

简报

2008年4月天山北坡一次强寒潮天气成因分析

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摘要 利用T213 0场预报资料对2008年4月18日新疆天山北坡带中部石河子垦区发生的50 a不遇强寒潮天气过程的环流背景、影响系统及物理量场进行了综合分析。结果表明:

“2008.04.18”强寒潮天气主要成因是: 里黑海脊发展东移与东欧脊同位相叠加并顺转, 脊前东北风带建立并加强, 诱导泰米尔半岛冷空气沿脊前东北气流西南下到横槽中, 迫使横槽转向强烈发展东南压, 并形成高空急流, 强锋区和强冷高压; 由于高压脊部分东南垮, 导致中高纬度强冷空气大举东南下, 造成强寒潮天气过程; 西南急流与冷空气的交汇产生了较强的动力辐合和水汽辐合, 对大暴雪的形成起到了重要作用; 大暴雪发生在较强的能量锋区、高湿区和水汽通量辐合区内。

关键词 [强寒潮](#) [大暴雪](#) [T213产品](#) [成因分析](#)

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Diagnosis analysis of a strong cold wave weather process in North Slope of Tianshan mountains in April 2008

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Abstract Based on T213 forecast data, the strong cold wave weather process on April 18, 2008 in Shihezi reclamation areas in North Slope of Tianshan Mountain, Xinjiang province was analyzed, and its circumfluence background, influencing system and physical fields were studied. The results indicate that the main reason of this weather process is that the ridge of the Caspian Sea and Black Sea expands and moves to eastward and splices with Eastern-Europe's ridge and veers. Northeasterly wind belt in front of the ridge develops and strengthens, which induces Tamil peninsula's northeast cold air to turn to southwest and to reach horizontal trough, consequently compels horizontal trough to turn and to develop intensively southeast pressure, finally forms the rush-flow in the high sky, strong frontal zone and cold high pressure. The high pressure ridge partially collapsed to the southeast leads to middle-high latitudinal strong cold air turning to southeast on a large scale, and strong cold wave weather is formed. The convergence of southwestern jet and cold air comes into being the strong dynamic convergence and water vapor convergence, which is important to the forming of torrential storm. Torrential storm occurs in stronger frontal zone of energy, high humid region and water vapor flux convergence region.

Key words [Strong cold wave weather](#) [Torrential storm](#) [T213 production](#) [Analysis of forming reason](#)

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