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The subject of the present study is climatological atmospheric centers of action (permanent and seasonal) of the Northern and Southern hemispheres for the central months of the winter and summer seasons. Data on 1000 hPa geopotential height from the NCEP/DOE AMIP-II reanalysis of atmospheric parameters for 1992-2021 are used as initial information. Software-implemented processing of long-term reanalysis data files made it possible to map of the distribution of synoptic centers of action at regular grid points (with a step of 2.5° in latitude and longitude). Statistical estimates of the parameters of atmospheric centers of action (location and intensity), including concentration ellipse characteristics, are presented. An analysis of the change in the characteristics as compared to the base climate period of 1961–1990 (according to the NCEP/NCAR reanalysis data) is given. The dynamics of the characteristics of the centers of action in the form of moving 10-year averages for 2000–2021 is demonstrated.

Keywords: atmospheric center of action, reanalysis, geopotential height, concentration ellipse, moving average, trend

Tab. 3. Fig. 15. Ref. 25.