Table E1. List of Instruments.

CODE*	Telescope (& CCD)	Observatory (or Observer)	Site
COO	PF 74 cm reflector+SBIG STL1001E	Lewis Cook	California, USA
CRI	38cm K-380+Apogee E47	Crimean astrophysical observatory	Crimea
GFB	CDK 50cm+Apogee U6	William Goff	California, USA
IMi	35cmSC+SXVR-H16	Ian Miller	Furzehill Observatory, UK
Ioh	30cmSC+ST-9XE CCD	Hiroshi Itoh	Tokyo, Japan
Kis	25cm SC+Alta F47	Seiichiro Kiyota	Kamagaya, Japan
Mhh		Hiroyuki Maehara	Japan
Mic	84cm+E2V 42-40	San Pedro Martir Observatory	Baja California, Mexico
MLF	30cmRCX400+ST8-XME	Berto Monard Calitzdorp	South Africa
	35cmRCX400+ST8-XME	Berto Monard Calitzdorp	South Africa
OKU	51cm+Andor DW936N-BV	OKU Astronomical Observatory	Osaka, Japan
RPc	FTN 2.0m+E2V 42-40	LCOGT‡	Hawaii, USA
	35cmSC+SXV-H9 CCD	Roger D. Pickard	UK
RIT	30cm+ST-9E	RIT Observatory	New York, USA
SGE	43cmCDK+STXL-11002	Sierra Remote Observatories	Auberry, CA, USA
SHU	18/225cm Maksutov telescope+SBIG ST-10XME	Stara Lesna	Slovakia
	60/750cm Zeiss telescope+FLI ML 3041	Stara Lesna	Slovakia
	50/200cm Maksutov telescope+Apogee Alta U16M	Crimean Stations of Sternberg Astronomical Institute (SAI)	Crimea
	250/2000cm+LNI BSI NBI 4k*4k	Caucasian Mountain Observatory KGO (SAI, KGO)	The North Caucasus, Russia
SRI	CDK 43cm+SBIG STL-1001	Richard Sabo	Montana, USA
Trt	25cm ALCCD5.2 (QHY6)	Tamás Tordai	Budapest, Hungary

*Observer's code: COO (Lewis M. Cook), CRI (Crimean Observatory), GFB (William Goff), IMi (Ian Miller), Ioh (Hiroshi Itoh), Kis (Seiichiro Kiyota), Mhh (Hiroyuki Maehara), Mic (Raúl Michel), MLF (Berto Monard), Njh (Kazuhiro Nakajima), OKU (Osaka Kyoiku Univ. team), RPc (Roger D. Pickard), RIT (Michael Richmond), SGE (Geoff Stone), SHU (Sergey Yu. Shugarov, Natalia Katysheva, Polina Golysheva, Olga Vozyakova), SRI (Richard Sabo), Trt (Tamás Tordai).

†itelescope.net.

‡Las Cumbres Observatory Global Telescope Network.

Table E2. Log of observations of the 2016 outburst of 1SWASP J1621.

Start*	End*	Mag†	Error‡	N§	Obs‖	Band#
466.9381	467.0381	3.093	0.015	47	Mic	$R_{\rm C}$
466.9387	467.0365	3.161	0.017	46	Mic	V
466.9395	467.0373	3.089	0.026	46	Mic	B
468.9367	468.9931	3.233	0.027	26	Mic	$R_{\rm C}$
468.9373	468.9937	3.292	0.029	26	Mic	V
468.9382	468.9922	3.183	0.029	25	Mic	B
505.7052	506.0115	3.103	0.016	137	Mic	B
505.7060	506.0101	3.138	0.013	136	Mic	$R_{\rm C}$
505.7066	506.0107	3.199	0.014	136	Mic	V
542.8993	542.9831	1.441	0.006	38	Mic	$R_{\rm C}$
542.8999	542.9837	1.202	0.007	38	Mic	V
542.9007	542.9846	0.653	0.009	38	Mic	B
543.6787	543.9624	13.501	0.014	812	SGE	CV
543.8746	543.9054	14.243	0.048	34	HBB	V
544.6798	544.9507	13.804	0.020	400	SGE	CV
544.7206	544.8464	13.786	0.016	313	COO	CV
544.8811	544.9792	1.907	0.052	44	Mic	$R_{\rm C}$
544.8817	544.9776	1.745	0.062	43	Mic	V
544.8826	544.9784	1.284	0.079	43	Mic	B
545.3104	545.5287	1.759	0.013	485	CRI	CV
545.4019	545.5645	13.891	0.026	219	RPc	V
545.4019	545.5645	13.891	0.027	219	PXR	V
545.4241	545.5385	1.695	0.007	66	SHU	CV
545.6793	545.9420	13.885	0.016	300	SRI	CV
545.7179	545.9854	14.102	0.022	362	SGE	CV
545.7365	545.9182	13.489	0.010	877	COO	R
546.3322	546.4039	14.259	0.041	101	Trt	V
546.3322	546.4039	14.259	0.041	101	TRT	V
546.4068	546.6473	2.009	0.023	150	Mic	$R_{\rm C}$
546.4071	546.6477	1.876	0.027	150	Mic	V
546.4078	546.6483	1.459	0.038	150	Mic	B
546.4359	546.5066	1.898	0.009	47	SHU	$R_{\rm C}$
546.4375	546.4540	1.829	0.008	2	SHU	CV
546.4691	546.4796	14.396	0.013	14	JSJ	B
546.6157	546.7485	13.847	0.004	242	LCO	CV
546.6840	546.9420	14.179	0.017	270	SRI	CV
547.2813	547.4122	2.134	0.025	31	CRI	$R_{\rm C}$
547.2853	547.4100	1.592	0.019	31	CRI	B
547.2940	547.4115	1.980	0.023	30	CRI	V
547.2953	547.4128	2.229	0.025	30	CRI	$I_{\rm C}$
547.3109	547.5321	2.162	0.013	500	CRI	CV
547.3536	547.4979	2.275	0.028	134	SHU	$R_{\rm C}$
547.3596	547.4988	2.040	0.019	6	SHU	CV
547.4130	547.6069	14.341	0.017	351	IMi	V
547.4426	547.5714	14.179	0.005	181	Trt	V
547.4426	547.5714	14.179	0.005	181	TRT	V
547.5081	547.6157	14.139	0.007	125	BSM	CV
547.6819	547.9724	14.355	0.012	648	SGE	CV
548.2983	548.5226	2.155	0.056	52	CRI	B
548.2998	548.5200	2.439	0.040	52	CRI	V

Table E2. Log of observations of the 2016 outburst of 1SWASP J1621 (continued).

Start*	End*	Mag†	Error‡	N§	Obs‖	Band#
548.3005	548.5207	2.526	0.032	52	CRI	$R_{\rm C}$
548.3011	548.5213	2.557	0.025	52	CRI	$I_{\rm C}$
548.3439	548.4874	2.620	0.027	93	NKa	$R_{\rm C}$
548.3439	548.4874	2.622	0.027	93	SHU	$R_{\rm C}$
548.3584	548.5426	2.473	0.012	416	CRI	CV
548.3680	548.4865	2.521	0.043	4	SHU	CV
548.3890	548.6118	14.598	0.014	266	BPO	CV
548.4251	548.5936	14.716	0.016	314	IMi	V
548.5078	548.6157	14.456	0.010	119	BSM	CV
548.6831	548.9865	14.714	0.012	541	SGE	CV
549.3060	549.4802	2.406	0.016	44	CRI	B
549.3074	549.4776	2.668	0.016	43	CRI	V
549.3082	549.4783	2.728	0.017	43	CRI	$R_{\rm C}$
549.3087	549.4789	2.699	0.017	43	CRI	$I_{\rm C}$
549.6008	549.8552	15.795	0.031	95	CMJ	B
549.6020	549.8564	15.010	0.020	96	CMJ	V
549.6277	549.8538	14.966	0.014	176	RIT	CV
549.6900	549.9682	14.985	0.010	548	SGE	CV
549.6976	549.9180	15.741	0.038	89	GFB	B
549.6985	549.9190	14.985	0.023	90	GFB	V
550.0408	550.1700	0.765	0.010	338	OKU	CV
550.0501	550.2506	14.832	0.012	308	Kis	CV
550.0555	550.2780	14.625	0.010	284	Ioh	$R_{\rm C}$
550.2851	550.5242	2.734	0.030	60	CRI	B
550.2866	550.5216	2.921	0.023	59	CRI	V
550.2873	550.5223	2.936	0.021	59	CRI	$R_{\rm C}$
550.2879	550.5229	2.860	0.018	59	CRI	$I_{\rm C}$
550.3179	550.6242	14.940	0.012	183	BSM	CV
550.3451	550.5412	3.126	0.082	6	SHU	CV
550.6839	550.9838	15.127	0.009	541	SGE	CV
550.6942	550.9266	15.103	0.015	136	SRI	CV
550.6974	550.9731	15.972	0.020	230	GFB	B
551.2732	551.5204	2.999	0.028	62	CRI	B
551.2747	551.5218	3.096	0.025	62	CRI	V
551.2754	551.5226	3.061	0.022	62	CRI	$R_{\rm C}$
551.2760	551.5232	2.963	0.019	62	CRI	$I_{\rm C}$
552.4002	552.4594	3.129	0.021	32	NKa	CV
552.4002	552.4594	3.197	0.021	32	SHU	CV
552.6653	552.8563	16.368	0.024	72	CMJ	B

Table E2. Log of observations of the 2016 outburst of 1SWASP J1621 (continued).

Start*	End*	Mag†	Error‡	N§	Obs‖	Band#
552.6666	552.8550	15.385	0.023	70	CMJ	V
553.5893	553.8566	16.317	0.024	103	CMJ	B
553.5905	553.8553	15.325	0.017	102	CMJ	V
553.6977	553.9739	16.306	0.014	230	GFB	B
553.7135	553.8156	15.181	0.012	26	SGE	V
554.0120	554.1428	1.030	0.007	289	OKU	CV
554.3890	554.5240	15.312	0.018	71	PVE	V
554.4558	554.5183	3.126	0.012	67	NKa	CV
554.4558	554.5183	3.202	0.012	67	SHU	CV
554.6905	554.9057	15.333	0.024	72	SGE	V
554.6935	554.9087	16.363	0.036	72	SGE	B
555.3449	555.5094	14.169	0.066	9	PVE	$I_{\rm C}$
555.3524	555.5439	15.359	0.025	55	PVE	V
555.3917	555.5158	16.326	0.085	8	PVE	B
555.6884	555.9814	15.211	0.023	49	SGE	V
555.6913	555.9845	16.242	0.028	53	SGE	B
556.3195	556.5463	14.141	0.019	61	PVE	$I_{\rm C}$
556.3574	556.5290	16.347	0.085	8	PVE	B
556.3631	556.5347	15.311	0.050	8	PVE	V
556.6001	556.8552	16.352	0.021	99	CMJ	B
556.6014	556.8539	15.352	0.018	97	CMJ	V
556.6899	556.9798	15.297	0.020	94	SGE	V
556.6930	556.9829	16.310	0.026	94	SGE	B
557.3278	557.4053	14.093	0.034	14	PVE	$I_{\rm C}$
557.3304	557.4133	15.278	0.045	15	PVE	V
558.3199	558.5466	15.373	0.019	99	PVE	V
563.0314	563.0755	0.916	0.010	62	OKU	$R_{\rm C}$
566.0187	566.1714	1.052	0.013	160	OKU	$R_{\rm C}$
617.3656	617.5738	15.229	0.009	288	RPc	CV
630.3350	630.5050	15.238	0.009	236	RPc	CV
665.2928	665.3731	15.202	0.012	106	RPc	CV
823.4359	823.5977	14.696	0.143	30	WTH	$R_{\rm C}$

*BJD–2457000.0.

†Mean magnitude.

‡1σ of mean magnitude.

§Number of observations.

‖Observer's code: GFB (William Goff), Kis (Seiichiro Kiyota), COO (Lewis M. Cook), Ioh (Hiroshi Itoh), CRI (Cremean Observatory), OKU (Osaka Kyoiku Univ. team), Trt (Tamás Tordai), RPc (Roger D. Pickard), IMi (Ian Miller), RIT (Michael Richmond), SGE (Geoff Stone), SHU (S. Shugarov team), SRI (Richard Sabo), LCO (Colin Littlefield), NKa (Natalia Katysheva & Sergei Yu. Shugarov), PVE (Velimir Popov), HBB (Barbara Harris), CMJ (Michael Cook), WHT (Wikander, Thomas).

#Filter. "CV" means no (clear) filter.

Table E3. Log of observations of the 2006 outburst and the 2013 quiescence of BD Pav.

Start*	End*	Mag†	Error‡	N§	Obs‖	Band#
979.2944	79.4928	12.481	0.003	539	MLF	CV
980.1966	80.5440	12.540	0.002	903	MLF	CV
982.1992	82.5138	12.635	0.003	851	MLF	CV
983.2130	83.5227	12.699	0.003	880	MLF	CV
984.1914	84.5195	12.776	0.003	930	MLF	CV
985.1892	85.5080	12.965	0.003	858	MLF	CV
3454.7143	2554.8467	15.152	0.114	150	OAR	V
3455.6887	2555.9171	15.157	0.144	220	OAR	V
3457.7425	2557.9143	15.101	0.109	167	OAR	V
3460.7053	2560.8474	15.039	0.030	9	OAR	V
3461.7647	2561.7685	14.956	0.015	5	OAR	V
3462.7649	2562.7688	15.077	0.033	5	OAR	V
3463.7621	2563.7657	15.156	0.016	5	OAR	V

*BJD–2453000.0.

†Mean magnitude.

‡1σ of mean magnitude.

§Number of observations.

‖Observer's code: MLF (Berto Monard).

#Filter. "CV" means no (clear) filter.

Table E4. Log of observations of the 2009 outburst of V364 Lib.

Start*	End*	Mag†	Error‡	N§	Obs‖	Band#
928.0757	28.2011	10.412	0.001	405	Mhh	V
928.1202	28.2177	11.478	0.003	223	Njh	CV
928.2010	28.2883	1.822	0.001	481	OUS	CV
928.2017	28.2036	10.569	0.006	6	Mhh	B
929.1080	29.1733	10.711	0.001	89	Kis	CV
929.1197	29.2284	1.893	0.002	351	OUS	CV
930.0970	30.2722	11.460	0.001	412	Njh	CV
930.1155	30.2758	1.880	0.001	885	OUS	CV
930.1287	30.1968	10.732	0.002	96	Kis	CV
930.1431	30.2359	10.436	0.002	138	Mhh	V
930.1434	30.2355	10.628	0.002	136	Mhh	B
931.0911	31.3198	11.493	0.001	537	Njh	CV
931.0944	31.1718	10.710	0.003	104	Kis	CV
932.0938	32.2945	11.552	0.001	465	Njh	CV
932.1091	32.1847	10.770	0.003	102	Kis	CV
932.1812	32.2890	10.729	0.001	410	Mhh	B
937.1064	37.1435	11.750	0.002	88	Njh	CV
938.0842	38.2074	11.906	0.003	237	Njh	CV
939.2176	39.3233	11.199	0.001	591	Mhh	CV
945.1195	45.2613	12.179	0.001	335	Njh	CV
947.1338	47.1456	12.247	0.005	29	Njh	CV
949.0912	49.2735	12.347	0.002	422	Njh	CV
950.1414	50.2637	12.363	0.002	288	Njh	CV
951.0445	51.2736	12.407	0.002	540	Njh	CV
951.3060	51.6199	0.042	0.001	1623	MLF	V
952.0562	52.1361	12.431	0.002	189	Njh	CV
953.0907	53.2577	12.433	0.001	392	Njh	CV
965.0846	65.2432	12.440	0.001	370	Njh	CV

*BJD–2454000.0.

†Mean magnitude.

‡1σ of mean magnitude.

§Number of observations.

‖Observer's code: Mhh (Hiroyuki Maehara), Njh (Kazuhiro Nakajima), OUS (Okayama U. of Science), Kis (Seiichiro Kiyota).

#Filter. "CV" means no (clear) filter.

Table E5. Log of spectroscopic observations of V364 Lib.

Date*	Name†	Start Time‡	End Time§	Exp‖	Number#	Grating¶	Site**
2009-04-07	V364 Lib	54929.1854	54929.2062	60	11	Grism	G
2009-04-09	V364 Lib	54931.1862	54931.2022	60	15	Grism	G
2009-04-10	V364 Lib	54932.1536	54932.1703	60	12	Grism	G
–	V364 Lib	54932.1953	54932.2043	60	9	Grism	G
2009-04-15	V364 Lib	54937.0754	54937.0764	30	3	$I_{\rm C}$	G
–	V364 Lib	54937.0816	54937.0948	60	11	Grism	G
2009-04-18	V364 Lib	54940.1137	54940.1151	60	2	Grism	G
2009-04-19	V364 Lib	54941.0797	54941.0901	60	10	Grism	G
2009-04-22	V364 Lib	54944.0798	54944.0902	60	10	Grism	G
2009-04-23	V364 Lib	54945.1173	5494.1257	60	5	Grism	G
2009-04-26	V364 Lib	54948.1084	54948.1209	120	5	Grism	G
2009-04-27	V364 Lib	54949.0751	54949.0820	60	6	Grism	G
2009-04-28	V364 Lib	54950.1300	54950.1473	60	12	Grism	G
2009-05-02	V364 Lib	54954.0627	54954.0738	60	10	Grism	G
2009-05-05	V364 Lib	54961.8932	54961.9392	900	5	std-Yd	S
–	V364 Lib	54961.9619	54961.0183	900	6	std-Bc	S
–	V364 Lib	54962.0348	54962.0573	900	3	std-Yd	S
2009-05-08	V364 Lib	54960.1634	54960.0759	60	10	Grism	G
2009-05-13	V364 Lib	54965.1412	54965.0419	20	3	R	G
–	V364 Lib	54965.1510	54965.1579	60	7	Grism	G
2009-05-20	V364 Lib	54972.1113	54972.1183	60	6	Grism	G

*Observational date (Japan Standard Time).

†Name of star.

‡Start time of observations in the unit of BJD–2400000.

§End time of observations in the unit of BJD–2400000.

‖Exposure time of each observation in unit of seconds.

#Number of observations.

¶Diffraction or echelle gratings.

**Name of observatory: S (Subaru Observatory), G (Gunma Observatory).

Table E6. Radial velocity measured in the 2009 quiescence of V364 Lib.

Time*	Phase†	Radial Velocity	Error
54929.1934	0.7912	−107.8	10.8
54931.1895	0.6329	−50.3	11.3
54932.1952	0.0648	73.3	13.7
54937.0838	0.0243	42.0	22.2
54941.0801	0.7135	−99.8	37.9
54944.1177	0.0379	−5.6	46.4
54945.1577	0.5186	−12.3	52.5

*Time of observations in the unit of BJD–2400000.

†Orbital phase under the assumption that the orbital period is 0.7024293 d.

Table E7. Radial velocity measured in the 2009 outburst of V364 Lib.

Time*	Phase†	Radial Velocity	Error
54961.3873	0.3746	−49.7	4.3
54961.3994	0.3917	−38.1	3.3
54961.4107	0.4078	−34.3	3.7
54961.4220	0.4239	−28.4	3.7
54961.4334	0.4401	−21.1	4.1
54961.4561	0.4724	−6.0	5.3
54961.4676	0.4888	2.4	4.3
54961.4788	0.5048	8.5	4.2
54961.4901	0.5208	13.4	3.1
54961.5013	0.5367	22.5	3.1
54961.5125	0.5527	30.8	2.2
54961.5289	0.5762	40.5	6.7
54961.5403	0.5923	49.5	5.5
54961.5515	0.6083	51.4	4.5

*Time of observations in the unit of BJD–2400000.
†Orbital phase under the assumption that the orbital period is 0.7024293 d.

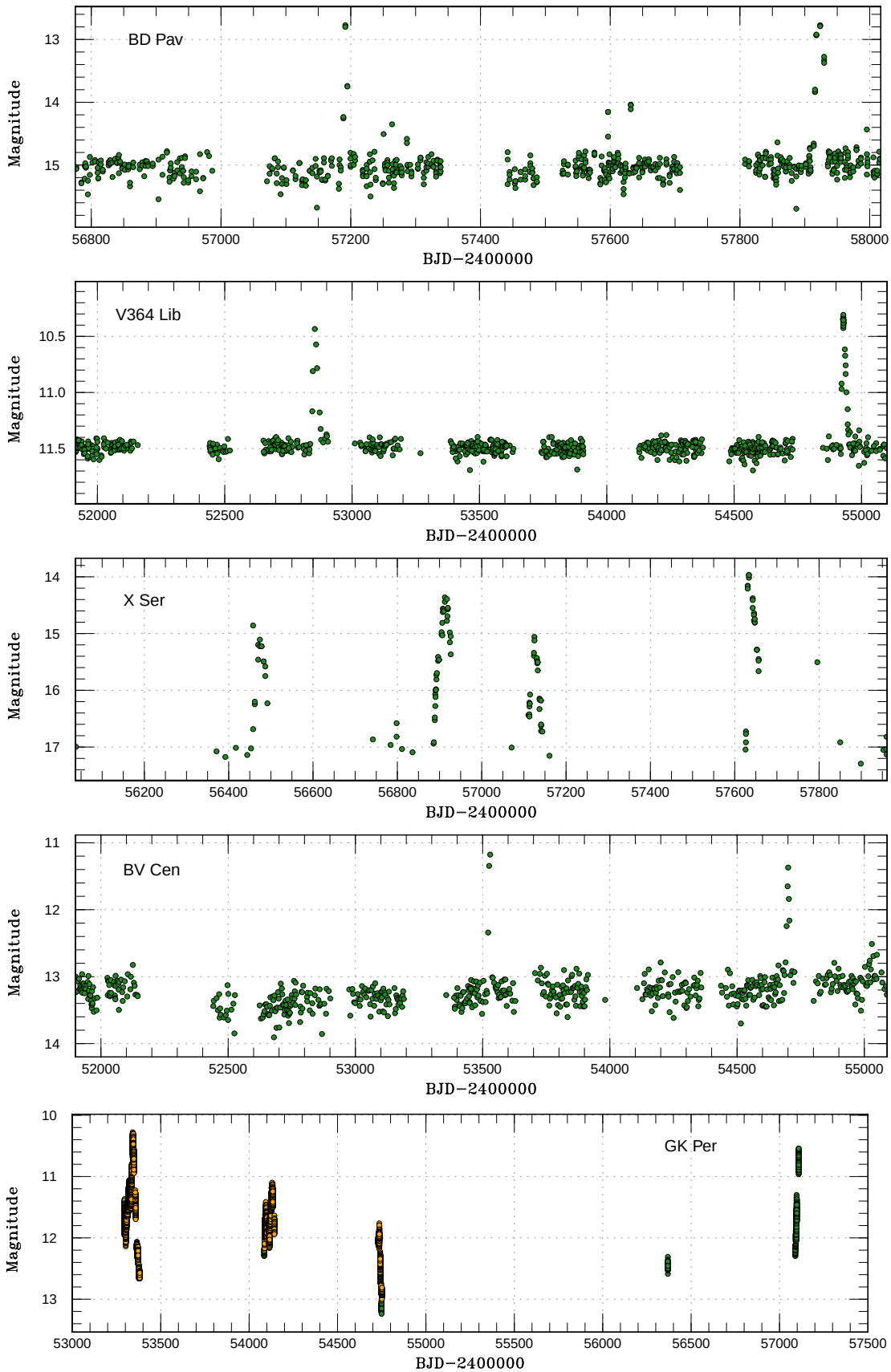

Fig. E1. Long-term light curves in the long-period objects discussed in this paper. The light curves of V364 Lib and BV Cen are derived from the ASAS-3 data archive. The light curves of BD Pav and X Ser are derived from the ASAS-SN data archive. Green and orange points represent the observations in the V band and no (clear) filter, respectively.