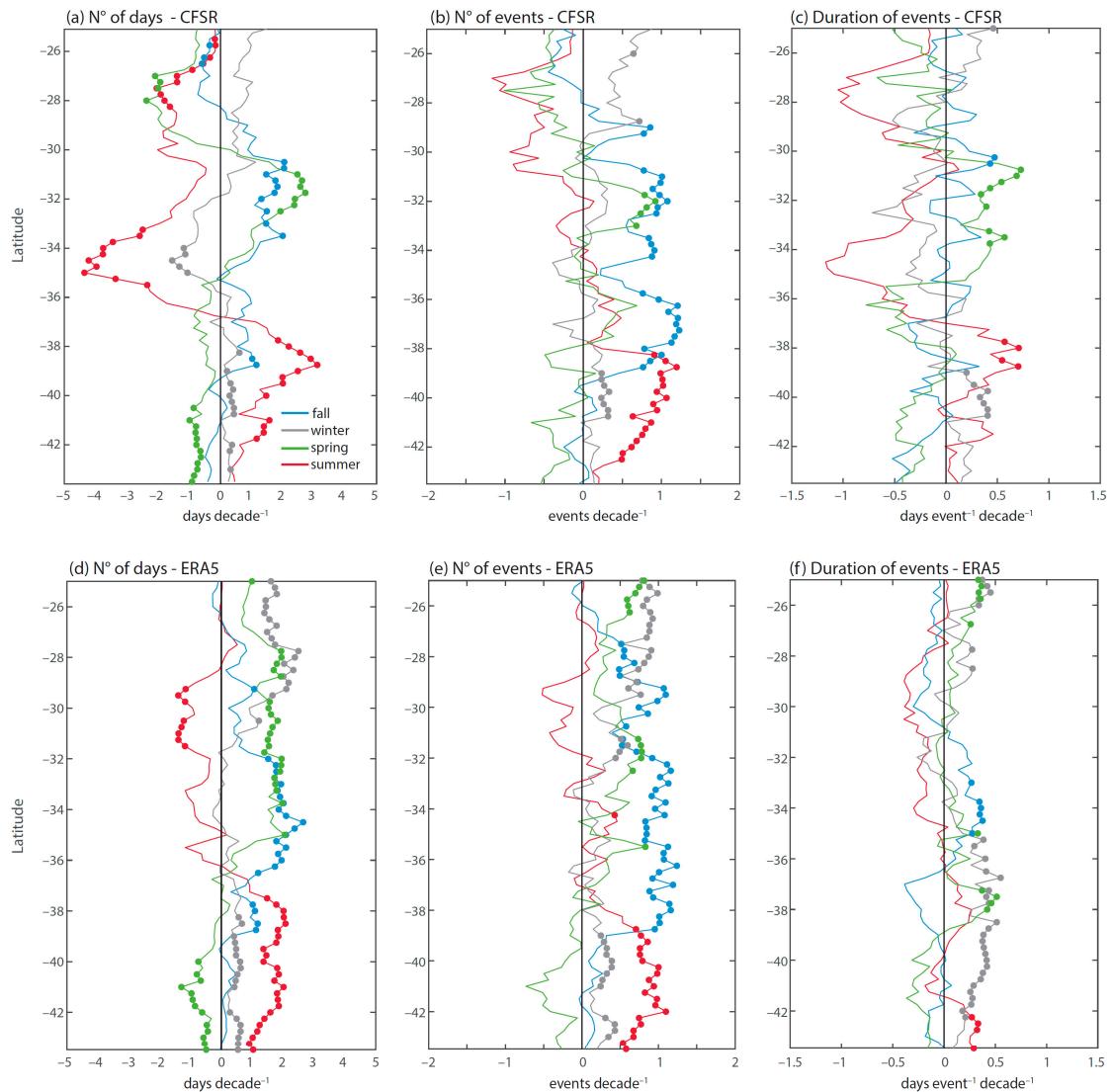
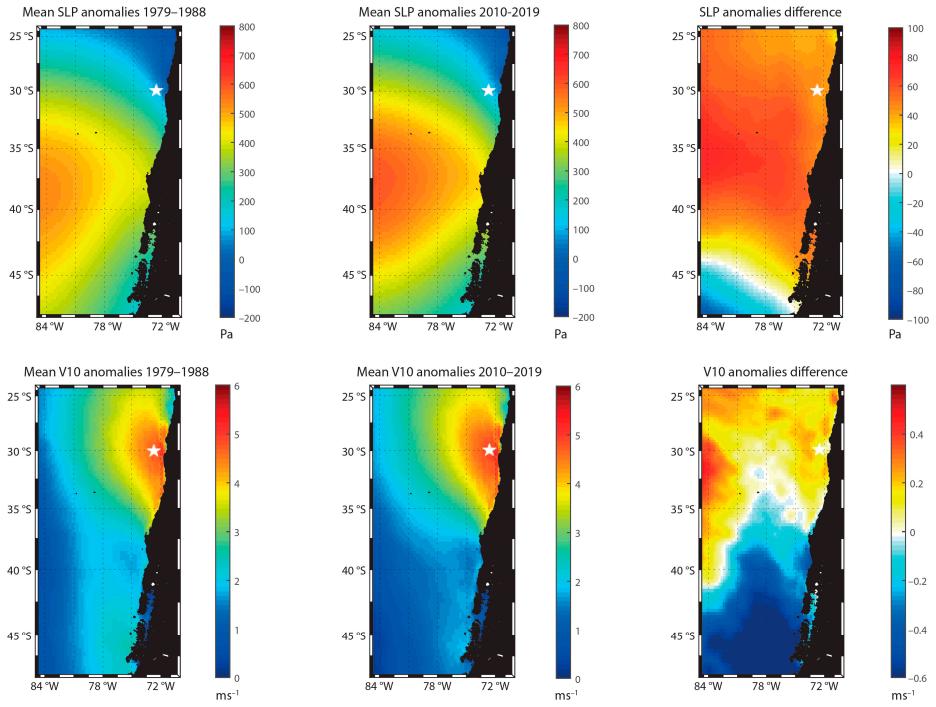


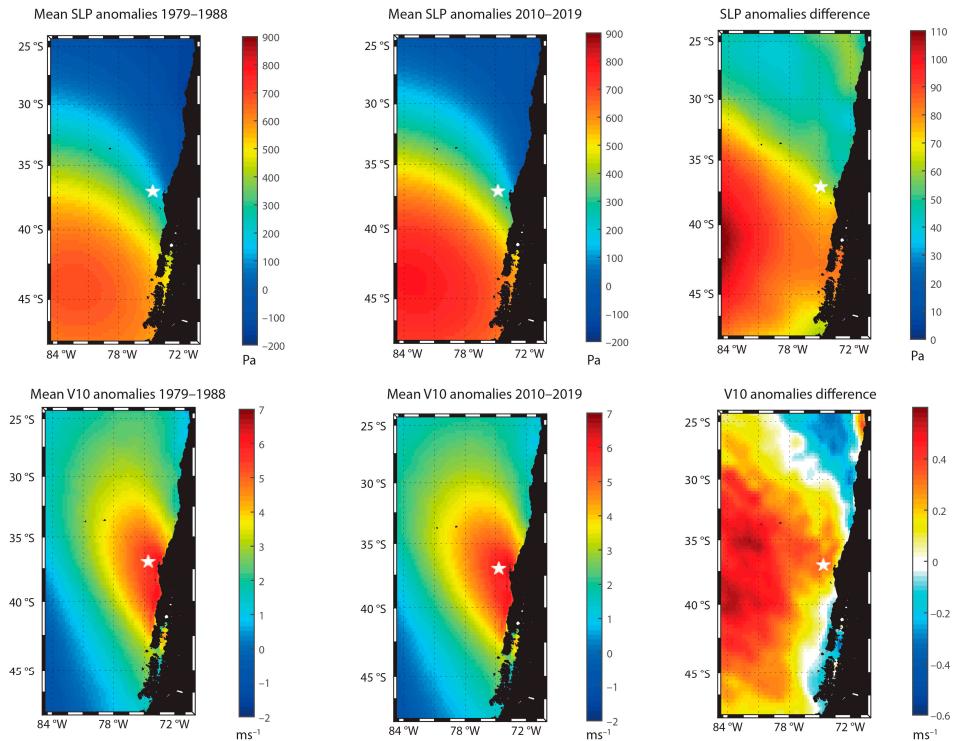
## Supplementary Materials



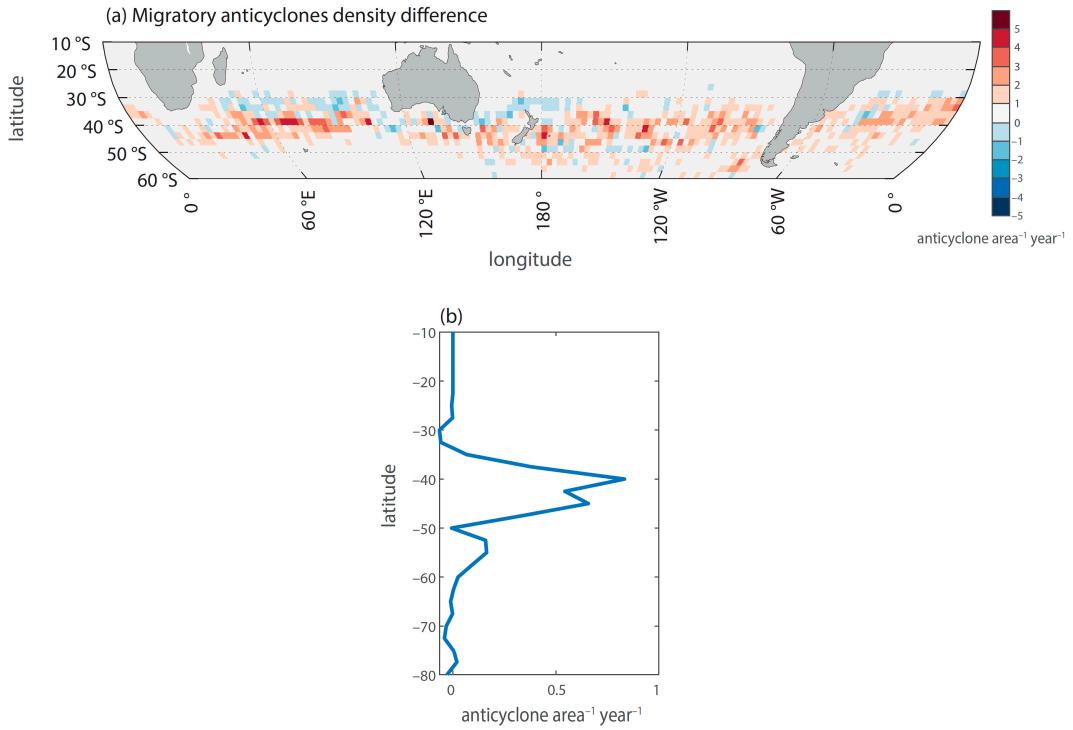
**Figure S1.** a) Trends in the number of windy days, b) trends in the number of CLLJ events and c) trends in the duration of the CLLJ events for the CFSR data. d), e) and f) display trends obtained from ERA5 data. Trends are calculated using the common period of both reanalysis (1979 - 2010). Dots represent locations where trends are significant.



**Figure S2.** Mean anomalies of SLP (upper panels) and V10 (bottom panels) during CCLJ events off Punta Lengua de Vaca (30°S) during the period 1979–1988 (left panels), during the period 2010–2019 (middle panels) and the difference in mean anomalies between these two periods (2010–2019 minus 1979–1988; right panels).



**Figure S3.** Mean anomalies of SLP (upper panels) and V10 (bottom panels) during CCLJ events off Punta Lavapie (37°S) during the period 1979–1988 (left panels), during the period 2010–2019 (middle panels) and the difference in mean anomalies between these two periods (2010–2019 minus 1979–1988).



**Figure S4.** a) Southern Hemisphere mean difference of migratory anticyclone density between periods 2000–2019 and 1979–1988. b) Longitudinal average of the difference in migratory anticyclone density.