

TOTAL SUNSPOT AREA AND THE SAVA RIVER FLOW, I

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Spectral decomposition theorem has been applied in searching the solar activity influence on the Sava river flow at a station. The seven year lag has been found for maximum river flow.

ON THE SWIMMING OUT OF THE SOLAR MAGNETIC TUBES

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The classical analogy of Coulumb-interaction of the magnetic dipoles is applied to the solar global magnetic field and its magnetic tubes, in the context of Savić and Kašanin theoretical model of solar interior. Thence it follows that this mechanism of interaction can originate the swimming out of the magnetic tubes in qualitative satisfactory manner according to observational data.

AN ANALYSIS OF CLOSE BINARIES (CB) BASED ON PHOTOMETRIC MEASUREMENTS

*An Interpretation of CB Light Curve RX Cas
by using the Inverse-Problem Method*

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The author considers the current problematics in the determination of the orbital and physical parameters for active close binaries (CB) of W Ser type based on the interpretation of photometric observations. One solves the problem in two stages: by obtaining a synthetic light curve in the case when the parameters of the corresponding CB model are given a priori (direct problem) and by determining the parameters of the given model for which the best fit between the synthetic light curve and the observations is achieved (inverse problem). In the particular case one analyses the light curves of CB RX Cas in the framework of the accretion-disc model. The change of the light curves with the system's physical-activity phase is analysed and the orbital and physical parameters of the system are determined for the maximum, minimum and the transition regime of the physical activity by applying the inverse-problem method.