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ON THE PERIOD OF THE SECONDARY CYCLE IN XZ CYGNI

The amplitude of the RRab variable XZ Cygni changes periodically between 0.92 and 1.67 magnitudes in B, and between 0.67 and 1.35 in V (Kunchev, 1974). In the Table the moments for the maxima and minima of the amplitude have been compiled from all available data from 1906 to 1973. The majority of the moments were determined on the basis of the original observations.

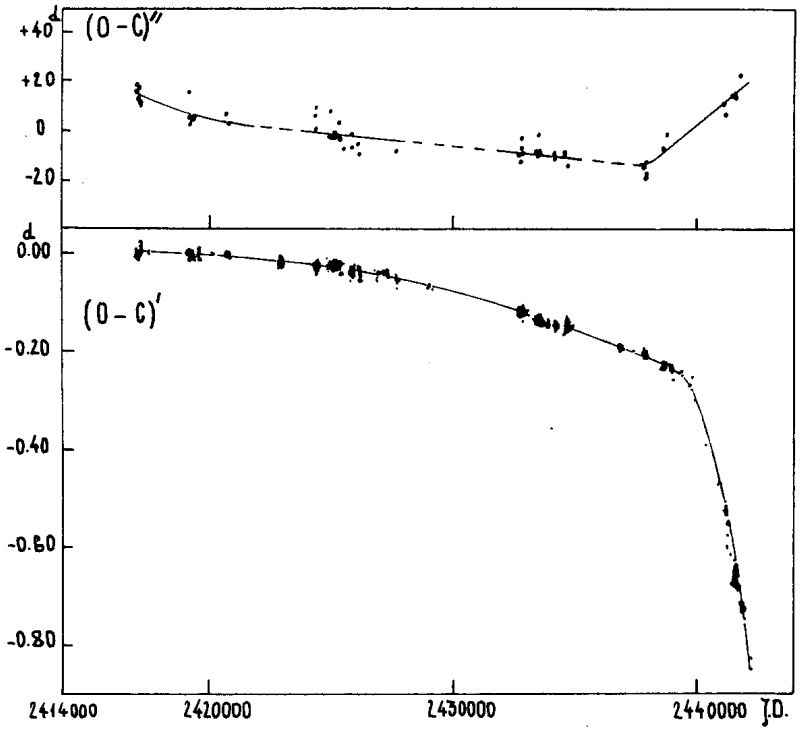
Max.Ampl. J.D.	(O-C)"	Min.Ampl. J.D.	(O-C)"	N	Observer
2417031:	+16^d	2417061	+19^d	-1	Blažko
17087	+13	17118:	+18	0	"
17199:	+12			2	"
17255	+10			3	Enebo
		19185	+16	36	Blažko
19204	+ 5	19228:	+ 2	37	"
		19290	+ 6	38	"
19319	+ 5	19346	+ 5	39	"
20701:	+ 8			63	Balanovski
20754	+ 3			64	Jordan
24378	+ 6	24400:	+ 1	127	Blažko
24439	+10			128	"
24944	- 3	24982	+ 8	137	Rybka
25116	- 3	25145	- 1	140	Zaharov
25174	- 3			141	"
25410	+ 3	25430	- 4	145	"
25456::	- 8			146	"
25865	- 1	25887	- 7	153	"
26148:	- 6	26172:	-11	158	"
27697:	- 9			185	Blažko
32693	-13	32723::	-10	272	Muller
		32788:	- 3	273	Klepicova
32814	- 7	32839:	- 9	274	Muller,Klepicova
33445	- 8	33471	-10	285	"
		33537	- 1	286	"
33560	- 8	33587	- 9	287	Klepicova
		34160	-10	297	Muller
34190	-10	34216	-12	298	Muller
		34621	- 9	305	Klepicova
34650	-10	34673	-15	306	"
37801:	-20	37834::	-15	361	Lange
37861:	-18	37893	-13	362	Saharov
38562	- 7			374	Fitch
38683:	- 1			376	"
41161	+ 6	41194::	+11	419	Bogdanov
		41541	+14	425	Kunchev
41571	+15	41599	+14	426	Kunchev
41810	+23			430	Firmanyuk

The following elements of the secondary period were determined:

Max.Ampl. J.D. = 2 417 072.35 + $57^{d}.477 \cdot N$

Min.Ampl. J.D. = 2 417 099.69 + $57^{d}.477 \cdot N$

(O - C)" values in the Table were calculated with these elements.



The Figure clearly shows the change of the secondary period of XZ Cygni (upper part). The change in the primary period P, obtained on the basis of the collected individual maxima is shown in the lower part of the Figure. The O - C's for the primary period were calculated with the elements:

Max. Hel. = 2 417 201.241 + $0^{d}.4665878 \cdot E$ (Klepicova,1959).

It is evident that after 1965 the basic period has considerably decreased and the length of the secondary period has increased.

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References:

Klepicova, L.A. 1959, P.Z., 12, No.3, 164
Kunchev, P. 1974, I.B.V.S. No.927