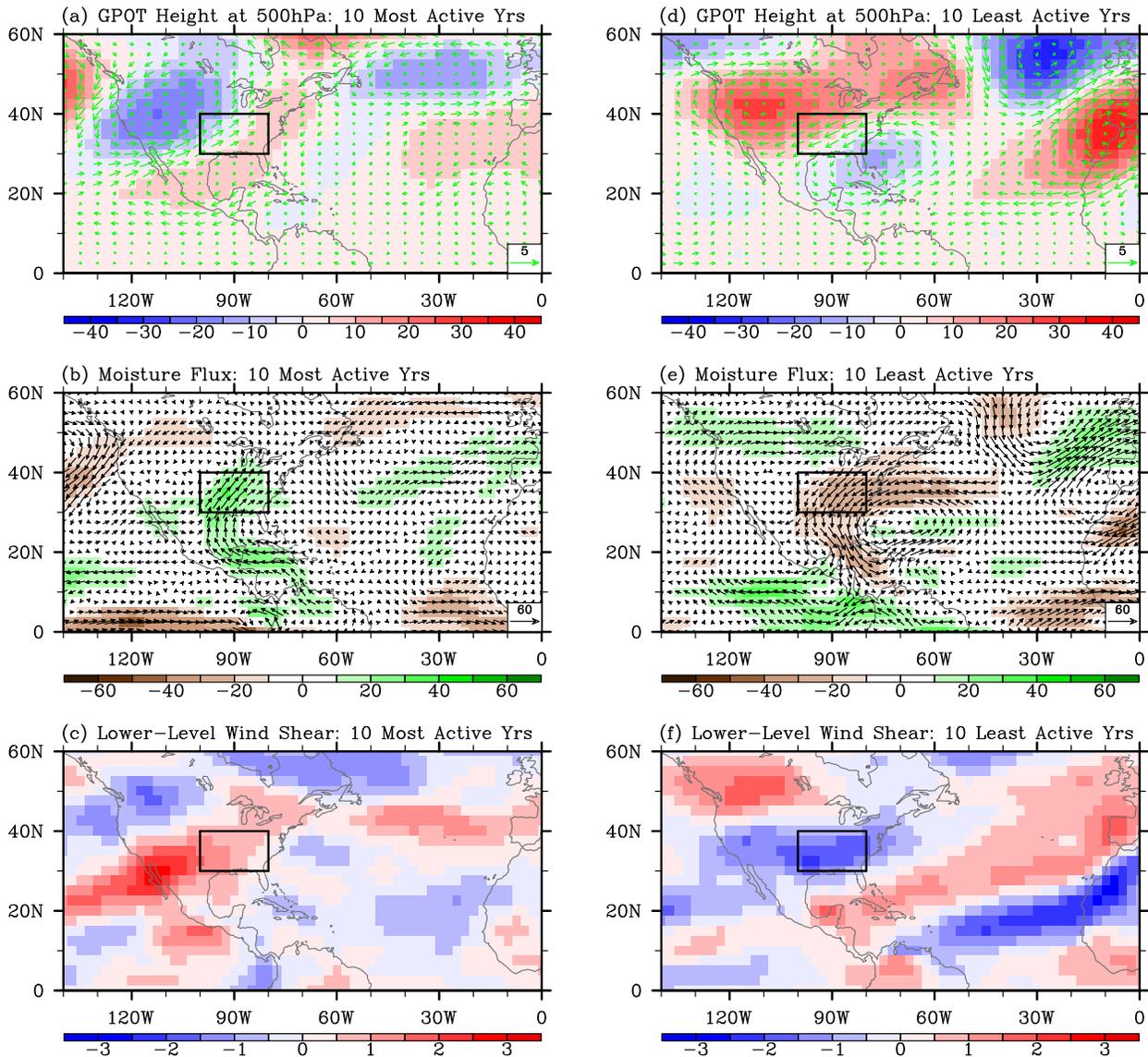
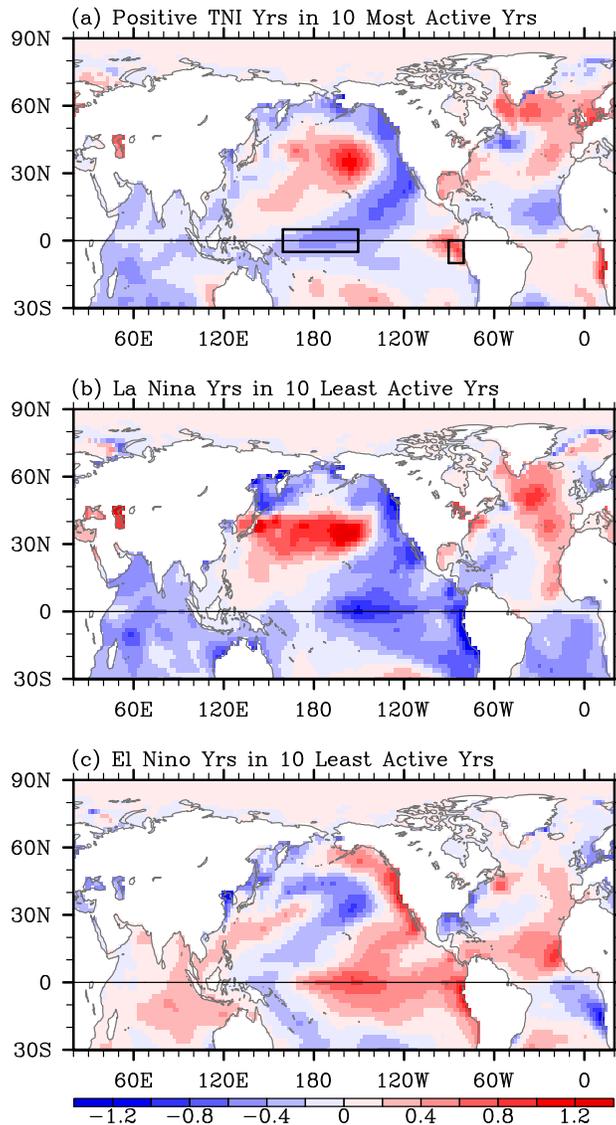


NCEP–NCAR Reanalysis: Key Atmospheric Conditions during Active and Inactive Years (APR–MAY)



1
 2 **Figure 1.** Anomalous geopotential height and wind at 500 hPa, moisture transport and lower-
 3 level (500 hPa – 925 hPa) vertical wind shear for the ten most active U.S. tornado years (a, b and
 4 c) and the ten least active U.S. tornado years (d, e and f) in AM during 1950-2010 obtained from
 5 NCEP-NCAR reanalysis. The unit is $\text{kg m}^{-1}\text{sec}^{-1}$ for moisture transport, m for geopotential
 6 height, and m s^{-1} for wind and wind shear. The small box in (a) - (f) indicates the central and
 7 eastern U.S. region frequently affected by intense tornadoes.

ERSST3: SST Anomalies (APR-MAY)

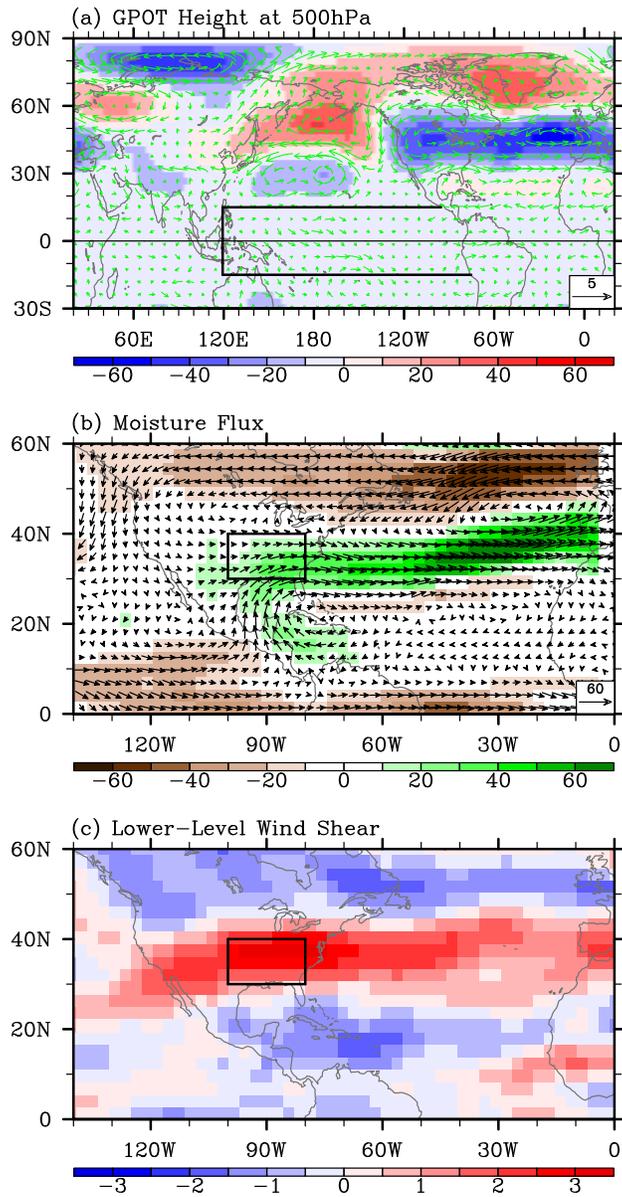


1

2 **Figure 2.** Composite SST anomalies in AM, obtained from ERSST3, for (a) the five positive
3 TNI years transitioning from a La Niña identified among the ten most active U.S. tornado years
4 in AM during 1950-2010, and for (b) the four years with a La Niña transitioning and (c) the four
5 years with an El Niño transitioning identified among the ten least active U.S. tornado years in
6 AM during 1950-2010. Thick black lines in (a) indicate the Niño-4 (5°N - 5°S; 160°E - 150°W)
7 and Niño-1+2 (10°S - 0°; 90°W - 80°W) regions.

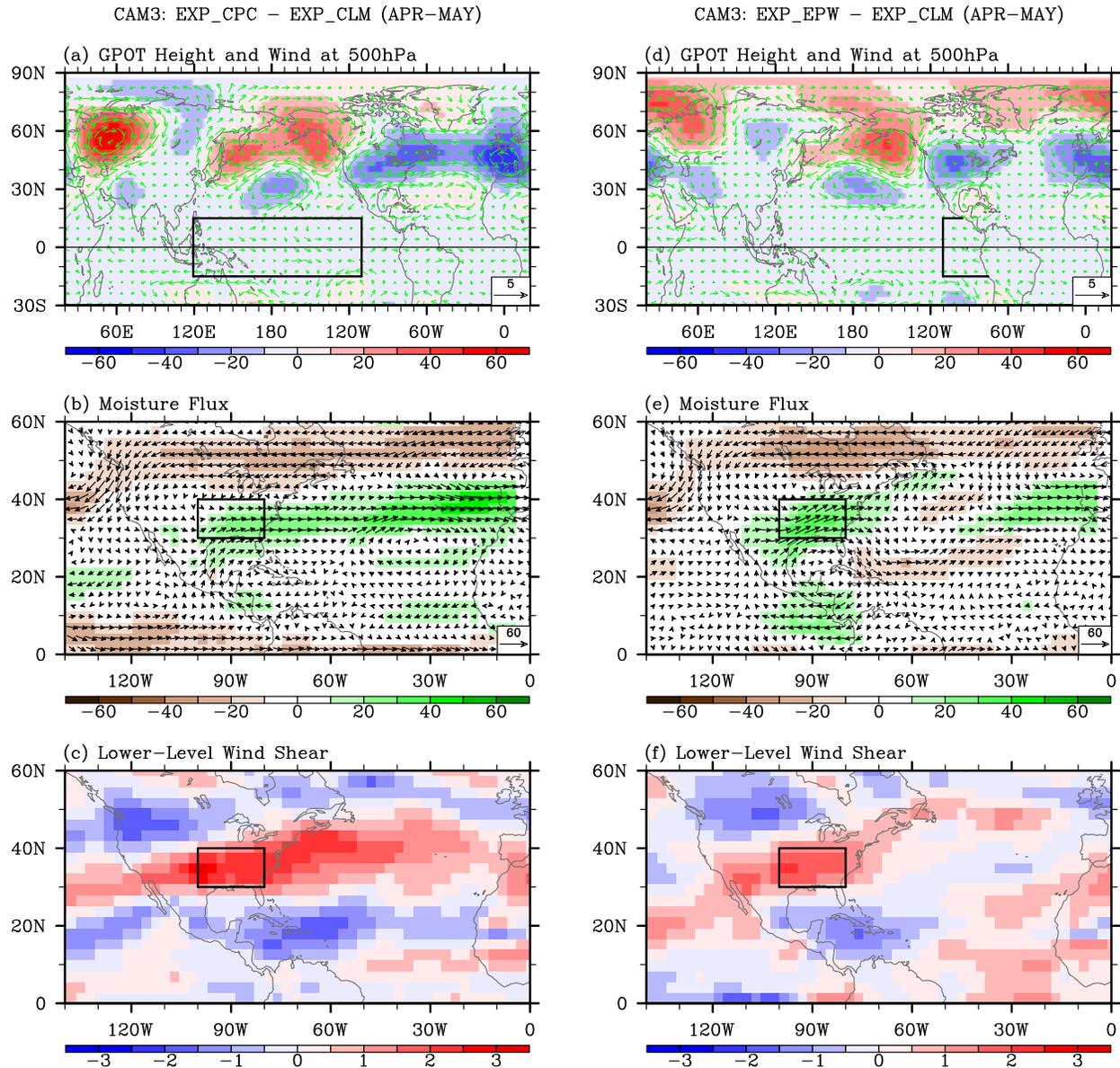
8

CAM3: EXP_TNI - EXP_CLM (APR-MAY)



1

2 **Figure 3.** Simulated anomalous (a) geopotential height and wind at 500 hPa, (b) moisture
3 transport and (c) lower-level (500 hPa – 925 hPa) vertical wind shear in AM obtained from
4 EXP_TNI – EXP_CLM. The unit is kg m⁻¹ sec⁻¹ for moisture transport, m for geopotential
5 height, and m s⁻¹ for wind and wind shear. Thick black lines in (a) indicate the tropical Pacific
6 region where the model SSTs are prescribed. The small box in (b) and (c) indicates the central
7 and eastern U.S. region frequently affected by intense tornadoes.



1
2 **Figure 4.** Simulated anomalous geopotential height and wind at 500 hPa, moisture transport, and
3 lower-level (500 hPa – 925 hPa) vertical wind shear in AM obtained from EXP_CPC –
4 EXP_CLM (a, b and c), and EXP_EPW – EXP_CLM (d, e and f). The unit is $\text{kg m}^{-1} \text{sec}^{-1}$ for
5 moisture transport, m for geopotential height, and m s^{-1} for wind and wind shear. Thick black
6 lines in (a) and (d) indicate the regions where the model SSTs are prescribed. The small box in
7 (b), (c), (e) and (f) indicates the central and eastern U.S. region frequently affected by intense
8 tornadoes.