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THE UV SPECTRUM OF HR 8752

In recent years the super-luminous star HR 8752 (HD 217476 currently G5 0-Ia) has been undergoing a continuous change in spectral type (see Lambert and Luck, 1978) and has been detected as a radio source by Smolinski et al. (1977). We have observed it with the International Ultraviolet Explorer as part of a programme to study variable and emission-line stars. Spectra were obtained at low resolution (6A) with both spectrographs: in the short wavelength region (1150A - 2000A) on 1978 July 24 and in the long wavelength region (1800A - 3000A) on 1978 August 1.

The spectrum recovered was that of an early type star. From the Si IV (1398) / C IV (1549) ratio we estimate the spectral type to be about B1 using the calibration of Molnar (1975); from the level of the exposure and the duration of the exposure, we deduce an apparent visual magnitude (after allowance for reddening) of about +11. If the absolute magnitude of the G-type star is taken as -9, this suggests that the hot companion is close to the main sequence. It seems probable to us that this early type companion is responsible for the excitation of the shell which gives rise to the forbidden [N II] emission lines (Sargent, 1965) and the free-free radio emission.

A more detailed account will be prepared and submitted to Astronomy and Astrophysics in due course.

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Editor's note: This paper came to the editor's hand on September 20, 1978. Its release, however, had to be delayed until the appearance of the commissioning phase papers.