



Estimation of tendencies of change for different characteristics of extratropical cyclones and anticyclones in the Northern Hemisphere

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Estimates of different characteristics of extratropical cyclones and anticyclones (including their number, duration, size and intensity) and their changes in dependence on surface temperature are performed. The results based on NCEP/NCAR reanalysis data (1948-2007) are compared with model estimates.

General tendency of decrease in the number of extratropical cyclones and anticyclones with increase surface temperature is exhibited in the Northern Hemisphere from reanalysis data. At the same time a ratio between the number of the cyclones and the number of the anticyclones is changing. Besides changes in the number and size of cyclones/anticyclones, estimates of area covered by cyclones/anticyclones are obtained. Relationships between changes in characteristics of extratropical cyclones and changes in meridional gradient of temperature and lapse rate in troposphere are also assessed.