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Orbital Period Modulation in Chromospherically Active Close Binaries

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Abstract: The orbital period changes in some chromospherically active close binaries have been interpreted as a consequence of magnetic activity. At least in two active close binaries a possible relationship between the orbital period modulation and activity cycle was suggested. The existence of a third companion in these binaries has also been proposed. The light-time effect which arises from orbiting around a third-body has been subtracted from all the O-C values and a cyclic change of the orbital period has been obtained. These cyclic changes seem to be connected with the total brightness variations at least in two samples, namely, V471 Tau and RT Lac. The length of the orbital period modulations and also activity cycle in these samples are nearly half that of the Sun.

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