

Variable Star Bulletin

Detection of the second historical decline of BZ Cam

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BZ Cam (= 0623+071) is a nova-like cataclysmic variable discovered in a search for faint planetary nebulae on the Palomar Observatory sky survey (Ellis et al. 1984). The first decline was discovered in 1928, then BZ Cam was classified into a VY-Scl type Cataclysmic variable (Garnavich et al. 1988). I detected the second historical decline of BZ Cam. The light curve is shown in Figure 1 and the observation data are listed in Table 1. BZ Cam was in the bright state on JD 2450850 - JD 2451300. Though, this star became clearly fainter than 13 and half magnitude. This star is in the faint state on and after JD 2451450. The magnitude has seemed to decrease gradually on 2451100 - 2451300. It is probable that this decrease was the first stage of the following decline. Further observations are strongly encouraged to get more detail and physical properties during the faint state.

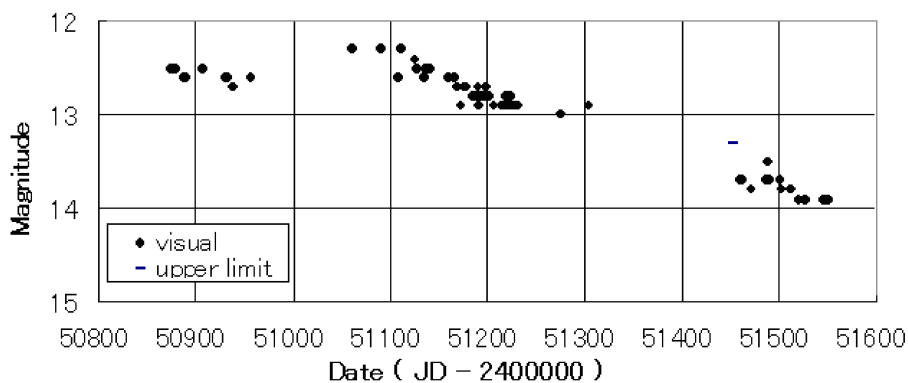


Figure 1: Figure 1 : Light curve of BZ Cam

Remarks This detection of the decline was announced in vsnet-alert 3544 (Kato 1999) and confirmed in vsnet-alert 2551 (Uemura 1999).

References

Ellis, G.L., Grayson, E.T., Bond, H.E., 1984, PASP, 96, 283

Table 1: Observation data of BZ Cam

JD-2400000	Mag.	JD-2400000	Mag.	JD-2400000	Mag.	JD-2400000	Mag.
50874.192	12.5	51141.188	12.5	51197.094	12.8	51460.192	13.7
50880.099	12.5	51159.203	12.6	51199.187	12.7	51461.199	13.7
50888.051	12.6	51165.160	12.6	51201.094	12.8	51462.280	13.7
50889.099	12.6	51166.213	12.6	51207.051	12.9	51472.228	13.8
50907.121	12.5	51167.176	12.6	51213.994	12.9	51487.206	13.7
50930.056	12.6	51169.203	12.7	51216.069	12.9	51488.224	13.5
50933.012	12.6	51173.140	12.9	51218.065	12.9	51491.132	13.7
50938.071	12.7	51176.280	12.7	51219.180	12.8	51501.214	13.7
50956.994	12.6	51177.099	12.7	51222.128	12.9	51502.278	13.8
51061.269	12.3	51186.144	12.8	51222.997	12.8	51512.125	13.8
51090.260	12.3	51187.158	12.8	51224.097	12.8	51520.107	13.9
51109.188	12.6	51188.098	12.8	51225.108	12.9	51528.122	13.9
51111.299	12.3	51189.076	12.8	51227.096	12.9	51547.153	13.9
51125.256	12.4	51190.039	12.7	51230.132	12.9	51547.928	13.9
51128.133	12.5	51191.076	12.8	51232.067	12.9	51551.125	13.9
51135.194	12.6	51192.217	12.9	51276.131	13.0		
51136.169	12.5	51194.101	12.8	51304.994	12.9		
51137.144	12.5	51195.208	12.8	51453.322	< 13.3		

The magnitude was estimated against neighboring GSC stars. The pre-x '<' indicates the upper limit (the variable was not seen) Instrument: 32cm re°ector + visual

Garnavich,P., Szkody, P., 1988, PASP, 100, 1522

Kato, T., vsnet-alert 3544:

<http://www.kusastro.kyoto-u.ac.jp/vsnet/Mail/alert3000/msg00544.html>

Uemura, M., vsnet-alert 3551:

<http://www.kusastro.kyoto-u.ac.jp/vsnet/Mail/alert3000/msg00551.html>

Visual and CCD minima of eclipsing binaries during 1999

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Following table is summary of minima of eclipsing binary reported from VSOLJ members.

star	min.	O-C	E	band	n	obs.	inst.
WZ And	2451181.958	+0.022	14820	v	19	Mhh	20L
KO Aql	2451339.048	+0.194	3300	v	23	Stm	10B
OO Aql	2451398.9990	+0.0102	25229	V	61	Nga	10L+ST-5
OO Aql	2451401.027	+0.011	25233	v	25	Stm	40L

star	min.		O-C	E	band	n	obs.	inst.
OO Aql	2451402.0402		+0.0107	25235	V	52	Nga	10L+ST-5
OO Aql	2451408.121		+0.010	25247	v	15	Mhh	20L
OO Aql	2451409.137		+0.012	25249	v	27	Kit	12B
OO Aql	2451422.056	*1	+0.008	25274.5	v	17	Mkn	13L
OO Aql	2451422.058	*1	+0.010	25274.5	v	22	Mhh	20L
OO Aql	2451426.114	*1	+0.012	25282.5	v	24	Kit	12B
OO Aql	2451427.1256	*1	+0.0101	25284.5	lc	156	Kis	25SC+AP-7
OO Aql	2451449.9314	*1	+0.0104	25329.5	lc	101	Kis	25SC+AP-7
OO Aql	2451453.9834	*1	+0.0081	25337.5	v	15	Sms	40L
OO Aql	2451453.991	*1	+0.016	25337.5	v	16	Ioh	30SC
OO Aql	2451470.96		+0.01	25371	v	9	Stm	40L
OO Aql	2451476.028		+0.007	25381	v	13	Ioh	30SC
OO Aql	2451487.945	*1	+0.015	25404.5	v	40	Kit	12B
OO Aql	2451488.957	*1	+0.013	25406.5	v	12	Mkn	20SC
V346 Aql	2451401.017		-0.004	8571	v	22	Stm	10B
V346 Aql	2451422.036		-0.006	8590	v	18	Mhh	20L
V805 Aql	2451384.0511		+0.0079	9740	V	52	Nga	10L+ST-5
RY Aqr	2451375.1397		-0.0511	5365	V	55	Nga	10L+ST-5
SU Aqr	2451434.0744		-0.0133	15406	V	36	Nga	10L+ST-5
RZ Cas	2451390.1664		+0.0277	6852	v	79	AUU	7B
RZ Cas	2451402.124		+0.033	6862	v	23	Kit	5B,7B
RZ Cas	2451408.103		+0.036	6867	v	20	Mhh	6R
RZ Cas	2451433.1905		+0.0229	6888	v	30	Imm	20L
RZ Cas	2451486.984		+0.030	6933	v	18	Stm	10B
RZ Cas	2451535.9889		+0.0300	6974	v	42	Imm	7B
V523 Cas	2451427.133	*1	+0.038	43676.5	v	20	Mhh	20L
U Cep	2451385.133		+0.115	2745	v	25	Stm	10B
EG Cep	2451402.022		+0.015	16172	v	13	Stm	10B
TT Cet	2451462.1338		-0.0389	38926	Rc	43	Kis	25SC+ST-6
TX Cet	2451477.0936		-0.0016	11331	V	22	Nga	10L+ST-5
TX Cet	2451493.0474	*1	+0.0242	11352.5	V	33	Nga	10L+ST-5
TW Cet	2451487.12733		+0.13813	28763	lc	86	Kis	25SC+ST-6
VY Cet	2451487.96966		-0.00440	47120	V	52	Kis	25SC+ST-6
DY Cet	2451472.0803		-0.0038	6742	lc	71	Kis	25SC+ST-6
DY Cet	2451541.9459	*1	-0.0041	6900.5	V	51	Nga	10L+ST-5
R CMa	2451229.9575		+0.0681	6110	V	115	Nga	4.7L+ST-5
RX CMa	2451190.1397		-0.0925	4242	V	238	Kis	25SC+AP-7
XZ CMi	2451188.1805	*1	-0.0069	15106.5	V	100	Kis	25SC+AP-7
RV Crv	2451285.024	*1	-0.021	13724.5	V	64	Nga	10L+ST-5
Z Dra	2451188.249		-0.118	5664	v	32	Mhh	20L
AI Dra	2451451.975		+0.017	6807	v	19	Stm	10B
TT Eri	2451513.00785		-0.08706	4943	lc	86	Kis	25SC+AP-7
TZ Eri	2451189.054		+0.169	3367	v	48	Mhh	20L
YY Eri	2451200.9643	*1	+0.0746	29920.5	V	151	Nga	10L+ST-5
YY Eri	2451535.9672	*1	+0.0806	30962.5	V	57	Nga	10L+ST-5
BC Eri	2451477.1157	*3			lc	173	Kis	25SC+ST-6
BC Eri	2451493.19719	*3			lc	165	Kis	25SC+AP-7

star	min.		O-C	E	band	n	obs.	inst.
BC Eri	2451501.10729	*3			V	102	Kis	25SC+AP-7
BC Eri	2451502.15987	*3			lc	175	Kis	25SC+AP-7
BC Eri	2451515.08101	*3			V	192	Kis	25SC+AP-7
BC Eri	2451525.09784	*3			lc	229	Kis	25SC+AP-7
BC Eri	2451526.14810	*3			V	229	Kis	25SC+AP-7
BC Eri	2451529.05185	*3			lc	59	Kis	25SC+AP-7
BC Eri	2451538.0143	*3			V	41	Nga	10L+ST-5
AE For	2451180.9089	*2	-0.0772	2919	Rc	57	Kis	25SC+BT-20
AE For	2451191.0099	*2	-0.0767	2930	Rc	97	Kis	25SC+AP-7
AE For	2451191.9279	*2	-0.0770	2931	V	97	Kis	25SC+AP-7
AE For	2451196.9774	*1*2	-0.0778	2936.5	Rc	104	Kis	25SC+AP-7
AE For	2451504.11886	*2	-0.08593	3271	lc	136	Kis	25SC+AP-7
SZ Her	2451391.042		-0.018	11645	v	24	Mhh	20L
RX Hya	2451488.26014		+0.04316	3524	V	120	Kis	25SC+ST-6
AV Hya	2451226.1217	*1	-0.0476	21294.5	V	120	Nga	10L+ST-5
DF Hya	2451475.2871		+0.0029	61516	lc	50	Kis	25SC+ST-6
DK Hya	2451215.0811	*1	-0.0509	38388.5	V	72	Nga	10L+ST-5
FG Hya	2451192.1178		-0.0491	18985	V	135	Nga	10L+ST-5
FG Hya	2451216.0489		-0.0498	19058	V	123	Nga	10L+ST-5
AP Leo	2451260.0955	*1	-0.0331	27241.5	V	94	Nga	10L+ST-5
VZ Lib	2451306.0232		-0.0936	18192	Rc	40	Kis	25SC+AP-7
VZ Lib	2451311.0429		-0.0896	18206	V	54	Nga	10L+ST-5
VZ Lib	2451316.0641		-0.0841	18220	V	48	Nga	10L+ST-5
VZ Lib	2451331.1014		-0.0938	18262	Rc	68	Kis	25SC+AP-7
BO Mon	2451200.0991		-0.0810	3457	V	140	Kis	25SC+AP-7
U Oph	2451300.2247		+0.0096	4104	V	135	Nga	10L+ST-5
U Oph	2451384.084		-0.002	4154	v	20	Kit	5B
V502 Oph	2451299.1037	*1	-0.0809	22331.5	V	54	Nga	10L+ST-5
V502 Oph	2451319.1339	*1	-0.0779	22375.5	V	87	Nga	10L+ST-5
V566 Oph	2451331.0982		+0.0591	23179	V	130	Nga	10L+ST-5
V566 Oph	2451344.0002	*1	+0.0572	23210.5	V	141	Nga	10L+ST-5
FZ Ori	2451194.9665		-0.0516	17927	V	84	Nga	10L+ST-5
FZ Ori	2451195.9644	*1	-0.0537	17929.5	V	80	Nga	10L+ST-5
ER Ori	2451222.979	*1	+0.021	22665.5	v	11	Mhh	13L
ER Ori	2451224.040		+0.023	22668	v	15	Mhh	20L
ER Ori	2451472.1530		+0.0246	23254	lc	51	Kis	25SC+ST-6
ET Ori	2451476.1286		+0.0036	26071	lc	54	Kis	25SC+ST-6
ET Ori	2451513.21467		+0.00315	26110	V	79	Kis	25SC+AP-7
BN Peg	2451477.0209		-0.0009	24647	lc	93	Kis	25SC+ST-6
RT Per	2451537.1326		+0.0461	21381	v	22	Mhh	20L
IZ Per	2451491.985		+0.011	1875	v	12	Stm	10B
RW PsA	2451475.9992	*1	-0.0099	47572.5	lc	74	Kis	25SC+ST-6
VZ Psc	2451422.1620	*1	+0.0069	29059.5	V	51	Nga	10L+ST-5
VZ Psc	2451461.9967		+0.0107	29212	Rc	103	Kis	25SC+ST-6
AO Ser	2451285.151		+0.015	19505	v	25	Mhh	20L
Y Sex	2451268.9984		+0.0213	22635	V	51	Nga	10L+ST-5
RZ Tau	2451538.103		+0.032	33347	v	16	Mhh	20L
RZ Tau	2451542.050	*1	+0.030	33356.5	v	13	Mhh	20L

star	min.	O-C	E	band	n	obs.	inst.
AM Tau	2451193.037	-0.029	2906	v	27	Mhh	20L
AM Tau	2451524.151	-0.031	3068	v	20	Mhh	20L
X Tri	2451193.067	-0.036	8945	v	14	Ioh	30SC
X Tri	2451194.040	-0.035	8946	v	22	Ioh	30SC
X Tri	2451496.1835	-0.0388	9257	v	26	Mhh	20L
TX UMa	2451538.303	+0.142	2135	v	27	Kit	10B
W UMi	2451460.999	-0.122	10451	v	15	Stm	40L
AX Vir	2451282.1140	+0.0057	33752	V	71	Nga	10L+ST-5
AZ Vir	2451276.1325	-0.0163	20876	V	77	Nga	10L+ST-5
BH Vir	2451284.1423	-0.0039	9859	V	76	Nga	10L+ST-5
Z Vul	2451412.103	+0.010	3448	v	12	Stm	10B

⌘ 1 secondary minimum

⌘ 2 $E_0=2448500.6581$ $P=0.918235$ (HIPPARCOS)

⌘ 3 no ephemeris in GCVS

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