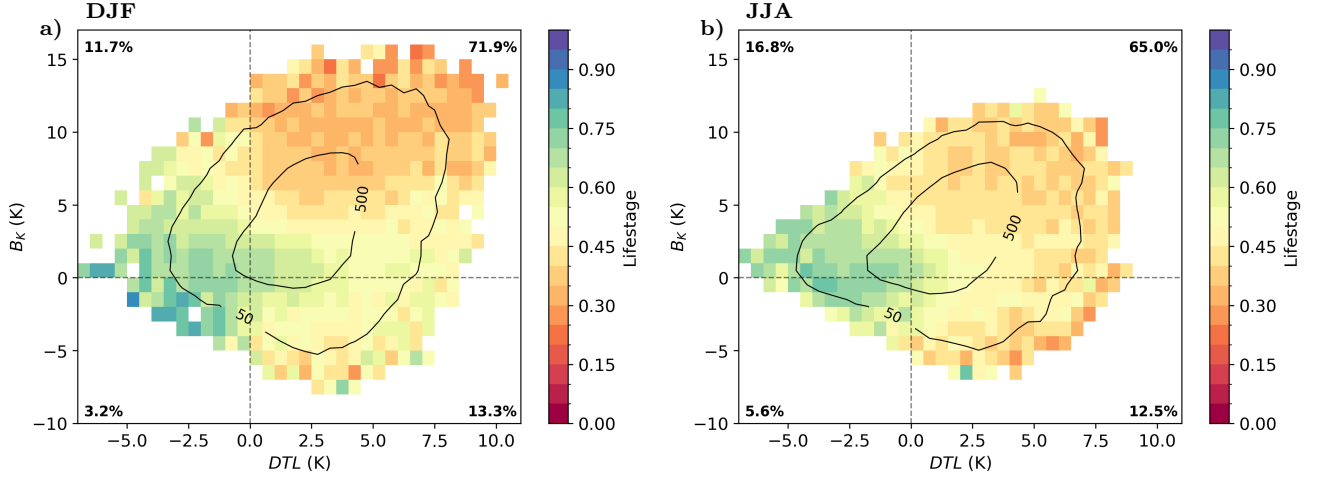
Figure S1. B_K vs. DTL diagrams for **(a)** DJF and **(b)** JJA. The diagrams are made with all track points. Shading indicates the mean lifestage in each small square. Black contours indicate the density of points. Four regions are built with gray lines of value 0. The percentages of data points in each region are indicated in the corners. Rectangles with less than 10 data points were removed for visualization but not in the percentages.

S2. Relative importance of different terms in the evolution of ETE

In Appendix B is demonstrated that the evolution of ETE is a function of the baroclinic conversion BC and the diabatic generation DG. These terms are plotted in Fig. S2.
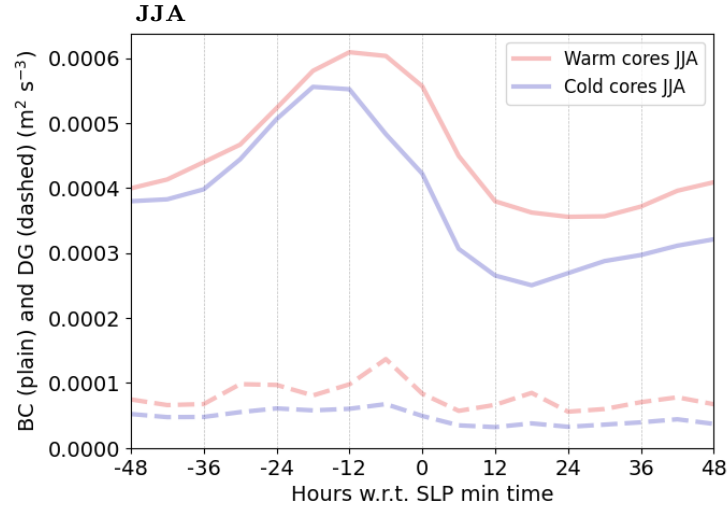
Figure S2. Lagged composites of mean BC (plain) and mean DG (dotted) on a 10°-radius circle and on the layers between 900 and 300 hPa. Transparent red lines correspond to JJA warm-core composites, transparent blue to JJA cold-core ones.