

ФОТОГРАФИЧЕСКИЕ НАБЛЮДЕНИЯ ВОСЬМИ ЦЕФЕИД

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Приводятся результаты фотографических наблюдений восьми цефеид с малыми амплитудами изменения блеска: X Lac, CR Cep, V 496 Aql, IX Cas, FN Aql, DD Cas, SY Aur, SZ Cas. Получены средние кривые блеска.

Photographic Observations of Eight Cepheids

E. N. Makarenko

Results of photographic observations of eight Cepheids with small amplitudes of light variation: X Lac, CR Cep, V 496 Aql, IX Cas, FN Aql, DD Cas, SY Aur, SZ Cas are given. Mean light curves are obtained.

Для исследования изменения периодов цефеид с малыми амплитудами [1] автором были получены фотографические наблюдения цефеид X Lac, CR Cep, V 496 Aql, IX Cas, FN Aql, DD Cas, SY Aur, SZ Cas. Блеск оценивался по пластинкам семикамерного астрографа Одесской астрономической обсерватории. На рис.1 и в табл.1 приводятся звезды сравнения и их блеск в степенной шкале.

Таблица 1

X Lac		CR Cep		V 496 Aql		IX Cas		FN Aql	
a	0.0	b	0.0	a	0.0	a	0.0	a	0.0
b	8.0	c	8.3	b	6.5	b	8.4	b	15.2
c	16.8	d	16.2	c	14.8	c	16.6	c	19.9
к	24.3	e	19.7						
d	28.9								

(Продолжение таблицы 1)

DD Cas	SY Aur	SZ Cas
с 0.0	а 0.0	к 0.0
к 8.6	б 9.9	с 9.8
ℓ 16.4	в 13.1	е 19.0
	д 19.2	
	е 26.0	

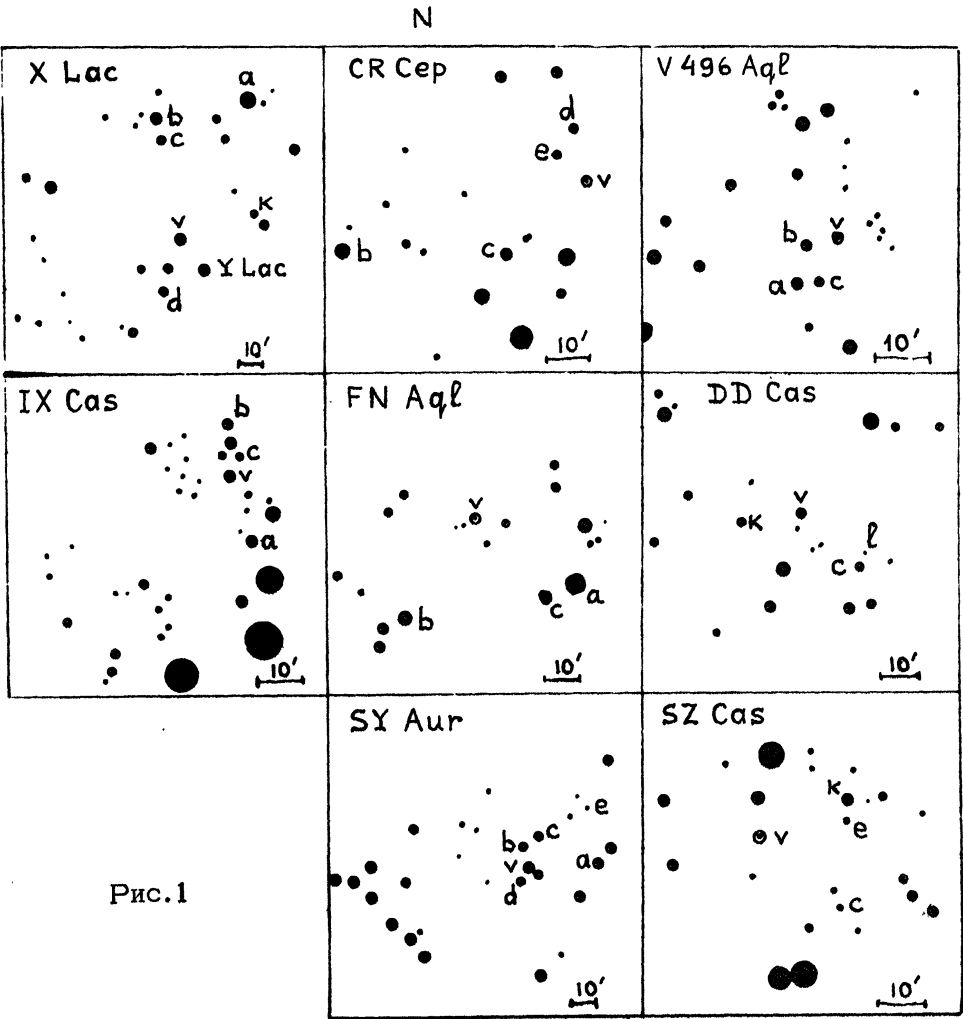


Рис.1

В таблицах 2-9 и на рис.2-3 приводятся средние кривые блеска этих звезд.

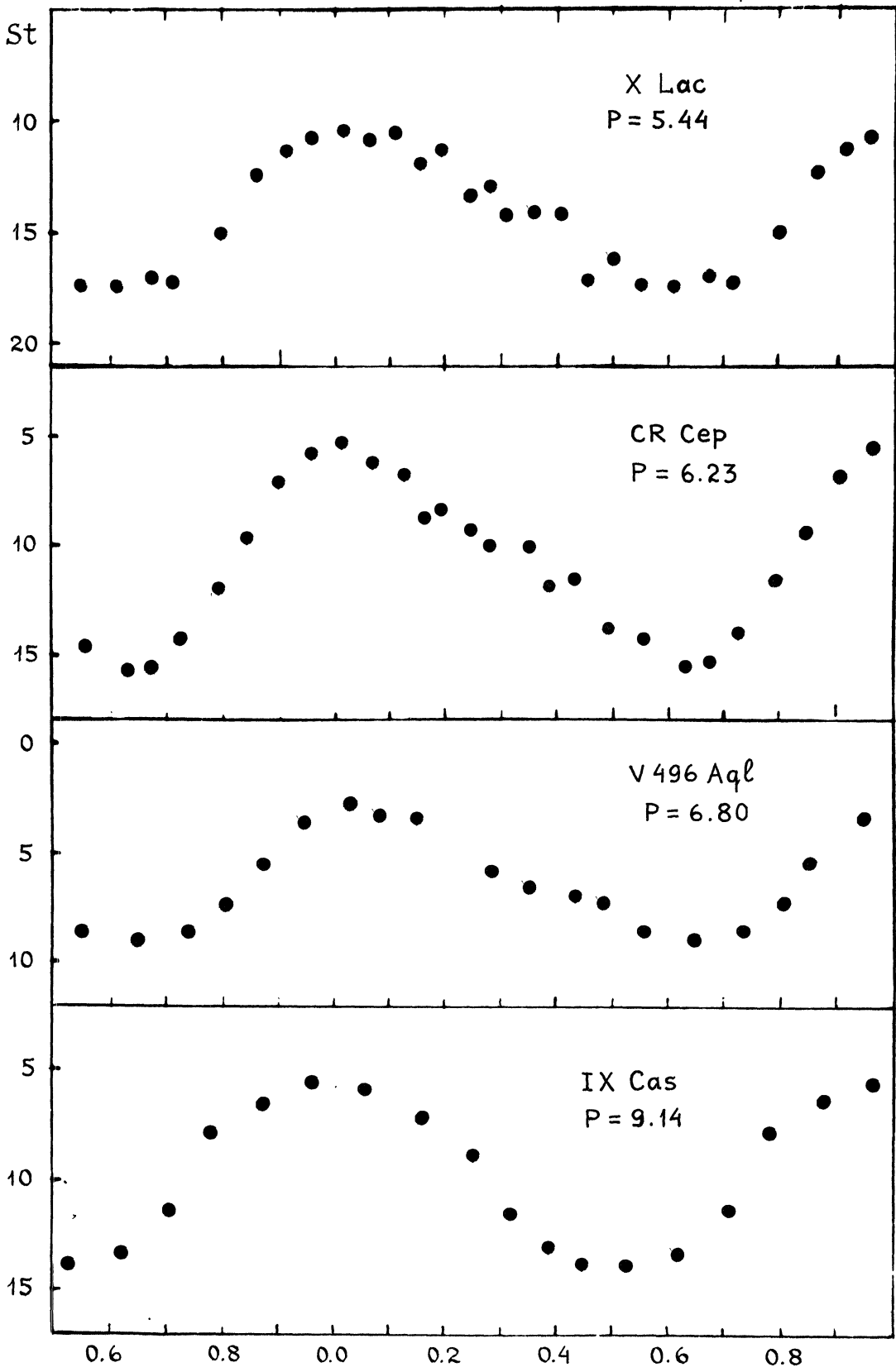


Рис.2

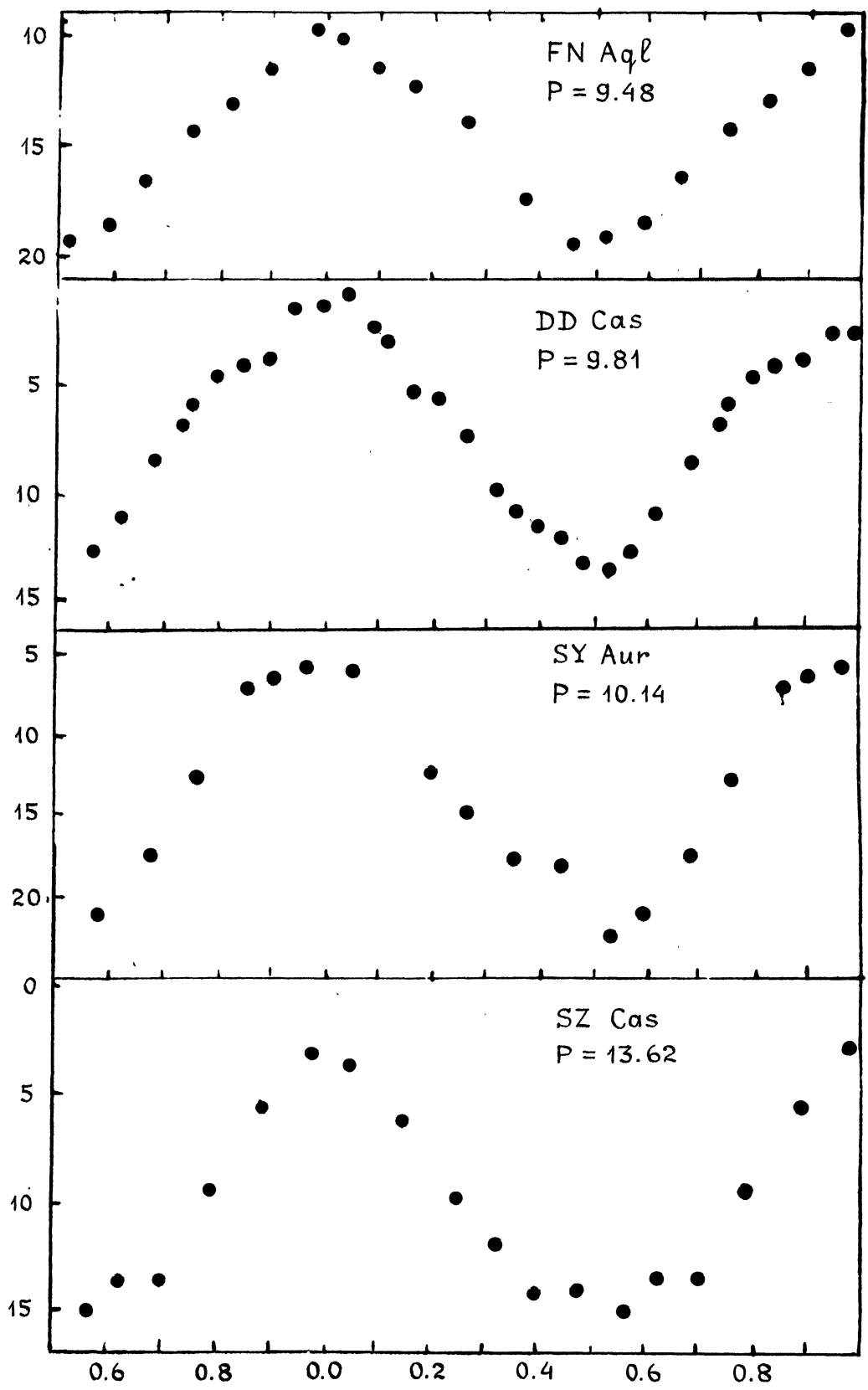


Рис.3

Таблица 2

Средняя кривая X Lac								
Фаза	St	n	Фаза	St	n	Фаза	St	n
0.022	10.0	19	0.314	14.2	19	0.678	17.0	20
.068	10.8	18	.365	14.1	19	.720	17.2	20
.117	10.5	19	.408	14.1	19	.807	15.0	19
.157	12.0	19	.461	17.1	20	.868	12.4	19
.200	11.4	19	.507	16.1	19	.920	11.4	20
.247	13.4	20	.556	17.3	19	.965	10.8	20
.285	12.9	19	.617	17.4	19			

Таблица 3

Средняя кривая CR Cep								
Фаза	St	n	Фаза	St	n	Фаза	St	n
0.023	5.6	19	0.322	11.0	18	0.685	15.5	18
.079	6.5	19	.363	10.2	19	.735	14.2	20
.134	7.1	19	.398	12.0	19	.804	11.9	19
.169	8.9	17	.439	11.7	17	.855	9.7	18
.202	8.6	19	.503	13.9	19	.908	7.3	19
.255	9.5	20	.566	14.4	19	.973	6.0	19
.292	10.2	20	.643	15.7	19			

Таблица 4

Средняя кривая V 496 Aql								
Фаза	St	n	Фаза	St	n	Фаза	St	n
0.037	2.7	7	0.435	6.9	7	0.740	8.6	8
.086	3.4	7	.487	7.3	7	.809	7.3	7
.150	3.3	7	.556	8.5	7	.876	5.5	7
.285	5.8	7	.653	8.9	7	.952	3.6	7
.353	6.6	7						

Таблица 5

Средняя кривая IX Cas								
Фаза	St	n	Фаза	St	n	Фаза	St	n
0.057	5.8	16	0.388	12.9	17	0.711	11.2	16
.157	7.1	16	.447	13.7	16	.777	7.7	17
.251	8.8	17	.526	13.8	16	.873	6.4	17
.321	11.4	16	.620	13.3	16	.965	5.6	18

Таблица 6

Средняя кривая FN Aql

Фаза	St	n	Фаза	St	n	Фаза	St	n
0.027	10.0	17	0.459	19.6	17	0.748	14.3	18
.095	11.3	18	.518	19.2	18	.818	13.1	18
.162	12.3	17	.592	18.6	19	.895	11.4	18
.261	13.9	19	.660	18.6	18	.977	9.7	19
.368	17.5	19						

Таблица 7

Средняя кривая DD Cas

Фаза	St	n	Фаза	St	n	Фаза	St	n
0.034	0.7	30	0.387	11.5	29	0.727	6.7	29
.066	2.2	29	.437	12.0	29	.761	5.9	28
.115	3.0	29	.475	13.2	28	.796	4.4	29
.158	5.2	29	.525	13.5	28	.835	4.0	28
.207	5.5	29	.568	12.7	28	.885	3.7	28
.257	7.4	29	.642	10.9	28	.939	1.2	29
.313	9.8	29	.677	8.6	28	.992	1.2	30
.351	10.7	30						

Таблица 8

Средняя кривая SY Aur

Фаза	St	n	Фаза	St	n	Фаза	St	n
0.049	5.9	12	0.442	18.1	10	0.762	12.6	11
.195	12.4	11	.530	22.3	10	.854	6.9	10
.260	14.7	11	.588	21.0	10	.904	6.2	11
.347	17.7	12	.675	17.4	11	.961	5.8	10

Таблица 9

Средняя кривая SZ Cas

Фаза	St	n	Фаза	St	n	Фаза	St	n
0.043	3.6	14	0.388	14.1	14	0.698	13.4	16
.145	6.1	15	.468	14.0	13	.785	9.3	16
.245	9.7	15	.559	15.1	15	.883	5.5	15
.318	11.9	15	.623	13.6	14	.975	2.8	15

Для семи звезд фазы вычислены с элементами, найденными в работе [1] :

$$X \cdot L \text{ ac} \quad \text{Max} = J. D. 2437957.304 + 5.44499 \cdot E$$

CR Cep	Max = J.D. 2438373.272 + 6.23260 · E
IX Cas	Max = J.D. 2437195.642 + 9.14783 · E
FN Aql	Max = J.D. 2437171.430 + 9.48151 · E
DD Cas	Max = J.D. 2436942.264 + 9.81191 · E
SY Aur	Max = J.D. 2436843.118 + 10.14416 · E
SZ Cas	Max = J.D. 2436484.208 + 13.62642 · E

Наблюдения V 496 Aql сведены в среднюю кривую с элементами ОКПЗ.

В таблице 10 приведены наблюдения.

Таблица 10

<u>X L a c</u>					
2436...		2436...		2436...	
053.536	13.3	129.327	10.0	436.409	18.3
072.434	12.4	.364	10.2	.448	19.6
.466	12.0	.391	10.9	438.519	10.9
074.499	10.5	138.271	10.9	441.505	13.5
078.439	9.3	.337	10.6	441.532	18.8
079.429	8.0	139.267	10.6	454.446	10.9
.455	9.1	140.300	11.9	455.451	9.1
.485	10.6	.331	11.9	456.473	10.3
081.442	15.5	141.369	10.9	461.415	14.6
.480	13.8	163.254	14.1	.444	11.9
.526	12.4	.292	11.5	462.412	13.5
082.428	15.3	164.251	16.8	.443	15.5
.460	13.5	.279	13.5	463.406	14.1
.489	16.8	165.227	10.9	463.435	16.8
083.427	12.9	184.199	8.0	465.391	8.0
.452	11.9	.232	11.5	466.383	9.3
084.435	10.3	187.187	11.5	.413	10.0
.464	9.1	.210	11.9	468.427	15.7
100.449	10.5	189.246	11.5	468.454	14.1
101.370	10.9	.246	10.9	469.499	13.8
.398	11.9	194.233	9.1	481.308	11.3
102.343	12.4	213.197	12.4	.345	9.8
.488	13.8	.197	14.3	482.323	8.9
107.475	10.2	397.497	16.8	483.349	9.0
110.396	12.0	411.528	7.0	484.339	14.6
111.345	9.9	426.492	10.9	.371	13.8
111.377	9.8	428.473	10.5	.403	12.4
112.452	10.6	.501	10.2	485.310	15.7
128.345	6.0	429.515	14.8	.336	14.1
.383	9.1	430.468	15.7	487.333	10.0

Таблица 10 (продолжение)

2436...		2436...		2437...	
487.359	8.0	816.454	18.4	196.495	14.6
488.350	10.0	817.435	20.0	197.403	18.1
.379	10.4	.473	17.8	.428	15.7
.406	8.0	822.442	16.8	198.402	17.9
489.340	13.5	823.446	18.3	.452	19.0
.365	12.4	824.461	12.4	204.391	18.8
.390	11.8	838.438	17.9	.417	19.2
490.360	18.1	843.444	15.7	222.323	11.9
.385	14.6	844.434	16.8	.351	11.9
.413	14.1	847.437	11.3	.379	15.5
493.462	10.9	864.290	13.5	228.349	12.9
.488	10.0	866.354	18.8	.375	11.9
495.362	18.1	867.324	14.8	248.302	15.7
.417	14.8	.368	14.8	275.192	14.8
513.285	15.7	869.313	12.9	278.208	15.5
.311	13.5	.341	13.8	.283	12.0
.363	12.4	894.222	15.7	521.506	10.2
538.204	13.8	.222	16.8	.533	10.6
541.192	9.5	897.346	13.8	522.484	12.4
.216	11.5	900.375	10.9	.511	11.2
.240	10.0	901.274	11.5	523.519	15.5
542.204	10.0	2437....		524.526	19.1
.231	10.6	165.448	16.8	525.491	18.1
543.208	12.4	.474	15.7	526.515	13.8
.236	10.2	167.456	13.0	528.502	13.0
544.290	12.9	.481	11.9	531.475	15.5
.315	13.8	168.479	11.3	.561	14.6
546.218	13.0	170.468	19.0	533.471	13.5
.244	10.9	172.471	14.6	.497	11.5
.273	10.9	.495	12.9	534.461	14.6
548.226	10.9	175.471	15.7	.535	17.8
.252	10.6	176.479	18.0	546.427	15.7
.281	10.4	179.474	13.5	548.420	10.9
549.195	14.6	.502	18.3	.445	10.9
.222	10.9	193.421	19.0	.471	11.9
.249	12.9	.445	17.5	549.411	12.4
576.201	13.5	195.403	12.9	.435	11.2
780.442	11.5	.451	9.9	555.389	11.7
786.488	11.5	.522	11.9	555.414	12.0
789.535	16.8	196.354	13.8	560.391	11.5
809.464	13.5	.402	14.6	.414	9.8
.495	13.8	.425	15.7	561.419	15.5
815.458	12.4	.450	13.8	.442	15.7
816.425	18.3	.472	14.6	576.354	10.5

Таблица 10 (продолжение)

2437...		2437...		2438...	
576.385	10.4	932.425	18.4	286.418	18.9
578.331	11.7	939.323	18.8	286.442	17.7
.383	15.8	.349	20.8	287.436	19.6
582.329	13.8	.374	16.8	.461	18.2
.358	11.2	942.312	13.8	288.488	17.5
583.353	15.3	.339	13.3	289.451	11.9
.383	15.8	943.363	19.4	.480	12.0
603.303	11.7	.390	17.7	290.415	13.8
.327	11.9	957.343	11.3	.440	12.4
606.284	18.0	959.297	14.6	291.412	18.3
.309	15.8	960.288	19.2	.437	16.8
607.294	19.1	.311	17.7	293.285	19.8
613.302	15.7	961.295	17.7	294.395	12.4
636.212	11.2	.319	16.8	.420	11.9
643.201	16.7	962.328	10.2	295.401	11.5
.229	15.1	963.342	11.9	.426	11.5
882.517	14.6	.365	11.5	296.373	13.8
885.521	15.7	968.339	10.2	297.399	17.7
888.488	16.8	.364	10.6	.423	19.0
.515	15.0	973.385	12.0	298.396	19.2
889.513	19.2	986.250	14.6	.418	18.4
.538	19.2	.275	15.7	300.415	11.5
902.471	12.4	991.203	13.8	.439	10.6
904.526	13.8	.227	12.4	313.322	16.8
905.511	18.4	2438...		.345	18.4
907.448	14.8	017.207	10.2	317.375	11.9
.472	15.5	262.472	10.9	319.322	18.0
.495	14.3	.499	10.2	.348	18.8
.519	12.4	.527	10.6	325.352	18.8
908.488	11.5	263.513	13.8	.375	18.2
910.448	17.6	.538	13.3	344.294	11.5
.472	17.7	268.459	11.9	353.323	18.2
911.442	18.8	.539	11.5	368.252	18.4
.465	18.3	268.563	11.9	374.242	18.3
912.463	17.3	269.450	16.8	.267	18.5
913.463	10.6	.480	14.6	405.267	15.5
.489	9.0	.538	20.3	672.414	18.3
914.453	12.4	270.455	18.9	673.392	19.8
.479	11.2	.480	17.5	.417	18.1
915.504	15.7	271.481	19.0	674.363	19.5
918.529	11.5	272.488	11.5	675.353	13.8
931.324	13.5	.515	10.9	.376	12.4
.349	11.9	285.394	14.6	679.351	19.0
932.400	19.1	.401	14.6	.378	18.5
		.449	18.1		

Таблица 10 (продолжение)

2438...		2438...		2439...	
697.315	12.9	978.529	18.3	007.475	11.5
.339	11.9	979.500	19.0	024.399	10.0
699.334	12.4	.525	16.8	.423	8.0
700.275	15.7	980.512	12.9	025.421	11.5
.299	16.8	981.537	12.0	.447	10.6
708.279	11.5	997.452	10.6	026.393	14.6
.304	11.9	.478	9.8	027.375	18.3
727.215	13.3	998.462	12.9	.405	15.8
.246	13.3	2439...		028.375	17.5
730.258	10.6	006.417	19.0	.399	15.7
736.202	11.2	.440	16.8	029.401	11.5
.228	10.9	.463	17.5	037.421	14.6
976.528	11.3	007.450	15.5		

CR Cep

2436...		2436...		2436...	
072.434	11.8	102.343	10.6	187.187	8.3
.466	11.3	.488	13.9	.210	5.0
074.499	6.3	107.416	3.7	189.246	13.9
078.439	14.9	.439	8.3	194.233	7.3
079.429	4.7	.475	9.9	213.197	13.2
.455	9.3	110.396	8.3	397.497	5.2
.485	7.3	111.377	6.3	411.528	5.6
081.442	4.6	.406	5.8	426.492	17.1
.480	7.4	112.452	5.6	428.473	5.8
.526	13.9	128.345	13.6	.501	3.7
082.428	9.6	.383	10.9	429.515	5.0
.460	9.3	129.327	3.5	429.540	4.2
.489	12.3	.364	3.1	430.468	8.3
083.427	10.3	.391	5.6	436.409	9.6
.452	13.2	138.271	9.6	.448	7.3
.481	13.2	.337	9.5	438.485	9.5
084.435	10.9	139.267	8.3	441.505	3.1
.464	14.4	140.300	12.3	455.451	4.2
.492	11.3	.331	15.2	456.439	11.7
085.516	8.3	141.369	6.3	.473	7.0
086.499	4.2	163.254	8.3	461.415	10.6
.523	5.6	.292	7.0	.444	8.3
100.449	7.0	164.251	10.9	462.412	9.6
.482	10.9	.279	12.7	.443	11.8
101.370	9.5	165.227	16.2	463.406	12.3
.398	11.8	184.199	18.3	465.391	7.0
.423	13.6	.232	12.3	466.383	3.7

Таблица 10 (продолжение)

2436...		2436...		2437...	
466.413	2.5	546.218	12.8	170.468	5.0
468.427	8.3	.244	6.3	.495	5.6
.454	5.0	.273	13.2	172.471	7.4
469.499	11.8	548.226	7.3	.495	10.7
481.308	8.3	.252	13.6	175.471	16.2
.345	9.6	549.195	16.2	176.479	9.3
482.294	13.0	780.442	10.3	179.474	11.3
482.323	14.2	786.488	10.9	.502	11.8
483.320	11.5	789.535	10.1	193.421	16.2
.349	13.6	809.464	3.7	.445	13.6
.374	14.2	.495	3.7	195.403	7.3
484.339	9.5	815.458	9.5	.427	5.6
.371	5.2	816.425	5.6	.451	6.3
.403	10.9	.454	6.5	.522	2.5
.433	6.3	817.435	10.1	196.354	7.3
485.310	3.1	.473	9.2	.402	6.5
.336	9.3	822.442	4.6	.425	6.3
.362	4.2	823.446	10.1	.450	7.4
487.333	10.3	.492	7.3	.472	7.4
.359	6.3	824.461	11.5	.495	7.4
488.350	12.6	838.438	14.2	197.403	10.7
.379	13.2	843.444	10.1	.428	6.7
.406	18.5	844.434	15.0	198.402	9.5
489.340	14.6	.462	15.1	.427	11.8
.365	15.0	847.437	6.3	.452	11.3
.390	14.9	.463	6.3	204.391	12.3
490.360	5.2	864.290	17.6	.417	14.2
.385	12.7	866.354	5.6	222.323	7.4
.413	13.2	867.324	11.3	.351	15.3
493.462	11.5	.368	10.6	.379	11.5
.488	5.2	869.313	13.9	223.349	8.3
495.362	18.5	.341	13.6	248.302	7.4
518.285	5.8	894.195	17.3	278.208	7.3
.311	11.8	.222	12.3	521.506	12.3
.363	7.0	897.346	6.3	.533	11.3:
538.204	11.5	900.375	13.6	522.484	12.2
541.192	2.8	901.274	11.7	523.519	18.5
.216	3.3	.301	14.2	524.526	11.3
.240	5.8	2437...		525.491	5.8
542.204	7.0	144.448	15.0	528.502	15.0
.231	3.7	163.492	9.2	531.475	16.7
543.208	6.9	165.448	6.3	.501	6.5
.236	10.3	167.456	10.9	533.471	7.3
544.290	12.7	.481	11.8	.497	11.3:
.315	13.9	168.479	14.9	534.461	10.5

Таблица 10 (продолжение)

2437...		2437...		2438...	
534.535	10.3	911.442	10.6	268.563	9.3
545.346	15.0	.465	10.3	269.450	10.3
546.427	10.1	912.463	7.4	.480	13.5
548.420	12.3	913.463	9.3	270.455	13.2
.471	13.9:	.489	8.3	285.394	16.2
549.411	11.3	914.453	11.5	.401	11.7
.435	13.9	.479	13.2	286.418	6.3
555.389	12.3	915.504	15.2	.442	5.6
.414	14.4	918.529	10.9	287.436	10.9
560.391	10.7	931.324	9.3	.461	10.9
.414	16.9	.349	6.3	288.439	13.2
561.419	13.2	932.400	9.3	.488	13.2
.442	15.0	.425	10.9	289.451	15.3
576.354	4.6	939.323	14.2	290.415	18.8
578.331	7.3	.349	12.8	.440	19.7
.383	9.3	.374	11.8	291.412	13.6
582.329	3.3	942.339	12.3	292.374	7.4
.358	5.6	.501	13.6	294.395	11.8
583.353	5.6	943.390	8.3	.420	11.8
.383	8.3	957.343	7.3	295.401	15.2
603.303	10.1	959.297	19.7	.426	13.2
.327	14.2	960.288	17.3	296.373	17.9
606.284	7.4	.311	17.9	297.399	15.2
.309	7.3	961.295	11.3	298.396	10.3
607.294	4.2	.319	12.7	.418	8.3
613.302	5.8	962.328	6.5	300.415	11.3
636.212	17.3	963.343	11.3	.439	11.3
643.201	10.3	.365	10.3	313.322	12.3
.229	12.7	968.339	10.3	.345	13.6
882.517	13.6	.364	12.4	317.375	8.3
885.521	19.7	973.385	14.4	319.322	9.5
887.515	6.3	986.250	13.9	.348	11.8
888.488	8.3	.275	12.3	325.352	9.5
.515	11.5	991.203	19.7	.375	10.3
889.513	10.1	2438...		344.294	12.7
902.471	13.2	017.207	16.2	353.323	15.2
904.526	15.0	262.472	9.6	368.252	7.0
905.511	10.3	.499	10.6	374.242	5.8
907.448	9.5	262.527	7.3	.267	8.3
.472	9.3	263.513	15.0	672.414	9.3
.495	10.9	.538	12.0	673.392	8.3
.519	11.5	268.459	9.3	.417	10.7
908.488	14.4	.486	10.9	674.363	9.5
910.448	19.7	.539	7.5	.388	11.3

Таблица 10 (продолжение)

2438...		2438...		2439...	
575.352	17.2	736.223	9.3	007.475	18.5
.376	13.3	978.529	5.6	024.399	11.8
679.351	8.3	979.500	11.2	.423	13.2
.378	7.4	.525	9.3	025.421	16.2
697.315	7.4	980.512	13.9	.447	16.2
.339	7.3	981.537	18.3	026.393	17.1
699.334	10.3	997.452	7.4	027.375	12.3
700.275	13.2	.478	5.6	.405	10.1
.299	17.0	998.462	10.1	028.375	7.3
708.279	19.7	.486	11.3	.399	3.7
.304	15.0	2439...		037.421	16.2
723.255	6.3	006.417	16.2	038.420	17.9
727.215	19.7	.440	15.2		
.246	17.0	.463	13.9		
736.202	9.5	007.450	13.5		

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2437...		2437...		2437...	
135.454	7.5	496.395	8.8	883.416	3.7
136.430	5.4	497.428	9.2	900.334	9.6
137.449	9.6	501.411	2.4	901.341	5.4
139.462	2.8	.436	2.4	902.334	3.2
140.473	2.8	519.372	9.2	903.320	2.6
142.455	4.8	520.369	5.4	904.339	3.7
144.422	9.3	521.381	1.0	906.335	8.3
169.386	5.5	522.341	3.2	908.329	6.5
172.352	7.5	523.358	4.3	955.250	7.7
189.313	7.4	524.360	7.4	2438...	
192.318	9.2	525.359	8.5	198.356	7.5
193.297	7.4	526.354	7.5	207.463	6.5
195.285	2.1	544.295	4.3	208.485	3.7
196.284	3.7	545.290	8.5	209.479	4.0
197.299	9.6	547.283	6.5	225.457	7.5
198.282	7.7	844.470	8.5	226.427	8.3
199.323	9.2	847.462	6.5	228.444	4.0
228.238	3.2	848.461	5.2	236.374	2.4
463.503	8.5	855.456	4.3	254.384	8.3
470.471	9.2	871.394	6.5	260.390	9.2
486.434	4.6	873.416	8.8	263.344	3.9
488.455	3.7	874.386	8.7	282.302	7.5
494.409	3.9	878.374	7.4	288.309	8.5
.433	2.1	880.356	9.0	293.264	5.4
496.373	7.7	882.376	1.6	294.266	7.8

Таблица 10 (продолжение)

438...		2438...		2438...	
63.473	5.2	942.487	7.5	974.417	5.4
89.448	2.8	946.461	5.7	976.376	7.7
39.315	5.2	963.401	5.0	991.346	2.8
67.245	6.5	964.424	3.2	992.336	2.1
70.248	7.7	966.460	5.4	998.340	2.8
35.451	7.5	967.416	7.5		
40.492	7.4	973.386	5.2		

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436...		2437...		2437...	
80.538	15.5	195.474	9.4	605.354	8.4
86.526	8.1	.522	4.7	606.309	7.3
09.495	6.6	.546	5.5	.335	7.5
15.458	17.7	196.495	5.7	613.302	12.3
16.454	16.7	.518	5.1	.333	11.5
17.473	11.8	197.428	7.1	636.236	5.2
23.492	9.4	198.331	9.4	.260	7.3
24.461	13.0	204.493	6.5:	637.281	6.3
.536	12.3	207.476	10.5	643.229	4.7
43.444	11.8	276.241	10.5	645.249	6.9
44.462	13.0	521.533	12.1	669.218	7.5
47.463	4.7	522.511	13.0	848.488	14.6
66.354	5.7	.541	11.0	885.427	16.7
67.368	6.3	523.540	6.3	887.515	13.6
.408	5.4	531.501	9.4	888.515	10.5
68.357	8.4	.526	10.6	889.538	6.3
69.341	12.1	533.497	5.7	904.503	12.1
94.222	5.1	.529	5.5	905.511	12.5
97.346	12.1	548.445	12.1	907.488	5.7
00.375	13.0	.471	12.5	.495	7.3
01.301	7.9	549.435	11.8	.519	6.3
20.184	6.7	.459	13.4	910.472	6.9
2437...		555.414	8.2	911.465	9.4
65.474	13.0	.440	12.5	912.463	11.8
67.481	5.7	560.414	6.3	913.489	14.9
70.495	8.2	.439	5.7	915.504	11.8
72.495	14.6	561.442	8.2	918.529	5.1
75.471	8.2	.467	4.7	931.349:	14.2
79.502	7.9	576.414	11.8	.372:	10.4
.531	7.4	578.383	5.2	932.425	15.6
93.445	9.4	582.358	11.5	939.374	10.5
.469	6.4	583.383	12.5	.400	11.8
95.451	5.7	603.327	13.9	942.343	13.6

Таблица 10 (продолжение)

2437...		2438...		2438...	
943.390	8.2	295.426	8.4	700.299	15.5
959.322	15.2	.451	12.1	.325	14.2
960.311	15.5	296.397	12.5	708.304	12.1
.335	12.6	.445	12.1	.328	11.2
961.319	6.7	297.423	14.6	727.246	13.6
963.365	6.3	298.418	14.6	.275	11.8
.388	4.7	.443	13.0	730.258	6.3
968.364	13.0	300.439	6.3	736.228	13.0
.389	13.9	313.345	7.5	.281	12.1
973.385	5.1	319.348	7.3	979.525	4.7
.419	5.7	353.323	14.6	997.478	5.7
986.275	12.6	368.252	8.2	998.486	4.7
.299	13.4	374.267	8.4	2439...	
991.227	4.7	.292	6.6	006.440	4.7
9438...		622.330	6.3	.487	4.3
960.535	13.6	641.478	7.3	007.475	5.1
962.527	13.0	642.555	7.1	024.425	5.1
963.538	12.1	643.451	10.6	025.447	5.7
968.486	8.4	644.433	14.2	027.405	7.5
.563	8.4	651.479	7.3	028.399	12.1
969.480	12.6	652.476	10.6	029.401	16.7
.508	12.3	653.495	13.0	037.421	12.3
970.480	14.2	654.487	16.7	038.420	13.0
.508	15.6	655.481	14.6	.445	12.6
271.481	14.9	670.400	8.2	052.351	5.7
.507	13.8	.445	9.4	.383	4.7
272.488	13.0	671.416	11.8	054.367	6.9
.515	11.5	.441	11.0	055.338	9.4
285.449	6.6	673.417	11.6	.361	11.2
286.442	7.3	674.388	12.1	059.402	7.1
287.461	12.6	675.376	8.3	.422	9.4
288.488	14.6	679.378	9.4		
290.440	10.6	.402	6.9		
291.437	5.5	697.339	6.0		
292.401	4.7	.365	8.5		
294.395	5.7	699.334	13.0		

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2436...		2436...		2436...	
728.492	8.7	750.446	16.1	759.499	13.1
730.497	13.0	755.513	10.1	760.472	11.4
734.050	19.9	756.463	12.1	761.469	21.0
749.470	11.9	757.469	10.7	777.424	12.1

Таблица 10 (продолжение)

2436...		2437...		2437...	
779.429	16.3	170.361	18.3	501.436	18.5
780.381	17.4	172.327	13.3	512.329	16.1
786.433	11.4	.352	8.8	519.348	16.1
789.377	16.3	174.351	9.3	.372	19.1
790.479	17.5	175.351	11.4	520.343	24.6
791.460	18.3	189.263	17.5	.369	19.9
792.451	12.3	.287	16.3	521.353	18.0
804.302	8.7	.313	18.0	.381	20.8
805.331	12.3	192.294	10.8	522.341	17.5
806.315	13.3	.318	9.3	523.329	10.7
807.310	15.2	193.274	10.7	.358	15.1
809.314	16.3	.297	7.6	524.334	10.8
813.375	9.7	195.260	12.1	.360	9.1
814.361	7.6	.285	8.8	525.328	11.4
817.290	17.5	196.261	14.2	.359	8.7
834.246	11.3	.284	15.2	526.325	11.4
838.276	18.7	197.273	17.0	.354	10.8
840.242	13.1	.299	18.0	544.295	12.6
869.204	15.2	198.258	19.1	545.290	11.7
2437...		.282	19.8	547.283	18.7
135.454	10.1	199.299	22.2	819.496	12.6
.483	10.7	.323	16.5	844.470	17.5
136.430	10.6	218.222	18.9	847.437	11.2
.459	8.7	228.214	15.2	.462	12.3
137.421	10.1	.238	13.0	848.461	12.1
.450	11.4	458.465	8.8	849.464	14.2
139.432	14.1	463.479	18.9	851.478	14.0
.462	14.0	.503	21.4	853.449	15.9
140.428	18.5	464.495	18.9	855.456	13.1
.473	17.8	466.474	13.0	869.380	16.0
142.411	17.5	470.446	12.5	871.364	21.8
.455	16.9	.471	11.6	.394	18.9
144.393	12.1	486.434	9.3	872.359	17.2
.422	11.7	488.432	11.6	873.416	15.9
145.427	10.1	.455	8.9	874.386	13.4
159.345	21.4	494.386	14.2	878.350	14.1
161.367	17.5	.409	11.4	.374	13.3
162.349	13.3	.433	17.2	880.356	19.9
165.312	10.1	496.373	7.6	881.420	18.9
166.338	12.1	.395	8.8	882.351	16.1
167.340	12.1	497.401	13.9	.376	16.3
169.357	21.0	.428	8.8	883.392	13.3
.386	18.9	498.394	13.3	.416	13.0
170.334	23.0	501.411	20.8	900.308	18.7

Таблица 10 (продолжение)

2437...		2438...		2438...	
900.334	18.3	260.367	19.9	938.466	10.1
901.341	16.3	.390	18.7	940.467	13.3
902.309	12.5	263.317	13.3	.492	14.2
.334	15.2	.344	15.2	942.463	21.0
903.320	14.0	282.302	14.2	.487	19.9
904.308	11.4	288.283	17.5	943.440	18.9
.339	9.3	.309	19.9	946.436	11.4
906.309	14.2	293.264	12.6	.461	13.4
.335	14.0	294.266	13.4	963.374	17.0
908.301	17.5	563.473	19.8	.401	17.5
.329	20.0:	564.474	21.4	964.398	14.2
910.295	18.3	589.420	13.3	.424	16.3
955.225	21.7	.448	15.1	966.381	7.0
.250	18.9	592.439	18.7	.410	10.1
2438...		608.377	13.3	967.390	11.4
198.443	10.7	.394	10.7	.416	9.7
.469	10.7	614.373	16.1	973.380	12.8
199.473	12.5	616.371	10.8	.386	16.1
203.474	21.7	621.364	17.5	974.389	13.4
208.460	12.5	635.310	8.7	.417	13.4
.485	10.1	637.311	16.1	976.351	11.4
209.440	11.6	638.284	17.5	.376	12.6
.479	15.2	639.287	18.9	991.320	18.9
225.457	11.7	.315	19.9	.346	18.3
226.427	10.7	641.300	14.2	992.308	14.0
228.444	11.4	642.313	13.3	.336	16.3
230.428	18.7	645.292	11.6	998.340	19.4
235.391	11.8	666.249	16.1	2439...	
236.374	11.4	667.245	18.9	023.256	12.5
254.354	12.6	670.248	14.2	261.499	13.3
.384	12.6	935.427	14.2		
255.362	11.8	.451	16.7		

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2436...		2436...		2436...	
072.434	13.0	079.485	3.9	083.452	10.4
.466	8.7	081.442	9.8	.481	15.7
.507	7.8	.480	5.2	084.435	11.8
074.499	12.5	.526	11.8	.464	13.8
.529	13.0	082.428	10.9	.492	14.3
078.439	1.9	.460	9.8	085.516	11.0
079.423	2.6	.489	13.0	086.499	6.6
.455	2.9	083.427	13.9	.523	4.9

Таблица 10 (продолжение)

2436...		2436...		2436...	
100.449	-1.8	221.208	11.5	484.403	7.6
.482	5.2	397.494	12.7	.433	9.7
101.340	6.8	411.528	2.6	485.310	13.4
.398	4.9	426.492	3.6	.336	8.7
.428	10.4	428.473	2.6	.362	11.5
102.343	2.4	429.515	7.6	487.333	9.9
107.439	0.0	.540	5.8	.359	9.8
.475	0.0	430.468	10.6	488.350	4.0
110.396	4.9	436.409	11.8	.379	8.7
111.345	8.7	.448	11.8	.406	3.9
.377	4.4	438.485	11.8	.434	5.8
112.392	12.5	.519	2.9	489.340	4.9
.452	10.8	441.505	3.4	.365	4.9
.479	9.7	.532	1.9	.390	3.9
128.383	-2.5	.560	-2.5	.413	4.4
.412	-2.5	455.451	10.8	490.360	2.9
129.290	4.4	456.473	7.8	.385	-1.3
.364	2.5	461.415	2.6	.413	2.9
.391	3.9	.444	-2.5	.442	3.5
.419	5.8	.470	3.5	493.462	6.6
138.271	4.9	462.412	1.1	.488	6.8
.337	-2.5	.443	2.6	495.362	12.5
139.267	6.8	.474	2.6	.417	11.5
140.300	9.8	463.406	5.8	.442	12.5
.331	9.8	.435	3.5	498.469	5.2
141.369	12.0	.465	6.1	518.285	2.9
.398	9.8	465.391	7.8	.311	4.8
163.254	9.9	466.383	16.0	.336	4.0
.292	10.8	.413	11.8	.363	3.9
164.251	5.8	.432	10.6	538.204	3.9
.279	6.1	468.427	10.8	540.349	-3.7
165.227	5.8	.454	6.7	541.192	6.6
184.189	6.6	.482	4.0	.216	2.6
.232	6.8	469.499	0.0	.240	3.9
.279	11.9	.526	1.9	542.204	5.0
187.187	2.4	481.308	-1.3	.231	4.9
.210	-2.5	.345	0.0	.283	4.4
.242	-1.1	482.294	4.4	543.208	7.6
.285	-1.3	.323	-3.7	.236	6.6
189.246	6.6	.351	3.2	.263	9.8
.275	4.8	483.320	6.6	544.290	12.9
194.233	4.9	.349	5.8	.315	11.5
.263	7.7	.374	4.4	.341	11.5
213.197	7.8	484.339	10.3	545.369	11.8
.226	6.8	.371	7.6	546.218	13.4

Таблица 10 (продолжение)

2436...		2436...		2437...	
546.244	8.7	864.290	3.2	193.445	11.4
.273	9.9	866.354	6.1	.469	10.3
547.357	5.8	867.324	8.6	195.427	4.3
548.226	3.9	.368	10.1	.451	4.3
.252	2.9	869.313	10.5	.474	3.4
.281	5.2	.341	10.5	.499	8.6
549.195	-3.5	.368	10.3	.522	2.9
.222	-2.9	894.222	2.5	.546	4.3
.249	2.0	.253	3.2	.570	3.4
.274	4.9	.304	2.3	196.354	4.3
574.249	13.7	897.346	11.7	196.402	3.7
576.201	16.5	.376	10.7	.472	3.8
.230	6.2	900.375	5.7	.495	3.4
581.218	6.6	.421	5.7	.518	0.0
780.442	15.1	901.274	4.9	.542	4.3
786.488	0.0	.301	4.8	197.403	0.0
789.535	11.7	920.184	4.3	.428	1.7
809.464	12.5	2437...		.453	-2.5
.495	9.6	163.492	11.5	.478	-2.9
815.458	3.2	165.448	4.3	.532	0.0
.480	2.5	.474	6.7	.559	-2.9
816.425	3.7	.500	5.7	198.402	2.2
.454	2.1	.525	6.4	.427	3.9
.498	3.2	167.456	2.5	.452	1.9
817.435	9.7	.481	1.0	.476	2.6
.473	4.3	.506	-2.9	.500	2.3
.509	6.4	.530	2.2	204.391	5.4
822.442	3.2	168.479	-1.4	.417	7.9
823.446	3.8	170.468	6.1	.442	6.7
.492	4.3	.495	6.0	.467	6.7
.544	2.5	.522	6.7	.493	7.6
824.461	1.0	170.548	5.7	207.476	8.6
.536	3.1	172.471	11.7	.501	-2.5
.567	0.0	.495	11.6	.525	-2.2
825.559	2.2	.542	10.9	222.323	11.2
838.438	12.9	175.471	2.9	222.351	12.9
.481	3.4	.494:	7.5	.379	10.7
844.434	0.0	.519	6.0	.408	11.2
.462	0.0	176.479	4.8	.435	11.4
.486	2.6	179.474	5.4	227.442	1.7
847.437	9.6	.502	3.8	228.349	5.4
.463	9.4	.531	4.8	.375	3.2
.490	10.3	.558	1.9	.477	10.3
.518	10.0	193.421	10.9	248.302	5.4

Таблица 10 (продолжение)

2437...		2437...		2437...	
275.192	0.0	576.354	10.1	889.513	14.1
276.241	0.0	.385	11.6	.538	15.4
278.208	8.6	578.331	2.9	902.471	6.1
.233	6.4	.383	3.4	904.526	2.9
.257	5.4	.410	3.8	.553	1.1
521.506	-2.5	.437	3.8	905.511	2.6
.533	-3.7	582.329	7.5	.535	4.8
522.484	5.4	.358	7.5	.560	4.3
.511	4.3	.386	6.4	907.448	12.5
.541	2.9	.413	6.7	.472	11.9
523.519	5.7	583.353	9.6	.495	10.9
.540	5.7	.383	10.1	.519	12.5
524.526	10.3	.410	7.5	.562	10.8
525.491	12.5	.435	8.6	908.464	12.5
526.515	12.0	603.303	8.6	.488	13.4
528.502	3.8	.327	9.4	909.470	14.8
531.475	3.8	605.354	12.0	.537	10.3
.501	-0.9	.379	16.4	910.448	10.1
.526	2.5	606.284	11.4	.498	8.6
533.471	11.6	.309	7.6	911.441	5.1
.497	6.7	.335	8.6	.465	5.1
.529	6.4	.360	9.7	.490	5.4
534.461	6.4	607.294	4.9	.514	7.5
.535	10.3	613.277	6.4	912.463	4.3
546.427	14.6	.302	9.4	.487	4.8
548.420	6.4	.333	11.4	.510	4.8
.445	6.9	636.212	14.4	913.463	0.0
.471	7.5	.236	5.1	.489	-1.0
.497	3.8	.260	6.4	.514	0.0
549.411	4.3	.285	5.1	914.453	3.4
.435	1.9	637.281	3.8	.479	2.6
.459	4.3	.305	3.2	.507	2.5
.487	2.6	643.201	12.5	.533	3.8
555.389	10.3	.229	10.9	915.504	5.1
.414	11.2	.253	12.7	.529	7.4
.440	19.4	645.249	8.6	.554	6.0
.465	12.9	.275	9.6	918.529	16.4
560.391	-1.4	669.218	1.9	931.324:	6.1
.414	0.0	847.462	4.8	.349:	3.2
.439	-2.5	882.517	5.7	.372:	6.7
.461	0.0	885.521	4.3	.422:	6.0
561.419	1.1	886.427	7.5	932.400	6.4
.442	-2.2	887.515	9.4	.425	2.1
.467	3.8	888.488	13.4	939.323	13.8
.490	1.1	.515	12.9	.349	11.9

Таблица 10 (продолжение)

2437...		2438...		2438...	
939.374	13.8	017.207	14.1	291.464	12.9
.400	8.6:	262.472	13.0	292.374	13.8
942.312	4.3	.499	16.4	.401	13.4
.339	3.8	.527	13.4	.426	15.3
.393	4.7	.558	14.1	.453	13.0
.425	2.9	263.513	10.8	294.395	6.0
943.363	2.9	.538	10.5	.420	6.4
.390	1.1	268.459	5.7	.445	5.4
.417	1.2	.486	4.3	.468	6.1
.447	2.6	.539	5.7	295.401	4.8
946.473	11.2	.563	4.8	.426	5.7
.497	10.9	269.450	11.5	.451	5.4
957.343	15.1	.480	7.6	.474	3.8
959.297	10.5	.508	8.6	296.373	1.9
.322	11.9	.538	14.8	.397	2.9
.349	10.5	270.455	16.4	.421	0.0
.376	10.3	.480	13.0	297.399	2.2
960.288	7.5	.531	12.5	.423	4.8
.311	5.4	271.507	15.1	.448	1.7
.335	6.4	.532	12.5	.478	4.8
961.295	6.4	272.488	16.5	298.396	5.1
.319	3.8	.515	12.9	.418	5.7
.347	4.3	285.394	2.5	.483	6.7
.370	4.8	.401	4.2	300.415	14.8
962.328	2.9	.449	4.8	.439	13.4
963.342	3.8	286.418	1.7	.463	13.0
.365	3.1	.442	3.4	.485	13.4
.388	2.5	.469	3.2	313.322	7.5
.410	5.1	287.436	2.9	.345	6.7
968.339	10.8	.461	2.6	317.375	4.3
.364	17.7	.485	3.8	319.322	9.9
.389	13.3	.511	3.8	.348	11.2
.414	16.4	288.439	4.8	.374	11.5
969.388	10.8	.464	6.9	.399	11.2
.413	9.6	.488	5.7	324.431	12.8:
973.385	2.9	.513	6.7	.456	4.8:
.419	3.8	289.480	13.0	325.352	2.2
.444	4.3	.512	11.2	.375	2.9
974.413	4.3	290.415	11.5	.400	0.0
986.250	12.5	.440	12.8	.425	2.9
.275	11.9	.467	11.5	344.294	5.4
.299	13.3	.494	14.1	353.323	4.3
991.203	3.2	291.412	16.4	368.252	9.6
.227	3.8	.437	12.0	374.242	3.2

Таблица 10 (продолжение)

2438...		2438...		2439...	
374.267	3.8	700.325	4.3	007.475	11.7
.318	3.1	.352	5.4	.499	12.9
405.242	2.6	708.279	1.9	.524	14.4
406.239	6.4	.304	1.1	024.399	5.4
641.503	2.9	.328	0.0	.423	6.7
672.414	16.4	.354	1.1	025.421	9.7
673.392	14.8	723.255	14.8	.447	7.5
.417	14.6	727.215	4.8	026.393	12.5
.440	15.3	.246	3.9	027.375	16.4
.460	13.0	.275	2.9	.405	13.4
674.363	15.1	.300	2.9	.437	15.3
.388	15.4	730.258	6.0	028.375	16.4
.412	16.4	736.202	5.7	.399	12.5
675.353	11.5	.228	5.7	.427	12.5
.376	12.1	.281	4.3	.454	14.1
.405	12.0	.306	5.1	029.354	6.7
.429	13.4	979.500	16.4	.378	6.7
676.265	6.7	.525	13.4	.449	7.5
.289	10.6	980.516	7.5	037.421	15.0
.419	6.4	981.537	5.7	.453	13.4
.474	9.6	997.452	8.6:	.482	13.8
679.351	2.9	.478	16.4	038.420	12.9
.378	2.2	.505	15.1	.445	11.7
.402	2.9	.532	12.9:	.468	7.0
.427	2.6	998.462	16.4	052.324	3.4
697.315	5.4	.486	14.4	.351	1.7
.339	4.3	.510	15.4	.385	2.3
.365	2.9	.533	13.6:	054.342	6.7
.391	3.7	2439...		.367	6.2
699.334	1.9	006.417	11.2	.429	4.3
.362	1.9	.463	7.4	055.313	11.1
.383	3.2	.487	16.4:	.361	11.2
700.275	4.3	.510	8.6:		
.299	4.3	007.450	12.5		

SY Aur

2436...		2436...		2436...	
084.574	16.9	252.228	13.1	487.517	6.5
141.485	6.5	257.271	9.9	488.516	5.9
163.484	6.5	274.261	5.9	489.488	8.4
202.446	6.5	465.551	11.5	495.576	15.5
213.328	7.5	466.571	6.5	499.584	6.9
245.238	6.9	468.574	8.6	518.465	6.5

Таблица 10 (продолжение)

2436...		2437...		2438...	
526.471	8.6	227.588	5.3	374.466	6.2
527.482	6.9	338.317	7.4	.466	5.0
528.519	4.9	.317	8.4	378.430	18.0
541.375	11.5	366.241	16.1	.430	16.9
542.374	16.7	.241	22.4	405.366	4.9
543.435	12.0	582.546	4.9	.366	7.6
544.424	17.7	.546	5.4	407.335	14.1
546.374	13.1	637.424	16.1	.335	14.8
547.449	6.2	.424	16.6	411.300	25.9
549.376	4.1	672.369	10.6	.300	22.4
555.392	14.3	.369	14.1	441.330	25.9
574.306	21.6	942.575	18.2	.330	17.4
576.333	10.6	943.581	19.2	671.570	16.6
581.316	9.8	945.590	23.3	707.509	15.7
583.305	17.2	.590	18.2	.509	8.9
606.280	15.7	961.492	16.1	708.550	6.0
607.266	15.1	.492	18.0	.550	7.6
608.269	6.2	969.536	5.4	727.408	12.4
612.315	10.9	.536	5.4	.408	15.7
844.567	8.4	974.537	22.6	732.436	14.1
855.612	12.3	.537	22.0	736.408	22.0
.612	15.1	973.546	22.0	.408	18.2
900.542	15.7	.546	17.4	2439...	
.542	14.8	975.543	23.0	029.571	25.9
904.411	4.1	.543	23.7	.571	22.6
933.370	5.4	2438...		036.574	12.6
.370	8.2	084.248	18.0	.574	16.6
954.270	4.5	.248	16.1	037.640	20.3
.270	5.9	085.247	20.3	.640	17.7
959.316	17.4	292.557	8.2	038.588	20.1
.316	19.2	.557	6.5	055.486	7.4
960.307	23.0	296.574	16.1	.486	4.9
.307	21.5	.574	15.7	059.577	23.9
964.288	5.9	297.562	21.5	067.546	16.1
979.225	16.7	.562	16.6	.546	16.7
.225	18.2	303.583	7.8	122.391	20.0
2437...		.583	4.9	.391	16.9
227.588	6.2	319.540	21.6		

SZ Cas

2436....		2436...		2436...	
053.536	11.2	074.562	8.0	081.526	14.4
072.466	6.6	079.455	11.2	082.489	14.8
072.507	12.8	.485	12.3	083.481	14.9

Таблица 10 (продолжение)

2436...		2436...		2437....	
084.492	12.3	469.526	-2.3	522.541	12.4
085.516	12.0	481.345	15.2	533.529	2.0
086.499	13.0:	482.351	10.9	549.459	11.9
.523	10.6	483.374	1.0	555.440	17.7
100.482	8.8	484.371	6.7	.515	8.6
101.398	3.5	.403	-2.0	560.439	-2.0
.428	0.0	.433	1.8	.508	2.9
102.488	2.4	485.336	0.0	.531	6.8:
111.430	11.8	.362	4.5	561.467	1.2
112.452	13.8	488.379	11.2	.538	4.8:
.479	11.5	.406	11.5	578.410	11.0
128.412	1.8	.439	11.2	582.386	10.4
129.391	1.6	489.365	16.2	583.410	14.8
.419	2.3	.390	15.5	.515	14.4
138.310	12.8	.413	11.8	605.354	14.0
.337	14.1	490.413	12.8	.426	13.5
140.331	5.3	.442	7.1	606.335	12.1
.369	5.7	493.448	10.4	.432	16.7
.398	5.0	495.339	12.4	613.333	12.3:
163.292	11.8	.442	11.2	636.260	16.0
.357	12.8	499.506	1.8	.340	15.3
164.310	14.0:	518.336	12.4	637.352	16.7
184.232	1.8	.363	14.8	643.253	3.0
.279	-2.7	540.349	1.0	.356	5.9
187.210	6.8	541.216	8.0	645.249	8.7
.242	11.2	.240	5.0	.325	11.0
.285	11.5	542.231	10.6	669.218	3.0
189.246	12.8	.257	1.6	690.259	14.9
.275	13.6	.283	3.2	905.535	12.9
194.233	11.5	543.236	9.0	907.562	17.9
.263	12.3	.263	13.4	909.512	12.9
213.197	11.2	544.290	14.0	911.490	16.7
.226	-3.2	.315	11.2	.563	8.7
221.208	14.4	.341	14.8	912.487	8.7
441.531	4.4	545.369	14.4	.557	9.8
.560	6.8	546.244	10.1	915.529	4.1
456.478	3.5	.273	9.3	942.425	4.4
.507	2.4	547.357	12.4	.511	5.9
462.474	12.8	549.274	11.6	943.502	5.9
463.465	12.4	574.249	11.6	946.473	15.6
466.413	13.4	824.536	2.7	.497	11.0
.432	14.8	867.408	4.0	.546	11.9
468.454	5.0	2437...		960.410	11.0
.482	3.0	172.518	15.3	961.347	17.0
469.499	2.7	175.484	10.2	.420	15.6

Таблица 10 (окончание)

2437...		2438...		2438...	
963.457	19.0	319.451	14.0	736.254	9.8
974.463	17.7	325.476	5.7	.357	13.2
2438...		374.367	15.7	699.439	14.4
238.564	11.9	405.291	4.5	2439...	
290.554	14.4	407.261	5.7	027.267	17.0
291.539	16.0	408.270	12.3	028.510	13.2
292.502	12.9	673.512	13.5	035.520	8.9
294.518	9.9	697.365	11.7	037.543	12.6
295.451	11.4	699.362	13.5	038.519	14.9
.521	3.6	700.325	7.9	053.467	19.0
296.494	4.9	707.456	5.6	054.478	15.6
297.537	7.7	708.328	8.9	055.434	16.3
298.536	6.9	727.275	12.6	059.498	3.3
300.531	12.9	.351	14.9		

Л и т е р а т у р а

1. Е.Н.Макаренко ПЗ 16, № 4, 388, 1968.