

# Weather Conditions and Weather Service at Helsinki in Connection with the Olympic Games

by

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## Weather Conditions

During the first week of the Olympic Games, from July 19th to 27th, Finland lay in an area influenced by shallow areas of low pressure, where cold air masses were predominant, and certain fronts caused rain at the competition sites in Helsinki and elsewhere.

On the opening day of the Games, July 19th, a weak occluded front from the south-west moved over the Helsinki area an hour before the beginning of the Opening Ceremony causing showers with which light thunder was heard. The rain let up and finally ceased during the ceremony. The amount of rainfall 2 km south-west from the Stadium was 5 mm, but 2 km north-west it was 10 mm. According to studies of cloud formations made with radar, the difference in the amount of rainfall at the last-mentioned location was apparently due to the heavy formation of shower clouds further inland from the coast which is common during the summer. The following and heavier rain, 8.6 mm, occurred together with a cold front on the evening of July 20 and the following night. Light Thunder also accompanied this rain. Later, only light rainfall occurred, 1—2 mm,

together with fronts or as separate showers on the 21st, 23rd, 25th, and 26th days of July. The rain did not greatly hinder the athletic competitions. Due to the rain, the crushed brick covered tracks at the Stadium were damp and in good condition, which probably partly contributed to the breaking of so many Olympic and World Records in spite of the noticeably chilly weather.

The average temperature during these days was between 14.0—14.5°C, but during colder spells it was much lower, 12.2°C on July 21st, and 12.8°C on the 23rd. Since the daily normal temperature during this period is approximately 17.5°C, the departure from the normal was exceptionally large, on the average —3.8°, the greatest departure being —5.3° C. The highest daily temperatures ranged from 16.5—20.0°C.

At the site of the sailing competitions, beyond the islands on the open sea, the wind was from the south on July 20—22 and on 26—28, but on the 23rd it was from the north. The force of the wind was usually 2—4 Beaufort, but on the afternoon of July 22nd it was periodically a little greater. The morning of July 28th was completely calm.

During the last week of the Games, from July 28—August 3rd, Finland lay mostly in an area of light high pressure. The weather remained dry, and the temperature rose gradually, average temperature 16—18°C, and the daily maximum temperatures of 19—22°C, were near the normal. A light shower caused a rainfall of 0.7 mm on the evening of July 30th. During this period the weather did not even slightly hinder the competitions.

The rowing competitions on July 20—23rd, and the canoeing competitions on July 27—28th, were held on the waters between wooded islands where high waves could not form. However, the stronger wind on July 22nd was probably a hindrance to the rowing competitions.

### **Weather Service**

During the organising period before the Games, the Meteorological Central Office made reports of weather conditions for July and August and of wind conditions on the open sea to the south of Helsinki to the Olympic Games Organising Committee. Wind reports were also sent to foreign countries on request.

### Aviation Weather Service

Since it was certain that travel by air would increase in connection with the Olympic Games, the Meteorological Central Office began at an early date to consider the enlargement of the aviation weather service, for which purpose a special sum of money was set aside. Greater difficulties in carrying out this project were caused by the fact that aviation weather service was to be provided at two airports:

1. At the new airport in Helsinki, 18 km north of the city, where large foreign aircrafts could also land.
2. At the Malmi Airport, 12 km north—east of the city, where only smaller aircrafts were able to land.

Fortunately however, there were sufficient numbers of capable aeronautical meteorologists and assistants in the aviation weather department, that they themselves could handle the increased aviation weather service at both airports. At the Helsinki airport, four aeronautical meteorologists were employed and six department assistants. Air traffic during the Games was increased overall 3—4 times, and during the busiest times before the beginning and at the conclusion of the Games, it was 5 times the usual summer traffic. The number of departing aircrafts during the busiest days varied from 60—80 planes per day. Air traffic was also busier than usual at other airports throughout the land, but these airports were able to provide aviation weather service without an increase in personnel.

On August 3rd and 4th, a special aviation weather service was arranged for the English jet aircraft, the »Comet», as a joint effort with the aviation weather service bureaus of Sweden and Norway.

No criticisms of the aviation weather service provided during the Games have been received.

### Other Weather Service

This was looked after by the weather bureau. For the weather service needed by those engaged in the sailing competitions, special weather reports were arranged from two weather stations, one situated on an island in the open sea 10 km south-east from the city near the sailing competition course, and the other on the lightship »Helsinki» 20 km

south of the city. Weather forecasts were made regularly at 9:00 A. M. for each particular day, and at 6:00 P. M. for each following day, as well as additional bulletins on request.

For the rowing competitions, a weather forecast and small weather map were provided three times a day, and on request additional information was supplied.

Weather forecasts and special information were needed only occasionally for the canoeing competitions. Other competitions were supplied with the required number of weather reports as they were requested.

Two additional meteorologists were employed to look after this additional weather service.