

NEW DATA ON THREE LONG-NEGLECTED ECLIPSING BINARIES

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ABSTRACT

Three eclipsing binaries, SS Boo, V387 Cyg and CC Ser have not been observed for 30 years or longer according to the 1976 Rocznik. All three have proven to be visually observable. Visual light curves generated from recent observations, times of minima, measured from these data and O - C values relative to the available prediction elements are discussed.

A REVISED PERIOD FOR THETA¹ ORIONIS A

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ABSTRACT

A single visual observation made in February, 1976, indicated the established period (196.298 days) should be divided by three. More recent observations confirm this finding.

A NEW WATER MASER IN W3(OH)

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ABSTRACT

A search for stellar water masers at Haystack Observatory has revealed the presence of a new component in the W3(OH) region. Observation of the $6_{16}-5_{23}$ rotational transition for H₂O at 22235.08 MHz evinced the new feature at radial velocity $v \approx -32$ km s⁻¹. The flux was substantially weaker than other components on W3(OH) and may be time-dependent. Implications of stellar maser evolution are briefly discussed.

OPTICAL OBSERVATIONS OF QUASARS

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ABSTRACT

One of the outstanding problems of astronomy concerns the nature of quasars. Many of these objects show variations in energy output at optical as well as radio frequencies. The existence of correlations between the two frequency bands may provide important clues to the physical nature of these sources. Whether or not the theory of synchrotron radiation by fast particles, which seems capable of explaining certain aspects of radio variability, can also explain the optical radiation may well be decided by such measurements. As with most ordinary variable stars, professional observers do not have the equipment or manpower to provide adequate data coverage and amateurs with large telescopes or photographic equipment have an opportunity to contribute significantly to this field. A number of radio-active quasars have optical counterparts as bright as $m_v = 13$ or brighter and could provide a challenge to amateurs with appropriate equipment.