

TOTAL SOLAR ECLIPSE OBSERVED AT PALIĆ (YUGOSLAVIA) ON AUGUST 11, 1999

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Abstract. The course of the total solar eclipse at Palić (Yugoslavia) on August 11, 1999 is presented. The observation was carried out by amateur PANASONIC video camera.

1. INTRODUCTION

Location: The camera was installed at Lake Palić on a small promontory which enabled us to determine quite precise geographic coordinates according to the detailed (1:50 000) maps made by the Military-Geographical Institute. The spot has the following coordinates: longitude $L = -1^{\text{h}}19^{\text{m}}04^{\text{s}}$, latitude $\varphi = +46^{\circ}05'50''$ and altitude $h \approx 100\text{m}$.

Equipment: Panasonic VHS-HQ movie camera, model NV-M7E Series, with tape speed 23.39 mm/s and television system CCIR was used; its main characteristics are: 625 lines, 50 fields PAL colour signal and 1/2 inch CCD image sensor, with standard illumination 1.400 lux and minimum required illumination of 10 lux. The camera, with lens diameter 49 mm and Auto Focus System F 1.2 (9-54 mm), was firmly mounted on the classical geodetic tripod in the equatorial plane. The camera was manually set on infinite distance and zoomed to telephoto position. During the partial eclipse special double MYLAR foil was used as a filter to reduce illumination. During the totality the filter was put off. The camera has a built in clock with the accuracy of 1 sec. A Maxell VHS tape was used.

Weather: Prior to the eclipse, in the morning of August 11, after a short storm, the weather was rainy with low clouds. At the beginning of the partial eclipse, the rain stopped and the sky started to clear. All the way shortly before the totality it was periodically sunny and cloudy. During the whole totality there were no clouds around the Sun, so the totality was completely recorded without any obstacle. Temperature was $+21^{\circ}\text{C}$, with no wind.

2. PRELIMINARY RESULTS

From the astrometrical point of view the most interesting results are the instants of the second and third contacts. From these observations it came out that the second contact was at $11^{\text{h}}52^{\text{m}}49^{\text{s}}$ and the third contact at $11^{\text{h}}54^{\text{m}}51^{\text{s}}$ CET. That means that the totality lasted 2 min. and 2 sec. During the totality the local conditions

changed mainly in so far as a significant attenuation of the day-light took place. It became dark like in early dawn, planets and brighter stars were visible with naked eye. No particular wind was noticed or animal disturbing. Even the few animals around quieted down !

According to the image on the tape it can be concluded that, during the totality when the filter was removed, the recording was over exposed and that some kind of lighter filter should have been used. Even with filter on, during the partial eclipse, over exposure is noticed.

Further examination of the tape image obtained with PC is going on and will be discussed later.

References

Panasonic Operating Instructions, *Matsushita Elec. Industr. Co., Japan.*