Inter-comparison of extra-tropical cyclone activity in four reanalysis datasets

Xiaolan L. Wang, Yang Feng and Val R. Swail Climate Research Division, Science and Technology Branch, Environment Canada

This poster inter-compares extra-tropical cyclone activity in the following four reanalysis datasets: NCEP-NCAR Reanalysis (NCEP1), NCEP-DOE Reanalysis (NCEP2), ERA40 Reanalysis, and the 20th Century Reanalysis (20CRv2; ensemble of 56 runs for 1871-2008). The intercomparison includes climatology and trends in cyclone counts and intensity, which are derived from applying an objective cyclone identification/tracking algorithm to each of the four datasets. The probability distribution of cyclones in the NCEP1, ERA40, and 20CR is also inter-compared for their common period (1958-2001). Effects of model/data resolution (including resolution of data used to identify/track cyclones) are discussed.