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EINE KLASSE UNSYMMETRISCHER
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BAHNEN IM PROBLÈME RESTREINT UND
IHRE ENTWICKLUNGSGESCHICHTE
(KLASSE n).

VON

ELIS STRÖMGREN

MIT 1 TAFEL



KØBENHAVN

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In einer Reihe von Publikationen des Kopenhagener Observatoriums habe ich in den letzten Jahren das gesamte vorliegende numerische Material für eine Anzahl periodischer Bahnklassen im problème restreint veröffentlicht, für die die Hauptresultate schon in älteren Arbeiten skizziert waren. Die jetzt vorliegende Abhandlung setzt diese Reihe von Publikationen fort, indem sie das ganze bis jetzt unveröffentlichte Material für eine Bahnklasse gibt, deren Hauptzüge in der Publ. 39¹ kurz angedeutet sind.

Die Untersuchungen über diese Bahnklasse nahmen schon im Jahre 1916 ihren Anfang. In der Publ. 26 unseres Observatoriums liegen die ersten Resultate veröffentlicht vor². Es wurde die Existenz einer Klasse periodischer unsymmetrischer librationsähnlicher Bahnen um L_1 festgestellt, die in zwei Ejektionsbahnen in m_2 bzw. m_1 ihren vorläufigen Abschluss fanden. In der jetzt vorliegenden Abhandlung sind vier Vertreter dieser Bahnklasse aus der Publ. 26 reproduziert (die Figuren 1—4 in der Tafel am Schluss dieser Abhandlung): Zunächst eine Ejektionsbahn

¹ Forms of periodic motion in the Restricted Problem and in the general Problem of Three Bodies, according to researches executed at the Observatory of Copenhagen. By ELIS STRÖMGREN. (A lecture delivered at the inter-Scandinavian Congress of Mathematicians at Helsingfors, July 1922).

² Über eine neue Art Librationen im problème restreint. Von E. STRÖMGREN und J. FISCHER-PETERSEN. (Auch Astr. Nachrichten. Jan. 1917).

in m_2 , mit $K = 9.21952$ (Fig. 1), danach die librationsähnliche Bahn $K = 10.03918$ (Fig. 2) und das Spiegelbild dieser Bahn in bezug auf die η -Achse, auch mit $K = 10.03918$ (Fig. 3), und zum Schluss die Ejektionsbahn in m_1 , mit $K = 9.21952$ (Fig. 4), die das Spiegelbild der Bahn in Fig. 1 darstellt.

Die nach der Veröffentlichung der Publ. 26 ausgeführten Arbeiten haben allmählich zu der Entwicklungsgeschichte geführt, die durch die beigelegte Tafel dargestellt ist (vgl. auch Fig. 31 der Publ. 39): nach der Ejektionsbahn in m_1 tritt eine Schleife auf (Fig. 5). Die Schleife erweitert sich während der darauf folgenden Entwicklung, und die Bahn schrumpft zusammen (Fig. 6); in Fig. 7 sind wir noch einen Schritt weiter gekommen: Schleife und Bahn haben jetzt beinahe dieselben Dimensionen. Es kommt nachher ein Stadium, wo Schleife und Bahn identisch sind, und von diesem Moment an kehrt die ganze Entwicklung um: die Schleife wird zur Bahn, und die Bahn wird zur Schleife. Wir können die Weiterentwicklung durch die Figuren 8, 9, 10, 11, 12, 13 verfolgen, bis wir zur Bahn $14 = 1$ gelangen, wo wir anfangen. Von hier aus können wir der Entwicklung noch weiter folgen, durch die Figuren 15, 16, 17, 18, 19, 20 bis zur Fig. 21 = 1, womit die ganze Entwicklungsgeschichte der Klasse durchlaufen ist.

Bezeichnend für die ganzen Resultate unserer Untersuchungen über die einfachperiodischen Bahnen im problème restreint ist es, dass entweder eine Klasse solcher Bahnen ein in sich geschlossenes System bildet, oder dass es möglich ist, für sie einen natürlichen Anfang und einen natürlichen Abschluss — zwei Grenzbahnen — zu finden.

In gewissen der zuletzt erwähnten Fälle liegt die eine Grenzbahn im Unendlichen, in anderen — sehr vielen — Fällen ist die eine Grenzbahn (oder beide) durch asymptotische Bahnen dargestellt, die durch unendlich viele Windungen in einen der Librationspunkte L_4 und L_5 (oder in beide) hineingehen. In einem Falle (Klasse m) fällt die eine Grenzbahn mit der Verbindungslinie zwischen den zwei endlichen Massen zusammen. Zu den zuerst oben erwähnten Klassen — denjenigen Bahnen, die in sich selbst geschlossene Systeme bilden — gehören die Librationen um L_2 und L_3 ¹ und ausserdem, wie wir gesehen haben, die in der vorliegenden Arbeit behandelte Klasse n .

Auf S. 6 ist eine Übersicht der bisjetzt nicht veröffentlichten Bahnen gegeben, und auf den S. 7—31 folgen die ausführlichen Rechnungsergebnisse. Die Bahnrechnungen sind von Herrn N. BENNEDSEN und von dem seither verstorbenen Herrn Sv. THYE ausgeführt worden. An der Umrechnung von E, F in ξ, η haben die Herrn N. BENNEDSEN, B. SVANHOF und K. STEENBERG SØRENSEN teilgenommen. Die Figuren sind von Herrn SVANHOF gezeichnet worden.

Dem Carlsbergfond bin ich für pekuniäre Unterstützung zum grossen Dank verpflichtet.

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¹ Publ. des Kopenhagener Observatoriums No. 63 (auch Videnskaberne Selskabs mathematisk-fysiske Meddelelser IX, 6).

Übersicht über die gerechneten Bahnen.

$$E'_0 = 0, F_0 = 0.$$

1.	$E_0 = 1.0$	$K = 6.0$
2.		6.034
3.		6.03868 periodisch
4.		7.0
5.		8.0
6.	$E_0 = 1.4$	$K = 4.2$
7.		4.9
8.		4.9188 periodisch
9.		5.0
10.		8.0
11.		10.0
12.	$E_0 = 1.52$	$K = 4.7$
13.		4.74
14.		4.8
15.		4.85
16.		4.8723 periodisch
17.		4.875
18.		4.9

Bahn 1.

$$E_0 = 1.0, K = 6.0.$$

ψ	E	F	ξ	η
0.000	+ 1.00000	0.00000	+ 0.54031	0.00000
0.015	1.00022	+ 0.05187	0.54084	— 0.04368
0.030	1.00090	0.10377	0.54245	0.08753
0.045	1.00204	0.15572	0.54511	0.13174
0.060	1.00367	0.20775	0.54886	0.17649
0.075	1.00582	0.25987	0.55359	0.22197
0.090	1.00855	0.31211	0.55928	0.26838
0.105	1.01191	0.36449	0.56585	0.31592
0.120	1.01597	0.41703	0.57327	0.36483
0.135	1.02081	0.46972	0.58140	0.41535
0.150	1.02653	0.52259	0.59011	0.46771
0.165	1.03325	0.57563	0.59924	0.52221
0.180	1.04109	0.62885	0.60851	0.57915
0.195	1.05021	0.68222	0.61770	0.63884
0.210	1.06077	0.73573	0.62641	0.70162
0.225	1.07298	0.78935	0.63416	0.76786
0.240	1.08703	0.84303	0.64041	0.83790
0.255	1.10319	0.89671	0.64443	0.91212
0.270	1.12172	0.95031	0.64536	0.99090
0.285	1.14292	1.00375	0.64213	1.0745
0.300	1.16710	1.05689	0.63340	1.1633
0.315	1.19463	1.10958	0.61766	1.2572
0.330	1.22588	1.16163	0.59309	1.3562
0.345	1.26123	1.21287	0.55757	1.4601
0.360	+ 1.30110	+ 1.26299	+ 0.50873	— 1.5678

ψ	E	F	ξ	η
0.375	+ 1.34587	+ 1.31171	+ 0.44405	- 1.6782
0.390	1.39593	1.35867	0.36081	1.7893
0.405	1.45161	1.40350	0.25654	1.8983
0.420	1.51316	1.44575	+ 0.12905	2.0014
0.435	1.58075	1.48497	- 0.02311	2.0940
0.450	1.65441	1.52067	0.20020	2.1708
0.465	1.73400	1.55237	0.40086	2.2254
0.480	1.81920	1.57962	0.62191	2.2516
0.495	1.90947	1.60202	0.85794	2.2455
0.510	2.00413	1.61926	1.1017	2.2014
0.525	2.10227	1.63114	1.3444	2.1181
0.540	2.20291	1.63758	1.5767	1.9960
0.555	2.30499	1.63861	1.7896	1.8389
0.570	2.40742	1.63438	1.9752	1.6519
0.585	2.50920	1.62513	2.1278	1.4428
0.600	2.60938	1.61117	2.2440	1.2201
0.615	2.70719	1.59282	2.3227	0.99204
0.630	2.80195	1.57044	2.3651	0.76637
0.645	2.89316	1.54436	2.3741	0.54973
0.660	2.98045	1.51491	2.3536	0.34701
0.675	3.06352	1.48239	2.3082	- 0.16289
0.690	3.14224	1.44707	2.2429	+ 0.00130
0.705	3.21654	1.40922	2.1624	0.14409
0.720	3.28641	1.36907	2.0711	0.26534
0.735	3.35192	1.32684	1.9727	0.36577
0.750	3.41317	1.28276	1.8707	0.44655
0.765	3.47028	1.23702	1.7678	0.50922
0.780	3.52342	1.18982	1.6661	0.55562
0.795	3.57276	1.14134	1.5673	0.58753
0.810	3.61847	1.09175	1.4726	0.60676
0.825	3.66075	1.04122	1.3830	0.61513
0.840	3.69976	0.98989	1.2988	0.61420
0.855	3.73570	0.93789	1.2206	0.60544
0.870	+ 3.76871	+ 0.88536	- 1.1483	+ 0.59011

ψ	E	F	ξ	η
0.885	+ 3.79898	+ 0.83239	- 1.0821	+ 0.56943
0.900	3.82663	0.77908	1.0215	0.54433
0.915	3.85182	0.72552	0.96668	0.51567
0.930	3.87467	0.67178	0.91722	0.48411
0.945	3.89528	0.61791	0.87296	0.45029
0.960	3.91377	0.56397	0.83340	0.41467
0.975	3.93023	0.50998	0.79848	0.37768
0.990	3.94474	0.45599	0.76790	0.33959
1.005	3.95737	0.40201	0.74143	0.30072
1.020	3.96818	0.34806	0.71883	0.26124
1.035	3.97723	0.29414	0.69993	0.22134
1.050	3.98457	0.24027	0.68454	0.18112
1.065	3.99022	0.18644	0.67254	0.14071
1.080	3.99422	0.13265	0.66380	0.10018
1.095	3.99660	0.07889	0.65827	0.05959
1.110	3.99736	+ 0.02515	0.65584	+ 0.01899
1.125	3.99652	- 0.02855	0.65654	- 0.02155
1.140	+ 3.99408	- 0.08226	- 0.66034	- 0.06201

Bahn 2.

$$E_0 = 1.0, K = 6.034.$$

ψ	E	F	ξ	η
0.000	+ 1.00000	0.00000	+ 0.54031	0.00000
0.015	1.00022	+ 0.05182	0.54084	- 0.04363
0.030	1.00089	0.10367	0.54245	0.08744
0.045	1.00202	0.15557	0.54512	0.13161
0.060	1.00363	0.20754	0.54886	0.17630
0.075	1.00577	0.25961	0.55359	0.22173
0.090	1.00847	0.31180	0.55929	0.26808
0.105	1.01180	0.36411	0.56589	0.31556
0.120	1.01582	0.41658	0.57331	0.36438
0.135	+ 1.02061	+ 0.46921	+ 0.58147	- 0.41479

ψ	E	F	ξ	η
0.150	+ 1.02628	+ 0.52202	+ 0.59019	- 0.46709
0.165	1.03294	0.57499	0.59935	0.52146
0.180	1.04072	0.62813	0.60867	0.57829
0.195	1.04977	0.68142	0.61789	0.63781
0.210	1.06025	0.73485	0.62664	0.70042
0.225	1.07236	0.78838	0.63446	0.76647
0.240	1.08631	0.84197	0.64084	0.83628
0.255	1.10235	0.89555	0.64499	0.91028
0.270	1.12074	0.94905	0.64607	0.98874
0.285	1.14178	1.00238	0.64306	1.0721
0.300	1.16580	1.05541	0.63460	1.1604
0.315	1.19313	1.10799	0.61924	1.2539
0.330	1.22415	1.15994	0.59510	1.3526
0.345	1.25925	1.21104	0.56016	1.4559
0.360	1.29883	1.26104	0.51206	1.5632
0.375	1.34328	1.30964	0.44827	1.6732
0.390	1.39297	1.35650	0.36618	1.7840
0.405	1.44823	1.40121	0.26324	1.8926
0.420	1.50933	1.44337	+ 0.13732	1.9956
0.435	1.57642	1.48250	- 0.01302	2.0884
0.450	1.64953	1.51812	0.18808	2.1655
0.465	1.72853	1.54977	0.38662	2.2212
0.480	1.81309	1.57698	0.60544	2.2492
0.495	1.90271	1.59937	0.83913	2.2444
0.510	1.99668	1.61661	1.0812	2.2027
0.525	2.09412	1.62850	1.3225	2.1220
0.540	2.19406	1.63496	1.5538	2.0033
0.555	2.29543	1.63601	1.7663	1.8492
0.570	2.39717	1.63180	1.9522	1.6660
0.585	2.49826	1.62256	2.1056	1.4603
0.600	2.59779	1.60859	2.2238	1.2406
0.615	2.69495	1.59022	2.3038	1.0152
0.630	2.78909	1.56780	2.3484	0.79193
0.645	+ 2.87971	+ 1.54168	- 2.3599	- 0.57715

ψ	E	F	ξ	η
0.660	+ 2.96641	+ 1.51217	- 2.3421	- 0.37613
0.675	3.04895	1.47959	2.2996	0.19259
0.690	3.12717	1.44421	2.2370	- 0.02886
0.705	3.20100	1.40629	2.1591	+ 0.11387
0.720	3.27045	1.36607	2.0702	0.23547
0.735	3.33558	1.32380	1.9741	0.33654
0.750	3.39649	1.27967	1.8742	0.41823
0.765	3.45332	1.23389	1.7734	0.48206
0.780	3.50623	1.18667	1.6729	0.52974
0.795	3.55539	1.13817	1.5755	0.56305
0.810	3.60099	1.08858	1.4819	0.58382
0.825	3.64319	1.03804	1.3932	0.59370
0.840	3.68220	0.98672	1.3098	0.59433
0.855	3.71817	0.93473	1.2320	0.58709
0.870	3.75127	0.88221	1.1601	0.57327
0.885	3.78167	0.82926	1.0940	0.55404
0.900	3.80951	0.77597	1.0336	0.53031
0.915	3.83492	0.72243	0.97870	0.50293
0.930	3.85803	0.66870	0.92912	0.47261
0.945	3.87895	0.61483	0.88462	0.43991
0.960	3.89778	0.56089	0.84490	0.40536
0.975	3.91462	0.50690	0.80975	0.36932
0.990	3.92953	0.45290	0.77890	0.33215
1.005	3.94259	0.39890	0.75208	0.29409
1.020	3.95386	0.34492	0.72918	0.25536
1.035	3.96340	0.29097	0.70992	0.21612
1.050	3.97124	0.23705	0.69420	0.17648
1.065	3.97742	0.18316	0.68183	0.13663
1.080	3.98197	0.12930	0.67276	0.09658
1.095	3.98490	0.07546	0.66690	0.05641
1.110	3.98625	+ 0.02164	0.66414	+ 0.01618
1.125	+ 3.98599	- 0.03218	- 0.66440	- 0.02406

Bahn 3.

Periodisch.

$$E_0 = 1.0, K = 6.03868.$$

ψ	E	F	ξ	η
0.000	+ 1.00000	0.00000	+ 0.54031	0.00000
0.015	1.00022	+ 0.05182	0.54088	— 0.04363
0.030	1.00089	0.10365	0.54246	0.08742
0.045	1.00201	0.15555	0.54512	0.13159
0.060	1.00362	0.20751	0.54888	0.17628
0.075	1.00576	0.25957	0.55359	0.22170
0.090	1.00846	0.31175	0.55929	0.26804
0.105	1.01178	0.36405	0.56589	0.31542
0.120	1.01580	0.41652	0.57331	0.36423
0.135	1.02058	0.46914	0.58149	0.41474
0.150	1.02624	0.52194	0.59021	0.46700
0.165	1.03289	0.57490	0.59938	0.52136
0.180	1.04067	0.62803	0.60869	0.57815
0.195	1.04971	0.68132	0.61791	0.63767
0.210	1.06018	0.73473	0.62667	0.70025
0.225	1.07227	0.78824	0.63449	0.76627
0.240	1.08621	0.84182	0.64090	0.83606
0.255	1.10223	0.89539	0.64506	0.91000
0.270	1.12060	0.94887	0.64619	0.98840
0.285	1.14162	1.00219	0.64317	1.07170
0.300	1.16562	1.05520	0.63476	1.16000
0.315	1.19292	1.10777	0.61946	1.25352
0.330	1.22391	1.15971	0.59539	1.35210
0.345	1.25897	1.21078	0.56039	1.45537
0.360	1.29851	1.26077	0.51252	1.56273
0.375	1.34292	1.30935	0.44885	1.67250
0.390	1.39256	1.35620	0.36692	1.78317
0.405	1.44776	1.40089	0.26417	1.89187
0.420	1.50880	1.44304	+ 0.13847	1.99481
0.435	1.57582	1.48216	— 0.01167	2.08762
0.450	+ 1.64885	+ 1.51777	— 0.18640	— 2.16480

ψ	E	F	ξ	η
0.465	+ 1.72777	+ 1.54941	- 0.38465	- 2.22055
0.480	1.81224	1.57661	0.60316	2.24879
0.495	1.90177	1.59900	0.83680	2.24420
0.510	1.99563	1.61624	1.07842	2.20290
0.525	2.09299	1.62813	1.31947	2.12260
0.540	2.19284	1.63460	1.55067	2.00429
0.555	2.29411	1.63565	1.76312	1.85079
0.570	2.39575	1.63144	1.94900	1.66785
0.585	2.49675	1.62220	2.10252	1.46263
0.600	2.59619	1.60823	2.22030	1.24337
0.615	2.69326	1.58986	2.30105	1.01845
0.630	2.78731	1.56743	2.34606	0.79548
0.645	2.87785	1.54131	2.35794	0.58092
0.660	2.96447	1.51179	2.34050	0.38010
0.675	3.04694	1.47920	2.29837	0.19666
0.690	3.12509	1.44381	2.23685	- 0.03302
0.705	3.19885	1.40588	2.15860	+ 0.10971
0.720	3.26824	1.36565	2.07005	0.23134
0.735	3.33332	1.32338	1.97427	0.33252
0.750	3.39419	1.27924	1.87461	0.41434
0.765	3.45098	1.23345	1.77367	0.47830
0.780	3.50386	1.18623	1.67372	0.52616
0.795	3.55299	1.13773	1.57652	0.55968
0.810	3.59858	1.08814	1.48320	0.58066
0.825	3.64076	1.03760	1.39457	0.59074
0.840	3.67977	0.98628	1.31123	0.59173
0.855	3.71575	0.93429	1.23360	0.58458
0.870	3.74886	0.88177	1.16180	0.57086
0.885	3.77928	0.82883	1.09568	0.55191
0.900	3.80714	0.77554	1.03522	0.52836
0.915	3.83258	0.72200	0.98032	0.50116
0.930	3.85573	0.66827	0.93078	0.47101
0.945	3.87669	0.61440	0.88622	0.43848
0.960	+ 3.89557	+ 0.56046	- 0.84648	+ 0.40407

ψ	E	F	ξ	η
0.975	+ 3.91246	+ 0.50647	- 0.81130	+ 0.36817
0.990	3.92743	0.45247	0.78038	0.33105
1.005	3.94055	0.39847	0.75358	0.29320
1.020	3.95188	0.34448	0.73058	0.25454
1.035	3.96149	0.29053	0.71130	0.21540
1.050	3.96940	0.23660	0.69550	0.17588
1.065	3.97565	0.18270	0.68313	0.13608
1.080	3.98028	0.12884	0.67398	0.09609
1.095	3.98328	0.07498	0.66807	0.05597
1.110	3.98472	+ 0.02115	0.66529	+ 0.01580
1.125	+ 3.98453	- 0.03268	- 0.66563	- 0.02440

Bahn 4.

$$E_0 = 1.0, K = 7.0.$$

ψ	E	F	ξ	η
0.00	+ 1.00000	0.00000	+ 0.54031	0.00000
0.02	1.00027	+ 0.06709	0.54129	- 0.05651
0.04	1.00112	0.13421	0.54422	0.11336
0.06	1.00257	0.20141	0.54909	0.17091
0.08	1.00470	0.26872	0.55582	0.22955
0.10	1.00761	0.33615	0.56434	0.28962
0.12	1.01142	0.40374	0.57450	0.35158
0.14	1.01631	0.47148	0.58611	0.41586
0.16	1.02248	0.53937	0.59894	0.48296
0.18	1.03018	0.60739	0.61254	0.55340
0.20	1.03970	0.67549	0.62647	0.62777
0.22	1.05139	0.74360	0.64003	0.70669
0.24	1.06564	0.81162	0.65227	0.79082
0.26	1.08293	0.87941	0.66199	0.88086
0.28	1.10377	0.94677	0.66756	0.97748
0.30	1.12874	1.01348	0.66694	1.0811
0.32	+ 1.15850	+ 1.07921	+ 0.65763	- 1.1922

ψ	E	F	ξ	η
0.34	+ 1.19373	+ 1.14359	+ 0.63634	- 1.3106
0.36	1.23515	1.20614	0.59944	1.4357
0.38	1.28347	1.26628	0.54262	1.5660
0.40	1.33935	1.32335	0.46131	1.6984
0.42	1.40335	1.37657	0.35114	1.8285
0.44	1.47579	1.42505	0.20863	1.9500
0.46	1.55675	1.46787	+ 0.03211	2.0546
0.48	1.64591	1.50408	- 0.17719	2.1328
0.50	1.74253	1.53277	0.41415	2.1750
0.52	1.84526	1.55318	0.66916	2.1730
0.54	1.95298	1.56478	0.93064	2.1213
0.56	2.06331	1.56726	1.1826	2.0200
0.58	2.17441	1.56067	1.4111	1.8738
0.60	2.28430	1.54527	1.6043	1.6921
0.62	2.39126	1.52160	1.7547	1.4869
0.64	2.49387	1.49035	1.8597	1.2711
0.66	2.59112	1.45226	1.9205	1.0563
0.68	2.68240	1.40814	1.9420	0.85182
0.70	2.76742	1.35876	1.9307	0.66419
0.72	2.84619	1.30485	1.8934	0.49721
0.74	2.91895	1.24708	1.8372	0.35249
0.76	2.98606	1.18607	1.7682	0.22994
0.78	3.04798	1.12237	1.6914	0.12845
0.80	3.10521	1.05648	1.6109	- 0.04599
0.82	3.15824	0.98881	1.5287	+ 0.01925
0.84	3.20756	0.91976	1.4505	0.06955
0.86	3.25361	0.84963	1.3745	0.10682
0.88	3.29677	0.77870	1.3038	0.13309
0.90	3.33738	0.70719	1.2366	0.14934
0.92	3.37573	0.63528	1.1753	0.15750
0.94	3.41203	0.56310	1.1205	0.15852
0.96	3.44648	0.49076	1.0711	0.15331
0.98	3.47920	0.41833	1.0273	0.14264
1.00	+ 3.51028	+ 0.34583	- 0.98915	+ 0.12713

ψ	E	F	ξ	η
1.02	+ 3.53978	+ 0.27330	- 0.95640	+ 0.10730
1.04	3.56771	0.20072	0.92898	0.08352
1.06	3.59408	0.12806	0.90676	0.05614
1.08	3.61883	+ 0.05529	0.88962	+ 0.02541
1.10	3.64191	- 0.01763	0.87756	- 0.00846
1.12	+ 3.66323	- 0.09078	- 0.87058	- 0.04530

Bahn 5.

 $E_0 = 1.0, K = 8.0.$

ψ	E	F	ξ	η
0.00	+ 1.00000	0.00000	+ 0.54031	0.00000
0.02	1.00015	+ 0.06494	0.54131	- 0.05469
0.04	1.00063	0.12989	0.54432	0.10966
0.06	1.00147	0.19488	0.54934	0.16518
0.08	1.00272	0.25991	0.55629	0.22157
0.10	1.00448	0.32499	0.56510	0.27911
0.12	1.00685	0.39012	0.57571	0.33814
0.14	1.00998	0.45527	0.58795	0.39899
0.16	1.01404	0.52044	0.60163	0.46205
0.18	1.01924	0.58557	0.61646	0.52772
0.20	1.02583	0.65060	0.63201	0.59644
0.22	1.03408	0.71545	0.64786	0.66867
0.24	1.04432	0.78002	0.66327	0.74488
0.26	1.05693	0.84415	0.67733	0.82560
0.28	1.07232	0.90767	0.68892	0.91128
0.30	1.09094	0.97036	0.69660	1.0024
0.32	1.11329	1.03194	0.69852	1.0991
0.34	1.13990	1.09209	0.69250	1.2016
0.36	1.17130	1.15042	0.67602	1.3096
0.38	1.20803	1.20646	0.64601	1.4222
0.40	1.25057	1.25970	0.59936	1.5379
0.42	1.29932	1.30952	0.53286	1.6543
0.44	+ 1.35458	+ 1.35527	+ 0.44362	- 1.7678

ψ	E	F	ξ	η
0.46	+ 1.41643	+ 1.39623	+ 0.32959	- 1.8737
0.48	1.48472	1.43167	0.19019	1.9661
0.50	1.55901	1.46084	+ 0.02676	2.0386
0.52	1.63856	1.48309	- 0.15688	2.0850
0.54	1.72231	1.49784	0.35439	2.0998
0.56	1.80897	1.50468	0.55736	2.0799
0.58	1.89705	1.50339	0.75628	2.0245
0.60	1.98503	1.49396	0.94170	1.9362
0.62	2.07146	1.47660	1.1056	1.8202
0.64	2.15503	1.45167	1.2423	1.6833
0.66	2.23473	1.41970	1.3488	1.5334
0.68	2.30983	1.38127	1.4250	1.3780
0.70	2.37989	1.33705	1.4728	1.2234
0.72	2.44477	1.28771	1.4956	1.0743
0.74	2.50457	1.23388	1.4975	0.93484
0.76	2.55953	1.17619	1.4829	0.80634
0.78	2.61007	1.11521	1.4560	0.68990
0.80	2.65666	1.05147	1.4205	0.58557
0.82	2.69980	0.98542	1.3796	0.49290
0.84	2.74003	0.91749	1.3358	0.41106
0.86	2.77785	0.84803	1.2912	0.33919
0.88	2.81372	0.77736	1.2475	0.27632
0.90	2.84807	0.70577	1.2057	0.22158
0.92	2.88129	0.63346	1.1668	0.17414
0.94	2.91369	0.56065	1.1313	0.13341
0.96	2.94554	0.48748	1.0997	0.09877
0.98	2.97706	0.41408	1.0723	0.06978
1.00	3.00842	0.34055	1.0492	0.04609
1.02	3.03975	0.26696	1.0305	0.027467
1.04	3.07111	0.19337	1.0162	0.013702
1.06	3.10253	0.11979	1.0064	0.004689
1.08	3.13402	+ 0.04624	1.0010	0.000350
1.10	3.16551	- 0.02730	1.0001	0.000653
1.12	+ 3.19693	- 0.10085	- 1.0036	- 0.005588

Bahn 6.

$E_0 = 1.4, K = 4.2.$

ψ	E	F	ξ	η
0.00	+ 1.40000	0.00000	+ 0.16997	0.00000
0.04	1.40471	+ 0.13832	0.16690	- 0.13685
0.08	1.41910	0.27696	0.15694	0.27730
0.12	1.44405	0.41610	0.13751	0.42478
0.16	1.48104	0.55572	0.10386	0.58241
0.20	1.53226	0.69538	+ 0.04823	0.75223
0.24	1.60071	0.83408	- 0.04090	0.93380
0.28	1.69005	0.96998	0.17959	1.12140
0.32	1.80456	1.10011	0.38652	1.29949
0.36	1.94832	1.22054	0.67884	1.43807
0.40	2.12430	1.32641	1.06002	1.48960
0.44	2.33259	1.41309	1.50197	1.39842
0.48	2.56984	1.47720	1.93795	1.12346
0.52	2.82891	1.51762	2.27442	0.66787
0.56	3.10054	1.53489	2.42606	- 0.09080
0.60	+ 3.37471	+ 1.52965	- 2.35126	+ 0.50821

Bahn 7.

$E_0 = 1.4, K = 4.9.$

ψ	E	F	ξ	η
0.00	+ 1.40000	0.00000	+ 0.16997	0.00000
0.02	1.40111	+ 0.06714	0.16925	- 0.06623
0.04	1.40445	0.13431	0.16707	0.13285
0.06	1.41008	0.20152	0.16327	0.20028
0.08	1.41808	0.26878	0.15765	0.26887
0.10	1.42855	0.33611	0.14986	0.33901
0.12	1.44165	0.40348	0.13940	0.41107
0.14	1.45757	0.47088	0.12575	0.48536
0.16	+ 1.47654	+ 0.53822	+ 0.10809	- 0.56207

ψ	E	F	ξ	η
0.18	+ 1.49881	+ 0.60546	+ 0.08552	- 0.64146
0.20	1.52471	0.67245	0.05689	0.72351
0.22	1.55456	0.73905	+ 0.02088	0.80807
0.24	1.58877	0.80503	- 0.02412	0.89470
0.26	1.62774	0.87014	0.07985	0.98260
0.28	1.67192	0.93405	0.14830	1.0704
0.30	1.72177	0.99635	0.23145	1.1563
0.32	1.77772	1.05660	0.33122	1.2375
0.34	1.84016	1.11428	0.44915	1.3106
0.36	1.90947	1.16880	0.58621	1.3711
0.38	1.98573	1.21962	0.74203	1.4141
0.40	2.06909	1.26607	0.91496	1.4340
0.42	2.15945	1.30757	1.1015	1.4250
0.44	2.25639	1.34364	1.2959	1.3825
0.46	2.35934	1.37395	1.4910	1.3033
0.48	2.46750	1.39818	1.6778	1.1862
0.50	2.58001	1.41621	1.8469	1.0328
0.52	2.69571	1.42811	1.9897	0.84762
0.54	2.81351	1.43400	2.0987	0.63754
0.56	2.93230	1.43408	2.1686	0.41111
0.58	3.05097	1.42855	2.1970	- 0.17835
0.60	3.16852	1.41762	2.1840	+ 0.05230
0.62	3.28398	1.40150	2.1319	0.27108
0.64	3.39649	1.38032	2.0456	0.46958
0.66	3.50527	1.35424	1.9309	0.64309
0.68	3.60964	1.32339	1.7949	0.78724
0.70	3.70903	1.28797	1.6449	0.90016
0.72	3.80296	1.24816	1.4880	0.98177
0.74	3.89108	1.20426	1.3302	1.0336
0.76	3.97319	1.15660	1.1768	1.0585
0.78	4.04913	1.10546	1.0318	1.0597
0.80	4.11900	1.05132	0.89774	1.0412
0.82	4.18283	0.99451	0.77625	1.0070
0.84	+ 4.24086	+ 0.93550	- 0.66796	+ 0.96042

ψ	E	F	ξ	η
0.86	+ 4.29332	+ 0.87460	- 0.57273	+ 0.90474
0.88	4.34048	0.81218	0.48999	0.84264
0.90	4.38259	0.74852	0.41888	0.77618
0.92	4.41999	0.68392	0.35832	0.70715
0.94	4.45297	0.61859	0.30719	0.63679
0.96	4.48176	0.55273	0.26440	0.56592
0.98	4.50665	0.48647	0.22894	0.49522
1.00	4.52784	0.41994	0.19992	0.42505
1.02	4.54554	0.35324	0.17655	0.35562
1.04	4.55991	0.28641	0.15815	0.28697
1.06	4.57108	0.21954	0.14424	0.21910
1.08	4.57916	0.15262	0.13439	0.15186
1.10	4.58426	0.08570	0.12826	0.08510
1.12	4.58639	+ 0.01877	0.12569	+ 0.01862
1.14	4.58559	- 0.04815	0.12660	- 0.04778
1.16	+ 4.58185	- 0.11507	- 0.13103	- 0.11434

Bahn 8.

Periodisch.

$$E_0 = 1.4, K = 4.9188.$$

ψ	E	F	ξ	η
0.00	+ 1.40000	0.00000	+ 0.16997	0.00000
0.02	1.40111	+ 0.06709	0.16925	- 0.06618
0.04	1.40445	0.13420	0.16706	0.13273
0.06	1.41006	0.20136	0.16329	0.20010
0.08	1.41805	0.26856	0.15767	0.26864
0.10	1.42850	0.33583	0.14990	0.33862
0.12	1.44159	0.40314	0.13946	0.41071
0.14	1.45752	0.47046	0.12578	0.48488
0.16	1.47642	0.53775	0.10819	0.56152
0.18	1.49865	0.60491	0.08567	0.64080
0.20	+ 1.52450	+ 0.67183	+ 0.05712	- 0.72273

ψ	E	F	ξ	η
0.22	+ 1.55430	+ 0.73835	+ 0.02120	- 0.80718
0.24	1.58845	0.80424	- 0.02368	0.89366
0.26	1.62735	0.86926	0.07926	0.98138
0.28	1.67144	0.93308	0.14749	1.06905
0.30	1.72118	0.99529	0.23032	1.15480
0.32	1.77701	1.05544	0.32979	1.23587
0.34	1.83931	1.11302	0.44729	1.30882
0.36	1.90845	1.16743	0.58385	1.36933
0.38	1.98452	1.21813	0.73905	1.41257
0.40	2.06767	1.26446	0.91132	1.43237
0.42	2.15778	1.30585	1.09712	1.42387
0.44	2.25444	1.34181	1.29083	1.38178
0.46	2.35709	1.37199	1.48494	1.30350
0.48	2.46493	1.39610	1.67119	1.18722
0.50	2.57708	1.41400	1.83967	1.03528
0.52	2.69239	1.42577	1.98236	0.85138
0.54	2.80978	1.43153	2.09124	0.64304
0.56	2.92815	1.43148	2.16171	0.41794
0.58	3.04639	1.42581	2.19085	- 0.18635
0.60	3.16352	1.41476	2.17875	+ 0.04246
0.62	3.27855	1.39853	2.12795	0.25956
0.64	3.39064	1.37725	2.04305	0.45742
0.66	3.49902	1.35109	1.93013	0.63023
0.68	3.60302	1.32019	1.79584	0.77405
0.70	3.70209	1.28475	1.64759	0.88704
0.72	3.79574	1.24495	1.49217	0.96895
0.74	3.88362	1.20109	1.33590	1.02138
0.76	3.96554	1.15349	1.18368	1.04708
0.78	4.04139	1.10244	1.03948	1.04928
0.80	4.11112	1.04840	0.90611	1.03186
0.82	4.17491	0.99171	0.78508	0.99855
0.84	4.23294	0.93282	0.67699	0.95302
0.86	4.28542	0.87204	0.58180	0.89824
0.88	+ 4.33265	+ 0.80974	- 0.49898	+ 0.83697

ψ	E	F	ξ	η
0.90	+ 4.37485	+ 0.74621	- 0.42772	+ 0.77130
0.92	4.41237	0.68173	0.36691	0.70290
0.94	4.44545	0.61651	0.31551	0.63307
0.96	4.47437	0.55075	0.27244	0.56269
0.98	4.49939	0.48458	0.23669	0.49238
1.00	4.52072	0.41813	0.20739	0.42253
1.02	4.53857	0.35150	0.18372	0.35338
1.04	4.55306	0.28473	0.16513	0.28494
1.06	4.56434	0.21791	0.15102	0.21724
1.08	4.57253	0.15104	0.14097	0.15014
1.10	4.57774	0.08415	0.13472	0.08349
1.12	4.57997	+ 0.01725	0.13205	+ 0.01710
1.14	4.57926	- 0.04964	0.13290	- 0.04922
1.16	+ 4.57561	- 0.11655	- 0.13728	- 0.11546

Bahn 9.

$$E_0 = 1.4, K = 5.$$

ψ	E	F	ξ	η
0.00	+ 1.40000	0.00000	+ 0.16997	0.00000
0.04	1.40442	+ 0.13372	0.16709	- 0.13227
0.08	1.41793	0.26760	0.15776	0.26764
0.12	1.44130	0.40165	0.13969	0.40908
0.16	1.47589	0.53569	0.10869	0.55916
0.20	1.52362	0.66915	+ 0.05812	0.71941
0.24	1.58706	0.80086	- 0.02176	0.88912
0.28	1.66937	0.92890	0.14401	1.06322
0.32	1.77395	1.05042	0.32370	1.22874
0.36	1.90404	1.16150	0.57372	1.36156
0.40	2.06154	1.25750	0.89576	1.42542
0.44	2.24604	1.33388	1.26868	1.37858
0.48	2.45379	1.38708	1.64296	1.19138
0.52	+ 2.67803	+ 1.41568	- 1.95091	- 0.86664

ψ	E	F	ξ	η
0.56	+ 2.91026	+ 1.42021	- 2.13152	- 0.44666
0.60	3.14190	1.40242	2.15550	+ 0.00059
0.64	3.36538	1.36400	2.03176	0.40568
0.68	3.57445	1.30636	1.79900	0.71768
0.72	3.76449	1.23111	1.50945	0.91390
0.76	3.93249	1.14005	1.21189	0.99790
0.80	4.07712	1.03580	0.94120	0.99102
0.84	4.19876	0.92122	0.71500	0.92074
0.88	4.29885	0.79923	0.53718	0.81230
0.92	4.37942	0.67224	0.40353	0.68426
0.96	4.44248	0.54217	0.30681	0.54852
1.00	4.48995	0.41029	0.23944	0.41151
1.04	4.52336	0.27749	0.19518	0.27606
1.08	4.54389	0.14420	0.16945	0.14265
1.12	4.55223	+ 0.01072	0.15948	+ 0.01059
1.16	+ 4.54861	- 0.12288	- 0.16428	- 0.12154

Bahn 10.

$$E_0 = 1.4, K = 8.$$

ψ	E	F	ξ	η
0.00	+ 1.40000	0.00000	+ 0.16997	0.00000
0.04	1.40328	+ 0.11490	0.16783	- 0.11359
0.08	1.41328	0.22945	0.16101	0.22869
0.12	1.43050	0.34322	0.14816	0.34656
0.16	1.45573	0.45558	0.12694	0.46838
0.20	1.49016	0.56559	0.09378	0.59429
0.24	1.53513	0.67197	+ 0.04402	0.72323
0.28	1.59225	0.77290	- 0.02819	0.85198
0.32	1.66312	0.86590	0.12896	0.97407
0.36	1.74897	0.94808	0.26306	1.07927
0.40	1.85036	1.01605	0.43105	1.15353
0.44	+ 1.96668	+ 1.06687	- 0.62673	- 1.18197

ψ	E	F	ξ	η
0.48	+ 2.09595	+ 1.09640	- 0.83410	- 1.15047
0.52	2.23486	1.10412	1.03174	1.05724
0.56	2.37951	1.08934	1.19597	0.90996
0.60	2.52603	1.05334	1.31288	0.72710
0.64	2.67136	0.99869	1.37423	0.53156
0.68	2.81362	0.92849	1.38494	0.34395
0.72	+ 2.95179	+ 0.84623	- 1.35516	- 0.17940

Bahn 11.

$E_0 = 1.4, K = 10.$

ψ	E	F	ξ	η
0.00	+ 1.40000	0.00000	+ 0.16997	0.00000
0.04	1.40245	+ 0.10044	0.16840	- 0.09918
0.08	1.40989	0.20033	0.16343	0.19902
0.12	1.42266	0.29903	0.15424	0.30018
0.16	1.44127	0.39579	0.13941	0.40281
0.20	1.46641	0.48966	0.11694	0.50669
0.24	1.49893	0.57939	0.08420	0.61079
0.28	1.53974	0.66346	+ 0.03813	0.71288
0.32	1.58972	0.73998	- 0.02434	0.80922
0.36	1.64954	0.80678	0.10568	0.89442
0.40	1.71949	0.86147	0.20660	0.96130
0.44	1.79931	0.90168	0.32503	1.00216
0.48	1.88811	0.92526	0.45538	1.01000
0.52	1.98437	0.93071	0.58889	0.98070
0.56	2.08631	0.91692	0.71515	0.91432
0.60	2.19210	0.88499	0.82532	0.81728
0.64	+ 2.30032	+ 0.83573	- 0.91314	- 0.69813

Bahn 12.

$$E_0 = 1.52, K = 4.7.$$

ψ	E	F	ξ	η
0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	1.52516	+ 0.13456	0.04604	- 0.13483
0.08	1.54089	0.26921	0.03099	0.27236
0.12	1.56795	0.40389	+ 0.00307	0.41496
0.16	1.60766	0.53834	- 0.04233	0.56434
0.20	1.66190	0.67187	0.11229	0.72060
0.24	1.73309	0.80327	0.21657	0.88074
0.28	1.82411	0.93058	0.36719	1.03664
0.32	1.93801	1.05099	0.57624	1.17173
0.36	2.07738	1.16094	0.85057	1.25903
0.40	2.24360	1.25648	1.18333	1.26241
0.44	2.43583	1.33397	1.54489	1.14568
0.48	2.65057	1.39092	1.88157	0.88875
0.52	2.88189	1.42629	2.12790	0.50370
0.56	3.12238	1.44011	2.22898	- 0.03828
0.60	3.36397	1.43253	2.15950	+ 0.43564
0.64	3.59847	1.40327	1.93587	0.84320
0.68	3.81811	1.35208	1.60793	1.12908
0.72	4.01635	1.27961	1.24177	1.27274
0.76	4.18895	1.18807	0.89615	1.28876
0.80	4.33445	1.08102	0.60646	1.21219
0.84	4.45381	0.96248	0.38356	1.08093
0.88	4.54953	0.83625	0.22222	0.92478
0.92	4.62468	0.70536	0.11031	0.76238
0.96	4.68228	0.57199	- 0.03513	0.60343
1.00	4.72493	0.43752	+ 0.01376	0.45157
1.04	4.75468	0.30272	0.04422	0.30709
1.08	4.77297	0.16794	0.06140	0.16843
1.12	4.78072	+ 0.03325	0.06832	+ 0.03318
1.16	+ 4.77831	- 0.10141	+ 0.06621	- 0.10137

Bahn 13.

$$E_0 = 1.52, K = 4.74.$$

ψ	E	F	ξ	η
0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	1.52515	+ 0.13432	0.04604	- 0.13458
0.08	1.54084	0.26872	0.03103	0.27184
0.12	1.56784	0.40314	+ 0.00320	0.41415
0.16	1.60746	0.53729	- 0.04208	0.56314
0.20	1.66155	0.67051	0.11178	0.71890
0.24	1.73253	0.80155	0.21559	0.87856
0.28	1.82326	0.92843	0.36542	1.03386
0.32	1.93673	1.04838	0.57315	1.16846
0.36	2.07552	1.15784	0.84558	1.25560
0.40	2.24094	1.25283	1.17576	1.25962
0.44	2.43218	1.32978	1.53450	1.14500
0.48	2.64557	1.38613	1.86865	0.89222
0.52	2.87530	1.42080	2.11380	0.51299
0.56	3.11410	1.43396	2.21600	- 0.05438
0.60	3.35364	1.42576	2.15145	+ 0.41259
0.64	+ 3.58616	+ 1.39607	- 1.93513	+ 0.81534

Bahn 14.

$$E_0 = 1.52, K = 4.8.$$

ψ	E	F	ξ	η
0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	1.52513	+ 0.13396	0.04606	- 0.13422
0.08	1.54077	0.26799	0.03110	0.27109
0.12	1.56768	0.40201	+ 0.00338	0.41293
0.16	1.60715	0.53572	- 0.04169	0.56134
0.20	1.66102	0.66845	0.11099	0.71642
0.24	1.73169	0.79894	0.21411	0.87523
0.28	+ 1.82198	+ 0.92521	- 0.36274	- 1.02962

ψ	E	F	ξ	η
0.32	+ 1.93483	+ 1.04448	- 0.56858	- 1.16345
0.36	2.07273	1.15319	0.83809	1.25042
0.40	2.23695	1.24739	1.16442	1.25558
0.44	2.42658	1.32344	1.51867	1.14411
0.48	2.63805	1.37883	1.84904	0.89712
0.52	2.86546	1.41257	2.09261	0.52658
0.56	3.10145	1.42474	2.19692	- 0.07860
0.60	3.33815	1.41564	2.13894	+ 0.37851
0.64	3.56772	1.38529	1.93326	0.77413
0.68	3.78283	1.33366	1.62612	1.05622
0.72	3.97738	1.26152	1.27883	1.20457
0.76	4.14739	1.17098	0.94640	1.23103
0.80	4.29140	1.06534	0.66335	1.16696
0.84	4.41017	0.94839	0.44183	1.04737
0.88	4.50590	0.82372	0.27862	0.90054
0.92	4.58139	0.69426	0.16338	0.74496
0.96	4.63942	0.56213	0.08474	0.59062
1.00	4.68242	0.42872	0.03276	0.44177
1.04	4.71232	0.29484	- 0.00007	0.29913
1.08	4.73051	0.16087	+ 0.01836	0.16154
1.12	4.73782	+ 0.02695	0.02543	+ 0.02694
1.16	+ 4.73462	- 0.10697	+ 0.02235	- 0.10714

Bahn 15.

$$E_0 = 1.52, K = 4.85.$$

ψ	E	F	ξ	η
0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	1.52512	+ 0.13367	0.04607	- 0.13393
0.08	1.54071	0.26738	0.03116	0.27046
0.12	1.56754	0.40107	+ 0.00353	0.41191
0.16	1.60689	0.53443	- 0.04137	0.55987
0.20	+ 1.66059	+ 0.66675	- 0.11036	- 0.71438

ψ	E	F	ξ	η
0.24	+ 1.73100	+ 0.79679	— 0.21289	— 0.87251
0.28	1.82090	0.92256	0.36053	1.02615
0.32	1.93320	1.04125	0.56471	1.15935
0.36	2.07037	1.14934	0.83186	1.24614
0.40	2.23359	1.24286	1.15499	1.25216
0.44	2.42191	1.31821	1.50568	1.14332
0.48	2.63177	1.37288	1.83297	0.90123
0.52	2.85725	1.40585	2.07526	0.53776
0.56	3.09107	1.41725	2.18131	— 0.09806
0.60	3.32543	1.40746	2.12868	+ 0.35105
0.64	3.55266	1.37662	1.93143	0.74105
0.68	3.76561	1.32483	1.63390	1.02129
0.72	3.95842	1.25289	1.29586	1.17175
0.76	4.12722	1.16287	0.96982	1.20313
0.80	4.27056	1.05795	0.69005	1.14501
0.84	4.38908	0.94181	0.46933	1.03101
0.88	4.48486	0.81794	0.30533	0.88873
0.92	4.56057	0.68921	0.18859	0.73652
0.96	4.61886	0.55773	0.10830	0.58453
1.00	4.66211	0.42488	0.05487	0.43723
1.04	4.69217	0.29149	0.02109	0.29557
1.08	4.71039	0.15796	— 0.00202	0.15862
1.12	4.71760	+ 0.02444	+ 0.00520	+ 0.02445
1.16	+ 4.71413	— 0.10905	+ 0.00175	— 0.10928

Bahn 16.

Periodisch.

$$E_0 = 1.52, K = 4.8723.$$

ψ	E	F	ξ	η
0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	1.52511	+ 0.13353	0.04608	— 0.13378
0.08	1.54068	0.26711	0.03118	0.27017
0.12	+ 1.56748	+ 0.40065	+ 0.00359	— 0.41145

ψ	E	F	ξ	η
0.16	+ 1.60678	+ 0.53384	- 0.04123	- 0.55921
0.20	1.66039	0.66598	0.11007	0.71347
0.24	1.73068	0.79581	0.21232	0.87124
0.28	1.82042	0.92135	0.35954	1.02457
0.32	1.93249	1.03980	0.56302	1.15750
0.36	2.06932	1.14762	0.82908	1.24420
0.40	2.23210	1.24085	1.15084	1.25063
0.44	2.41986	1.31590	1.49993	1.14295
0.48	2.62903	1.37025	1.82596	0.90290
0.52	2.85368	1.40287	2.06757	0.54246
0.56	3.08655	1.41392	2.17435	- 0.10640
0.60	3.31992	1.40382	2.12390	+ 0.33926
0.64	3.54615	1.37274	1.93023	0.72677
0.68	3.75821	1.32083	1.63712	1.00609
0.72	3.95031	1.24894	1.30269	1.15737
0.76	4.11863	1.15909	0.97930	1.19075
0.80	4.26169	1.05440	0.70101	1.13500
0.84	4.38014	0.93854	0.48069	1.02331
0.88	4.47596	0.81496	0.31641	0.88296
0.92	4.55178	0.68647	0.19909	0.73211
0.96	4.61023	0.55518	0.11811	0.58110
1.00	4.65362	0.42250	0.06405	0.43444
1.04	4.68379	0.28923	0.02979	0.29319
1.08	4.70205	0.15580	0.01045	0.15642
1.12	4.70925	+ 0.02237	0.00314	+ 0.02238
1.16	+ 4.70571	- 0.11101	- 0.00672	- 0.11124

Bahn 17.

$$E_0 = 1.52, K = 4.875.$$

ψ	E	F	ξ	η
-0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	1.52511	+ 0.13351	0.04608	- 0.13377
0.08	+ 1.54068	+ 0.26707	+ 0.03119	- 0.27014

ψ	E	F	ξ	η
0.12	+ 1.56747	+ 0.40059	+ 0.00359	- 0.41139
0.16	1.60676	0.53377	- 0.04121	0.55912
0.20	1.66037	0.66589	0.11004	0.71333
0.24	1.73065	0.79569	0.21229	0.87110
0.28	1.82036	0.92120	0.35941	1.02438
0.32	1.93240	1.03963	0.56281	1.15727
0.36	2.06919	1.14741	0.82876	1.24399
0.40	2.23192	1.24061	1.15032	1.25046
0.44	2.41961	1.31562	1.49926	1.14291
0.48	2.62868	1.36992	1.82506	0.90313
0.52	2.85325	1.40251	2.06668	0.54307
0.56	3.08602	1.41352	2.17348	- 0.10741
0.60	3.31926	1.40337	2.12338	+ 0.33785
0.64	3.54537	1.37226	1.93013	0.72505
0.68	3.75733	1.32034	1.63750	1.00428
0.72	3.94933	1.24845	1.30346	1.15565
0.76	4.11759	1.15861	0.98044	1.18922
0.80	4.26061	1.05397	0.70233	1.13379
0.84	4.37905	0.93815	0.48206	1.02239
0.88	4.47488	0.81460	0.31776	0.88224
0.92	4.55071	0.68614	0.20037	0.73160
0.96	4.60918	0.55489	0.11930	0.58069
1.00	4.65258	0.42222	0.06519	0.43411
1.04	4.68276	0.28897	0.03088	0.29288
1.08	4.70104	0.15556	0.01150	0.15618
1.12	4.70823	+ 0.02215	0.00416	+ 0.02215
1.16	+ 4.70468	- 0.11123	- 0.00777	- 0.11146

Bahn 18.

$$E_0 = 1.52, K = 4.9.$$

ψ	E	F	ξ	η
0.00	+ 1.52000	0.00000	+ 0.05077	0.00000
0.04	+ 1.52510	+ 0.13336	+ 0.04609	- 0.13362

ψ	E	F	ξ	η
0.08	+ 1.54066	+ 0.26677	+ 0.03121	- 0.26982
0.12	1.56741	0.40013	+ 0.00366	0.41089
0.16	1.60664	0.53312	- 0.04106	0.55838
0.20	1.66016	0.66503	0.10972	0.71230
0.24	1.73030	0.79461	0.21167	0.86973
0.28	1.81983	0.91987	0.35831	1.02266
0.32	1.93161	1.03802	0.56094	1.15524
0.36	2.06805	1.14551	0.82573	1.24186
0.40	2.23030	1.23841	1.14580	1.24878
0.44	2.41738	1.31310	1.49304	1.14247
0.48	2.62569	1.36706	1.81741	0.90499
0.52	2.84936	1.39928	2.05840	0.54819
0.56	3.08112	1.40990	2.16589	- 0.11639
0.60	3.31327	1.39938	2.11815	+ 0.32509
0.64	3.53825	1.36799	1.92869	0.70947
0.68	3.74918	1.31593	1.64059	0.98765
0.72	3.94035	1.24407	1.31075	1.13976
0.76	4.10801	1.15442	0.99087	1.17544
0.80	4.25070	1.05007	0.71448	1.12268
0.84	4.36900	0.93460	0.49473	1.01386
0.88	4.46486	0.81138	0.33018	0.87584
0.92	4.54081	0.68325	0.21217	0.72683
0.96	4.59942	0.55227	0.13036	0.57706
1.00	4.64296	0.41984	0.07557	0.43125
1.04	4.67325	0.28678	0.04076	0.29051
1.08	4.69158	0.15352	0.02106	0.15410
1.12	4.69876	+ 0.02022	0.01363	+ 0.02023
1.16	+ 4.69511	- 0.11304	- 0.01739	- 0.11327

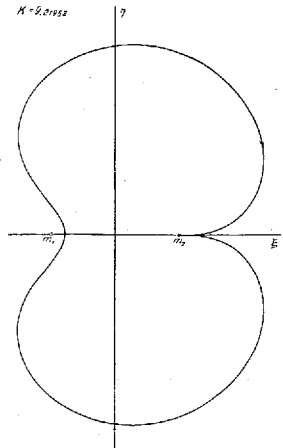


Fig. 1 →
14 ←
↓ 21
↑

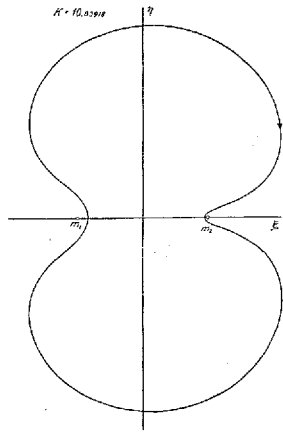


Fig. 2 →
← 13

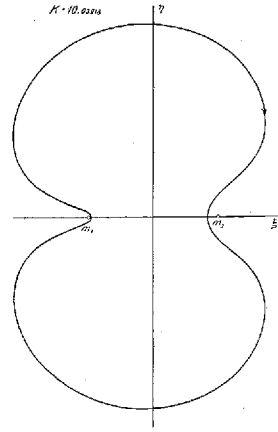


Fig. 3 →
← 12

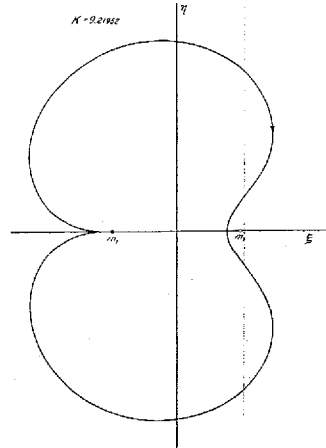


Fig. 4 →
← 11

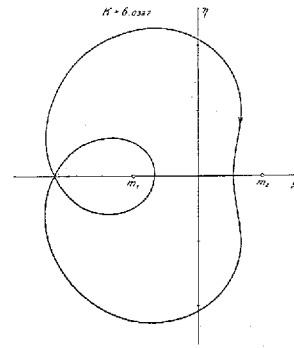


Fig. 5 →
← 10

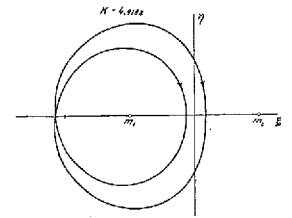


Fig. 6
← 9
↑

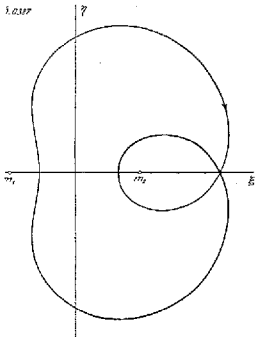


Fig. 15 →
20 ←

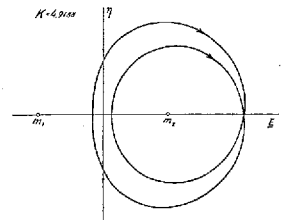


Fig. 16 →
← 19

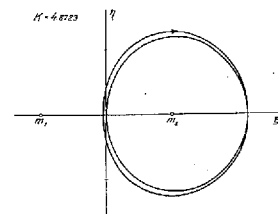
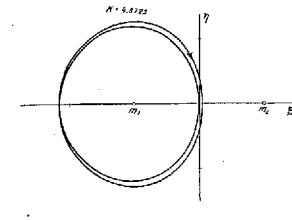


Fig. 17
↓
← 18



↓ ↑
Fig. 7 → 8