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CONFIRMATION OF THE 6 MINUTE PERIOD FOR 21 Com

In a recent note Musielok and Kozar (1982) claimed that the light variation of 21 Comae Berenices had a period of about 6 minutes.

After this note, Kurtz (1983) reminded us that information cannot be extracted from equally spaced data beyond the Nyquist frequency.

In June 1982 we got some measurements of 21 Com which showed a period of 6 minutes, but with a Nyquist frequency lower than 240 cd^{-1}. Although the significance of the Nyquist frequency for unequally spaced data is not sufficiently clear we decided not to publish these results.

The new data, obtained in April 1983, confirm our early assumption and that of the Musielok and Kozar that 21 Com pulsates at a frequency of about 244 cd^{-1}.

To see this, we have plotted the data in Figure 1 corrected only for atmospheric extinction, from a set taken at Calar Alto Observatory with an ultraviolet filter plus a neutral filter and using the 1.23 m telescope.

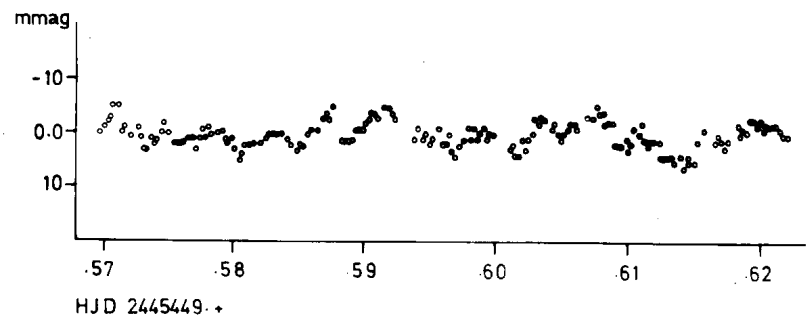

Figure 1

The subsequent power spectrum, in Figure 2, shows a period of about 6 minutes and, also, another one of about 24 minutes which clearly appears in Figure 1, if we look carefully at the plot.

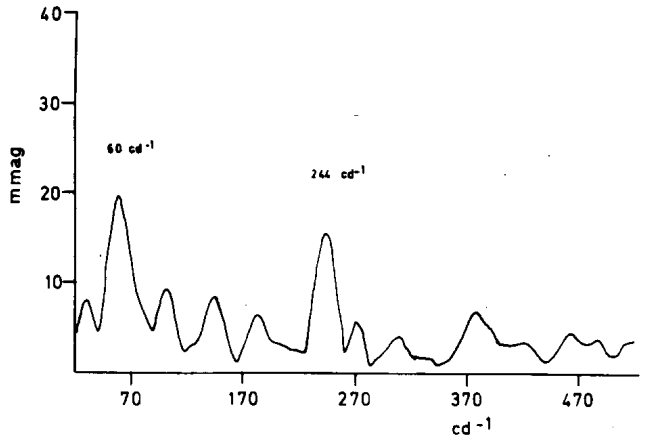

Figure 2

Apparently, the ratio between the two frequencies is four and the amplitude of the higher frequency seems to be modulated by the period of 24 minutes.

More observations are being carried out in order to clarify the light curve of 21 Com, which behaves like the recently named "Rapidly oscillating Ap stars" (Kurtz, 1982).

R. GARRIDO

Instituto de Astrofisica
de Andalucia. Apdo. 2144
Granada. Spain.

A. SÁNCHEZ-LAVEGA

Centro Astronómico Hispano-
Aleman. Apdo. 511
Almeria. Spain.

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