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Z ANDROMEDAE: IUE AND OPTICAL OBSERVATIONS IN 1978

Since many years the symbiotic star Z Andromedae is in a quiescent phase (Mattei 1978), and coordinated optical and ultraviolet observations may hold an important clue to identify the stellar components of this classical object.

Low resolution IUE spectra (1150-3300 Å) of Z And were obtained on 1978, May 5 and June 13. The UV spectrum is dominated by strong emission lines, both permitted and forbidden, having a wide range of ionization energy. Very prominent are HeII 1640 to 3202, CIV 1550, NV 1240, OIII 3133.

Near 2200 Å the emission line spectrum is probably depressed by the interstellar absorption band, indicating that Z And is somewhat reddened. In the far UV, where the crowding of the emission lines is less severe, a smoothed continuum is present under the emission lines. The dereddened energy distribution corresponds to that of an early B or O-type star.

Several objective prism spectra (3400-8800 Å) of Z And were obtained at the Campo Imperatore Schmidt telescope of the Roma Astronomical Observatory during October 1977, and July-August 1978. The star shows a typical symbiotic spectrum with several high excitation emission lines, in particular [FeVII], the Balmer continuum in emission, and an intense red-infrared spectrum dominated by the TiO bands, whose strength corresponds to an M6 spectral type.

Small variations of emission line intensities were observed during 1977-78.

In July 1978 the visual magnitude of Z And, estimated from the count rate of the fine error sensor of IUE, was about $10^m.3$.

This work is based on observations by the International Ultraviolet Explorer collected at the Villafranca Satellite Tracking Station of the European Space Agency.

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Reference:

Mattei, J.A. 1978, J.Roy.Astron.Soc.Can. 72, 61

Editor's note: This paper came to the editor's hand on September 21, 1978. Its release, however, had to be delayed until the appearance of the commissioning phase papers.