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V-R COLOURS OF RED VARIABLE STARS

During the years 1973-1974 the authors observed the variable stars of late spectral classes photoelectrically with the 20-inch reflector of Urals University Observatory.

The colour-indices were determined with mean error $\pm 0^m.009$. Larger errors for some stars are produced by variability.

Results of observations are given in Table 1.

First column contains the stellar identification of Catalogue of Bright Stars (1964). The GCVS names (3rd edition, 1969 and its Supplements) or numbers of stars according to First (1951) and Second (1965) Catalogue of Suspected Variable Stars are listed in second column. Third, fourth and fifth column contain the heliocentric times J.D. of observations, colour-indices V-R, mean errors, respectively.

		Table I		
BS=HR	Name	J.D.hel	V-R	me
		244 ...		
46	AD Cet	2275.4229	1.541	$\pm 0^m.017$
		2277.4625	1.453	
		2277.4667	1.460	
		2310.3743	1.515	
		2310.3785	1.496	
80	100 017	2272.3403	0.972	0.013
		2272.3993	1.011	
		2277.2771	0.976	
		2324.1778	1.021	
		2324.2521	1.040	
103	TV Psc	1901.2854	1.588	0.028
		1901.3250	1.553	
		1901.3951	1.543	
		1958.2333	1.573	
		1958.3014	1.591	
		2077.1715	1.724	
		2077.2069	1.751	
		2104.1340	1.799	
		2307.2014	1.490	
		2276.3764	1.544	
		2277.4313	1.560	
		2309.1750	1.695	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
211	88	1901.2917	1. ^m 670	±0.023
		1901.3361	1.637	
		1901.4035	1.591	
		2077.2208	1.792	
		2078.2035	1.749	
		2274.3764	1.655	
		2307.1806	1.690	
		2307.2069	1.673	
		2319.4639	1.579	
587	AR Cet	2018.2090	2.051	0.052
		2018.2299	2.125	
		2056.1250	1.876	
		2318.4257	2.004	
631*	-	1900.3688	1.535	0.019
		2275.3354	1.565	
		2275.3903	1.597	
		2278.2729	1.602	
		2280.2674	1.503	
689*	-	2098.1181	1.453	0.025
		2098.1521	1.471	
		2333.3569	1.377	
		2356.2826	1.369	
		2357.3222	1.348	
750	230	2112.1917	1.522	0.022
		2114.2694	1.527	
		2277.3896	1.433	
		2277.2632	1.416	
		2278.3111	1.390	
		2319.3875	1.401	
		2322.3826	1.396	
758	R Tri	2142.1875	1.547	0.029
		2356.1146	1.390	
		2356.1382	1.400	
		2356.1479	1.405	
		2356.1785	1.416	
		2356.5583	1.336	
992	102 411	2309.4306	0.765	0.030
		2322.3729	0.838	
		2356.4556	0.686	
		2356.4597	0.704	
		2356.4736	0.683	
1009*	-	1801.3917	1.563	0.006
		1802.3833	1.569	
		1802.3056	1.580	
		1804.3597	1.596	
		1809.3028	1.581	
		1813.3035	1.561	
		1815.3701	1.545	
1105	BD Cam	1803.3590	1.673	0.008
		1807.3972	1.670	
		1809.2931	1.668	
		1813.2979	1.640	
		1814.3771	1.634	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
1335*	-	1803.3688	1. ^m 178	±0. ^m 004
		1808.4181	1.201	
		1809.2840	1.198	
		1813.3118	1.200	
		1815.3854	1.188	
1451	DV Eri	1736.1118	1.540	0.019
		1736.1500	1.527	
		2050.2201	1.462	
		2050.2750	1.488	
		2056.2688	1.438	
		2098.1292	1.551	
1556	o ¹ Ori	2079.3979	1.751	0.017
		2097.2944	1.756	
		2097.3194	1.773	
		2112.1986	1.694	
1562	100 421	1735.1715	1.394	0.026
		1735.2150	1.422	
		1735.2188	1.391	
		1736.1250	1.436	
		2356.5403	1.299	
1571	100 422	1735.1639	0.874	0.012
		1735.2243	0.840	
		2123.1965	0.847	
		2126.1840	0.892	
1709	100 461	1757.2417	1.017	0.010
		1758.1896	0.974	
		1758.2146	0.996	
		1758.2375	1.016	
1722	PU Aur	1734.3118	1.750	0.022
		2309.2590	1.838	
		2310.2243	1.844	
		2322.2701	1.786	
1802*	-	1801.3465	1.420	0.005
		1802.4014	1.406	
		1804.3340	1.408	
		1816.2778	1.397	
1834	CI Ori	1734.2306	1.182	0.009
		1735.1958	1.187	
		1735.2319	1.191	
		1953.4333	1.150	
2037	100 692	1761.1924	0.980	0.005
		1761.2063	1.004	
		2078.2743	0.986	
		2078.3409	0.997	
2063	U Ori	2322.2958	1.348	0.015
		2323.2979	1.394	
		2330.2792	1.408	
		2330.3083	1.348	
		2356.3472	1.334	
		2356.4159	1.282	
		2356.4993	1.307	
		2357.1965	1.394	
		2357.3354	1.265	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
2215	UW Lyn	1802.4104	1. ^m 698	+0. ^m 018
		1803.3396	1.700	
		1815.3021	1.698	
		2330.1444	1.635	
		2330.2215	1.619	
2275	100 729	1761.1688	1.332	0.013
		1761.1993	1.360	
		1761.2125	1.330	
		2104.1944	1.388	
2289	ψ^1 Aur	1734.3201	1.399	0.025
		1779.1917	1.384	
		1780.3951	1.484	
		1781.3125	1.483	
		1804.2569	1.431	
		2144.3750	1.462	
		2144.4264	1.492	
		2302.1611	1.541	
		2303.2535	1.591	
		2308.1854	1.304	
2480	100 761	2097.3618	1.099	0.002
		2112.3708	1.091	
		2113.3250	1.098	
		2114.2035	1.096	
2508*	-	2055.3340	1.407	0.031
		2097.2361	1.554	
		2104.1875	1.516	
		2114.1646	1.486	
2609	OV Cep	1780.4090	1.313	0.008
		1782.2159	1.287	
		1782.2778	1.312	
		1783.2715	1.310	
		2291.2632	1.252	
		2309.1659	1.297	
		2333.2813	1.275	
		2356.3549	1.280	
2639	100 794	1735.2778	1.324	0.014
		1736.2347	1.313	
		1736.2889	1.377	
		1761.1507	1.333	
2703	UY Lyn	1734.3722	1.562	0.012
		1815.3431	1.552	
		1822.3785	1.602	
		1823.3090	1.567	
		2153.4667	1.580	
		2160.4500	1.634	
2717	BQ Gem	1761.3278	1.763	0.008
		1761.3330	1.755	
		1780.1743	1.751	
		1780.2736	1.724	
2742	VZ Cam	1761.2917	1.606	0.014
		1782.2090	1.538	
		1782.2313	1.554	
		2124.4806	1.609	
		2148.4076	1.591	
		2333.2882	1.534	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
2795*	-	2080.4646	1. ^m 240	±0. ^m 003
		2097.4215	1.242	
		2097.4563	1.250	
		2099.3438	1.236	
		2103.4375	1.231	
		2104.2361	1.219	
		2104.3486	1.237	
		2105.4243	1.225	
2938	100 883	1734.3528	1.254	0.008
		1802.2500	1.301	
		2049.4007	1.261	
		2097.4021	1.296	
		2097.4417	1.307	
		2103.4299	1.282	
		2104.4181	1.301	
2983*	-	1747.3361	1.218	0.007
		1747.3417	1.217	
		2079.3840	1.192	
		2097.4479	1.200	
		2098.4535	1.197	
		2112.2063	1.185	
		2112.4090	1.192	
		2114.1965	1.132	
		2317.4076	1.244	
2999*	-	1734.3840	1.392	0.005
		2056.3909	1.402	
		2112.2250	1.373	
		2148.3583	1.392	
		2155.3909	1.388	
		2158.3743	1.407	
		2159.3167	1.406	
3013*		1747.3535	1.332	0.005
		1747.4146	1.324	
		1747.4368	1.333	
		2112.2861	1.295	
		2112.3097	1.294	
		2112.3542	1.312	
		2157.3375	1.315	
		2159.3069	1.314	
3550	101 010	1734.2659	1.018	0.009
		1778.3521	1.047	
		1782.3188	1.052	
		2322.4979	1.016	
3639	RS Cnc	1779.3646	2.479	0.025
		1779.4035	2.367	
		1780.3431	2.455	
		1781.3590	2.480	
		1782.4181	2.511	
3769*	-	1779.4535	1.180	0.021
		1780.2563	1.216	
		1780.3701	1.306	
		1781.3646	1.225	
		2124.5104	1.254	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
3820*	-	1803.2521	1. ^m 300	±0. ^m 010
		1804.2208	1.265	
		1785.3264	1.282	
		1786.3049	1.288	
		2124.5028	1.325	
3866*	-	1802.2757	1.361	0.005
		1804.2347	1.351	
		1823.2868	1.354	
		2103.3681	1.358	
		2104.2639	1.382	
		2104.3576	1.381	
		2124.3903	1.357	
3870	CS UMa	1781.3917	1.563	0.015
		1782.3939	1.553	
		1786.4264	1.539	
		1800.4007	1.604	
		2103.5292	1.629	
		2310.2549	1.545	
3882	R Leo	2076.4715	3.598	0.053
		2356.4382	3.382	
		2356.4444	3.395	
		2356.4708	3.380	
4127	101 134	1787.3285	1.431	0.004
		1798.2472	1.452	
		1798.2778	1.447	
		1801.2931	1.444	
4483	ω Vir	1781.2153	1.848	0.015
		1783.2056	1.871	
		1783.2333	1.869	
		1787.2875	1.807	
4765	CQ Dra	1787.3882	1.487	0.007
		1787.4542	1.511	
		1788.3674	1.476	
		1788.3764	1.482	
		1825.3701	1.468	
4800	T UMa	2276.2813	1.545	0.229
		2277.2500	1.520	
		2308.1757	2.141	
		2308.2299	2.114	
		2330.1938	0.871	
		2330.2668	0.880	
5015	7013	1788.2951	1.366	0.015
		1788.4514	1.393	
		1798.3771	1.373	
		1799.3285	1.357	
		2124.5347	1.450	
		2155.4576	1.429	
5334*	-	1822.3236	1.302	0.006
		1823.3215	1.304	
		1916.2264	1.314	
		1916.2667	1.329	
5590*	-	1788.3278	1.323	0.009
		1788.4659	1.340	
		1798.3181	1.362	
		1798.3590	1.362	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
5894	R Ser	2273.2986	3. ^m 213	±0. ^m 356
		2280.2188	2.509	
		2323.2563	1.984	
6086	AT Dra	1786.3896	1.727	0.007
		1799.4243	1.750	
		1800.4306	1.757	
		1801.4243	1.766	
		2142.2417	1.777	
		2396.4347	1.743	
6107*	-	1813.3931	1.374	0.002
		1816.3806	1.360	
		1822.3417	1.372	
		1823.3938	1.366	
		2310.2951	1.368	
6200*	-	1816.3875	1.370	0.003
		1822.3917	1.362	
		1823.3708	1.366	
		1825.3382	1.381	
		2142.2542	1.371	
6227	101 605	1786.4701	1.538	0.022
		1788.4132	1.536	
		1797.4188	1.588	
		1799.3368	1.612	
		2280.2536	1.485	
6452	V 656 Her	1787.4326	1.331	0.014
		1788.4201	1.284	
		1797.4409	1.298	
		1798.3514	1.283	
		2291.2715	1.221	
		2291.3236	1.236	
		2299.2293	1.286	
6765*	-	1788.4264	1.514	0.004
		1797.4111	1.526	
		1797.3917	1.525	
		1798.3632	1.532	
6815	V 669 Her	1798.2931	1.447	0.029
		1799.2353	1.471	
		1801.2563	1.492	
		2098.4125	1.581	
7243	R Aql	2277.3111	3.930	0.172
		2291.2826	3.269	
		2309.2993	2.869	
		2310.2028	2.678	
		2310.2319	2.698	
		2310.3035	2.780	
		2330.2542	2.795	
7414	101 850	1798.4319	1.524	0.015
		1799.4069	1.462	
		1801.4146	1.473	
		1823.4021	1.463	
7566	V 1509 Cyg	2132.3938	1.401	0.013
		2341.3896	1.335	
		2356.3007	1.356	
		2356.3708	1.364	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
7576	8468	1733.2938	0 ^m .927	±0 ^m .011
		1744.3396	0.930	
		1779.2069	0.895	
		1780.3159	0.950	
7645	VZ Sge	1793.4326	1.744	0.005
		1801.3694	1.764	
		1802.3778	1.742	
		1825.2889	1.754	
7798	102 998	1798.3028	0.762	0.008
		1804.2743	0.751	
		1802.2340	0.786	
		1814.2785	0.796	
7851	101 996	2143.3604	0.776	0.011
		1802.2382	1.406	
		1814.2840	1.367	
		1916.2730	1.340	
		1916.3438	1.342	
		1916.4472	1.335	
7956	T Cyg	2307.2556	1.343	0.005
		1814.2889	0.942	
		1824.3875	0.962	
		1916.3736	0.947	
		2104.5618	0.943	
		2357.3118	0.944	
8015	102 046	2396.2215	0.964	0.004
		2396.2590	0.974	
		1907.3382	1.099	
		1913.2743	1.082	
8016	102 045	1913.2938	1.095	0.003
		1913.3550	1.108	
		1914.2736	1.104	
		2112.3188	0.812	
		2113.3653	0.832	
		2114.3639	0.822	
8044*	-	2124.3569	0.827	0.009
		2124.3611	0.821	
		1807.3632	1.494	
		1826.3083	1.456	
		1916.2896	1.449	
		2149.4771	1.448	
8113	T Cep	2158.4576	1.449	0.098
		1779.3396	3.320	
		2104.3847	3.768	
		2112.2507	3.423	
8289*	-	2112.3292	3.580	0.009
		1915.3021	1.380	
		1917.3826	1.397	
		2302.2361	1.406	
		2303.2368	1.416	
8306	8683	2322.3417	1.432	0.004
		2309.2486	1.352	
		2310.2451	1.338	
		2322.4326	1.333	
		2323.4243	1.309	

Table I (cont.)

BS=HR	Name	J.D. hel. 244 ...	V-R	me
8306	8683	2343.2472	1 ^m .332	±0 ^m .004
		2356.1285	1.336	
		2356.2049	1.344	
		2356.2569	1.341	
8416	102 144	1782.4396	1.690	0.003
		1782.4611	1.702	
		1786.4583	1.697	
		1787.3576	1.701	
8594	8775	1733.2951	0.682	0.024
		1733.3153	0.673	
		1786.3409	0.707	
		1787.2368	0.776	
8621	102 195	1787.3424	1.774	0.033
		1803.3306	1.710	
		1804.3847	1.708	
		2132.2382	1.848	
8703*	-	1914.3236	0.837	0.007
		1916.2465	0.860	
		1916.3184	0.861	
		2309.1972	0.858	
		2330.3236	0.828	
8815	GZ Peg	2077.1313	1.868	0.051
		2079.1215	2.006	
		2098.1021	1.969	
		2395.2264	1.779	
8850	χ Aqr	1914.3111	1.751	0.011
		1916.3049	1.714	
		1916.3604	1.702	
		1916.4250	1.741	
8904*	-	1787.1965	1.416	0.008
		2103.3806	1.400	
		2104.2785	1.434	
		2114.2424	1.400	
8940	5749	2078.1764	1.886	0.030
		2275.3484	1.800	
		2309.1875	1.809	
		2322.3250	1.731	
		2330.2368	1.722	
8943	103 124	2280.2743	1.047	0.009
		2310.3104	1.059	
		2318.4701	1.009	
		2330.2424	1.056	
		2330.3097	1.049	
8991	102 279	1958.2826	1.325	0.018
		2077.1174	1.364	
		2078.1409	1.400	
		2307.1667	1.434	
		2322.2159	1.386	
9036*	-	2274.3576	1.379	0.011
		2301.3431	1.424	
		2302.2194	1.418	
		2309.2194	1.386	
9047	XZ Psc	1916.3347	1.872	0.025
		2077.1090	1.844	

Table I (cont.)

BS=HR	Name	J.D. hel 244 ...	V-R	me
9047	XZ Psc	2275.4159	1. ^m 979	±0. ^m 025
		2322.2333	1.922	
		2357.2521	1.859	
9066	R Cas	2309.3597	3.076	0.423
		2322.1674	3.098	
		2322.3917	2.984	
		2393.1229	4.977	
		2393.1368	4.913	
		2396.3500	4.937	
9103 102 299		1916.3889	1.113	0.007
		2275.4319	1.119	
		2275.4361	1.117	
		2383.1424	1.112	
		2383.1722	1.081	

*) - Data on variability of these stars are included in Card-Catalogue of variable stars of the Sternberg State Astronomical Institute.

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