NN CEPHEI AND PP LACERTAE

NN Cephei and PP Lacertae, catalogued as RR ? in the Second Supplement to the Third Edition of the General Catalogue of Variable Stars (1974), are in fact two eclipsing binaries.

NN Cep = HD 217796

From 20 May to 6 August 1976, R.Rolland followed continuously this star, performing 751 visual estimations with binoculars. The resulting light-curves have revealed the eclipsing binary character of NN Cep, previously known as a spectroscopic binary. The period was found to be 2.058 days.

The best observed minima obtained by Rolland are listed below. Reductions were made using the tracing paper method.

JD 2442 919.49	Minimum II	O - C = + 0.05 d
922.51	I	- 0.02
991.49	II	+ 0.02
994.56	I	+ 0.00

The O - C values refer to this calculated ephemeris :

$$\text{Min I} = \text{JD hel. } 2442\ 959.57 + 2.058 \cdot E$$
$$\pm 7 \qquad\qquad \pm 2$$

The shape of the mean light-curve suggests that NN Cep is a Beta Lyrae system rather than an EA type variable.

PP Lac = CSV 8787

From 29 August to 17 October 1976, A.Figer made 228 visual estimates of PP Lac on 9 nights with a 10 inch-reflector.

The light-curves show that PP Lac is a new EW type variable with a period of 0.4011 day.

Times of the best observed minima, obtained using the tracing paper method are listed below:

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        JD hel. 2443 023.391     O - C = + 0.005
                     040.434              + 0.001
                     040.625              - 0.008
                     050.442              - 0.018
                     068.320              + 0.011
                     068.516              + 0.007
                     069.312              + 0.000
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The O-C values refer to either one of these calculated ephemerides, since the precision of the mean light-curve does not allow us to discriminate the primary minimum from the secondary one:

$$\text{Min I} = \text{JD hel. } 2443\ 050.46 + 0.4011 \cdot E$$
$$\pm 2 \qquad\qquad \pm 4$$

$$\text{Min I} = \text{JD hel. } 2443\ 050.66 + 0.4011 \cdot E$$
$$\pm 2 \qquad\qquad \pm 4$$

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