

Storm Track Climatology Evaluation

CORe vs. CFSR

(43 years: 1979-2021)

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Method

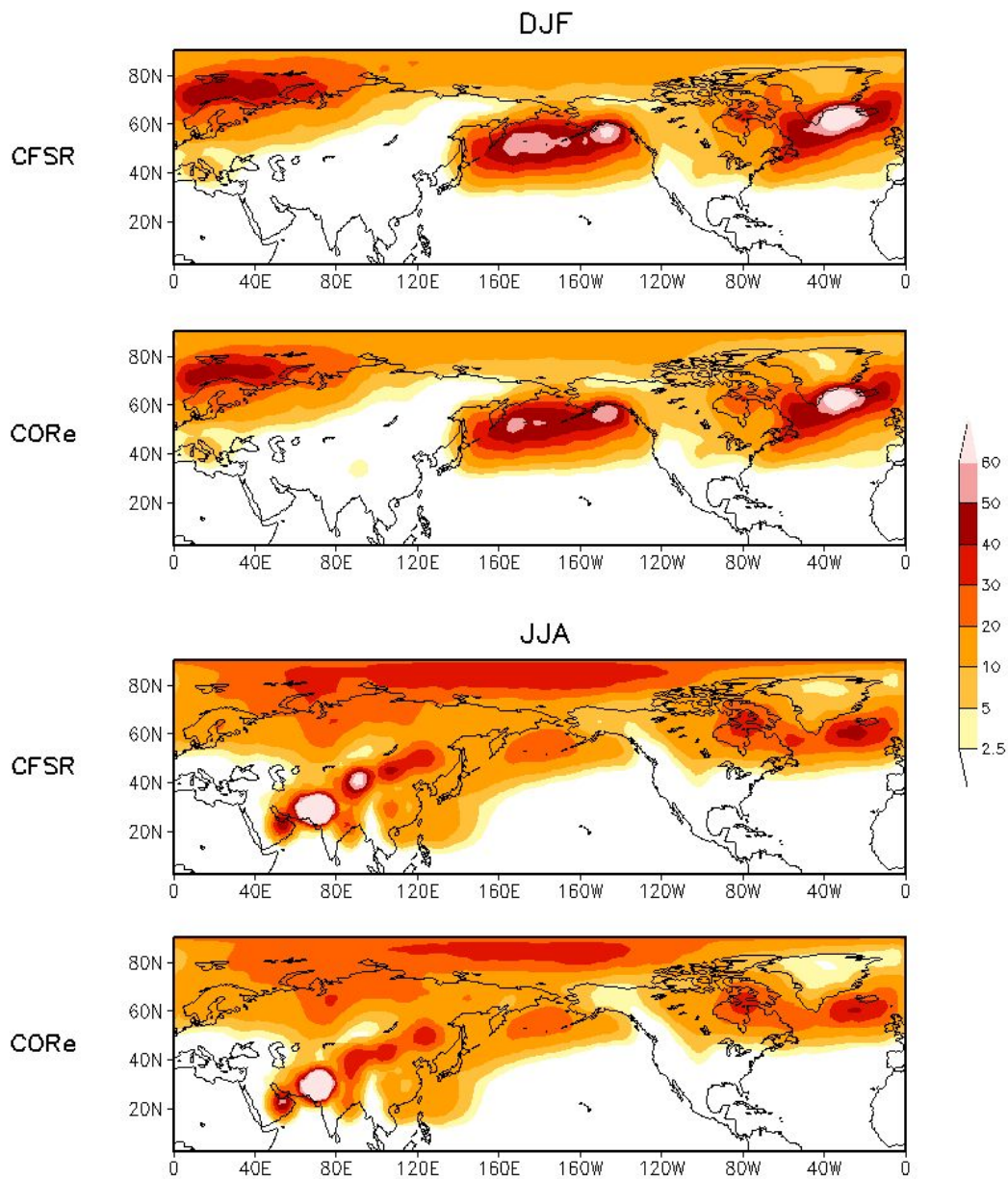
- **Storm track:** detected and tracked based on the algorithm developed by Mark Serreze (1995)
 - Using 6-h SLP data on 2.5°x2.5° grid
 - Center SLP \leq 1000 hPa
 - Center SLP at least 1 hPa lower than surrounding grid points
 - Maximum distance a storm can move is 800 km/6-h
- **Storm track density:** total number of storm centers within a 500-km radius for each grid point divided by ensemble members
- **Storm intensity** (center SLP): mean storm center SLP within a 500-km radius for each grid point
- **Storm duration:** mean lifetime of storms passing through a domain of 500-km radius for each grid point

Climatology: 43 years (1979-2021)

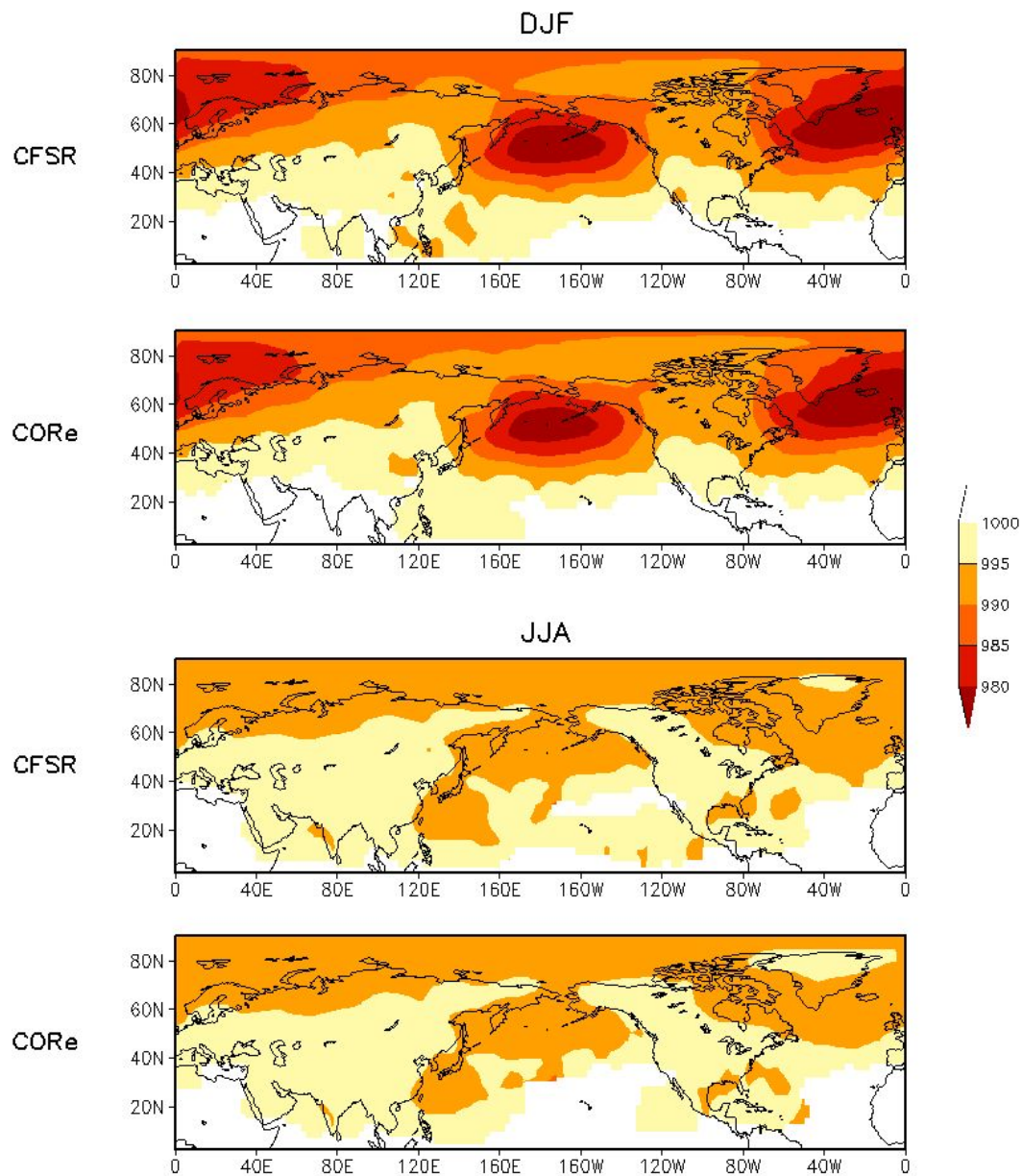
Seasonal Means: DJF JJA

Overall, the CORE storm statistics align well with those of the CFSR.

43-yr (1979–2021) Climatology, Storm Track Density



43-yr (1979-2021) Climatology, Storm Intensity (hPa)



43-yr (1979–2021) Climatology, Storm Duration (day)

