

## MINIMA OF ECLIPSING BINARY STARS - III

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This report continues the list of minima published in JAAVSO Vol. 4, No. 2. This work is sponsored by the AAVSO with the writer currently acting as program coordinator. This report contains 504 observed heliocentric minima of 69 eclipsing binary stars derived from observations submitted by participants in the AAVSO's eclipsing binary program. Except where otherwise noted we continue, as has been our practice in the past, using linear elements given in the main listing of the 1969 General Catalog of Variable Stars to compute the O-C's without regard to additional linear or nonlinear elements which might appear in the notes following the main listing and without regard to more recent elements which may be listed in the supplements to the catalog. This practice is continued so that O-C's published here may be readily compared with those we have published in the past. The number of estimates used for each minimum is given under n.

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
<u>2,400,000+</u>				
<u>RT Andromedae</u>				
41212.333	12608	-0.005	7	M. Baldwin
41213.587	12610	-0.009	10	M. Baldwin
41213.605	12610	+0.010	11	D. Ortwein
41230.575	12637	-0.002	13	D. Ortwein
41244.396	12659	-0.018	12	M. Baldwin
41249.437	12667	-0.008	9	M. Baldwin
41308.572	12761	+0.008	13	I. Lenss
41318.622	12777	-0.005	10	S. Cook
41564.530	13168	-0.009	11	M. Baldwin
41595.346	13217	-0.011	8	M. Baldwin
41624.279	13263	-0.008	8	M. Baldwin
<u>TW Andromedae</u>				
41605.380	5228	+0.013	24	M. Baldwin
<u>WZ Andromedae</u>				
41209.686	8818	-0.003	11	T. Cragg
41213.489:	8823.5	-0.027:	10	M. Baldwin
41249.336	8875	-0.006	15	M. Baldwin
41562.374	9325	-0.016	14	M. Baldwin
41564.465	9328	-0.013	12	M. Baldwin
41682.723	9498	-0.016	13	T. Cragg
<u>XZ Andromedae</u>				
41236.332	1533	-0.006	6	M. Baldwin
41240.404	1536	-0.007	14	M. Baldwin
41248.548	1542	-0.007	8	M. Baldwin
41335.415	1606	-0.006	9	M. Baldwin
41347.631:	1615	-0.006:	8	T. Cragg
41560.728	1772	-0.004	15	L. Hazel
41593.298	1796	-0.010	7	M. Baldwin
41597.372	1799	-0.008	9	M. Baldwin
41605.514	1805	-0.010	9	M. Baldwin

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
<u>AB Andromedae</u>				
2441145.685	15174	-0.010	10	D. Ortwein
41193.654	15318.5	0.000	14	D. Ortwein
41195.645	15324.5	0.000	13	D. Ortwein
41202.617	15345.5	+0.002	14	D. Ortwein
41204.616	15351.5	+0.009	14	D. Ortwein
41212.426	15375	+0.020	11	M. Baldwin
41213.429	15378	+0.028	9	M. Baldwin
41236.320	15447	+0.018	12	M. Baldwin
41240.306	15459	+0.022	7	M. Baldwin
41240.471	15459.5	+0.020	9	M. Baldwin
41241.299	15462	+0.019	6	M. Baldwin
41243.610	15469	+0.006	12	D. Ortwein
41244.285	15471	+0.017	7	M. Baldwin
41248.438	15483.5	+0.022	11	M. Baldwin
41249.432	15486.5	+0.020	13	M. Baldwin
41252.578	15496	+0.013	11	D. Ortwein
41253.414	15498.5	+0.019	11	M. Baldwin
41253.572	15499	+0.012	10	D. Ortwein
41254.555	15502	-0.001	10	D. Ortwein
41276.320	15567.5	+0.025	9	M. Baldwin
41317.634	15692	+0.019	7	B. Small
41320.617	15701	+0.014	11	B. Small
41322.610	15707	+0.017	9	B. Small
41562.407	16429.5	+0.022	10	M. Baldwin
41564.396	16435.5	+0.019	14	M. Baldwin
41565.389	16438.5	+0.017	17	M. Baldwin
41566.387	16441.5	+0.019	12	M. Baldwin
41593.438	16523	+0.021	15	M. Baldwin
41593.603	16523.5	+0.020	16	B. Small
41596.592	16532.5	+0.022	10	B. Small
41597.422	16535	+0.022	14	M. Baldwin
41598.579	16538.5	+0.018	12	B. Small
41599.412	16541	+0.021	10	M. Baldwin
41599.575	16541.5	+0.018	8	B. Small
41600.577	16544.5	+0.024	9	B. Small
41605.386	16559	+0.021	8	M. Baldwin
41606.379	16562	+0.018	11	M. Baldwin
41623.312	16613	+0.025	9	M. Baldwin
41624.306	16616	+0.023	10	M. Baldwin
41625.626	16620	+0.015	7	B. Small
41626.624	16623	+0.018	8	B. Small
41682.719	16792	+0.023	13	T. Cragg
<u>RY Aquarii</u>				
41577.623	3918	-0.065	13	B. Small
<u>CX Aquarii</u>				
41248.383	8624	+0.010	16	M. Baldwin
41253.380	8633	+0.004	19	M. Baldwin
41561.397:	9187	+0.006:	9	M. Baldwin
41562.509	9169	+0.005	12	M. Baldwin
41566.406	9189	+0.010	10	M. Baldwin
41574.747	9211	+0.011	14	T. Cragg
41593.641	9245	+0.002	11	E. Mayer
41595.311	9248	+0.004	13	M. Baldwin
41605.324	9266	+0.010	18	M. Baldwin
41653.702	9353	+0.017	10	T. Cragg

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
<u>XZ Aquilae</u>				
2441154.742	3401	+0.018	24	E. Mayer
<u>OO Aquilae</u>				
41151.722	14259	-0.024	5	T. Cragg
41164.659	14284.5	-0.010	10	D. Ortwein
41179.609	14314	-0.010	12	D. Ortwein
41217.612	14389	-0.017	10	D. Ortwein
41236.629	14426.5	-0.005	16	I. Lenss
41240.410	14434	-0.024	11	M. Baldwin
41248.521	14450	-0.023	12	B. Small
41249.278	14451.5	-0.026	11	M. Baldwin
41249.537	14452	-0.020	6	B. Small
41251.560	14456	-0.025	12	B. Small
41253.336	14459.5	-0.022	13	M. Baldwin
41256.627	14466	-0.025	19	I. Lenss
41500.652	14947.5	-0.022	5	B. Small
41502.677	14951.5	-0.023	14	B. Small
41534.607	15014.5	-0.021	7	B. Small
41558.678	15062	-0.023	9	E. Mayer
41562.471	15069.5	-0.031-	11	M. Baldwin
41604.289	15152	-0.023	7	M. Baldwin
41605.301	15154	-0.025	16	M. Baldwin
41606.310	15156	-0.030	10	M. Baldwin
41606.565	15156.5	-0.029	6	B. Small
41623.292	15189.5	-0.025	10	M. Baldwin
41623.545	15190	-0.026	7	B. Small
41624.302	15191.5	-0.029	11	M. Baldwin
41625.575	15194	-0.023	9	B. Small
41626.585	15196	-0.027	8	B. Small
<u>V342 Aquilae</u>				
41193.757	1640	-0.016	11	T. Cragg
<u>V346 Aquilae</u>				
41121.797	8851	-0.013	9	T. Cragg
41193.715	8916	-0.008	12	T. Cragg
41234.658	8953	-0.001	14	S. Cook
41505.710	9198	-0.008	4	T. Cragg
41595.328	9279	-0.006	10	M. Baldwin
41598.650	9282	-0.003	9	B. Small
41605.283	9288	-0.008	9	M. Baldwin
41650.648	9329	-0.004	9	T. Cragg
<u>WW Aurigae</u>				
40953.643	3171.5	+0.005	20	M. Daw
40953.652	3171.5	+0.014	21	K. Simmons
40981.401	3182.5	-0.012	9	M. Baldwin
40982.668	3183	-0.008	12	E. Mayer
40982.682	3183	+0.006	12	D. Ortwein
40996.563	3188.5	0.000	8	B. Small
41035.679	3204	-0.022	14	B. Conner
41040.728	3206	-0.023	12	B. Conner
41049.585	3209.5	-0.004	9	D. Ortwein
41054.622	3211.5	-0.016	8	B. Conner
41064.732	3215.5	-0.007	12	R. Nolthenius
41314.689	3314.5	-0.026	20	K. Simmons
41314.703	3314.5	-0.012	18	D. Wolters
41314.710	3314.5	-0.005	15	M. Daw

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
2441597.522	3426.5	+0.004	9	M. Baldwin
41679.592	3459	+0.011	8	B. Small
<u>AR Aurigae</u>				
41604.483	3594.5	+0.012	13	M. Baldwin
<u>Y Camelopardalis</u>				
40958.717	1529	+0.033	20	E. Mayer
41682.651	1748	+0.056	28	M. Baldwin
<u>SV Camelopardalis</u>				
40982.647	12149	-0.007	12	B. Small
41036.604	12240	-0.019	7	E. Mayer
41057.369	12275	-0.012	12	M. Baldwin
41248.351	12597	+0.001	10	M. Baldwin
41364.593	12793	+0.001	11	J. Bortle
41380.602	12820	-0.003	11	B. Small
41392.450:	12840	-0.016	11	M. Baldwin
41402.548	12857	-0.001	6	B. Small
41415.591	12879	-0.006	9	B. Small
41422.707	12891	-0.006	13	B. Small
41590.547	13174	-0.005	5	B. Small
41599.446	13189	-0.003	7	M. Baldwin
41605.380	13199	+0.011	12	M. Baldwin
41682.473	13329	-0.005	10	M. Baldwin
<u>AL Camelopardalis</u>				
41049.754	11020	-0.002	14	B. Conner
41053.762	11023	+0.021	13	B. Conner
41364.575	11257	+0.004	14	J. Bortle
41433.645	11309	0.000	16	J. Bortle
<u>R Canis Majoris</u>				
40973.563	4805	+0.018	14	K. Simmons
40975.806	4807	-0.011	15	I. Lenss
40982.637	4813	+0.005	13	B. Small
40982.638	4813	+0.006	10	D. Ortwein
41683.524	5430	+0.017	17	M. Baldwin
<u>RZ Cassiopeiae</u>				
40954.436	3188	-0.001	13	R. Lukas
40961.601	3194	-0.008	11	B. Small
40973.561	3204	0.000	14	K. Simmons
40979.534	3209	-0.003	16	B. Small
41010.608	3235	-0.005	9	D. Ortwein
41053.627	3271	-0.015	10	D. Ortwein
41139.689	3343	-0.011	10	R. Simpkins
41145.675	3348	-0.001	11	R. Simpkins
41194.671	3389	-0.010	28	K. Simmons
41235.317	3423	-0.003	16	E. Mayer
41241.298	3428	+0.002	10	M. Baldwin
41243.684	3430	-0.002	14	B. Small
41248.464	3434	-0.004	16	M. Baldwin
41249.658	3435	-0.004	21	B. Small
41255.638	3440	-0.001	29	R. Thompson
41255.639	3440	0.000	23	G. Bailey
41261.613	3445	-0.002	13	J. Bortle

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
<u>RZ Cassiopeiae</u>				
2441261.614	3445	-0.001	12	D. Ortwein
41316.592	3491	-0.005	14	B. Small
41322.573	3496	0.000	14	J. Bortle
41322.575	3496	+0.002	13	B. Small
41328.549	3501	0.000	8	B. Small
41377.555	3542	+0.001	12	B. Small
41433.729	3589	-0.002	15	J. Bortle
41561.627	3696	+0.005	20	J. Koller
41566.403	3700	-0.001	14	M. Baldwin
41567.599	3701	+0.001	11	E. Mayer
41596.283	3725	-0.002	7	M. Baldwin
41597.481	3726	+0.003	8	M. Baldwin
41598.675	3727	0.000	14	B. Small
41604.652	3732	0.000	17	E. Mayer
41628.560:	3752	+0.004:	7	B. Small
41653.651	3773	-0.006	14	K. Simmons
41653.659	3773	+0.003	13	B. Small
41659.636	3778	+0.003	9	B. Small
41677.564	3793	+0.003	14	B. Small
41682.347	3797	+0.005	14	M. Baldwin
41683.537	3798	-0.001	15	M. Baldwin
<u>TV Cassiopeiae</u>				
40973.607	11506	-0.033	14	K. Simmons
40993.583	11517	+0.005	8	B. Small
41127.694	11591	-0.017	16	R. Simpkins
41145.811 1)	11601	-0.026	19	R. Simpkins
41194.763	11628	-0.015	28	K. Simmons
41252.769	11660	-0.013	13	I. Lenss
41312.594	11693	-0.004	8	B. Small
<u>AB Cassiopeiae</u>				
40985.369	5391	+0.008	11	M. Baldwin
41213.638	5558	+0.009	15	M. Baldwin
41335.290	5647	+0.009	12	M. Baldwin
41391.332	5688	+0.009	12	M. Baldwin
41593.626	5836	+0.006	12	E. Mayer
41596.363	5838	+0.009	15	M. Baldwin
41604.561	5844	+0.006	16	M. Baldwin
41682.475	5901	+0.007	18	M. Baldwin
<u>U Cephei</u>				
41068.767	1114	+0.017	31	I. Lenss
41245.777	1185	+0.021	26	I. Lenss
41422.780	1256	+0.018	13	B. Small
<u>EG Cephei</u>				
41248.626	26292	+0.014	11	B. Small
41297.637	26382	+0.009	11	B. Small
41367.353	26510	+0.013	10	M. Baldwin
41370.622	26516	+0.014	13	J. Bortle
41379.326	26532	+0.005	13	M. Baldwin
41391.311	26554	+0.009	8	M. Baldwin
41392.395	26556	+0.003	11	M. Baldwin
41559.606	26863	+0.015	11	E. Mayer
41564.502	26872	+0.010	11	M. Baldwin
41593.365	26925	+0.008	8	M. Baldwin
41599.352	26936	+0.004	10	M. Baldwin

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
2441605.348	26947	+0.010	16	M. Baldwin
41623.320	26980	+0.009	13	M. Baldwin
41626.593	26986	+0.014	10	B. Small
<u>U Coronae Borealis</u>				
41068.732	7045	-0.010	18	I. Lenss
41151.591	7069	-0.004	16	P. Gruntmeyer
41541.637:	7182	-0.057:	12	B. Small
<u>W Corvi</u>				
41063.706	34019.5	+0.024	13	B. Conner
41065.631	34024.5	+0.009	15	B. Conner
41096.662	34104.5	-0.007	11	B. Conner
41097.636	34107	-0.003	11	B. Conner
<u>Y Cygni</u>				
41650.632	10718.5	+0.116	10	T. Cragg
<u>ZZ Cygni</u>				
41213.568	31937	-0.031	9	M. Baldwin
41244.373	31986	-0.029	12	M. Baldwin
41249.401	31994	-0.030	7	M. Baldwin
<u>V477 Cygni</u>				
41100.637	3517	+0.002	7	D. Ortwein
41154.625	3540	+0.009	11	D. Ortwein
41161.633	3543	-0.024	16	B. Conner
41506.692	3690	+0.026	10	D. Ortwein
<u>V1143 Cygni</u>				
41578.587	2104	+0.050	11	B. Small
<u>FZ Delphini</u>				
41153.646	12550	0.000	17	B. Conner
41156.777	12554	-0.002	19	B. Conner
41212.390	12625	+0.003	11	M. Baldwin
41241.367	12662	+0.001	14	M. Baldwin
41566.402	13077	+0.002	8	M. Baldwin
41594.601	13113	+0.006	10	E. Mayer
<u>Z Draconis</u>				
41683.477	6199	-0.001	18	M. Baldwin
<u>TW Draconis</u>				
41559.611	2733	-0.016	7	E. Mayer
<u>AI Draconis</u>				
40801.689	1455	+0.004	10	S. Cook
41049.848	1662	+0.008	12	R. Nolthenius
41115.778	1717	+0.003	10	S. Cook
41120.589	1721	+0.019	10	R. Simpkins
41121.770	1722	+0.001	12	T. Cragg
41127.768	1727	+0.005	16	R. Simpkins
41133.754	1732	-0.004	13	R. Nolthenius
41145.762	1742	+0.017	11	R. Simpkins
41519.771	2054	-0.004	25	R. Harvin
<u>YY Eridani</u>				
40981.389	22905	-0.001	8	M. Baldwin

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
2440983.634	22912	-0.007	8	B. Small
40993.599	22943	-0.009	9	B. Small
40999.553	22961.5	-0.002	13	B. Small
41002.609	22971	-0.001	10	B. Small
41308.666	23923	-0.007	13	I. Lenss
41317.673	23951	-0.003	14	B. Small
41320.568	23960	-0.001	9	B. Small
41324.582	23972.5	-0.006	11	I. Lenss
41324.741	23973	-0.008	10	I. Lenss
41347.583	24044	+0.008	10	B. Small
41352.560	24059.5	+0.002	8	B. Small
41370.558	24115.5	-0.004	12	B. Small
41383.576	24156	-0.007	8	B. Small
41388.559	24171.5	-0.006	9	B. Small
41396.592:	24196.5	-0.011:	7	B. Small
41682.414	25085.5	+0.001	16	M. Baldwin
41683.378	25088.5	+0.001	14	M. Baldwin
<u>SX Geminorum</u>				
41036.590	16099	-0.032	13	D. Ortwein
<u>SZ Herculis</u>				
41043.730	7403	-0.004	23	B. Conner
41129.650	7508	+0.016	8	W. Hampton
41147.648	7530	+0.016	11	E. Mayer
41147.652	7530	+0.020	14	D. Ortwein
41515.799	7980	+0.025	36	M. Connors
41533.792	8002	+0.019	17	T. Cragg
41562.427	8037	+0.021	17	M. Baldwin
41570.608	8047	+0.021	18	E. Mayer
<u>TU Herculis</u>				
41048.725	1582	-0.016	45	B. Conner
<u>CT Herculis</u>				
40818.731	819	+0.032	9	S. Cook
41052.742	950	+0.029	22	B. Conner
41086.674	969	+0.021	12	E. Mayer
41102.743	978	+0.012	12	E. Mayer
41145.655	1002	+0.052	21	B. Conner
41579.713	1245	+0.023	8	T. Cragg
<u>SW Lacertae</u>				
40813.683:	10105.5	-0.007:	8	S. Cook
41213.449	11352	-0.029	11	M. Baldwin
41240.394	11436	-0.025	10	M. Baldwin
41241.359	11439	-0.022	13	M. Baldwin
41244.404	11448.5	-0.024	10	M. Baldwin
41248.411	11461	-0.026	16	M. Baldwin
41249.377	11464	-0.023	14	M. Baldwin
41253.387	11476.5	-0.022	7	M. Baldwin
41276.316	11548	-0.024	10	M. Baldwin
41562.400	12440	-0.030	8	M. Baldwin
41594.307	12539.5	-0.036	12	M. Baldwin
41598.642	12553	-0.030	6	B. Small
41600.558	12559	-0.038	12	B. Small

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
2441605.373	12574	-0.034	13	M. Baldwin
41606.332	12577	-0.038	11	M. Baldwin
41609.544	12587	-0.033	6	B. Small
41614.510	12602.5	-0.038	10	B. Small
41621.568	12624.5	-0.037	6	B. Small
41622.530	12627.5	-0.037	7	B. Small
41623.332	12630	-0.037	11	M. Baldwin
41624.296	12633	-0.034	10	M. Baldwin
41625.583	12637	-0.030	11	B. Small
41626.535	12640	-0.041	9	B. Small
41626.700	12640.5	-0.036	5	B. Small
<u>VX Lacertae</u>				
41565.429	6832	-0.047	21	M. Baldwin
<u>CM Lacertae</u>				
41213.403	8841	+0.009	8	M. Baldwin
<u>Y Leonis</u>				
41025.608	4351	+0.058	12	E. Mayer
41052.582	4367	+0.055	18	E. Mayer
41062.697	4373	+0.054	13	E. Mayer
41067.727:	4376	+0.026:	7	T. Cragg
<u>UV Leonis</u>				
41391.343	4917	-0.005	10	M. Baldwin
<u>SS Librae</u>				
41096.686	14496	+0.008	15	B. Conner
41152.771	14535	+0.011	19	B. Conner
41155.656	14537	+0.020	16	B. Conner
41536.712:	14802	+0.006:	6	T. Cragg
<u>Delta Librae</u>				
40700.842	7669	+0.013	22	R. Nolthenius
<u>EW Lyrae</u>				
41097.717	3135	+0.048	41	B. Conner
41099.673	3136	+0.056	42	B. Conner
41594.640	3390	+0.043	13	E. Mayer
<u>FL Lyrae</u>				
41133.742	1337	-0.003	11	R. Nolthenius
41621.658	1561	+0.006	9	J. Koller
<u>RU Monoceros</u>				
40999.578	3168.5	+0.082	11	F. Mayer
41022.695	3175	-0.101	10	B. Conner
41040.613	3180	-0.106	15	B. Conner
41361.653:	3269.5	+0.108:	11	T. Cragg
<u>RW Monoceros</u>				
41335.316	4016	-0.009	12	M. Baldwin
<u>U Ophiuchius</u>				
41108.661	19572	+0.005	11	M. Daw
41160.654	19603	-0.001	8	E. Mayer
41235.281	19647.5	-0.015	13	E. Mayer



<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
<u>EQ Orionis</u>				
2441335.386	8663	-0.058	13	M. Baldwin
<u>ER Orionis</u>				
40957.655	10507.5	-0.015	9	E. Mayer
40959.581	10512	+0.006	8	D. Ortwein
40975.657	10550	-0.007	22	I. Lenss
40976.716	10552.5	-0.007	16	I. Lenss
40989.634	10583	-0.003	10	I. Lenss
41013.548	10639.5	-0.011	7	D. Ortwein
41245.793	11188	-0.001	11	I. Lenss
41248.541	11194.5	-0.005	8	M. Baldwin
41252.772	11204.5	-0.009	11	I. Lenss
41256.586	11213.5	-0.005	11	I. Lenss
41297.652	11310.5	-0.009	12	B. Small
41308.661	11336.5	-0.009	11	I. Lenss
41317.555	11357.5	-0.006	12	B. Small
41319.677	11362.5	-0.001	5	T. Cragg
41323.699	11372	-0.001	7	T. Cragg
41324.538	11374	-0.009	12	I. Lenss
41324.749	11374.5	-0.010	11	I. Lenss
41335.326	11399.5	-0.018	5	M. Baldwin
41367.299	11475	-0.011	9	M. Baldwin
41368.361	11477.5	-0.008	5	E. Mayer
41375.551	11494.5	-0.015	7	B. Small
41379.575	11504	-0.014	10	B. Small
41380.636	11506.5	-0.011	9	B. Small
41383.591	11513.5	-0.021	8	B. Small
41386.562	11520.5	-0.014	7	B. Small
41390.583	11530	-0.015	8	B. Small
41393.335	11536.5	-0.015	8	M. Baldwin
41401.583	11556	-0.023	7	B. Small
41404.545	11563	-0.025	6	B. Small
41411.537	11579.5	-0.018	4	B. Small
41415.562	11589	-0.016	6	B. Small
41683.358	12221.5	-0.021	13	M. Baldwin
<u>FL Orionis</u>				
40956.668	8707	+0.093	7	T. Cragg
40984.577	8725	+0.084	15	E. Mayer
41015.599	8745	+0.086	10	E. Mayer
<u>FT Orionis</u>				
41682.629	2753	+0.014	12	M. Baldwin
<u>U Pegasi</u>				
41212.376	12542.5	+0.005	15	M. Baldwin
41213.488	12545.5	-0.007	11	M. Baldwin
41234.672	12602	+0.001	13	S. Cook
41236.347	12606.5	-0.010	8	M. Baldwin
41241.409	12620	-0.007	12	M. Baldwin
41244.408	12628	-0.007	10	M. Baldwin
41245.733	12631.5	+0.006	16	I. Lenss
41248.348	12638.5	-0.002	21	M. Baldwin
41249.480	12641.5	+0.006	9	M. Baldwin
41253.405	12652	-0.005	13	M. Baldwin
41276.262	12713	-0.009	13	M. Baldwin
41324.619	12842	+0.001	12	I. Lenss
41604.395	13588.5	+0.002	5	M. Baldwin

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
2441605.320	13591	-0.010	14	M. Baldwin
41623.311	13639	-0.009	11	M. Baldwin
<u>UX Pegasi</u>				
41591.669	1642	-0.002	8	L. Hazel
<u>Beta Persei</u>				
40956.304	515	-0.049	15	R. Lukas
40967.804	519	-0.018	17	B. Conner
40970.674	520	-0.015	22	B. Conner
40993.595	528	-0.034	9	E. Small
41013.689	535	-0.012	17	B. Conner
41314.703	640	-0.013	12	D. Wolters
41314.715	640	-0.061	18	M. Daw
41314.742	640	-0.035	20	K. Simmons
41317.586	641	-0.058	13	B. Small
41357.744:	655	-0.044:	7	T. Cragg
41366.358	658	-0.032	12	E. Mayer
41592.877	737	-0.037	32	G. Gliba
<u>RT Persei</u>				
40975.641	19334	-0.045	15	E. Mayer
41248.301	19655	-0.045	15	M. Baldwin
41253.396	19661	-0.047	13	M. Baldwin
41276.326	19688	-0.051	8	M. Baldwin
41562.571	20025	-0.056	8	M. Baldwin
41597.403	20066	-0.050	11	M. Baldwin
<u>ST Persei</u>				
40982.646	714	+0.008	18	E. Mayer
40985.290	715	+0.004	8	M. Baldwin
41035.601	734	-0.004	17	E. Mayer
41591.769	944	+0.011	13	L. Hazel
<u>XZ Persei</u>				
40969.275	13736	+0.005	12	M. Baldwin
41395.383	14106	+0.008	9	M. Baldwin
41623.402	14304	+0.004	10	M. Baldwin
<u>Y Piscium</u>				
41240.539	2) 1649	+0.110	17	M. Baldwin
41244.307	1650	+0.112	17	M. Baldwin
<u>RW Tauri</u>				
41245.772	8685	-0.068	21	I. Lenss
41248.538	8686	-0.071	15	M. Baldwin
<u>X Trianguli</u>				
40969.652	3497	-0.017	28	I. Lenss
40970.622	3498	-0.018	21	I. Lenss
40981.307	3509	-0.020	8	M. Baldwin
41213.504	3748	-0.021	10	M. Baldwin
41248.476	3784	-0.024	14	M. Baldwin
41249.451	3785	-0.020	14	M. Baldwin
41253.334	3789	-0.024	10	M. Baldwin
41308.716	3846	-0.020	25	I. Lenss
41313.569	3851	-0.024	15	B. Small
41347.574	3886	-0.023	20	B. Small
41593.370	4139	-0.026	7	M. Baldwin

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
2441594.343	4140	-0.025	9	M. Baldwin
41595.313	4141	-0.026	11	M. Baldwin
41596.285	4142	-0.025	8	M. Baldwin
41616.689	4163	-0.024	10	T. Cragg
<u>W Ursae Majoris</u>				
40952.679	6474	-0.061	10	K. Simmons
40953.676	6477	-0.065	21	K. Simmons
40975.700	6543	-0.062	16	E. Mayer
40996.7242	6606	-0.058	17	I. Lenss
41028.748	6702	-0.064	6	T. Cragg
41035.571	6722.5	-0.081	11	D. Ortwein
41036.593	6725.5	-0.060	12	E. Mayer
41037.584	6728.5	-0.070	12	D. Ortwein
41038.596	6731.5	-0.058	12	D. Ortwein
41042.595	6743.5	-0.063	8	E. Mayer
41047.604	6758.5	-0.059	8	D. Ortwein
41052.599	6773.5	-0.069	11	D. Ortwein
41053.604	6776.5	-0.065	11	D. Ortwein
41053.614	6776.5	-0.055	15	J. Bortle
41057.603	6788.5	-0.069	9	D. Ortwein
41058.614	6791.5	-0.060	12	E. Mayer
41058.946	6792.5	-0.061	11	S. Cook
41063.625	6806.5	-0.053	9	J. Bortle
41064.617	6809.5	-0.062	12	D. Ortwein
41068.778	6822	-0.072	15	I. Lenss
41076.626	6845.5	-0.064	12	D. Ortwein
41080.626	6857.5	-0.068	12	F. Mayer
41085.626	6872.5	-0.073	14	D. Ortwein
41086.634	6875.5	-0.065	14	D. Ortwein
41089.629	6884.5	-0.074	11	D. Ortwein
41095.640	6902.5	-0.068	12	D. Ortwein
41099.646	6914.5	-0.066	8	F. Mayer
41256.787	7385.5	-0.073	11	I. Lenss
41308.666	7541	-0.075	13	I. Lenss
41308.829	7541.5	-0.079	9	I. Lenss
41324.687	7589	-0.070	11	I. Lenss
41364.562	7708.5	-0.066	13	J. Bortle
41392.761	7793	-0.059	10	T. Cragg
41395.754	7802	-0.069	8	T. Cragg
41403.596	7825.5	-0.068	12	J. Bortle
41433.626	7915.5	-0.066	15	J. Bortle
41449.640	7963.5	-0.068	10	E. Mayer
<u>TX Ursae Majoris</u>				
41049.681	606	+0.046	20	B. Conner
41052.694	607	-0.005	21	B. Conner
41052.717	607	+0.019	18	R. Nolthenius
41055.750	608	-0.012	22	B. Conner
41435.600	732	-0.004	19	J. Bortle
<u>VV Ursae Majoris</u>				
41012.642	5330	+0.058	8	F. Mayer
41025.693	5349	+0.049	17	E. Mayer
41045.638	5378	+0.060	9	E. Mayer
41056.630	5394	+0.054	10	F. Mayer
41080.690	5429	+0.057	12	F. Mayer

<u>J.D. hel.</u>	<u>E</u>	<u>O - C</u>	<u>n</u>	<u>Observer</u>
<u>XZ Ursae Majoris</u>				
2441050.601	11998	-0.067	18	E. Mayer
<u>RU Ursae Minoris</u>				
41401.599	28471	+0.001	8	B. Small
41402.638	28473	-0.010	12	B. Small
41411.554:	28490	-0.017	5	B. Small
41422.582	28511	-0.013	9	B. Small
41433.631	28532	+0.013	16	J. Bortle
<u>BU Vulpeculae</u>				
41129.731	13350	-0.004	14	D. Ortwein
41153.649	13392	+0.016	11	D. Ortwein
41182.646	13443	-0.005	13	D. Ortwein
41213.385	13497	+0.008	8	M. Baldwin
41561.597	14109	-0.003	10	D. Ortwein
41564.450	14114	+0.004	7	M. Baldwin
41596.315	14170	+0.006	9	M. Baldwin
41604.275	14184	0.000	4	M. Baldwin

- 1) Determined by combining portions of eclipses observed on J.D. 2441145 and 2441147.
- 2) Observed descending leg of eclipse only. Time of minimum determined by fitting data to minimum of J.D. 2441244.