

YELLOW SUPERGIANTS WITH HOT COMPANIONS

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ABSTRACT. A group of non-variable yellow supergiants were observed with the *International Ultraviolet Explorer* satellite, with the aim of discovering hot companions. Four newly discovered systems are announced: HD 26630 (G0Ib+B9-9.5), HD 74395 (G2I+B9.5), HD 193469 (F5Ib+B4-5), and the Cepheid HD 129708 (F2II+B4-5). The Cepheid HD 9250 was observed but no hot companion was found. Some stars known to have a hot companion were also included to study the properties of the companion and to compare with previous work. Kurucz's (1979) atmospheric models were used to fit the overall energy distribution of the binary system and allowed to estimate T_e , $\log g$ and the spectral type of the hot companion. The magnitude differences in the V band between the yellow supergiants and their companions were calculated. This provides a way of estimating M_V for yellow supergiants and the distance to the systems. Comparison with evolutionary tracks, suggest that the masses of the primaries are contained between 5 and 9 M_\odot and that, on average, they are about twice as massive. Details will be published elsewhere.

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