

Variable Star Bulletin

Visual and CCD minima of eclipsing binaries during 2010

Kazuo Nagai

E-mail: PXS10547@nifty.ne.jp

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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	2455402.2276		+0.0458	6329	cG *50	39	Hsk	EosKissX3
RT And	2455473.2966		+0.0467	6442	C	44	Kai	28SC+ST-7XME
RT And	2455478.3275		+0.0462	6450	C	40	Kai	28SC+ST-7XME
RT And	2455528.0113		+0.0452	6529	cG	52	Hsk	EosKissX3
TW And	2455527.9602		-0.0559	445	cG	71	Hsk	EosKissX3
AB And	2455443.1012	*1	-0.0039	8867.5	V	505	Ioh	30SC+DSI-ProII
AB And	2455443.2661		-0.0050	8868	V	505	Ioh	30SC+DSI-ProII
AB And	2455517.9427		-0.0039	9093	vG	51	Hsk	EosKissX3
AP And	2455497.0176		+0.0002	1888	Rc	211	Siz	35SC+ST-9E
BX And	2455506.9706		-0.0062	4928	cG	67	Hsk	EosKissX3
DS And	2455519.1069		+0.0038	2987	V	561	Ioh	30SC+DSI-ProII
LO And	2455431.1742		-0.0069	7704	V	476	Ioh	30SC+DSI-ProII
LO And	2455438.2118	*1	-0.0075	7722.5	V	419	Ioh	30SC+DSI-ProII
LO And	2455441.0662		-0.0064	7730	Rc	432	Siz	35SC+ST-9E
LO And	2455441.2561	*1	-0.0067	7730.5	Rc	432	Siz	35SC+ST-9E
V404 And	2455444.1131	*1	+0.0125	4354.5	Rc	290	Siz	35SC+ST-9E
V404 And	2455560.0522		+0.0119	4526	V	563	Ioh	30SC+DSI-ProII
S Ant	2455198.179	*1	+0.003	3964.5	vis	39	Kit	8B
S Ant	2455213.106	*1	+0.018	3987.5	vis	31	Kit	8B
OO Aql	2455396.0751		+0.0456	33116	Rc	122	Nga	20SC+SV-04LE
V829 Aql	2455324.2415		-0.0265	10486	Rc	205	Siz	35SC+ST-9E
V829 Aql	2455438.0313		-0.1088	10580	Rc	318	Siz	35SC+ST-9E
V1542 Aql	2455414.0336	*28	+0.0101	7258	Rc	114	Nga	20SC+SV-04LE
V1695 Aql	2455405.0525		+0.0301	6983	Rc	113	Nga	20SC+SV-04LE
ST Aqr	2455457.0220	*1	-0.0028	3785.5	Ic	108	Nga	10L+CV-04
EK Aqr	2455453.1351		+0.0076	3512	Rc	366	Siz	35SC+ST-9E
HS Aqr	2455431.9938	*1	+0.0001	4127.5	Ic	73	Nga	10L+CV-04
HV Aqr	2455426.0393	*1	-0.0069	7813.5	Rc	144	Nga	20SC+SV-04LE
HV Aqr	2455435.0242	*1	-0.0090	7837.5	Rc	121	Nga	20SC+SV-04LE
MO Aqr	2455433.0301	*1	+0.0064	8626.5	Ic	49	Nga	10L+CV-04
MO Aqr	2455434.0405		+0.0214	8629	Ic	107	Nga	10L+CV-04

star	min.		O-C	E		n	obs.	inst.
MO Aqr	2455435.0385	*1	+0.0241	8631.5	Ic	113	Nga	10L+CV-04
MO Aqr	2455438.0277		+0.0272	8639	Ic	101	Nga	10L+CV-04
MO Aqr	2455443.9990		+0.0264	8654	Ic	96	Nga	10L+CV-04
MU Aqr	2455413.0656	*1	+0.0034	10700.5	Rc	88	Nga	20SC+SV-04LE
OO Aqr	2455426.0430	*1	+0.0271	5452.5	Ic	97	Nga	10L+CV-04
SS Ari	2455442.2340	*1	-0.0066	7246.5	V	266	Ioh	30SC+DSI-ProII
SS Ari	2455502.112		-0.011	7394	V	469	Ioh	30SC+DSI-ProII
WW Aur	2455519.211		-0.001	1195	vis	37	Kit	7B
WW Aur	2455524.269		+0.007	1197	vis	25	Kit	7B
AR Aur	2455505.227	*1	+0.011	726.5	vis	31	Kit	7B
AR Aur	2455530.024	*1	+0.000	732.5	vis	33	Kit	7Band8B
AR Aur	2455532.100		+0.009	733	vis	31	Kit	7B
AH Aur	2455519.1209	*1	+0.1315	38488.5	Rc	391	Siz	35SC+ST-9E
HL Aur	2455248.944		-0.005	4415	vis	21	Hsk	28SC
HL Aur	2455547.1245		-0.0041	4894	Rc	382	Siz	35SC+ST-9E
V355 Aur	2455512.2082		-0.1518	240	Rc	525	Siz	35SC+ST-9E
TZ Boo	2455270.1686		+0.0680	52622	Rc	466	Siz	35SC+ST-9E
TZ Boo	2455270.3174	*1	+0.0683	52622.5	Rc	466	Siz	35SC+ST-9E
UW Boo	2455304.1869		+0.0029	2791	Rc	230	Siz	35SC+ST-9E
UW Boo	2455542.304		+0.004	3028	cG	47	Hsk	EosKissX3
GN Boo	2455338.0110	*23	-0.1420	11080	V	239	Ioh	30SC+DSI-ProII
GN Boo	2455338.1611	*1*23	-0.1427	11080.5	V	239	Ioh	30SC+DSI-ProII
GS Boo	2455251.2096	*9	-0.0056	2189	Rc	304	Siz	35SC+ST-9E
HH Boo	2455542.3265		-0.0002	9546	cG	44	Hsk	EosKissX3
WW Cam	2455200.1340	*1	-0.0382	6515.5	Rc	468	Siz	35SC+ST-9E
AK Cam	2455207.9916		-0.2068	6149	Rc	250	Siz	35SC+ST-9E
AL Cam	2455223.0417		-0.0317	21690	Rc	643	Siz	35SC+ST-9E
AT Cam	2455549.2324	*1	-0.1199	21127.5	Rc	516	Siz	35SC+ST-9E
LR Cam	2455245.9785	*7	-0.0579	7533	Rc	560	Siz	35SC+ST-9E
LR Cam	2455246.1948	*1*7	-0.0586	7533.5	Rc	560	Siz	35SC+ST-9E
BQ Cap	2455448.983	*1*31	-0.015	4713.5	Ic	56	Nga	10L+CV-04
CM Cap	2455413.9798		-0.0102	8200	Ic	122	Nga	10L+CV-04
RZ Cas	2455203.043		+0.066	10042	vis	25	Ssh	7B
RZ Cas	2455203.044		+0.068	10042	vis	26	Ngi	7B
RZ Cas	2455203.045		+0.069	10042	vis	23	Kau	7B
RZ Cas	2455203.046		+0.070	10042	vis	27	Sza	7B
RZ Cas	2455220.967		+0.062	10057	vis	25	Hsk	5F
RZ Cas	2455234.1131		+0.0600	10068	cG	28	Kun	NikonD40
RZ Cas	2455400.2542		+0.0618	10207	cG	52	Hsk	EosKissX3
RZ Cas	2455412.208		+0.063	10217	vis	49	Imi	
RZ Cas	2455412.212		+0.067	10217	vis	51	Ngi	
RZ Cas	2455418.167		+0.046	10222	vis	20	Nkn	7B
RZ Cas	2455418.170		+0.049	10222	vis	31	Nin	7B
RZ Cas	2455418.174		+0.053	10222	vis	24	Kau	7B
RZ Cas	2455418.176		+0.055	10222	vis	35	Sim	7B
RZ Cas	2455418.179		+0.058	10222	vis	27	Mod	7B
RZ Cas	2455418.179		+0.058	10222	vis	31	Imi	7B
RZ Cas	2455418.180		+0.059	10222	vis	16	Kmo	7B
RZ Cas	2455418.180		-0.059	10222	vis	28	Ykg	7B
RZ Cas	2455418.181		+0.060	10222	vis	27	Kei	7B
RZ Cas	2455418.183		+0.062	10222	vis	28	Kta	7B
RZ Cas	2455418.185		+0.064	10222	vis	23	Sza	7B
RZ Cas	2455418.200		+0.079	10222	vis	22	Ngi	7B
RZ Cas	2455504.2436		+0.0647	10294	cG	20	Ium	NikonD80

star	min.		O-C	E		n	obs.	inst.
RZ Cas	2455510.2187		+0.0636	10299	cG	40	Kun	NikonD80
RZ Cas	2455520.977		+0.065	10308	vis	23	Kit	8B
RZ Cas	2455528.14		+0.06	10314	vis	32	Tae	8B
RZ Cas	2455528.144		+0.060	10314	vis	48	Uor	8B
RZ Cas	2455534.125		+0.065	10319	vis	61	Saz	8B
RZ Cas	2455534.127		+0.067	10319	vis	61	Tae	8B
RZ Cas	2455534.129		+0.069	10319	vis	61	Aiy	8B
RZ Cas	2455535.319		+0.064	10320	cG	30	Kun	NikonD40
RZ Cas	2455540.0989		+0.0626	10324	cG	48	Kun	NikonD40
TV Cas	2455485.239		-0.038	6004	vis	39	Mdy	10B
CW Cas	2455451.220	*1	+0.137	43286.5	V	252	Ioh	30SC+DSI-ProII
CW Cas	2455457.2765	*1	+0.1355	43305.5	V	428	Ioh	30SC+DSI-ProII
GU Cas	2455426.177		-0.347	4605	V	175	Ioh	30SC+DSI-ProII
V374 Cas	2455532.0592		-0.0891	24925	Rc	667	Siz	35SC+ST-9E
V381 Cas	2455432.2394		-0.0278	6235	V	461	Ioh	30SC+DSI-ProII
V523 Cas	2455461.0338		+0.0875	60938	Rc	189	Siz	35SC+ST-9E
V523 Cas	2455468.1618	*1	+0.0880	60968.5	Rc	350	Siz	35SC+ST-9E
V523 Cas	2455468.2785		+0.0878	60969	Rc	350	Siz	35SC+ST-9E
V523 Cas	2455498.3079	*1	+0.0880	61097.5	C	49	Kai	28SC+ST7XME
V541 Cas	2455480.2341		+0.3215	18100	V	531	Ioh	30SC+DSI-ProII
V752 Cen	2455218.297		+0.030	29643	vis	23	Kit	12B
V752 Cen	2455221.275		+0.047	29651	vis	23	Kit	12B
V752 Cen	2455223.294	*1	+0.029	29656.5	vis	24	Kit	12B
U Cep	2455521.155		+0.1771	4404	vis	47	Kit	12B
EG Cep	2455436.0345		+0.0139	23579	cG	66	Hsk	EosKissX3
TW Cep	2455504.0119	*1	+0.1327	41440.5	Rc	445	Siz	35SC+ST-9E
TW Cep	2455504.1695	1	+0.1319	41441	Rc	445	Siz	35SC+ST-9E
VV Cet	2455502.9726	*1	+0.1088	46276.5	Ic	58	Nga	10L+CV-04
VY Cet	2455503.077	*1	-0.147	58901.5	Rc	329	Siz	35SC+ST-9E
VY Cet	2455503.2492		-0.1448	58902	Rc	329	Siz	35SC+ST-9E
XY Cet	2455516.042		+0.004	6165	vis	29	Kit	12B
YY Cet	2455533.9592	*40	-0.2811	12999	Ic	66	Nga	10L+CV-04
DY Cet	2455554.8941	*1*42	-0.0445	16004.5	Ic	78	Nga	10L+CV-04
R CMa	2455200.154		+0.085	9605	vis	37	Kit	7B
R CMa	2455224.0134		+0.0892	9626	Ic	49	Nga	10L+CV-04
R CMa	2455510.272		+0.091	9878	vis	30	Kit	7B
R CMa	2455534.143		+0.107	9899	vis	28	Kit	7B
R CMa	2455535.264		+0.092	9900	vis	36	Kit	7B
R CMa	2455551.169		+0.094	9914	vis	37	Kit	7B
RT CMa	2455512.1743		+0.5799	22327	Ic	157	Kis	20SC+E47+
RT CMa	2455560.0425		+0.5785	22364	Ic	263	Kis	20SC+E47+
FZ CMa	2455226.939	*1	-0.273	10592.5	Ic	37	Nga	10L+CV-04
KL CMa	2455530.1043	*1*43	-0.0004	3988.5	V	129	Kis	20SC+E47+
XZ CMi	2455200.1973		-0.0082	22038	V	327	Ioh	30SC+DSI-ProII
XZ CMi	2455232.0337		-0.0063	22093	Rc	55	Nga	10L+CV-04
YY CMi	2455221.0394	*1	+0.0157	24860.5	Rc	70	Nga	10L+CV-04
BF CMi	2455198.2304		-0.1341	9341	V	322	Ioh	30SC+DSI-ProII
BF CMi	2455233.0855	*1	-0.1093	9370.5	Rc	92	Nga	20SC+SV-04LE
BX CMi	2455225.1311	*5	-0.0730	3324	Rc	292	Siz	35SC+ST-9E
RW Com	2455310.0898		-0.0133	64411	Rc	334	Siz	35SC+ST-9E
RW Com	2455310.2089	*1	-0.0128	64411.5	Rc	334	Siz	35SC+ST-9E
LR Com	2455228.1965	*6	-0.0018	3043	Rc	123	Siz	35SC+ST-9E
LR Com	2455267.1851	*1*6	-0.0021	3086.5	Rc	315	Siz	35SC+ST-9E
TW CrB	2455349.0802		+0.0416	29634	V	234	Ioh	30SC+DSI-ProII
AB CrB	2455318.0234	*1	-0.0050	7430.5	Rc	369	Siz	35SC+ST-9E

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AB CrB	2455318.2219		-0.0052	7431	Rc	369	Siz	35SC+ST-9E
AR CrB	2455334.1164		-0.0048	7471	V	259	Ioh	30SC+DSI-ProII
RV Crv	2455219.255	*1	-0.073	18989.5	vis	25	Kit	12B
ZZ Cyg	2455523.9648		-0.0600	16741	cG	43	Hsk	EosKissX3
CG Cyg	2455415.1441		+0.0648	25335	V	473	Ioh	30SC+DSI-ProII
CG Cyg	2455425.2424		+0.0648	25351	cG	40	Hsk	EosKissX3
CV Cyg	2455440.0797		-0.2740	31508	V	538	Ioh	30SC+DSI-ProII
DK Cyg	2455416.1637		+0.0882	37002	V	481	Ioh	30SC+DSI-ProII
DK Cyg	2455461.1168	*1	+0.0903	37097.5	V	309	Ioh	30SC+DSI-ProII
KR Cyg	2455465.0120		+0.0078	31188	V	403	Ioh	30SC+DSI-ProII
V345 Cyg	2455416.1586		+0.5044	12903	Rc	288	Siz	35SC+ST-9E
V1034 Cyg	2455450.0122		-0.0021	12807	cG	61	Hsk	EosKissX3
V1918 Cyg	2455282.1844	*13	-0.1721	20268	Rc	370	Siz	35SC+ST-9E
V1918 Cyg	2455363.9942	*13	-0.1731	20466	Rc	230	Siz	35SC+ST-9E
V1918 Cyg	2455412.1274	*1*13	-0.1760	20582.5	V	493	Ioh	30SC+DSI-ProII
V1918 Cyg	2455413.1612	*13	-0.1752	20585	V	334	Ioh	30SC+DSI-ProII
YY Del	2455442.0010		+0.0109	15739	Rc	251	Siz	35SC+ST-9E
FZ Del	2455430.0072		-0.0392	30778	Rc	100	Nga	20SC+SV-04LE
SX Dra	2455277.2270		+0.0996	2045	Rc	348	Siz	35SC+ST-9E
AI Dra	2455330.136		+0.013	10042	vis	16	Mdy	10B
AI Dra	2455414.063		+0.023	10112	cG	32	Hsk	EosKissX3
BE Dra	2455311.1069		+0.1424	36352	Rc	518	Siz	35SC+ST-9E
BE Dra	2455312.1552		+0.1458	36354	Rc	391	Siz	35SC+ST-9E
BU Dra	2455250.2508	*1*8	+0.0013	717.5	Rc	442	Siz	35SC+ST-9E
BU Dra	2455252.1643	*8	+0.0006	718	Rc	606	Siz	35SC+ST-9E
BV Dra	2455481.3093	*1	-0.0025	31442.5	C	46	Kai	28SC+ST-7XME
BV Dra	2455491.2848		-0.0039	31471	C	70	Kai	28SC+ST-7XME
BW Dra	2455481.264		-0.093	44183	C	46	Kai	28SC+ST-7XME
BW Dra	2455496.3097	*1	-0.0939	44234.5	C	34	Kai	28SC+ST-7XME
RU Eri	2455559.9595	*1	-0.0280	20880.5	Ic	69	Nga	10L+CV-04
YY Eri	2455453.272		+0.140	43147	cG	15	Hsk	EosKissX3
YY Eri	2455487.190	*1	+0.140	43252.5	vis	25	Kit	12B
YY Eri	2455504.071		+0.143	43305	vis	70	Kit	12B
YY Eri	2455504.232	*1	+0.143	43305.5	vis	70	Kit	12B
YY Eri	2455505.193	*1	+0.140	43308.5	vis	59	Kit	12B
YY Eri	2455510.015	*1	+0.139	43323.5	vis	77	Kit	12B
YY Eri	2455510.174		+0.137	43324	vis	77	Kit	12B
YY Eri	2455511.138		+0.137	43327	vis	39	Kit	12B
YY Eri	2455512.1047		+0.139	43330	Ic	69	Nga	10L+CV-04
YY Eri	2455536.0572	*1	+0.1404	43404.5	Ic	43	Nga	10L+CV-04
YY Eri	2455551.0063		+0.1400	43451	Ic	71	Nga	10L+CV-04
BV Eri	2455548.9769	*1	-0.1648	23833.5	Ic	84	Nga	10L+CV-04
FK Eri	2455530.070	*1*38	-0.267	3148.5	Rc	123	Nga	20SC+SV-04LE
FK Eri	2455557.9784	*38	-0.2619	3161	Rc	107	Nga	20SC+SV-04LE
AE For	2455558.0139	*44	-0.1984	7686	V	181	Kis	20SC+E47+
TX Gem	2455248.954		-0.035	12643	vis	25	Hsk	28SC
WW Gem	2455234.9934		+0.0247	23631	Rc	727	Siz	35SC+ST-9E
AF Gem	2455535.2593		-0.0691	22817	V	420	Ioh	30SC+DSI-ProII
GW Gem	2455207.1624		+0.0264	44828	V	538	Ioh	30SC+DSI-ProII
GW Gem	2455255.962		+0.027	44902	vis	19	Hsk	28SC
GW Gem	2455507.2091		+0.0261	45283	Rc	260	Siz	35SC+ST-9E
GW Gem	2455534.2463		+0.0261	45324	V	579	Ioh	30SC+DSI-ProII
GW Gem	2455542.1596		+0.0260	45336	Rc	330	Siz	35SC+ST-9E
LO Gem	2455562.2100	*46	+0.0034	1368	Rc	569	Siz	35SC+ST-9E
Z Her	2455426.0466		-0.0208	10604	cG	49	Hsk	EosKissX3

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V450 Her	2455285.2009		-0.3401	32428	Rc	228	Siz	35SC+ST-9E
V728 Her	2455350.1238	*25	+0.0709	17824	V	161	Ioh	30SC+DSI-ProII
V842 Her	2455290.1430	*14	+0.1343	12200	Rc	648	Siz	35SC+ST-9E
V878 Her	2455275.1686	*12	-0.0343	10109	Rc	451	Siz	35SC+ST-9E
V1055 Her	2455318.9631	*18	+0.0053	10344	Rc	415	Siz	35SC+ST-9E
V1055 Her	2455319.1219	*1*18	+0.0063	10344.5	Rc	415	Siz	35SC+ST-9E
V1055 Her	2455319.2786	*18	+0.0053	10345	Rc	415	Siz	35SC+ST-9E
V1055 Her	2455329.0564	*18	+0.0055	10376	Rc	353	Siz	35SC+ST-9E
V1055 Her	2455329.2146	*1*18	+0.0060	10376.5	Rc	353	Siz	35SC+ST-9E
V1073 Her	2455362.2044	*1*26	+0.0194	12286.5	V	441	Ioh	30SC+DSI-ProII
V1097 Her	2455311.2184		+0.0071	7892	V	255	Ioh	30SC+DSI-ProII
V1097 Her	2455315.0072	*1	+0.0070	7902.5	Rc	186	Siz	35SC+ST-9E
V1097 Her	2455316.0905	*1	+0.0077	7905.5	Rc	208	Siz	35SC+ST-9E
V1097 Her	2455350.0106	*1	+0.0082	7999.5	Rc	432	Siz	35SC+ST-9E
V1097 Her	2455350.1900		+0.0072	8000	Rc	432	Siz	35SC+ST-9E
V1097 Her	2455351.0922		+0.0073	8002.5	V	346	Ioh	30SC+DSI-ProII
WY Hya	2455560.2429	*1	+0.0293	20934.5	V	461	Ioh	30SC+DSI-ProII
AV Hya	2455267.0705	*1	-0.0797	27207.5	Rc	96	Nga	20SC+SV-04LE
DF Hya	2455558.2171		+0.0490	73866	V	597	Ioh	30SC+DSI-ProII
EZ Hya	2455265.9930	*1	-0.1070	28485.5	Ic	60	Nga	10L+CV-04
LO Hya	2455549.1422				Rc	157	Nga	20SC+SV-04LE
SW Lac	2455480.2626		-0.1034	31819	C	50	Kai	28SC+ST-7XME
SW Lac	2455547.9348		-0.1033	32030	cG	104	Hsk	EosKissX3
PP Lac	2455439.1209		-0.0548	24538	V	752	Ioh	30SC+DSI-ProII
UV Leo	2455512.272	*1	+0.034	28448.5	vis	33	Kit	12B
UV Leo	2455515.266	*1	+0.027	28453.5	vis	29	Kit	12B
UV Leo	2455524.274	*1	+0.034	28468.5	vis	30	Kit	12B
XZ Leo	2455277.1126		+0.0505	21019	V	518	Ioh	30SC+DSI-ProII
AG Leo	2455230.1656		+0.1275	8424	Rc	435	Siz	35SC+ST-9E
AG Leo	2455286.1159	*1	+0.1015	8440.5	Rc	305	Siz	35SC+ST-9E
AM Leo	2455293.0169		+0.0111	34991	Rc	82	Nga	20SC+SV-04LE
AP Leo	2455248.215	*1	-0.037	36508.5	vis	26	Kit	12B
HI Leo	2455232.1452		+0.0014	15019	Rc	466	Siz	35SC+ST-9E
HI Leo	2455232.3005	*1	+0.0009	15019.5	Rc	466	Siz	35SC+ST-9E
HI Leo	2455268.1328	*1	+0.0005	15134.5	Rc	297	Siz	35SC+ST-9E
HI Leo	2455268.2889		+0.0008	15135	Rc	297	Siz	35SC+ST-9E
V Lep	2455203.020		+0.309	33949	Ic	47	Nga	10L+CV-04
V Lep	2455555.0887		+0.3134	34278	Ic	87	Nga	10L+CV-04
RS Lep	2455222.9342		-0.0072	14770	Ic	76	Nga	10L+CV-04
VZ Lib	2455318.1183	*1	-0.0105	29390.5	Ic	103	Nga	10L+CV-04
VZ Lib	2455350.0036	*1	-0.0106	29479.5	Ic	94	Nga	10L+CV-04
ES Lib	2455319.0892		+0.0930	16975	Ic	123	Nga	10L+CV-04
SW Lyn	2455482.2896		+0.0629	17866	cG	65	Hsk	EosKissX3
BG Lyn	2455549.2423	*45	-0.0049	10645	V	347	Ioh	30SC+DSI-ProII
V563 Lyr	2455317.1452	*1*16	+0.0211	7992.5	Rc	253	Siz	35SC+ST-9E
V563 Lyr	2455393.1049	*16	+0.0213	8124	V	390	Ioh	30SC+DSI-ProII
AV Mon	2455207.0515		-0.1625	4102	Rc	386	Siz	35SC+ST-9E
DD Mon	2455548.1610		+0.1622	44412	Rc	397	Siz	35SC+ST-9E
EP Mon	2455203.0666		+0.0326	19436	Rc	324	Siz	35SC+ST-9E
NS Mon	2455559.1997	*1*47	-0.0007	1720.5	V	430	Ioh	30SC+DSI-ProII
V460 Mon	2455218.1689		+0.2157	16446	Rc	293	Siz	35SC+ST-9E
V864 Mon	2455553.0770		-0.0102	5696	Rc	155	Nga	20SC+SV-04LE
V508 Oph	2455415.0830	*1	-0.0181	29967.5	Rc	136	Siz	35SC+ST-9E
V566 Oph	2455370.0884	*1	+0.1476	33038.5	Ic	95	Nga	10L+CV-04
V1125 Oph	2455334.0728	*21	+0.0327	3108	Rc	350	Siz	35SC+ST-9E

star	min.		O-C	E		n	obs.	inst.
V1125 Oph	2455338.1826	*1*21	+0.0401	3112.5	Rc	362	Siz	35SC+ST-9E
V1125 Oph	2455349.1129	*1*21	+0.0306	3124.5	Rc	331	Siz	35SC+ST-9E
V1125 Oph	2455396.0634	*21	+0.0312	3176	V	410	Ioh	30SC+DSI-ProII
V1125 Oph	2455438.0000	*21	+0.0319	3222	V	414	Ioh	30SC+DSI-ProII
VV Ori	2455519.196	*1	-0.069	9848.5	vis	31	Kit	7B
EQ Ori	2455247.945		-0.031	13636	vis	23	Hsk	28SC
ER Ori	2455234.963	*1	-0.121	32141.5	vis	22	Hsk	28SC
ER Ori	2455511.234		-0.118	32794	vis	27	Kit	12B
ER Ori	2455530.0747	*1	-0.1185	32838.5	Ic	99	Nga	10L+CV-04
ER Ori	2455534.0962		-0.1193	32848	Ic	90	Nga	10L+CV-04
ER Ori	2455535.143		-0.131	32850.5	vis	28	Kit	12B
FZ Ori	2455221.0290	*1	-0.0542	27992.5	Rc	100	Nga	20SC+SV-04LE
FZ Ori	2455223.0260	*1	-0.0571	27997.5	Rc	157	Nga	20SC+SV-04LE
FZ Ori	2455551.0169	*1	-0.0553	28817.5	Rc	389	Siz	35SC+ST-9E
V343 Ori	2455212.1641		+0.2205	26711	V	354	Ioh	30SC+DSI-ProII
V343 Ori	2455562.1261	*1	+0.2355	27143.5	V	570	Ioh	30SC+DSI-ProII
V647 Ori	2455206.0964		-0.2542	21994	Rc	499	Siz	35SC+ST-9E
V648 Ori	2455512.0772	*1	+0.0656	18146.5	Ic	298	Kis	20SC+E47+
U Peg	2455457.106		-0.139	50551	vis	19	Mdy	10B
U Peg	2455476.9733		-0.1348	50604	cG	62	Hsk	EosKissX3
BN Peg	2455440.1092		+0.0037	30203	Rc	224	Siz	35SC+ST-9E
BN Peg	2455444.0515	*1	+0.0229	30208.5	Rc	168	Nga	20SC+SV-04LE
DI Peg	2455524.9404		-0.0094	14510	cG	63	Hsk	EosKissX3
GP Peg	2455450.1072		-0.0468	14567	Rc	350	Siz	35SC+ST-9E
V432 Per	2455555.9721		-0.0671	61215	V	359	Ioh	30SC+DSI-ProII
beta Per	2455439.1956		+0.1033	3417	cG	20	Gah	Canon20D
beta Per	2455439.206		+0.114	3417	cG	18	Kun	NikonD40
beta Per	2455502.279		+0.106	3439	cG	10	Kun	NikonD80
beta Per	2455505.1434		+0.1031	3440	cG	42	Ium	NikonD80
beta Per	2455505.159		+0.119	3440	vis	24	Kit	nakedeye
beta Per	2455528.087		+0.108	3448	vis	56	Tae	nakedeye
beta Per	2455528.088		+0.109	3448	vis	52	Air	nakedeye
beta Per	2455528.090		+0.111	3448	vis	55	Saz	nakedeye
beta Per	2455528.092		+0.113	3448	vis	57	Kwe	nakedeye
beta Per	2455528.094		+0.115	3448	vis	56	Sio	nakedeye
beta Per	2455528.094		+0.115	3448	vis	56	Kze	nakedeye
beta Per	2455528.096		+0.117	3448	vis	50	Uor	nakedeye
beta Per	2455528.105		+0.126	3448	vis	57	Syu	nakedeye
VZ Psc	2455396.1701		-0.0682	44275	V	200	Kis	20SC+E47+
VZ Psc	2455413.1514		-0.0640	44340	V	231	Kis	20SC+E47+
VZ Psc	2455415.1109	*1	-0.0634	44347.5	Ic	188	Kis	20SC+E47+
VZ Psc	2455440.0626		-0.0550	44443	Ic	192	Kis	20SC+E47+
VZ Psc	2455440.9871	*1	-0.0447	44446.5	Ic	285	Kis	20SC+E47+
VZ Psc	2455460.0498	*1	-0.0486	44519.5	Ic	59	Nga	10L+CV-04
VZ Psc	2455480.9534	*1	-0.0399	44599.5	Ic	56	Nga	10L+CV-04
AQ Psc	2455510.9495	*36	+0.1989	23018	Rc	155	Nga	20SC+SV-04LE
DV Psc	2455506.9643	*1*34	+0.0436	11735.5	Ic	58	Nga	10L+CV-04
DV Psc	2455504.0348	*34	+0.0452	11726	V	423	Ioh	30SC+DSI-ProII
DV Psc	2455504.1939	*1*34	+0.0500	11726.5	V	423	Ioh	30SC+DSI-ProII
TY Pup	2455213.073	*1	+0.181	25390.5	vis	36	Kit	12B
TY Pup	2455534.203	*1	+0.171	25782.5	vis	31	Kit	12B
UZ Pup	2455213.0322		-0.0068	13335	Ic	83	Nga	10L+CV-04
UZ Pup	2455255.950		-0.011	13389	vis	19	Hsk	28SC
RS Sct	2455393.0915		-0.0225	16494	Rc	147	Nga	20SC+SV-04LE
AQ Ser	2455277.2515		-0.2280	15968	Rc	91	Nga	20SC+SV-04LE

star	min.		O-C	E		n	obs.	inst.
V505 Sgr	2455393.0328	*1	-0.0654	9241.5	Ic	79	Nga	10L+CV-04
V505 Sgr	2455395.9977		-0.0577	9244	Ic	121	Nga	10L+CV-04
V505 Sgr	2455406.0408	*1	-0.0690	9252.5	Ic	126	Nga	10L+CV-04
V4727 Sgr	2455445.6488		-0.0314	1164	V	100	Kis	30L+ST-8XE
WY Tau	2455505.1316	*1	+0.0575	26131.5	Rc	447	Siz	35SC+ST-9E
AH Tau	2455553.1097	*1	-0.1297	73617.5	V	512	Ioh	30SC+DSI-ProII
AM Tau	2455530.2215		-0.0554	5028	Rc	518	Siz	35SC+ST-9E
CD Tau	2455480.206		+0.021	4035	vis	28	Kit	7B
CD Tau	2455504.231		-0.000	4042	vis	33	Kit	7B
CD Tau	2455511.117		+0.015	4044	vis	23	Kit	7B
CD Tau	2455529.997	*1	+0.002	4049.5	vis	21	Kit	7Band8B
CD Tau	2455535.160		+0.013	4051	vis	31	Kit	7B
CT Tau	2455528.1214		-0.0552	15182	Rc	330	Siz	35SC+ST-9E
CT Tau	2455557.1288	*1	-0.0549	15225.5	V	736	Ioh	30SC+DSI-ProII
EQ Tau	2455551.1116		-0.0247	44933	V	635	Ioh	30SC+DSI-ProII
EQ Tau	2455554.0125	*1	-0.0252	44941.5	V	637	Ioh	30SC+DSI-ProII
EQ Tau	2455554.1835		-0.0249	44942	V	637	Ioh	30SC+DSI-ProII
GR Tau	2455465.1033		-0.0363	25339	Ic	138	Kis	20SC+E47+
V1241 Tau	2455510.153	*1	+0.034	33984.5	vis	40	Kit	12B
V1241 Tau	2455524.126	*1	+0.011	34001.5	vis	31	Kit	12B
V Tri	2455496.0554		-0.0038	53010	Rc	476	Siz	35SC+ST-9E
X Tri	2455222.957		-0.074	13093	vis	27	Hsk	28SC
X Tri	2455482.3475		-0.0838	13360	C	38	Kai	28SC+ST-7
X Tri	2455495.9557		-0.0771	13374	cG	80	Hsk	EosKissX3
VV UMa	2455266.0754		-0.0487	13749	Rc	195	Siz	35SC+ST-9E
VV UMa	2455287.0419	*1	-0.0473	13779.5	Rc	364	Siz	35SC+ST-9E
XZ UMa	2455247.1064	*1	-0.1014	7427.5	Rc	466	Siz	35SC+ST-9E
XZ UMa	2455248.933		-0.108	7429	vis	23	Hsk	28SC
XZ UMa	2455542.2961		-0.1020	7669	cG	46	Hsk	EosKissX3
AA UMa	2455297.1305	*1	-0.1959	31257.5	V	261	Ioh	30SC+DSI-ProII
AF UMa	2455219.2910		+0.5487	5406	V	551	Ioh	30SC+DSI-ProII
KM UMa	2455331.1120	*1*19	-0.0027	11682.5	Rc	266	Siz	35SC+ST-9E
RT UMi	2455226.1351		+0.1381	7557	Rc	542	Siz	35SC+ST-9E
RT UMi	2455249.1675	*1	+0.1459	7569.5	Ic	285	Siz	35SC+ST-9E
AX Vir	2455329.0280	*1	+0.0175	39512.5	Rc	92	Nga	20SC+SV-04LE
BF Vir	2455334.0654		+0.0986	14461	Rc	80	Nga	20SC+SV-04LE
CG Vir	2455319.1262		-0.3268	25407	Rc	132	Nga	20SC+SV-04LE
CX Vir	2455311.0797		+0.0162	39163	Ic	51	Nga	10L+CV-04
HW Vir	2455318.0091	*17	-0.0106	82141	Ic	131	Kis	20SC+E47+
LU Vir	2455317.9833	*15	-0.0907	13850	Rc	129	Nga	20SC+SV-04LE
NN Vir	2455332.9959	*20	+0.0040	5893	Rc	486	Nga	20SC+SV-04LE
NY Vir	2455555.2873	*48	-0.0015	52783	C	217	Kis	20SC+E47+
PY Vir	2455300.0346	*1	-0.0225	10760.5	Ic	69	Nga	10L+CV-04
AT Vul	2455441.1071		-0.0748	6415	V	431	Ioh	30SC+DSI-ProII
BS Vul	2455405.2547	*1	-0.0260	25492.5	Rc	286	Siz	35SC+ST-9E
BU Vul	2455538.933		+0.015	38674	cG	56	Hsk	EosKissX3
NSV13702	2455425.0217	*29	+0.0359	5141	Ic	110	Nga	10L+CV-04
ASAS005530-1106.6	2455505.9804	*1*33	+0.0363	6694.5	Ic	56	Nga	10L+CV-04
ASAS010327-1210.4	2455502.0069	*32	-0.0108	6193	Ic	91	Nga	10L+CV-04
ASAS010327-1210.4	2455504.9461	*32	-0.0047	6198	Ic	66	Nga	10L+CV-04
ASAS022014-0252.0	2455510.0406	*35	-0.0192	5604	Ic	106	Nga	10L+CV-04
ASAS022014-0252.0	2455510.0468	*35	-0.0130	5604	Rc	161	Nga	20SC+SV-04LE
ASAS022014-0252.0	2455511.0004	*1*35	-0.0246	5605.5	Ic	90	Nga	10L+CV-04
ASAS022014-0252.0	2455512.945	*1*35	-0.010	5608.5	Ic	38	Nga	10L+CV-04
ASAS043559-0450.1	2455206.9259	*3	+0.0431	5720	Ic	25	Nga	10L+CV-04

star	min.		O-C	E		n	obs.	inst.
ASAS044106-0121.5	2455553.0187	*1*41	+0.0121	16628.5	Ic	102	Nga	10L+CV-04
ASAS051049-0832.5	2455530.0666	*39	-0.2802	2353	Ic	99	Nga	10L+CV-04
ASAS053930-0808.9	2455221.9764	*1*4	+0.0459	7551.5	Ic	71	Nga	10L+CV-04
ASAS061056-0722.2	2455203.0934	*2	+0.1143	8714	Rc	254	Nga	20SC+SV-04LE
ASAS061056-0722.2	2455209.9803	*2	+0.1151	8732	Rc	206	Nga	20SC+SV-04LE
ASAS100329-0300.8	2455266.0201	*1*10	-0.0001	9999.5	Rc	115	Nga	20SC+SV-04LE
ASAS130736-1414.7	2455269.1359	*11	+0.0239	7211	Ic	60	Nga	10L+CV-04
ASAS145616+0402.4	2455338.0599	*1*22	+0.0364	7353.5	Rc	86	Nga	20SC+SV-04LE
ASAS160300-0634.8	2455350.9966	*1*24	-0.0315	6949.5	Rc	126	Nga	20SC+SV-04LE
ASAS194228-0041.1	2455413.0226	*1*27	+0.0248	7219.5	Ic	97	Nga	10L+CV-04
ASAS220425-0603.4	2455445.9894	*1*30	-0.0203	4911.5	Ic	93	Nga	10L+CV-04

Observers

Air	Arai Rintaro
Gah	Gan Hiromichi
Hsk	Hirosawa Kenji
Imi	Ikegami Akiko
Ioh	Itoh Hiroshi
Ium	Ishizu Mitsuhiro
Kai	Kasai Kiyoshi
Kau	Koyama Syuhei
Kei	Kikuchi Eriko
Kis	Kiyota Seiichiro
Kit	Kanai Kiyotaka
Kmo	Kobayashi Masato
Kta	Kinoshita Miku
Kun	KOGAKUIN UNIVERSITY Natural Science Club
Kwe	Koshikawa Tetsuya
Kze	Kitsunozuka Tetsuya
Mdy	Maeda Yutaka
Mod	Morinaga Daiki
Nga	Nagai Kazuo
Ngj	Nagata Yoshiki
Nin	Nishimura Akinori
Nkn	Nagai Kanade
Sim	Shimokawa Masahiro
Sio	Suzuki Atsuko
Siz	Shiokawa Kazuhiko
Ssh	Suzuki Shota
Saz	Sayama Kazuhiro
Syu	Sakata Yuuki
Sza	Simizu Yuka
Tae	Takagi Kenta
Uor	Ushio Ryouta
Ykg	Yoshikawa Genki

Remarks

- *1 secondary minimum
- *2 min=2451869.36+0.382559xE (ASAS-3 catalog)
- *3 min=2451869.32+0.58349xE (ASAS-3 catalog)
- *4 min=2451869.14+0.44399xE (ASAS-3 catalog)
- *5 min=2450122.48519+1.535114xE (IBVS4410)
- *6 min=2452500.768+0.8962965xE (J.M.Kreiner,2004,AA54)
- *7 min=2451975.6040+0.4341474xE (IBVS5132)
- *8 min=2452503.394+3.82837xE (J.M.Kreiner,2004,AA54)
- *9 min=2451221.8497+1.25695xE (IBVS5060)
- *10 min=2451870.02+0.339617xE (ASAS-3 catalog)
- *11 min=2451887.29+0.468981xE (ASAS-3 catalog)
- *12 min=2449922.7072+0.52947826xE (IBVS4284)
- *13 min=2446907.9108+0.4131856xE (IBVS3090)
- *14 min=2450177.4767+0.41906xE (IBVS4365)
- *15 min=2448500.453+0.492247xE (Hipparcos catalog)
- *16 min=2450700.3444+0.577639xE (IBVS4696)
- *17 min=2445730.5565+0.116719582xE (Cakirli and Devlen (1999))
- *18 min=2452056.3775+0.315408xE (IBVS5192)
- *19 min=2451220.4869+0.351862xE (IBVS4810)
- *20 min=2452500.3046+0.4806868xE (J.M.Kreiner,2004,AA54)
- *21 min=2452500.635+0.911649xE (J.M.Kreiner,2004,AA54)
- *22 min=2452125.50+0.436870xE (ASAS-3 catalog)
- *23 min=2451996.4139+0.301601xE (IBVS5125)
- *24 min=2451923.91+0.493146xE (ASAS-3 catalog)
- *25 min=2446949.8370+0.4712868xE (IBVS3234)
- *26 min=2451746.5126+0.2942801xE (IBVS4975)
- *27 min=2451979.909+0.475530xE (ASAS-3 catalog)
- *28 min=2452383.540+0.417537xE (ASAS-3 catalog)
- *29 min=2451873.583+0.6908xE (ASAS-3 catalog)
- *30 min=2451873.974+0.727280xE (ASAS-3 Catalog)
- *31 min=2448500.8749+1.47409xE (Hipparcos catalog)
- *32 min=2451869.08+0.58662xE (ASAS-3 Catalog)
- *33 min=2451869.09+0.54326xE (ASAS-3 Catalog)
- *34 min=2451886.073+0.308538xE (ASAS3 Catalog)
- *35 min=2451904.11+0.64346xE (ASAS-3 catalog)
- *36 min=2444562.4691+0.475640xE (IBVS5463)
- *37 min=2451277.680+17.6445xE (IBVS5674)
- *38 min=2448501.94+2.2323xE (Hipparcos catalog)
- *39 min=2451870.02+1.5556xE (ASAS-3 catalog)
- *40 min=2445259.0560+0.7904596xE (McFarlane,T.M et. al.,1986)
- *41 min=2451869.877+0.221495xE (ASAS-3 Catalog)
- *42 min=2448500.251+0.440794xE (Hipparcos catalog)
- *43 min=2448501.57+1.7622xE (Hipparcos catalog)
- *44 min=2448500.6581+0.918235xE (Hipparcos catalog)
- *45 min=2442776.961+1.199839xE (R.Dequinze, J.AAVSO 19,1990)
- *46 min=2452500.914+2.237787xE (J.M. Kreiner, 2004, AA 54)
- *47 min=2452500.8069+1.777619xE (J.M.Kreiner,2004,AA54)
- *48 min=2450223.36134+0.101015999xE (Kilkenny et al. 2000)
- *50 cG means G plane of DSLR camera

VSOLJ
c/o Keiichi Saijo National Science Museum, Ueno-Park, Tokyo Japan

Editor Seiichiro Kiyota
e-mail:skiyotax@gmail.com
Publishing Masahiko Momose
