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Characteristic Analysis of Continuous Hailfall in the context of Cold Vortex in the Beijing-Tianjin-Hebei Region

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Cold vortex is firstly defined. Using weather maps from April to September during 2000-2011,the temporal-spatial distribution and life characteristics of cold vortex are studied. Disaster weather data from 176 stations in Beijing-Tianjin-Hebei region from April to September during 2000-2011 and NCEP 1°[U+F0B4]1°reanalysis data are used to analyze the temporal-spatial distribution characteristics of continuous hailfall of Beijing, Tianjin,Hebei region and its relation with cold vortex. The results showed that: The number of cold vortex mainly occurred from Northeast China to the east of Lake Baikal, and long-lived cold vortex accounted for 70%; It was long-lived vortex that caused continuous haifall in the Beijing-Tianjin-Hebei region and Continuous hail in the context of cold vortex exhibited significant diurnal variation .and occurred more in mountainous area than on the plains, more in north area than the south area; Continuous hail mainly occurred to the south of vortex center, and could occur in any period of cold vortex; . The distance between Continuous hail and cold vortex was about 200-1200km .The continuous hailfall were mainly affected by t the cold vortex and its rear transverse trough; Continuous hail occurred in different positionCorresponding to cold vortex with different speed.
Keywords: cold vortex; continuous hail; statistics; storm-relative composites