

Det Kgl. Danske Videnskabernes Selskab.

Mathematisk-fysiske Meddelelser. **XIII**, 1.

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SYMMETRISCHE UND UNSYMMETRISCHE  
LIBRATIONSÄHNLICHE BAHNEN IM PRO-  
BLÈME RESTREINT MIT ASYMPTOTISCH-  
PERIODISCHEN BAHNEN ALS GRENZ-  
BAHNEN

MIT UNTERSTÜTZUNG EINER GROSSEN ANZAHL  
MITARBEITER, INSbesondere DES HERRN CAND. MAG.  
JENS P. MÖLLER

von

ELIS STRÖMGREN

MIT 6 FIGUREN



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Unter den vielen existierenden Klassen einfach-periodischer Bahnen im Problème Restreint mit zwei gleich grossen endlichen Massen: Bahnen um eine der endlichen Massen, um beide Massen, um einen der fünf Librationspunkte oder asymptotisch zu Librationspunkten verlaufende Bahnen gibt es vier Sorten von Bahnklassen, die — für beständig oder in einer bestimmten Phase ihrer Entwicklungsgeschichte — einfach geschlossene, in Bezug auf die  $\xi$ -Achse symmetrische Kurven um den Librationspunkt  $L_1$  bilden, indem sie die  $\xi$ -Achse zweimal zwischen den zwei endlichen Massen senkrecht schneiden.

Die vom Gesichtspunkte der Entwicklungsgeschichte älteste dieser Klassen sind die reinen Librationen um den Librationspunkt  $L_1$ . Die Entwicklung dieser Bahnklasse fängt mit infinitesimalen Bahnen um  $L_1$  an. Wir können die Entwicklung durch das System endlicher Librationen um  $L_1$  bis zur Doppelanjektiobahn in  $m_1$  und  $m_2$  verfolgen<sup>1</sup>. Die weitere Entwicklung dieser Klasse bis zum natürlichen Abschluss ist in der Publ. 60 des Kopenhagener Observatoriums<sup>2</sup> von Herrn JENS P. MÖLLER skizziert worden und wird in einer demnächst erscheinenden Abhandlung näher dargelegt werden.

<sup>1</sup> Publikation des Kopenhagener Observatoriums No. 18 und Astr. Nachrichten 4721.

<sup>2</sup> Auch Astr. Nachrichten 5574.

Die zweite der betreffenden Bahnklassen ist die in den Publikationen 26<sup>1</sup> und 94<sup>2</sup> behandelte Klasse  $n$ : eine Klasse in Bezug auf die  $\eta$ -Achse unsymmetrischer Bahnen, die ein in sich geschlossenes System bildet und deshalb keine Grenzbahnen besitzt.

Die Bahnklassen, die in der jetzt vorliegenden Abhandlung behandelt werden, können in der folgenden Weise charakterisiert werden.

Zunächst gibt es eine Klasse in bezug auf die  $\eta$ -Achse symmetrischer librationsähnlicher Bahnen, die zwei asymptotisch-periodische Grenzbahnen besitzen, und dann eine Klasse in Bezug auf die  $\eta$ -Achse unsymmetrischer librationsähnlicher Bahnen, die ebenfalls von zwei asymptotisch-periodischen Bahnen begrenzt sind.

Über diese beiden Bahnklassen hat Herr JENS P. MÖLLER in der oben angeführten Publikation No. 60 des Kopenhagener Observatoriums einen vorläufigen Bericht gegeben. Die jetzt vorliegende Arbeit gibt das gesamte Zahlenmaterial, das zur Klarlegung dieser Bahnklassen beschafft wurde. Da die zwei Bahnklassen, die symmetrische und die unsymmetrische, in einander ziemlich verschlungen sind, wird das Materiel in einem Verzeichnis zusammengestellt. Bei den verschiedenen periodischen Bahnen wird jedes Mal bemerkt, ob sie der einen oder der anderen Klasse angehören.

Die gerechneten periodischen Bahnen der um die  $\eta$ -Achse symmetrischen Klasse sind in Fig. 1 dargestellt, die gerechneten periodischen Bahnen der unsymmetrischen

<sup>1</sup> Astr. Nachr. 4872.

<sup>2</sup> Kgl. Danske Vid. Selsk. Math.-fys. Medd. XII, 11.

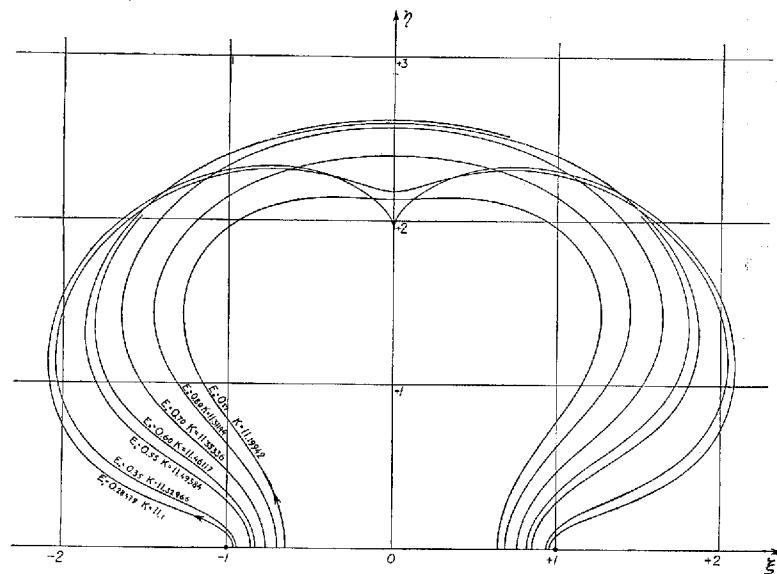


Fig. 1. Die symmetrischen librationsähnlichen Bahnen.

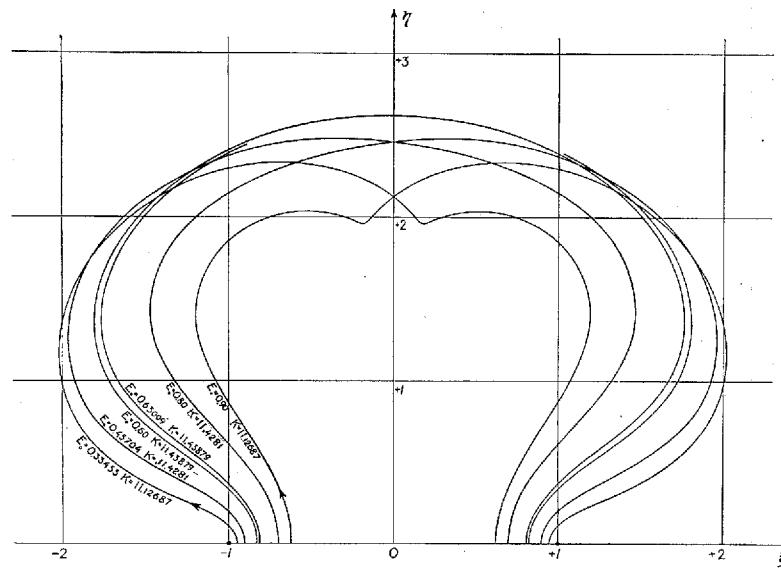


Fig. 2. Die unsymmetrischen librationsähnlichen Bahnen.

Klasse in Fig. 2 (in der entsprechenden Fig. 9 der Publ. 60 ist an zwei Stellen die Zahl 11.31144 in 11.4281 zu korrigieren). In beiden Fällen blieb die Zeichnung auf die oberhalb der  $\xi$ -Achse liegende Hälfte beschränkt.

Die Theorie der asymptotischen Bahnen und eine Übersicht über alle existierenden gleichzeitig gegen  $L_4$  und  $L_5$  asymptotischen periodischen Bahnen sind in der Publ. des Kopenhagener Observatoriums No. 47<sup>1</sup> gegeben. Es

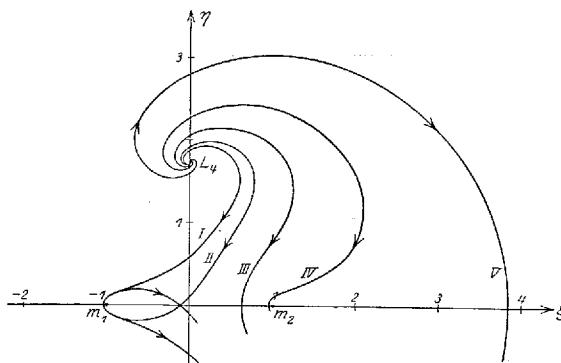


Fig. 3. Die 5 zu  $L_4$  und  $L_5$  asymptotischen periodischen Bahnen. Aus Platzrücksichten wird diese Fig. in kleinerem Massstabe gegeben als die übrigen 5 Bilder der vorliegenden Abhandlung.

zeigte sich, dass es 5 solche periodische Bahnen gibt, die gegen  $L_4$  und  $L_5$  asymptotisch verlaufen. Diese fünf asymptotischen periodischen Bahnen werden nach Publ. 47 in Fig. 3 wiedergegeben. In der Fig. ist nur das für den Überblick notwendige — etwas mehr als ein Quadrant — gegeben; das übrige ist der Übersichtlichkeit wegen fortgelassen.

Nachdem die fundamentalen Resultate der Theorie der asymptotischen Bahnen gefunden waren, stellte es sich

<sup>1</sup> Seeliger-Festschrift (1925). Vgl. auch Publ. 67 (Kgl. Danske Vid. Selsk. Math.-fys. Medd. X, 7).

gleich heraus, dass die in Fig. 3 mit I und II bezeichneten Bahnen zusammen die Grenzbahnen und damit den natürlichen Anfang und Abschluss der Bahnen der Klasse  $k$  bilden<sup>1</sup> und die Bahn V die Grenzbahn der aus der Unendlichkeit herkommenden Bahnklasse  $l^2$ .

Für die Beurteilung der Bedeutung der Bahnen III und IV in der Fig. 3 hatte man zunächst in dem damals vorliegenden Material keinen Anhalt; es zeigte sich jedoch bald, dass man in diesen zwei asymptotisch-periodischen Bahnen die Grenzbahnen und damit den natürlichen Anfang und Abschluss einer Bahnklasse vor sich hatte, die inzwischen gefunden worden war: die in der Publ. 60 als »Pseudolibrationen« bezeichneten Bahnen. Von dieser Klasse gibt Fig. 1 eine Anzahl (7) Individuen wieder: die Bahnen 2, 8, 14, 20, 27, 34 und 45 in der Übersicht auf S. 14-15.

Um den Zusammenhang deutlicher zu machen, stellen wir in Fig. 4 die zwei in Fig. 3 angedeuteten asymptotisch-periodischen Bahnen III und IV in ihrem ganzen Verlauf dar. Die in Fig. 1 gegebene Bahn  $E_0 = 0.28479$ ,  $K = 11.1$  liegt der Grenzbahn IV in Fig. 1 sehr nahe, die Bahn  $E_0 = 0.87$ ,  $K = 11.19942$  der Grenzbahn III ziemlich nahe. Den stetigen Übergang der Bahnen dieser Klasse von der einen Grenzbahn bis zur anderen ersieht man aus der Fig. 1. Die Annäherung an die Grenzbahnen geht nach dem in der Publ. 47 S. 7<sup>3</sup> beschriebenen Schema mit ins unendliche wiederholter Bildung von Spitzen und Schleifen vor sich.

<sup>1</sup> Publ. des Kopenhagener Observatoriums No. 47 und 80 (Kgl. Danske Vid. Selsk. Math.-fys. Medd. XI, 7).

<sup>2</sup> Publ. 47 und 69 (Kgl. Danske Vid. Selsk. Math.-fys. Medd. X, 9).

<sup>3</sup> Vgl. auch: Tre Aartier Celest Mekanik paa Københavns Observatory S. 44 und die grosse Tafel in dem Artikel: Unsere Kenntnisse über die Bewegungsformen im Dreikörperproblem (Ergebnisse der exakten Naturwissenschaften, Springer 1925).

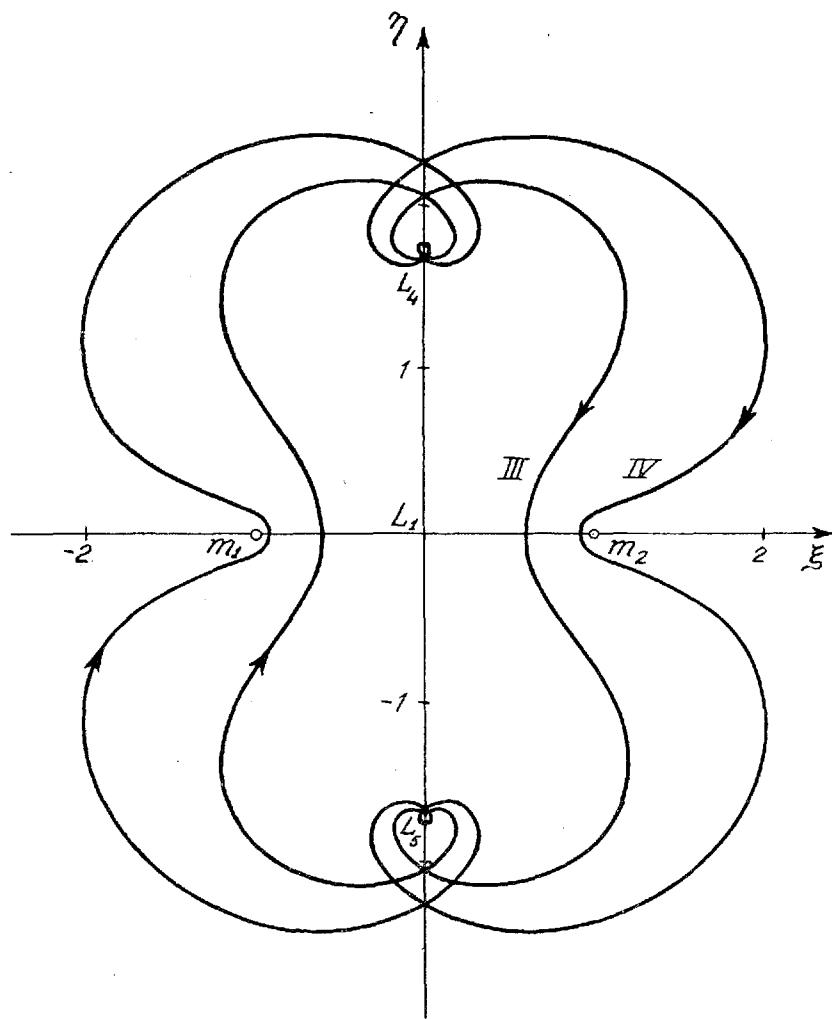


Fig. 4. Die asymptotisch-periodischen Bahnen III und IV der Fig. 3, d. h. die Grenzbahnen der in der Fig. 1 gegebenen symmetrischen librationsähnlichen Bahnen, gezeichnet in ihrem ganzen Verlauf.

Im Laufe der jetzt angedeuteten Untersuchung wurde nun ausserdem eine Klasse in Bezug auf die  $\eta$ -Achse unsymmetrischer periodischer Bahnen gefunden. Die drei

gerechneten Individuen dieser Klasse (die Bahnen 49 und 38 in der Übersicht auf S. 15 und die Bahn  $E_0 = 0.63009$ ,  $K = 11.43879$ , die das Spiegelbild der Bahn 17 ist) sind, mit ihren Spiegelbildern, in Fig. 2 eingezeichnet. Während die vorhin beschriebene Klasse symmetrischer Bahnen zwei symmetrische asymptotische Bahnen als Grenzbahnen hat, ist die neue auf Fig. 2 dargestellte Klasse von zwei unsymmetrischen asymptotischen Bahnen begrenzt, von denen die eine aus der linken Hälfte der Bahn III und der rechten Hälfte der Bahn IV (Fig. 3) und die andere aus der linken Hälfte der Bahn IV und der rechten Hälfte der Bahn III gebildet ist. Diese zwei Grenzbahnen werden in den Fig. 5 und 6 gegeben.

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In der Publ. 67 des Kopenhagener Observatoriums<sup>1</sup> habe ich die durchgreifende Wandlung besprochen, die in unserem Arbeitsprogramm dadurch eingetreten ist, dass das System zu  $L_4$  und  $L_5$  asymptotischer Bahnen gefunden wurde. Bezeichnend für die Kopenhagener Untersuchungen im Gebiete des problème restreint war es in der ersten Periode, dass wir zunächst eine Anzahl Vertreter einer Klasse periodischer Bahnen gefunden hatten, und dass wir nachher durch mühevolles Suchen die Grenzbahnen der Klasse ermittelten. Nachdem das System zu  $L_4$  und  $L_5$  asymptotischer Bahnen gefunden war, lag gerade das umgekehrte Problem vor: wir haben eine Anzahl asymptotischer periodischer Bahnen gefunden, von denen wir mit Sicherheit behaupten können, dass sie Grenzbahnen

<sup>1</sup> Kgl. Danske Vid. Selsk. Math.-fys. Medd. X, 7.

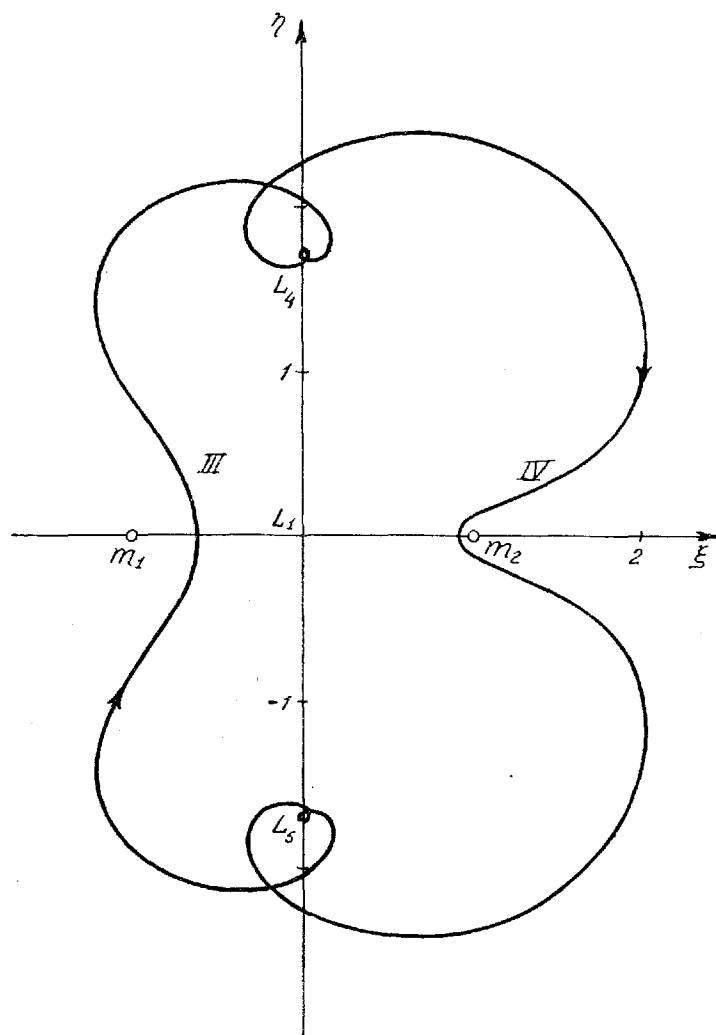


Fig. 5. Die eine Grenzbahn der in der Fig. 2 gezeichneten unsymmetrischen librationsähnlichen Bahnen, bestehend aus der linken Hälfte der Bahn III und der rechten Hälfte der Bahn IV in Fig. 4.

zu Klassen periodischer Bahnen sind, und die Aufgabe ist nun, zu untersuchen, wie diese Klassen verlaufen. Diese Aufgabe ist prinzipiell verhältnismässig einfach, weil der

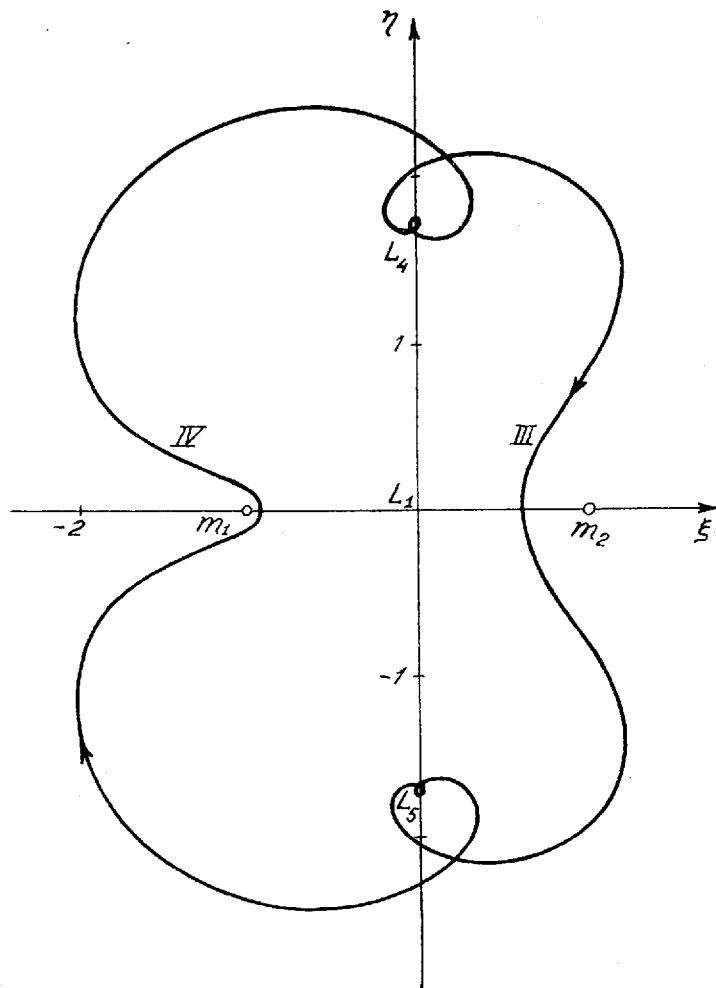


Fig. 6. Die andere Grenzbahn der unsymmetrischen librationsähnlichen Bahnen, bestehend aus der linken Hälfte der Bahn IV und der rechten Hälfte der Bahn III in Fig. 4.

ganze Rahmen des zu untersuchenden Bahngebietes durch die Festlegung der Grenzbahnen gegeben ist.

Wir hatten nun oben mit einer Bahnklasse zu tun, die von den in Fig. 5 und 6 gezeichneten asymptotisch-periodischen

dischen Bahnen begrenzt ist. Diese Grenzbahnen sind durch Kombination der asymptotisch-periodischen Bahnen III und IV der Fig. 3 entstanden. Der Gedanke liegt nun nahe, alle übrigen Kombinationen der fünf asymptotisch-periodischen Bahnen der Fig. 3 in entsprechender Weise zu konstruieren. Wenn dies getan wird, erhalten wir, ausser der in Fig. 5 (mit dem Spiegelbild in Fig. 6) dargestellten, noch 9 andere — im ganzen also 10 — unsymmetrische asymptotisch-periodische Bahnen (mit deren Spiegelbildern zusammen 20 solche Bahnen), die neue weite Perspektiven eröffnen, da es anzunehmen ist, dass alle diese Bahnen Grenzbahnen zu Klassen unsymmetrischer periodischer Bahnen sind. Prinzipiell werden sich keine Schwierigkeiten bieten, wenn man das ganze Feld dieser Klassen festlegen will; in der Praxis liesse sich diese Aufgabe jedoch nur mit einem sehr grossen Arbeitsaufwand durchführen.

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Bei der Organisation der Arbeit hat Cand. mag. JENS P. MÖLLER wesentliche Dienste geleistet. An der numerischen Rechenarbeit haben teilgenommen: Oberlehrer N. BENNEDSEN (Helsingör), Dr. F. BURMEISTER (München), Geodätassistent JENS JOHANNSEN (Kopenhagen), Admiral M. RIMSKY-KORSAKOFF (Kopenhagen), Berechner M. LÖKKEGAARD (Kopenhagen), Frl. E. MACKEPRANG (Kopenhagen), Cand. mag. AXEL V. NIELSEN (Aarhus), Dr. E. NOTEBOOM (Rathenow) und Oberlehrer P. J. PEDERSEN (Helsingör). Eine Anzahl Umrechnungen von  $E$ ,  $F$  in  $\xi$ ,  $\eta$  sind von Oberlehrer N. BENNEDSEN (Helsingör), Cand. mag. K. STEENBERG SØRENSEN (Kopenhagen), Frl. E. MACKEPRANG (Kopenhagen) und Frau G. SKADE (Kopenhagen) ausgeführt worden.

Die Herren Cand. mag. JENS P. MÖLLER, Ingenieur  
O. S. L. CHRISTENSEN und Magister B. SVANHOF (alle Ko-  
penhagen) haben die Figuren gezeichnet.

Dem Carlsbergfond bin ich für pekuniäre Unterstützung  
zu grossem Danke verpflichtet.

*Observatorium Kopenhagen, 2. Nov. 1934.*

ELIS STRÖMGREN.

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Übersicht über die gerechneten Bahnen.

$$E'_0 = 0, \quad F_0 = 0 \quad (\xi'_0 = 0, \quad \eta_0 = 0).$$

1.	$E_0 = +0.28$	$K = 11.1$
2.	$+0.28479$	11.1 periodisch, symmetrisch
3.	$+0.285$	11.1
4.	$+0.29$	11.1
5.	$+0.30$	11.1
6.	$+0.32$	11.1
<hr/>		
7.	$+0.35$	11.3
8.	$+0.35$	11.32966 periodisch, symmetrisch
9.	$+0.35$	11.4
<hr/>		
10.	$+0.45$	11.6
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11.	$+0.55$	11.0
12.	$+0.55$	11.2
13.	$+0.55$	11.4
14.	$+0.55$	11.49384 periodisch, symmetrisch
15.	$+0.55$	11.6
<hr/>		
16.	$+0.6$	11.4
17.	$+0.6$	11.43879 periodisch, unsymmetrisch
18.	$+0.6$	11.44
19.	$+0.6$	11.45
20.	$+0.6$	11.46117 periodisch, symmetrisch
21.	$+0.6$	11.48
<hr/>		

22.	$E_0 = +0.7$	$K = 10.0$
23.	+0.7	10.1
24.	+0.7	10.4232 periodisch, Libration um $L_1$
25.	+0.7	10.9
26.	+0.7	11.2
27.	+0.7	11.35336 periodisch, symmetrisch
28.	+0.7	11.4
29.	+0.8	9.7
30.	+0.8	9.9
31.	+0.8	10.0
32.	+0.8	10.5
33.	+0.8	11.3
34.	+0.8	11.31144 periodisch, symmetrisch
35.	+0.8	11.4
36.	+0.8	11.42
37.	+0.8	11.428
38.	+0.8	11.4281 periodisch, unsymmetrisch
39.	+0.8	11.5
40.	+0.8	12.0
41.	$\xi_0 = +0.67$	11.2
42.	+0.67	11.35
43.	+0.67	11.4
44.	$E_0 = +0.87$	11.1
45.	+0.87	11.19942 periodisch, symmetrisch
46.	+0.87	11.2
47.	+0.9	10.9
48.	+0.9	11.1
49.	+0.9	11.12687 periodisch, unsymmetrisch
50.	+0.9	11.2
51.	+0.9	11.24

## Bahn 1.

$$E_0 = +0.28, F_0 = 0, K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.28000	0.00000	+ 0.9610	0.0000
0.04	0.27832	+ 0.15598	0.9732	- 0.0430
0.08	0.27362	0.31143	1.0099	0.0855
0.12	0.26685	0.46575	1.0711	0.1273
0.16	0.25969	0.61813	1.1571	0.1690
0.20	0.25457	0.76754	1.2671	0.2128
0.24	0.25470	0.91256	1.3994	0.2632
0.28	0.26403	1.05142	1.5500	0.3278
0.32	0.28703	1.18189	1.7106	0.4181
0.36	0.32820	1.30139	1.8679	0.5483
0.40	0.39131	1.40712	2.0009	0.7321
0.44	0.47833	1.49634	2.0815	0.9761
0.48	0.58835	1.56671	2.0795	1.2715
0.52	0.71697	1.61664	1.9730	1.5894
0.56	0.85661	1.64571	1.7612	1.8860
0.60	0.99758	1.65496	1.4708	2.1179
0.64	1.13038	1.64698	1.1476	2.2608
0.68	1.24751	1.62561	0.8396	2.3158
0.72	1.34458	1.59530	0.5756	2.3033
0.76	1.42024	1.56045	0.3728	2.2497
0.80	1.47553	1.52488	0.2288	2.1785
0.84	1.51294	1.49166	0.1350	2.1062
0.88	1.53564	1.46311	0.0799	2.0426
0.92	+ 1.54705	+ 1.44085	+ 0.0529	-- 1.9932

$\psi$	$E$	$F$	$\xi$	$\eta$
0.96	+ 1.55055	+ 1.42605	+ 0.0445	- 1.9605
1.00	1.54947	1.41942	0.0466	1.9460
1.04	1.54707	1.42136	0.0520	1.9502
1.08	1.54664	1.43198	0.0534	1.9735
1.12	1.55160	1.45106	0.0432	2.0163
1.16	1.56560	1.47804	+ 0.0120	2.0780
1.20	1.59256	1.51194	- 0.0517	2.1570
1.24	+ 1.63662	+ 1.55116	- 0.1625	- 2.2476

## Bahn 2.

Periodisch (symmetrisch).

$$E_0 = + 0.28479, F_0 = 0, K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.28479	0.00000	+ 0.95972	0.00000
0.04	0.28309	+ 0.15584	0.97187	- 0.04371
0.08	0.27833	0.31116	1.00844	0.08688
0.12	0.27146	0.46535	1.06959	0.12933
0.16	0.26416	0.61762	1.15535	0.17171
0.20	0.25885	0.76692	1.26519	0.21612
0.24	0.25872	0.91185	1.39726	0.26699
0.28	0.26773	1.05065	1.54744	0.33198
0.32	0.29034	1.18111	1.70786	0.42242
0.36	0.33105	1.30067	1.86497	0.55247
0.40	0.39367	1.40655	1.99794	0.73586
0.44	0.48020	1.49604	2.07890	0.97935
0.48	0.58983	1.56680	2.07760	1.27447
0.52	0.71828	1.61726	1.97181	1.59286
0.56	0.85803	1.64698	1.76034	1.89089
0.60	0.99955	1.65696	1.46904	2.12519
0.64	1.13333	1.64975	1.14335	2.27073
0.68	1.25186	1.62910	0.83019	2.32797
0.72	+ 1.35066	+ 1.59944	+ 0.56254	- 2.31682

$\psi$	$E$	$F$	$\xi$	$\eta$
0.76	+ 1.42833	+ 1.56506	+ 0.35440	- 2.26377
0.80	1.48581	1.52978	0.20513	2.19236
0.84	1.52554	1.49658	0.10608	2.11907
0.88	1.55062	1.46771	0.04607	2.05401
0.92	1.56440	1.44475	0.01431	2.00247
0.96	1.57018	1.42877	+ 0.00136	1.96699
1.00	1.57117	1.42042	- 0.00081	1.94863
1.04	1.57048	1.42003	+ 0.00069	1.94777
1.08	1.57118	1.42759	- 0.00084	1.96439
1.12	+ 1.57634	+ 1.44283	- 0.01241	- 1.99800

## Bahn 3.

$$E_0 = + 0.285, F_0 = 0, K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.28500	0.00000	+ 0.95966	0.00000
0.04	0.28330	+ 0.15584	0.97182	- 0.04364
0.08	0.27854	0.31115	1.0084	0.08694
0.12	0.27166	0.46533	1.0694	0.12942
0.16	0.26436	0.61759	1.1553	0.17183
0.20	0.25904	0.76689	1.2650	0.21626
0.24	0.25890	0.91182	1.3972	0.26716
0.28	0.26790	1.05062	1.5473	0.33218
0.32	0.29049	1.18108	1.7078	0.42261
0.36	0.33118	1.30064	1.8648	0.55266
0.40	0.39377	1.40653	1.9978	0.73607
0.44	0.48028	1.49603	2.0788	0.97945
0.48	0.58990	1.56681	2.0775	1.2746
0.52	0.71834	1.61729	1.9718	1.5930
0.56	0.85809	1.64703	1.7603	1.8911
0.60	0.99963	1.65705	1.4690	2.1256
0.64	1.13346	1.64987	1.1431	2.2711
0.68	+ 1.25205	+ 1.62926	+ 0.8298	- 2.3285

$\psi$	$E$	$F$	$\xi$	$\eta$
0.72	+ 1.35093	+ 1.59962	+ 0.5619	- 2.3174
0.76	1.42868	1.56527	0.3536	2.2644
0.80	1.48627	1.53000	0.2041	2.1929
0.84	1.52610	1.49679	0.1048	2.1196
0.88	1.55128	1.46792	0.0446	2.0545
0.92	1.56517	1.44492	+ 0.0126	2.0028
0.96	1.57105	1.42889	- 0.0006	1.9672
1.00	1.57213	1.42047	0.0029	1.9487
1.04	1.57152	1.41997	0.0016	1.9476
1.08	1.57226	1.42740	0.0032	1.9639
1.12	+ 1.57743	+ 1.44247	- 0.0148	- 1.9974

## Bahn 4.

$$E_0 = + 0.29, F_0 = 0, K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.29000	0.00000	+ 0.95824	0.00000
0.04	0.28828	+ 0.15570	0.97038	- 0.04445
0.08	0.28346	0.31087	1.0068	0.08835
0.12	0.27649	0.46491	1.0676	0.13153
0.16	0.26903	0.61704	1.1534	0.17462
0.20	0.26351	0.76622	1.2630	0.21967
0.24	0.26311	0.91105	1.3948	0.27112
0.28	0.27177	1.04978	1.5446	0.33641
0.32	0.29394	1.18023	1.7048	0.42705
0.36	0.33415	1.29985	1.8617	0.55693
0.40	0.39622	1.40590	1.9947	0.74000
0.44	0.48220	1.49568	2.0761	0.98250
0.48	0.59140	1.56687	2.0755	1.2776
0.52	0.71963	1.61791	1.9734	1.5961
0.56	0.85950	1.64834	1.7596	1.8960
0.60	1.00160	1.65915	1.4673	2.1330
0.64	+ 1.13646	+ 1.65280	+ 1.1389	- 2.2815

2\*

$\psi$	$E$	$F$	$\xi$	$\eta$
0.68	+ 1.25653	+ 1.63299	+ 0.82142	- 2.3414
0.72	1.35727	1.60406	0.54822	2.3319
0.76	1.43719	1.57029	0.33408	2.2796
0.80	1.49717	1.53537	0.17892	2.2078
0.84	1.53955	1.50224	0.07363	2.1335
0.88	1.56736	1.47307	+ 0.00788	2.0667
0.92	1.58387	1.44938	- 0.02940	2.0127
0.96	1.59229	1.43214	0.04758	1.9740
1.00	1.59572	1.42191	0.05465	1.9513
1.04	1.59706	1.41893	0.05745	1.9447
1.08	1.59916	1.42311	0.06228	1.9538
1.12	+ 1.60476	+ 1.43410	- 0.07528	- 1.9776

Bahn 5.

$$E_0 = + 0.30, F_0 = 0, K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.30000	0.00000	+ 0.95534	0.00000
0.04	0.29825	+ 0.15540	0.96742	- 0.04585
0.08	0.29331	0.31029	1.0038	0.09116
0.12	0.28614	0.46405	1.0645	0.13573
0.16	0.27839	0.61590	1.1497	0.18017
0.20	0.27246	0.76483	1.2588	0.22651
0.24	0.27154	0.90947	1.3900	0.27898
0.28	0.27952	1.04807	1.5392	0.34509
0.32	0.30087	1.17848	1.6987	0.43588
0.36	0.34012	1.29821	1.8552	0.56541
0.40	0.40114	1.40457	1.9881	0.74741
0.44	0.48608	1.49489	2.0703	0.98915
0.48	0.59441	1.56689	2.0714	1.2833
0.52	0.72222	1.61901	1.9682	1.6031
0.56	0.86231	1.65077	1.7578	1.9057
0.60	+ 1.00547	+ 1.66310	+ 1.4638	- 2.1475

$\psi$	$E$	$F$	$\xi$	$\eta$
0.64	+ 1.14231	+ 1.65832	+ 1.1303	- 2.3013
0.68	1.26524	1.64002	0.80456	2.3658
0.72	1.36958	1.61239	0.52106	2.3592
0.76	1.45369	1.57960	0.29554	2.3075
0.80	1.51822	1.54521	0.12880	2.2347
0.84	1.56537	1.51205	+ 0.01289	2.1577
0.88	1.59805	1.48214	- 0.06309	2.0869
0.92	1.61935	1.45688	0.10981	2.0274
0.96	1.63230	1.43708	0.13664	1.9817
1.00	1.63974	1.42316	0.15127	1.9500
1.04	1.64429	1.41522	0.16010	1.9320
1.08	1.64835	1.41302	0.16857	1.9266
1.12	1.65407	1.41613	0.18149	1.9325
1.16	1.66350	1.42383	0.20338	1.9476
1.20	1.67841	1.43512	0.23836	1.9696
1.24	1.70035	1.44877	0.29023	1.9947
1.28	1.73049	1.46320	0.36187	2.0180
1.32	1.76938	1.47658	0.45438	2.0340
1.36	+ 1.81721	+ 1.48681	- 0.56702	- 2.0351

## Bahn 6.

$$E_0 = + 0.32, F_0 = 0, K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.32000	0.00000	+ 0.94924	0.00000
0.04	0.31818	+ 0.15479	0.96120	- 0.04862
0.08	0.31302	0.30906	0.99722	0.09670
0.12	0.30548	0.46223	1.0574	0.14402
0.16	0.29719	0.61352	1.1419	0.19115
0.20	0.29050	0.76194	1.2499	0.23998
0.24	0.28856	0.90615	1.3799	0.29463
0.28	0.29524	1.04445	1.5274	0.36225
0.32	+ 0.31498	+ 1.17477	+ 1.6859	- 0.45362

$\psi$	$E$	$F$	$\xi$	$\eta$
0.36	+ 0.35232	+ 1.29469	+ 1.8414	- 0.58247
0.40	0.41120	1.40160	1.9744	0.76255
0.44	0.49401	1.49294	2.0579	1.0018
0.48	0.60055	1.56650	2.0619	1.2944
0.52	0.72730	1.62073	1.9622	1.6153
0.56	0.86765	1.65511	1.7538	1.9233
0.60	1.01273	1.67040	1.4569	2.1742
0.64	1.15335	1.66873	1.1137	2.3388
0.68	1.28185	1.65342	0.7716	2.4124
0.72	1.39327	1.62837	0.4672	2.4112
0.76	1.48563	1.59747	0.2186	2.3605
0.80	1.55921	1.56407	+ 0.0289	2.2843
0.84	1.61583	1.53072	- 0.1089	2.2003
0.88	1.65808	1.49920	0.2049	2.1193
0.92	1.68864	1.47061	0.2693	2.0467
0.96	1.71017	1.44552	0.3112	1.9848
1.00	1.72503	1.42408	0.3376	1.9334
1.04	1.73525	1.40616	0.3541	1.8917
1.08	1.74250	1.39141	0.3647	1.8582
1.12	1.74814	1.37928	0.3726	1.8310
1.16	1.75319	1.36912	0.3797	1.8083
1.20	1.75837	1.36020	0.3873	1.7883
1.24	1.76413	1.35172	0.3961	1.7690
1.28	1.77061	1.34283	0.4060	1.7488
1.32	1.77771	1.33273	0.4165	1.7262
1.36	1.78509	1.32064	0.4267	1.6997
1.40	1.79220	1.30589	0.4350	1.6683
1.44	1.79838	1.28789	0.4400	1.6314
1.48	1.80283	1.26624	0.4403	1.5891
1.52	1.80476	1.24069	0.4344	1.5412
1.56	1.80342	1.21120	0.4214	1.4887
1.60	1.79813	1.17791	0.4006	1.4320
1.64	1.78833	1.14115	0.3723	1.3723
1.68	+ 1.77361	+ 1.10139	- 0.3364	- 1.3105

$\psi$	$E$	$F$	$\xi$	$\eta$
1.72	+ 1.75365 ·	+ 1.05925 ·	- 0.2937 ·	- 1.2476
1.76	1.72826 ·	1.01547	0.2448 ·	1.1844
1.80	1.69731	0.97084	0.1904 ·	1.1216
1.84	1.66065 ·	0.92620	0.1310 ·	1.0601
1.88	1.61819	0.88241 ·	- 0.0670 ·	1.0003
1.92	1.56973 ·	0.84036	+ 0.0014 ·	0.9428 ·
1.96	1.51508 ·	0.80091	0.0745	0.8879 ·
2.00	+ 1.45394	+ 0.76489	+ 0.1523 ·	- 0.8359 ·

## Bahn 7.

$$E_0 = + 0.35. \quad F_0 = 0. \quad K = 11.3.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.35000	0.00000	+ 0.93938	0.00000
0.04	0.34803 ·	+ 0.15366 ·	0.95115	- 0.05261
0.08	0.34243 ·	0.30678	0.98660	0.10438
0.12	0.33413	0.45871 ·	1.0459	0.15576
0.16	0.32469 ·	0.60866 ·	1.1288	0.20639
0.20	0.31643	0.75559	1.2348	0.25814
0.24	0.31237	0.89814	1.3619	0.31465
0.28	0.31622	1.03460	1.5061	0.38229
0.32	0.33219	1.16290 ·	1.6599	0.47069
0.36	0.36455 ·	1.28068 ·	1.8112	0.59206
0.40	0.41694	1.38542 ·	1.9415	0.75856
0.44	0.49143	1.47469 ·	2.0272	0.97702
0.48	0.58766 ·	1.54647 ·	2.0423	1.2424
0.52	0.70224	1.59947 ·	1.9667	1.5336
0.56	0.82892	1.63348 ·	1.7962	1.8159
0.60	0.95959	1.64956	1.5485	2.0525
0.64	1.08598	1.65008	1.2582	2.2187
0.68	1.20127 ·	1.63851 ·	0.96465	2.3095
0.72	1.30120 ·	1.61891	0.69855	2.3372
0.76	+ 1.38421	+ 1.59529	+ 0.47607	- 2.3225

$\psi$	$E$	$F$	$\xi$	$\eta$
0.80	+ 1.45099	+ 1.57120	+ 0.29999	- 2.2858
0.84	1.50379	1.54948	0.16475	2.2433
0.88	1.54572	1.53214	+ 0.06073	2.2053
0.92	1.58027	1.52045	- 0.02272	2.1778
0.96	1.61106	1.51507	0.09601	2.1632
1.00	+ 1.64164	+ 1.51601	- 0.16895	- 2.1618

## Bahn 8.

Periodisch (symmetrisch).

$$E_0 = + 0.35, F_0 = 0, K = 11.32966.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.35000	0.00000	+ 0.93938	0.00000
0.04	0.34802	+ 0.15364	0.95115	- 0.05261
0.08	0.34240	0.30673	0.98660	0.10461
0.12	0.33406	0.45862	1.04583	0.15570
0.16	0.32457	0.60851	1.12874	0.20626
0.20	0.31623	0.75534	1.23469	0.25789
0.24	0.31206	0.89774	1.36166	0.31418
0.28	0.31577	1.03401	1.50564	0.38147
0.32	0.33153	1.16205	1.65912	0.46931
0.36	0.36358	1.27949	1.80988	0.58976
0.40	0.41548	1.38381	1.94000	0.75470
0.44	0.48925	1.47257	2.02562	0.97075
0.48	0.58443	1.54378	2.04164	1.23277
0.52	0.69756	1.59617	1.96845	1.51961
0.56	0.82233	1.62957	1.80256	1.79729
0.60	0.95068	1.64510	1.56168	2.02986
0.64	1.07438	1.64522	1.28000	2.19355
0.68	1.18673	1.63346	0.99608	2.28374
0.72	1.28356	1.61392	0.73963	2.31284
0.76	1.36344	1.59071	0.52611	2.30137
0.80	+ 1.42715	+ 1.56748	+ 0.35810	- 2.26935

$\psi$	$E$	$F$	$\xi$	$\eta$
0.84	+ 1.47707	+ 1.54713	+ 0.22980	- 2.23270
0.88	1.51645	1.53181	0.13153	2.20195
0.92	1.54902	1.52294	+ 0.05229	2.18335
0.96	1.57873	1.52129	- 0.01903	2.17980
1.00	+ 1.60958	+ 1.52701	- 0.09348	- 2.19190

## Bahn 9.

$$E_0 = + 0.35, F_0 = 0, K = 11.4.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.35000	0.00000	+ 0.93938	0.00000
0.04	0.34800	+ 0.15360	0.95115	- 0.05259
0.08	0.34233	0.30662	0.98660	0.10455
0.12	0.33389	0.45841	1.0458	0.15555
0.16	0.32427	0.60814	1.1286	0.20593
0.20	0.31575	0.75474	1.2345	0.25734
0.24	0.31134	0.89681	1.3611	0.31306
0.28	0.31470	1.03261	1.5046	0.37953
0.32	0.32997	1.16003	1.6572	0.46603
0.36	0.36128	1.27667	1.8071	0.58424
0.40	0.41204	1.37998	1.9363	0.74553
0.44	0.48409	1.46755	2.0220	0.95594
0.48	0.57677	1.53739	2.0400	1.2099
0.52	0.68645	1.58832	1.9723	1.4867
0.56	0.80672	1.62028	1.8170	1.7533
0.60	0.92954	1.63454	1.5919	1.9761
0.64	1.04687	1.63370	1.3302	2.1334
0.68	1.15223	1.62146	1.0686	2.2216
0.72	1.24172	1.60210	0.83457	2.2533
0.76	1.31418	1.57988	0.64217	2.2481
0.80	1.37062	1.55864	0.49340	2.2256
0.84	1.41369	1.54155	0.38221	2.2014
0.88	+ 1.44703	+ 1.53104	+ 0.29871	- 2.1864

$\psi$	$E$	$F$	$\xi$	$\eta$
0.92	+ 1.47491	+ 1.52885	+ 0.23119	- 2.1880
0.96	1.50204	1.53603	0.16697	2.2102
1.00	1.53355	1.55307	+ 0.09192	2.2556
1.04	1.57507	1.57973	- 0.01083	2.3238
1.08	1.63268	1.61499	0.16164	2.4099
1.12	+ 1.71276	+ 1.65672	- 0.38435	- 2.5003

Bahn 10.

$$E_0 = + 0.45. \quad F_0 = 0. \quad K = 11.6.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.450000	0.000000	+ 0.90045	0.00000
0.02	0.449424	+ 0.074711	0.90322	- 0.03249
0.04	0.447714	0.149352	0.91150	0.06488
0.06	0.444919	0.223853	0.92538	0.09715
0.08	0.441126	0.298134	0.94474	0.12919
0.10	0.436455	0.372112	0.96972	0.16096
0.12	0.431064	0.445693	1.0003	0.19245
0.14	0.425147	0.518770	1.0363	0.22370
0.16	0.418942	0.591224	1.0779	0.25476
0.18	0.412724	0.662918	1.1248	0.28581
0.20	0.406811	0.733700	1.1769	0.31707
0.22	0.401559	0.803399	1.2338	0.34890
0.24	0.397366	0.871824	1.2953	0.38178
0.26	0.394661	0.938765	1.3606	0.41635
0.28	0.393903	1.003996	1.4293	0.45341
0.30	0.395569	1.067271	1.5007	0.49418
0.32	0.400142	1.128332	1.5722	0.53894
0.34	0.408095	1.186911	1.6440	0.58969
0.36	0.419869	1.242735	1.7138	0.64743
0.38	0.435854	1.295533	1.7798	0.71366
0.40	0.456364	1.345041	1.8397	0.78835
0.42	+ 0.481612	+ 1.391014	+ 1.8912	- 0.87320

$\psi$	$E$	$F$	$\xi$	$\eta$
0.44	+ 0.511686	+ 1.433233	+ 1.9317	- 0.96796
0.46	0.546539	1.471515	1.9587	1.0723
0.48	0.585966	1.505722	1.9701	1.1849
0.50	0.629609	1.535767	1.9642	1.3042
0.52	0.676965	1.561627	1.9395	1.4272
0.54	0.727401	1.583343	1.8958	1.5513
0.56	0.780181	1.601028	1.8338	1.6728
0.58	0.834511	1.614868	1.7548	1.7888
0.60	0.889574	1.625116	1.6613	1.8962
0.62	0.944580	1.632096	1.5561	1.9929
0.64	0.998797	1.636185	1.4427	2.0771
0.66	1.051595	1.637809	1.3244	2.1486
0.68	1.102468	1.637429	1.2044	2.2074
0.70	1.151051	1.635522	1.0854	2.2544
0.72	1.197124	1.632569	0.96960	2.2910
0.74	1.240614	1.629039	0.85838	2.3190
0.76	1.281581	1.625378	0.75252	2.3403
0.78	1.320210	1.621999	0.65224	2.3569
0.80	1.356794	1.619268	0.55721	2.3704
0.82	1.391719	1.617506	0.46658	2.3824
0.84	1.425447	1.616979	0.37921	2.3942
0.86	1.458503	1.617899	0.29363	2.4068
0.88	1.491466	1.620417	0.20814	2.4211
0.90	1.524957	1.624622	0.12082	2.4371
0.92	1.559626	1.630541	+ 0.02961	2.4552
0.94	+ 1.596143	+ 1.638130	- 0.06768	- 2.4748

## Bahn 11.

$$E_0 = + 0.55, F_0 = 0, K = 11.0.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.550000	0.000000	+ 0.85252	0.00000
0.02	+ 0.549458	+ 0.072637	+ 0.85504	- 0.03797

$\psi$	$E$	$F$	$\xi$	$\eta$
0.04	+ 0.547847	+ 0.145227	+ 0.86266	— 0.07591
0.06	0.545214	0.217723	0.87534	0.11381
0.08	0.541632	0.290070	0.89316	0.15164
0.10	0.537212	0.362199	0.91614	0.18943
0.12	0.532092	0.434064	0.94422	0.22720
0.14	0.526447	0.505572	0.97748	0.26499
0.16	0.520499	0.576643	1.01588	0.30294
0.18	0.514493	0.647169	1.05929	0.34117
0.20	0.508724	0.717033	1.10764	0.37994
0.22	0.503527	0.786103	1.16073	0.41960
0.24	0.499279	0.854232	1.21817	0.46060
0.26	0.496398	0.921255	1.27959	0.50351
0.28	0.495339	0.986991	1.34428	0.54911
0.30	0.496596	1.051246	1.41143	0.59834
0.32	0.500680	1.113812	1.48003	0.65226
0.34	0.508122	1.174471	1.54879	0.71217
0.36	0.519458	1.232997	1.61593	0.77938
0.38	0.535206	1.289147	1.67954	0.85532
0.40	0.555852	1.342732	1.73740	0.94144
0.42	0.581826	1.393495	1.78667	1.03883
0.44	0.613485	1.441235	1.82437	1.14834
0.46	0.651084	1.485757	1.84726	1.27026
0.48	0.694762	1.526892	1.85174	1.40419
0.50	0.744525	1.564487	1.83462	1.54871
0.52	0.800233	1.598424	1.79271	1.70158
0.54	0.861601	1.628609	1.72344	1.85948
0.56	0.928198	1.654987	1.62530	2.01809
0.58	0.999466	1.677526	1.49765	2.17255
0.60	1.074737	1.696234	1.34144	2.31739
0.62	1.153253	1.711149	1.15903	2.44733
0.64	1.234211	1.722329	0.95385	2.55741
0.66	1.316777	1.729871	0.73092	2.64369
0.68	1.400124	1.733879	0.49587	2.70312
0.70	+ 1.483453	+ 1.734476	+ 0.25480	— 2.73425

$\psi$	$E$	$F$	$\xi$	$\eta$
0.72	+ 1.566000	+ 1.731777	+ 0.01398	- 2.73687
0.74	1.647069	1.725902	- 0.22081	2.71194
0.76	1.726015	1.716953	0.44424	2.66159
0.78	1.802252	1.705018	0.65186	2.58894
0.80	1.875256	1.690172	0.84012	2.49759
0.82	1.944558	1.672460	1.00645	2.39133
0.84	2.009749	1.651926	1.14932	2.27447
0.86	2.070476	1.628596	1.26806	2.15065
0.88	2.126454	1.602481	1.36273	2.02362
0.90	2.177457	1.573619	1.43427	1.89648
0.92	2.223333	1.542035	1.48403	1.77192
0.94	2.264006	1.507779	1.51386	1.65192
0.96	2.299475	1.470876	1.52582	1.53807
0.98	2.329816	1.431424	1.52217	1.43133
1.00	2.355177	1.389503	1.50536	1.33203
1.02	2.375772	1.345216	1.47752	1.24020
1.04	2.391868	1.298685	1.44087	1.15561
1.06	2.403788	1.250044	1.39739	1.07760
1.08	2.411884	1.199439	1.34903	1.00560
1.10	2.416541	1.147025	1.29724	0.93880
1.12	2.418151	1.092959	1.24357	0.87640
1.14	2.417113	1.037405	1.18927	0.81766
1.16	2.413820	0.980521	1.13526	0.76190
1.18	2.408654	0.922465	1.08252	0.70853
1.20	2.401976	0.863386	1.03160	0.65699
1.22	2.394124	0.803427	0.98312	0.60683
1.24	2.385407	0.742719	0.93752	0.55779
1.26	2.376111	0.681385	0.89502	0.50951
1.28	2.366386	0.619534	0.85582	0.46186
1.30	2.356656	0.557267	0.82014	0.41457
1.32	2.347007	0.494671	0.78804	0.36756
1.34	2.337635	0.431823	0.75956	0.32071
1.36	2.328651	0.368791	0.73463	0.27398
1.38	+ 2.320182	+ 0.305634	- 0.71325	- 0.22725

$\psi$	$E$	$F$	$\xi$	$\eta$
1.40	+ 2.312323	+ 0.242400	- 0.69535	- 0.18051
1.42	2.305152	0.179137	0.68088	0.13368
1.44	2.298692	0.115878	0.66977	0.08671
1.46	2.293004	+ 0.052665	0.66196	- 0.03954
1.48	2.288092	- 0.010470	0.65739	+ 0.00789
1.50	2.283952	0.073494	0.65600	0.05563
1.52	2.280563	0.136371	0.65772	0.10376
1.54	2.277883	0.199064	0.66253	0.15234
1.56	2.275861	0.261529	0.67038	0.20145
1.58	2.274428	0.323716	0.68118	0.25117
1.60	2.273475	0.385567	0.69490	0.30158
1.62	2.272901	0.447011	0.71143	0.35277
1.64	2.272578	0.507972	0.73068	0.40484
1.66	2.272359	0.568354	0.75250	0.45788
1.68	2.272073	0.628049	0.77668	0.51203
1.70	2.271538	0.686936	0.80297	0.56735
1.72	2.270550	0.744873	0.83112	0.62400
1.74	2.268891	0.801704	0.86062	0.68210
1.76	2.266329	0.857256	0.89104	0.74175
1.78	2.262625	0.911341	0.92174	0.80306
1.80	2.257539	0.963751	0.95196	0.86614
1.82	2.250833	1.014274	0.98098	0.93102
1.84	2.242286	1.062677	1.00779	0.99760
1.86	2.231697	1.108733	1.03138	1.06595
1.88	2.218911	1.152201	1.05073	1.13574
1.90	2.203811	1.192851	1.06478	1.20658
1.92	2.186347	1.230463	1.07254	1.27803
1.94	2.166532	1.264828	1.07307	1.34928
1.96	2.144469	1.295769	1.06576	1.41948
1.98	2.120337	1.323122	1.05017	1.48759
2.00	2.094402	1.346797	1.02631	1.55236
2.02	2.067008	1.366716	0.99442	1.61258
2.04	2.038570	1.382859	0.95526	1.66704
2.06	+ 2.009557	- 1.395262	- 0.90992	+ 1.71476

$\psi$	$E$	$F$	$\xi$	$\eta$
2.08	+ 1.980473	- 1.404011	- 0.85978	+ 1.75468
2.10	1.951846	1.409247	0.80650	1.78629
2.12	1.924187	1.411160	0.75180	1.80925
2.14	1.897994	1.409985	0.69742	1.82370
2.16	1.873716	1.405998	0.64504	1.83000
2.18	1.851750	1.399502	0.59613	1.82865
2.20	1.832432	1.390823	0.55186	1.82050
2.22	1.816023	1.380313	0.51318	1.80658
2.24	1.802737	1.368310	0.48080	1.78788
2.26	1.792671	1.355169	0.45500	1.76540
2.28	1.785933	1.341232	0.43606	1.74008
2.30	1.782532	1.326840	0.42395	1.71277
2.32	1.782444	1.312314	0.41846	1.68435
2.34	1.785602	1.297963	0.41938	1.65542
2.36	1.791919	1.284083	0.42639	1.62663
2.38	1.801276	1.270952	0.43916	1.59841
2.40	+ 1.813536	- 1.258835	- 0.45733	+ 1.57086

## Bahn 12.

$$E_0 = + 0.55, F_0 = 0, K = 11.2.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.550000	0.000000	+ 0.85252	0.00000
0.02	0.549441	+ 0.072487	0.85504	- 0.03789
0.04	0.547773	0.144921	0.86268	0.07574
0.06	0.545045	0.217249	0.87536	0.11352
0.08	0.541330	0.289413	0.89316	0.15122
0.10	0.536737	0.361347	0.91610	0.18882
0.12	0.531403	0.432978	0.94417	0.22633
0.14	0.525505	0.504223	0.97740	0.26380
0.16	0.519253	0.574986	1.01571	0.30131
0.18	+ 0.512895	+ 0.645158	+ 1.05902	- 0.33901

$\psi$	$E$	$F$	$\xi$	$\eta$
0.20	+ 0.506719	+ 0.714615	+ 1.10723	- 0.37709
0.22	0.501054	0.783219	1.16014	0.41589
0.24	0.496267	0.850814	1.21731	0.45579
0.26	0.492764	0.917228	1.27835	0.49736
0.28	0.490984	0.982275	1.34261	0.54130
0.30	0.491397	1.045753	1.40935	0.58844
0.32	0.494492	1.107449	1.47745	0.63980
0.34	0.500768	1.167140	1.54568	0.69650
0.36	0.510723	1.224598	1.61246	0.75983
0.38	0.524828	1.279592	1.67600	0.83102
0.40	0.543518	1.331897	1.73412	0.91128
0.42	0.567164	1.381295	1.78436	1.00164
0.44	0.596058	1.427587	1.82417	1.10277
0.46	0.630389	1.470593	1.85054	1.21486
0.48	0.670223	1.510163	1.86058	1.33755
0.50	0.715507	1.546176	1.85165	1.46957
0.52	0.766042	1.578551	1.82117	1.60896
0.54	0.821504	1.607247	1.76738	1.75304
0.56	0.881441	1.632264	1.68900	1.89827
0.58	0.945300	1.653644	1.58596	2.04071
0.60	1.012450	1.671473	1.45900	2.17630
0.62	1.082209	1.685878	1.31015	2.30105
0.64	1.153876	1.697014	1.14213	2.41133
0.66	1.226769	1.705068	0.95847	2.50417
0.68	1.300242	1.710241	0.76318	2.57747
0.70	1.373708	1.712741	0.56047	2.62994
0.72	1.446650	1.712767	0.35444	2.66141
0.74	1.518625	1.710502	+ 0.14895	2.67177
0.76	1.589255	1.706098	- 0.05250	2.66250
0.78	1.658221	1.699671	0.24687	2.63462
0.80	1.725247	1.691299	0.43157	2.58994
0.82	1.790084	1.681019	0.60445	2.53040
0.84	1.852504	1.668829	0.76373	2.45788
0.86	+ 1.912279	+ 1.654697	- 0.90796	- 2.37467

$\psi$	$E$	$F$	$\xi$	$\eta$
0.88	+ 1.969186	+ 1.638562	— 1.03619	— 2.28274
0.90	2.023002	1.620350	1.14758	2.18445
0.92	2.073504	1.599976	1.24180	2.08162
0.94	2.120481	1.577356	1.31875	1.97636
0.96	2.163738	1.552415	1.37874	1.87057
0.98	2.203108	1.525087	1.42230	1.76576
1.00	2.238464	1.495328	1.45037	1.66346
1.02	2.269721	1.463116	1.46403	1.56470
1.04	2.296851	1.428451	1.46457	1.47038
1.06	2.319882	1.391361	1.45355	1.38103
1.08	2.338899	1.351899	1.43248	1.29679
1.10	2.354042	1.310137	1.40287	1.21772
1.12	2.365504	1.266175	1.36634	1.14368
1.14	2.373520	1.220127	1.32442	1.07422
1.16	2.378361	1.172124	1.27850	1.00895
1.18	2.380329	1.122307	1.22983	0.94728
1.20	2.379738	1.070827	1.17957	0.88870
1.22	2.376914	1.017837	1.12882	0.83278
1.24	2.372183	0.963492	1.07835	0.77902
1.26	2.365862	0.907944	1.02898	0.72680
1.28	2.358258	0.851343	0.98122	0.67600
1.30	2.349660	0.793829	0.93568	0.62621
1.32	2.340334	0.735535	0.89268	0.57721
1.34	2.330526	0.676585	0.85246	0.52882
1.36	2.320458	0.617090	0.81530	0.48088
1.38	2.310324	0.557154	0.78127	0.43324
1.40	2.300297	0.496867	0.75048	0.38586
1.42	2.290526	0.436308	0.72290	0.33861
1.44	2.281134	0.375551	0.69863	0.29146
1.46	2.272227	0.314655	0.67753	0.24436
1.48	2.263889	0.253677	0.65959	0.19725
1.50	2.256183	0.192665	0.64476	0.15008
1.52	2.249155	0.131661	0.63297	0.10281
1.54	+ 2.242835	+ 0.070705	— 0.62414	— 0.05538

$\psi$	$E$	$F$	$\xi$	$\eta$
1.56	+ 2.237236	+ 0.009834	- 0.61821	- 0.00773
1.58	2.232355	- 0.050916	0.61513	+ 0.04019
1.60	2.228176	0.111508	0.61484	0.08845
1.62	+ 2.224664	- 0.171901	- 0.61727	+ 0.13712

## Bahn 13.

$$E_0 = +0.55, F_0 = 0, K = 11.4.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.550000	0.000000	+ 0.85252	0.00000
0.02	0.549421	+ 0.072334	0.85504	- 0.03780
0.04	0.547699	0.144611	0.86268	0.07557
0.06	0.544878	0.216771	0.87534	0.11324
0.08	0.541032	0.288751	0.89316	0.15079
0.10	0.536268	0.360479	0.91607	0.18820
0.12	0.530724	0.431877	0.94413	0.22546
0.14	0.524572	0.502856	0.97730	0.26260
0.16	0.518021	0.573313	1.01555	0.29970
0.18	0.511315	0.643133	1.05873	0.33685
0.20	0.504737	0.712186	1.10680	0.37426
0.22	0.498609	0.780325	1.15947	0.41220
0.24	0.493288	0.847389	1.21639	0.45103
0.26	0.489168	0.913199	1.27706	0.49128
0.28	0.486672	0.977561	1.34094	0.53356
0.30	0.486250	1.040270	1.40716	0.57869
0.32	0.488368	1.101106	1.47476	0.62753
0.34	0.493496	1.159840	1.54245	0.68117
0.36	0.502092	1.216243	1.60889	0.74070
0.38	0.514589	1.270081	1.67219	0.80726
0.40	0.531370	1.321133	1.73048	0.88190
0.42	0.552755	1.369186	1.78152	0.96550
0.44	0.578975	1.414049	1.82288	1.05859
0.46	+ 0.610157	+ 1.455557	+ 1.85229	- 1.16134

$\psi$	$E$	$F$	$\xi$	$\eta$
0.48	+ 0.646312	+ 1.493566	+ 1.86704	- 1.27324
0.50	0.687320	1.527992	1.86504	1.39326
0.52	0.732937	1.558787	1.84442	1.51964
0.54	0.782796	1.585952	1.80383	1.65004
0.56	0.836427	1.609545	1.74248	1.78164
0.58	0.893276	1.629644	1.66058	1.91122
0.60	0.952731	1.646412	1.55906	2.03568
0.62	1.014159	1.660047	1.43963	2.15205
0.64	1.076937	1.670786	1.30467	2.25774
0.66	1.140485	1.678898	1.15678	2.35078
0.68	1.204286	1.684676	0.99912	2.42972
0.70	1.267911	1.688413	0.83454	2.49400
0.72	1.331026	1.690405	0.66566	2.54365
0.74	1.393395	1.690922	0.49490	2.57894
0.76	1.454871	1.690201	0.32417	2.60041
0.78	1.515383	1.688433	+ 0.15497	2.60906
0.80	1.574925	1.685759	- 0.01152	2.60563
0.82	+ 1.633526	+ 1.682267	- 0.17439	- 2.59077

## Bahn 14.

Periodisch (symmetrisch).

$$E_0 = + 0.55, F_0 = 0, K = 11.49384.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.550000	0.000000	+ 0.85252	0.00000
0.02	0.549368	+ 0.074802	0.85522	- 0.03909
0.04	0.547492	0.149537	0.86338	0.07813
0.06	0.544421	0.224136	0.87700	0.11706
0.08	0.540241	0.298523	0.89608	0.15584
0.10	0.535075	0.372615	0.92062	0.19442
0.12	0.529083	0.446320	0.95070	0.23283
0.14	0.522463	0.519532	0.98620	0.27108
0.16	+ 0.515456	+ 0.592127	+ 1.02712	- 0.30924

$\psi$	$E$	$F$	$\xi$	$\eta$
0.18	+ 0.508345	+ 0.663971	+ 1.07327	- 0.34746
0.20	0.501455	0.734908	1.12453	0.38595
0.22	0.495155	0.804765	1.18054	0.42503
0.24	0.489854	0.873350	1.24086	0.46518
0.26	0.485997	0.940453	1.30488	0.50696
0.28	0.484059	1.005848	1.37190	0.55111
0.30	0.484536	1.069294	1.44087	0.59855
0.32	0.487931	1.130539	1.51057	0.65033
0.34	0.494742	1.189326	1.57946	0.70757
0.36	0.505429	1.245400	1.64589	0.77143
0.38	0.520409	1.298509	1.70781	0.84304
0.40	0.540023	1.348419	1.76300	0.92336
0.42	0.564517	1.394919	1.80900	1.01300
0.44	0.594018	1.437828	1.84331	1.11215
0.46	0.628524	1.477005	1.86371	1.22042
0.48	0.667891	1.512355	1.86774	1.33683
0.50	0.711843	1.543839	1.85352	1.45962
0.52	0.759965	1.571481	1.81992	1.58654
0.54	0.811745	1.595362	1.76633	1.71479
0.56	0.866577	1.615632	1.69296	1.84142
0.58	0.923823	1.632481	1.60096	1.96332
0.60	0.982824	1.646176	1.49204	2.07780
0.62	1.042954	1.657022	1.36858	2.18262
0.64	1.103653	1.665361	1.23319	2.27611
0.66	1.164433	1.671558	1.08865	2.35721
0.68	1.224941	1.675985	0.93754	2.42578
0.70	1.284924	1.679006	0.78208	2.48188
0.72	1.344256	1.680959	0.62407	2.52606
0.74	1.402924	1.682142	0.46476	2.55906
0.76	1.461013	1.682802	0.30493	2.58171
0.78	1.518687	1.683118	+ 0.14502	2.59470
0.80	1.576167	1.683199	- 0.01496	2.59841
0.82	1.633703	1.683079	0.17501	2.59306
0.84	+ 1.691624	+ 1.682705	- 0.33547	- 2.57824

## Bahn 15.

 $E_0 = +0.55, F_0 = 0, K = 11.6.$ 

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.550000	0.000000	+ 0.85252	0.00000
0.02	0.549402	+ 0.072182	0.85506	- 0.03769
0.04	0.547624	0.144301	0.86267	0.07539
0.06	0.544709	0.216294	0.87536	0.11295
0.08	0.540732	0.288089	0.89316	0.15036
0.10	0.535796	0.359612	0.91605	0.18757
0.12	0.530040	0.430777	0.94408	0.22458
0.14	0.523633	0.501490	0.97722	0.26141
0.16	0.516781	0.571640	1.01538	0.29807
0.18	0.509725	0.641108	1.05849	0.33469
0.20	0.502743	0.709756	1.10638	0.37143
0.22	0.496149	0.777432	1.15881	0.40852
0.24	0.490293	0.843967	1.21546	0.44630
0.26	0.485558	0.909175	1.27579	0.48524
0.28	0.482351	0.972857	1.33928	0.52591
0.30	0.481105	1.034801	1.40513	0.56902
0.32	0.482261	1.094780	1.47207	0.61541
0.34	0.486259	1.152564	1.53921	0.66604
0.36	0.493525	1.207920	1.60511	0.72188
0.38	0.504450	1.260614	1.66815	0.78397
0.40	0.519372	1.310424	1.72652	0.85320
0.42	0.538560	1.357145	1.77808	0.93034
0.44	0.562191	1.400592	1.82083	1.01576
0.46	0.590336	1.440611	1.85258	1.10954
0.48	0.622951	1.477086	1.87137	1.21119
0.50	0.659867	1.509944	1.87539	1.31970
0.52	0.700795	1.539163	1.86312	1.43347
0.54	0.745333	1.564773	1.83379	1.55057
0.56	0.792990	1.586865	1.78696	1.66846
0.58	0.843211	1.605582	1.72300	1.78476
0.60	0.895385	1.621129	1.64319	1.89691
0.62	+ 0.948915	+ 1.633759	+ 1.54913	- 2.00266

$\psi$	$E$	$F$	$\xi$	$\eta$
0.64	+ 1.003230	+ 1.643774	+ 1.44280	- 2.10014
0.66	1.057809	1.651514	1.32676	2.18825
0.68	1.112224	1.657342	1.20317	2.26626
0.70	1.166148	1.661639	1.07437	2.33400
0.72	1.219371	1.664784	0.94215	2.39194
0.74	1.271800	1.667140	0.80796	2.44078
0.76	1.323457	1.669045	0.67273	2.48147
0.78	1.374471	1.670797	0.53687	2.51488
0.80	1.425065	1.672645	0.40036	2.54194
0.82	1.475537	1.674775	0.26275	2.56341
0.84	1.526243	1.677312	+ 0.12333	2.57953
0.86	1.577573	1.680303	- 0.01882	2.59035
0.88	1.629927	1.683726	0.16462	2.59544
0.90	1.683696	1.687476	0.31494	2.59382
0.92	1.739225	1.691375	0.47031	2.58424
0.94	1.796799	1.695173	0.63094	2.56506
0.96	1.856602	1.698550	0.79630	2.53441
0.98	1.918703	1.701134	0.96527	2.49012
1.00	1.983024	1.702505	1.13582	2.43053
1.02	2.049328	1.702221	1.30509	2.35400
1.04	2.117214	1.699826	1.46947	2.26000
1.06	2.186117	1.694879	1.62477	2.14857
1.08	2.255326	1.686967	1.76672	2.02119
1.10	2.324023	1.675725	1.89122	1.88043
1.12	2.391305	1.660841	1.99467	1.72977
1.14	2.456251	1.642075	2.07462	1.57359
1.16	2.517972	1.619255	2.12985	1.41652
1.18	2.575644	1.592277	2.16015	1.26320
1.20	2.628565	1.561112	2.16680	1.11764
1.22	2.676176	1.525791	2.15195	0.98317
1.24	2.718094	1.486406	2.11840	0.86198
1.26	2.754105	1.443101	2.06929	0.75527
1.28	2.784170	1.396064	2.00790	0.66329
1.30	+ 2.808409	+ 1.345519	- 1.93755	- 0.58540

$\psi$	$E$	$F$	$\xi$	$\eta$
1.32	+ 2.827079	+ 1.291713	- 1.86092	- 0.52036
1.34	2.840550	1.234913	1.78058	0.46661
1.36	2.849276	1.175391	1.69880	0.42228
1.38	2.853770	1.113413	1.61719	0.38553
1.40	2.854576	1.049263	1.53731	0.35462
1.42	2.852252	0.983178	1.46020	0.32795
1.44	2.847346	0.915404	1.38678	0.30414
1.46	2.840388	0.846163	1.31773	0.28207
1.48	2.831872	0.775659	1.25360	0.26085
1.50	2.822261	0.704078	1.19465	0.23976
1.52	2.811966	0.631587	1.14121	0.21830
1.54	2.801362	0.558334	1.09347	0.19615
1.56	2.790770	0.484453	1.05145	0.17308
1.58	2.780470	0.410061	1.01524	0.14898
1.60	2.770700	0.335265	0.98490	0.12381
1.62	2.761649	0.260158	0.96030	0.09758
1.64	2.753472	0.184826	0.94148	0.07035
1.66	2.746280	0.109346	0.92840	0.04219
1.68	2.740150	+ 0.033793	0.92104	- 0.01321
1.70	2.735121	- 0.041761	0.91933	+ 0.01652
1.72	2.731198	0.117243	0.92330	0.04688
1.74	+ 2.728347	- 0.192576	- 0.93288	+ 0.07782

## Bahn 16.

$$E_0 = + 0.6. \quad F_0 = 0. \quad K = 11.4.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.60000	0.00000	+ 0.82534	0.00000
0.04	0.59771	+ 0.14181	0.83495	- 0.08007
0.08	0.59107	0.28319	0.86386	0.15993
0.12	0.58073	0.42360	0.91222	0.23942
0.16	0.56787	0.56242	0.97992	0.31869
0.20	+ 0.55414	+ 0.69882	+ 1.0666	- 0.39839

$\psi$	$E$	$F$	$\xi$	$\eta$
0.24	+ 0.54179	+ 0.83174	+ 1.1706	- 0.48009
0.28	0.53360	0.95990	1.2890	0.56675
0.32	0.53282	1.08178	1.4165	0.66315
0.36	0.54295	1.19572	1.5447	0.77585
0.40	0.56735	1.29997	1.6621	0.91268
0.44	0.60878	1.39292	1.7535	1.0803
0.48	0.66885	1.47325	1.8015	1.2818
0.52	0.74752	1.54011	1.7893	1.5128
0.56	0.84303	1.59329	1.7040	1.7609
0.60	0.95205	1.63334	1.5418	2.0063
0.64	1.07043	1.66150	1.3090	2.2274
0.68	1.19398	1.67958	1.0210	2.4068
0.72	1.31930	1.68966	0.69707	2.5342
0.76	1.44422	1.69374	0.35495	2.6070
0.80	1.56776	1.69326	+ 0.00853	2.6266
0.84	1.68969	1.68891	- 0.33204	2.5960
0.88	1.80999	1.68045	0.65797	2.5171
0.92	1.92810	1.66681	0.95905	2.3920
0.96	2.04260	1.64640	1.2228	2.2248
1.00	2.15105	1.61730	1.4359	2.0244
1.04	2.25028	1.57781	1.5869	1.8039
1.08	2.33704	1.52663	1.6711	1.5799
1.12	2.40861	1.46307	1.6910	1.3675
1.16	2.46345	1.38705	1.6559	1.1773
1.20	2.50143	1.29915	1.5795	1.0135
1.24	2.52383	1.20045	1.4766	0.87476
1.28	2.53294	1.09234	1.3605	0.75638
1.32	2.53170	0.97637	1.2425	0.65243
1.36	2.52322	0.85411	1.1305	0.55757
1.40	2.51049	0.72701	1.0303	0.46777
1.44	2.49608	0.59633	0.94508	0.38041
1.48	2.48213	0.46312	0.87660	0.29401
1.52	2.47029	0.32821	0.82556	0.20783
1.56	+ 2.46171	+ 0.19223	- 0.79206	- 0.12161

$\psi$	$E$	$F$	$\xi$	$\eta$
1.60	+ 2.45713	+ 0.05570	- 0.77596	- 0.03523
1.64	2.45690	- 0.08097	0.77716	+ 0.05126
1.68	+ 2.46096	- 0.21738	- 0.79561	+ 0.13787

## Bahn 17.

Periodisch (unsymmetrisch).

$$E_0 = + 0.6. \quad F_0 = 0. \quad K = 11.43879.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.60000	0.00000	+ 0.82534	0.00000
0.04	0.59770	+ 0.14174	0.83495	- 0.08004
0.08	0.59100	0.28303	0.86386	0.15982
0.12	0.58060	0.42336	0.91220	0.23923
0.16	0.56761	0.56205	0.97990	0.31834
0.20	0.55373	0.69830	1.06653	0.39779
0.24	0.54117	0.83102	1.17051	0.47909
0.28	0.53270	0.95893	1.28879	0.56516
0.32	0.53155	1.08051	1.41616	0.66065
0.36	0.54117	1.19406	1.54425	0.77206
0.40	0.56489	1.29788	1.66173	0.90696
0.44	0.60539	1.39033	1.75360	1.07193
0.48	0.66418	1.47011	1.80304	1.26974
0.52	0.74117	1.53640	1.79367	1.49638
0.56	0.83452	1.58909	1.71356	1.73948
0.60	0.94089	1.62873	1.55919	1.98024
0.64	1.05619	1.65669	1.33697	2.19850
0.68	1.17632	1.67488	1.06178	2.37767
0.72	1.29809	1.68553	0.75153	2.50876
0.76	1.41957	1.69073	0.42242	2.58965
0.80	1.54009	1.69211	+ 0.08619	2.62212
0.84	1.65991	1.69046	- 0.24946	2.60838
0.88	1.77947	1.68560	0.57810	2.54871
0.92	+ 1.89877	+ 1.67648	- 0.89125	- 2.44229

$\psi$	$E$	$F$	$\xi$	$\eta$
0.96	+ 2.01679	+ 1.66128	- 1.17676	- 2.28974
1.00	2.13125	1.63793	1.41906	2.09643
1.04	2.23883	1.60435	1.60300	1.87370
1.08	2.33566	1.55888	1.71858	1.63889
1.12	2.41820	1.50044	1.76396	1.41010
1.16	2.48396	1.42880	1.74644	1.20235
1.20	2.53199	1.34429	1.67919	1.02333
1.24	2.56291	1.24795	1.57819	0.87400
1.28	2.57875	1.14111	1.45877	0.74993
1.32	2.58236	1.02546	1.33379	0.64454
1.36	2.57715	0.90264	1.21308	0.55116
1.40	2.56627	0.77423	1.10331	0.46464
1.44	2.55268	0.64164	1.00870	0.38137
1.48	2.53883	0.50605	0.93154	0.29929
1.52	2.52666	0.36838	0.87288	0.21736
1.56	2.51755	0.22941	0.83295	0.13523
1.60	2.51243	+ 0.08968	0.81176	- 0.05285
1.64	2.51179	- 0.05132	0.80920	+ 0.03024
1.68	+ 2.51568	- 0.19116	- 0.82528	+ 0.11267

## Bahn 18.

$$E_0 = + 0.6. \quad F_0 = 0. \quad K = 11.44.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.60000	0.00000	+ 0.82534	0.00000
0.04	0.59770	+ 0.14174	0.83493	- 0.08003
0.08	0.59100	0.28303	0.86386	0.15982
0.12	0.58059	0.42335	0.91220	0.23922
0.16	0.56760	0.56204	0.97990	0.31832
0.20	0.55371	0.69828	1.0665	0.39776
0.24	0.54115	0.83100	1.1705	0.47906
0.28	0.53267	0.95890	1.2888	0.56510
0.32	+ 0.53151	+ 1.08047	+ 1.4162	- 0.66057

$\psi$	$E$	$F$	$\xi$	$\eta$
0.36	+ 0.54112	+ 1.19401	+ 1.5443	- 0.77195
0.40	0.56481	1.29782	1.6617	0.90678
0.44	0.60529	1.39025	1.7536	1.0716
0.48	0.66404	1.47001	1.8031	1.2694
0.52	0.74097	1.53628	1.7938	1.4959
0.56	0.83425	1.58896	1.7139	1.7388
0.60	0.94054	1.62859	1.5597	1.9795
0.64	1.05574	1.65654	1.3378	2.1976
0.68	1.17577	1.67474	1.0630	2.3768
0.72	1.29743	1.68540	0.75321	2.5079
0.76	1.41880	1.69064	0.42451	2.5890
0.80	1.53923	1.69207	+ 0.08860	2.6220
0.84	1.65898	1.69050	- 0.24689	2.6087
0.88	1.77852	1.68576	0.57557	2.5496
0.92	1.89785	1.67678	0.88910	2.4439
0.96	2.01599	1.66175	1.1753	2.2919
1.00	2.13063	1.63858	1.4184	2.0987
1.04	2.23847	1.60518	1.6035	1.8760
1.08	2.33561	1.55989	1.7201	1.6407
1.12	2.41850	1.50161	1.7663	1.4114
1.16	2.48460	1.43010	1.7493	1.2031
1.20	2.53294	1.34570	1.6824	1.0236
1.24	2.56412	1.24942	1.5814	0.87390
1.28	2.58018	1.14264	1.4610	0.74962
1.32	2.58395	1.02700	1.3367	0.64419
1.36	2.57884	0.90416	1.2157	0.55086
1.40	2.56801	0.77571	1.1056	0.46444
1.44	2.55445	0.64306	1.0107	0.38132
1.48	2.54060	0.50739	0.93326	0.29939
1.52	2.52842	0.36964	0.87434	0.21760
1.56	2.51929	0.23057	0.83426	0.13559
1.60	2.51416	+ 0.09074	0.81287	- 0.05335
1.64	2.51351	- 0.04936	0.81016	+ 0.02901
1.68	+ 2.51739	- 0.18931	- 0.82600	+ 0.11131

## Bahn 19.

 $E_0 = + 0.6$ .  $F_0 = 0$ .  $K = 11.45$ .

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.600000	0.000000	+ 0.82534	0.00000
0.04	0.597693	+ 0.141724	0.83493	- 0.08002
0.08	0.590989	0.282994	0.86386	0.15979
0.12	0.580556	0.423288	0.91220	0.23918
0.16	0.567539	0.561953	0.97990	0.31824
0.20	0.553609	0.698150	1.0665	0.39764
0.24	0.540983	0.830818	1.1705	0.47879
0.28	0.532448	0.958653	1.2887	0.56469
0.32	0.531194	1.080135	1.4160	0.65991
0.36	0.540673	1.193582	1.5441	0.77096
0.40	0.564188	1.297262	1.6616	0.90530
0.44	0.604418	1.389565	1.7536	1.0695
0.48	0.662831	1.469182	1.8035	1.2663
0.52	0.739330	1.535310	1.7949	1.4916
0.56	0.832043	1.587820	1.7162	1.7332
0.60	0.937652	1.627332	1.5640	1.9726
0.64	1.052043	1.655213	1.3449	2.1898
0.68	1.171173	1.673406	1.0734	2.3687
0.72	1.291865	1.684162	0.76725	2.5006
0.76	1.412254	1.689640	0.44222	2.5836
0.80	1.531784	1.691498	+ 0.10943	2.6197
0.84	1.650825	1.690582	- 0.22413	2.6107
0.88	1.769979	1.686743	0.55274	2.5568
0.92	1.889416	1.678909	0.86868	2.4564
0.96	2.008258	1.665275	1.1600	2.3090
1.00	2.124323	1.643629	1.4107	2.1185
1.04	2.234225	1.611865	1.6047	1.8959
1.08	2.334011	1.568158	1.7303	1.6582
1.12	2.419854	1.511398	1.7842	1.4246
1.16	2.488992	1.441199	1.7727	1.2112
1.20	2.540177	1.357878	1.7089	1.0272
1.24	+ 2.573851	+ 1.262386	- 1.6090	- 0.87402

$\psi$	$E$	$F$	$\xi$	$\eta$
1.28	+ 2.591883	+ 1.156115	- 1.4889	- 0.74784
1.32	2.597155	1.040704	1.3619	0.64171
1.36	2.592982	0.917851	1.2386	0.54876
1.40	2.582705	0.789182	1.1259	0.46328
1.44	2.569355	0.656138	1.0282	0.38136
1.48	2.555489	0.519938	0.9482	0.30077
1.52	2.543118	0.381561	0.88710	0.22022
1.56	2.533729	0.241780	0.84496	0.13944
1.60	2.528298	+ 0.101190	0.82194	- 0.05834
1.64	2.527354	- 0.039714	0.81784	+ 0.02289
1.68	+ 2.530986	- 0.180498	- 0.83270	+ 0.10405

## Bahn 20.

Periodisch (symmetrisch).

$$E_0 = + 0.6. F_0 = 0. K = 11.46117.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.600000	0.000000	+ 0.82534	0.00000
0.04	0.597688	+ 0.141703	0.83495	- 0.08001
0.08	0.590971	0.282951	0.86386	0.15976
0.12	0.580516	0.423217	0.91220	0.23911
0.16	0.567470	0.561848	0.97990	0.31814
0.20	0.553492	0.698002	1.06650	0.39744
0.24	0.540809	0.830614	1.17041	0.47852
0.28	0.532192	0.958379	1.28864	0.56424
0.32	0.530834	1.079773	1.41593	0.65921
0.36	0.540172	1.193113	1.54396	0.76990
0.40	0.563495	1.296669	1.66138	0.90370
0.44	0.603457	1.388830	1.75360	1.06712
0.48	0.661513	1.468293	1.80383	1.26288
0.52	0.737538	1.534265	1.79613	1.48693
0.56	0.829649	1.586625	1.71885	1.72720
0.60	+ 0.934512	+ 1.626015	+ 1.56881	- 1.96527

$\psi$	$E$	$F$	$\xi$	$\eta$
0.64	+ 1.048050	+ 1.653823	+ 1.35256	- 2.18153
0.68	1.166214	1.672024	1.08460	2.36021
0.72	1.285882	1.682906	0.78238	2.49294
0.76	1.405257	1.688666	0.46114	2.57800
0.80	1.523872	1.691006	+ 0.13158	2.61741
0.84	1.642214	1.690809	- 0.20010	2.61306
0.88	1.761040	1.687959	0.52885	2.56465
0.92	+ 1.880706	+ 1.681385	- 0.84772	- 2.46989

Bahn 21.

 $E_0 = + 0.6$ .  $F_0 = 0$ .  $K = 11.48$ .

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.600000	0.000000	+ 0.82534	0.00000
0.04	0.597681	+ 0.141669	0.83495	- 0.07999
0.08	0.590942	0.282879	0.86388	0.15972
0.12	0.580448	0.423099	0.91220	0.23902
0.16	0.567343	0.561672	0.97988	0.31796
0.20	0.553294	0.697752	1.0665	0.39714
0.24	0.540515	0.830270	1.1704	0.47803
0.28	0.531761	0.957917	1.2885	0.56347
0.32	0.530227	1.079163	1.4157	0.65803
0.36	0.539327	1.192323	1.5437	0.76808
0.40	0.562325	1.295669	1.6612	0.90098
0.44	0.601836	1.387591	1.7536	1.0631
0.48	0.659290	1.466795	1.8045	1.2571
0.52	0.734516	1.532502	1.7982	1.4791
0.56	0.825612	1.584610	1.7232	1.7170
0.60	0.929243	1.623792	1.5767	1.9529
0.64	1.041313	1.651478	1.3654	2.1676
0.68	1.157848	1.669694	1.1034	2.3458
0.72	1.275791	1.680786	0.80770	2.4798
0.76	+ 1.393453	+ 1.687023	+ 0.49294	- 2.5682

$\psi$	$E$	$F$	$\xi$	$\eta$
0.80	+ 1.510527	+ 1.690176	+ 0.16880	- 2.6132
0.84	1.627691	1.691193	- 0.15953	2.6166
0.88	1.745964	1.690011	0.48832	2.5775
0.92	1.866014	1.685562	0.81188	2.4924
0.96	1.987208	1.675960	1.1186	2.3580
1.00	2.107752	1.658824	1.3922	2.1752
1.04	2.224140	1.631732	1.6133	1.9522
1.08	2.332224	1.592623	1.7663	1.7058
1.12	2.427312	1.540098	1.8434	1.4578
1.16	2.505894	1.473533	1.8482	1.2277
1.20	2.565945	1.393104	1.7933	1.0286
1.24	2.607264	1.299675	1.6957	0.86460
1.28	2.631410	1.194637	1.5730	0.73238
1.32	2.641123	1.079664	1.4404	0.62473
1.36	2.639843	0.956548	1.3094	0.53350
1.40	2.631111	0.827015	1.1883	0.45174
1.44	2.618246	0.692614	1.0823	0.37451
1.48	2.604082	0.554673	0.99454	0.29878
1.52	2.590897	0.414265	0.92632	0.22304
1.56	2.580383	0.272234	0.87818	0.14668
1.60	2.573697	+ 0.129254	0.85008	- 0.06971
1.64	2.571483	- 0.014151	0.84192	+ 0.00764
1.68	+ 2.573930	- 0.157507	- 0.85365	+ 0.08504

## Bahn 22.

$$E_0 = + 0.7. \quad F_0 = 0. \quad K = 10.0.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.700000	0.000000	+ 0.76484	0.00000
0.02	0.699610	+ 0.069547	0.76695	- 0.04482
0.04	0.698452	0.139078	0.77325	0.08972
0.06	0.696564	0.208578	0.78380	0.13479
0.08	+ 0.694012	+ 0.278025	+ 0.79858	- 0.18013

$\psi$	$E$	$F$	$\xi$	$\eta$
0.10	+ 0.690888	+ 0.347393	+ 0.81768	- 0.22587
0.12	0.687314	0.416650	0.84100	0.27206
0.14	0.683443	0.485756	0.86870	0.31894
0.16	0.679460	0.554659	0.90068	0.36668
0.18	0.675590	0.623297	0.93688	0.41552
0.20	0.672094	0.691593	0.97724	0.46578
0.22	0.669277	0.759458	1.0215	0.51780
0.24	0.667488	0.826787	1.0694	0.57214
0.26	0.667121	0.893459	1.1206	0.62934
0.28	0.668618	0.959334	1.1743	0.69020
0.30	0.672467	1.024256	1.2297	0.75560
0.32	0.679203	1.088052	1.2859	0.82655
0.34	0.689400	1.150529	1.3412	0.90432
0.36	0.703664	1.211476	1.3939	0.99015
0.38	0.722625	1.270666	1.4416	1.0855
0.40	0.746920	1.327854	1.4815	1.1916
0.42	0.777171	1.382775	1.5102	1.3097
0.44	0.813967	1.435144	1.5237	1.4403
0.46	0.857830	1.484659	1.5175	1.5835
0.48	0.909182	1.530991	1.4866	1.7384
0.50	0.968308	1.573787	1.4258	1.9023
0.52	1.035314	1.612671	1.3306	2.0713
0.54	1.110084	1.647238	1.1971	2.2393
0.56	1.192244	1.677072	1.0231	2.3987
0.58	1.281133	1.701748	0.8091	2.5402
0.60	1.375788	1.720861	0.5591	2.6539
0.62	1.474959	1.734052	+ 0.2794	2.7309
0.64	1.577147	1.741037	- 0.0186	2.7639
0.66	1.680673	1.741638	0.3224	2.7491
0.68	1.783774	1.735795	0.6182	2.6864
0.70	+ 1.884706	+ 1.723581	- 0.8928	- 2.5805

## Bahn 23.

 $E_0 = +0.7, F_0 = 0, K = 10.1.$ 

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.70000	0.00000	+ 0.76484	0.00000
0.02	0.69960	+ 0.06943	0.76695	- 0.04474
0.04	0.69842	0.13884	0.77325	0.08957
0.06	0.69648	0.20821	0.78380	0.13454
0.08	0.69386	0.27751	0.79857	0.17976
0.10	0.69064	0.34673	0.81764	0.22534
0.12	0.68694	0.41583	0.84098	0.27137
0.14	0.68292	0.48475	0.86870	0.31803
0.16	0.67876	0.55346	0.90062	0.36549
0.18	0.67468	0.62188	0.93685	0.41399
0.20	0.67094	0.68994	0.97718	0.46380
0.22	0.66785	0.75754	1.0214	0.51532
0.24	0.66574	0.82458	1.0693	0.56901
0.26	0.66501	0.89093	1.1204	0.62544
0.28	0.66608	0.95645	1.1742	0.68532
0.30	0.66943	1.02097	1.2296	0.74948
0.32	0.67559	1.08434	1.2858	0.81903
0.34	0.68511	1.14634	1.3413	0.89500
0.36	0.69857	1.20677	1.3944	0.97867
0.38	0.71658	1.26541	1.4427	1.0714
0.40	0.73975	1.32201	1.4838	1.1744
0.42	0.76867	1.37632	1.5142	1.2889
0.44	0.80389	1.42806	1.5302	1.4152
0.46	0.84590	1.47696	1.5276	1.5537
0.48	0.89510	1.52269	1.5019	1.7035
0.50	0.95175	1.56494	1.4482	1.8623
0.52	1.01593	1.60337	1.3621	2.0265
0.54	1.08753	1.63762	1.2401	2.1909
0.56	1.16620	1.66731	1.0799	2.3483
0.58	1.25133	1.69207	0.8817	2.4905
0.60	1.34203	1.71154	0.6483	2.6086
0.62	+ 1.43718	+ 1.72541	+ 0.3858	- 2.6941

$\psi$	$E$	$F$	$\xi$	$\eta$
0.64	+ 1.53540	+ 1.73342	+ 0.1032 ·	— 2.7399
0.66	1.63516	1.73539	— 0.1880 ·	2.7417
0.68	1.73485	1.73125	0.4756 ·	2.6986
0.70	+ 1.83283	+ 1.72105	— 0.7472 ·	— 2.6134

## Bahn 24.

Periodisch (Libration um  $L_1$ ). $E_0 = + 0.7$ .  $F_0 = 0$ .  $K = 10.4232$ .

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.70000	0.00000	+ 0.76484	0.00000
0.02	0.69962	+ 0.06386	0.76663	— 0.04115
0.04	0.69849	0.12770	0.77206	0.08234
0.06	0.69664	0.19149	0.78110	0.12362
0.08	0.69410	0.25523	0.79377	0.16505
0.10	0.69096	0.31884	0.81014	0.20665
0.12	0.68730	0.38234	0.83014	0.24853
0.14	0.68322	0.44565	0.85382	0.29074
0.16	0.67884	0.50874	0.88122	0.33338
0.18	0.67434	0.57155	0.91222	0.37661
0.20	0.66989	0.63402	0.94680	0.42057
0.22	0.66570	0.69608	0.98483	0.46547
0.24	0.66202	0.75760	1.02614	0.51155
0.26	0.65909	0.81852	1.07049	0.55913
0.28	0.65721	0.87875	1.11756	0.60866
0.30	0.65672	0.93811	1.16684	0.66053
0.32	0.65794	0.99651	1.21775	0.71533
0.34	0.66124	1.05381	1.26959	0.77373
0.36	0.66704	1.10984	1.32130	0.83648
0.38	0.67571	1.16444	1.37181	0.90442
0.40	0.68766	1.21746	1.41974	0.97832
0.42	0.70329	1.26872	1.46347	1.05905
0.44	+ 0.72298	+ 1.31806	+ 1.50113	— 1.14742

$\psi$	$E$	$F$	$\xi$	$\eta$
0.46	+ 0.74709	+ 1.36529	+ 1.53048	- 1.24400
0.48	0.77592	1.41024	1.54925	1.34925
0.50	0.80974	1.45274	1.55482	1.46307
0.52	0.84873	1.49265	1.54446	1.58496
0.54	0.89301	1.52975	1.51552	1.71388
0.56	0.94260	1.56391	1.46531	1.84804
0.58	0.99743	1.59501	1.39174	1.98486
0.60	1.05729	1.62284	1.29312	2.12100
0.62	1.12187	1.64728	1.16865	2.25237
0.64	1.19080	1.66819	1.01840	2.37461
0.66	1.26352	1.68544	0.84390	2.48267
0.68	1.33941	1.69891	0.64796	2.57212
0.70	1.41776	1.70851	0.43460	2.63859
0.72	1.49775	1.71414	+ 0.20918	2.67869
0.74	1.57852	1.71577	- 0.02223	2.69056
0.76	1.65921	1.71338	0.25287	2.67325
0.78	1.73888	1.70699	0.47624	2.62782
0.80	+ 1.81671	+ 1.69665	- 0.68636	- 2.55682

## Bahn 25.

$$E_0 = + 0.7. \quad F_0 = 0. \quad K = 10.9.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.70000	0.00000	+ 0.76484	0.00000
0.02	0.69951	+ 0.06846	0.76695	- 0.04408
0.04	0.69805	0.13687	0.77327	0.08824
0.06	0.69567	0.20522	0.78384	0.13245
0.08	0.69241	0.27345	0.79866	0.17675
0.10	0.68837	0.34151	0.81777	0.22120
0.12	0.68367	0.40936	0.84112	0.26585
0.14	0.67843	0.47692	0.86880	0.31077
0.16	0.67283	0.54412	0.90072	0.35609
0.18	+ 0.66706	+ 0.61088	+ 0.93687	- 0.40188

$\psi$	$E$	$F$	$\xi$	$\eta$
0.20	+ 0.66136	+ 0.67711	+ 0.97710	- 0.44838
0.22	0.65599	0.74268	1.0212	0.49580
0.24	0.65127	0.80746	1.0690	0.54442
0.26	0.64752	0.87132	1.1200	0.59467
0.28	0.64511	0.93408	1.1737	0.64697
0.30	0.64444	0.99557	1.2297	0.70190
0.32	0.64592	1.05562	1.2864	0.76017
0.34	0.64999	1.11405	1.3433	0.82256
0.36	0.65712	1.17064	1.3991	0.88998
0.38	0.66774	1.22519	1.4521	0.96322
0.40	0.68227	1.27750	1.5005	1.0432
0.42	0.70112	1.32735	1.5421	1.1308
0.44	0.72462	1.37455	1.5747	1.2264
0.46	0.75306	1.41892	1.5959	1.3304
0.48	0.78662	1.46028	1.6029	1.4425
0.50	0.82539	1.49848	1.5934	1.5620
0.52	0.86937	1.53339	1.5648	1.6876
0.54	0.91842	1.56490	1.5151	1.8170
0.56	0.97229	1.59292	1.4427	1.9476
0.58	1.03060	1.61741	1.3471	2.0761
0.60	1.09289	1.63833	1.2282	2.1987
0.62	1.15860	1.65568	1.0872	2.3115
0.64	1.22710	1.66950	0.92630	2.4108
0.66	1.29770	1.67981	0.74857	2.4931
0.68	1.36970	1.68670	0.55797	2.5557
0.70	1.44240	1.69024	0.35939	2.5966
0.72	1.51509	1.69050	+ 0.15608	2.6148
0.74	1.58710	1.68759	- 0.04558	2.6104
0.76	1.65779	1.68160	0.24156	2.5842
0.78	1.72658	1.67259	0.42775	2.5379
0.80	+ 1.79292	+ 1.66066	- 0.60061	- 2.4741

$\eta$	$E$	$F$	$\zeta$	$\eta$
0.00	+ 0.700000	0.000000	+ 0.76484	0.00000
0.02	0.699480	+ 0.068094	- 0.76695	- 0.04387
0.04	0.697930	0.136145	0.77328	0.08776
0.06	0.695384	0.204108	0.78384	0.13168
0.08	0.691902	0.271934	0.79870	0.17564
0.10	0.687566	0.339568	0.81777	0.21968
0.12	0.682485	0.406948	0.84116	0.26382
0.14	0.676793	0.474003	0.86880	0.30811
0.16	0.670655	0.540651	0.90072	0.35262
0.18	0.664264	0.606798	0.93683	0.39746
0.20	0.657843	0.672388	0.97702	0.44275
0.22	0.651649	0.737150	1.0210	0.48869
0.24	0.645969	0.801098	1.0687	0.53549
0.26	0.641119	0.864034	1.1196	0.58351
0.28	0.637446	0.925793	1.1732	0.63314
0.30	0.635320	0.986201	1.2291	0.68483
0.32	0.635132	1.045070	1.2860	0.73922
0.34	0.637281	1.10208	1.3434	0.79693
0.36	0.642172	1.157413	1.3998	0.85870
0.38	0.650198	1.210484	1.4539	0.92528
0.40	0.661729	1.261225	1.5042	0.99742
0.42	0.677097	1.309443	1.5487	1.0758
0.44	0.696581	1.354960	1.5857	1.1609
0.46	0.720391	1.397618	1.6131	1.2529
0.48	0.748656	1.437279	1.6289	1.3517
0.50	0.781414	1.473833	1.6311	1.4568
0.52	0.818605	1.507203	1.6178	1.5672
0.54	0.860069	1.537346	1.5877	1.6815
0.56	0.905552	1.564254	1.5396	1.7977
0.58	0.954718	1.587960	1.4730	1.9137
0.60	1.007159	1.608530	1.3879	2.0268
0.62	+ 1.062417	+ 1.626064	+ 1.2852	- 2.1345

$$E_0 = + 0.7, F_0 = 0, K = 11.2.$$

Bahn 26.

$\psi$	$E$	$F$	$\xi$	$\eta$
0.64	+ 1.120006	+ 1.640696	+ 1.1660	- 2.2345
0.66	1.179431	1.652579	1.0322	2.3245
0.68	1.240213	1.661886	0.88598	2.4022
0.70	1.301898	1.668797	0.72983	2.4667
0.72	1.364079	1.673490	0.56630	2.5169
0.74	1.426393	1.676130	0.39803	2.5520
0.76	1.488527	1.676864	0.22745	2.5722
0.78	1.550209	1.675807	+ 0.05694	2.5775
0.80	1.611206	1.673042	- 0.11142	2.5682
0.82	1.671304	1.668613	0.27560	2.5452
0.84	1.730306	1.662529	0.43381	2.5092
0.86	+ 1.788012	+ 1.654760	- 0.58436	- 2.4611

Bahn 27.

Periodisch (symmetrisch).

$$E_0 = + 0.7, \quad F_0 = 0, \quad K = 11.35336.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.700000	0.000000	+ 0.76484	0.00000
0.04	0.697862	+ 0.135767	0.77330	- 0.08751
0.08	0.691632	0.271156	0.79870	0.17507
0.12	0.681867	0.405703	0.84116	0.26275
0.16	0.669531	0.538860	0.90074	0.35084
0.20	0.656029	0.669887	0.97700	0.43988
0.24	0.643239	0.797841	1.06861	0.53095
0.28	0.633512	0.921558	1.17311	0.62609
0.32	0.629608	1.039668	1.28588	0.72858
0.36	0.634539	1.150647	1.39994	0.84290
0.40	0.651285	1.252913	1.50564	0.97443
0.44	0.682405	1.344964	1.59041	1.12811
0.48	0.729586	1.425545	1.64019	1.30638
0.52	0.793265	1.493815	1.64104	1.50707
0.56	+ 0.872438	+ 1.549493	+ 1.58215	- 1.72200

$\psi$	$E$	$F$	$\xi$	$\eta$
0.60	+ 0.964784	+ 1.592938	+ 1.45860	- 1.93768
0.62	1.014917	1.610362	1.37319	2.04071
0.64	1.067113	1.625146	1.27326	2.13795
0.66	1.120945	1.637494	1.16030	2.22775
0.68	1.176012	1.647632	1.03598	2.30872
0.70	1.231964	1.655792	0.90214	2.37968
0.72	1.288503	1.662207	0.76055	2.44006
0.74	1.345400	1.667097	0.61299	2.48939
0.76	1.402487	1.670664	0.46100	2.52753
0.78	1.459657	1.673069	0.30591	2.55453
0.80	1.516853	1.674438	+ 0.14891	2.57047
0.82	1.574054	1.674851	- 0.00900	2.57535
0.84	1.631259	1.674333	0.16685	2.56929
0.86	+ 1.688467	+ 1.672859	- 0.32374	- 2.55206

## Bahn 28.

$$E_0 = + 0.7, F_0 = 0, K = 11.4.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.700000	0.000000	+ 0.76484	0.00000
0.04	0.697842	+ 0.135652	0.77332	- 0.08743
0.08	0.691549	0.270912	0.79868	0.17489
0.12	0.681679	0.405324	0.84116	0.26245
0.16	0.669189	0.538316	0.90074	0.35030
0.20	0.655477	0.669142	0.97695	0.43899
0.24	0.642409	0.796851	1.0686	0.52956
0.28	0.632316	0.920270	1.1730	0.62399
0.32	0.627928	1.038025	1.2858	0.72537
0.36	0.632217	1.148589	1.4000	0.83812
0.40	0.648109	1.250385	1.5060	0.96747
0.44	0.678093	1.341925	1.5917	1.1182
0.48	0.723787	1.421977	1.6434	1.2927
0.52	+ 0.785559	+ 1.489744	+ 1.6478	- 1.4889

$\psi$	$E$	$F$	$\xi$	$\eta$
0.56	+ 0.862367	+ 1.545004	+ 1.5945	- 1.6990
0.60	0.951897	1.588196	1.4791	1.9103
0.64	1.051028	1.620417	1.3045	2.1080
0.68	1.156489	1.643297	1.0800	2.2788
0.70	1.210696	1.651837	0.95284	2.3513
0.72	1.265520	1.658776	0.81798	2.4142
0.74	1.320769	1.664351	0.67691	2.4672
0.76	1.376321	1.668778	0.53089	2.5104
0.78	1.432119	1.672236	0.38096	2.5434
0.80	1.488159	1.674863	0.22803	2.5666
0.82	1.544479	1.676748	+ 0.07282	2.5798
0.84	1.601137	1.677923	- 0.08404	2.5826
0.86	1.658194	1.678363	0.24194	2.5752
0.88	1.715694	1.677986	0.40008	2.5569
0.90	+ 1.773643	+ 1.676656	- 0.55750	- 2.5274

Bahn 29.

 $E_0 = + 0.8. F_0 = 0. K = 9.7.$ 

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.800000	0.000000	+ 0.69671	0.00000
0.04	0.798887	+ 0.134201	0.70380	- 0.09645
0.08	0.795733	0.268333	0.72510	0.19400
0.12	0.791105	0.402268	0.76072	0.29385
0.16	0.785987	0.535774	0.81057	0.39746
0.20	0.781851	0.668454	0.87414	0.50686
0.24	0.780726	0.799698	0.94992	0.62476
0.28	0.785281	0.928623	1.03467	0.75508
0.32	0.798846	1.054030	1.12226	0.90310
0.36	0.825382	1.174366	1.20230	1.0754
0.40	0.869261	1.287675	1.25820	1.2789
0.44	0.934838	1.391576	1.26803	1.5175
0.48	+ 1.025686	+ 1.483223	+ 1.20142	- 1.7872

$\psi$	$E$	$F$	$\xi$	$\eta$
0.52	+ 1.143512	+ 1.559346	+ 1.02895	- 2.0684
0.56	1.28697	1.61639	0.73277	2.3214
0.60	1.45061	1.65097	+ 0.32395	2.4920
0.64	1.62503	1.66052	- 0.14745	2.5323
0.68	+ 1.79839	+ 1.64420	- 0.60584	- 2.4276

## Bahn 30.

$$E_0 = + 0.8, F_0 = 0, K = 9.9.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.800000	0.000000	+ 0.69671	0.00000
0.04	0.798795	+ 0.133582	0.70380	- 0.09600
0.08	0.795359	0.267059	0.72502	0.19298
0.12	0.790239	0.400270	0.76080	0.29205
0.16	0.784407	0.532947	0.81072	0.39455
0.20	0.779280	0.664657	0.87444	0.50225
0.24	0.776824	0.794754	0.95048	0.61767
0.28	0.779601	0.922330	1.03569	0.74413
0.32	0.790789	1.046179	1.12455	0.88702
0.36	0.814125	1.164757	1.20725	1.0518
0.40	0.853693	1.276181	1.26909	1.2451
0.44	0.913502	1.378212	1.28909	1.4708
0.48	0.996800	1.468269	1.24129	1.7262
0.52	1.10514	1.54348	1.09882	1.9958
0.56	1.23736	1.60081	0.84422	2.2467
0.60	1.38883	1.63740	0.48283	2.4328
0.64	1.55140	1.65110	+ 0.05223	2.5100
0.68	1.71469	1.64101	- 0.38391	2.4577
0.72	+ 1.86816	+ 1.60795	- 0.76075	- 2.2909

## Bahn 31.

$$E_0 = +0.8, F_0 = 0, K = 10.0.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.800000	0.000000	+ 0.69671	0.00000
0.04	0.798749	+ 0.133270	0.70382	- 0.09577
0.08	0.795172	0.266418	0.72515	0.19248
0.12	0.789812	0.399265	0.76083	0.29116
0.16	0.783618	0.531527	0.81080	0.39310
0.20	0.777997	0.662752	0.87456	0.49997
0.24	0.774879	0.792279	0.95072	0.61413
0.28	0.776772	0.919186	1.03629	0.73898
0.32	0.786781	1.042258	1.12567	0.87906
0.36	0.808534	1.159966	1.20961	1.0402
0.40	0.845980	1.270454	1.27400	1.2284
0.44	0.902959	1.371552	1.29897	1.4477
0.48	0.982563	1.460805	1.25997	1.6960
0.52	1.086258	1.535525	1.13167	1.9593
0.56	1.212966	1.592932	0.89688	2.2081
0.60	1.358374	1.630442	0.55891	2.4000
0.64	1.51499	1.64609	+ 0.15003	2.4930
0.68	1.67310	1.63906	- 0.27290	2.4652
0.72	+ 1.82276	+ 1.60997	- 0.64850	- 2.3256

## Bahn 32.

$$E_0 = +0.8, F_0 = 0, K = 10.5.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	0.79852	+ 0.13170	0.70383	- 0.09461
0.08	0.79423	0.26320	0.72525	0.18993
0.12	0.78765	0.39423	0.76105	0.28668
0.16	0.77967	0.52441	0.81120	0.38582
0.20	+ 0.77158	+ 0.65322	+ 0.87526	- 0.48857

$\psi$	$E$	$F$	$\xi$	$\eta$
0.24	+ 0.76516	+ 0.77990	+ 0.95196	- 0.59665
0.28	0.76266	0.90349	1.0387	0.71262
0.32	0.76684	1.02273	1.1307	0.83998
0.36	0.78084	1.13615	1.2203	0.98322
0.40	0.80794	1.24201	1.2961	1.1471
0.44	0.85124	1.33849	1.3430	1.3353
0.48	0.91312	1.42364	1.3427	1.5478
0.52	0.99457	1.49560	1.2767	1.7768
0.56	1.09482	1.55272	1.1309	2.0055
0.60	1.21081	1.59365	0.90265	2.2080
0.64	1.33750	1.61760	0.60561	2.3557
0.68	1.46842	1.62438	+ 0.26941	2.4263
0.72	1.59657	1.61460	- 0.06733	2.4127
0.76	1.71566	1.58938	0.36846	2.3237
0.80	1.82058	1.55035	0.60877	2.1806
0.84	1.90832	1.49927	0.77848	2.0075
0.88	1.97723	1.43783	0.87942	1.8252
0.92	2.02746	1.36771	0.92183	1.6477
0.96	2.06009	1.29034	0.91870	1.4824
1.00	2.07688	1.20719	0.88300	1.3317
1.04	2.08005	1.11957	0.82634	1.1949
1.08	2.07186	1.02871	0.75776	1.0700
1.12	2.05445	0.93574	0.68393	0.95472
1.16	2.02973	0.84169	0.60940	0.84692
1.20	1.99922	0.74746	0.53701	0.74498
1.24	1.96420	0.65384	0.46824	0.64784
1.28	+ 1.92541	+ 0.56148	- 0.40341	- 0.55465

## Bahn 33.

$$E_0 = + 0.8, F_0 = 0, K = 11.3.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	+ 0.79814	+ 0.12915	+ 0.70387	- 0.09274

$\psi$	$E$	$F$	$\xi$	$\eta$
0.08	+ 0.79272	+ 0.25798	+ 0.72540	- 0.18580
0.12	0.78419	0.38607	0.76138	0.27949
0.16	0.77334	0.51293	0.81180	0.37422
0.20	0.76132	0.63789	0.87630	0.47053
0.24	0.74966	0.76011	0.95374	0.56926
0.28	0.74027	0.87850	1.0420	0.67177
0.32	0.73540	0.99180	1.1372	0.77998
0.36	0.73752	1.09856	1.2336	0.89654
0.40	0.74905	1.19726	1.3230	1.0245
0.44	0.77211	1.28642	1.3956	1.1663
0.48	0.80811	1.36475	1.4405	1.3228
0.52	0.85739	1.43133	1.4473	1.4916
0.56	0.91914	1.48572	1.4085	1.6664
0.60	0.99130	1.52812	1.3215	1.8377
0.64	1.07104	1.55935	1.1899	1.9948
0.68	1.15523	1.58081	1.0223	2.1285
0.72	1.24098	1.59433	0.83040	2.2338
0.76	1.32618	1.60190	0.62530	2.3096
0.80	1.40965	1.60542	0.41560	2.3586
0.84	1.49120	1.60649	+ 0.20617	2.3847
0.88	1.57134	1.60612	- 0.00141	2.3914
0.92	1.65102	1.60473	0.20746	2.3801
0.96	1.73121	1.60203	0.41246	2.3502
1.00	1.81250	1.59707	0.61526	2.2992
1.04	1.89482	1.58840	0.81190	2.2238
1.08	1.97721	1.57420	0.99502	2.1217
1.12	2.05779	1.55256	1.1548	1.9937
1.16	2.13402	1.52170	1.2810	1.8440
1.20	2.20296	1.48022	1.3654	1.6806
1.24	2.26203	1.42726	1.4048	1.5129
1.28	2.30926	1.36256	1.4009	1.3497
1.32	2.34378	1.28648	1.3603	1.1968
1.36	+ 2.36588	+ 1.19981	- 1.2924	- 1.0567

$\psi$	$E$	$F$	$\xi$	$\eta$
1.40	+ 2.37676	+ 1.10377	- 1.2075	- 0.92918
1.44	2.37840	0.99978	1.1149	0.81212
1.48	2.37306	0.88929	1.0224	0.70288
1.52	2.36306	0.77370	0.93590	0.59917
1.56	2.35057	0.65429	0.85918	0.49911
1.60	2.33745	0.53209	0.79426	0.40157
1.64	2.32516	0.40799	0.74263	0.30562
1.68	2.31487	0.28266	0.70453	0.21075
1.72	2.30735	0.15660	0.67998	0.11648
1.76	2.30309	+ 0.03021	0.66888	- 0.02247
1.80	2.30228	- 0.09617	0.67107	+ 0.07168
1.84	2.30483	0.22224	0.68648	0.16637
1.88	2.31038	0.34762	0.71515	0.26201
1.92	2.31826	0.47184	0.75687	0.35904
1.96	2.32752	0.59429	0.81138	0.45798
2.00	2.33683	0.71418	0.87772	0.55956
2.04	2.34457	0.83046	0.95400	0.66472
2.08	2.34880	0.94191	1.0369	0.77464
2.12	2.34740	1.04712	1.1215	0.89108
2.16	2.33825	1.14452	1.2009	1.0157
2.20	2.31956	1.23258	1.2667	1.1495
2.24	2.29011	1.30992	1.3098	1.2924
2.28	2.24971	1.37540	1.3215	1.4414
2.32	2.19925	1.42845	1.2969	1.5906
2.36	2.14077	1.46904	1.2345	1.7322
2.40	2.07720	1.49789	1.1388	1.8577
2.44	2.01176	1.51634	1.0190	1.9606
2.48	1.94754	1.52629	0.88638	2.0382
2.52	1.88689	1.53002	0.75148	2.0919
2.56	1.83123	1.52996	0.62243	2.1265
2.60	1.78088	1.52831	0.50334	2.1484
2.64	1.73524	1.52716	0.39472	2.1644
2.68	+ 1.69285	- 1.52812	- 0.29383	+ 2.1800

$\psi$	$E$	$F$	$\xi$	$\eta$
2.72	+ 1.65167	- 1.53237	- 0.19570	+ 2.1994
2.76	1.60915	1.54060	0.09361	2.2250
2.80	1.56247	1.55291	+ 0.02055	2.2567
2.84	1.50870	1.56878	0.15542	2.2918
2.88	1.44507	1.58702	0.31934	2.3238
2.92	1.36934	1.60568	0.51843	2.3419
2.96	1.28028	1.62211	0.75353	2.3312
3.00	+ 1.17818	- 1.63304	+ 1.0167	+ 2.2747

Bahn 34.

Periodisch (symmetrisch).

 $E_0 = + 0.8$ .  $F_0 = 0$ .  $K = 11.31144$ .

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	0.79814	+ 0.12912	0.70386	- 0.09271
0.08	0.79270	0.25790	0.72539	0.18573
0.12	0.78414	0.38595	0.76138	0.27938
0.16	0.77325	0.51276	0.81180	0.37405
0.20	0.76117	0.63767	0.87629	0.47027
0.24	0.74944	0.75982	0.95376	0.56887
0.28	0.73995	0.87815	1.04203	0.67118
0.32	0.73496	0.99136	1.13725	0.77913
0.36	0.73691	1.09803	1.23367	0.89535
0.40	0.74822	1.19663	1.32331	1.02279
0.44	0.77101	1.28568	1.39625	1.16399
0.48	0.80667	1.36391	1.44164	1.31973
0.52	0.85552	1.43041	1.44925	1.48764
0.56	0.91675	1.48475	1.41160	1.66158
0.60	0.98833	1.52713	1.32628	1.83214
0.64	1.06743	1.55841	1.19670	1.98878
0.68	1.15094	1.58000	1.03147	2.12259
0.72	1.23603	1.59374	0.84194	2.22850
0.76	+ 1.32064	+ 1.60165	+ 0.63905	- 2.30576

$\psi$	$E$	$F$	$\xi$	$\eta$
0.80	+ 1.40364	+ 1.60569	+ 0.43108	- 2.35697
0.84	1.48489	1.60739	0.22266	2.38584
0.88	1.56503	1.60787	+ 0.01497	2.39587
0.92	1.64510	1.60750	- 0.19268	2.38837
0.96	+ 1.72620	+ 1.60602	- 0.40116	- 2.36233

## Bahn 35.

$$E_0 = + 0.8. \quad F_0 = 0. \quad K = 11.4.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	0.79809	+ 0.12883	0.70387	- 0.09251
0.08	0.79253	0.25732	0.72543	0.18527
0.12	0.78376	0.38504	0.76143	0.27859
0.16	0.77255	0.51149	0.81188	0.37278
0.20	0.76004	0.63598	0.87638	0.46830
0.24	0.74772	0.75764	0.95396	0.56590
0.28	0.73748	0.87540	1.0423	0.66676
0.32	0.73151	0.98796	1.1379	0.77270
0.36	0.73217	1.09391	1.2349	0.88608
0.40	0.74184	1.19173	1.3257	1.0098
0.44	0.76250	1.27999	1.4009	1.1462
0.48	0.79546	1.35746	1.4502	1.2959
0.52	0.84102	1.42330	1.4640	1.4571
0.56	0.89828	1.47719	1.4356	1.6241
0.60	0.96533	1.51948	1.3627	1.7888
0.64	1.03946	1.55110	1.2487	1.9418
0.68	1.11777	1.57368	1.1011	2.0757
0.72	1.19776	1.58916	0.93000	2.1863
0.76	1.27771	1.59975	0.74448	2.2737
0.80	1.35700	1.60757	0.55070	2.3406
0.84	1.43606	1.61436	0.35084	2.3909
0.88	+ 1.51621	+ 1.62136	+ 0.14338	- 2.4276

$\psi$	$E$	$F$	$\xi$	$\eta$
0.92	+ 1.59933	+ 1.62899	- 0.07553	- 2.4503
0.96	1.68742	1.63693	0.31033	2.4556
1.00	1.78212	1.64392	0.56306	2.4357
1.04	1.88411	1.64792	0.83040	2.3801
1.08	1.99263	1.64632	1.1015	2.2786
1.12	2.10518	1.63615	1.3573	2.1259
1.16	2.21751	1.61469	1.5743	1.9262
1.20	2.32440	1.57966	1.7310	1.6945
1.24	2.42037	1.52964	1.8149	1.4526
1.28	2.50113	1.46422	1.8262	1.2231
1.32	2.56399	1.38373	1.7763	1.0208
1.36	2.60846	1.28934	1.6818	0.85252
1.40	2.63590	1.18269	1.5614	0.71613
1.44	2.64905	1.06567	1.4306	0.60486
1.48	2.65137	0.94028	1.3018	0.51088
1.52	2.64645	0.80835	1.1834	0.42732
1.56	2.63758	0.67153	1.0806	0.34924
1.60	2.62763	0.53118	0.99660	0.27359
1.64	2.61883	0.38839	0.93260	0.19883
1.68	2.61284	0.24402	0.88926	0.12433
1.72	2.61075	+ 0.09872	0.86658	- 0.05006
1.76	2.61315	- 0.04696	0.86455	+ 0.02368
1.80	2.62012	0.19256	0.88320	0.09652
1.84	2.63125	0.33759	0.92276	0.16806
1.88	2.64562	0.48146	0.98332	0.23807
1.92	2.66176	0.62345	1.0651	0.30681
1.96	2.67756	0.76263	1.1672	0.37539
2.00	2.69029	0.89784	1.2876	0.44636
2.04	2.69660	1.02769	1.4227	0.52447
2.08	2.69267	1.15053	1.5660	0.61700
2.12	2.67453	1.26460	1.7072	0.73377
2.16	2.63845	1.36810	1.8320	0.88560
2.20	2.58171	1.45939	1.9216	1.0810
2.24	+ 2.50300	- 1.53723	- 1.9538	+ 1.3223

$\psi$	$E$	$F$	$\xi$	$\eta$
2.28	+ 2.40310	- 1.60086	- 1.9075	+ 1.6006
2.32	2.28475	1.65030	1.7682	1.8957
2.36	2.15225	1.68624	1.5336	2.1785
2.40	2.01064	1.71018	1.2158	2.4199
2.44	1.86455	1.72384	0.83746	2.5976
2.48	1.71766	1.72925	0.42538	2.7002
2.52	1.57230	1.72793	- 0.00437	2.7257
2.56	1.42988	1.72068	+ 0.40501	2.6778
2.60	1.29145	1.70753	0.78536	2.5636
2.64	1.15843	1.68749	1.1203	2.3917
2.68	1.03303	1.65918	1.3946	2.1749
2.72	0.91816	1.62103	1.5959	1.9309
2.76	0.81703	1.57171	1.7187	1.6795
2.80	+ 0.73245	- 1.51036	+ 1.7656	+ 1.4402

## Bahn 36.

$$E_0 = + 0.8. \quad F_0 = 0. \quad K = 11.42.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	0.79808	+ 0.12877	0.70387	- 0.09246
0.08	0.79249	0.25718	0.72542	0.18517
0.12	0.78367	0.38483	0.76140	0.27840
0.16	0.77239	0.51119	0.81188	0.37248
0.20	0.75978	0.63558	0.87644	0.46784
0.24	0.74734	0.75713	0.95398	0.56521
0.28	0.73693	0.87476	1.0424	0.66577
0.32	0.73073	0.98718	1.1380	0.77120
0.36	0.73111	1.09296	1.2351	0.88400
0.40	0.74040	1.19060	1.3262	1.0068
0.44	0.76058	1.27867	1.4019	1.1421
0.48	0.79294	1.35597	1.4520	1.2905
0.52	+ 0.83774	+ 1.42165	+ 1.4672	- 1.4501

$\psi$	$E$	$F$	$\xi$	$\eta$
0.56	+ 0.89412	+ 1.47544	+ 1.4408	- 1.6156
0.60	0.96013	1.51767	1.3707	1.7788
0.64	1.03310	1.54936	1.2601	1.9308
0.68	1.11021	1.57211	1.1166	2.0644
0.72	1.18899	1.58796	0.94975	2.1759
0.76	1.26783	1.59913	0.76837	2.2652
0.80	1.34620	1.60777	0.57818	2.3354
0.84	1.42465	1.61569	0.38081	2.3906
0.88	1.50469	1.62414	+ 0.17410	2.4332
0.92	1.58840	1.63361	- 0.04680	2.4632
0.96	1.67805	1.64373	0.28729	2.4763
1.00	1.77553	1.65320	0.55046	2.4636
1.04	1.88176	1.65988	0.83362	2.4127
1.08	1.99610	1.66094	1.1252	2.3112
1.12	2.11590	1.65325	1.4040	2.1516
1.16	2.23662	1.63381	1.6427	1.9378
1.20	2.35236	1.60021	1.8159	1.6865
1.24	2.45704	1.55097	1.9089	1.4240
1.28	2.54559	1.48556	1.9216	1.1763
1.32	2.61492	1.40446	1.8668	0.96208
1.36	2.66427	1.30888	1.7641	0.78828
1.40	2.69502	1.20055	1.6339	0.65233
1.44	2.71003	1.08152	1.4934	0.54589
1.48	2.71304	0.95384	1.3557	0.45928
1.52	2.70786	0.81945	1.2295	0.38423
1.56	2.69812	0.68006	1.1203	0.31482
1.60	2.68683	0.53706	1.0311	0.24740
1.64	2.67642	0.39159	0.96316	0.18019
1.68	2.66866	0.24452	0.91696	0.11249
1.72	2.66470	+ 0.09653	0.89258	- 0.04438
1.76	2.66517	- 0.05180	0.88982	+ 0.02377
1.80	2.67014	0.19998	0.90880	0.09143
1.84	2.67915	0.34747	0.94956	0.15795
1.88	+ 2.69121	- 0.49365	- 1.0122	+ 0.22372

$\psi$	$E$	$F$	$\xi$	$\eta$
1.92	+ 2.70472	- 0.63771	- 1.0967	+ 0.28848
1.96	2.71743	0.77865	1.2019	0.35385
2.00	2.72644	0.91518	1.3257	0.42284
2.04	2.72826	1.04573	1.4639	0.50090
2.08	2.71896	1.16853	1.6088	0.59606
2.12	2.69455	1.28148	1.7492	0.71853
2.16	2.65165	1.38268	1.8690	0.87872
2.20	2.58803	1.47028	1.9481	1.0831
2.24	2.50343	1.54287	1.9645	1.3298
2.28	2.39988	1.59973	1.8999	1.6044
2.32	2.28161	1.64099	1.7466	1.8819
2.36	2.15432	1.66769	1.5120	2.1328
2.40	2.02409	1.68180	1.2177	2.3326
2.44	1.89605	1.68595	0.89200	2.4696
2.48	1.77371	1.68295	0.56099	2.5445
2.52	1.65857	1.67549	- 0.24233	2.5671
2.56	1.55058	1.66550	+ 0.05536	2.5491
2.60	1.44864	1.65405	0.33018	2.4996
2.64	1.35141	1.64125	0.58274	2.4244
2.68	1.25785	1.62633	0.81304	2.3256
2.72	1.16767	1.60787	1.0185	2.2039
2.76	1.08151	1.58409	1.1938	2.0609
2.80	+ 1.00102	- 1.55309	+ 1.3318	+ 1.9007

## Bahn 37.

$$E_0 = + 0.8. \quad F_0 = 0. \quad K = 11.428.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	0.79808	+ 0.12874	0.70387	- 0.09244
0.08	0.79247	0.25713	0.72542	0.18512
0.12	0.78363	0.38475	0.76143	0.27832
0.16	+ 0.77233	+ 0.51108	+ 0.81190	- 0.37237

$\psi$	$E$	$F$	$\xi$	$\eta$
0.20	+ 0.75968	+ 0.63543	+ 0.87644	- 0.46766
0.24	0.74718	0.75693	0.95403	0.56493
0.28	0.73671	0.87450	1.0424	0.66535
0.32	0.73042	0.98686	1.1381	0.77062
0.36	0.73068	1.09258	1.2352	0.88314
0.40	0.73983	1.19016	1.3264	1.0056
0.44	0.75982	1.27816	1.4023	1.1405
0.48	0.79194	1.35539	1.4527	1.2884
0.52	0.83646	1.42101	1.4684	1.4474
0.56	0.89249	1.47475	1.4428	1.6122
0.60	0.95810	1.51697	1.3738	1.7749
0.64	1.03063	1.54867	1.2646	1.9265
0.68	1.10727	1.57149	1.1226	2.0600
0.72	1.18558	1.58747	0.95740	2.1717
0.76	1.26398	1.59885	0.77762	2.2618
0.80	1.34196	1.60780	0.58890	2.3333
0.84	1.42016	1.61615	0.39260	2.3901
0.88	1.50012	1.62515	+ 0.18629	2.4350
0.92	1.58402	1.63533	- 0.03523	2.4679
0.96	1.67424	1.64631	0.27780	2.4842
1.00	1.77278	1.65677	0.54499	2.4745
1.04	1.88067	1.66454	0.83442	2.4257
1.08	1.99732	1.66670	1.1343	2.3242
1.12	2.12007	1.66003	1.4225	2.1619
1.16	2.24420	1.64145	1.6703	1.9421
1.20	2.36360	1.60849	1.8507	1.6827
1.24	2.47187	1.55961	1.9471	1.4112
1.28	2.56368	1.49431	1.9603	1.1559
1.32	2.63571	1.41305	1.9034	0.93644
1.36	2.68710	1.31708	1.7971	0.76064
1.40	2.71920	1.20820	1.6629	0.62489
1.44	2.73495	1.08848	1.5184	0.52071
1.48	2.73815	0.96003	1.3772	0.43752
1.52	+ 2.73276	+ 0.82480	- 1.2478	- 0.36635

$\psi$	$E$	$F$	$\xi$	$\eta$
1.56	+ 2.72247	+ 0.68451	- 1.1359	- 0.30084
1.60	2.71042	0.54060	1.0445	0.23711
1.64	2.69909	0.39419	0.97480	0.17320
1.68	2.69030	0.24619	0.92730	0.10846
1.72	2.68526	+ 0.09727	0.90192	- 0.04293
1.76	2.68459	- 0.05199	0.89860	+ 0.02295
1.80	2.68836	0.20107	0.91724	0.08864
1.84	+ 2.69614	- 0.34942	- 0.95808	+ 0.15364

## Bahn 38.

Periodisch (unsymmetrisch).

$E_0 = + 0.8, F_0 = 0, K = 11.4281.$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.6967	0.0000
0.04	0.79808	+ 0.12874	0.7039	- 0.0924
0.08	0.79247	0.25713	0.7254	0.1851
0.12	0.78363	0.38475	0.7614	0.2783
0.16	0.77233	0.51108	0.8119	0.3723
0.20	0.75968	0.63543	0.8764	0.4676
0.24	0.74718	0.75693	0.9540	0.5649
0.28	0.73671	0.87450	1.0424	0.6653
0.32	0.73041	0.98686	1.1380	0.7706
0.36	0.73068	1.09258	1.2352	0.8831
0.40	0.73982	1.19015	1.3264	1.0056
0.44	0.75981	1.27816	1.4023	1.1404
0.48	0.79193	1.35538	1.4527	1.2883
0.52	0.83644	1.42101	1.4684	1.4473
0.56	0.89247	1.47474	1.4428	1.6122
0.60	0.95807	1.51696	1.3738	1.7748
0.64	1.03060	1.54866	1.2646	1.9265
0.68	1.10724	1.57149	1.1227	2.0600
0.72	1.18554	1.58746	0.9575	2.1716
0.76	+ 1.26393	+ 1.59884	+ 0.7777	- 2.2617

$\psi$	$E$	$F$	$\xi$	$\eta$
0.80	+ 1.34191	+ 1.60780	+ 0.5890	- 2.3332
0.84	1.42010	1.61615	0.3927	2.3901
0.88	1.50006	1.62516	+ 0.1864	2.4350
0.92	1.58397	1.63535	- 0.0351	2.4680
0.96	1.67419	1.64634	0.2777	2.4842
1.00	1.77275	1.65681	0.5449	2.4746
1.04	1.88066	1.66459	0.8344	2.4258
1.08	1.99733	1.66677	1.1344	2.3243
1.12	2.12012	1.66011	1.4227	2.1620
1.16	2.24429	1.64154	1.6705	1.9422
1.20	2.36373	1.60858	1.8508	1.6826
1.24	2.47205	1.55971	1.9476	1.4111
1.28	2.56389	1.49442	1.9607	1.1556
1.32	2.63595	1.41315	1.9038	0.9361
1.36	2.68737	1.31717	1.7975	0.7602
1.40	2.71948	1.20829	1.6632	0.6245
1.44	2.73524	1.08856	1.5187	0.5204
1.48	2.73844	0.96010	1.3774	0.4373
1.52	2.73305	0.82486	1.2480	0.3661
1.56	2.72276	0.68456	1.1361	0.3006
1.60	2.71070	0.54064	1.0446	0.2370
1.64	2.69936	0.39422	0.9749	0.1731
1.68	2.69056	0.24621	0.9274	0.1084
1.72	2.68550	+ 0.09728	0.9020	- 0.0429
1.76	2.68482	- 0.05199	0.8987	+ 0.0229
1.80	2.68858	0.20108	0.9173	0.0886
1.84	+ 2.69634	- 0.34944	- 0.9581	+ 0.1536

## Bahn 39.

$$E_0 = + 0.8, F_0 = 0, K = 11.5.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	+ 0.79805	+ 0.12851	+ 0.70388	- 0.09227

$\psi$	$E$	$F$	$\xi$	$\eta$
0.08	+ 0.79234	+ 0.25665	+ 0.72543	- 0.18474
0.12	0.78332	0.38401	0.76145	0.27768
0.16	0.77175	0.51004	0.81193	0.37133
0.20	0.75875	0.63405	0.87654	0.46606
0.24	0.74579	0.75515	0.95414	0.56251
0.28	0.73470	0.87227	1.0427	0.66176
0.32	0.72762	0.98410	1.1385	0.76542
0.36	0.72686	1.08924	1.2362	0.87570
0.40	0.73467	1.18618	1.3283	0.99515
0.44	0.75295	1.27353	1.4058	1.1261
0.48	0.78292	1.35011	1.4592	1.2692
0.52	0.82478	1.41517	1.4797	1.4226
0.56	0.87765	1.46851	1.4610	1.5818
0.60	0.93960	1.51055	1.4015	1.7392
0.64	1.00810	1.54243	1.3043	1.8871
0.68	1.08048	1.56589	1.1763	2.0193
0.72	1.15451	1.58308	1.0261	2.1331
0.76	1.22889	1.59639	0.86132	2.2294
0.80	1.30349	1.60813	0.68590	2.3115
0.84	1.37937	1.62032	0.49964	2.3841
0.88	1.45871	1.63437	0.29760	2.4502
0.92	1.54451	1.65094	+ 0.07100	2.5091
0.96	1.64017	1.66969	- 0.19060	2.5549
1.00	1.74887	1.68916	0.49594	2.5737
1.04	1.87277	1.70674	0.84650	2.5442
1.08	2.01195	1.71886	1.2292	2.4410
1.12	2.16356	1.72146	1.6122	2.2451
1.16	2.32150	1.71063	1.9486	1.9567
1.20	2.47716	1.68342	2.1924	1.6027
1.24	2.62103	1.63805	2.3161	1.2312
1.28	2.74487	1.57418	2.3214	0.89250
1.32	2.84315	1.49255	2.2334	0.62096
1.36	2.91373	1.39476	2.0856	0.42763
1.40	+ 2.95770	+ 1.28309	- 1.9097	- 0.30452

$\psi$	$E$	$F$	$\xi$	$\eta$
1.44	+ 2.97832	+ 1.15996	- 1.7284	- 0.23377
1.48	2.98024	1.02784	1.5559	0.19577
1.52	2.96839	0.88884	1.4005	0.17424
1.56	2.94743	0.74475	1.2661	0.15735
1.60	2.92138	0.59697	1.1550	0.13828
1.64	2.89354	0.44664	1.0677	0.11334
1.68	2.86637	0.29462	1.0044	0.08123
1.72	2.84160	+ 0.14161	0.96494	- 0.04199
1.76	2.82029	- 0.01179	0.94888	+ 0.00373
1.80	2.80283	0.16498	0.95605	0.05508
1.84	2.78901	0.31730	0.98610	0.11142
1.88	2.77798	0.46792	1.0388	0.17256
1.92	2.76830	0.61579	1.1133	0.23902
1.96	2.75785	0.75948	1.2078	0.31249
2.00	2.74390	0.89720	1.3186	0.39601
2.04	2.72329	1.02669	1.4392	0.49428
2.08	2.69276	1.14532	1.5593	0.61297
2.12	2.64954	1.25020	1.6647	0.75697
2.16	2.59212	1.33842	1.7377	0.92715
2.20	2.52115	1.40746	1.7616	1.1165
2.24	2.43992	1.45567	1.7264	1.3085
2.28	2.35417	1.48259	1.6341	1.4799
2.32	2.27121	1.48931	1.5016	1.6088
2.36	2.19840	1.47848	1.3548	1.6829
2.40	2.14169	1.45397	1.2196	1.7024
2.44	2.10493	1.42037	1.1150	1.6771
2.48	2.08970	1.38284	1.0501	1.6210
2.52	2.09570	1.34433	1.0264	1.5468
2.56	2.12159	1.31020	1.0406	1.4644
2.60	2.16515	1.28324	1.0879	1.3800
2.64	2.22367	1.26619	1.1631	1.2969
2.68	2.29423	1.26131	1.2622	1.2168
2.72	+ 2.37348	- 1.27062	- 1.3823	+ 1.1403

$\psi$	$E$	$F$	$\xi$	$\eta$
2.76	+ 2.45748 ·	— 1.29609	— 1.5223	+ 1.0682
2.80	2.54127 ·	1.33995 ·	1.6836	1.0047
2.84	2.61808	1.40521	1.8714	0.95764
2.88	+ 2.67778	— 1.49629 ·	— 2.0968	+ 0.94864

## Bahn 40.

 $E_0 = + 0.8$ .  $F_0 = 0$ .  $K = 12.0$ .

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.80000	0.00000	+ 0.69671	0.00000
0.04	0.79781 ·	+ 0.12688 ·	0.70390	— 0.09107
0.08	0.79139 ·	0.25333	0.72552	0.18213
0.12	0.78116	0.37883 ·	0.76166	0.27317
0.16	0.76780 ·	0.50278 ·	0.81230	0.36411
0.20	0.75236 ·	0.62441 ·	0.87708	0.45497
0.24	0.73617	0.74277 ·	0.95506	0.54589
0.28	0.72087 ·	0.85673 ·	1.0442	0.63725
0.32	0.70835	0.96498	1.1413	0.72988
0.36	0.70056 ·	1.06611 ·	1.2417	0.82505
0.40	0.69938	1.15874	1.3391	0.92444
0.44	0.70622 ·	1.24159	1.4266	1.0293
0.48	0.72188 ·	1.31379	1.4970	1.1404
0.52	0.74626 ·	1.37485	1.5446	1.2565
0.56	0.77831	1.42496	1.5660	1.3751
0.60	0.81628	1.46503 ·	1.5612	1.4924
0.64	0.85808	1.49666	1.5336	1.6050
0.68	0.90170 ·	1.52213	1.4888	1.7114
0.72	0.94590	1.54421	1.4326	1.8129
0.76	0.99063	1.56606	1.3695	1.9148
0.80	1.03721 ·	1.59093	1.3001	2.0252
0.84	1.08909	1.62221 ·	1.2189	2.1565
0.88	1.15205	1.66310	1.1111	2.3234
0.92	+ 1.23510 ·	+ 1.71637 ·	+ 0.94608	— 2.5420

$\psi$	$E$	$F$	$\xi$	$\eta$
0.96	+ 1.35148 ·	+ 1.78403 ·	+ 0.66593	- 2.8236
0.98	1.42779 ·	1.82338 ·	0.45279	2.9849
1.00	1.52000 ·	1.86618 ·	+ 0.16800	3.1504
1.02	1.63140	1.91189	- 0.20938	3.3029
1.04	1.76552	1.95965	0.70023	3.4122
1.06	1.92589 ·	2.00833 ·	1.3186	3.4301
1.08	2.11564 ·	2.05663 ·	2.0595	3.2891
1.10	2.33711 ·	2.10336 ·	2.8834	2.9076
1.12	+ 2.59164 ·	+ 2.14805 ·	- 3.7021	- 2.2086

## Bahn 41.

 $\xi_0 = +0.67$ ,  $\eta_0 = 0$ ,  $K = 11.2$ .

$t$	$\xi$	$\eta$	$t$	$\xi$	$\eta$
0.00	+ 0.67000	0.00000	0.46	+ 1.23801	- 1.03399 ·
0.02	0.67541	- 0.08496	0.50	1.26510 ·	1.08448
0.04	0.69080 ·	0.16685	0.58	1.30731 ·	1.18056 ·
0.06	0.71412 ·	0.24348 ·	0.66	1.33522 ·	1.27131 ·
0.08	0.74292 ·	0.31392 ·	0.74	1.35056	1.35753 ·
0.10	0.77502 ·	0.37815 ·	0.82	1.35480	1.43960 ·
0.12	0.80878	0.43667	0.90	1.34925	1.51771
0.14	0.84303 ·	0.49017	0.98	1.33502 ·	1.59182 ·
0.16	0.87701 ·	0.53936 ·	1.06	1.31315	1.66193
0.18	0.91022 ·	0.58490	1.22	1.25009 ·	1.78990 ·
0.20	0.94236 ·	0.62734	1.38	1.16664	1.90121 ·
0.22	0.97325	0.66715	1.54	1.06833	1.99574 ·
0.24	1.00277 ·	0.70472 ·	1.70	0.95993	2.07378 ·
0.26	1.03090	0.74039 ·	1.86	0.84543 ·	2.13623
			2.18	0.72816	2.18411 ·
			2.34	0.61078 ·	2.21893
0.30	1.08288	0.80704	2.50	0.49516	2.24229 ·
0.34	1.12930	0.86872 ·	2.66	0.38283	2.25587
0.38	1.17042	0.92662	2.82	0.27458 ·	2.26136
0.42	+ 1.20655	- 0.98151 ·	2.98	+ 0.07142 ·	- 2.25389

$t$	$\xi$	$\eta$	$t$	$\xi$	$\eta$
3.14	-0.02388	2.24329	0.04	+ 0.69084	- 0.16616
3.30	0.11564	2.22916	0.06	0.71424	0.24246
3.46	0.20453	2.21198	0.08	0.74318	0.31256
3.62	0.29121	2.19169	0.10	0.77549	0.37643
3.78	0.37623	2.16805	0.12	0.80951	0.43453
3.94	0.45993	2.14045	0.14	0.84407	0.48758
4.10	0.54237	2.10805	0.16	0.87839	0.53626
4.26	0.62324	2.06985	0.18	0.91198	0.58124
4.42	0.70174	2.02465	0.20	0.94452	0.62307
4.58	0.77661	1.97128	0.22	0.97583	0.66224
4.74	0.84598	1.90853	0.24	1.00579	0.69913
4.90	0.90740	1.83529	0.26	1.03437	0.73407
5.06	0.95777	1.75057			
5.22	0.99327	1.65341	0.30	1.08730	0.79918
5.38	1.00935	1.54281	0.34	1.13472	0.85923
5.54	1.00061	1.41742	0.38	1.17690	0.91540
			0.42	1.21414	0.96851
5.62	0.98503	1.34846	0.46	1.24677	1.01916
5.70	0.96081	1.27470	0.50	1.27511	1.06777
5.78	0.92709	1.19540			
5.86	0.88297	1.10947	0.58	1.32001	1.16006
5.94	0.82770	1.01534	0.66	1.35092	1.24697
6.02	0.76090	0.91076	0.74	1.36961	1.32939
6.10	0.68291	0.79264	0.82	1.37756	1.40774
6.18	0.59569	0.65711	0.90	1.37609	1.48223
6.26	0.50389	0.50064	0.98	1.36633	1.55293
6.34	0.41515	0.32292	1.06	1.34932	1.61985
6.42	0.33690	- 0.13096			
6.50	- 0.26949	+ 0.06054	1.22	1.29716	1.74235
Bahn 42.					
$\xi_0 = +0.67, \eta_0 = 0, K = 11.35$ .					
$t$	$\xi$	$\eta$			
0.00	+ 0.67000	0.00000			
0.02	+ 0.67541	- 0.08461	2.18	0.74326	2.18230
			2.34	+ 0.64137	- 2.21749

<i>t</i>	$\xi$	$\eta$	<i>t</i>	$\xi$	$\eta$
2.50	+ 0.54095	- 2.24619	6.50	- 1.14354	- 0.43420
2.66	0.44209	2.27004	6.52	1.08940	0.38888
2.82	0.34439	2.29040	6.54	1.03119	0.33597
2.98	0.24701	2.30834	6.55	1.00071	0.30547
3.14	0.14882	2.32451	6.56	0.96959	0.27129
3.30	+ 0.04850	2.33913	6.57	0.93840	0.23239
3.46	- 0.05529	2.35189	6.58	0.90821	0.18741
3.62	0.16384	2.36205	6.59	0.88123	0.13481
3.78	0.27821	2.36843	6.60	0.86147	0.07390
3.94	0.39905	2.36937	6.61	- 0.85459	- 0.00585
4.10	0.52665	2.36293			
4.26	0.66065	2.34692			
4.42	0.80005	2.31904			
4.58	0.94313	2.27701			
4.74	1.08744	2.21876			
4.90	1.22970	2.14252			
5.06	1.36587	2.04704	0.00	+ 0.67000	0.00000
5.22	1.49117	1.93178	0.02	0.67542	- 0.08450
5.38	1.60003	1.79697	0.04	0.69086	0.16593
5.54	1.68613	1.64381	0.06	0.71429	0.24212
5.70	1.74235	1.47445	0.08	0.74327	0.31211
5.86	1.76035	1.29199	0.10	0.77565	0.37585
5.94	1.75193	1.19697	0.12	0.80975	0.43381
6.02	1.72990	1.10000	0.14	0.84442	0.48670
6.10	1.69239	1.00141	0.16	0.87886	0.53522
6.18	1.63702	0.90127	0.18	0.91258	0.58001
6.26	1.56062	0.79900	0.20	0.94526	0.62164
6.34	1.45855	0.69267	0.22	0.97670	0.66058
6.38	1.39580	0.63653	0.24	1.00681	0.69724
6.42	1.32361	0.57678	0.26	1.03553	0.73194
6.44	1.28346	0.54483	0.30	1.08878	0.79654
6.46	1.24027	0.51092	0.34	1.13654	0.85604
6.48	- 1.19374	- 0.47438	0.38	1.17907	0.91163
			0.42	+ 1.21669	- 0.96414

Bahn 43.

 $\xi_0 = +0.67, \eta_0 = 0, K = 11.4$ .

<i>t</i>	$\xi$	$\eta$	<i>t</i>	$\xi$	$\eta$
0.46	+ 1.24971	- 1.01418	3.94	- 0.37369	- 2.44315
0.50	1.27845	1.06216	4.10	0.51534	2.44536
0.54	1.30321	1.10842	4.26	0.66592	2.43658
0.58	1.32426	1.15315	4.42	0.82433	2.41437
0.66	1.35616	1.23878	4.58	0.98869	2.37576
0.74	1.37595	1.31991	4.74	1.15631	2.31841
0.82	1.38513	1.39699	4.90	1.32365	2.24026
0.90	1.38502	1.47025	5.06	1.48636	2.13985
0.98	1.37674	1.53978	5.22	1.63936	2.01660
1.06	1.36135	1.60561	5.38	1.77690	1.87079
1.22	1.31278	1.72618	5.54	1.89259	1.70397
1.38	1.24573	1.83208	5.70	1.97955	1.51895
1.54	1.16549	1.92367	5.86	2.03030	1.32065
1.70	1.07644	2.00177	6.02	2.03657	1.11286
1.86	0.98207	2.06761	6.18	1.98842	0.90465
2.02	0.88511	2.12269	6.26	1.94002	0.80265
2.18	0.78743	2.16878	6.34	1.87242	0.70336
2.34	0.69021	2.20769	6.42	1.78236	0.60744
2.50	0.59393	2.24121	6.50	1.66457	0.51532
2.66	0.49843	2.27096	6.54	1.59283	0.47001
2.82	0.40305	2.29830	6.58	1.51028	0.42444
2.98	0.30669	2.32418	6.62	1.41417	0.37703
3.14	0.20797	2.34916	6.66	1.29994	0.32429
3.30	+ 0.10532	2.37326	6.68	1.23361	0.29334
3.46	- 0.00283	2.39596	6.70	1.15903	0.25628
3.62	0.11799	2.41631	6.72	1.07349	0.20665
3.78	- 0.24134	2.43269	6.74	0.97488	- 0.12731

## Bahn 44.

$E_0 = + 0.87, F_0 = 0, K = 11.1.$

$\psi$	<i>E</i>	<i>F</i>	$\xi$	$\eta$
0.00	+ 0.87000	0.00000	+ 0.64483	0.00000
0.04	+ 0.86849	+ 0.12490	+ 0.65103	- 0.09560

$\psi$	$E$	$F$	$\xi$	$\eta$
0.08	+ 0.86408	+ 0.24952	+ 0.66965	- 0.19173
0.12	0.85720	0.37350	0.70077	0.28898
0.16	0.84853	0.49639	0.74423	0.38795
0.20	0.83909	0.61759	0.79965	0.48929
0.24	0.83025	0.73630	0.86598	0.59392
0.28	0.82368	0.85150	0.94110	0.70299
0.32	0.82140	0.96197	1.0214	0.81802
0.36	0.82556	1.06626	1.1016	0.94076
0.40	0.83833	1.16282	1.1741	1.0730
0.44	0.86157	1.25007	1.2299	1.2157
0.48	0.89645	1.32653	1.2592	1.3680
0.52	0.94318	1.39100	1.2530	1.5258
0.56	1.00071	1.44275	1.2059	1.6820
0.60	1.06683	1.48159	1.1172	1.8270
0.64	1.13834	1.50800	0.99308	1.9504
0.68	1.21163	1.52309	0.84436	2.0448
0.72	1.28323	1.52850	0.68467	2.1070
0.76	1.35027	1.52621	0.52696	2.1386
0.80	1.41078	1.51831	0.38108	2.1449
0.84	1.46378	1.50684	0.25281	2.1331
0.88	1.50912	1.49355	0.14414	2.1101
0.92	1.54733	1.47991	+ 0.05419	2.0819
0.96	1.57937	1.46699	- 0.01958	2.0527
1.00	1.60646	1.45553	0.08060	2.0254
1.04	1.62993	1.44595	0.13243	2.0017
1.08	1.65108	1.43834	0.17851	1.9818
1.12	1.67114	1.43255	0.22179	1.9654
1.16	1.69114	1.42819	0.26477	1.9515
1.20	1.71193	1.42465	0.30926	1.9384
1.24	1.73409	1.42116	0.35629	1.9243
1.28	1.75788	1.41681	0.40609	1.9069
1.32	1.78322	1.41057	0.45782	1.8839
1.36	+ 1.80967	+ 1.40141	- 0.50958	- 1.8532

## Bahn 45.

Periodisch (symmetrisch).

$E_0 = +0.87, F_0 = 0, K = 11.19942.$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.87000	0.00000	+ 0.64483	0.00000
0.04	0.86843	+ 0.12453	0.65104	- 0.09530
0.08	0.86389	0.24876	0.66968	0.19111
0.12	0.85675	0.37232	0.70081	0.28791
0.16	0.84770	0.49475	0.74435	0.38627
0.20	0.83776	0.61544	0.79990	0.48679
0.24	0.82823	0.73357	0.86642	0.59024
0.28	0.82077	0.84813	0.94190	0.69765
0.32	0.81733	0.95788	1.02277	0.81044
0.36	0.81999	1.06141	1.10397	0.93018
0.40	0.83086	1.15717	1.17831	1.05849
0.44	0.85168	1.24364	1.23726	1.19625
0.48	0.88355	1.31942	1.27153	1.34267
0.52	0.92664	1.38341	1.27288	1.49438
0.56	0.97993	1.43498	1.23609	1.64493
0.60	1.04130	1.47410	1.16076	1.78575
0.64	1.10777	1.50138	1.05202	1.90796
0.68	1.17600	1.51807	0.91973	2.00509
0.72	1.24285	1.52594	0.77573	2.07429
0.76	1.30582	1.52706	0.63138	2.11714
0.80	1.36329	1.52365	0.49516	2.13865
0.84	1.41464	1.51776	0.37178	2.14500
0.88	1.46014	1.51126	0.26244	2.14275
0.92	1.50069	1.50561	0.16562	2.13724
0.96	1.53775	1.50188	+ 0.07787	2.13250
1.00	1.57305	1.50068	- 0.00532	2.13090
1.04	+ 1.60848	+ 1.50222	- 0.08880	- 2.13300

## Bahn 46.

$$E_0 = +0.87, F_0 = 0, K = 11.2.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.87000	0.00000	+ 0.64483	0.00000
0.04	0.86843	+ 0.12453	0.65104	- 0.09530
0.08	0.86389	0.24875	0.66968	0.19110
0.12	0.85674	0.37231	0.70083	0.28791
0.16	0.84770	0.49474	0.74437	0.38625
0.20	0.83775	0.61543	0.79990	0.48677
0.24	0.82822	0.73356	0.86642	0.59023
0.28	0.82076	0.84811	0.94188	0.69763
0.32	0.81731	0.95786	1.0228	0.81040
0.36	0.81997	1.06138	1.1040	0.93012
0.40	0.83082	1.15714	1.1783	1.0584
0.44	0.85162	1.24360	1.2373	1.1962
0.48	0.88347	1.31938	1.2716	1.3425
0.52	0.92654	1.38336	1.2730	1.4942
0.56	0.97981	1.43494	1.2363	1.6447
0.60	1.04115	1.47405	1.1610	1.7855
0.64	1.10759	1.50134	1.0525	1.9077
0.68	1.17579	1.51804	0.92018	2.0048
0.72	1.24262	1.52593	0.77628	2.0741
0.76	1.30556	1.52707	0.63197	2.1170
0.80	1.36301	1.52368	0.49550	2.1386
0.84	1.41437	1.51783	0.37245	2.1451
0.88	1.45985	1.51137	0.26315	2.1429
0.92	1.50042	1.50577	0.16627	2.1376
0.96	1.53751	1.50208	+ 0.07845	2.1330
1.00	1.57286	1.50095	- 0.00486	2.1315
1.04	1.60835	1.50256	0.08854	2.1338
1.08	+ 1.64587	+ 1.50665	- 0.17750	- 2.1389

## Bahn 47.

 $E_0 = +0.9$ .  $F_0 = 0$ .  $K = 10.9$ .

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.90000	0.00000	+ 0.62161	0.00000
0.04	0.89871	+ 0.12356	0.62738	- 0.09694
0.08	0.89497	0.24686	0.64470	0.19456
0.12	0.88918	0.36959	0.67357	0.29359
0.16	0.88201	0.49132	0.71385	0.39475
0.20	0.87447	0.61147	0.76510	0.49891
0.24	0.86788	0.72929	0.82612	0.60710
0.28	0.86388	0.84377	0.89472	0.72048
0.32	0.86444	0.95367	0.96730	0.84058
0.36	0.87170	1.05755	1.0382	0.96904
0.40	0.88776	1.15376	1.0999	1.1071
0.44	0.91446	1.24059	1.1432	1.2551
0.48	0.95291	1.31640	1.1581	1.4109
0.52	1.00321	1.37974	1.1358	1.5693
0.56	1.06412	1.42958	1.0716	1.7214
0.60	1.13308	1.46542	0.96648	1.8560
0.64	1.20651	1.48747	0.82868	1.9621
0.68	1.28025	1.49661	0.67183	2.0324
0.72	1.35026	1.49436	0.51199	2.0648
0.76	1.41312	1.48263	0.36363	2.0629
0.80	1.46641	1.46363	0.23721	2.0340
0.84	1.50875	1.43950	0.13814	1.9869
0.88	1.53965	1.41231	0.06770	1.9300
0.92	1.55938	1.38385	0.02419	1.8697
0.96	1.56865	1.35570	0.00444	1.8108
1.00	1.56846	1.32920	0.00472	1.7566
1.04	1.55996	1.30546	0.02146	1.7090
1.08	1.54435	1.28547	0.05147	1.6693
1.12	1.52283	1.27005	0.09209	1.6383
1.16	1.49660	1.25993	0.14117	1.6163
1.20	1.46687	1.25577	0.19686	1.6041
1.24	+ 1.43491	+ 1.25817	+ 0.25761	- 1.6025

$\psi$	$E$	$F$	$\xi$	$\eta$
1.28	+ 1.40211	+ 1.26769	+ 0.32185	- 1.6123
1.32	1.37005	1.28486	0.38791	1.6352
1.36	1.34070	1.31020	0.45349	1.6733
1.40	1.31645	1.34422	0.51529	1.7297
1.44	1.30043	1.38739	0.56815	1.8092
1.48	1.29672	1.44016	0.60333	1.9179
1.52	1.31090	1.50283	0.60607	2.0642
1.54	1.32690	1.53789	0.58796	2.1543
1.56	1.35034	1.57537	0.55101	2.2568
1.58	1.38253	1.61515	0.48916	2.3722
1.60	1.42499	1.65703	0.39478	2.4997
1.62	1.47937	1.70068	0.25839	2.6364
1.64	1.54755	1.74562	+ 0.06860	2.7767
1.66	1.63143	1.79117	- 0.18674	2.9095
1.68	1.73288	1.83645	0.51911	3.0174
1.70	+ 1.85353	+ 1.88034	- 0.93578	- 3.0745

## Bahn 48.

$$E_0 = + 0.9. \quad F_0 = 0. \quad K = 11.1.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.90000	0.00000	+ 0.62161	0.00000
0.04	0.89861	+ 0.12276	0.62738	- 0.09630
0.08	0.89457	0.24523	0.64476	0.19318
0.12	0.88827	0.36707	0.67373	0.29129
0.16	0.88035	0.48784	0.71418	0.39120
0.20	0.87177	0.60693	0.76567	0.49364
0.24	0.86379	0.72356	0.82714	0.59941
0.28	0.85799	0.83673	0.89656	0.70952
0.32	0.85619	0.94520	0.97048	0.82512
0.36	0.86040	1.04756	1.0439	0.94758
0.40	0.87257	1.14224	1.1099	1.0780
0.44	+ 0.89435	+ 1.22763	+ 1.1601	- 1.2166

$\psi$	$E$	$F$	$\xi$	$\eta$
0.48	+ 0.92674	+ 1.30224	+ 1.1857	- 1.3617
0.52	0.96976	1.36485	1.1792	1.5092
0.56	1.02227	1.41466	1.1362	1.6520
0.60	1.08199	1.45148	1.0574	1.7813
0.64	1.14574	1.47576	0.94908	1.8884
0.68	1.20995	1.48865	0.82208	1.9673
0.72	1.27122	1.49181	0.68911	2.0161
0.76	1.32675	1.48735	0.56194	2.0375
0.80	1.37465	1.47750	0.44925	2.0371
0.84	1.41396	1.46450	0.35584	2.0220
0.88	1.44463	1.45042	0.28308	1.9992
0.92	1.46728	1.43706	0.22969	1.9747
0.96	1.48306	1.42595	0.19285	1.9533
1.00	1.49348	1.41830	0.16885	1.9382
1.04	1.50029	1.41506	0.15356	1.9321
1.08	1.50546	1.41690	0.14255	1.9368
1.12	1.51111	1.42425	0.13108	1.9536
1.16	1.51956	1.43727	0.11387	1.9832
1.20	1.53329	1.45583	0.08476	2.0260
1.24	1.55498	1.47948	+ 0.03651	2.0812
1.28	1.58744	1.50735	- 0.03942	2.1464
1.32	1.63345	1.53804	0.15248	2.2160
1.36	1.69554	1.56957	0.31185	2.2804
1.40	1.77551	1.59922	0.52360	2.3240
1.44	1.87371	1.62361	0.78582	2.3262
1.48	1.98828	1.63888	1.0833	2.2648
1.52	2.11487	1.64114	1.3859	2.1250
1.56	2.24653	1.62708	1.6530	1.9087
1.60	2.37488	1.59445	1.8468	1.6382
1.64	2.49172	1.54232	1.9463	1.3498
1.68	2.59072	1.47107	1.9528	1.0794
1.72	2.66847	1.38211	1.8846	0.85034
1.76	2.72458	1.27753	1.7675	0.67013
1.80	+ 2.76109	+ 1.15984	- 1.6263	- 0.53405

$\psi$	$E$	$F$	$\xi$	$\eta$
1.84	+ 2.78159	+ 1.03159	- 1.4797	- 0.43137
1.88	2.79034	0.89518	1.3410	0.35083
1.92	2.79140	0.75272	1.2182	0.28333
1.96	2.78850	0.60592	1.1159	0.22258
2.00	2.78454	0.45614	1.0361	0.16501
2.04	2.78178	0.30442	0.97970	0.10885
2.08	+ 2.78174	+ 0.15154	- 0.94670	- 0.05357

## Bahn 49.

Periodisch (unsymmetrisch).

$E_0 = + 0.9, F_0 = 0, K = 11.12687.$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.90000	0.00000	+ 0.62161	0.00000
0.04	0.89860	+ 0.12265	0.62740	- 0.09621
0.08	0.89452	0.24501	0.64477	0.19300
0.12	0.88815	0.36674	0.67374	0.29097
0.16	0.88013	0.48737	0.71422	0.39072
0.20	0.87140	0.60632	0.76577	0.49294
0.24	0.86324	0.72279	0.82729	0.59840
0.28	0.85720	0.83578	0.89680	0.70804
0.32	0.85508	0.94407	0.97095	0.82307
0.36	0.85889	1.04622	1.04464	0.94474
0.40	0.87055	1.14069	1.11114	1.07415
0.44	0.89167	1.22589	1.16222	1.21143
0.48	0.92326	1.30034	1.18924	1.35513
0.52	0.96532	1.36283	1.18474	1.50111
0.56	1.01672	1.41263	1.14444	1.64263
0.60	1.07521	1.44955	1.06899	1.77105
0.64	1.13767	1.47409	0.96451	1.87798
0.68	1.20059	1.48743	0.84151	1.95761
0.72	1.26066	1.49126	0.71228	2.00819
0.76	+ 1.31514	+ 1.48769	+ 0.58829	- 2.03221

$\psi$	$E$	$F$	$\xi$	$\eta$
0.80	+ 1.36224	+ 1.47900	+ 0.47789	- 2.03526
0.84	1.40106	1.46743	0.38586	2.02427
0.88	1.43164	1.45506	0.31333	2.00610
0.92	1.45469	1.44373	0.25907	1.98675
0.96	1.47147	1.43493	0.22001	1.97099
1.00	1.48361	1.42991	0.19232	1.96204
1.04	1.49306	1.42958	0.17149	1.96282
1.08	1.50200	1.43456	0.15246	1.97511
1.12	1.51279	1.44522	0.12979	2.00018
1.16	1.52807	1.46157	0.09705	2.03856
1.20	1.55061	1.48328	+ 0.04676	2.08981
1.24	1.58337	1.50960	- 0.02983	2.15181
1.28	1.62928	1.53920	0.14251	2.21937
1.32	1.69097	1.57017	0.30063	2.28316
1.36	1.77026	1.59990	0.51068	2.32821
1.40	1.86764	1.62517	0.77166	2.33442
1.44	1.98150	1.64233	1.07013	2.28003
1.48	2.10784	1.64771	1.37814	2.14916
1.52	2.24057	1.63802	1.65739	1.94055
1.56	2.37204	1.61082	1.86976	1.67246
1.60	2.49437	1.56477	1.99072	1.37854
1.64	2.60087	1.49977	2.01640	1.09577
1.68	2.68719	1.41681	1.96167	0.85185
1.72	2.75172	1.31769	1.85110	0.65886
1.76	2.79535	1.20467	1.70988	0.51514
1.80	2.82121	1.08021	1.55884	0.41031
1.84	2.83289	0.94669	1.41251	0.33255
1.88	2.83463	0.80628	1.28027	0.27090
1.92	2.83026	0.66081	1.16743	0.21749
1.96	2.82314	0.51177	1.07683	0.16732
2.00	2.81579	0.36032	1.00957	0.11784
2.04	2.81011	0.20739	0.96598	0.06800
2.08	2.80727	+ 0.05367	0.94600	- 0.01767
2.12	+ 2.80778	- 0.10022	- 0.94955	+ 0.03289

## Bahn 50.

 $E_0 = +0.9, F_0 = 0, K = 11.2.$ 

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.90000	0.00000	+ 0.62161	0.00000
0.04	0.89856	+ 0.12236	0.62740	- 0.09598
0.08	0.89438	0.24441	0.64477	0.19250
0.12	0.88781	0.36582	0.67380	0.29013
0.16	0.87952	0.48610	0.71435	0.38944
0.20	0.87042	0.60466	0.76597	0.49102
0.24	0.86175	0.72070	0.82766	0.59560
0.28	0.85504	0.83322	0.89748	0.70407
0.32	0.85207	0.94098	0.97208	0.81747
0.36	0.85477	1.04258	1.0467	0.93696
0.40	0.86502	1.13649	1.1146	1.0636
0.44	0.88439	1.22115	1.1680	1.1975
0.48	0.91379	1.29515	1.1988	1.3372
0.52	0.95324	1.35735	1.1996	1.4792
0.56	1.00162	1.40709	1.1665	1.6170
0.60	1.05677	1.44430	1.1001	1.7429
0.64	1.11571	1.46955	1.0058	1.8491
0.68	1.17512	1.48410	0.89376	1.9305
0.72	1.23190	1.48975	0.77483	1.9855
0.76	1.28354	1.48863	0.65966	2.0165
0.80	1.32844	1.48308	0.55600	2.0287
0.84	1.36595	1.47541	0.46800	2.0288
0.88	1.39629	1.46771	0.39670	2.0232
0.92	1.42041	1.46187	0.34052	2.0181
0.96	1.43991	1.45939	0.29600	2.0181
1.00	1.45676	1.46151	0.25855	2.0271
1.04	1.47340	1.46909	0.22246	2.0478
1.08	1.49257	1.48264	0.18095	2.0824
1.12	1.51738	1.50230	0.12585	2.1316
1.16	1.55122	1.52772	+ 0.04721	2.1949
1.20	1.59775	1.55801	- 0.06684	2.2686
1.24	+ 1.66063	+ 1.59156	- 0.22945	- 2.3444

$\psi$	$E$	$F$	$\xi$	$\eta$
1.28	+ 1.74318	+ 1.62589	- 0.45281	- 2.4068
1.32	1.84751	1.65761	0.74275	2.4319
1.36	1.97364	1.68245	1.0908	2.3885
1.40	2.11838	1.69577	1.4667	2.2486
1.44	2.27486	1.69327	1.8194	2.0021
1.48	2.43324	1.67173	2.0920	1.6698
1.52	2.58269	1.62952	2.2457	1.3006
1.56	2.71361	1.56655	2.2740	0.95070
1.60	2.81955	1.48399	2.1994	0.66210
1.64	2.89795	1.38397	2.0580	0.45114
1.68	2.94973	1.26914	1.8842	0.31242
1.72	2.97829	1.14238	1.7037	0.22883
1.76	2.98834	1.00637	1.5324	0.18090
1.80	2.98486	0.86349	1.3794	0.15216
1.84	2.97249	0.71565	1.2491	0.13099
1.88	2.95517	0.56433	1.1433	0.11023
1.92	2.93604	0.41068	1.0627	0.08620
1.96	2.91741	0.25553	1.0070	0.05741
2.00	2.90085	+ 0.09955	0.97600	- 0.02371
2.04	2.88723	- 0.05670	0.96940	+ 0.01427
2.08	2.87674	0.21268	0.98702	0.05609
2.12	+ 2.86896	- 0.36781	- 1.0289	+ 0.10129

## Bahn 51.

$$E_0 = + 0.9. \quad F_0 = 0. \quad K = 11.24.$$

$\psi$	$E$	$F$	$\xi$	$\eta$
0.00	+ 0.90000	0.00000	+ 0.62161	0.00000
0.04	0.89854	+ 0.12219	0.62740	- 0.09585
0.08	0.89429	0.24408	0.64480	0.19223
0.12	0.88763	0.36531	0.67386	0.28966
0.16	0.87918	0.48540	0.71440	0.38873
0.20	+ 0.86987	+ 0.60375	+ 0.76608	- 0.48994

$\psi$	$E$	$F$	$\xi$	$\eta$
0.24	+ 0.86093	+ 0.71955	+ 0.82786	- 0.59406
0.28	0.85385	0.83181	0.89782	0.70187
0.32	0.85042	0.93929	0.97268	0.81440
0.36	0.85252	1.04060	1.0477	0.93278
0.40	0.86201	1.13421	1.1164	1.0579
0.44	0.88041	1.21859	1.1711	1.1900
0.48	0.90863	1.29235	1.2038	1.3276
0.52	0.94667	1.35440	1.2075	1.4673
0.56	0.99342	1.40411	1.1783	1.6031
0.60	1.04677	1.44146	1.1167	1.7274
0.64	1.10380	1.46708	1.0281	1.8332
0.68	1.16131	1.48227	0.92170	1.9153
0.72	1.21630	1.48885	0.80837	1.9724
0.76	1.26637	1.48902	0.69815	2.0069
0.80	1.31006	1.48513	0.59834	2.0237
0.84	1.34681	1.47952	0.51294	2.0295
0.88	1.37699	1.47432	0.44268	2.0308
0.92	1.40172	1.47143	0.38577	2.0335
0.96	1.42277	1.47240	0.33842	2.0425
1.00	1.44238	1.47845	0.29545	2.0620
1.04	1.46338	1.49042	0.25002	2.0947
1.08	1.48888	1.50878	0.19401	2.1428
1.12	1.52251	1.53349	0.11705	2.2067
1.16	1.56827	1.56398	+ 0.00628	2.2843
1.20	1.63039	1.59894	- 0.15336	2.3686
1.24	1.71298	1.63615	0.37767	2.4454
1.28	1.81929	1.67231	0.67784	2.4895
1.32	1.95061	1.70308	1.0516	2.4652
1.36	2.10485	1.72346	1.4717	2.3349
1.40	2.27573	1.72858	1.8824	2.0775
1.44	2.45292	1.71467	2.2139	1.7079
1.48	2.62403	1.67961	2.4115	1.2807
1.52	2.77730	1.62303	2.4601	0.86778
1.56	+ 2.90400	+ 1.54598	- 2.3839	- 0.52717

$\psi$	$E$	$F$	$\xi$	$\eta$
1.60	+ 2.99969	+ 1.45057	- 2.2274	- 0.28506
1.64	3.06410	1.33958	2.0336	0.13762
1.68	3.10007	1.21605	1.8336	0.06388
1.72	3.11236	1.08291	1.6452	0.03821
1.76	3.10638	0.94265	1.4773	0.03833
1.80	3.08733	0.79729	1.3331	0.04797
1.84	3.05984	0.64833	1.2136	0.05673
1.88	3.02773	0.49688	1.1187	0.05881
1.92	2.99399	0.34374	1.0481	0.05155
1.96	2.96080	0.18953	1.0014	0.03429
2.00	2.92962	+ 0.03478	0.97820	- 0.00732
2.04	+ 2.90122	- 0.11997	- 0.97825	+ 0.02863

