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LIGHT CURVE VARIATION OF PZ CASSIOPEIAE

The semi-regular variable star PZ Cassiopeiae was investigated using the patrol plates of Odessa astronomical observatory seven-camera astrograph obtained in 1957-1983. They were exposed through a yellow filter on the emulsion ZP-3. The exposure time was 30 min.

The times of light extrema observed are given in Table I. For them the following elements were obtained (L.S. Kudashkina, Astron. Tsirk. No. 1351, 1984):

$$\text{Max JD} = 2436809.6 + 801^{\text{d}}.3 \text{ E}$$

$$\text{Min JD} = 2437164.1 + 801^{\text{d}}.3 \text{ E}$$

The diagram for residuals (O-C) for the above elements is shown in Figure 1. Maximum and the subsequent minimum have the same cycle number. Qualitative similarity of (O-C) curves for maximum and minimum shows that cycle duration is changing, possible in a regular way. The dependence of duration of the ascending and descending branches on cycle number (which corresponds to the nearest maximum) is shown in Figure 2. As these two curves are opposite in phase, cyclicity (about 18 years) cannot be excluded. Ascending branch is shorter than the descending one during half of this cycle but in the second half of the cycle the situation is inverse.

Table I

E	Max	O-C	Min	O-C
0	2436900	91	2437180	16
1	7600	-10	7940	-25
2	8320	-22	8700	-67
3	9000	-214	9610:	42
4	9840	-175	2440520	151
5	2440800	-16	1220	49
6	1600	-17	1980	8
7	2680:	162	2800	27
8	3400	180	3600:	26
9	4120	99	4360:	-16
10	4800	-23	5260:	83
11	5660	36		

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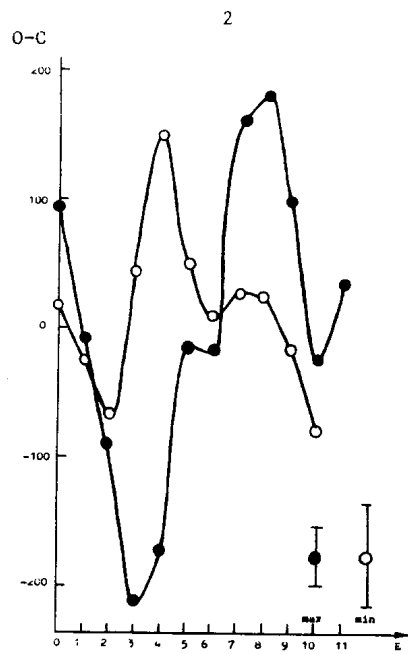


Figure 1

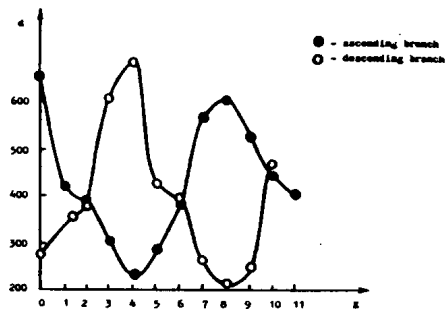


Figure 2

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