VARIATIONS IN PRECIPITATION IN REPUBLIC OF MACEDONIA

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One of the most important meteorological element in modern climatology is the study of the regime of the multiyear changes in precipitation. Therefore, in this paper, we analyze the variations in precipitation in the Republic of Macedonia. We consider the measuring points Skopje, Stip, Demir Kapija and Prilep in the period from 1925 to 2003. Using several mathematical-statistical and analytical methods we make attempt to discover the characteristics of the structure of the multiyear variations in precipitation as the distribution of precipitation from year to year, linear trend, the extreme phenomena, the existence of cycles, e.t.c. The obtained results provide an answer to many issues related to the considered subject.

Key words: *Rain-sum, variations, regression line, time-series analysis*

Proučavanja režima višegodisnjih promena padavina kao jedan od najznačajnijih klimatskih elemenata je važan problem u savremenoj klimatologiji. Zato, se u ovom radu analiziraju varijacije padavina u Republici Makedoniji. Posmatrane su merne meteorološke stanice: Skopje, Štip, Demir Kapija i Prilep, u periodu 1925 do 2003 godine. Primenom raznih matematicko-statističkih i analitičkih metoda, vrši se pokušaj da se otkriju karakteristike u strukturi višegodišnjih varijacija padavina, kao raspodela padavina od godine u godinu, linearni trend, te ekstremne pojave, postojanje ciklusa i drugo. Dobijeni rezultati daju odgovor na brojna pitanja vezana za ovu problematiku.

Klucne reci: *Padavine, varijacije, linearni trend, analiza vremenskih serija*