

539·152·1: 614·83: 551·5 (4-5)

THE INFLUENCE OF NUCLEAR EXPLOSIONS ON THE WEATHER PATTERN OF TEMPERATE EURASIA

A powerful series of atmospheric, nuclear explosions took place in the Novaya Zemlya region of the Arctic in the autumn and early winter of 1961; and a much more powerful series in the same region during the same seasons of 1962.

During the nuclear periods (periods of explosions), 9 September to 4 November 1961 and 5 August to 25 December 1962; and the post-nuclear periods 5 November to 30 November 1961 and 26 December 1962 to 15 January 1963, an abnormal pressure pattern was displayed in the troposphere and lower stratosphere of the North Polar regions and Temperate Eurasia (aerological charts).

This pressure pattern was associated with abnormally long periods of low index for the time of year characterized by weak sea-level westerlies, poor cyclonic activity, strong high-level westerlies and deep, extensive blocking in mid and high latitudes of Eurasia. These features of the atmospheric circulation

were displayed on a much more intensive scale in 1962 than in 1961 (aerological charts).

The extended periods of strong, high-level westerlies and deep, extensive blocking induced the development of an extensive cold polar cell by mid-winter of each year (Namias 1947). The very cold winds emitted by the polar cell opposed the warm westerly circulation; and the blocking anti-cyclones prevented the invasion of temperate latitudes by warm fronts. As a consequence, the winters were very cold in Temperate Eurasia, and the 1962-1963 winter was one of the coldest on record.

With the aid of aerological charts and available data and information regarding atmospheric, nuclear explosions and their influence on the atmosphere, I have discovered that each series of nuclear explosions had played an important role in the evolution of the abnormal circulation pattern.

Full details of my investigations will be published in the form of a scientific paper.

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Dublin, Ireland
30 November 1964

REFERENCE

Namias, J.

- 1947 Characteristics of the General Circulation over the Northern Hemisphere during the abnormal winter 1946-47, *Mon. Weath. Rev.*, U.S. Dep. Comm., pp. 145-152.