全球卫星遥感监测服务专报

2024 年第 7 期（总 197 期）

国家卫星气象中心　　2024 年 2 月 5 日

# Forest fire monitoring in central Chile

## 1. Overview

On February 2（local time, the same below）, intense wildfires broke out in the Valparaiso district of central Chile. As of February 4, the fire had killed 46 people, burned more than 1,100 houses, and caused traffic and communication problems in several cities.

## 2. Satellite monitoring

Fengyun-3D meteorological satellite true color image and fire intensity map shows that on February 2, many fires broke out in central Chile, among which the fire points were densely concentrated near the Valparaiso district, and the corresponding fire intensity reached the level 6-9 (Figure 1). On February 3, the fires developed rapidly. Fengyun-3D meteorological satellite detected that the number of fire points increased from 124 on February 2 to 150. The smoke generated by the forest fire spread to the north and east (Figure 2). On February 4, Valparaiso and Santiago, the capital of Chile, were all shrouded in smoke caused by the fires (Figure 3).

Further analysis using the satellite altitude product (Figure 4), surface type product (Figure 5) and population density distribution product (Figure 6) of central Chile shows that the altitude of the Valparaiso district with the most dense fire points is about 500-1000 meters. The land cover type is mainly forest and grassland. The population density is about 1,000-2,000 people per square kilometer. The development of the fires will seriously threaten the life and property safety of the local people near these areas.

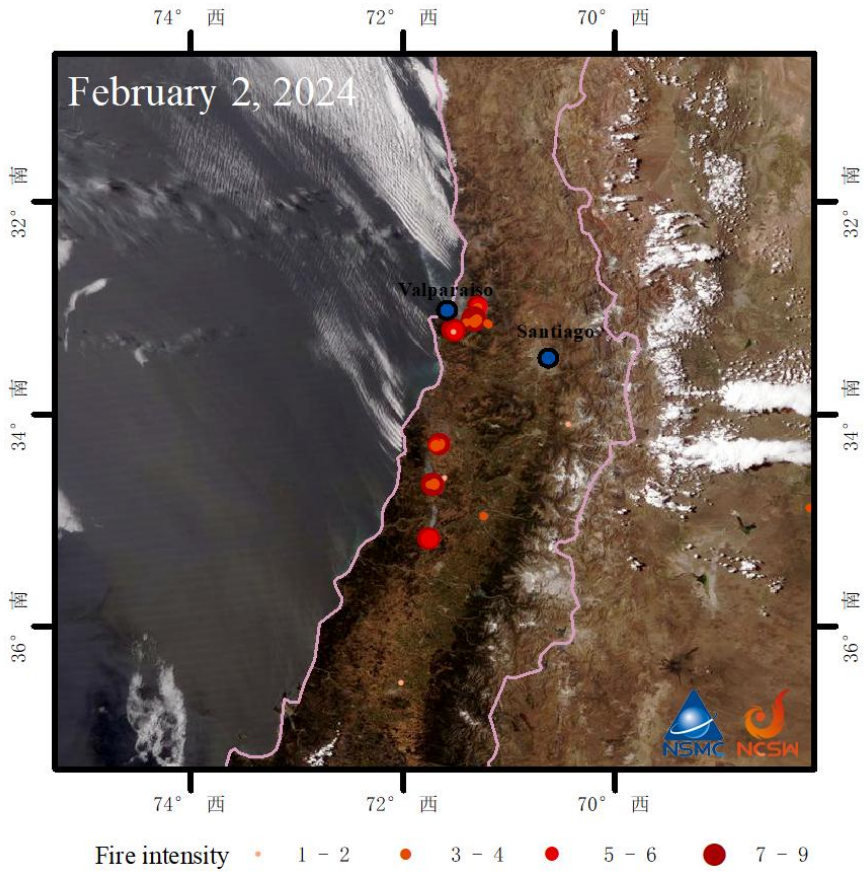


Figure 1. FY-3D satellite true color image overlaid by fire intensity map (February 2, 2024)

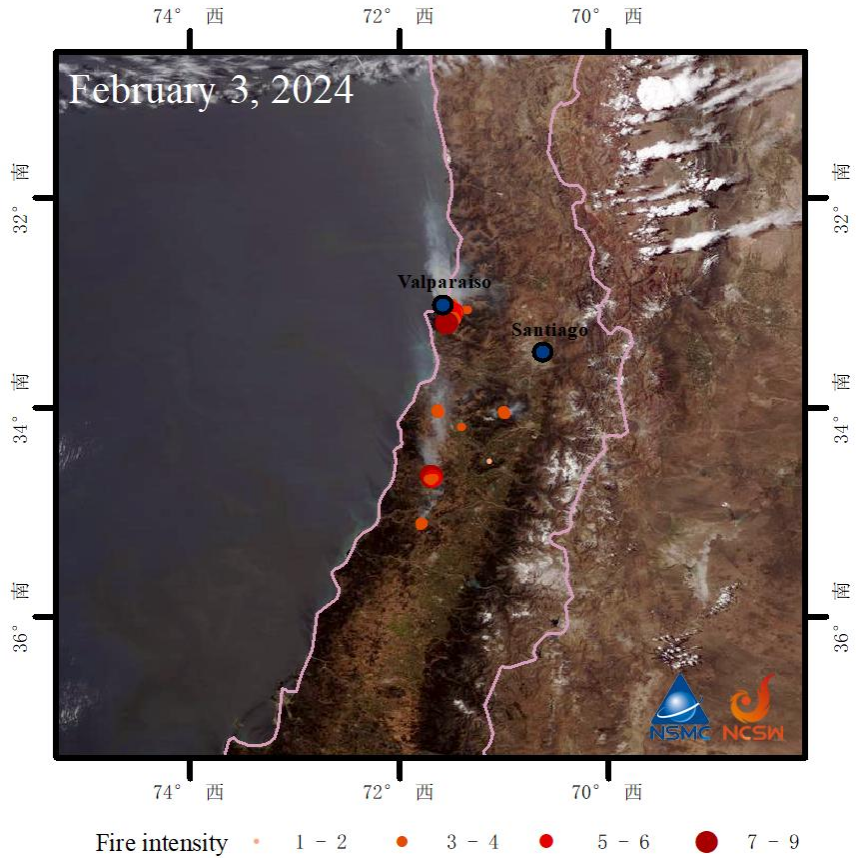


Figure 2. FY-3D satellite true color image overlaid by fire intensity map (February 3, 2024)

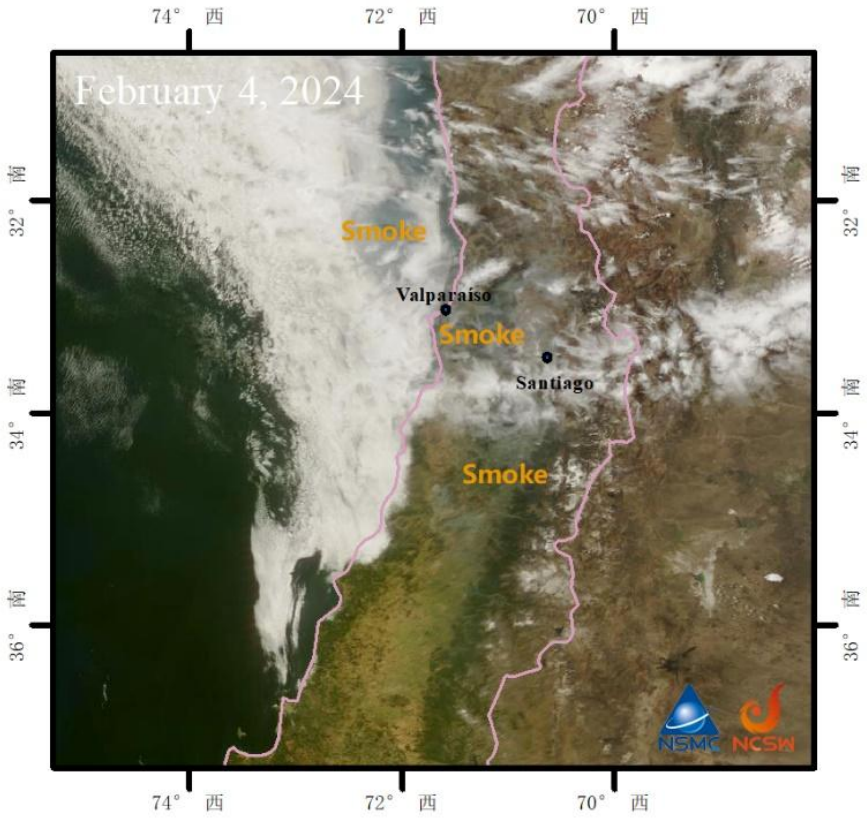

Figure 3. FY-3D satellite true color image overlaid by fire intensity map (February 4, 2024)

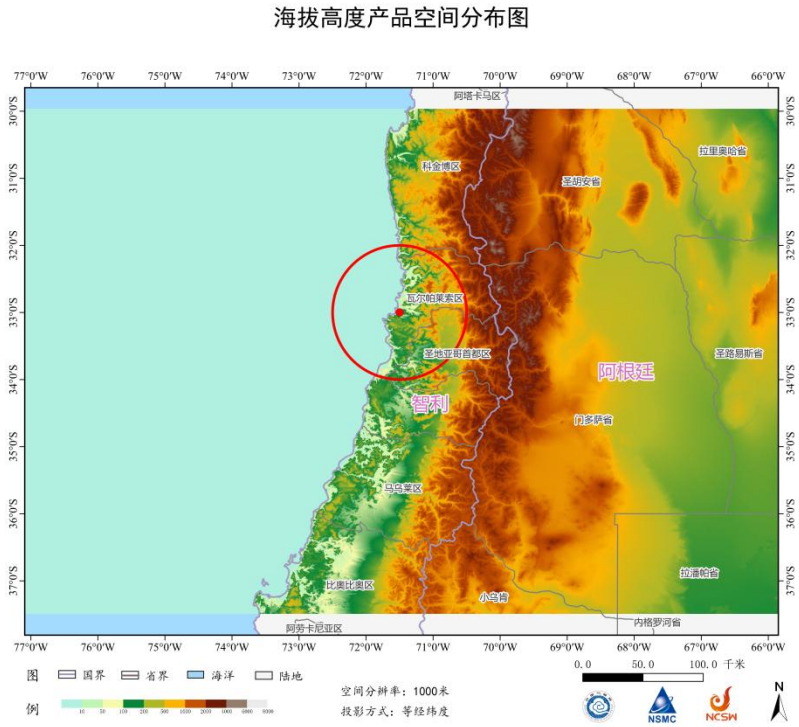


Figure 4. Satellite derived spatial distribution map of altitude

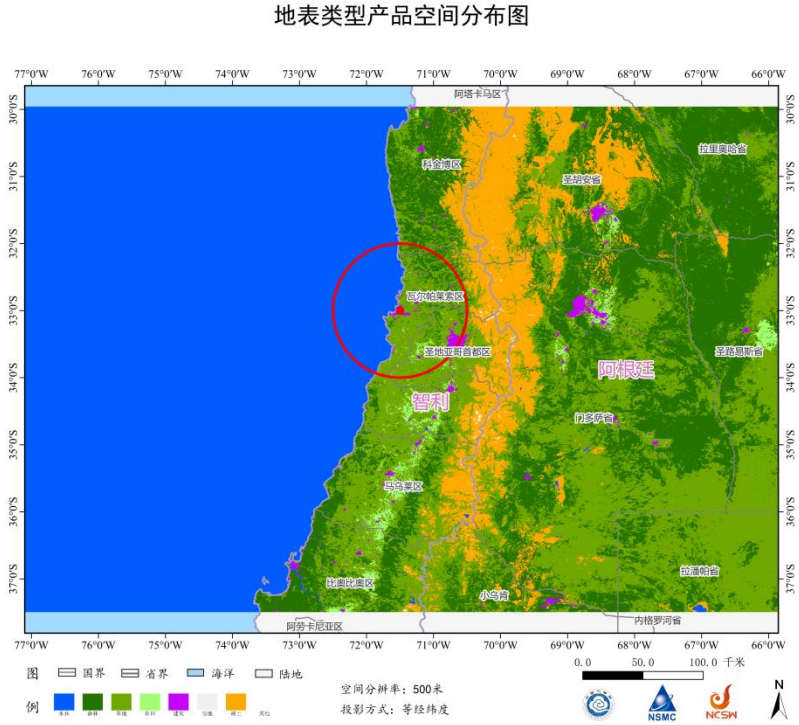


Figure 5. Satellite derived spatial distribution map of surface types

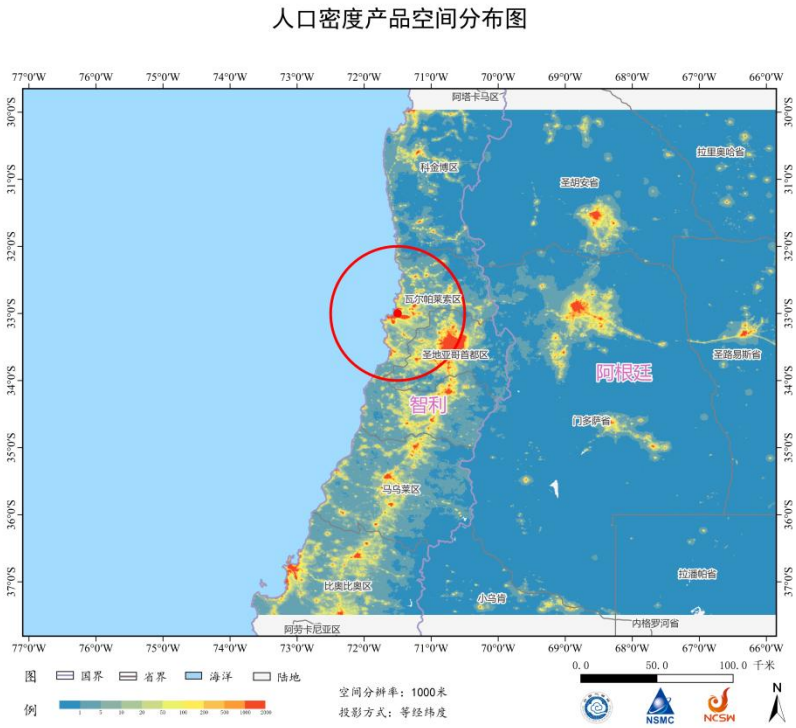


Figure 6. Satellite derived spatial distribution map of population density

## 3. Impact analysis

Chile, located in the southern hemisphere, is currently in midsummer. Fengyun 3D satellite have monitored that since January, surface temperatures exceeding 40°C have continued to occur in central Chile. High temperatures and dry air have led to increasingly severe forest fires in central Chile. Currently, four cities in the Valparaiso region have implemented martial law, and we need to pay close attention to the development of fires in the area.

分析制作：Tian Lin, Zhu Lin　　审 核：Zhu Lin　　签 发：Gao Ling
联系电话：010-68406467　　签发时间： 2023 年 2 月 4 日 18:00