

## THE CATALOG OF DECLINATIONS OF 250 DS PROGRAM STARS

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The determinations of the DS program stars positions are an actual problem, because as a rule they are absent in the catalogues. The double stars of the program DS are useless for photographic and photoelectric control because of the nearness of the components. The visual observations are possible only.

The working program of observations was worked out from the DS stars with the declinations from  $-10^\circ$  till  $+10^\circ$ . The stars from FK4 with declinations from  $-15^\circ$  till  $+15^\circ$  were used in the capacity of bearing.

Determinations of DS stars declinations was made using Repsold meridian circle of Odessa astronomical observatory (diameter of the lens is 135 mm, focal distance is 1980 mm). Observations was conducted with the differential method in two positions of the instrument. 1058 observations of DS stars and 895 observations of the reference stars have been made since September 1983 till June 1985 during the 65 evenings.

Double stars brighter component was observed. If they have equal magnitude a component precedes along the right ascension was observed. In other observations and treatment of obtained results were being conducted according to the classical scheme for the differential method.

Two catalogues of declinations DS have been received; for the position of the instrument "circle-east" and "circle-west".

As far as their systematic differences have been found less than  $0.1''$  the final catalogue was compiled as an average of two. The catalogue of declinations of 250 stars of the program has been received in the system FK4 on the equinox 1950.0 and the epoch of observations. The root mean square

error of one observation is  $\pm 0.38''$ , the middle square error of catalogue position is  $\pm 0.18''$ .

The absence of high precision catalogues, which contain sufficient amount of double stars for comparison, did not allow researching the obtained catalogue for the outer precision. The comparison of our catalogue with GC catalogue and with photographic catalogue AGK3 made on 174 and 141 general stars has given the mean root square quantities of the declinations deviations  $+0.95$  and  $+0.77$  accordingly. Such great quantity in case of comparison with catalogues GC has been conditioned the appearance of big systematic and accidental errors in the proper motions of GC stars. In a case of comparison with catalogue AGK3 – it is conditioned with the presence of photographic effects misrepresenting of double stars position.

The 250 DS stars declinations catalog consist of the following columns:

- N** – the ordinal number of a star,
  - DS** – the number of a star in the DS list,
  - BD** – the number of a star in the BD,
  - m** – star's magnitude;
  - $\alpha$**  – the approximate mean right ascension for the equinox and epoch 1950.0,
  - $\delta$**  – the declination of a star for the equinox J1950.0 and epoch of observations.
  - 1980+** – the middle epoch of observations,
  - n** – the number of observations.
- The stars of catalogue NN 20, 158, 159, 161, 215 had a component preceding on the right ascension.

## THE CATALOG OF DECLINATIONS OF 250 DS PROGRAM STARS

№№	DS	BD	m	α			δ			1980+	n
				h	m	s	o	'	"		
1	11	-3 0014	7.8	0	09	01	-3	21	21.64	4.41	6
2	15	+8 0019	6.1	0	12	24	+8	32	35.13	4.27	2
3	16	-6 0030	7.8	0	13	18	-5	52	44.54	4.45	3
4	20	+8 0024	6.6	0	14	50	+8	35	54.88	4.43	3
5	21	-0 0033	7.9	0	14	55	+0	02	35.01	4.43	3
6	29	-4 0040	7.8	0	21	26	-3	45	08.55	4.35	10
7	41	-8 0117	7.1	0	38	15	-7	30	23.24	4.36	10
8	53	-8 0154	8.8	0	49	19	-8	26	14.98	4.26	4
9	59	+8 0126	8.2	0	52	09	+9	09	29.39	4.38	5
10	68	-6 0197	9.0	1	00	57	-5	51	16.29	4.26	2
11	72	-2 0160	7.4	1	04	38	-1	59	56.52	4.33	7
12	93	-6 0270	6.8	1	22	29	-6	12	22.05	4.43	6
13	95	+2 0211	6.6	1	24	18	+3	16	35.26	4.43	6
14	108	+8 0269	8.9	1	41	36	+9	14	00.64	4.52	4
15	110	-7 0287	6.6	1	42	13	-7	00	58.13	4.47	3
16	113	-1 0244	8.6	1	45	24	-1	12	18.44	4.45	3
17	117	-10 0392	8.4	1	49	48	-9	58	36.52	4.26	6
18	132	-1 0297	8.2	2	06	09	-0	40	23.48	4.37	7
19	155	+0 0415	7.3	2	28	55	+0	52	25.56	4.32	6
20	158	-6 0502	8.0	2	31	38	-5	51	11.90	4.62	5
21	179	-5 0528	7.1	2	47	52	-5	11	33.27	4.39	4
22	181	+5 0406	8.8	2	50	01	+6	16	14.56	4.50	3
23	188	-1 0419	7.3	2	54	37	-0	46	30.74	4.35	6
24	192	-2 0538	7.7	3	00	30	-2	16	54.88	4.35	8
25	195	+7 0476	8.9	3	04	39	+8	12	13.67	4.50	3
26	220	+4 0544	8.1	3	28	09	+4	58	57.72	4.46	10
27	226	+0 0616	6.2	3	34	13	+0	25	27.72	4.46	10
28	231	+7 0540	8.8	3	42	17	+8	09	48.64	4.48	5
29	239	-1 0538	8.9	3	46	44	-1	39	37.19	4.38	2
30	241	-1 0544	6.5	3	47	44	-1	40	24.46	4.78	2
31	268	+0 0710	6.9	4	09	35	+0	36	28.79	4.40	6
32	276	+0 0721	7.4	4	13	27	+0	19	50.06	4.54	6
33	284	-5 0903	8.7	4	22	08	-4	59	11.29	4.86	4
34	290	+6 0696	7.3	4	28	23	+6	41	05.74	4.50	10
35	294	-10 0959	6.7	4	32	51	-9	50	17.95	4.57	3
36	295	+7 0671	8.1	4	33	27	+8	07	28.77	4.67	5
37	300	+0 0817	8.0	4	38	21	+0	52	00.44	4.41	4
38	303	-9 0970	6.7	4	41	11	-8	53	19.72	4.39	4
39	310	+0 0876	8.9	4	49	14	+1	09	56.11	4.54	3
40	313	+8 0799	7.0	4	52	13	+8	31	13.34	4.37	4
41	315	-0 0799	8.4	4	52	31	-0	37	29.42	4.93	2
42	318	+1 0869	8.0	4	55	30	+1	35	57.90	4.40	4
43	322	+1 0886	6.5	4	59	25	+1	32	14.80	4.62	4
44	324	-8 1013	7.1	5	00	38	-8	44	00.40	4.54	3
45	326	-6 1081	8.7	5	02	39	-6	35	26.38	4.88	2
46	333	+7 0819	7.2	5	07	15	+8	06	42.75	4.72	5
47	339	-7 1012	7.1	5	12	16	-7	07	39.80	4.92	3
48	340	+8 0900	7.7	5	12	27	+8	22	36.01	4.85	3
49	350	+4 0891	8.6	5	15	00	+4	37	51.38	4.42	2
50	359	-2 1222	8.6	5	19	09	-2	05	56.44	4.38	2
51	360	+5 0899	7.2	5	19	31	+5	20	53.50	4.42	2

№.№	DS	BD	m	α			δ			1980+	n
				h	m	s	o	'	"		
52	365	+0 1035	7.7	5	20	31	+1	00	38.76	4.47	2
53	366	-1 0882	6.1	5	21	19	-0	54	44.04	5.02	2
54	368	+1 1009	8.7	5	22	35	+1	52	47.06	4.84	2
55	373	+2 0961	7.5	5	23	54	+2	53	36.87	4.38	2
56	375	+6 0928	9.0	5	24	31	+6	55	31.83	4.90	2
57	389	-5 1315	6.8	5	32	48	-5	25	16.12	4.56	2
58	390	-4 1186	6.5	5	33	02	-4	23	44.56	4.86	2
59	407	+3 1022	7.7	5	42	05	+3	48	41.52	4.62	4
60	408	-7 1162	8.2	5	42	08	-7	45	48.24	4.62	4
61	410	-4 1235	6.5	5	43	34	-4	17	11.87	4.80	4
62	411	+4 1046	7.3	5	45	49	+4	41	17.63	4.65	3
63	421	+5 1044	6.8	5	52	15	+5	51	10.54	4.55	3
64	423	+4 1074	9.0	5	52	40	+4	42	24.20	4.43	2
65	424	+8 1115	9.0	5	52	59	+8	58	32.78	4.42	2
66	426	-7 1232	8.5	5	55	19	-7	39	50.90	4.84	2
67	430	+9 1043	8.7	5	57	35	+9	42	02.45	4.37	4
68	432	-2 1453	8.5	6	00	00	-2	21	33.00	5.03	4
69	434	-7 1274	8.7	6	02	37	-7	55	58.67	4.57	3
70	440	+5 1106	8.5	6	05	52	+5	48	32.75	5.05	2
71	445	-0 1204	8.8	6	09	01	-0	45	16.38	5.02	2
72	460	-1 1262	8.8	6	19	30	-2	00	15.75	4.84	4
73	466	+0 1425	7.9	6	24	35	+0	09	59.37	4.85	3
74	468	+5 1249	7.6	6	25	34	+5	18	18.03	4.84	2
75	476	+4 1291	8.3	6	28	42	+4	52	14.24	5.18	2
76	477	+5 1280	7.1	6	29	00	+5	48	20.52	4.64	4
77	490	+9 1345	7.1	6	38	25	+9	01	58.30	4.89	2
78	496	+1 1472	7.9	6	40	05	+1	45	57.45	5.02	2
79	516	+2 1457	8.3	6	51	59	+2	40	30.74	5.10	3
80	519	-8 1617	8.2	6	52	43	-8	26	04.43	4.85	3
81	545	-8 1764	9.0	7	06	57	-8	14	02.77	4.99	3
82	555	-8 1805	7.9	7	11	19	-8	50	21.56	4.85	2
83	560	-1 1618	8.1	7	13	03	-1	46	16.94	4.93	2
84	561	-9 1947	8.7	7	13	43	-9	10	50.45	5.02	2
85	579	+9 1657	8.4	7	24	39	+8	51	20.25	4.94	2
86	586	+5 1688	7.7	7	27	54	+5	21	36.67	4.88	5
87	597	-3 2023	8.7	7	40	05	-3	54	26.42	5.25	2
88	598	+3 1773	7.5	7	40	54	+3	36	22.82	4.72	2
89	603	+4 1816	8.3	7	43	57	+4	15	14.30	5.25	2
90	604	+5 1790	7.0	7	45	24	+5	32	04.79	5.07	4
91	608	-2 2316	8.5	7	48	29	-2	59	34.04	4.72	2
92	609	-2 2322	7.0	7	49	38	-2	55	28.09	5.09	2
93	617	+6 1840	6.8	7	56	06	+5	45	35.49	4.80	4
94	618	+6 1841	8.5	7	56	26	+6	28	24.12	5.25	4
95	632	+8 1963	8.0	8	02	42	+8	20	34.88	4.80	4
96	633	+6 1869	8.0	8	02	45	+5	58	13.91	5.25	3
97	635	-0 1913	8.0	8	05	24	-1	12	12.20	4.82	3
98	642	+2 1892	9.0	8	07	52	+2	03	58.92	5.25	3
99	645	+10 1752	7.8	8	10	09	+9	43	43.53	4.99	4
100	653	-8 2291	7.0	8	14	23	-8	51	32.86	5.25	2
101	656	+4 1957	8.1	8	18	34	+4	32	12.91	5.10	2
102	657	-6 2566	8.8	8	19	41	-6	39	50.68	5.25	2
103	660	+4 1974	8.4	8	23	33	+4	40	01.69	5.00	4
104	664	+7 1997	6.0	8	33	12	+6	47	40.59	4.99	5

№№	DS	BD		m	α			δ			1980+	n
					b	m	s	°	'	"		
105	673	-2	2676	6.6	8	42	49	-2	25	06.51	4.92	4
106	676	+3	2056	7.5	8	45	36	+2	45	55.55	5.25	2
107	681	-6	2744	8.3	8	49	17	-6	35	45.04	5.25	2
108	682	+5	2073	7.5	8	49	26	+4	39	17.51	4.94	2
109	687	-7	2661	6.7	8	53	03	-7	46	44.73	5.25	3
110	692	-8	2551	7.3	8	58	20	-8	59	42.20	5.10	2
111	694	-8	2568	8.0	9	00	42	-8	47	33.96	5.25	2
112	698	+3	2142	8.5	9	04	02	+3	01	09.31	5.25	2
113	700	-6	2825	8.5	9	05	24	-6	56	11.48	5.25	2
114	715	+6	2169	7.5	9	21	51	+6	33	57.10	4.80	6
115	718	+6	2177	7.5	9	24	39	+6	27	05.99	4.26	2
116	721	+2	2215	7.4	9	28	57	+1	41	10.30	4.93	4
117	727	+4	2213	8.0	9	32	49	+4	07	45.66	4.27	2
118	734	+3	2661	7.4	9	40	52	+2	51	24.68	4.50	4
119	754	-3	2900	8.2	10	17	35	-4	05	30.68	4.27	2
120	756	+7	2282	7.9	10	17	55	+6	40	55.55	4.28	2
121	760	+9	2352	7.9	10	22	57	+9	01	50.63	4.63	3
122	761	-6	3173	6.4	10	28	29	-7	22	50.26	4.80	4
123	774	+5	2384	6.3	10	40	45	+5	00	36.63	4.80	4
124	778	-3	2999	6.9	10	46	45	-3	45	32.67	4.92	6
125	785	-3	3040	7.5	11	02	10	-3	57	02.52	4.85	2
126	786	+7	2411	8.8	11	03	32	+7	18	14.14	4.85	2
127	795	-0	2428	7.0	11	16	49	-1	22	49.73	4.83	8
128	799	+4	2482	8.6	11	27	25	+3	28	51.26	4.72	6
129	800	-5	3304	7.7	11	28	18	-6	26	35.79	4.82	4
130	814	-7	3278	8.8	11	41	56	-7	48	36.96	5.10	4
131	835	-6	3532	8.0	12	12	33	-6	58	45.25	4.84	4
132	836	+9	2611	8.9	12	13	16	+9	18	45.44	5.02	4
133	847	+4	2622	7.6	12	28	01	+3	47	03.63	4.78	9
134	849	+8	2621	7.9	12	32	35	+7	43	06.31	4.84	6
135	853	+8	2638	8.6	12	41	16	+7	49	54.48	4.84	6
136	859	-4	3378	7.0	12	53	40	-4	35	37.62	4.46	7
137	864	-5	3619	8.7	13	00	47	-6	09	51.62	4.83	4
138	865	+9	2713	8.1	13	02	00	+8	55	14.84	4.86	4
139	867	+1	2789	7.7	13	04	46	+0	51	08.46	4.82	4
140	873	-1	2786	8.0	13	10	40	-2	17	26.57	4.83	6
141	884	-6	3811	8.6	13	22	44	-7	19	27.13	4.91	7
142	888	+10	2553	7.1	13	28	10	+9	34	27.26	4.84	8
143	891	+0	3075	7.7	13	31	43	-0	03	29.60	4.84	4
144	895	-7	3661	7.9	13	34	58	-7	37	03.81	4.84	4
145	904	-7	3728	6.5	13	52	21	-7	48	50.05	4.96	5
146	905	-3	3562	8.8	13	53	30	-4	22	19.25	5.10	4
147	910	-5	3802	8.0	14	02	11	-6	18	48.44	4.66	7
148	914	+8	2821	7.2	14	06	42	+7	37	15.75	4.73	6
149	917	-2	3800	8.6	14	08	44	-3	06	11.19	5.00	5
150	919	+6	2856	8.4	14	10	54	+5	38	03.30	5.13	4
151	926	+6	2863	8.1	14	13	51	+6	18	45.00	4.40	6
152	932	-7	3834	7.6	14	19	59	-7	32	25.59	4.55	6
153	943	+8	2908	8.0	14	40	28	+8	17	16.78	4.55	6
154	946	+8	2913	8.8	14	42	20	+7	54	41.96	4.42	6
155	948	+1	2981	6.7	14	44	33	+1	10	46.67	4.42	6
156	951	+0	3250	9.0	14	48	00	+0	10	52.13	4.20	4
157	952	+10	2752	7.6	14	48	37	+9	55	43.00	4.78	5

№№	DS	BD	m	α			δ			1980+	n
				h	m	s	°	'	"		
158	961	+6 2983	7.2	15	01	37	+5	41	24.31	4.74	6
159	962	+9 3000	7.5	15	05	08	+9	24	57.63	4.60	6
160	966	-7 3995	8.5	15	14	12	-8	06	06.18	4.40	6
161	978	-8 4032	6.5	15	35	58	-8	37	56.79	4.54	9
162	985	-2 4051	9.0	15	46	35	-3	04	55.76	4.17	8
163	988	-1 3116	7.0	15	53	19	-2	01	09.81	4.70	4
164	991	+3 3104	7.2	15	54	48	+3	32	55.48	4.89	2
165	999	-2 4113	8.7	16	05	00	-2	31	03.96	4.32	8
166	1009	-1 3153	8.2	16	11	28	-2	12	47.86	4.08	8
167	1018	-7 4299	6.5	16	26	07	-8	01	09.08	4.20	8
168	1022	+5 3221	7.9	16	29	11	+5	32	23.17	4.45	6
169	1025	-2 4226	8.1	16	36	47	-3	00	30.17	4.30	8
170	1040	+7 3292	8.7	16	59	42	+7	17	04.96	4.12	8
171	1043	-2 4301	9.0	17	03	53	-2	31	35.77	4.04	3
172	1055	+4 3406	9.0	17	19	58	+4	24	35.24	4.10	5
173	1060	-0 3275	9.0	17	21	23	-0	47	23.90	4.26	4
174	1065	+2 3323	9.0	17	25	48	+2	14	38.14	4.09	5
175	1070	+4 3452	8.8	17	33	12	+4	10	39.77	4.02	4
176	1071	+1 3463	8.4	17	33	18	+1	01	38.94	4.26	4
177	1078	-1 3389	8.5	17	44	04	-1	11	48.26	4.20	4
178	1088	+2 3415	8.0	17	49	22	+2	54	40.74	4.26	8
179	1098	+2 3443	8.5	17	56	30	+2	02	25.22	4.25	3
180	1099	-6 4689	9.0	17	56	36	-6	51	12.38	4.27	4
181	1120	+0 3870	8.0	18	07	51	+0	31	56.81	4.04	4
182	1123	-2 4579	9.0	18	12	11	-2	31	32.59	4.30	4
183	1124	-3 4257	7.3	18	13	05	-3	22	30.47	4.02	4
184	1128	-5 4626	8.1	18	17	08	-4	59	02.62	4.06	4
185	1129	-2 4579	9.0	18	17	22	-8	00	14.97	4.02	4
186	1136	-6 4755	7.5	18	22	02	-6	37	54.57	4.05	4
187	1138	+7 3688	8.8	18	24	03	+7	39	19.83	4.02	4
188	1143	+1 3689	8.2	18	27	25	+1	08	48.84	4.30	4
189	1145	+6 3824	8.2	18	29	00	+6	25	25.17	4.21	3
190	1151	-0 3523	8.3	18	35	22	-0	25	48.65	4.37	6
191	1160	+5 3941	6.2	18	43	01	+5	26	48.07	4.12	5
192	1165	-1 3559	6.1	18	43	54	-1	00	58.01	4.15	5
193	1200	+6 4014	7.1	19	03	21	+6	28	11.35	4.30	4
194	1201	+6 4022	7.2	19	03	57	+7	04	38.29	4.30	4
195	1209	+8 3992	8.9	19	07	49	+8	36	00.28	3.75	2
196	1211	+7 3987	7.5	19	08	32	+8	02	17.59	4.30	5
197	1225	-6 5107	8.9	19	17	52	-6	08	56.52	4.38	6
198	1238	-0 3755	8.5	19	26	08	-0	43	19.56	4.56	4
199	1244	+9 4139	6.9	19	29	49	+9	13	35.81	4.02	4
200	1253	-3 4042	8.8	19	33	18	-3	10	08.51	4.05	4
201	1270	+5 4290	8.5	19	44	29	+6	00	21.60	4.21	6
202	1274	-4 4938	8.5	19	47	11	-4	02	57.64	4.22	3
203	1276	+3 4172	6.7	19	48	57	+3	57	35.27	4.08	2
204	1278	+0 4338	9.0	19	49	59	+0	31	08.92	4.19	3
205	1286	+1 4145	8.5	19	54	19	+1	47	09.12	4.04	4
206	1297	-0 3899	7.5	19	59	05	-0	20	18.47	4.12	4
207	1299	+7 4349	7.9	20	00	29	+8	15	23.91	4.06	4
208	1303	+8 4320	8.6	20	02	10	+9	05	51.88	4.10	2
209	1307	-9 5356	7.8	20	04	13	-9	03	33.62	4.25	3
210	1311	+8 4344	6.5	20	05	26	+9	15	13.27	4.06	4

№№	DS	BD		m	α			δ		1980+	n	
					h	m	s	o	"			
211	1318	+8	4358	6.6	20	07	43	+8	17	44.92	4.08	2
212	1322	-0	4444	6.8	20	10	02	+0	42	59.04	4.25	3
213	1323	-3	4817	7.0	20	10	11	-3	08	49.94	4.06	4
214	1334	+5	4469	8.6	20	15	18	+6	02	15.91	4.28	4
215	1340	-8	5323	8.4	20	18	06	-7	54	10.82	4.11	4
216	1387	+5	4632	8.6	20	48	35	+6	11	55.86	4.08	8
217	1391	+3	4461	6.2	20	53	10	+4	20	26.88	4.01	7
218	1400	+6	4731	7.4	20	59	44	+6	58	53.73	4.06	4
219	1402	+2	4298	8.4	21	02	14	+3	20	02.91	4.12	4
220	1411	+8	4625	8.4	21	08	33	+9	20	40.62	4.06	4
221	1413	-6	5706	7.9	21	09	20	-6	01	11.55	4.12	4
222	1418	-8	5615	8.8	21	14	03	-7	51	52.17	4.12	4
223	1423	+8	4651	7.2	21	17	12	+9	18	47.54	4.36	4
224	1430	+3	4559	8.8	21	21	12	+4	08	59.61	4.08	6
225	1444	+8	4695	7.9	21	32	02	+9	16	37.28	4.03	7
226	1463	+8	4753	8.0	21	49	28	+8	50	39.79	4.25	8
227	1474	+5	4910	7.2	21	55	31	+5	42	04.90	4.29	6
228	1475	-2	5668	9.0	21	55	45	-2	04	07.00	4.22	5
229	1490	-0	4307	8.2	22	04	33	+0	19	32.84	4.25	5
230	1493	+7	4806	8.3	22	07	33	+7	42	27.18	4.21	6
231	1504	+4	4849	7.5	22	20	44	+5	23	37.05	4.30	10
232	1513	-8	5888	7.7	22	27	55	-8	22	17.42	4.24	11
233	1524	-3	5487	9.0	22	39	03	-2	48	51.06	4.37	3
234	1527	+0	4912	7.0	22	40	25	+0	57	18.42	4.31	3
235	1528	-9	6038	6.9	22	40	26	-8	34	25.98	4.37	3
236	1530	-10	5982	7.4	22	42	43	-9	54	28.20	4.34	3
237	1534	-4	5757	7.3	22	45	16	-4	29	30.59	4.27	7
238	1548	-1	4359	8.9	22	54	25	-0	45	55.32	4.18	4
239	1549	-4	5793	6.6	22	54	32	-3	30	45.43	4.42	4
240	1555	-5	5903	8.3	22	57	06	-4	37	57.23	4.45	4
241	1562	-5	5923	9.0	23	02	53	-4	31	12.65	4.20	4
242	1565	+5	5135	8.3	23	05	11	+6	20	02.56	4.20	4
243	1577	+1	4712	7.9	23	18	17	+2	10	56.56	4.21	4
244	1583	-9	6183	7.2	23	21	10	-8	44	04.67	4.20	4
245	1585	+2	4663	6.8	23	21	43	+3	26	26.46	4.44	3
246	1592	+4	5019	7.5	23	28	08	+4	58	24.72	3.97	4
247	1599	-10	6134	8.3	23	31	44	-9	59	09.15	4.20	4
248	1607	-1	4473	8.9	23	38	09	-0	39	36.46	4.12	5
249	1609	+6	5194	8.8	23	41	24	+6	58	19.54	4.20	4
250	1622	-10	6203	9.0	23	53	48	-9	46	37.87	4.18	5