

# Variable Star Bulletin

## Visual and CCD minima of eclipsing binaries during 2009

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

star	min.		O-C	E	color	n	obs.	inst.
RT And	2454856.945		-0.010	21807	vis	19	Hsk	28SC
XZ And	2454883.943		-0.005	1756	vis	24	Hsk	28SC
XZ And	2455149.970		-0.010	1952	vis	19	Hsk	28SC
BL And	2455135.9735	*1	+0.0037	3648.5	Rc	169	Siz	35SC+ST-9E
CN And	2455194.951		-0.007	9715	V	231	Ioh	30SC+DSI-ProII
GZ And	2455156.968	*1	-0.003	8710.5	V	482	Ioh	30SC+DSI-ProII
GZ And	2455157.1221		-0.0012	8711	V	482	Ioh	30SC+DSI-ProII
S Ant	2455173.246		+0.031	3926	vis	23	Kit	8B
S Ant	2455185.215	*1	+0.006	3944.5	vis	29	Kit	8B
S Ant	2455187.167	*1	+0.013	3947.5	vis	24	Kit	8B
SW Ant	2454863.1596		-0.0130	5861	Rc	148	Njh	25SC+CV-04
OO Aql	2454994.188		+0.042	32323	vis	30	Kit	12B
OO Aql	2455032.204		+0.049	32398	vis	36	Kit	12B
OO Aql	2455060.072		+0.043	32453	vis	26	Kit	12B
V417 Aql	2455028.0597		-0.1343	32453	Rc	110	Nga	20SC+SV-04LE
RY Aqr	2455088.0248		-0.0115	1316	Rc	101	Nga	20SC+SV-04LE
RY Aqr	2455091.9572		-0.0123	1318	Ic	43	Nga	10L+CV-04
ST Aqr	2455088.0008		-0.0054	3313	Ic	62	Nga	10L+CV-04
SU Aqr	2455080.0794		+0.0058	2469	Ic	49	Nga	10L+CV-04
UU Aqr	2455067.0861		-0.0012	15693	C	219	Kis	20SC+E47+
UU Aqr	2455070.0305		-0.0013	15711	V	177	Kis	20SC+E47+
CD Aqr	2455142.9371		+0.0294	675	Rc	147	Siz	35SC+ST-9E
CX Aqr	2455071.0360	*1	-0.0103	4623.5	Rc	96	Nga	20SC+SV-04LE
DD Aqr	2455117.9809		-0.0257	2565	Rc	144	Nga	20SC+SV-04LE
DX Aqr	2455080.0836	*1	-0.0156	3462.5	Rc	461	Nga	20SC+SV-04LE
EE Aqr	2455098.9922		+0.0045	5106	Ic	65	Nga	10L+CV-04
EL Aqr	2455138.9713	*1	+0.0078	5481.5	Rc	75	Nga	20SC+SV-04LE
HV Aqr	2455080.9770		-0.0059	6892	Rc	54	Njh	20SC+CV-04
MU Aqr	2455099.0644		+0.1327	9926	Rc	228	Siz	35SC+ST-9E
SS Ari	2455125.1635	*1	-0.0047	6465.6	Rc	376	Siz	35SC+ST-9E
SS Ari	2455125.9755	*1	-0.0047	6467.5	Rc	279	Siz	35SC+ST-9E

star	min.		O-C	E		n	obs.	inst.
SS Ari	2455126.1766		-0.0066	6468	Rc	279	Siz	35SC+ST-9E
WW Aur	2455115.214		+0.006	37	vis	37	Kit	7B
WW Aur	2455139.192	*1	-0.004	30	vis	30	Kit	7B
WW Aur	2455187.167	*1	-0.004	40	vis	40	Kit	7B
AP Aur	2455173.2783	*1	+0.1265	22359.5	V	383	Ioh	30SC+DSI-ProII
EP Aur	2455167.1315		+0.0109	48828	V	244	Ioh	30SC+DSI-ProII
EP Aur	2455173.0410		+0.0103	48838	Rc	465	Siz	35SC+ST-9E
EP Aur	2455173.3364	*1	+0.0102	48838.5	Rc	465	Siz	35SC+ST-9E
HL Aur	2425588.427		-0.0130	47559	Rc	388	Siz	35SC+ST-9E
zeta Aur	2454912.9		-0.4	28	vis	48	Kit	5B
AC Boo	2454929.2004	*1	-0.0168	82719.5	V	412	Ioh	30SC+DSI-ProII
AR Boo	2454911.2421	*1*24	+0.0319	13711.5	Rc	217	Njh	20SC+CV-04
AR Boo	2454916.2465	*24	+0.0357	13726	Rc	211	Njh	20SC+CV-04
CK Boo	2454905.2968	*1	-0.0919	33812.5	Rc	217	Njh	20SC+CV-04
FY Boo	2454917.2837	*25	-0.0102	15162	V	174	Njh	20SC+CV-04
GN Boo	2454994.0352	*41	+0.0090	9939	V	273	Siz	35SC+ST-9E
GN Boo	2454994.1841	*1*41	+0.0071	9939.5	V	273	Siz	35SC+ST-9E
i Boo	2454948.048		+0.115	56365	vis	41	Kit	5B
i Boo	2454948.231	*1	+0.164	56365.5	vis	41	Kit	5B
i Boo	2454950.201		+0.125	56373	vis	22	Kit	5B
i Boo	2454951.024		+0.145	56376	vis	37	Kit	7B
i Boo	2454951.131	*1	+0.118	56376.5	vis	37	Kit	7B
i Boo	2454965.061	*1	+0.121	56428.5	vis	23	Kit	5B7B
i Boo	2454984.079	*1	+0.124	56499.5	vis	23	Kit	5B
HW Cam	2454909.2397	*34	+0.0767	4007	V	378	Ioh	30SC+DSI-ProII
MT Cam	2454871.0158		-0.1323	5177	V	457	Ioh	30SC+DSI-ProII
AN Cam	2455186.6607	*1	+5.6360	1389.5	V	76	Kis	25L+ST-8XE
AO Cam	2454883.9812		-0.0719	31293	V	293	Ioh	30SC+DSI-ProII
LR Cam	2455162.191	*56	-0.055	7340	Rc	279	Siz	35SC+ST-9E
RZ Cas	2454842.070		+0.058	9740	vis	18	Nyu	
RZ Cas	2454842.073		+0.061	9740	vis	19	Kso	
RZ Cas	2454842.075		+0.063	9740	vis	24	Yda	
RZ Cas	2454842.075		+0.063	9740	vis	30	Eni	
RZ Cas	2454842.076		+0.064	9740	vis	24	Yto	
RZ Cas	2455093.073		+0.059	9950	vis	26	Mdy	5B
RZ Cas	2455099.055		+0.065	9955	vis	52	Kit	7B
RZ Cas	2455118.173		+0.059	9971	vis	55	Kit	7B
RZ Cas	2455122.959		+0.064	9975	vis	21	Hsk	5F
RZ Cas	2455122.957		+0.063	9975	vis	44	Kit	7B8B
RZ Cas	2455124.155		+0.065	9976	vis	60	Kit	7B
TV Cas	2455139.050		-0.022	5813	vis	41	Kit	8B
TW Cas	2455123.232		-0.026	9182	vis	31	Kit	12B
XX Cas	2454850.9535		+0.0173	5974	V	333	Ioh	30SC+DSI-ProII
CW Cas	2455108.922		+0.119	42213	Rc	193	Siz	35SC+ST-9E
CW Cas	2455113.0695		+0.1215	42226	Rc	131	Siz	35SC+ST-9E
V381 Cas	2455193.0454		-0.0273	6098	Rc	162	Siz	35SC+ST-9E
V523 Cas	2455009.1876	*1	+0.0823	59004.5	V	70	Siz	35SC+ST-9E
V523 Cas	2455060.0155		+0.0825	59222	V	395	Siz	35SC+ST-9E
V523 Cas	2455060.1327	*1	+0.0828	59222.5	V	395	Siz	35SC+ST-9E
V523 Cas	2455060.2487		+0.0820	59223	V	395	Siz	35SC+ST-9E
U Cep	2455142.214		+0.173	4252	vis	56	Kit	7B12B
U Cep	2455167.136		+0.164	4262	vis	60	Kit	12B
U Cep	2455172.123		+0.165	4264	vis	70	Kit	12B
SU Cep	2455072.0539		+0.0064	31891	V	415	Ioh	30SC+DSI-ProII
WY Cep	2455186.0072	*1	+0.0229	24068.5	Rc	294	Siz	35SC+ST-9E
WZ Cep	2455084.1487	*1	-0.0915	64783.5	V	341	Siz	35SC+ST-9E

star	min.		O-C	E		n	obs.	inst.
EE Cep	2454842.37		+1.07	10	B	19	Kis	
EE Cep	2454842.20		+0.90	10	V	19	Kis	
EE Cep	2454842.67		+1.37	10	Ic	18	Kis	
TT Cet	2455168.015		-0.062	46552	V	107	Ioh	30SC+DSI-ProII
VV Cet	2455136.008		+0.123	45574	Rc	48	Nga	20SC+SV-04LE
AA Cet	2455157.081		-0.018	25903	vis	15	Kit	7B
CT Cet	2455138.9894	*1*48	+0.0231	12749.5	Ic	66	Nga	10L+CV-04
CT Cet	2455179.8994	*48	+0.0236	12909	Ic	28	Nga	10L+CV-04
R CMa	2454857.103		+0.088	9303	vis	30	Kit	7B
RT CMa	2455142.1705		+0.5949	22041	V	302	Kis	20SC+DSI-ProIII
SZ CMa	2454844.0521	*53	-1.6649	2205	V	148	Kis	20SC+E47+
TU CMa	2454846.0362	*1	-0.0120	24710.5	Rc	94	Nga	20SC+SV-04LE
TZ CMa	2454876.9527		-0.2028	14519	V	225	Ioh	30SC+DSI-ProII
XZ CMi	2454902.9771	*1	-0.0097	21524.5	V	144	Njh	20SC+CV-04
YY CMi	2455171.258		+0.012	24815	vis	23	Kit	12B
YY CMi	2455194.234		+0.014	24836	vis	30	Kit	12B
AK CMi	2455167.1555		-0.0171	21321	Rc	392	Siz	35SC+ST-9E
BF CMi	2454845.2066		-0.1326	9042	V	414	Ioh	30SC+DSI-ProII
WW Cnc	2455182.0783		-0.5301	25134	Rc	83	Siz	35SC+ST-9E
WX Cnc	2455178.2893		+0.0124	24137	V	187	Ioh	30SC+DSI-ProII
FF Cnc	2455184.1995	*61	-0.1872	4651	V	431	Ioh	30SC+DSI-ProII
GW Cnc	2454869.0694	*14	+0.0723	7981	V	371	Ioh	30SC+DSI-ProII
GY Cnc	2454915.0568				C	472	Njh	25SC+CV-04
GY Cnc	2454915.9345				C	492	Njh	20SC+CV-04
GY Cnc	2454916.1096				C	492	Njh	20SC+CV-04
GY Cnc	2454916.9869				C	538	Njh	20SC+CV-04
GY Cnc	2454918.0396				C	450	Njh	20SC+CV-04
GY Cnc	2454919.0919				C	372	Njh	20SC+CV-04
GY Cnc	2454921.0222				C	271	Njh	20SC+CV-04
LL Com	2454962.9807	*1*37	+0.2176	11738.5	Rc	234	Njh	20SC+CV-04
TW CrB	2454960.1276	*1	+0.0398	28973.5	V	122	Njh	25SC+CV-04
Z Crt	2454965.0060		-0.0802	7785	V	122	Njh	20SC+CV-04
TW Crt	2454874.1521	*1*15	-0.1188	6749.5	V	301	Njh	20SC+CV-04
W Crv	2454918.1846	*1	+0.0201	39348.5	Rc	170	Njh	20SC+CV-04
RV Crv	2454842.261		-0.078	18485	vis	26	Kit	12B
RV Crv	2454848.233		-0.084	18493	vis	30	Kit	12B
RV Crv	2454851.234		-0.072	18497	vis	30	Kit	12B
RV Crv	2454857.194		-0.090	18505	vis	24	Kit	12B
RV Crv	2454879.237	*1	-0.091	18534.5	vis	33	Kit	12B
EG CVn	2454971.0984		+0.0396	7657	V	291	Ioh	30SC+DSI-ProII
WZ Cyg	2455018.1231		+0.0627	24283	V	181	Siz	35SC+ST-9E
V753 Cyg	2455011.0490		+0.0671	44534	V	248	Siz	35SC+ST-9E
TY Del	2455108.970		+0.031	10200	vis	17	Hsk	28SC
YY Del	2455085.108		+0.009	15289	V	228	Ioh	30SC+DSI-ProII
MR Del	2455065.9834	*42	-0.0013	12585	Rc	62	Nga	20SC+SV-04LE
AI Dra	2455087.973		+0.010	9840	vis	23	Kit	7B
AI Dra	2455123.940		+0.013	9870	vis	31	Kit	12B
FU Dra	2454960.0366	*35	-0.0142	21061	C	310	Siz	35SC+ST-9E
FU Dra	2454960.1917	*1*35	-0.0125	21061.5	C	310	Siz	35SC+ST-9E
YY Eri	2454851.9081	*1	+0.1308	41276.5	Ic	547	Njh	20SC+CV-04
YY Eri	2454852.0690		+0.1310	41277	Ic	547	Njh	20SC+CV-04
YY Eri	2455126.1462	*1	+0.1344	42129.5	V	236	Kis	6R+ST-9XE
YY Eri	2455133.221	*1	+0.136	42151.5	vis	30	Kit	12B
YY Eri	2455139.1667		+0.1344	42170	Rc	316	Nga	20SC+SV-04LE
YY Eri	2455141.097		+0.136	42176	vis	57	Kit	12B
YY Eri	2455155.083	*1	+0.137	42219.5	vis	56	Kit	12B

star	min.		O-C	E		n	obs.	inst.
YY Eri	2455157.172		+0.136	42226	vis	61	Kit	12B
YY Eri	2455159.099		+0.134	42232	vis	48	Kit	12B
BC Eri	2455143.0888	*1*51	+0.0517	6907.5	Ic	42	Nga	10L+CV-04
BV Eri	2455154.0242	*1	-0.1542	23055.5	Rc	70	Nga	20SC+SV-04LE
BV Eri	2455182.9626	*1	-0.1527	23112.5	Ic	35	Nga	10L+CV-04
BZ Eri	2454845.0288		+0.0032	44095	V	157	Njh	20SC+CV-04
AE For	2454862.9297	*12	-0.1787	6929	V	125	Njh	20SC+CV-04
U Gem	2454833.2249		+0.0174	97195	C	280	Njh	20SC+CV-04
U Gem	2454834.2887		+0.0198	97201	C	237	Njh	20SC+CV-04
U Gem	2454835.1734		+0.0199	97206	C	391	Njh	20SC+CV-04
U Gem	2454837.2971		+0.0208	97218	C	359	Njh	20SC+CV-04
SX Gem	2455196.0469		-0.0548	26458	Rc	469	Siz	35SC+ST-9E
TX Gem	2454856.960		-0.027	12503	vis	24	Hsk	28SC
AC Gem	2454857.2300		-0.2847	9879	V	513	Ioh	30SC+DSI-ProII
LO Gem	2454864.0143	*13	-0.0028	1056	V	420	Ioh	30SC+DSI-ProII
V367 Gem	2455187.0929				Rc	498	Siz	35SC+ST-9E
V367 Gem	2455188.1429	*1			Rc	590	Siz	35SC+ST-9E
V728 Her	2454963.1883	*38	+0.0618	17003	Rc	191	Njh	20SC+CV-04
V1005 Her	2454931.2168	*31	+0.0139	15437	Ic	229	Njh	25SC+CV-04
V1073 Her	2454961.245	*39	+0.017	10924	V	113	Ioh	30SC+DSI-ProII
V1073 Her	2454976.9886	*1*39	+0.0162	10977.5	V	333	Siz	35SC+ST-9E
V1073 Her	2454977.1351	*39	+0.0156	10978	V	333	Siz	35SC+ST-9E
V1073 Her	2454977.283	*1*39	+0.016	10978.5	V	333	Siz	35SC+ST-9E
V1073 Her	2454995.0878	*39	+0.0172	11039	V	53	Siz	35SC+ST-9E
u Her	2454994.187	*1	+0.012	23970.5	vis	40	Kit	5B
u Her	2455032.094		-0.025	23989	vis	28	Kit	5B
VY Hya	2454852.1961		-0.1084	15649	V	116	Njh	20SC+CV-04
AV Hya	2454851.2052		-0.0923	26599	V	347	Ioh	30SC+DSI-ProII
DM Hya	2454846.2233		+0.1951	30079	V	195	Njh	20SC+CV-04
DM Hya	2454848.1943	*1	+0.1990	30081.5	V	147	Njh	20SC+CV-04
EU Hya	2454863.2255		-0.0314	26647	V	111	Njh	20SC+CV-04
GK Hya	2454873.0318	*1	+0.0088	11124.5	Ic	58	Nga	10L+CV-04
QY Hya	2454843.3046	*1*4	-0.0228	21697.5	Ic	226	Njh	20SC+CV-04
VX Lac	2455158.928		+0.072	9214	vis	22	Hsk	28SC
AR Lac	2455099.175		-0.075	6810	vis	44	Kit	7B
AR Lac	2455115.041		-0.075	6818	vis	37	Kit	7B
AR Lac	2455116.012	*1	-0.095	6818.5	vis	32	Kit	7B
AR Lac	2455117.987	*1	-0.103	6819.5	vis	36	Kit	7B
ES Lac	2455070.1665		+0.1313	4671	V	424	Ioh	30SC+DSI-ProII
PP Lac	2455155.10		-0.05	23830	Rc	98	Siz	35SC+ST-9E
PP Lac	2455156.9051	*1	-0.0524	23834.5	Rc	279	Siz	35SC+ST-9E
UV Leo	2454834.171	*1	+0.029	27318.5	vis	34	Kit	12B
UV Leo	2455155.222	*1	+0.034	27853.5	vis	35	Kit	12B
UV Leo	2455186.123		+0.031	27905	vis	29	Kit	12B
UX Leo	2454924.0687		-0.3191	17423	Rc	163	Nga	20SC+SV-04LE
AM Leo	2454905.0898	*1	+0.0121	33930.5	C	185	Nga	8R+DSI-Pro
AP Leo	2454848.179		-0.056	35579	vis	31	Kit	12B
AP Leo	2454851.204		-0.044	35586	vis	31	Kit	12B
AP Leo	2454857.242		-0.031	35600	vis	38	Kit	12B
AP Leo	2454864.115		-0.043	35616	vis	32	Kit	12B
AP Leo	2454866.279		-0.031	35621	vis	27	Kit	12B
AP Leo	2454868.218	*1	-0.029	35625.5	vis	33	Kit	12B
AP Leo	2454879.186		-0.035	35651	vis	24	Kit	12B
AP Leo	2454884.133	*1	-0.037	35662.5	vis	31	Kit	12B
AP Leo	2454897.0458	*1	-0.0348	35692.5	Ic	77	Nga	10L+CV-04
DO Leo	2454907.0588	*20	+0.0064	10263	C	132	Njh	25SC+CV-04

star	min.		O-C	E		n	obs.	inst.
RR Lep	2454862.9979		-0.0322	26748	Rc	242	Njh	25SC+CV-04
VZ Lib	2454920.2831	*1	-0.1734	28280.5	V	183	Njh	20SC+CV-04
VZ Lib	2454951.0928	*1	-0.1743	28366.5	Ic	97	Nga	10L+CV-04
ES Lib	2454953.0728	*1	+0.0949	16560.5	Ic	115	Nga	10L+CV-04
GI Lib	2454924.2691	*28	+0.0141	1440	V	151	Njh	20SC+CV-04
delta Lib	2454951.182		-0.047	5152	vis	39	Kit	7B
delta Lib	2454965.157		-0.036	5158	vis	37	Kit	7B
SW Lyn	2455189.2405		+0.0626	17411	V	412	Ioh	30SC+DSI-ProII
BG Lyn	2454846.1378	*11	-0.0002	1955	V	559	Ioh	30SC+DSI-ProII
beta Lyr	2455060.0		-0.7	3625	vis		vsolj	
beta Lyr	2455066.1	*1	-0.9	3625.5	vis		vsolj	
beta Lyr	2455072.8		-0.7	3626	vis		vsolj	
beta Lyr	2455079.6	*1	-0.4	3626.5	vis		vsolj	
beta Lyr	2455085.3		-1.1	3627	vis		vsolj	
beta Lyr	2455091.7	*1	-1.2	3627.5	vis		vsolj	
RW Mon	2454879.958		-0.069	11122	vis	20	Hsk	28SC
RW Mon	2455183.0256		-0.0703	11281	Rc	364	Siz	35SC+ST-9E
CK Mon	2454865.0891		+0.1939	14372	V	204	Ioh	30SC+DSI-ProII
CP Mon	2454847.1044		+0.0155	15324	V	176	Njh	20SC+CV-04
DD Mon	2454848.0787	*1	+0.1546	43179.5	Rc	152	Nga	20SC+SV-04LE
DD Mon	2455184.0630		+0.1598	43771	Rc	251	Kis	20SC+DSI-ProIII
HI Mon	2454856.0266		-0.0043	15587	V	288	Njh	20SC+CV-04
HI Mon	2455185.0739		-0.0135	15796	Rc	173	Nga	20SC+SV-04LE
IZ Mon	2454844.0755	*1	-0.1165	35264.5	Ic	220	Njh	20SC+CV-04
V384 Mon	2454845.1398		-0.0374	17949	V	263	Njh	20SC+CV-04
V442 Mon	2454846.1679		+0.0344	13161	V	124	Njh	20SC+CV-04
V442 Mon	2454857.0118	*1	+0.0428	13167.5	Rc	131	Nga	20SC+SV-04LE
V714 Mon	2454844.1921	*7	-0.0048	6804	V	318	Ioh	30SC+DSI-ProII
V753 Mon	2455188.0687	*1*63	+0.2959	9877.5	V	455	Kis	20SC+DSI-ProIII
U Oph	2454960.174		-0.010	6286	vis	30	Kit	7B
U Oph	2454965.191		-0.025	6289	vis	42	Kit	7B
U Oph	2455028.103	*1	-0.014	6326.5	vis	19	Kit	7B
V508 Oph	2454971.1640		-0.0173	28680	V	240	Siz	35SC+ST-9E
V508 Oph	2454972.1985		-0.0171	28683	V	343	Siz	35SC+ST-9E
V566 Oph	2454995.0643		+0.1541	32123	Rc	88	Nga	20SC+SV-04LE
V2383 Oph	2454977.0861	*1*40	-0.0040	5761.5	Ic	93	Nga	10L+CV-04
V2610 Oph	2454954.1964		+0.0223	6059	Ic	94	Nga	10L+CV-04
V2612 Oph	2454994.0479		+0.0845	6766	Ic	72	Nga	10L+CV-04
VV Ori	2454838.113		-0.106	9390	vis	50	Kit	5B
VV Ori	2455141.187		-0.049	9594	vis	37	Kit	5B
VV Ori	2455173.086	*1	-0.086	9615.5	vis	32	Kit	5B
ER Ori	2455151.1239		+0.0842	31943	Rc	188	Siz	35SC+ST-9E
ER Ori	2455154.0883		+0.0848	31950	V	172	Kis	20SC+DSI-ProIII
ER Ori	2455172.0824	*1	+0.0845	31992.5	Ic	98	Nga	10L+CV-04
ER Ori	2455173.146		+0.090	31995	vis	36	Kit	12B
ER Ori	2455183.103	*1	+0.097	32018.5	vis	33	Kit	12B
ER Ori	2455187.114		+0.085	32028	vis	34	Kit	12B
ER Ori	2455194.107	*1	+0.092	32044.5	vis	19	Kit	12B
FR Ori	2454845.0140	*1	+0.0428	30552.5	Rc	126	Nga	20SC+SV-04LE
FT Ori	2454848.2258		+0.0142	4285	V	239	Ioh	30SC+DSI-ProII
GU Ori	2454846.0629	*1			Ic	164	Njh	20SC+CV-04
V392 Ori	2455135.1764	*1	+0.0038	44940.5	Rc	346	Siz	35SC+ST-9E
V392 Ori	2455136.1637		+0.0022	44942	Rc	314	Siz	35SC+ST-9E
V1363 Ori	2455126.1520	*52	+0.1097	15341	V	187	Kis	20SC+E47+
V1633 Ori	2454848.0515	*5	-0.0020	2042	Ic	196	Njh	20SC+CV-04
BX Peg	2455061.0300		-0.0923	38748	V	328	Siz	35SC+ST-9E

star	min.		O-C	E		n	obs.	inst.
BX Peg	2455061.1705	*1	-0.0920	38748	V	328	Siz	35SC+ST-9E
BX Peg	2455082.0685		-0.0853	38823	V	83	Siz	35SC+ST-9E
ER Peg	2455184.9465		+0.0079	1180	V	295	Ioh	30SC+DSI-ProII
RT Per	2455192.1224		+0.0663	25684	Rc	435	Siz	35SC+ST-9E
IZ Per	2455139.070		-0.013	2864	vis	48	Kit	12B
V432 Per	2455139.1288	*49	+0.0388	17056	Rc	327	Siz	35SC+ST-9E
V432 Per	2455141.2376	*1*49	+0.0394	17061.5	Rc	374	Siz	35SC+ST-9E
V680 Per	2454838.0219	*3	+0.0669	8791	C	286	Njh	20SC+CV-04
V680 Per	2454843.0732	*1*3	+0.0695	8804.5	C	166	Njh	25SC+CV-04
beta Per	2454837.032		+0.074	3207	vis	10	Tcy	2B
beta Per	2454837.041		+0.083	3207	vis	9	Nto	N
beta Per	2454839.9189		+0.0932	3208	V	192	Kis	50mmlens+DSI-Pro-III
beta Per	2455095.121		+0.105	3297	vis	29	Mdy	3BN
beta Per	2455115.199		+0.112	3304	vis	38	Kit	5BN
beta Per	2455184.003		+0.101	3328	vis	11	Iak	5B
beta Per	2455183.998		+0.096	3328	C	12	Iak	50mmlens+EOSKiss
RV Psc	2454847.9142	*1	-0.0486	54994.5	Rc	127	Njh	20SC+CV-04
SU Psc	2455124.1408		-0.3049	10860	Rc	225	Siz	35SC+ST-9E
UV Psc	2454845.9623	*1	-0.0161	13285.5	V	158	Njh	20SC+CV-04
UV Psc	2455143.0244	*1	-0.0156	13630.5	Rc	469	Nga	20SC+SV-04LE
UW Psc	2454843.9368		+0.2635	11569	V	153	Njh	20SC+CV-04
VZ Psc	2455100.0354	*1	+0.1132	43140.5	Ic	41	Nga	10L+CV-04
VZ Psc	2455115.9718	*1	+0.1172	43201.5	Ic	47	Nga	10L+CV-04
VZ Psc	2455117.9310		+0.1175	43209	Ic	69	Nga	10L+CV-04
VZ Psc	2455120.937	*1	+0.120	43220.5	Ic	58	Nga	10L+CV-04
VZ Psc	2455122.894		+0.118	43228	Ic	101	Nga	10L+CV-04
VZ Psc	2455123.937		+0.116	43232	Ic	58	Nga	10L+CV-04
VZ Psc	2455142.883	*1	+0.126	43304.5	Ic	23	Nga	10L+CV-04
AQ Psc	2454848.9155	*8	-0.0189	4938	Ic	240	Njh	20SC+CV-04
DV Psc	2455091.2099	*45	+0.0442	10388	V	89	Siz	35SC+ST-9E
DV Psc	2455116.0504	*1*45	+0.0474	10468.5	Rc	411	Siz	35SC+ST-9E
DV Psc	2455118.0548	*45	+0.0463	10475	Rc	268	Siz	35SC+ST-9E
DV Psc	2455139.1905	*1*45	+0.0471	10543.5	V	447	Ioh	30SC+DSI-ProII
DV Psc	2455143.9702	*45	+0.0445	10559	V	164	Ioh	30SC+DSI-ProII
DZ Psc	2454846.9806				V	180	Njh	20SC+CV-04
TY Pup	2455178.241		+0.166	25348	vis	33	Kit	12B
TY Pup	2455183.170		+0.180	25354	vis	37	Kit	12B
TY Pup	2455185.210	*1	+0.172	25356.5	vis	46	Kit	12B
UZ Pup	2454864.0945		-0.0049	12896	Rc	135	Nga	20SC+SV-04LE
AY Pup	2454863.0902		-0.0704	30307	V	221	Njh	20SC+CV-04
V1055 Sco	2454917.3020	*26	+0.0185	17645	V	294	Njh	25SC+CV-04
Y Sex	2454907.9998		-0.0013	31303	Rc	158	Nga	20SC+SV-04LE
Y Sex	2454919.9589	*1	-0.0072	31331.5	Ic	52	Nga	10L+CV-04
VY Sex	2454907.0676	*19	+0.0126	5428	Ic	85	Nga	10L+CV-04
WZ Sex	2454910.9753		-0.0399	2066	Ic	53	Nga	10L+CV-04
U Sge	2455087.995		-0.010	11228	vis	31	Hsk	28SC
V4727 Sgr	2455062.0160				C	50	Kis	10R+STL-11000M
V4727 Sgr	2455071.0042				C	54	Kis	14R+STL-11000M
RZ Tau	2455164.0600		+0.0584	42070	Rc	330	Siz	35SC+ST-9E
RW Tau	2454870.973		-0.228	3318	vis	34	Hsk	28SC
RW Tau	2455142.313		-0.233	3416	vis	22	Hsk	28SC
AH Tau	2455133.1085		-0.1282	72355	Rc	374	Siz	35SC+ST-9E
AH Tau	2455133.2746	*1	-0.1284	72355.5	Rc	374	Siz	35SC+ST-9E
CD Tau	2455133.244		+0.008	3934	vis	29	Kit	7B
CD Tau	2455183.065	*1	+0.019	3948.5	vis	35	Kit	7B
EQ Tau	2455142.0049		+0.1455	43734	Rc	449	Siz	35SC+ST-9E

star	min.		O-C	E	n	obs.	inst.	
EQ Tau	2455142.1754	*1	+0.1453	43734.5	Rc	449	Siz	35SC+ST-9E
EQ Tau	2455142.345		+0.144	43735	Rc	449	Siz	35SC+ST-9E
GR Tau	2455143.1415		-0.0386	24590	Rc	327	Siz	35SC+ST-9E
GR Tau	2455161.1964		-0.0375	24632	Rc	91	Siz	35SC+ST-9E
V781 Tau	2454852.0113		-0.0484	31826	V	603	Njh	25SC+CV-04
V1128 Tau	2455186.0426	*1*62	-0.0129	21894.5	V	759	Ioh	30SC+DSI-ProII
V1128 Tau	2455186.1955	*62	-0.0127	21895	V	759	Ioh	30SC+DSI-ProII
V1130 Tau	2455182.0444	*57	-0.0316	8364	Rc	151	Nga	20SC+SV-04LE
lambdaTau	2455178.081		+0.021	8518	vis	29	Kit	5B
RS Tri	2455158.9446		-0.0345	9020	V	170	Ioh	30SC+DSI-ProII
ST Tri	2454838.0171		-0.0521	33008	C	286	Njh	20SC+CV-04
ST Tri	2454843.0468	*1	-0.0525	33018.5	C	166	Njh	25SC+CV-04
W UMa	2454846.1222	*1	-0.0611	27216.5	V	234	Wth	CCD
W UMa	2455185.2627		-0.0631	28233	V	463	Ioh	6R+DSI-ProII
TX UMa	2454871.150		+0.186	3223	vis	23	Mdy	10B
UX UMa	2454902.1485		+0.0017	88825	Rc	154	Njh	25SC+CV-04
UX UMa	2454963.1172		+0.0023	89135	V	242	Njh	25SC+CV-04
XY UMa	2454906.0877		+0.0351	41106	V	342	Ioh	30SC+DSI-ProII
XY UMa	2455187.2580		+0.0356	41693	V	590	Ioh	30SC+DSI-ProII
XZ UMa	2455195.1576		-0.1016	7385	Rc	599	Siz	35SC+ST-9E
AA UMa	2454911.1601		-0.1968	30433	V	408	Ioh	30SC+DSI-ProII
BG UMa	2454902.1697		-0.1624	28446	Rc	297	Njh	20SC+CV-04
IY UMa	2454936.9630				C	333	Njh	20SC+CV-04
IY UMa	2454937.0368				C	333	Njh	20SC+CV-04
HN UMa	2454961.0448	*36	-0.1346	16887	Rc	232	Njh	20SC=CV-04
W UMi	2455132.059		-0.160	12609	vis	37	Kit	12B
AX Vir	2454845.3330		+0.0118	38824	V	118	Njh	20SC+CV-04
AZ Vir	2454863.3427		-0.0205	31135	Rc	116	Njh	20SC+CV-04
AZ Vir	2454908.2760	*1	-0.0192	31263.5	Rc	192	Njh	20SC+CV-04
BD Vir	2454863.2867		+0.1488	4836	V	184	Njh	25SC+CV-04
FQ Vir	2454848.3409	*6	+0.0014	3132	V	154	Njh	20SC+CV-04
FQ Vir	2454954.0365	*6	+0.0029	3273	Ic	49	Nga	10L+CV-04
GR Vir	2454951.1149	*33	-0.0279	26761	Rc	150	Nga	20SC+SV-04LE
GR Vir	2454954.0645	*1*33	-0.0276	26769.5	Rc	149	Nga	20SC+SV-04LE
GR Vir	2454961.0042	*33	-0.0275	26789.5	Rc	91	Nga	20SC+SV-04LE
GR Vir	2454966.0335	*1*33	-0.0294	26804	Ic	100	Nga	10L+CV-04
GR Vir	2454966.0343	*33	-0.0286	26804	Rc	154	Nga	20SC+SV-04LE
GR Vir	2454976.9647	*33	-0.0280	26835.5	Ic	89	Nga	10L+CV-04
GR Vir	2454978.0003	*33	-0.0333	26838.5	Ic	59	Nga	10L+CV-04
HW Vir	2454835.2624	*2	-0.0051	78005	Rc	288	Njh	20SC+CV-04
HW Vir	2454835.2624	*1*2	-0.0050	78005.5	Rc	288	Njh	20SC+CV-04
HW Vir	2454856.2140	*1*2	-0.0047	78184.5	B	116	Njh	20SC+CV-04
HW Vir	2454856.2719	*2	-0.0051	78185	B	116	Njh	20SC+CV-04
HW Vir	2454906.0529	*1*2	-0.0050	78611.5	Ic	112	Nga	10L+CV-04
HW Vir	2454906.1115	*2	-0.0048	78612	Ic	112	Nga	10L+CV-04
HW Vir	2454965.9881	*2	-0.0053	79125	V	257	Siz	35SC+ST-9E
HW Vir	2454966.0466	*1*2	-0.0052	79125.5	V	257	Siz	35SC+ST-9E
HW Vir	2454966.1049	*2	-0.0053	79126	V	257	Siz	35SC+ST-9E
LU Vir	2454950.0381	*1*32	-0.0812	13102.5	Ic	89	Nga	10KL+CV-04
NY Vir	2454911.1595	*1*23	-0.0008	46406.5	V	158	Njh	25SC+CV-04
NY Vir	2454911.2096	*23	-0.0012	46407	V	158	Njh	25SC+CV-04
NY Vir	2454916.1594	*23	-0.0012	46456	Rc	180	Njh	25SC+CV-04
NY Vir	2454916.2098	*1*23	-0.0013	46456	Rc	180	Njh	25SC+CV-04
NY Vir	2454917.1693	*23	-0.0014	46466	B	143	Njh	25SC+CV-04
NY Vir	2454917.2192	*1*23	-0.0021	46466.5	B	143	Njh	25SC+CV-04
PY Vir	2454948.0150	*1	-0.0172	9629.5	Ic	98	Nga	10L+CV-04

star	min.		O-C	E		n	obs.	inst.
ASAS012951+0536.7	2455159.0031	*54	+0.1199	6901	Rc	90	Nga	20SC+SV-04LE
ASAS015937-0331.0	2455158.9589	*1*55	-0.0094	5153.5	Ic	80	Nga	10L+CV-04
ASAS022014-0252.0	2455072.1911	*1*44	+0.0058	4923.5	Ic	219	Kis	20SC+E47+
ASAS022014-0252.0	2455171.9114	*1*44	-0.0102	5078.5	Rc	184	Nga	20SC+SV-04LE
ASAS034703-0704.2	2455183.0199	*1*58	-0.0211	8771.5	Rc	125	Nga	20SC+SV-04LE
ASAS034931-0431.2	2455188.9853	*60	+0.1011	6912	Rc	103	Nga	20SC+SV-04LE
ASAS051153-0428.6	2454841.9968	*1*9	+0.0243	4030.5	Rc	157	Nga	20SC+SV-04LE
ASAS051617-0019.8	2454844.0251	*10	+0.0006	7815	Rc	164	Nga	20SC+SV-04LE
ASAS061056-0722.2	2455185.109	*59	+0.110	8667	Ic	84	Nga	10L+CV-04
ASAS061056-0722.2	2455186.0681	*1*59	+0.1129	8669.5	Ic	83	Nga	10L+CV-04
ASAS070223+0414.3	2454871.0332	*16	+0.0150	6900	Rc	141	Nga	20SC+SV-04LE
ASAS084207-0108.5	2454870.0542	*17	-0.0018	4926	Ic	64	Nga	10L+CV-04
ASAS093547-1335.2	2454883.0342	*18	+0.0053	8585	Ic	69	Nga	10L+CV-04
ASAS095556+0215.5	2454908.9908	*22	+0.0245	5227	Rc	130	Nga	20SC+SV-04LE
ASAS105708-0616.4	2454908.0136	*21	-0.0475	3677.5	Ic	110	Nga	10L+CV-04
ASAS110951-0931.7	2454924.0156	*1*27	-0.0056	7611.5	Ic	82	Nga	10L+CV-04
ASAS111636-0154.2	2454931.9837	*1*30	+0.0063	4867.5	Ic	69	Nga	10L+CV-04
ASAS113837-1933.5	2454930.9847	*1*29	+0.0089	5729.5	Ic	35	Nga	10L+CV-04
ASAS121628-0541.6	2454940.9949	*1*32	+0.0171	6331.5	Ic	102	Nga	10L+CV-04
ASAS220425-0603.4	2455081.9795	*43	-0.0266	4411	Ic	49	Nga	10L+CV-04
ASAS223616+0600.9	2455122.9135	*1*47	+0.1544	10488.5	Rc	114	Nga	20SC+SV-04LE
ASAS223707+0252.5	2455098.9705	*46	-0.0100	5393	Rc	185	Nga	20SC+SV-04LE

#### Observers

Eni	Entani Daiki
Hsk	Hirosawa Kenji
Iak	Kazuyoshi Imamura
Ioh	Itoh Hiroshi
Kis	Kiyota Seiichiro
Kit	Kanai Kiyotaka
Kso	Kusunoki Hiroshi
Mdy	Maeda Yutaka
Nga	Nagai Kazuo
Njh	Nakajima Kazuhiro
Nto	Naito Ryosuke
Nyu	Nakamura Yuuki
Siz	Shiokawa Kazuhiko
Tcy	Tsuchiyama Yukiko
vsolj	variable star observers league in Japan
Wth	Watanabe Hiroshi
Yda	Yamada Masahiro
Yto	Yoda Tomoaki

## Remarks

- \*1 secondary minimum
- \*2 min=2445730.5565+0.116719582xE (Cakirli and Devlen (1999))
- \*3 min=2451550.3118+0.3739783xE (IBVS5287)
- \*4 min=2448500.2490+0.2923390xE (Hipparcos catalog)
- \*5 min=2452501.0075+1.1493859xE (J.M.Kreiner, 2004, AA 54)
- \*6 min=2452500.5810+0.7496036xE (J.M.Kreiner, 2004, AA 54)
- \*7 min=2452500.1665+0.3445077xE (J.M.Kreiner, 2004, AA 54)
- \*8 min=2452500.3638+0.4756117xE (J.M. Kreiner, 2004, AA 54)
- \*9 min=2451869.64+0.73746xE (ASAS-3 catalog)
- \*10 min=2451869.87+0.38057xE (ASAS-3 catalog)
- \*11 min=2452500.4531+1.1998388xE (J.M. Kreiner, 2004, AA 54)
- \*12 min=2448500.6581+0.918235xE (Hipparcos catalog)
- \*13 min=2452500.914+2.237787xE (J.M. Kreiner, 2004, AA 54)
- \*14 min=2452623.032+0.281414xE (ASAS-3 catalog)
- \*15 min=2448500.718+0.9443xE (Hipparcos catalog)
- \*16 min=2452374.06+0.361878xE (ASAS-3 catalog)
- \*17 min=2451870.92+0.608838xE (ASAS-3 catalog)
- \*18 min=2451869.05+0.351075xE (ASAS-3 catalog)
- \*19 min=2452500.1065+0.44343192xE (Gazeas,K.D. et. al., 2006AcA,56,127G)
- \*20 min=2452500.2270+0.2345148xE (J.M. Kreiner, 2004, AA 54)
- \*21 min=2451871.77+0.82564xE (ASAS-3 catalog)
- \*22 min=2451914.81+0.572825xE (ASAS-3 catalog)
- \*23 min=2450223.36134+0.101015999xE (Kilkenny et al. 2000)
- \*24 min=2450182.4799+0.3448733xE (IBVS4601)
- \*25 min=2451260.7047+0.241168xE (IBVS5038)
- \*26 min=2448500.2734+0.363673xE (Hipparcos catalog)
- \*27 min=2451870.98+0.401109xE (ASAS-3 catalogue)
- \*28 min=2451915.303+2.08955xE (IBVS5652)
- \*29 min=2451874.15+0.533524xE (ASAS-3 catalogue)
- \*30 min=2451871.05+0.62885xE (ASAS-3 catalogue)
- \*31 min=2450624.7430+0.27897xE (IBVS4504)
- \*32 min=2448500.4530+0.492247xE (Hipparcos catalog)
- \*33 min=2445665.6415+0.34697886xE (IBVS5300)
- \*34 min=2450534.6410+1.09172xE (IBVS4526)
- \*35 min=2448500.2630+0.3067180xE (Hipparcos catalog)
- \*36 min=2448500.0781+0.382608xE (Hipparcos catalog)
- \*37 min=2450186.398+0.4068974xE (IBVS4386)
- \*38 min=2446949.8370+0.4712868xE (IBVS3234)
- \*39 min=2451746.5126+0.2942801xE (IBVS4975)
- \*40 min=2452083.640+0.5022043xE (IBVS5480)
- \*41 min=2451996.4139+0.301601xE (IBVS5125)
- \*42 min=2448500.516+0.52169xE (Hipparcos catalog)
- \*43 min=2451873.974+0.72728xE (ASAS-3 catalog)
- \*44 min=2451904.110+0.64346xE (ASAS-3 catalog)
- \*45 min=2451886.073+0.308538xE (ASAS3 Catalog)
- \*46 min=2451872.78+0.59822xE (ASAS-3 catalog)
- \*47 min=2451877.785+0.309384xE (ASAS-3 catalog)
- \*48 min=2451868.898+0.256486xE (ASAS-3 catalog)
- \*49 min=2448601.3743+0.38330885xE (IBVS3797)
- \*50 min=2452500.1242+0.3085357xE (J.M. Kreiner, 2004, AA 54)
- \*51 min=2451501.10674970+0.5272429xE (IBVS4937)
- \*52 min=2448500.0343+0.431915xE (Hipparcos catalog)
- \*53 min=2442250.757+5.712xE (IBVS5542)
- \*54 min=2451901.28+0.472048xE (ASAS-3 catalog)
- \*55 min=2451904.43+0.631520xE (ASAS-3 catalog)
- \*56 min=2451975.6040+0.4341474xE (IBVS5132)
- \*57 min=2448500.319+0.798871xE (Hipparcos catalog)
- \*58 min=2451869.87+0.37772xE (ASAS-3 catalog)
- \*59 min=2451869.36+0.382559xE (ASAS-3 catalog)
- \*60 min=2451869.88+0.48018xE (ASAS-3 catalog)

Remarks(continued)

\*61 min=2449030.430+1.323147xE (IBVS3859)

\*62 min=2448500.062+0.3053732xE (Hipparcos catalog)

\*63 min=2448500.2213+0.677049xE (Hipparcos catalog)

Errata of VSOLJ variable star bulletin No.48

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Correction of error \*

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Variable Star Bulletin, No.48 (2009) \*

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error

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