

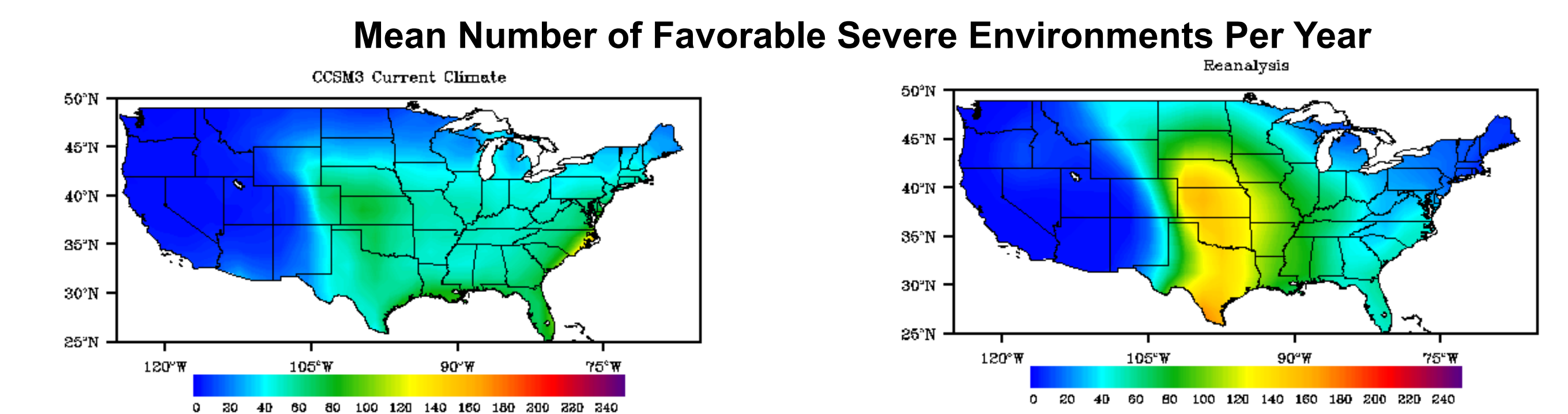
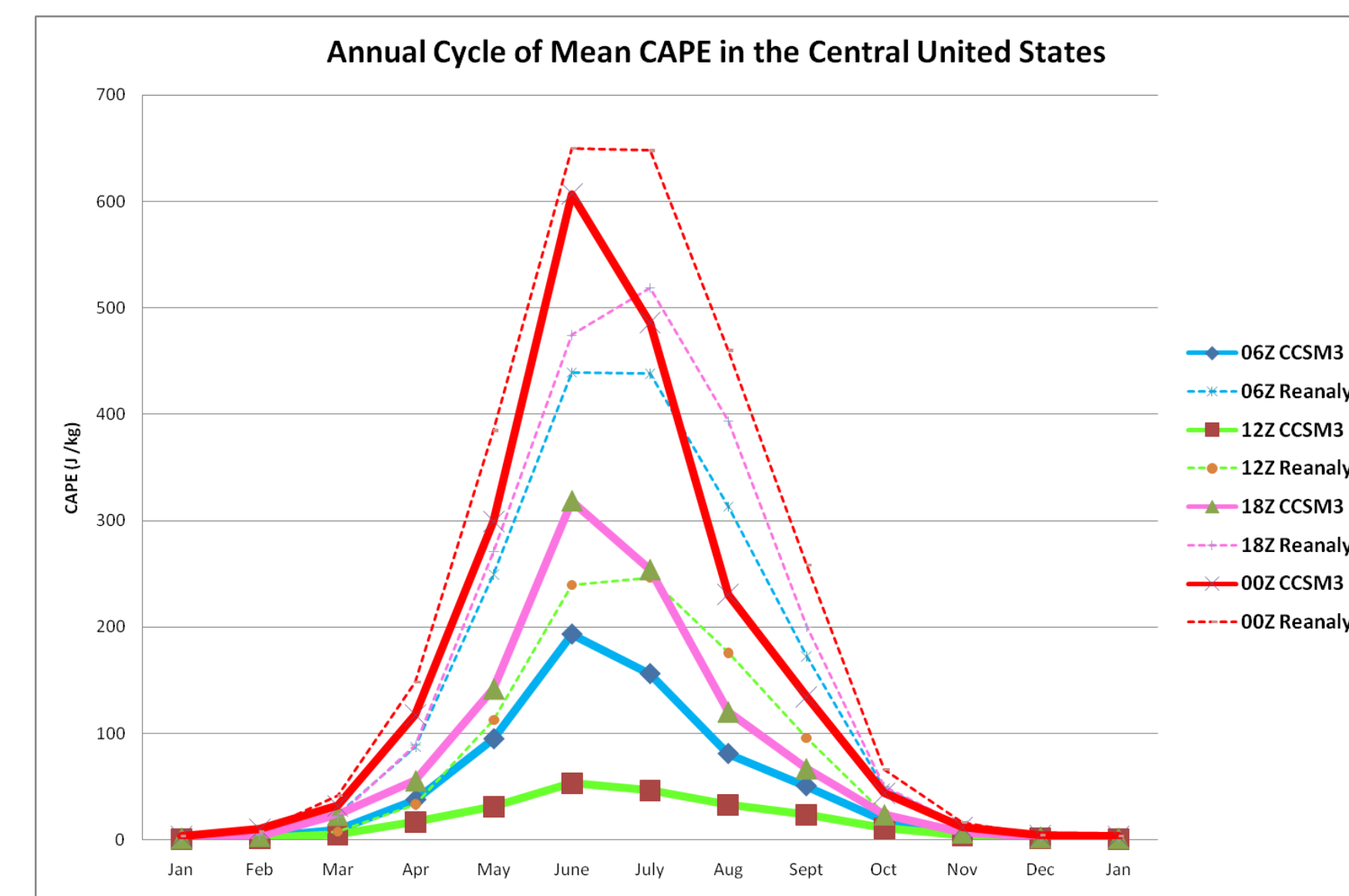
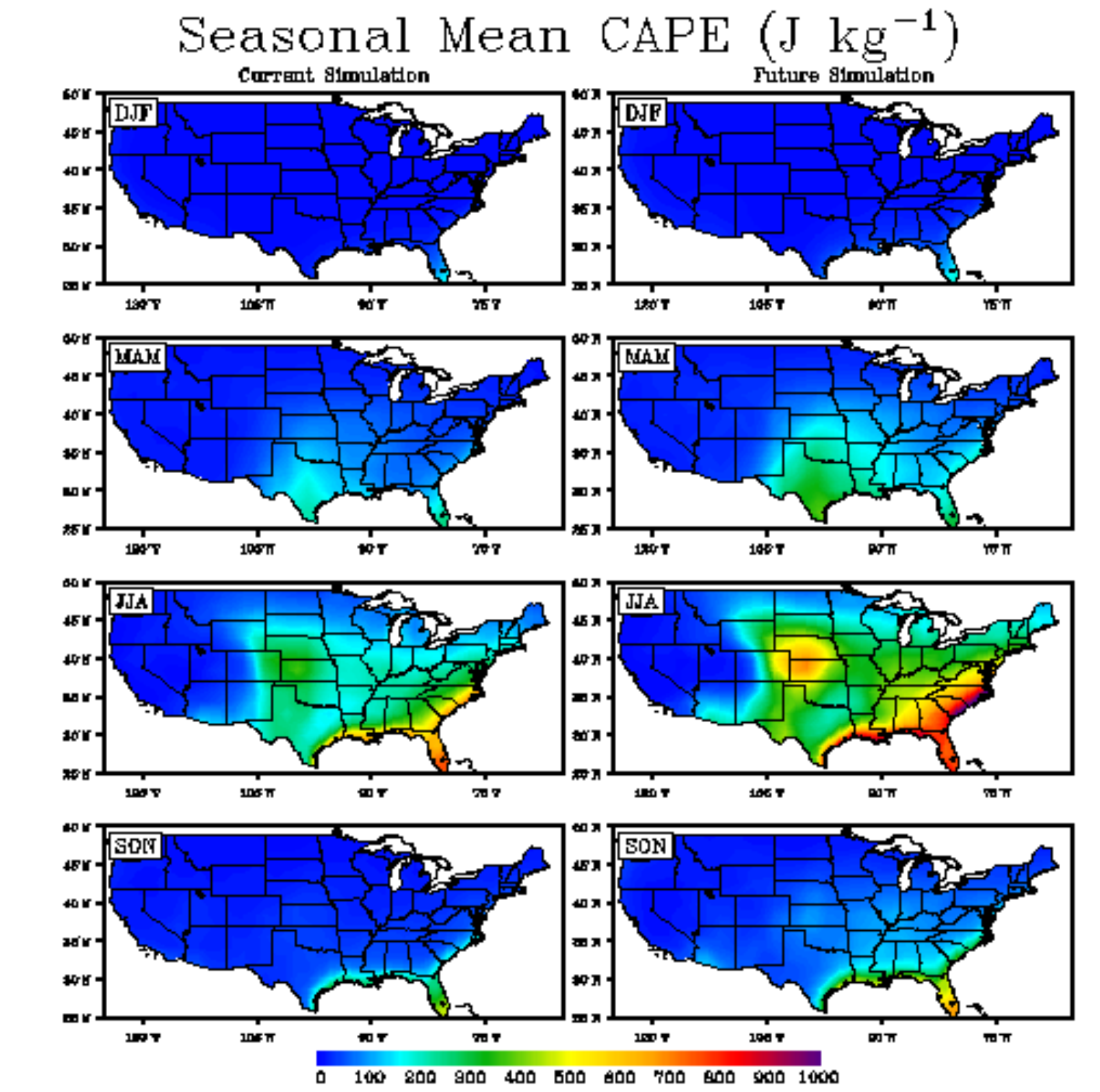
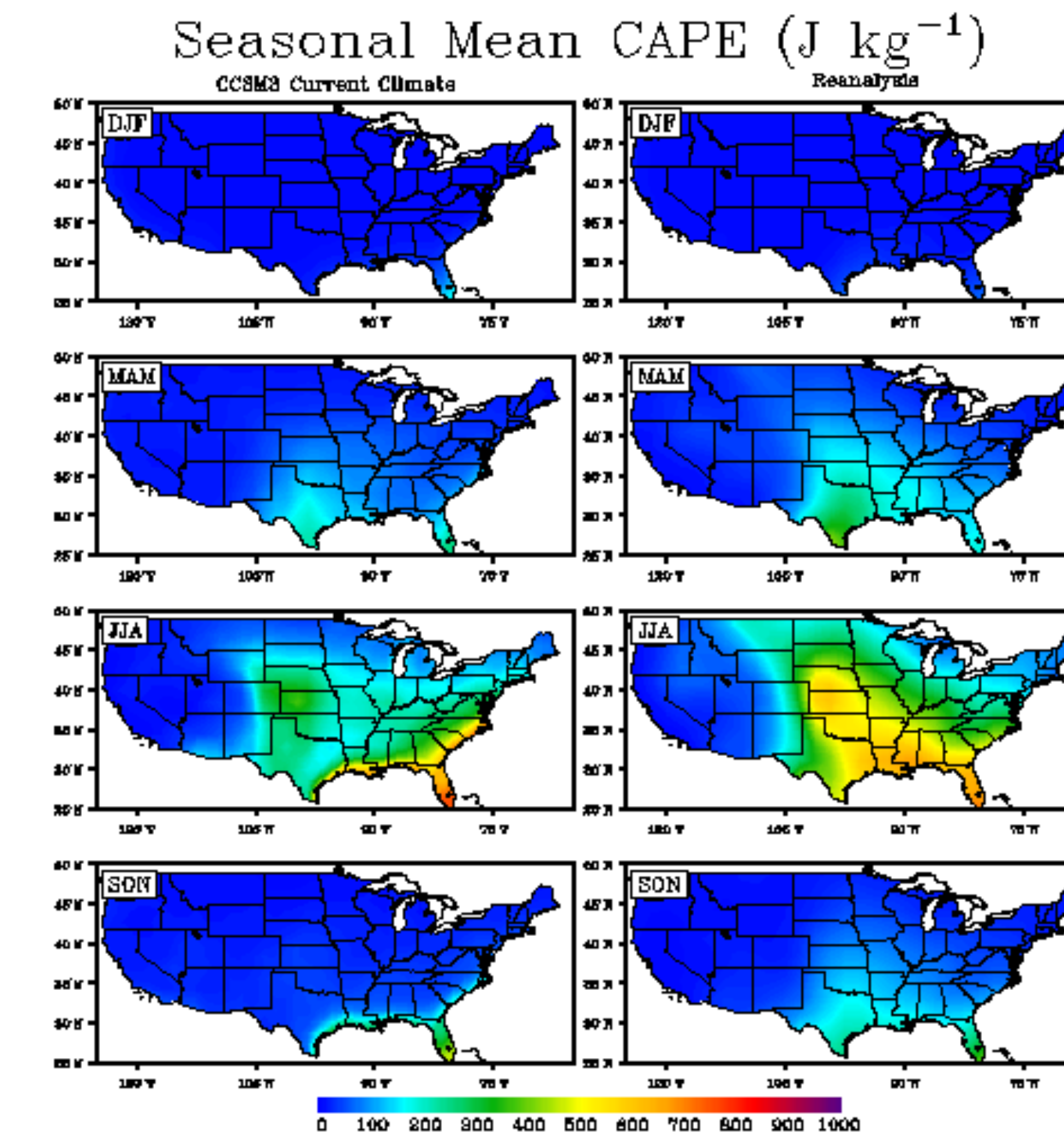
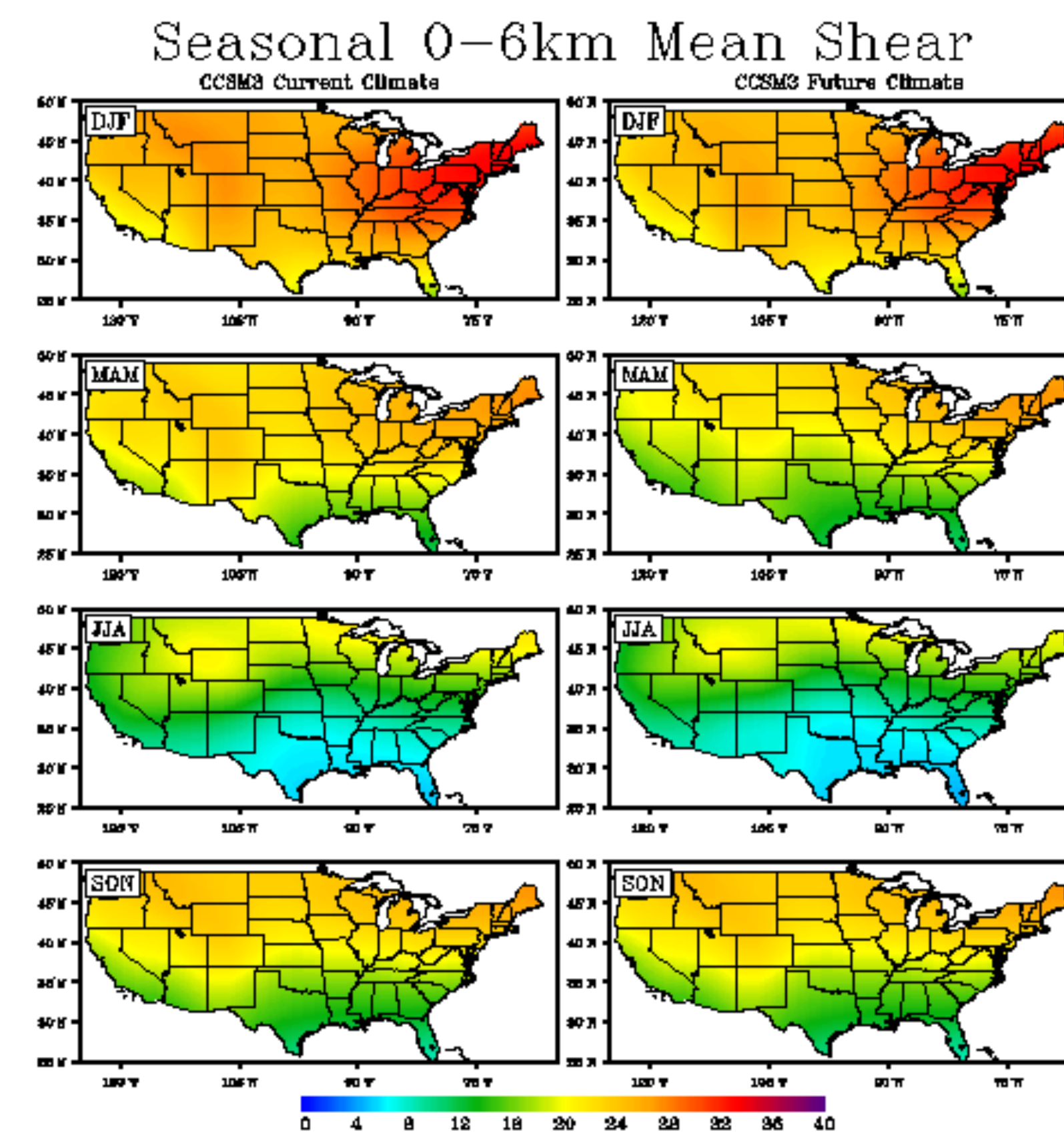
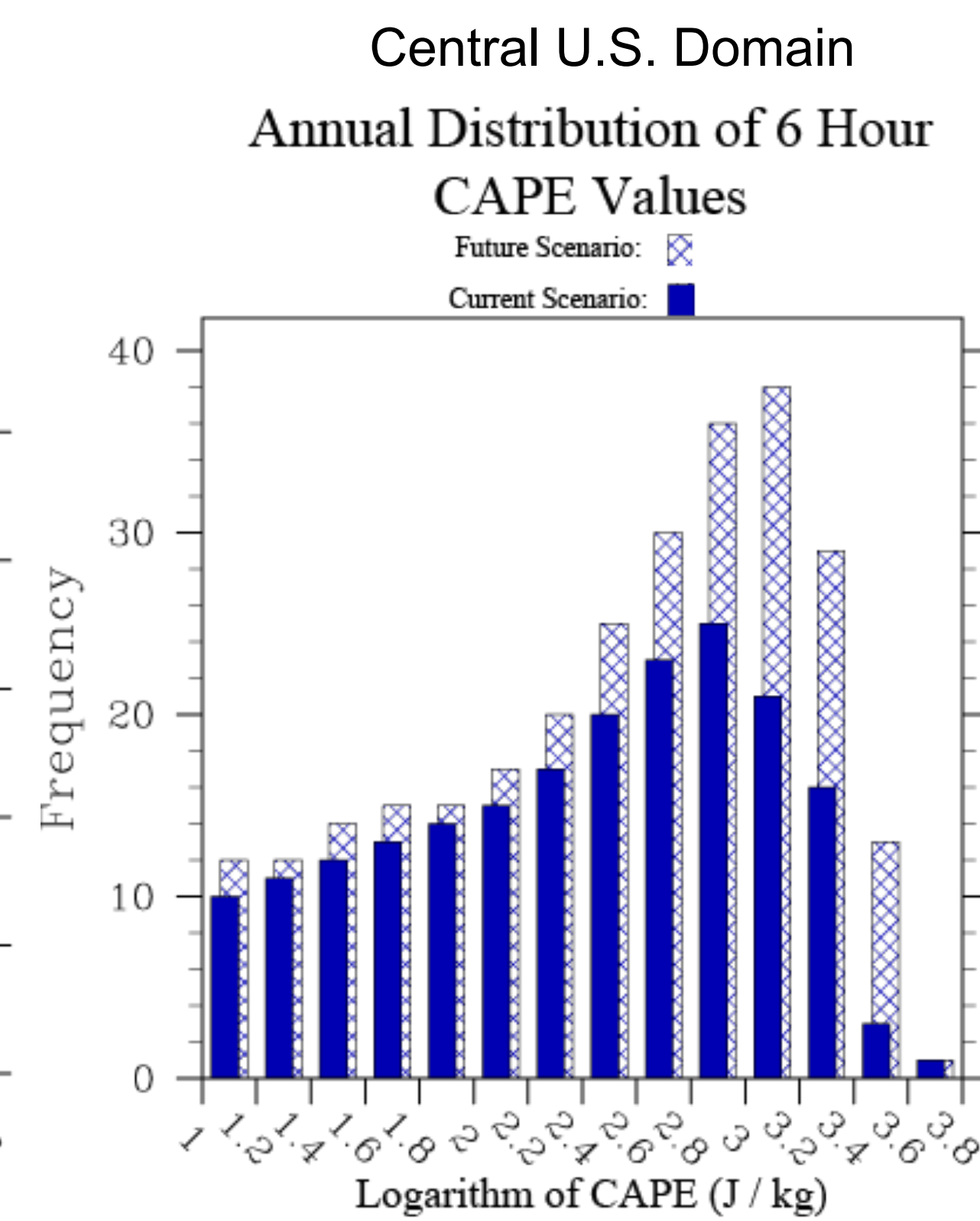
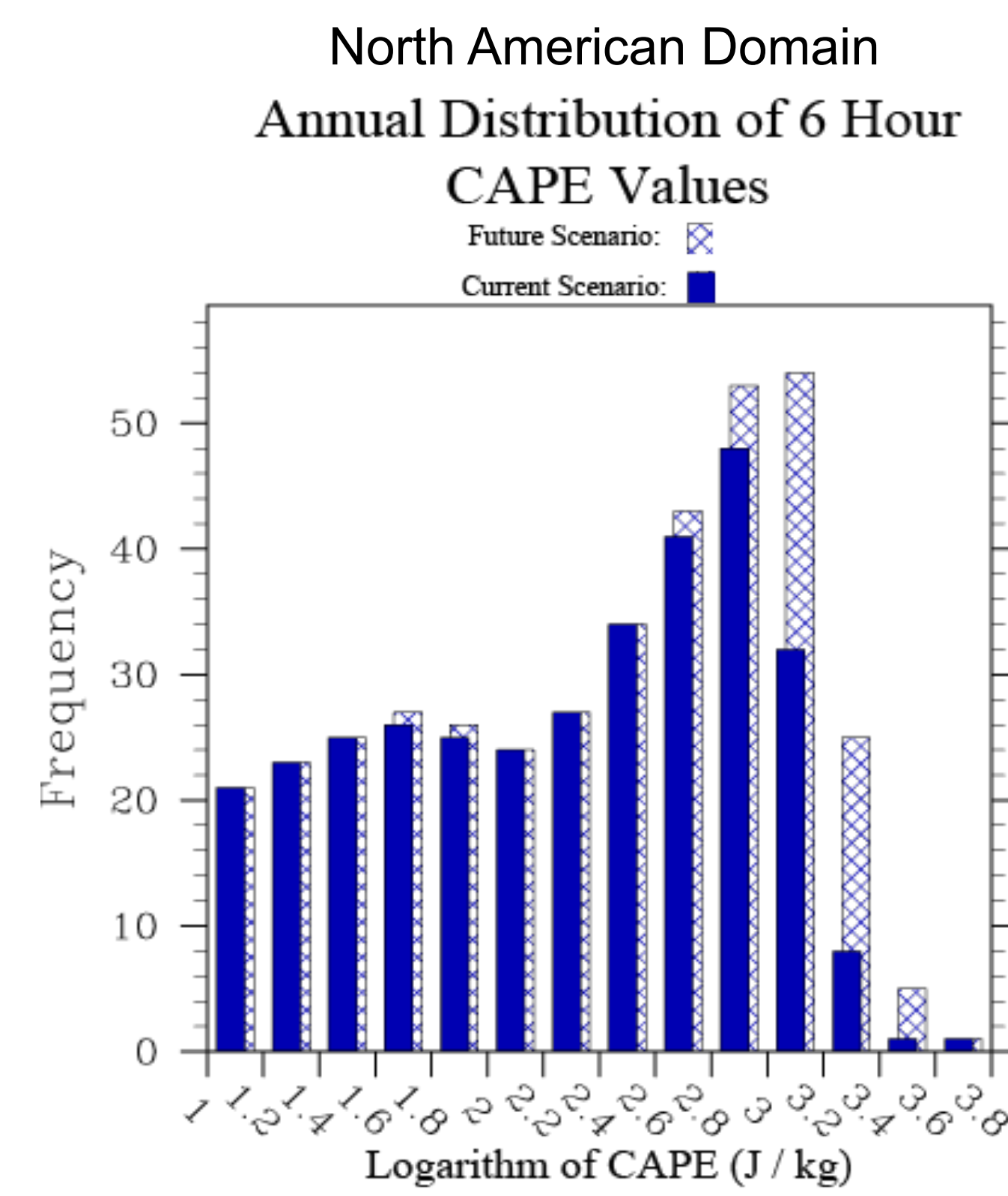
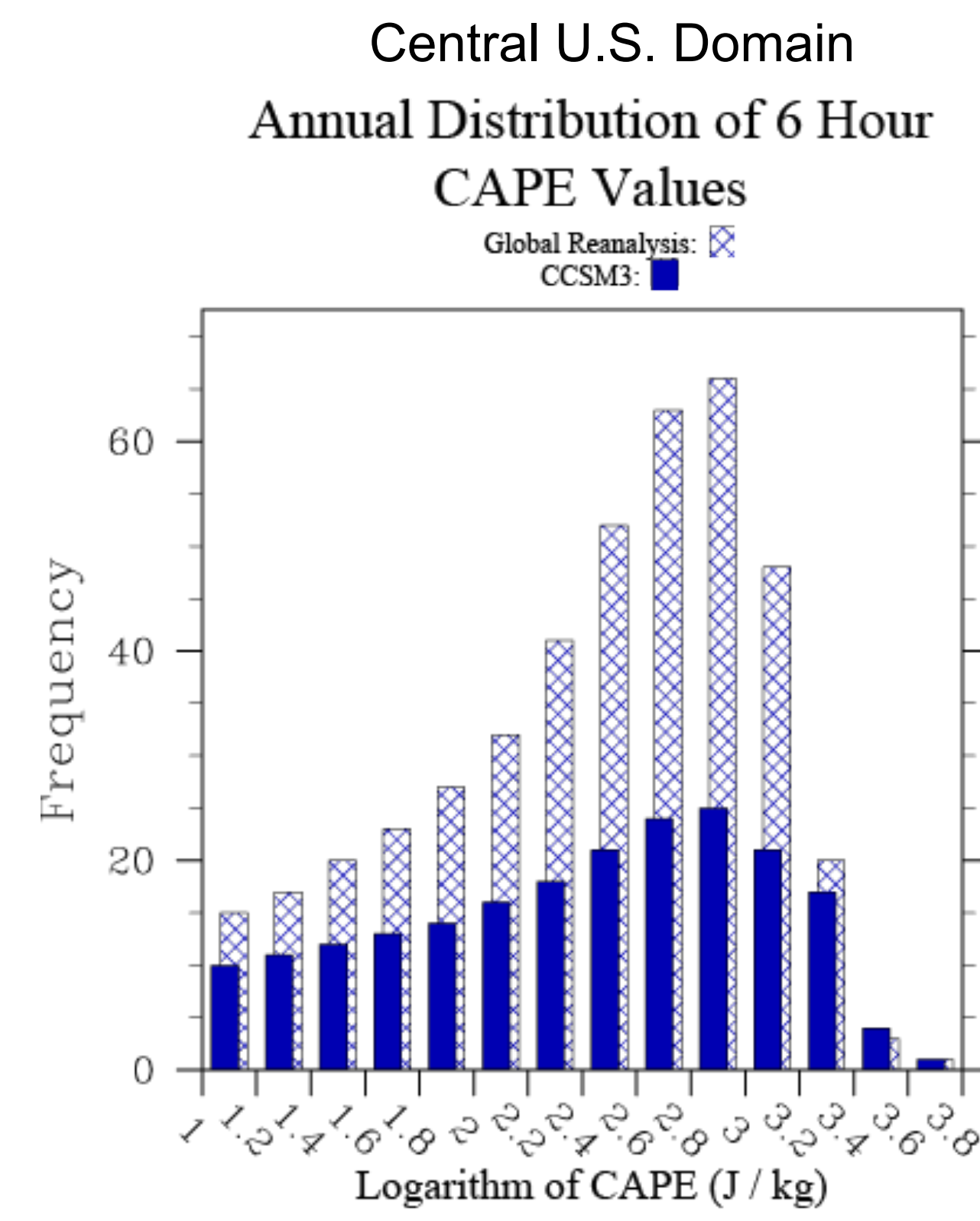
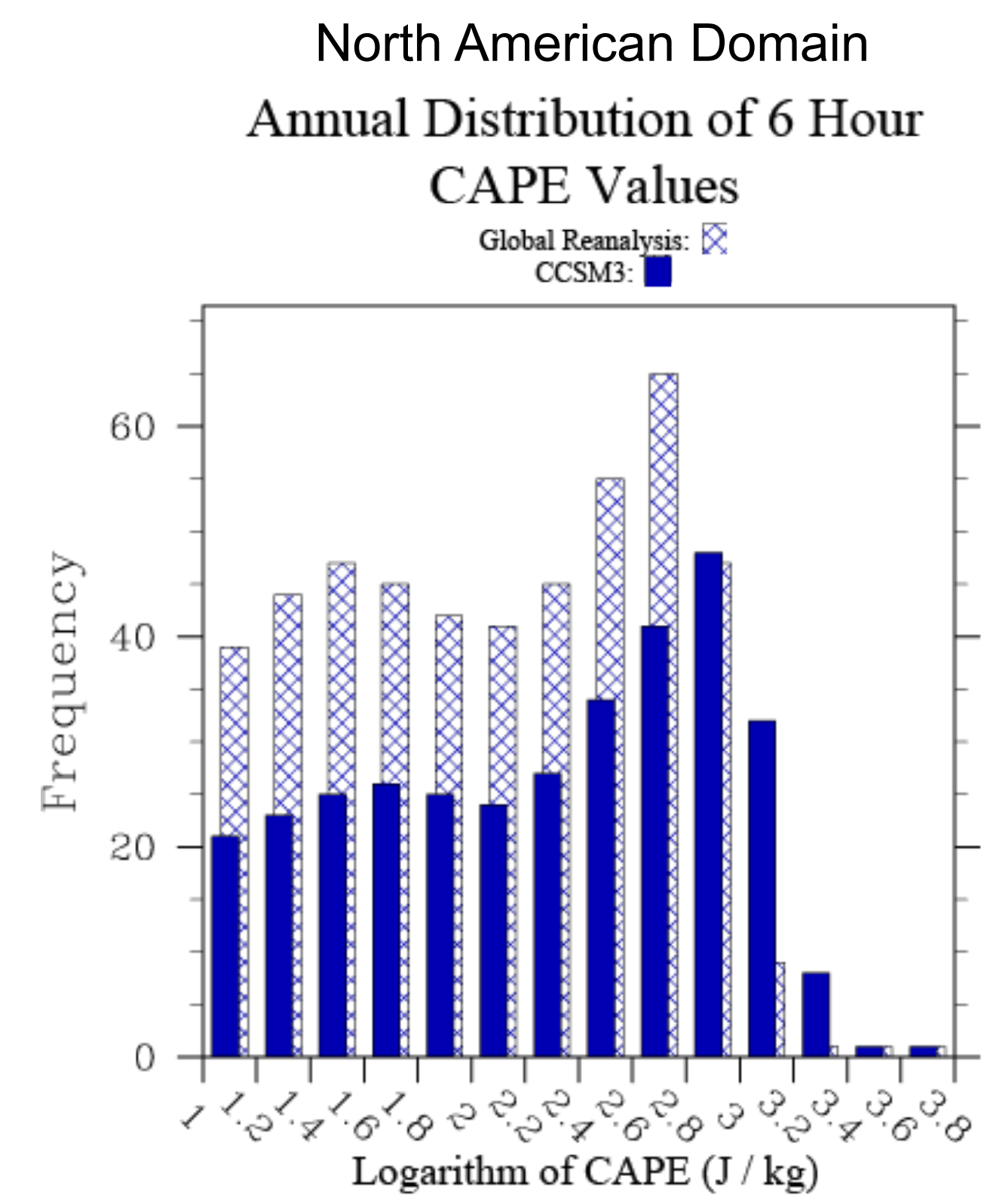
A Preliminary Assessment of the Severe Thunderstorm Environment in North America as Simulated by the CCSM3

Patrick T. Marsh¹, Harold E. Brooks² and David J. Karoly³

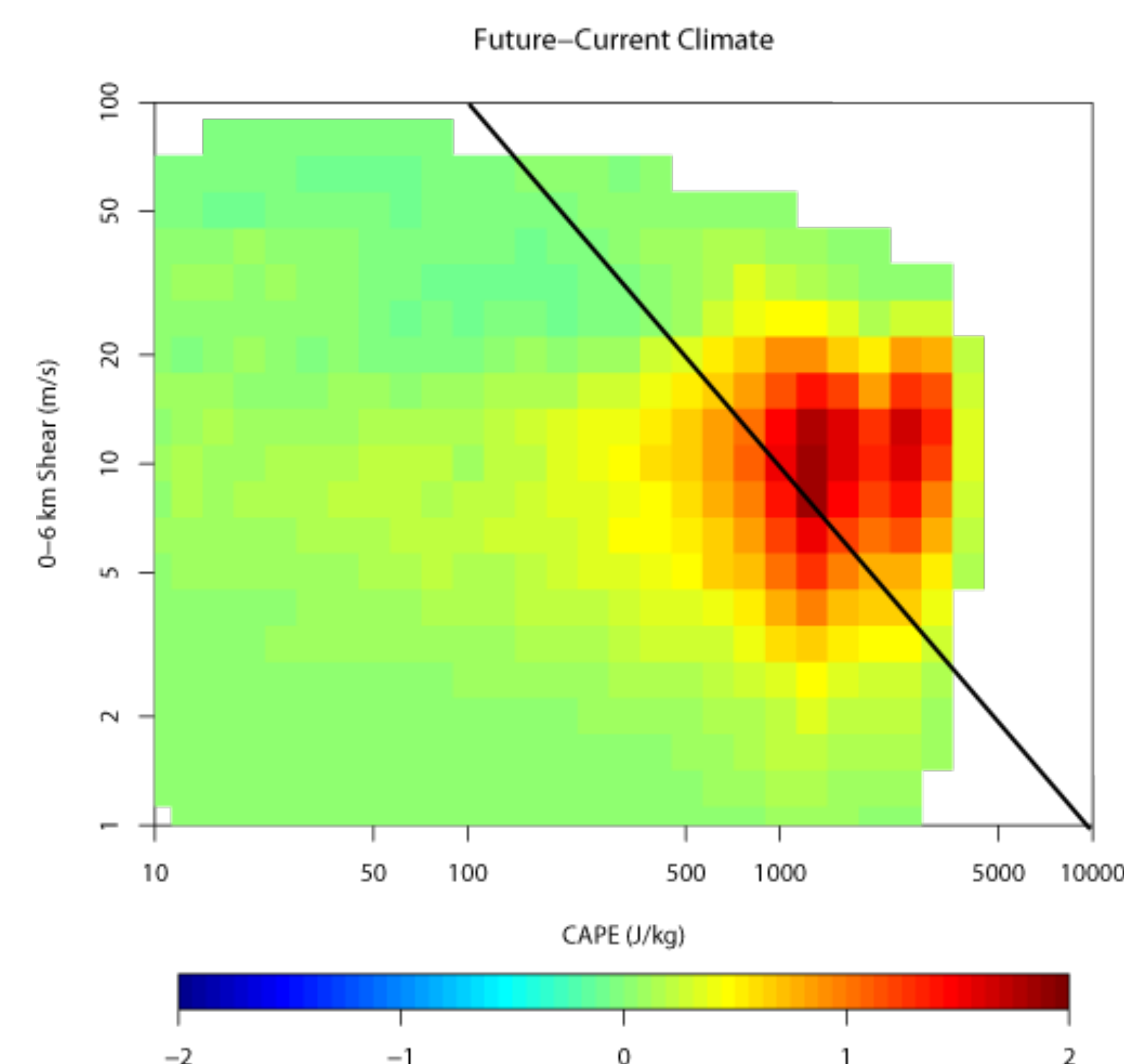
¹ School of Meteorology, 120 David L. Boren Blvd, University of Oklahoma, Norman, OK

² National Severe Storms Laboratory, 120 David L. Boren Blvd, Norman, OK

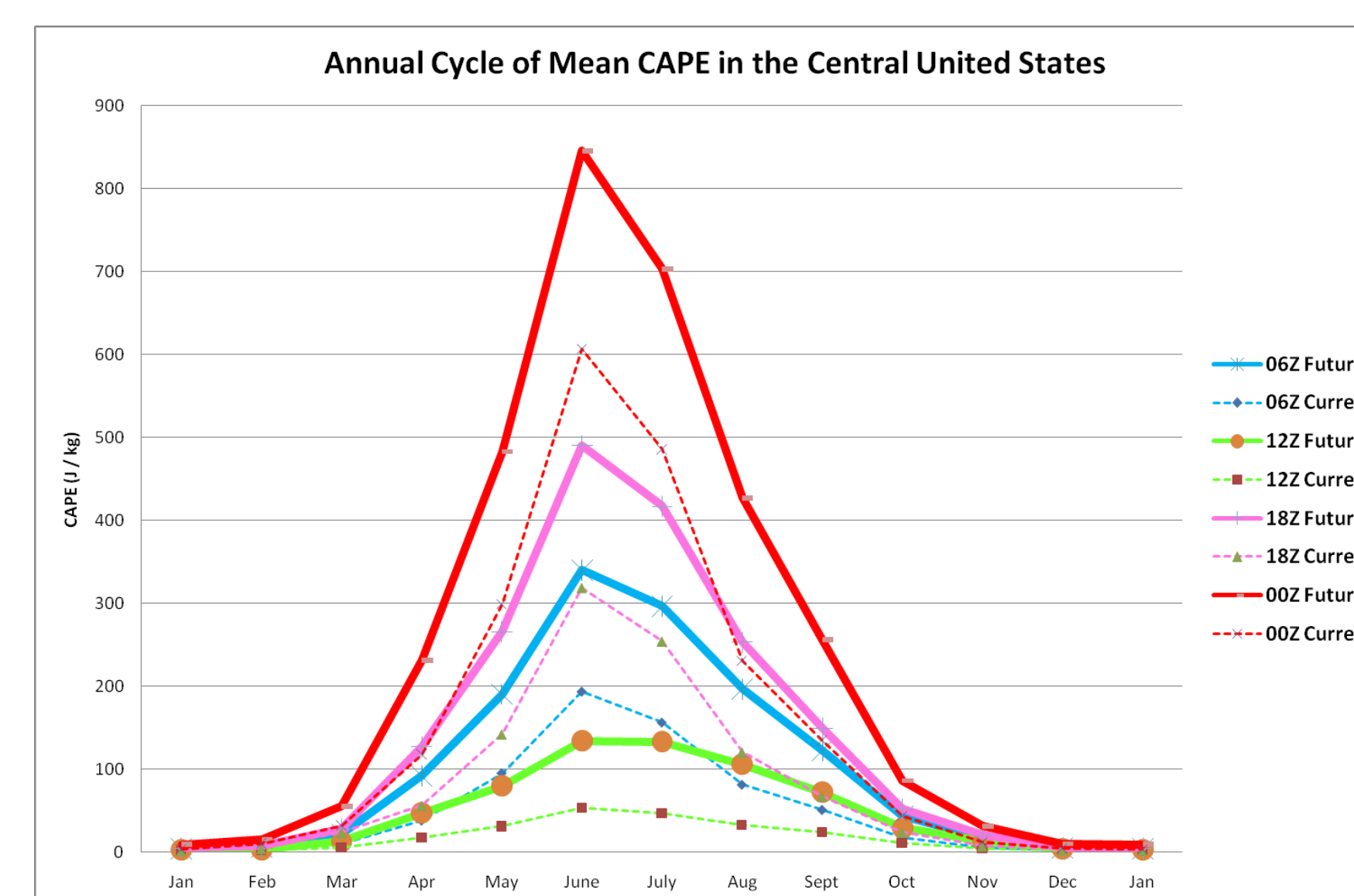
³ School of Earth Sciences, University of Melbourne, VIC 3010, Australia



For our purpose, the term “Favorable Severe Environment” refers to each 6 hour period that the product of CAPE and Deep Layer Shear is greater than or equal to $10,000\ m^3s^{-1}$



The image on the left shows the increase from current to future in annual frequency of occurrence of a given CAPE-Shear combination for a representative gridpoint. The black line is the $CAPE \cdot Shear \geq 10,000\ m^3s^{-1}$ discriminator.



Due to differences in the resolution (temporal and spatial) between the reanalysis and CCSM3, anytime a direct comparison is made, the following normalization technique is used:

1. Count the number of occurrences in specific ranges for all 6-hour time periods for all gridpoints in the domain
2. Divide the resulting value by the number of gridpoints in the domain.
3. Divide the resulting value by the number of years contained in the time period of each dataset.

