

Basic climate characteristics for the territory of Serbia (standard normal period 1961-1990)

Climate of Serbia can be described as moderate-continental with more or less pronounced local characteristics. Spatial distribution of climate parameters are caused by geographic location, relief and local influence as a result of combination of relief, distribution of air pressure of major scale, terrain exposition, presence of river systems, vegetation, urbanisation etc. Among geographic characteristics of synoptic situations significant for weather and climate of Serbia the following should be mentioned: the Alpes, Mediterranean Sea and Genoa Bay, Panonia plain and the valley of the Morava, the Carpathian and Rodopi mountains as well as hilly-mountainous part with ravines and highland plains. Prevailing meridional location of river ravines and plains in the northern area of the country make possible the deep southward intrusion of polar air masses.

Average annual air temperature for the period 1961-1990 for the area with the altitude of up to 300m amounts to 10.9°C. The areas with the altitudes of 300 to 500 m have average annual temperature of around 10.0 °C, and over 1000 m of altitude around 6.0°C. Figure 1 shows mean annual temperature for GMS Belgrade, through its deviation from the normal. The black line is the 5-year sliding mean, and yellow pillars are the deviation from the normal, for each year. Absolute temperature maximum in the period 1961-1990 were measured in July and range in the interval from 37.1 to 42.3 °C in lower regions, while in mountainous areas they range from -35.6 to -20.6 °C. Figure 2 shows differences between mean maximum and minimum temperatures for each month (coloured pillars), while thin lines give the range of absolute maximum and minimum temperatures per months for the period of thirty years. The Figure was made on the basis of daily reports of GMS Belgrade from the period 1971-2000.

Annual precipitation sums rise in average with altitude. In lower regions annual precipitation height range in the interval from 540 to 820 mm. Areas with the altitude over 1000 m have in average 700 to 1000 mm of precipitation, and some mountainous summits in southwestern part of Serbia have heavier precipitation up to 1500 mm. Major part of Serbia has continental precipitation regime with higher quantities in warmer part of the year, except for south-western parts where highest precipitation is measured in autumn. June is the rainiest with the average of 12 to 13 % of total annual precipitation sum. February and October have the least of precipitation. Snow cover occurrence is characteristic for colder part of the year, from November to March, and majority of days with snow cover is in January.

Annual sums of solar radiation range are in the interval from 1500 mm to 2200 hours annually.

Surface air circulation is to a great extent caused by orography. In warmer part of the year winds from northwest and west prevail. During colder part of the year east and southeast wind, koshava, dominates. Winds from southwestern direction prevail in mountainous part of southwestern Serbia.

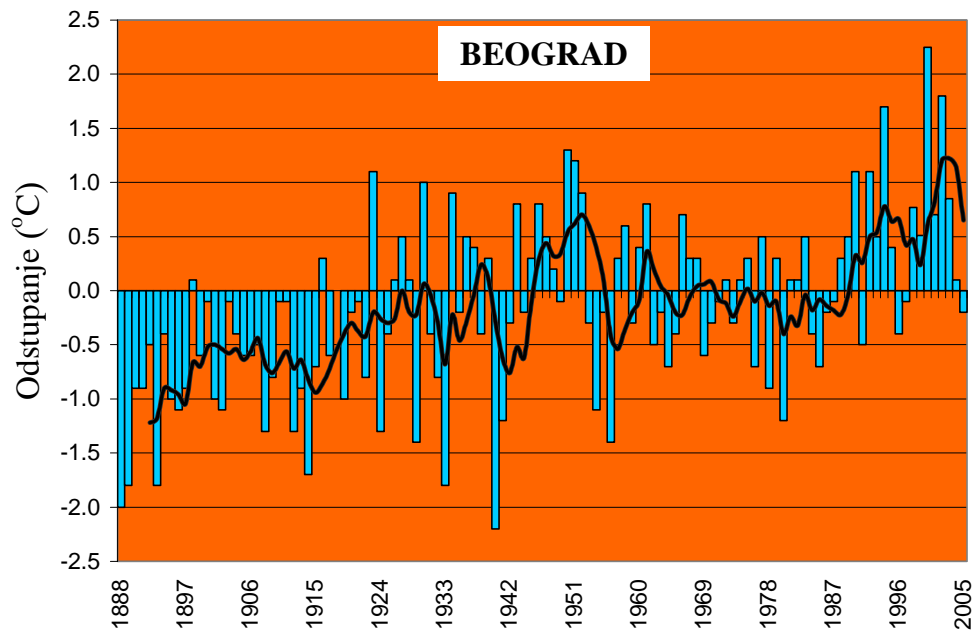


Figure 1. Deviation of mean annual temperature in the period 1888-2005. in Belgrade, from normal Reference period is 1961-1990.

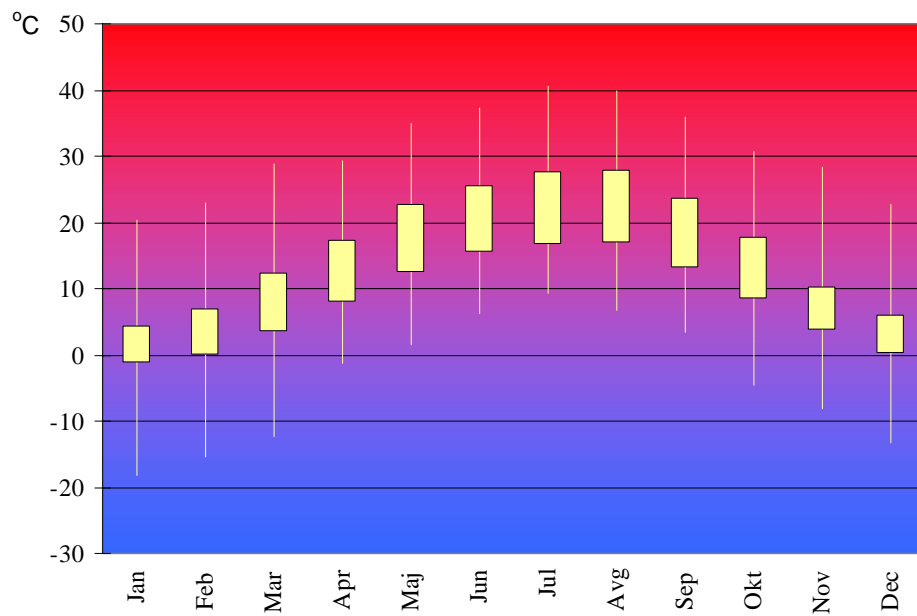


Figure 2. The range of mean and absolute monthly maximum temperatures in Belgrade Reference period is 1971-2000.