# Z CHA - ANOTHER CASE OF GRAVITATIONAL RADIATION?

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By combining spectroscopic data obtained by Vogt (1979) and photometric data obtained by Bailey (1979) and Fabian et al. (1979) it is possible to determine the physical parameters of the southern dwarf nova Z Cha (Ritter, 1979). The resulting values are: mass of the white dwarf primary $M_1=(0.35\pm0.06)M_\odot$, radius of the white dwarf $R_1=(1.8\ 10^{-2})R_\odot$, mass of the secondary $M_2=(0.16\pm0.02)M_\odot$, radius of the secondary $R_2=(0.19\pm0.01)R_\odot$, inclination $i = 74\overset{\circ}{.}8\pm0.8^\circ$. Accordingly the primary conforms to the theoretical M-R relation of white dwarfs and the secondary to the theoretical low mass main sequence. The mass exchange rate derived from the luminosity of the accretion disk and from the hot spot respectively turns out to be $\dot{M} \approx 4\cdot10^{-11}\ M_\odot$/year, about $10^2$ times more than is expected from the nuclear evolution of the secondary. On the other hand, angular momentum losses due to gravitational radiation predicts a mass loss rate (Faulkner, 1971) which is almost identical to the one derived from observations. Therefore after the binary pulsar (Taylor et al., 1979), Z Cha seems to be another case presenting strong evidence for the action of gravitational waves.

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