

Global Disaster Weather Monitoring and Forecast News

No. 4 (experimental)

Central Meteorological Observatory

Jan 2, 2024

Europe and North America are experiencing continuous rain, snow, strong winds and cold weather

I. Real-time Monitoring

Since late December, under the influence of strong and stable polar vortex and surface cyclone, there have been large-scale gale cooling and continuous low-temperature rain and snow weather in Europe and North America. Among them, some areas in southern northern Europe, eastern Europe, eastern Central Europe, southwestern and eastern Canada, northwestern and central and eastern United States, southern Alaska and other places have experienced heavy snowstorms and local blizzards; Moderate to heavy rain and local heavy rain occurred in parts of western Europe, western Central Europe, southern Europe and southeastern United States. There are 4 ~ 6 winds in most areas, and local gusts reach 8 ~ 10. In some areas, the maximum temperature drop in 24 hours is 8 ~ 12°C, and the local temperature is above 14°C.

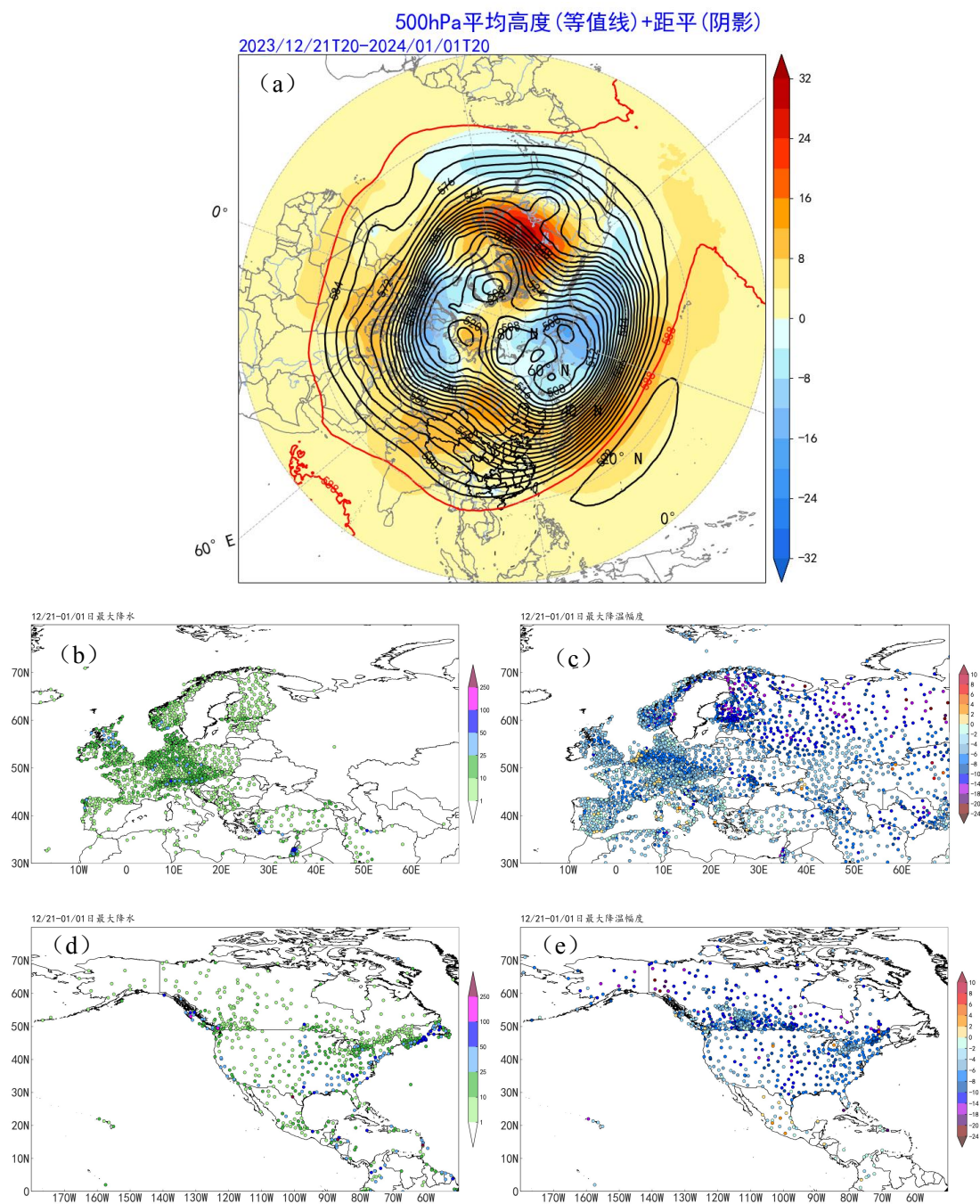


Figure 1. (a)500hPa average potential height (unit: dagpm) and anomaly (coloring), 24 hour maximum precipitation (unit: mm) and 2 m minimum temperature maximum lowering amplitude from Dec 21, 2023 to Jan 1, 2024 (Europe: b, c; North America: d, e)

II. Future Forecast:

In the next three days, due to the continuous influence of high-altitude cold vortex, trough of low pressure and surface cyclone,

there will still be strong winds, cooling, rain and snow in Europe and North America. Among them, there are moderate to heavy snow and local snowstorms in parts of southern Northern Europe, northeastern Central Europe, south-central and eastern Eastern Europe, western and southern Canada, southern baffin island, southern Labrador Peninsula, southern alaska peninsula, midwest and northeastern United States; There is moderate rain in parts of western Europe, western Central Europe, southern Europe, the western coast and southeast of the United States, and southern Mexico. There are 4 ~ 6 winds in southern northern Europe, western Europe, central Europe, eastern Europe, eastern North America and coastal areas, and the winds in some areas can reach 7 ~ 8 or above. Some areas in the southwest and north of northern Europe, eastern Europe, northern and eastern Canada, northwestern and central and eastern United States have a temperature drop of 6 ~ 10°C, and the local temperature drop in northeastern Europe, eastern Europe, northern and eastern Canada and northeastern United States can reach more than 14°C.

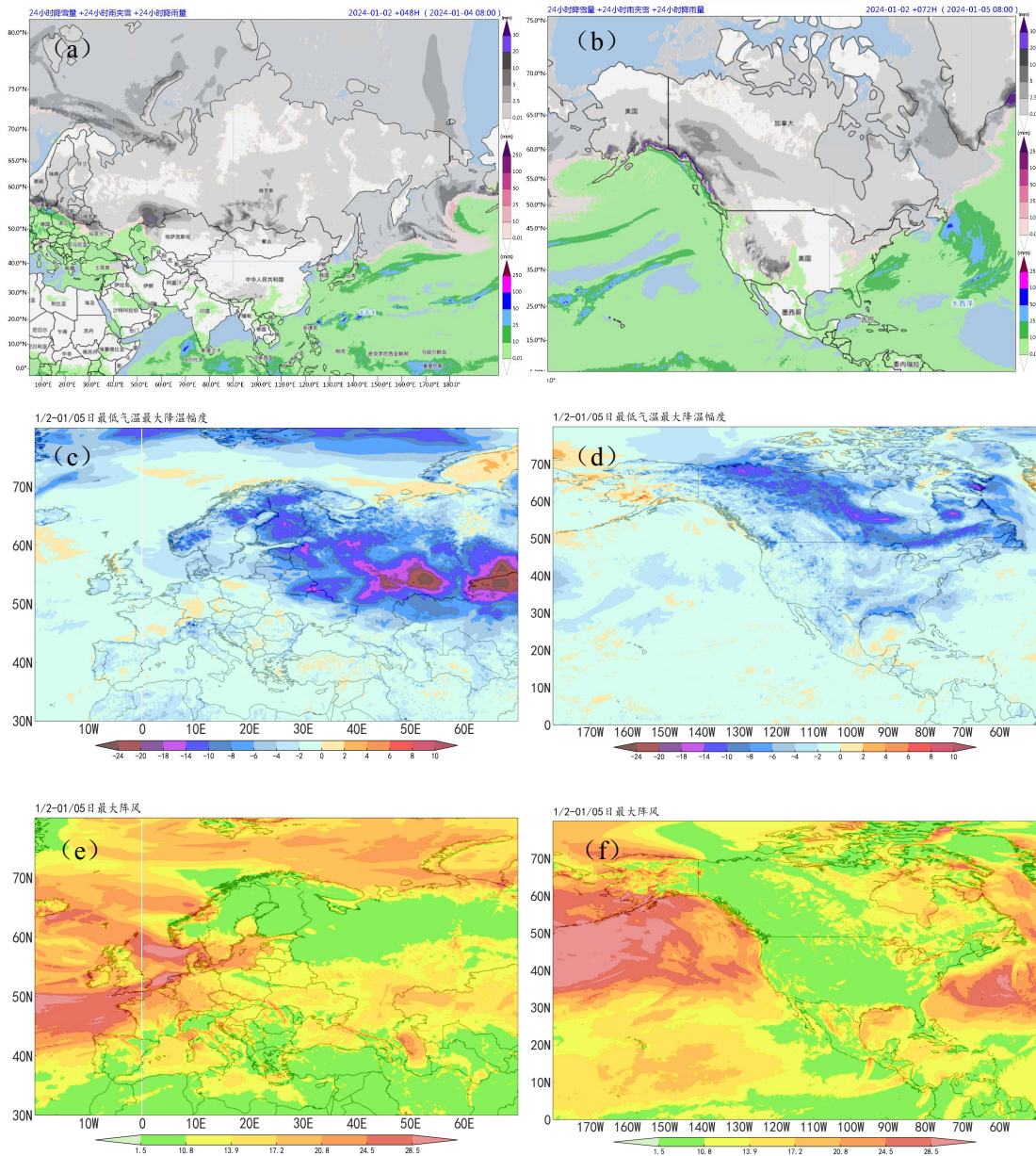


Figure 2. 24 hour maximum precipitation (a-b, unit: mm), 2m minimum temperature maximum lowering amplitude (c-d, unit: C) and 24 hour maximum gust (e-f, unit: m/s) from Jan 2 00: 00 to Jan 5 00: 00 (UTC), 2024.

Author: Liu Xiaobo, Meng Qingtao

Reviewer: Bao Yuanyuan

English reviewer: Wang Yi

Issue approver: Dai Kan