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TABLES OF K-MESON SCATTERING BY PROTONS

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TABLES OF K-MESON SCATTERING BY PROTONS

James A. Baker and Kent Curtis

January 31, 1956

Printed for the U. S. Atomic Energy Commission

# TABLES OF K-MESON SCATTERING BY PROTONS

James A. Baker and Kent Curtis

Radiation Laboratory  
University of California  
Berkeley, California

January 31, 1956

The following tables are intended to facilitate the reduction of data obtained in K-meson proton scattering experiments. They have to do with the conversion of the observable quantities in the laboratory system to the center-of-mass system.

The tables are for the elastic scattering of K mesons by protons at rest. They cover the range of incident K-meson energies from 10 Mev to 200 Mev at intervals of 10 Mev, and from 200 Mev to 6000 Mev at intervals of 50 Mev.

In each table the first three items of the first row give the incident K-meson energy in Mev, the value of  $\lambda^2$  in millibarns, and the K-meson momentum in the center-of-mass system in units of  $\mu c$ , in that order. In the columns below the following information is provided (angles are measured counterclockwise from the direction of the incident K meson):

Column 1: The angle of the scattered K meson in the laboratory system, in degrees.

Column 2: The energy of the scattered K meson, in Mev.

Column 3: The cosine of the angle of the scattered K meson in the center-of-mass system.

Column 4: The angle of the scattered K meson in the center-of-mass system, in degrees.

Column 5: The angle of the scattered proton in the laboratory system, in degrees.

Column 6: The ratio,  $d \cos \chi / d \cos \theta_K$ , of the solid angle in the center-of-mass system to the solid angle in the laboratory system for the scattered K meson.

The mass of the K meson was assumed to be 966 electron masses. The following constants were used in constructing these tables:

Mass of K meson	$\mu c^2 = 493.46 \text{ Mev}$
Mass of proton	$M c^2 = 938.22 \text{ Mev}$
	$(\hbar/\mu c)^2 = 1.595 \times 10^{-27} \text{ cm}^2.$

These tables were prepared at the suggestion of Dr. Lynn Stevenson and are similar to tables on pion scattering prepared by James A. Baker and John Killeen.<sup>1</sup>

The computations were performed on an IBM model 650 data-processing machine at the University of California Radiation Laboratory at Livermore. The computational code may be applied without modification to the elastic scattering of any two particles for which the energy of the incident particle is in the interval  $0 < E < 10^4 \text{ Mev}$ . The machine time required is about 20 seconds for each value of the incident energy.

We wish to thank Mr. Gordon Bjork and Mr. Paul Runedrich and their assistants in the tabulating office for a beautiful job of printing the results.

This work was done under the auspices of the United States Atomic Energy Commission.

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<sup>1</sup> James A. Baker and John Killeen, Pion-Proton Scattering Tables, UCRL-2843, Jan. 1955.

## FORMULAS

Introduce

$$\gamma_L = \frac{E}{\mu c^2} + 1$$

incident K-meson energy including rest energy in units of K-meson rest energy

$$\eta_L = \sqrt{\gamma_L^2 - 1}$$

incident K-meson momentum in units of  $\mu c$ 

$$U = \gamma_L + \frac{Mc^2}{\mu c^2}$$

$$B = \eta_L$$

$$N = \sqrt{U^2 - B^2}$$

$$\gamma_0 = \frac{U}{N}$$

$$\eta_0 = \frac{B}{N}$$

Then

$$\eta_B = \gamma_0 \eta_L - \eta_0 \gamma_L$$

Baricentric system momentum (K-meson or proton) in units of  $\mu c$ 

$$\chi^2 = \frac{1}{\eta_B} \left( \frac{\eta}{\mu c} \right)^2$$

$$\tan \theta_K = \frac{\sin \chi}{\gamma_0 \cos \chi + \frac{\eta_0 \gamma_B}{\eta_B}}$$

tangent of laboratory system angle of scattered K-meson

$$\tan \theta_P = \frac{1}{\gamma_0} \left\{ \frac{\sin \chi}{\cos \chi - 1} \right\}$$

tangent of laboratory system angle of scattered proton

$$E_K = \left\{ \gamma_0 \gamma_B + \eta_0 \eta_B \cos \chi - 1 \right\}^3 \mu c^2$$

$$\frac{d\Omega_B}{d\Omega_L} = \left\{ \frac{\gamma_0 \cos \chi + \frac{\eta_0 \gamma_B}{\eta_B}}{\cos \theta_K} \right\} \frac{1}{\gamma_0 + \frac{\eta_0 \gamma_B}{\eta_B} \cos \chi}$$

$$= \frac{\sin^3 \chi}{\sin^3 \theta_K} \frac{1}{\gamma_0 + \frac{\eta_0 \gamma_B}{\eta_B} \cos \chi}$$



$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
10.000000	91.550886	.131991	1.020264	.202331	1.002406
15.000000	9.640269	.921016	22.924901	90.000000-	2.349816
30.000000	8.648904	.701754	45.432001	78.510631-	2.286432
45.000000	7.237603	.389557	67.073018	67.234821-	2.104227
60.000000	5.684679	.046117	87.356698	56.400017-	1.827580
75.000000	4.246732	.272007-	105.783823	46.252763-	1.494531
90.000000	3.083642	.529231-	121.953552	37.041836-	1.152267
105.000000	2.239823	.715871-	135.714680	28.964850-	.846441
120.000000	1.674315	.840919-	147.237377	22.094627-	.606548
135.000000	1.316556	.920062-	156.935261	16.344079-	.438514
150.000000	1.102887	.967324-	165.312763	11.505393-	.330688
165.000000	.990377	.992237-	172.856211	7.326182-	.266523
180.000000	.955342	1.000000-	180.000000	3.563339-	.233034
					.222690

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
20.000000	45.729506	.186755	1.040529	.287576	1.004812
15.000000	19.277577	.920327	23.025970	90.000000-	2.371156
30.000000	17.278070	.699451	45.616951	78.433052-	2.305543
45.000000	14.433198	.385715	67.311769	67.092957-	2.117611
60.000000	11.323467	.041603	87.615560	56.217015-	1.834000
75.000000	8.447078	.276191-	106.033060	46.054691-	1.495128
90.000000	6.127314	.532481-	122.173338	36.851385-	1.149419
105.000000	4.447077	.718070-	135.805448	28.797030-	.842386
120.000000	3.323465	.842240-	147.377523	21.955716-	.602727
135.000000	2.612336	.920756-	157.036503	16.237222-	.435293
150.000000	2.198502	.967613-	165.378139	11.428216-	.327950
165.000000	1.964964	.992009-	172.887652	7.276277-	.264194
180.000000	1.805386	1.000000-	180.000000	3.539217-	.231040
					.220681

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
30.000000	30.457519	.228835	1.060794	.353953	1.007216
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\alpha\beta/d\alpha L$
15.000000	28.906004	.919640	23.126467	78.355646-	2.392469
30.000000	25.882070	.697159	45.800470	66.951665-	2.324585
45.000000	21.597341	.381900	67.548458	56.034986-	2.130837
60.000000	16.911922	.037136	87.871730	45.858167-	1.840309
75.000000	12.598079	.280318-	106.279260	36.662882-	1.495655
90.000000	9.127562	.535679-	122.390031	28.631388-	1.146531
105.000000	6.619296	.720231-	136.073638	21.820639-	.838372
120.000000	4.943500	.843535-	147.515376	16.132027-	.598858
135.000000	3.885024	.921432-	157.136426	11.352070-	.432015
150.000000	3.253393	.967897-	165.442767	7.227003-	.325257
165.000000	2.920800	.992374-	172.919580	3.514866-	.261925
180.000000	2.817173	1.000000-	180.000000		.228878
					.218716

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
40.000000	22.821893	.264358	1.081059	.410716	1.009620
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\alpha\beta/d\alpha L$
15.000000	38.529002	.918953	23.226448	78.278124-	2.413787
30.000000	34.464357	.694873	45.982842	66.810603-	2.343675
45.000000	28.718982	.378105	67.783600	55.853759-	2.144071
60.000000	22.454484	.032707	88.125607	45.662903-	1.848522
75.000000	16.703187	.284399-	106.522996	36.475925-	1.405116
90.000000	12.088333	.539833-	122.604317	28.467350-	1.146090
105.000000	8.759933	.722357-	136.249479	21.686223-	.834304
120.000000	6.538862	.844809-	147.651568	16.028036-	.595041
135.000000	5.136937	.922098-	157.234803	11.028036-	.428701
150.000000	4.301012	.953176-	165.505538	7.178416-	.323015
165.000000	3.860844	.992441-	172.950806	3.491089-	.258074
180.000000	3.723562	1.000000-	180.000000		.228878
					.218716

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_e/d\eta_L$
50.000000	18.241279	.295693	1.101324	.461426	1.012021
15.000000	48.143611	.918266	23.326086	78.200660-	2.362588
30.000000	43.022465	.692590	46.164470	66.669770-	2.157214
45.000000	35.800158	.374328	68.017138	55.673163-	1.852649
60.000000	27.948194	.028310	88.377709	45.468785-	1.496523
75.000000	20.760924	.288439-	106.764612	36.290459-	1.140814
90.000000	15.008146	.541950-	122.816598	28.304974-	.830427
105.000000	10.866521	.724457-	136.423773	21.553125-	.591264
120.000000	8.107083	.846065-	147.786271	15.925247-	.425616
135.000000	6.366643	.922755-	157.332263	11.202642-	.320001
150.000000	5.329880	.968450-	165.569448	7.130459-	.257490
165.000000	4.784111	.992506-	172.981231	3.467769-	.224980
180.000000	4.613867	1.000000-	180.000000		.214884

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_e/d\eta_L$
50.000000	15.187574	.324059	1.121589	.507898	1.014421
15.000000	57.752299	.917580	23.425150	78.123311-	2.381585
30.000000	51.557873	.690315	46.344894	66.529281-	2.170259
45.000000	42.843338	.370575	68.248842	55.493541-	1.858074
60.000000	33.396506	.023956	88.627232	45.276156-	1.490005
75.000000	24.773755	.292429-	107.003536	36.106769-	1.137582
90.000000	17.889459	.545020-	123.026129	28.144374-	.821503
105.000000	12.942515	.726520-	136.595488	21.421860-	.587518
120.000000	9.550632	.847299-	147.919140	15.823891-	.421111
135.000000	7.576612	.923400-	157.428348	11.129261-	.317111
150.000000	6.341477	.968720-	165.631614	7.053133-	.251011
165.000000	5.691094	.992571-	173.011769	3.444564-	.223111
180.000000	5.408775	1.000000-	180.000000		.210111

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \lambda$	$\lambda$	$\theta_P$	$d\eta_P/d\lambda$
70.000000	13.006703	.350175	1.141854	.551207	1.016819
15.000000	67.353091	.916894	23.523813	78.045962-	2.477149
30.000000	60.070089	.688048	46.524116	66.389135-	2.400530
45.000000	49.847535	.366842	68.478942	55.314549-	2.183208
60.000000	38.797938	.019638	88.874692	45.084731-	1.851001
75.000000	28.741187	.296375-	107.240110	35.924740-	1.467147
90.000000	20.731809	.548050-	123.233425	27.985493-	1.125030
105.000000	14.986927	.728554-	136.765370	21.291971-	.822609
120.000000	11.169507	.848513-	148.050404	15.723680-	.583030
135.000000	8.765855	.924034-	157.523173	11.057168-	.419400
150.000000	7.335309	.968985-	165.692864	7.036380-	.314012
165.000000	6.582780	.992636-	173.042422	3.421360-	.252187
180.000000	6.348385	1.000000-	180.000000		.221074
					.211167

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \lambda$	$\lambda$	$\theta_P$	$d\eta_P/d\lambda$
80.000000	11.371082	.374514	1.162119	.592047	1.019215
15.000000	76.947962	.916210	23.621846	77.968670-	2.400057
30.000000	68.560099	.685787	46.702420	66.249334-	2.419485
45.000000	56.814722	.363132	68.707323	55.136531-	2.196085
60.000000	44.154465	.015359	89.119918	44.894795-	1.870438
75.000000	32.665195	.300273-	107.474106	35.744373-	1.497369
90.000000	23.537139	.551036-	123.438257	27.828273-	1.132141
105.000000	17.002225	.730555-	136.933018	21.163743-	.818149
120.000000	12.564696	.849707-	148.179835	15.624902-	.580220
135.000000	9.935852	.924656-	157.616565	10.005002-	.416362
150.000000	8.312857	.969245-	165.755311	6.000371-	.312436
165.000000	7.459165	.992697-	173.071299	3.399186-	.251090
180.000000	7.193192	1.000000-	180.000000		.219265
					.219388

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$n_L$	$\gamma_0$
$\theta_k$	$E_k$	$\cos \chi$	$\chi$	$\theta_p$	$d n_B / d n_L$
90.000000	10.099212	.397397	1.182384	.630895	1.021000
15.000000	86.534938	.915525	23.719535	77.891378-	2.430119
30.000000	77.026423	.683530	46.879808	66.109704-	2.208000
45.000000	63.742431	.359438	68.934214	54.959143-	1.873100
60.000000	49.465595	.011112	89.363254	44.705891-	1.497530
75.000000	36.545285	.304134-	107.706154	35.565381-	1.129200
90.000000	26.304473	.553988-	123.641084	27.672601-	.814910
105.000000	18.986435	.732530-	137.099003	21.036833-	.570326
120.000000	14.135706	.850884-	148.308006	15.527156-	.413337
135.000000	11.086605	.925270-	157.709155	10.915361-	.309025
150.000000	9.273627	.969502-	165.813357	6.944764-	.249031
165.000000	8.320259	.992760-	173.101322	3.376554-	.217440
180.000000	8.023688	1.000000-	180.000000		.207618

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$n_L$	$\gamma_0$
$\theta_k$	$E_k$	$\cos \chi$	$\chi$	$\theta_p$	$d n_B / d n_L$
100.000000	9.081843	.419065	1.202649	.668104	1.024002
15.000000	96.116485	.914841	23.816767	77.814258-	2.457289
30.000000	85.471034	.681279	47.056221	65.970418-	2.221330
45.000000	70.634612	.355764	69.159616	54.782396-	1.851347
60.000000	54.733300	.006899	89.604698	44.518133-	1.497173
75.000000	40.383431	.307953-	107.936024	35.367935-	1.130001
90.000000	29.036771	.556902-	123.841906	27.518416-	.811100
105.000000	20.943011	.734477-	137.263156	20.911355-	.570072
120.000000	15.594509	.852043-	148.434630	15.430555-	.410100
135.000000	12.219100	.925375-	157.800771	10.843590-	.309100
150.000000	10.219593	.969794-	165.872257	6.944764-	.249031
165.000000	9.113026	.992820-	173.129916	3.376554-	.217440
180.000000	8.842661	1.000000-	180.000000		.207618

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
110.000000	8.249538	.439697	1.222914	.703930	1.026392
15.000000	105.690630	.914158	23.913596	90.000000-	2.563012
30.000000	93.892453	.679035	47.231561	77.737138-	2.476059
45.000000	77.488796	.352113	69.383298	65.831418-	2.234296
60.000000	59.957086	.002724	89.843851	54.606545-	1.887415
75.000000	44.179633	.311726-	108.163374	44.331807-	1.497711
90.000000	31.733046	.559775-	124.040321	35.212152-	1.123421
105.000000	22.870966	.736393-	137.425131	27.365954-	.807336
120.000000	17.011107	.853182-	148.559535	20.787367-	.569566
135.000000	13.333830	.926468-	157.890783	15.335272-	.407498
150.000000	11.149275	.970002-	165.930641	10.777049-	.305203
165.000000	10.000989	.992880-	173.158676	6.855497-	.245011
180.000000	9.643723	1.000000-	180.000000	3.332895-	.213815
					.204162

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
120.000000	7.556084	.459431	1.243179	.738575	1.028780
15.000000	120.000000	1.000000	24.010083	90.000000-	2.584326
30.000000	115.257867	.913474	47.406012	77.659903-	2.494926
45.000000	102.292159	.676798	69.605606	65.692820-	2.246258
60.000000	84.305971	.348479	90.081227	54.431506-	1.892904
75.000000	65.138435	.001416-	108.388661	44.146684-	1.497715
90.000000	47.934383	.315460-	124.236731	35.037859-	1.120506
105.000000	34.394779	.562612-	137.585387	27.215037-	.803593
120.000000	24.771287	.738283-	148.683064	20.684734-	.566003
135.000000	18.415500	.854305-	157.979935	15.241078-	.404629
150.000000	14.430302	.927052-	165.907994	10.709258-	.302876
165.000000	12.063660	.970245-	173.108579	6.811837-	.243032
180.000000	10.820629	.992938-	180.000000	3.311581-	.212017
	10.433755	1.000000-			.202478

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
130.000000	6.969411	.478377	1.263444	.772198	1.031165
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$dn_B/dn_L$
	130.000000	1.000000		90.000000-	2.605648
15.000000	124.818689	.912792	24.105881	77.582958-	2.513705
30.000000	110.669166	.674565	47.579561	65.554393-	2.250382
45.000000	91.087123	.344865	69.826367	54.257212-	1.808203
60.000000	70.276852	.005524-	90.316598	43.932708-	1.497674
75.000000	51.649164	.319156-	108.612000	34.834007-	1.117591
90.000000	37.022956	.565414-	124.431193	27.065609-	.791577
105.000000	26.644962	.740147-	137.744039	20.543490-	.532570
120.000000	19.798673	.855412-	148.805333	15.147858-	.401793
135.000000	15.509503	.927628-	158.068056	10.642232-	.300572
150.000000	12.964227	.970485-	166.045003	6.763579-	.241115
165.000000	11.626946	.992995-	173.214367	3.290439-	.210331
180.000000	11.210958	1.000000-	180.000000		.200820

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
140.000000	6.466647	.496625	1.283709	.804927	1.033550
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$dn_B/dn_L$
	140.000000	1.000000		90.000000-	2.628916
15.000000	134.371616	.912110	24.201336	77.505092-	2.532458
30.000000	119.023968	.672339	47.752021	65.415310-	2.271017
45.000000	97.831753	.341270	70.045538	54.093606-	1.900317
60.000000	75.372339	.009599-	90.550078	43.779934-	1.497382
75.000000	55.323480	.322810-	108.833047	34.693353-	1.117170
90.000000	39.617085	.568179-	124.623478	26.917672-	.791182
105.000000	28.491496	.741934-	137.900801	20.423519-	.532130
120.000000	21.161121	.856501-	148.925998	15.055698-	.401011
135.000000	16.571926	.928194-	158.155145	10.579908-	.290007
150.000000	13.349493	.970721-	166.101153	6.723994-	.241221
165.000000	12.419939	.993052-	173.242041	3.269526-	.210331
180.000000	11.975339	1.000000-	180.000000		.200820

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
150.000000	6.030992	514249	1.303974	836867	1.035932
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
15.000000	150.000000	1.000000		90.000000	2.648200
30.000000	143.919115	.911428	24.296504	77.423396	2.551111
45.000000	127.356563	.670118	47.923737	65.278514	2.221181
60.000000	104.540371	.337694	70.263476	53.910745	1.903179
75.000000	80.426868	.013640	90.791611	43.593421	1.497103
90.000000	58.958813	.326427	109.052146	34.523986	1.111731
105.000000	42.178645	.570911	124.913871	26.771166	.792239
120.000000	30.312370	.743795	138.055786	20.304936	.525531
135.000000	22.503337	.857574	149.045403	14.968970	.301239
150.000000	17.618065	.928752	158.241204	10.510624	.235079
165.000000	14.721445	.970954	166.156787	6.683667	.237341
180.000000	13.201089	.993108	173.269314	3.248842	.207020
	12.727859	1.000000	180.000000		.197596

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
150.000000	5.649371	531311	1.324239	868105	1.038311
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
15.000000	150.000000	1.000000		90.000000	2.648200
30.000000	153.458718	.910747	24.391100	77.351631	2.550079
45.000000	135.656450	.667904	48.064421	65.141119	2.221181
60.000000	111.213455	.334139	70.479765	53.793745	1.903179
75.000000	85.440439	.017646	91.211193	43.413169	1.497103
90.000000	62.558556	.330001	109.263697	34.352294	1.111731
105.000000	44.708130	.572304	125.042061	26.503230	.792239
120.000000	32.139077	.743579	138.228037	20.107117	.525531
135.000000	23.33321	.857330	149.103203	14.975107	.301239
150.000000	19.674427	.928901	153.213640	10.510624	.235079
165.000000	15.274031	.971100	158.241204	6.683667	.237341
180.000000	13.201089	.993108	173.269314	3.248842	.207020
	12.727859	1.000000	180.000000		.197596



$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \lambda$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
170.000000	5.313667	.547862	1.344504	.898716	1.040688
15.000000	162.992893	.910065	24.485580	77.274933-	2.588605
30.000000	143.955631	.665695	48.264246	65.003895-	2.308668
45.000000	117.851503	.330600	70.694741	53.567371-	1.919061
60.000000	90.413547	.021623-	91.239060	43.239005-	1.497021
75.000000	66.114502	.333542-	109.483984	34.188277-	1.105906
90.000000	47.206034	.576268-	125.188529	26.482797-	.785308
105.000000	33.879111	.747342-	138.360771	20.071743-	.549350
120.000000	25.128554	.859672-	149.279800	14.786321-	.390854
135.000000	19.662478	.929841-	158.410169	10.382224-	.291715
150.000000	16.424381	.971407-	166.265707	6.601046-	.233702
165.000000	14.725392	.993216-	173.322370	3.208506-	.203758
180.000000	14.196895	1.000000-	180.000000		.194456

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \lambda$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
180.000000	5.014850	.563948	1.364769	.928759	1.043062
15.000000	172.518679	.909386	24.579316	77.198156-	2.607216
30.000000	152.222102	.663493	48.433154	64.867130-	2.320811
45.000000	124.453528	.327082	70.908168	53.396802-	1.924050
60.000000	95.346191	.025565-	91.464977	43.061101-	1.496742
75.000000	69.635846	.337042-	109.696896	34.022749-	1.102984
90.000000	49.672356	.578896-	125.373078	26.340703-	.781736
105.000000	35.624979	.749077-	138.510542	19.957151-	.546120
120.000000	26.411554	.860698-	149.395136	14.698602-	.388206
135.000000	20.660751	.920373-	158.493076	10.319199-	.289583
150.000000	17.255371	.971629-	166.319278	6.560424-	.231918
165.000000	15.469039	.993270-	173.343012	3.188510-	.202081
180.000000	14.912908	1.000000-	180.000000		.192929

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
190.000000	4.747597	.579604	1.385034	.958289	1.045433
15.000000	190.000000	1.000000		90.000000-	2.733556
30.000000	182.037557	.908706	24.672823	77.121437-	2.625897
45.000000	160.465875	.661296	48.601145	64.730537-	2.332869
60.000000	131.020517	.323581	71.120277	53.227034-	1.928958
75.000000	100.238371	.029477-	91.689233	42.884287-	1.496421
90.000000	73.119192	.340509-	109.907973	33.858597-	1.100064
105.000000	52.107590	.581494-	125.555852	26.200042-	.778194
120.000000	37.347161	.750792-	138.659110	19.843648-	.542921
135.000000	27.675803	.861710-	149.509212	14.611798-	.385597
150.000000	21.643233	.930898-	158.575295	10.256861-	.287473
165.000000	18.073037	.971847-	166.372277	6.520374-	.230146
180.000000	16.200843	.993322-	173.374738	3.168972-	.200522
	15.618558	1.000000-	180.000000		.191422

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
200.000000	4.507083	.594868	1.405299	.987352	1.047802
15.000000	200.000000	1.000000		90.000000-	2.754872
30.000000	191.550513	.908027	24.765814	77.044661-	2.644447
45.000000	168.688922	.659104	48.768277	64.594288-	2.344873
60.000000	137.553951	.320100	71.330954	53.058012-	1.933784
75.000000	105.092061	.033358-	91.911713	42.708732-	1.496055
90.000000	76.567503	.343938-	110.117046	33.695820-	1.097142
105.000000	54.514696	.584059-	125.736620	26.060756-	.774679
120.000000	39.046150	.752481-	138.805845	19.731463-	.539760
135.000000	28.922781	.862706-	149.621856	14.526084-	.383024
150.000000	22.612392	.931414-	158.656426	10.195325-	.285407
165.000000	18.879354	.972052-	166.424645	6.480725-	.228420
180.000000	16.922284	.993374-	173.400521	3.149491-	.199055
	16.313352	1.000000-	180.000000		.189941

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_i$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
250.000000	3.593762	.666183	1.506624	1.126905	1.059607
15.000000	239.013641	.904638	25.225383	76.661581-	2.861455
30.000000	209.480447	.648235	49.591273	63.917739-	2.736970
45.000000	169.710881	.302963	72.364283	52.223900-	2.403780
60.000000	128.791550	.052301-	92.998041	41.848035-	1.956789
75.000000	93.285001	.360562-	111.134791	32.902273-	1.493623
90.000000	66.117463	.596425-	126.614391	25.384608-	1.082570
105.000000	47.207514	.760597-	139.516943	19.188299-	.757514
120.000000	34.896630	.867481-	150.167311	14.111664-	.524479
135.000000	27.247972	.933884-	159.048673	9.898361-	.370651
150.000000	22.732303	.973088-	166.677492	6.289586-	.275483
165.000000	20.367634	.993620-	173.524337	3.056042-	.220155
180.000000	19.632376	1.000000-	180.000000		.191634
					.182867

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_i$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
300.000000	2.985667	.730882	1.607949	1.259165	1.071341
15.000000	286.308498	.901262	25.675499	76.279819-	2.968039
30.000000	249.740513	.637507	50.393701	63.248926-	2.828916
45.000000	201.043731	.286266	73.365412	51.408294-	2.460967
60.000000	151.579122	.070517-	94.043746	41.015184-	1.977983
75.000000	109.175951	.376364-	112.108761	32.141385-	1.490272
90.000000	77.050602	.608078-	127.450738	24.740489-	1.068080
105.000000	54.851237	.768197-	140.192288	18.673210-	.741011
120.000000	40.468800	.871935-	150.684349	13.719875-	.510023
135.000000	31.561321	.936182-	159.420007	9.618013-	.359048
150.000000	26.312369	.974042-	166.916701	6.109391-	.266222
165.000000	23.566254	.993848-	173.641153	2.968035-	.212439
180.000000	22.713058	1.000000-	180.000000		.184812
					.175300

$E$	$\lambda^2$	$\eta_a$	$\gamma_L$	$\eta_L$	$\gamma_o$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
350.000000	2.551897	.790563	1.709274	1.386224	1.083000
15.000000	350.000000	1.000000		90.000000-	3.074625
30.000000	333.435578	.897896	26.117078	75.899261-	2.920169
45.000000	289.480470	.626918	51.176819	62.587904-	2.516478
60.000000	231.583587	.269990	74.336232	50.610737-	1.997493
75.000000	173.507083	.088047-	95.051349	40.209318-	1.486112
90.000000	124.300061	.391405-	113.042052	31.411265-	1.053710
105.000000	87.369381	.619077-	128.248868	24.126336-	.725142
120.000000	62.023211	.775331-	140.835147	18.184018-	.496320
135.000000	45.677783	.876100-	151.175545	13.348770-	.348142
150.000000	35.584022	.938327-	159.772548	9.352848-	.257555
165.000000	29.646196	.974931-	167.143707	5.939165-	.205261
180.000000	25.580071	.994061-	173.752489	2.884785-	.178368
		1.000000-	180.000000		.170188

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_o$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
400.000000	2.227021	.846264	1.810599	1.509393	1.094582
15.000000	400.000000	1.000000		90.000000-	3.181203
30.000000	380.396362	.894545	26.549890	75.520020-	3.010619
45.000000	328.709202	.616465	51.941432	61.934618-	2.570367
60.000000	261.360057	.254122	75.278347	49.831056-	2.015411
75.000000	194.623793	.104926-	96.022971	39.429408-	1.481232
90.000000	138.712105	.405735-	113.937242	30.710480-	1.039495
105.000000	97.125614	.629474-	129.011475	23.340257-	.709878
120.000000	68.768340	.782036-	141.447467	17.719178-	.483326
135.000000	50.559600	.880001-	151.842563	12.996974-	.337884
150.000000	39.346175	.940331-	160.197279	9.101950-	.249445
165.000000	32.760927	.975760-	167.358910	5.775222-	.198563
180.000000	29.322485	.994259-	173.557455	2.806290-	.172559
	28.255126	1.000000-	180.000000		.164487

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
450.000000	1.974709	.898703	1.911924	1.629556	1.106085
15.000000	450.000000	1.000000		90.000000-	3.287799
30.000000	427.192330	.891203	26.975139	75.142097-	3.100524
45.000000	367.438056	.606145	52.688626	61.289238-	2.622678
60.000000	290.401764	.238643	76.193475	49.068736-	2.031846
75.000000	214.972676	.121195-	96.961132	38.674365-	1.475721
90.000000	152.460938	.419410-	114.797481	30.037312-	1.025455
105.000000	106.363219	.639321-	129.741309	22.980420-	.695190
120.000000	75.122154	.788356-	142.032227	17.275683-	.470976
135.000000	55.142873	.883666-	152.087866	12.662825-	.328204
150.000000	42.870972	.942210-	160.426121	8.863886-	.241827
165.000000	35.675312	.976537-	167.563972	5.625643-	.192275
180.000000	31.921549	.994444-	173.957264	2.731977-	.166953
	30.756485	1.000000-	180.000000		.159153

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
500.000000	1.773154	.948407	2.013249	1.747332	1.117506
15.000000	500.000000	1.000000		90.000000-	3.394375
30.000000	473.822001	.887874	27.292596	74.765320-	3.189800
45.000000	405.673942	.595957	53.419032	60.651708-	2.673452
60.000000	318.734859	.223545	77.082591	48.323719-	2.046877
75.000000	234.595677	.136879-	97.867322	37.943557-	1.469660
90.000000	165.591462	.432465-	115.624201	29.390557-	1.011616
105.000000	115.122165	.648656-	130.440432	22.445278-	.681052
120.000000	81.117714	.794317-	142.590919	16.395157-	.459235
135.000000	59.454742	.887112-	152.512657	12.345292-	.319064
150.000000	43.180620	.943973-	160.729760	8.336026-	.234561
165.000000	38.403547	.977265-	167.759181	5.481028-	.186378
180.000000	35.100972	.994019-	174.033262	2.631159-	.161768
	33.100972	1.000000-	180.000000		.144157

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_k$	$E_k$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
550.000000	1.608481	.995772	2.114574	1.863175	1.128846
15.000000	550.000000	1.000000		90.000000-	3.500959
30.000000	520.288829	.884556	27.803006	74.389975-	3.278422
45.000000	443.429196	.585897	54.133511	60.022085-	2.722738
60.000000	346.386976	.208810	77.947299	47.595604-	2.060607
75.000000	253.530299	.152014-	98.743719	37.235897-	1.463109
90.000000	178.144637	.444948-	116.420097	28.768612-	.997985
105.000000	123.439464	.657520-	131.111136	21.933340-	.667439
120.000000	86.785123	.799952-	143.125545	16.453228-	.448057
135.000000	63.518400	.890360-	152.918540	12.043057-	.310416
150.000000	49.294364	.945632-	161.019992	8.423281-	.227910
165.000000	40.977559	.977950-	167.945791	5.343404-	.180818
180.000000	36.645458	.994782-	174.144335	2.594123-	.156743
	35.302749	1.000000-	180.000000		.149464

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_k$	$E_k$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
600.000000	1.471465	1.041101	2.215899	1.977424	1.140103
15.000000	600.000000	1.000000		90.000000-	3.607549
30.000000	566.591828	.881251	28.206254	74.016063-	3.366427
45.000000	480.710234	.575962	54.832920	59.400311-	2.770599
60.000000	373.378349	.194423	78.788916	46.883933-	2.073102
75.000000	271.810591	.166630-	99.592040	36.550410-	1.456137
90.000000	190.155990	.456896-	117.187058	28.170329-	.984581
105.000000	131.346202	.665950-	131.755370	21.443060-	.654321
120.000000	92.148559	.805289-	143.638228	16.069346-	.437396
135.000000	67.353585	.893428-	153.307235	11.754974-	.302221
150.000000	52.227994	.947197-	161.297704	8.218735-	.221521
165.000000	43.395522	.978594-	168.123752	5.212712-	.175591
180.000000	38.798432	.994936-	174.231367	2.530353-	.152196
	37.373308	1.000000-	180.000000		.145047

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
650.000000	1.355690	1.084645	2.317224	2.090341	1.151278
15.000000	650.000000	1.000000		90.000000-	3.714134
30.000000	612.731985	.877954	28.603428	73.643354-	3.453761
45.000000	517.527911	.566152	55.517548	58.786444-	2.817046
60.000000	399.736610	.180377	79.608189	46.188477-	2.084444
75.000000	289.473562	.180749-	100.413490	35.886409-	1.448789
90.000000	201.661545	.468338-	117.926575	27.594507-	.971406
105.000000	138.874455	.673973-	132.374565	20.973234-	.641683
120.000000	97.234669	.810346-	144.129826	15.702653-	.427230
135.000000	70.981516	.896327-	153.679485	11.480183-	.294448
150.000000	54.998289	.948673-	161.563270	8.024044-	.215497
165.000000	45.676796	.979202-	168.294092	5.088151-	.170654
180.000000	40.828534	.995081-	174.314733	2.469620-	.147877
	39.326436	1.000000-	180.000000		.140885

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
700.000000	1.256597	1.126600	2.418549	2.202130	1.162370
15.000000	700.000000	1.000000		90.000000-	3.820719
30.000000	658.712754	.874673	28.993670	73.272307-	3.540446
45.000000	553.890122	.556463	56.188367	58.180426-	2.862144
60.000000	425.481991	.166656	80.406491	45.508777-	2.094709
75.000000	306.547340	.194398-	101.209614	35.242978-	1.441122
90.000000	212.693870	.479308-	118.640366	27.039998-	.958470
105.000000	146.048896	.681621-	132.970556	20.522718-	.629492
120.000000	102.063686	.815148-	144.602115	15.351888-	.417517
135.000000	74.416997	.899074-	154.036725	11.217768-	.287060
150.000000	57.619064	.950069-	161.817835	7.838177-	.209786
165.000000	47.832730	.979776-	168.457442	4.969434-	.165989
180.000000	42.746620	.995217-	174.393743	2.412037-	.143804
	41.170503	1.000000-	180.000000		.136954

E	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
750.000000	1.170837	1.167131	2.519874	2.312955	1.173380
	750.000000	1.000000		90.000000-	3.927301
15.000000	704.533147	.871402	29.378010	72.902634-	3.626478
30.000000	589.805257	.546893	56.845778	57.582316-	2.905929
45.000000	450.636205	.153251	81.184567	44.844662-	2.103945
60.000000	323.062025	.207598-	101.981732	34.619428-	1.433173
75.000000	223.279612	.489834-	119.329749	26.505829-	.945776
90.000000	152.895184	.688917-	133.544545	20.090421-	.617736
105.000000	106.654361	.819712-	145.056070	15.016135-	.408234
120.000000	77.675325	.901678-	154.379583	10.967042-	.280038
135.000000	60.100190	.951391-	162.062145	7.660732-	.204370
150.000000	49.872208	.980320-	168.614203	4.856046-	.161566
165.000000	44.559598	.995346-	174.469947	2.356919-	.139840
180.000000	42.914397	1.000000-	180.000000		.133238

E	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
800.000000	1.095900	1.206375	2.621199	2.422949	1.184309
	800.000000	1.000000		90.000000-	4.033883
15.000000	750.193166	.868141	29.756677	72.534337-	3.712017
30.000000	625.281705	.537440	57.490356	56.991997-	2.948422
45.000000	475.219978	.140152	81.943335	44.195672-	2.112224
60.000000	339.044265	.220373-	102.731047	34.014900-	1.424982
75.000000	233.446405	.499943-	119.996328	25.990855-	.933324
90.000000	159.435527	.695885-	134.097908	19.675256-	.606389
105.000000	111.023472	.824056-	145.493007	14.694419-	.399347
120.000000	80.770317	.904150-	154.709148	10.727145-	.273352
135.000000	62.453509	.952644-	162.296771	7.491079-	.199233
150.000000	51.805591	.980835-	168.754662	4.747700-	.157378
165.000000	46.277339	.995470-	174.544259	2.303806-	.136176
180.000000	44.566013	1.000000-	180.000000		.129718



$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_0/d\eta_L$
850.000000	1.029869	1.244448	2.722524	2.532219	1.195157
15.000000	795.695770	.864893	30.129501	90.000000-	4.140472
30.000000	660.328348	.528102	58.122615	72.167529-	3.796847
45.000000	499.250580	.127345	82.683769	56.409414-	2.989678
60.000000	354.520213	.232743-	103.458703	43.561351-	2.119607
75.000000	243.217935	.509659-	120.641192	33.428707-	1.416588
90.000000	165.688674	.702550-	134.632076	25.494272-	.921118
105.000000	115.187302	.828196-	145.913902	19.276191-	.595430
120.000000	83.712830	.906503-	155.026509	14.385996-	.390836
135.000000	64.688398	.953836-	162.522745	10.497331-	.266972
150.000000	53.640282	.981323-	168.908990	7.328645-	.194329
165.000000	47.907736	.995586-	174.614561	4.644281-	.153415
180.000000	46.133248	1.000000-	180.000000	2.253443-	.132648
					.126379

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_0/d\eta_L$
900.000000	.971260	1.281445	2.823849	2.640856	1.205924
15.000000	841.036519	.861656	30.496882	90.000000-	4.247061
30.000000	694.947159	.518876	58.743014	71.802269-	3.880990
45.000000	522.744295	.114822	83.406555	55.834623-	3.029725
60.000000	369.508128	.244729-	104.165905	42.941525-	2.126140
75.000000	252.614434	.519007-	121.265773	32.860103-	1.408020
90.000000	171.670912	.708930-	135.147968	25.014936-	.909156
105.000000	119.157696	.832147-	146.320014	18.892424-	.584845
120.000000	86.512732	.908743-	155.332240	14.039834-	.38257-
135.000000	66.811764	.954968-	162.739954	10.277029-	.260884
150.000000	55.381709	.981788-	168.048391	7.173202-	.189679
165.000000	49.454246	.995697-	174.682801	4.545045-	.149322
180.000000	47.619555	1.000000-	180.000000	2.205085-	.129209
					.123205

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
950.000000	.918884	1.317460	2.925174	2.748934	1.216612
	950.000000	1.000000		90.000000-	4.353644
15.000000	886.222814	.858430	30.859163	71.438613-	3.964570
30.000000	729.154423	.509761	59.352068	55.267566-	3.068590
45.000000	545.724810	.102576	84.112439	42.335794-	2.131879
60.000000	384.039097	.256343-	104.853225	32.308517-	1.399303
75.000000	261.661563	.528003-	121.870702	24.552330-	.897434
90.000000	177.404444	.715040-	135.646555	18.523095-	.574614
105.000000	122.950443	.835919-	146.711688	13.805475-	.374844
120.000000	89.183840	.910877-	155.626854	10.065779-	.255066
135.000000	68.835451	.956047-	162.949599	7.024118-	.185237
150.000000	57.040727	.982230-	169.182463	4.449991-	.146041
165.000000	50.926242	.995802-	174.748118	2.158904-	.126132
180.000000	49.035297	1.000000-	180.000000		.120190

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1000.000000	.871804	1.352566	3.026499	2.856518	1.227222
	1000.000000	1.000000		90.000000-	4.460227
15.000000	931.253175	.855214	31.216574	71.076274-	4.047713
30.000000	762.953594	.500756	59.949892	54.708187-	3.106312
45.000000	568.206435	.090596	84.802051	41.743757-	2.136863
60.000000	398.130392	.267606-	105.521924	31.773202-	1.390463
75.000000	270.377085	.536669-	122.457239	24.105480-	.885952
90.000000	182.903089	.720398-	136.128757	18.167517-	.564723
105.000000	126.577881	.839525-	147.090070	13.532174-	.367325
120.000000	91.732077	.912914-	155.911213	9.862895-	.249501
135.000000	70.765380	.957074-	163.151452	6.881108-	.180999
150.000000	58.621235	.982550-	169.311608	4.358891-	.142601
165.000000	52.329154	.995902-	174.810971	2.114615-	.123146
180.000000	50.282041	1.000000-	180.000000		.117319

$E$	$\bar{\lambda}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1050.000000	.829262	1.386826	3.127824	2.963660	1.237754
	1050.000000	1.000000		90.000000-	4.566811
15.000000	976.127603	.852010	31.568943	70.715597-	4.130073
30.000000	796.350594	.491857	60.537231	54.156486-	3.142938
45.000000	590.203481	.078873	85.476136	41.165184-	2.141144
60.000000	411.799776	.278533-	106.172747	31.253530-	1.381526
75.000000	278.777284	.545022-	123.026243	23.673699-	.874711
90.000000	188.178195	.726522-	136.595717	17.824831-	.555152
105.000000	130.048397	.842976-	147.455846	13.269244-	.360100
120.000000	94.166324	.914860-	156.185889	9.667975-	.244174
135.000000	72.604512	.958055-	163.346429	6.743770-	.176952
150.000000	60.126837	.983052-	169.436455	4.271400-	.139335
165.000000	53.664955	.995997-	174.871762	2.072044-	.120404
180.000000	51.666928	1.000000-	180.000000		.114580

$E$	$\bar{\lambda}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1100.000000	.790635	1.420299	3.229149	3.070407	1.248210
	1100.000000	1.000000		90.000000-	4.673395
15.000000	1020.847576	.848818	31.916671	70.356696-	4.211948
30.000000	829.355292	.483063	61.114314	53.612348-	3.178487
45.000000	611.732725	.067399	86.135324	40.599617-	2.144761
60.000000	425.067483	.289139-	106.806495	30.748983-	1.372507
75.000000	286.880420	.553080-	123.578689	23.256242-	.863697
90.000000	193.246541	.731923-	137.047953	17.494464-	.545890
105.000000	133.373836	.846282-	147.809647	13.016168-	.353150
120.000000	96.494970	.916721-	156.451398	9.480503-	.239067
135.000000	74.364196	.958992-	163.534818	6.611703-	.173082
150.000000	61.566265	.983436-	169.557177	4.187232-	.135191
165.000000	54.942528	.995088-	174.930318	2.031249-	.117687
180.000000	52.893674	1.000000-	180.000000		.111967

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
1150.000000	.755410	1.453036	3.330474	3.176799	1.258590
	1150.000000	1.000000		90.000000-	4.779977
15.000000	1065.411123	.845636	32.259815	69.999228-	4.293159
30.000000	861.970154	.474372	61.681428	53.075659-	3.212985
45.000000	632.807984	.056167	86.780131	40.046770-	2.147748
60.000000	437.949303	.299437-	107.423857	30.258990-	1.363432
75.000000	294.699816	.560857-	124.115149	22.852536-	.852919
90.000000	198.116515	.737115-	137.486323	17.175785-	.536923
105.000000	136.559626	.849452-	148.152162	12.772432-	.346463
120.000000	98.722457	.918502-	156.708083	9.300193-	.234175
135.000000	76.043940	.959888-	163.716904	6.484850-	.169377
150.000000	62.940556	.983801-	169.673144	4.106617-	.133222
165.000000	56.160391	.996175-	174.986927	1.991945-	.115059
180.000000	54.063672	1.000000-	180.000000		.109470

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
1200.000000	.723154	1.485088	3.431799	3.282871	1.268897
	1200.000000	1.000000		90.000000-	4.886566
15.000000	1109.825644	.842465	32.598605	69.643364-	4.373853
30.000000	894.208506	.465781	62.239145	52.546418-	3.246469
45.000000	653.446530	.045169	87.411072	39.506357-	2.150150
60.000000	450.465981	.309442-	108.025692	29.782804-	1.354306
75.000000	302.254222	.568369-	124.636656	22.461779-	.842381
90.000000	202.803909	.742109-	137.911458	16.868164-	.528233
105.000000	139.619039	.852493-	148.483961	12.537519-	.340022
120.000000	100.858653	.920208-	156.956575	9.126472-	.229473
135.000000	77.654106	.950746-	163.893146	6.862039-	.165880
150.000000	64.253619	.964152-	169.785959	4.028732-	.130371
165.000000	57.323915	.976259-	175.042217	1.264015-	.112486
180.000000	55.187407	1.000000-	180.000000		.107083

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
1250.000000	.693517	1.516489	3.533124	3.388652	1.279130
15.000000	1250.000000	1.000000		90.000000-	4.993151
30.000000	1154.083244	.839304	32.933213	69.289047-	4.453933
45.000000	926.070346	.457291	62.787523	52.024510-	3.278961
60.000000	673.657244	.034397	88.028778	38.978032-	2.151996
75.000000	462.627327	.319165-	108.612516	29.320198-	1.345152
90.000000	309.552522	.575628-	125.143723	22.083569-	.832030
105.000000	207.314149	.746918-	138.324216	16.571028-	.519818
120.000000	142.555680	.855414-	148.805620	12.310972-	.333814
135.000000	102.905039	.921845-	157.197389	8.959054-	.224961
150.000000	79.195681	.961568-	164.063945	6.244896-	.162418
165.000000	65.515440	.984488-	169.895051	3.953924-	.127628
180.000000	58.442158	.996338-	175.095044	1.917747-	.110170
	56.256123	1.000000-	180.000000		.104797

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
1300.000000	.666187	1.547282	3.634449	3.494169	1.289291
15.000000	1300.000000	1.000000		90.000000-	5.099733
30.000000	1198.190832	.836156	33.263580	68.936520-	4.533366
45.000000	957.566038	.442899	63.326848	51.510052-	3.310487
60.000000	693.455411	.023646	88.633534	38.461511-	2.153320
75.000000	474.451658	.328618-	109.185015	28.870484-	1.335983
90.000000	316.610012	.582646-	125.636933	21.717335-	.821916
105.000000	211.659574	.751351-	138.725000	16.383919-	.511657
120.000000	145.378775	.858222-	149.117658	12.092274-	.327826
135.000000	104.870004	.923416-	157.490812	8.797952-	.220616
150.000000	80.674092	.962256-	164.229135	6.134450-	.159155
165.000000	66.721954	.984810-	170.000704	3.881721-	.125000
180.000000	59.511984	.996414-	175.146132	1.882736-	.107705
	57.283510	1.000000-	180.000000		.102506

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
1350.000000	.640909	1.577501	3.735774	3.599445	1.299382
	1350.000000	1.000000		90.000000-	5.206323
15.000000	1242.149888	.833017	33.589994	68.585684-	4.612382
30.000000	988.702983	.440602	63.857636	51.002755-	3.341081
45.000000	712.856861	.013507	89.226030	37.956391-	2.154154
60.000000	485.954252	.337812-	109.743706	28.433145-	1.326808
75.000000	323.438043	.589437-	126.117179	21.362387-	.812013
90.000000	215.849558	.756017-	139.114383	16.006320-	.503740
105.000000	148.094788	.860923-	149.420461	11.881139-	.322049
120.000000	106.757988	.924925-	157.657130	8.641922-	.216438
135.000000	82.093288	.963113-	164.389499	6.022072-	.156016
150.000000	67.881589	.985118-	170.102920	3.812174-	.122470
165.000000	60.538384	.996487-	175.195999	1.848992-	.105651
180.000000	58.269447	1.000000-	180.000000		.100506

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
1400.000000	.617459	1.607177	3.837099	3.704501	1.309403
	1400.000000	1.000000		90.000000-	5.312905
15.000000	1285.958437	.829890	33.912512	68.236466-	4.690695
30.000000	1019.484635	.432400	64.379944	50.502620-	3.370784
45.000000	731.869943	.003376	89.806494	37.462501-	2.154522
60.000000	497.144485	.346757-	110.289162	28.007896-	1.317634
75.000000	330.047963	.596009-	126.584712	21.018383-	.802317
90.000000	219.892490	.760324-	139.492821	15.737890-	.496060
105.000000	150.709642	.863522-	149.714446	11.677223-	.316471
120.000000	108.572447	.926376-	157.876860	8.491635-	.212417
135.000000	83.457217	.963839-	164.544828	5.916534-	.153002
150.000000	68.993852	.985414-	170.202041	3.745138-	.120066
165.000000	61.522840	.996558-	175.244643	1.816276-	.103454
180.000000	59.215413	1.000000-	180.000000		.098490

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\Omega_L$
1450.000000	.595651	1.636333	3.938424	3.809354	1.319355
	1450.000000	1.000000		90.000000-	5.419495
15.000000	1329.614508	.826771	34.231478	67.888852-	4.768556
30.000000	1049.915930	.424291	64.894117	50.009647-	3.399573
45.000000	750.505527	.006556-	90.375670	36.979441-	2.154454
60.000000	508.036173	.355465-	110.822013	27.594106-	1.308476
75.000000	336.448163	.602376-	127.040328	20.684750-	.792825
90.000000	223.793799	.764484-	139.861176	15.477939-	.488605
105.000000	153.227284	.866027-	150.000294	11.479954-	.311082
120.000000	110.318808	.927772-	158.090229	8.346333-	.208542
135.000000	84.768838	.964537-	164.695630	5.814604-	.150099
150.000000	70.062196	.985700-	170.298814	3.680222-	.117729
165.000000	62.468807	.996626-	175.292027	1.784591-	.101358
180.000000	60.123876	1.000000-	180.000000		.096552

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\Omega_L$
1500.000000	.575315	1.665002	4.039749	3.914022	1.329240
	1500.000000	1.000000		90.000000-	5.526077
15.000000	1373.125994	.823665	34.546547	67.543072-	4.845822
30.000000	1080.005735	.416273	65.400439	49.523664-	3.427522
45.000000	768.776937	.016292-	90.933559	36.506980-	2.153971
60.000000	518.642641	.363942-	111.342545	27.191545-	1.299342
75.000000	342.651964	.608543-	127.484313	20.361144-	.783531
90.000000	227.562860	.768500-	140.219504	15.226353-	.481363
105.000000	155.655116	.868441-	150.278007	11.289274-	.305871
120.000000	112.000033	.929115-	158.297353	8.205958-	.204805
135.000000	86.030620	.965209-	164.842136	5.716113-	.147305
150.000000	71.090077	.985973-	170.352034	3.617712-	.115485
165.000000	63.379244	.996690-	175.335717	1.754511-	.099573
180.000000	60.397797	1.000000-	180.000000		.094690

E	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1550.000000	.556310	1.693203	4.141074	4.018518	1.339058
	1550.000000	1.000000		90.000000-	5.632657
15.000000	1416.487467	.820569	34.858122	67.198897-	4.922616
30.000000	1109.759027	.408345	65.899027	49.044614-	3.454622
45.000000	786.693053	.025839-	91.480676	36.044832-	2.153107
60.000000	528.972770	.372199-	111.851389	26.799642-	1.290238
75.000000	348.665289	.614522-	127.917297	20.047163-	.774428
90.000000	231.205102	.772381-	140.568263	14.982559-	.474331
105.000000	157.997086	.870769-	150.548214	11.104724-	.300832
120.000000	113.619574	.930410-	158.498863	8.070225-	.201198
135.000000	87.244042	.965856-	164.984573	5.620945-	.144620
150.000000	72.079468	.986237-	170.483135	3.557151-	.113320
165.000000	64.254645	.996753-	175.381465	1.724889-	.097716
180.000000	61.838162	1.000000-	180.000000		.092899

E	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1600.000000	.538511	1.720959	4.242399	4.122856	1.348811
	1600.000000	1.000000		90.000000-	5.739244
15.000000	1459.701889	.817484	35.166259	66.856554-	4.998665
30.000000	1139.180698	.400506	66.390109	48.572440-	3.480905
45.000000	804.262760	.035204-	92.017538	35.592654-	2.151875
60.000000	539.036923	.380246-	112.349060	26.418052-	1.281167
75.000000	354.496527	.620322-	128.339739	19.742292-	.765518
90.000000	234.725951	.776136-	140.908199	14.746329-	.467495
105.000000	160.256154	.873017-	150.811201	10.926018-	.295956
120.000000	115.179900	.931658-	158.694814	7.938845-	.197718
135.000000	88.413053	.966480-	165.123172	5.528756-	.142016
150.000000	73.031356	.986491-	170.571599	3.498594-	.111260
165.000000	65.096984	.996813-	175.424494	1.696528-	.095804
180.000000	62.646946	1.000000-	180.000000		.091173



$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1650.000000	.521805	1.748290	4.343724	4.227048	1.358500
	1650.000000	1.000000		90.000000-	5.845834
15.000000	1502.770740	.814410	35.470900	66.515988-	5.074268
30.000000	1168.275698	.392752	66.874087	48.106911-	3.506410
45.000000	821.498887	.044390-	92.544258	35.150273-	2.150300
60.000000	548.847436	.388089-	112.835730	26.046432-	1.272141
75.000000	360.154560	.625951-	128.752154	19.446130-	.756789
90.000000	238.133798	.779768-	141.239426	14.517260-	.460851
105.000000	162.438242	.875188-	151.067256	10.752928-	.291232
120.000000	116.685946	.932862-	158.885495	7.811592-	.194358
135.000000	89.540613	.967081-	165.257874	5.439546-	.139518
150.000000	73.949195	.986736-	170.657543	3.441986-	.109260
165.000000	65.908235	.996872-	175.466836	1.668796-	.094012
180.000000	63.426616	1.000000-	180.000000		.089511

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1700.000000	.506095	1.775218	4.445048	4.331102	1.368125
	1700.000000	1.000000		90.000000-	5.952404
15.000000	1545.694019	.811346	35.772276	66.177198-	5.149279
30.000000	1197.051429	.385085	67.350902	47.648259-	3.531129
45.000000	838.411302	.053401-	93.061180	34.717403-	2.148401
60.000000	558.413686	.395734-	113.311858	25.684494-	1.263167
75.000000	365.649257	.631413-	129.154542	19.158448-	.748242
90.000000	241.434071	.783283-	141.562230	14.295067-	.454391
105.000000	164.549271	.877285-	151.316607	10.585223-	.286659
120.000000	118.141165	.934024-	159.071076	7.688463-	.191110
135.000000	90.629683	.967661-	165.389081	5.353259-	.137095
150.000000	74.834959	.986971-	170.740908	3.287211-	.107325
165.000000	66.693826	.995926-	175.506313	1.642670-	.092360
180.000000	64.178652	1.000000-	180.000000		.087909

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1750.000000	.491297	1.801755	4.546373	4.435031	1.377689
	1750.000000	1.000000		90.000000-	6.059001
15.000000	1588.472221	.808290	36.070787	65.840013-	5.223996
30.000000	1225.512330	.377501	67.820957	47.196080-	3.555116
45.000000	855.006422	.062246-	93.568821	34.293701-	2.146197
60.000000	567.742088	.403193-	113.778017	25.331782-	1.254245
75.000000	370.984566	.636720-	129.547763	18.878844-	.739868
90.000000	244.627755	.786690-	141.877300	14.079406-	.448104
105.000000	166.588255	.879314-	151.559828	10.422446-	.282225
120.000000	119.545063	.935148-	159.252130	7.569001-	.187963
135.000000	91.680264	.968221-	165.516851	5.269550-	.134763
150.000000	75.689635	.987199-	170.822440	3.334156-	.105464
165.000000	67.446849	.996982-	175.547509	1.616256-	.090662
180.000000	64.904040	1.000000-	180.000000		.086361

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1800.000000	.477331	1.827922	4.647698	4.538843	1.387191
	1800.000000	1.000000		90.000000-	6.165581
15.000000	1631.107319	.805247	36.365860	65.504660-	5.297956
30.000000	1253.662351	.370000	68.284308	46.750434-	3.578359
45.000000	871.294608	.070926-	94.067237	33.879109-	2.143706
60.000000	576.844484	.410469-	114.234378	24.987950-	1.245377
75.000000	376.168875	.641876-	129.931989	18.607033-	.731667
90.000000	247.724722	.789990-	142.184691	13.869990-	.441985
105.000000	168.561609	.881276-	151.796746	10.264710-	.277927
120.000000	120.903070	.936233-	159.428315	7.453206-	.184920
135.000000	92.694328	.958762-	165.641297	5.188476-	.132501
150.000000	76.514209	.987420-	170.902310	3.282475-	.103649
165.000000	68.177666	.997033-	175.585037	1.591619-	.089289
180.000000	65.604263	1.000000-	180.000000		.084869

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$\frac{d\eta_B/d\Omega_L}{d\Omega_L}$
1850.000000	.464134	1.853728	4.749023	4.642544	1.396633
	1850.000000	1.000000		90.000000-	6.272169
15.000000	1673.593884	.802212	36.658069	65.170970-	5.371479
30.000000	1281.505438	.362580	68.741185	46.311204-	3.600888
45.000000	887.280796	.079448-	94.556887	33.473111-	2.140945
60.000000	585.724329	.417570-	114.681342	24.652827-	1.236574
75.000000	381.206133	.646888-	130.307448	18.342613-	.723629
90.000000	250.723982	.793191-	142.484807	13.666647-	.436030
105.000000	170.469826	.883177-	152.028106	10.111444-	.273753
120.000000	122.214692	.937283-	159.600259	7.340849-	.181973
135.000000	93.673356	.969285-	165.762650	5.109809-	.130320
150.000000	77.310657	.987632-	170.979316	3.232685-	.101911
165.000000	68.881342	.997034-	175.623254	1.567211-	.087695
180.000000	66.279812	1.000000-	180.000000		.083426

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$\frac{d\eta_B/d\Omega_L}{d\Omega_L}$
1900.000000	.451637	1.879200	4.850348	4.746143	1.406017
	1900.000000	1.000000		90.000000-	6.376751
15.000000	1715.949189	.799189	35.947183	64.839227-	5.444444
30.000000	1309.055409	.355240	69.191759	45.878335-	3.622735
45.000000	902.984230	.087813-	95.037885	33.075765-	2.137925
60.000000	594.399387	.424501-	115.119196	24.325954-	1.217528
75.000000	386.110156	.651759-	130.674428	18.025412-	.713754
90.000000	253.639654	.796293-	142.777646	13.469149-	.436030
105.000000	172.329258	.885015-	152.253451	9.962870-	.269700
120.000000	123.467330	.928298-	159.767792	7.231373-	.179119
135.000000	94.624750	.969769-	165.890507	5.023663-	.126217
150.000000	73.769417	.987937-	171.054003	3.104270-	.101911
165.000000	67.554294	.997192-	175.657680	1.549934-	.087695
180.000000	66.906120	1.000000-	180.000000		.083426

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
1950.000000	.439795	1.904331	4.951673	4.849645	1.415341
15.000000	1950.000000	1.000000		90.000000-	6.485339
30.000000	1758.148560	.796175	37.233548	64.509261-	5.516848
45.000000	1336.300421	.6347978	69.636259	45.451710-	3.643922
60.000000	918.394548	.096030-	95.510690	32.686612-	2.134676
75.000000	602.861763	.431271-	115.548342	24.007161-	1.219154
90.000000	390.871569	.656501-	131.033615	17.835030-	.708040
105.000000	256.461462	.799307-	143.064010	13.277036-	.424577
120.000000	174.112560	.886799-	152.473810	9.818376-	.265775
135.000000	124.714569	.939282-	159.931314	7.126048-	.176355
150.000000	95.539135	.970280-	165.996302	4.959408-	.126156
165.000000	78.326571	.988037-	171.128686	3.137115-	.093583
180.000000	70.221585	.997179-	175.695045	1.521145-	.084755
	67.565773	1.000000-	180.000000		.080633

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2000.000000	.428551	1.929152	5.052998	4.953058	1.424609
15.000000	2000.000000	1.000000		90.000000-	6.591922
30.000000	1800.216177	.793171	37.517104	64.181013-	5.588761
45.000000	1363.262186	.6340795	70.074629	45.031217-	3.664422
60.000000	933.537410	.104099-	95.075301	32.305538-	2.131198
75.000000	611.133169	.437882-	115.968893	23.698159-	1.210543
90.000000	395.512577	.661113-	131.384295	17.531351-	.700475
105.000000	259.206590	.802230-	143.343671	13.090503-	.419072
120.000000	175.351026	.888527-	152.683784	9.678059-	.261957
135.000000	125.907266	.940234-	160.090941	7.023316-	.173078
150.000000	95.429833	.970752-	166.103544	4.887673-	.124166
165.000000	79.549493	.983822-	171.109347	3.001000-	.087021
180.000000	70.051137	.997125-	175.730297	1.408257-	.080417
	66.173159	1.000000-	180.000000		.079879

$E$	$\pi^2$	$\eta_B$	$\gamma$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2050.000000	.417262	1.953669	5.154323	5.056336	1.433021
15.000000	2050.000000	1.000000		90.000000-	6.698504
30.000000	1842.145625	.790179	37.797682	63.854714-	5.660224
45.000000	1399.938730	.333687	70.507212	44.616911-	3.684301
60.000000	948.412915	.112024-	96.432063	31.932370-	2.127502
75.000000	619.215580	.444340-	116.381250	23.392721-	1.202011
90.000000	400.029726	.665603-	131.729727	17.353975-	.693062
105.000000	261.872764	.805069-	143.617029	12.908681-	.413707
120.000000	177.538666	.890203-	152.898888	9.541695-	.258248
135.000000	127.062460	.941157-	160.246842	6.923450-	.171074
150.000000	97.290431	.971211-	166.218438	4.817772-	.122271
165.000000	80.249715	.988414-	171.269863	3.047333-	.095493
180.000000	71.477445	.997269-	175.764488	1.477314-	.032040
	68.771794	1.000000-	180.000000		.078117

$E$	$\pi^2$	$\eta_B$	$\gamma$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2100.000000	.407691	1.977889	5.255648	5.159635	1.442977
15.000000	2100.000000	1.000000		90.000000-	6.805091
30.000000	1883.932955	.787196	38.075738	63.530133-	5.731117
45.000000	1416.333014	.326655	70.934009	44.208507-	3.703543
60.000000	963.024219	.119812-	96.881319	31.566823-	2.123617
75.000000	627.112942	.450653-	116.785701	23.096444-	1.193551
90.000000	404.427951	.659977-	132.065397	17.122729-	.685793
105.000000	264.462945	.807829-	143.884422	12.731924-	.408474
120.000000	179.174985	.891830-	153.104121	9.408998-	.254641
135.000000	128.183112	.942052-	160.399077	6.826391-	.168552
150.000000	98.128861	.971655-	166.325695	4.749934-	.120405
165.000000	80.927731	.986594-	171.338101	3.004304-	.094042
180.000000	72.077001	.997311-	175.777261	1.456873-	.030847
	69.346183	1.000000-	180.000000		.076893

E	$\bar{\alpha}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2150.000000	.398000	2.001824	5.356973	5.262809	1.452079
15.000000	2150.000000	1.000000		90.000000-	6.911677
30.000000	1925.580142	.784222	38.351159	63.207329-	5.801486
45.000000	1442.449972	.319696	71.355362	43.806061-	3.722195
60.000000	977.384450	.127463-	97.323070	31.208667-	2.119537
75.000000	634.833645	.456823-	117.182417	22.807215-	1.185164
90.000000	408.712186	.674237-	132.395020	16.897442-	.678668
105.000000	266.980094	.810512-	144.146041	12.559865-	.403368
120.000000	180.762945	.893409-	153.304886	9.279968-	.251131
135.000000	129.268728	.942920-	160.547932	6.731910-	.166098
150.000000	98.934645	.972086-	166.430547	4.683872-	.118599
165.000000	81.583542	.988769-	171.404909	2.962478-	.092603
180.000000	72.655338	.997353-	175.830378	1.436061-	.079601
	69.902315	1.000000-	180.000000		.075708

E	$\bar{\alpha}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2200.000000	.388757	2.025483	5.458298	5.365912	1.461127
15.000000	2200.000000	1.000000		90.000000-	7.018255
30.000000	1967.085706	.781257	38.624116	62.886301-	5.871496
45.000000	1468.291578	.312809	71.771329	43.409345-	3.740269
60.000000	991.492522	.134984-	97.757773	30.857788-	2.115289
75.000000	642.380649	.462857-	117.571742	22.524804-	1.176856
90.000000	412.886873	.678389-	132.717996	16.677770-	.671681
105.000000	269.426677	.813121-	144.402038	12.392332-	.398388
120.000000	182.304520	.894943-	153.501124	9.154375-	.247719
135.000000	130.322762	.943763-	160.693463	6.640065-	.163719
150.000000	99.718263	.972505-	166.533163	4.619644-	.116849
165.000000	82.219614	.988939-	171.470341	2.921683-	.091211
180.000000	73.218378	.997393-	175.861661	1.416408-	.078337
	70.441669	1.000000-	180.000000		.074557

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2250.000000	.379929	2.048878	5.559623	5.468949	1.470122
	2250.000000	1.000000		90.000000-	7.124842
15.000000	2008.457542	.778305	38.894323	62.567392-	5.940888
30.000000	1493.868196	.305995	72.181911	43.018359-	3.757749
45.000000	1005.363733	.142374-	98.185314	30.513956-	2.110871
60.000000	649.762838	.468758-	117.953848	22.248868-	1.168618
75.000000	416.957932	.682435-	133.034326	16.463655-	.664829
90.000000	271.809604	.815658-	144.652535	12.229153-	.393529
105.000000	183.803656	.896433-	153.693179	9.032164-	.244395
120.000000	131.346695	.944580-	160.835614	6.550683-	.161405
135.000000	100.480661	.972910-	166.633145	4.557191-	.115154
150.000000	82.837922	.989103-	171.533767	2.882206-	.089867
165.000000	73.763653	.997432-	175.892830	1.397214-	.077246
180.000000	70.965232	1.000000-	180.000000		.073443

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
2300.000000	.371492	2.072015	5.660948	5.571923	1.479065
	2300.000000	1.000000		90.000000-	7.231425
15.000000	2049.691702	.775362	39.162123	62.250146-	6.009759
30.000000	1519.177850	.299250	72.587393	42.633045-	3.774665
45.000000	1018.998082	.149640-	98.606151	30.176999-	2.106299
60.000000	656.983664	.474531-	118.328906	21.979291-	1.160464
75.000000	420.926352	.686382-	133.344526	16.254755-	.658105
90.000000	274.125420	.818129-	144.898048	12.070100-	.388780
105.000000	185.260356	.897881-	153.880995	8.913046-	.241164
120.000000	132.340034	.945375-	160.974785	6.463651-	.159157
135.000000	101.219373	.973304-	166.731170	4.496400-	.113502
150.000000	83.437478	.989263-	171.536864	2.843559-	.088541
165.000000	74.292644	.997470-	175.913425	1.378366-	.076123
180.000000	71.673004	1.000000-	180.000000		.072300

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
2350.000000	.363418	2.094904	5.762273	5.674838	1.487958
15.000000	2090.788679	1.000000	39.427747	90.000000-	7.338020
30.000000	1544.229918	.772426	72.987776	61.934675-	6.078275
45.000000	1032.402971	.292575	99.020400	42.253288-	3.791034
60.000000	664.050036	.156785-	118.697203	29.846689-	2.101582
75.000000	424.798053	.480180-	133.648594	21.715902-	1.152387
90.000000	276.382514	.690232-	145.138232	16.050954-	.651511
105.000000	186.676591	.820533-	154.064971	11.915115-	.384150
120.000000	133.305739	.899290-	161.110977	8.797079-	.238015
135.000000	101.937360	.946147-	166.827205	6.378853-	.156967
150.000000	84.019269	.973687-	171.657240	4.437157-	.111893
165.000000	74.806832	.989418-	175.952590	2.806118-	.087272
180.000000	71.965972	.997506-	180.000000	1.360316-	.074967
		1.000000-			.071309

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
2400.000000	.355687	2.117549	5.863598	5.777696	1.496799
15.000000	2131.746500	1.000000	39.690734	90.000000-	7.444592
30.000000	1569.021433	.769502	73.383174	61.621038-	6.146173
45.000000	1045.583335	.285969	99.428117	41.879032-	3.806894
60.000000	670.964423	.163809-	119.058969	29.522911-	2.096729
75.000000	428.573529	.485708-	133.946762	21.458472-	1.144380
90.000000	273.577926	.693988-	145.373717	15.852138-	.645040
105.000000	188.053349	.822875-	154.244995	11.764026-	.373623
120.000000	134.243809	.900660-	161.244075	8.684034-	.234245
135.000000	102.634622	.946897-	166.920712	6.286405-	.154842
150.000000	84.583790	.974058-	171.717114	4.379574-	.110320
165.000000	75.303743	.983511-	175.012142	2.769506-	.086024
180.000000	72.443543	.987548-	180.000000	1.342210-	.070715
		1.000000-			.070281



$E$	$\bar{\lambda}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
2450.000000	.348274	2.139967	5.964923	5.880502	1.505592
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$\frac{d\eta_B/d\eta_L}{d\eta_L}$
	2450.000000	1.000000		90.000000-	7.551179
15.000000	2172.577995	.766587	39.951545	61.309406-	6.213667
30.000000	1593.568201	.279428	73.773817	41.509990-	3.822221
45.000000	1058.550030	.170718-	99.829646	29.205492-	2.091749
60.000000	677.739653	.491119-	119.414260	21.206772-	1.136472
75.000000	432.262650	.697654-	134.239199	15.658019-	.638690
90.000000	280.721524	.825156-	145.604390	11.616604-	.375204
105.000000	189.397046	.901993-	154.421351	8.573855-	.231955
120.000000	135.159181	.947627-	161.374652	6.215904-	.152774
135.000000	103.313625	.974420-	167.012786	4.323310-	.108814
150.000000	85.135973	.989715-	171.775441	2.733925-	.084835
165.000000	75.791288	.997577-	176.010401	1.325194-	.072790
180.000000	72.910458	1.000000-	180.000000		.069296

$E$	$\bar{\lambda}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
2500.000000	.341165	2.162147	6.066248	5.983256	1.514335
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$\frac{d\eta_B/d\eta_L}{d\eta_L}$
	2500.000000	1.000000		90.000000-	7.657772
15.000000	2213.261452	.763681	40.210178	60.999435-	6.280705
30.000000	1617.855896	.272955	74.159761	41.146391-	3.837046
45.000000	1071.294668	.177515-	100.225158	28.894147-	2.086655
60.000000	684.361417	.496421-	119.763592	20.960629-	1.128633
75.000000	435.856038	.701236-	134.526366	15.468428-	.632459
90.000000	282.802946	.827381-	145.830708	11.472792-	.370881
105.000000	190.697317	.903293-	154.594442	8.466368-	.229035
120.000000	136.043465	.948338-	161.502584	6.137409-	.150753
135.000000	103.971410	.974772-	167.102855	4.268478-	.107331
150.000000	85.656938	.989858-	171.832851	2.699204-	.083676
165.000000	76.260570	.997610-	176.097731	1.308521-	.071737
180.000000	73.360988	1.000000-	180.000000		.068331

E	$\bar{\lambda}^2$	$\eta_B$	$\delta_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
2550.000000	.334334	2.184123	6.167573	6.085963	1.523031
15.000000	2250.000000	1.000000		90.000000-	7.764348
30.000000	2253.831412	.760787	40.466347	60.691528-	6.347070
45.000000	1641.913638	.266547	74.541064	40.787949-	3.851376
60.000000	1083.847842	.184198-	100.614483	28.588932-	2.081441
75.000000	690.861789	.501609-	120.106622	20.719872-	1.120874
90.000000	439.377381	.704730-	134.807860	15.283362-	.626343
105.000000	284.841930	.829547-	146.052271	11.332532-	.366661
120.000000	191.973903	.904556-	154.763636	8.361631-	.226193
135.000000	136.912451	.949028-	161.627671	6.060976-	.148792
150.000000	104.615377	.975114-	167.190919	4.215021-	.105898
165.000000	86.188527	.989997-	171.889288	2.665170-	.062515
180.000000	76.722450	.997643-	176.065233	1.292019-	.070957
180.000000	73.804117	1.000000-	180.000000		.067394

E	$\bar{\lambda}^2$	$\eta_B$	$\delta_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
2600.000000	.327775	2.205867	6.268898	6.188625	1.531679
15.000000	2600.000000	1.000000		90.000000-	7.870942
30.000000	2294.245438	.757900	40.720569	60.385283-	6.413217
45.000000	1665.712806	.260202	74.917899	40.434605-	3.865245
60.000000	1096.181919	.190777-	100.998250	28.289504-	2.076130
75.000000	697.215109	.506695-	120.444037	20.484320-	1.113197
90.000000	442.805954	.708146-	135.084369	15.102480-	.620341
105.000000	286.819231	.831663-	146.269995	11.195480-	.362520
120.000000	193.207558	.905788-	154.929679	8.259352-	.223419
135.000000	137.749855	.949702-	161.750570	5.986320-	.146877
150.000000	105.237139	.975447-	167.277206	4.162906-	.104502
165.000000	86.692352	.990131-	171.943833	2.632840-	.061417
180.000000	77.165579	.997675-	176.092105	1.275977-	.069882
180.000000	74.228494	1.000000-	180.000000		.066480

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$\frac{d\eta_B/d\eta_L}{d\theta_P}$
2650.000000	.321463	2.227420	6.370223	6.291243	1.540281
	2650.000000	1.000000		90.000000-	7.977523
15.000000	2334.543501	.755021	40.972727	60.080813-	6.478845
30.000000	1689.289423	.253921	75.290264	40.086304-	3.878638
45.000000	1108.330455	.197249-	101.376231	27.995806-	2.070718
60.000000	703.449999	.511676-	120.775665	20.253943-	1.105596
75.000000	446.164948	.711482-	135.355722	14.925837-	.614446
90.000000	288.757055	.833724-	146.483250	11.061752-	.358495
105.000000	194.416539	.906988-	155.092514	8.159549-	.220709
120.000000	138.570976	.950357-	161.870834	5.913497-	.145011
135.000000	105.846071	.975771-	167.361890	4.112175-	.103132
150.000000	87.186801	.990262-	171.997405	2.600139-	.080352
165.000000	77.601306	.997706-	176.118346	1.260277-	.069026
180.000000	74.646950	1.000000-	180.000000		.065592

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$\frac{d\eta_B/d\eta_L}{d\theta_P}$
2700.000000	.315389	2.248767	6.471548	6.393819	1.548837
	2700.000000	1.000000		90.000000-	8.084104
15.000000	2374.709316	.752155	41.222537	59.778348-	6.543939
30.000000	1712.629672	.247703	75.658332	39.743045-	3.891562
45.000000	1120.284566	.203618-	101.748710	27.707608-	2.065213
60.000000	709.560043	.516557-	121.101735	20.028427-	1.098080
75.000000	449.446469	.714743-	135.622205	14.753147-	.608658
90.000000	290.646521	.835736-	146.692609	10.931175-	.354543
105.000000	195.595913	.908157-	155.252025	8.062089-	.218071
120.000000	139.371371	.950995-	161.988634	5.842507-	.143191
135.000000	106.440592	.976086-	167.444567	4.062611-	.101012
150.000000	87.666939	.990390-	172.050405	2.369034-	.078293
165.000000	78.075139	.997736-	176.148843	1.245094-	.065115
180.000000	75.053552	1.000000-	180.000000		.065071

$E$	$\bar{\lambda}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
2750.000000	.309540	2.269913	6.572873	6.496357	1.557347
15.000000	2414.736468	.749297	41.470456	59.477775-	8.190689
30.000000	1735.735033	.241546	76.022103	39.404599-	6.602551
45.000000	1132.045734	.209887-	102.115804	27.424911-	3.904040
60.000000	715.544254	.521343-	121.422477	19.807666-	2.059530
75.000000	452.651010	.717932-	135.884104	14.584297-	1.090641
90.000000	292.488120	.837700-	146.898129	10.803577-	.602974
105.000000	196.740744	.909299-	155.408729	7.966920-	.350679
120.000000	140.148080	.951618-	162.104486	5.773065-	.215490
135.000000	107.016069	.976394-	167.526042	4.014199-	.141416
150.000000	88.131780	.990515-	172.102199	2.537973-	.100517
165.000000	78.436243	.997766-	176.169110	1.230140-	.078271
180.000000	75.447838	1.000000-	180.000000		.067238
					.063885

$E$	$\bar{\lambda}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
2800.000000	.303901	2.290875	6.674198	6.598857	1.555814
15.000000	2454.643216	.746448	41.716312	59.178920-	8.297274
30.000000	1758.619323	.235449	76.381863	39.070966-	6.672752
45.000000	1143.629750	.216058-	102.477685	27.147428-	3.915092
60.000000	721.416942	.526034-	121.738005	19.591547-	2.053952
75.000000	455.789427	.721049-	136.141247	14.419170-	1.083282
90.000000	294.289749	.839617-	147.099753	10.678902-	.597390
105.000000	197.862383	.910411-	155.562282	7.274044-	.346892
120.000000	140.909985	.952224-	162.217817	5.705341-	.212559
135.000000	107.579602	.976694-	167.605912	3.956873-	.139589
150.000000	88.589219	.990636-	172.152348	2.500008-	.099257
165.000000	78.837921	.997795-	176.194149	1.215529-	.077285
180.000000	75.834219	1.000000-	180.000000		.066302
					.063065

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$\frac{dn_B/dn_L}{dn_B/dn_L}$
2850.000000	.298465	2.311644	6.775523	6.701321	1.574236
15.000000	2494.410807	1.000000	41.960163	90.000000-	8.403858
30.000000	1781.273166	.743609	76.737441	58.882013-	6.736556
45.000000	1155.028717	.229412	102.834465	38.742031-	3.927736
60.000000	727.169720	.222134-	122.048491	26.875158-	2.048232
75.000000	458.854318	.530635-	122.048491	19.379896-	1.075999
90.000000	296.045979	.724099-	136.394036	14.257768-	.591906
105.000000	198.953426	.841490-	147.297824	10.557033-	.343196
120.000000	141.648697	.911497-	155.713085	7.783230-	.210508
135.000000	108.126851	.952816-	162.329200	5.639107-	.138000
150.000000	89.032348	.976986-	167.684064	3.920692-	.098029
165.000000	79.227756	.990754-	172.202581	2.478787-	.076309
180.000000	76.208263	.997823-	176.218499	1.201263-	.065356
		1.000000-	180.000000		.062265

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$\frac{dn_B/dn_L}{dn_B/dn_L}$
2900.000000	.293218	2.332233	6.876848	6.803751	1.582615
15.000000	2534.051579	1.000000	42.202123	90.000000-	8.510446
30.000000	1803.708406	.740779	77.089180	58.586883-	6.799856
45.000000	1166.252505	.223433	103.186262	38.417737-	3.938956
60.000000	732.812455	.228116-	122.253992	26.607816-	2.042427
75.000000	461.854566	.535147-	122.253992	19.172657-	1.068799
90.000000	297.761253	.727083-	136.642471	14.099803-	.586520
105.000000	200.018317	.843320-	147.492458	10.437801-	.339572
120.000000	142.370138	.912557-	155.861251	7.694422-	.208101
135.000000	108.661270	.953393-	162.438463	5.574421-	.136354
150.000000	89.464620	.977271-	167.760723	3.875531-	.096825
165.000000	79.611175	.990289-	172.201340	2.450254-	.075372
180.000000	76.573513	.997012-	176.201121	1.207795-	.064827
		1.000000-	180.000000		.061155

E	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$\frac{dn_B/dn_L}{dn_B/dn_L}$
2950.000000	.288153	2.352644	6.978173	6.906149	1.590951
15.000000	2950.000000	1.000000		90.000000-	8.617031
30.000000	2573.560597	.737958	42.442192	58.293643-	6.862651
45.000000	1825.925042	.217513	77.436965	38.098026-	3.949784
60.000000	1177.303582	.234007-	103.533187	26.345401-	2.035560
75.000000	738.347616	.539574-	122.654737	18.969544-	1.061674
90.000000	464.788196	.730004-	136.886780	13.945162-	.581223
105.000000	299.438036	.845108-	147.683539	10.321261-	.336022
120.000000	201.056561	.913593-	156.006783	7.607676-	.205748
135.000000	143.074308	.953956-	162.545721	5.511223-	.134745
150.000000	109.181873	.977549-	167.836241	3.831483-	.095658
165.000000	89.885050	.990982-	172.299525	2.422236-	.074416
180.000000	76.929704	.997875-	176.263992	1.174391-	.063874
		1.000000-	180.000000		.060724

E	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$\frac{dn_B/dn_L}{dn_B/dn_L}$
3000.000000	.283256	2.372892	7.079498	7.008515	1.599246
15.000000	3000.000000	1.000000		90.000000-	8.723617
30.000000	2612.954144	.735146	42.680371	58.002294-	6.925111
45.000000	1847.935412	.211649	77.780912	37.782728-	3.950209
60.000000	1188.194283	.239809-	103.875358	26.087742-	2.030639
75.000000	743.783591	.543916-	122.950727	18.770613-	1.054626
90.000000	467.667545	.732861-	137.126849	13.793901-	.576022
105.000000	301.081263	.846855-	147.871298	10.207357-	.332546
120.000000	202.076546	.914603-	156.149507	7.522821-	.203450
135.000000	143.764168	.954506-	162.651031	5.449458-	.133171
150.000000	109.693592	.977820-	167.910038	3.788454-	.094516
165.000000	89.299558	.991091-	172.246279	2.395020-	.073532
180.000000	77.280062	.997922-	176.287827	1.160812-	.063006
		1.000000-	180.000000		.059923

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$dn_B/dn_L$
3050.000000	.278523	2.392968	7.180823	7.110852	1.607499
	3050.000000	1.000000		90.000000-	8.830198
15.000000	2652.213963	.732343	42.916773	57.712664-	6.987076
30.000000	1869.731619	.205842	78.121134	37.471955-	3.970267
45.000000	1198.917701	.245523-	104.212830	25.834724-	2.024663
60.000000	749.116432	.548177-	123.242134	18.575635-	1.047655
75.000000	470.482251	.735659-	137.363022	13.645792-	.570908
90.000000	302.683040	.848564-	148.055905	10.095802-	.329140
105.000000	203.069885	.915590-	156.289767	7.439857-	.201201
120.000000	144.436263	.955042-	162.754335	5.389011-	.131641
135.000000	110.191989	.978084-	167.982518	3.746284-	.093402
150.000000	90.702222	.991198-	172.392402	2.368378-	.072658
165.000000	80.701726	.997927-	176.310115	1.147920-	.062309
180.000000	77.620057	1.000000-	180.000000		.059259

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$dn_B/dn_L$
3100.000000	.273946	2.412877	7.282148	7.213160	1.615711
	3100.000000	1.000000		90.000000-	8.936787
15.000000	2691.343508	.729549	43.151399	57.424981-	7.048715
30.000000	1891.317117	.200090	78.457747	37.165480-	3.979951
45.000000	1209.479757	.251153-	104.545833	25.586232-	2.018641
60.000000	754.347621	.552360-	123.529186	18.384496-	1.040763
75.000000	473.235768	.738400-	137.595357	13.500719-	.565882
90.000000	304.251262	.850235-	148.237303	9.986654-	.325801
105.000000	204.039044	.916555-	156.427620	7.358668-	.199003
120.000000	145.091580	.955567-	162.856092	5.329825-	.130138
135.000000	110.677062	.978343-	169.054023	3.705031-	.092307
150.000000	91.095018	.991302-	172.437494	2.342366-	.071302
165.000000	81.048336	.997951-	176.331544	1.135430-	.051512
180.000000	77.951663	1.000000-	180.000000		.048552

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
3150.000000	.269516	2.432627	7.383473	7.315440	1.623883
15.000000	2730.346727	1.000000	43.384250	90.000000-	9.043372
30.000000	1912.697829	.726763	78.790692	57.139018-	7.109755
45.000000	1219.886372	.194392	104.874253	36.863245-	3.989264
60.000000	759.484064	.256698-	123.811826	25.342267-	2.012572
75.000000	475.935497	.556466-	137.823910	18.197139-	1.033944
90.000000	305.784941	.741084-	148.415608	13.358740-	.560940
105.000000	204.987971	.851869-	156.563010	9.879797-	.322532
120.000000	145.732093	.917498-	162.955844	7.279199-	.196849
135.000000	111.150785	.956079-	168.123981	5.272013-	.128670
150.000000	91.475970	.978595-	172.482471	3.664752-	.091242
165.000000	81.384184	.991405-	176.354119	2.316697-	.070957
180.000000	78.274881	.997976-	180.000000	1.122825-	.060929
		1.000000-			.057862

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
3200.000000	.265226	2.452219	7.484798	7.417695	1.632015
15.000000	2769.223620	1.000000	43.615266	90.000000-	9.149959
30.000000	1933.873755	.723987	79.120200	56.854831-	7.170456
45.000000	1230.136067	.188748	105.198547	36.565192-	3.998243
60.000000	764.523296	.262163-	124.090398	25.102427-	2.006462
75.000000	478.577492	.560498-	138.048796	18.013449-	1.027198
90.000000	307.282598	.743714-	148.591105	13.219568-	.556082
105.000000	205.913211	.853469-	156.696223	9.775175-	.319323
120.000000	146.356816	.918420-	163.054049	7.201449-	.194744
135.000000	111.610691	.956580-	168.193194	5.215405-	.127235
150.000000	91.849028	.978843-	172.526474	3.625218-	.090190
165.000000	81.713323	.991505-	176.374917	2.291659-	.070120
180.000000	78.590203	.997999-	180.000000	1.110793-	.060085
		1.000000-			.057187

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$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_S/d\eta_L$
3250.000000	.261071	2.471657	7.586123	7.519924	1.640108
15.000000	3250.000000	1.000000		90.000000-	9.256544-
30.000000	2807.973200	.721220	43.844678	56.572592-	7.230720-
45.000000	1954.851802	.183159	79.446099	36.271322-	4.006844-
60.000000	1240.237723	.267547-	105.518429	24.866998-	2.000316-
75.000000	769.474198	.564456-	124.364615	17.833368-	1.020521-
90.000000	481.166192	.746291-	138.270129	13.083262-	.551304-
105.000000	308.749166	.855034-	148.763565	9.672788-	.316180-
120.000000	206.817727	.919322-	156.827201	7.125303-	.192832-
135.000000	146.967721	.957069-	163.150478	5.160000-	.125023-
150.000000	112.061716	.979084-	168.260860	3.586658-	.089136-
165.000000	92.211722	.991603-	172.569675	2.267136-	.069312-
180.000000	82.035060	.998022-	176.395429	1.099104-	.059472-
	78.897630	1.000000-	180.000000		.056528-

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_S/d\eta_L$
3300.000000	.257043	2.490947	7.687448	7.622129	1.648162
15.000000	3300.000000	1.000000		90.000000-	9.363126-
30.000000	2846.599908	.718462	44.072315	56.292187-	7.290517-
45.000000	1975.630984	.177620	79.768789	35.981463-	4.015100-
60.000000	1250.191341	.272854-	105.834243	24.635523-	1.994141-
75.000000	774.334797	.568345-	124.634994	17.656668-	1.013104-
90.000000	483.703079	.748817-	138.488082	12.949705-	.546108-
105.000000	310.185140	.856566-	148.933275	9.572405-	.312370-
120.000000	207.702997	.920204-	156.956002	7.050761-	.190004-
135.000000	147.563823	.957548-	163.245417	5.105741-	.124112-
150.000000	112.503364	.979319-	168.327266	3.548846-	.089107-
165.000000	92.558496	.991603-	172.611245	2.243244-	.069312-
180.000000	82.35447	.998046-	176.417073	1.067015-	.059472-
	78.193141	1.000000-	180.000000		.056528-

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3350.000000	.253135	2.510104	7.788772	7.724310	1.656179
	3350.000000	1.000000		90.000000-	9.469707
15.000000	2885.121015	.715713	44.298289	56.013615-	7.350040
30.000000	1996.233013	.172135	80.087983	35.695614-	4.023025
45.000000	1260.014191	.278083-	106.145932	24.408116-	1.987930
60.000000	779.120389	.572162-	124.901248	17.483348-	1.007410
75.000000	486.199502	.751291-	138.702369	12.818784-	.541986
90.000000	311.596934	.858065-	149.100063	9.474258-	.310074
105.000000	208.575438	.921065-	157.082339	6.977881-	.188682
120.000000	148.153510	.958015-	163.338465	5.052685-	.123122
135.000000	112.940077	.979549-	168.392583	3.511887-	.087219
150.000000	92.922307	.991790-	172.653098	2.219924-	.067797
165.000000	82.657808	.998067-	176.436682	1.075957-	.058210
180.000000	79.496692	1.000000-	180.000000		.055257

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3400.000000	.249345	2.529105	7.890097	7.826469	1.664158
	3400.000000	1.000000		90.000000-	9.576301
15.000000	2923.500005	.712972	44.522717	55.736876-	7.408927
30.000000	2016.627789	.166698	80.404027	35.413662-	4.030721
45.000000	1269.685055	.283239-	106.453668	24.184506-	1.901690
60.000000	783.812224	.575915-	125.163834	17.313295-	1.000000
75.000000	488.639178	.753719-	138.913618	12.690442-	.531110
90.000000	312.974186	.859534-	149.264330	9.277944-	.307110
105.000000	209.423699	.921910-	157.207015	6.906261-	.190730
120.000000	148.725432	.958473-	163.430253	5.000661-	.123110
135.000000	113.361494	.977775-	168.457156	3.475562-	.087210
150.000000	93.262302	.991882-	172.694293	2.196892-	.067790
165.000000	82.959907	.998038-	176.456162	1.064899-	.058210
180.000000	79.794374	1.000000-	180.000000		.055257

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\eta_L$
3450.000000	.245665	2.547977	7.991422	7.928608	1.672100
	3450.000000	1.000000		90.000000-	9.682876
15.000000	2961.769446	.710240	44.745540	55.461856-	7.467546
30.000000	2036.843931	.161313	80.716805	35.135548-	4.038052
45.000000	1279.228112	.288320-	106.757508	23.964934-	1.975437
60.000000	788.428558	.579601-	125.422582	17.146449-	.994576
75.000000	491.035921	.756098-	139.121487	12.564620-	.532967
90.000000	314.325778	.860972-	149.425904	9.233577-	.304199
105.000000	210.255675	.922736-	157.329456	6.836245-	.184856
120.000000	149.287485	.958920-	163.520322	4.949725-	.120524
135.000000	113.776989	.979995-	168.520296	3.440038-	.065339
150.000000	93.599336	.991970-	172.734171	2.174489-	.066321
165.000000	83.255391	.998109-	176.475700	1.054013-	.056904
180.000000	80.068121	1.000000-	180.000000		.054041

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\eta_L$
3500.000000	.242094	2.566701	8.092747	8.030725	1.680005
	3500.000000	1.000000		90.000000-	9.789470
15.000000	2999.905653	.707518	44.966587	55.188727-	7.525739
30.000000	2056.865156	.155977	81.026488	34.861273-	4.045070
45.000000	1288.624611	.293332-	107.057623	23.748928-	1.969160
60.000000	792.955577	.583226-	125.677892	16.982583-	.988233
75.000000	493.380358	.758434-	139.326434	12.441205-	.525560
90.000000	315.645294	.862383-	149.585301	9.190987-	.301341
105.000000	211.066926	.923546-	157.450235	6.767548-	.182903
120.000000	149.833747	.959359-	163.609188	4.899705-	.119232
135.000000	114.179653	.980211-	168.582576	3.405260-	.084432
150.000000	93.924528	.992057-	172.773763	2.152487-	.055304
165.000000	83.542589	.998129-	176.404430	1.043470-	.050223
180.000000	80.243472	1.000000-	180.000000		.050223

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3550.000000	.238624	2.585299	8.194072	8.132823	1.687874
	3550.000000	1.000000		90.000000-	9.895045
15.000000	3037.926390	.704804	45.186145	54.917374-	7.583469
30.000000	2076.707747	.150690	81.333021	34.590665-	4.051789
45.000000	1297.897252	.298272-	107.353899	23.536590-	1.962858
60.000000	797.414498	.586786-	125.929363	16.821811-	.982029
75.000000	495.684825	.760724-	139.528115	12.320196-	.524235
90.000000	316.944086	.863763-	149.741833	9.100346-	.298539
105.000000	211.865841	.924337-	157.568608	6.700283-	.181177
120.000000	150.371127	.959787-	163.696392	4.850832-	.118028
135.000000	114.576397	.980422-	168.643825	3.371111-	.083531
150.000000	94.244784	.992142-	172.812494	2.130944-	.064838
165.000000	83.821885	.998151-	176.515177	1.032527-	.055541
180.000000	80.613396	1.000000-	180.000000		.052877

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3600.000000	.235252	2.603758	8.295397	8.234902	1.695707
	3600.000000	1.000000		90.000000-	10.002633
15.000000	3075.818826	.702099	45.404212	54.647912-	7.640757
30.000000	2096.364797	.145452	81.636459	34.323724-	4.058210
45.000000	1307.033697	.303145-	107.646681	23.327804-	1.955549
60.000000	801.789036	.590288-	126.177511	16.664019-	.975336
75.000000	497.941426	.762972-	139.726989	12.201480-	.519678
90.000000	318.209322	.865118-	149.896245	9.011365-	.295784
105.000000	212.643043	.925114-	157.685606	6.634276-	.179391
120.000000	150.893210	.960203-	163.782508	4.802318-	.110821
135.000000	114.960803	.980629-	168.704272	3.237651-	.082000
150.000000	94.556159	.992225-	172.851055	2.109627-	.064001
165.000000	84.098717	.998159-	176.512231	1.022729-	.055500
180.000000	80.675019	1.000000-	180.000000		.052812

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_c$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$\frac{dn_e}{dn_p}$
3650.000000	.231973	2.622095	8.396722	8.336932	1.703500
	3650.000000	1.000000		90.000000-	10.211111
15.000000	3113.597273	.699401	45.620962	54.379997-	7.607811
30.000000	2115.847655	.140259	81.937147	34.060335-	4.004000
45.000000	1316.051217	.307950-	107.935853	23.122514-	1.930221
60.000000	806.095477	.593731-	126.422336	16.503975-	.809700
75.000000	500.159536	.765178-	139.922883	12.084940-	.515700
90.000000	319.455313	.866445-	150.048194	8.924161-	.292000-
105.000000	213.408402	.925874-	157.800542	6.569591-	.177800
120.000000	151.408384	.960619-	163.866962	4.755778-	.113800
135.000000	115.342249	.980831-	168.763459	3.304935-	.081000
150.000000	94.862105	.992308-	172.888984	2.088889-	.063500-
165.000000	84.366173	.998190-	176.552133	1.012187-	.054900
180.000000	81.135479	1.000000-	180.000000		.051700

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_c$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$\frac{dn_e}{dn_p}$
3700.000000	.228785	2.640304	8.498047	8.439004	1.711200
	3700.000000	1.000000		90.000000-	10.211111
15.000000	3151.248407	.696711	45.835165	54.113916-	7.707000
30.000000	2135.152373	.135115	82.234627	33.900556-	4.070000
45.000000	1324.940931	.312689-	108.221415	22.920503-	1.910000
60.000000	810.328392	.597115-	126.663656	16.355739-	.810000
75.000000	502.335703	.767343-	140.115970	11.970685-	.510000
90.000000	320.676631	.867746-	150.197793	8.800561-	.290000
105.000000	214.157477	.926619-	157.913815	6.566107-	.170000
120.000000	151.912208	.961022-	163.950327	4.720055-	.110000
135.000000	115.712346	.981029-	168.621706	3.272100-	.080000
150.000000	95.160650	.992388-	172.625040	2.088889-	.063500-
165.000000	84.630660	.998208-	176.500079	1.012187-	.054900
180.000000	81.333131	1.000000-	180.000000		.051700

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$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3750.000000	.225681	2.658398	8.599372	8.541030	1.718999
	3750.000000	1.000000		90.000000-	10.322392
15.000000	3188.795420	.694031	46.049821	53.849668-	7.810658
30.000000	2154.291782	.130017	82.529357	33.544215-	4.075842
45.000000	1333.717642	.317363-	108.503596	22.722016-	1.937540
60.000000	814.496170	.600444-	126.901787	16.207257-	.957744
75.000000	504.475353	.769468-	140.306192	11.858392-	.507588
90.000000	321.875743	.869022-	150.345272	8.754623-	.287824
105.000000	214.892735	.927349-	158.025370	6.443884-	.174235
120.000000	152.408631	.961416-	164.032145	4.664449-	.113345
135.000000	116.077507	.981223-	168.879311	3.241336-	.080149
150.000000	95.457220	.992466-	172.962323	2.048667-	.062233
165.000000	84.890723	.998227-	176.587656	.892706-	.053178
180.000000	81.637329	1.000000-	180.000000		.050692

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3800.000000	.222659	2.676374	8.700697	8.643039	1.726695
	3800.000000	1.000000		90.000000-	10.428972
15.000000	3226.228938	.691361	46.261987	53.587310-	7.866269
30.000000	2173.261440	.124964	82.821279	33.291254-	4.081196
45.000000	1342.375923	.321974-	108.782455	22.526638-	1.931184
60.000000	818.597825	.603717-	127.136700	16.060408-	.951837
75.000000	506.578487	.771554-	140.493721	11.748270-	.503587
90.000000	323.053143	.870273-	150.490517	8.672231-	.285265
105.000000	215.616150	.928064-	158.135034	6.382807-	.172587
120.000000	152.892717	.961803-	164.112990	4.619987-	.112227
135.000000	116.436748	.981413-	168.935919	3.210454-	.079342
150.000000	95.745402	.992543-	172.998477	2.029072-	.061595
165.000000	85.146830	.998244-	176.604100	.983539-	.052685
180.000000	81.832057	1.000000-	180.000000		.050175

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3850.000000	.219720	2.694217	8.802022	8.745032	1.734357
	3850.000000	1.000000		90.000000-	10.535561
15.000000	3263.522805	.688697	46.472836	53.326614-	7.921770
30.000000	2192.046049	.119955	83.110450	33.041674-	4.086282
45.000000	1350.907877	.326524-	109.057990	22.334410-	1.924829
60.000000	822.622006	.606939-	127.368576	15.916137-	.945999
75.000000	508.635236	.773604-	140.678729	11.640096-	.499646
90.000000	324.201428	.871502-	150.633699	8.591330-	.282749
105.000000	216.317360	.928767-	158.243495	6.322818-	.170961
120.000000	153.365453	.962182-	164.192516	4.576500-	.111139
135.000000	116.784638	.981599-	168.991553	3.180087-	.078553
150.000000	96.026182	.992618-	173.033885	2.009878-	.060987
165.000000	85.392574	.998262-	176.621575	.974142-	.052187
180.000000	82.117961	1.000000-	180.000000		.049667

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
3900.000000	.216855	2.711954	8.903347	8.847010	1.741986
	3900.000000	1.000000		90.000000-	10.642138
15.000000	3300.710578	.686042	46.682309	53.067637-	7.976720
30.000000	2210.677192	.114993	83.396700	32.795416-	4.091110
45.000000	1359.333737	.331012-	109.330260	22.145334-	1.918471
60.000000	826.587464	.610108-	127.597415	15.774273-	.940219
75.000000	510.659909	.775617-	140.861102	11.533869-	.495766
90.000000	325.334416	.872706-	150.774704	8.512032-	.280281
105.000000	217.010180	.929455-	158.350066	6.264090-	.169371
120.000000	153.830294	.962554-	164.270897	4.533757-	.110065
135.000000	117.127594	.981782-	169.046957	3.150351-	.077786
150.000000	96.301533	.992692-	173.003993	1.990971-	.060365
165.000000	85.635850	.998280-	176.638649	.964975-	.051684
180.000000	82.351862	1.000000-	180.000000		.049169

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta/d\eta_L$
3950.000000	.214066	2.729565	9.004672	8.948972	1.749582
15.000000	3337.765610	.683395	46.890407	52.810494-	8.031353
30.000000	2229.130689	.110073	83.680429	32.552368-	4.095706
45.000000	1367.636231	.335443-	109.599607	21.959180-	1.912110
60.000000	830.483839	.613227-	127.823332	15.634929-	.934507
75.000000	512.643132	.777596-	141.041068	11.429476-	.491942
90.000000	326.438784	.873890-	150.913933	8.434053-	.277851
105.000000	217.687210	.930130-	158.455146	6.206336-	.167809
120.000000	154.282799	.962919-	164.348303	4.491702-	.109013
135.000000	117.461668	.981961-	169.100759	3.121130-	.077029
150.000000	96.571950	.992764-	173.103156	1.972579-	.059767
165.000000	85.874686	.998296-	176.654406	.956266-	.051162
180.000000	82.578855	1.000000-	180.000000		.048691

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta/d\eta_L$
4000.000000	.211345	2.747081	9.105997	9.050921	1.757147
15.000000	3374.726884	.680756	47.097188	52.554955-	8.085661
30.000000	2247.438121	.105197	83.961407	32.312528-	4.100049
45.000000	1375.842994	.339814-	109.865632	21.776006-	1.905749
60.000000	834.326919	.616296-	128.046213	15.497992-	.923856
75.000000	514.601189	.779538-	141.218341	11.227031-	.488180
90.000000	327.531308	.875050-	151.050984	8.357506-	.275465
105.000000	218.355850	.930792-	158.558622	6.149613-	.166276
120.000000	154.732836	.963276-	164.424220	4.450621-	.107981
135.000000	117.793274	.982136-	169.153987	3.092432-	.076230
150.000000	96.540393	.992864-	173.136674	1.954530-	.059192
165.000000	85.109574	.998313-	176.671135	.947385-	.050636
180.000000	82.804367	1.000000-	180.000000		.048203



$E$	$\pi^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
4050.000000	.208693	2.764480	9.207322	9.152856	1.764680
15.000000	3411.565287	.678127	47.302479	52.301249-	10.961899
30.000000	2265.576296	.100362	84.239922	32.075781-	8.139403
45.000000	1383.938728	.344128-	110.128677	21.595753-	4.104178
60.000000	838.104862	.619317-	128.266401	15.595753-	1.899393
75.000000	516.522235	.781447-	141.393322	15.363290-	.923262
90.000000	328.600146	.876190-	151.186202	11.226363-	.484470
105.000000	219.008700	.931442-	158.660781	8.282334-	.273117
120.000000	155.172510	.963626-	164.499106	6.093979-	.164767
135.000000	118.117478	.982308-	169.206470	4.410170-	.106971
150.000000	97.099954	.992904-	173.170307	3.064292-	.075554
165.000000	86.339527	.998329-	176.687007	1.936654-	.058608
180.000000	83.024451	1.000000-	180.000000	.938848-	.050365
					.047735

$E$	$\pi^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
4100.000000	.206107	2.781770	9.308647	9.254777	1.772181
15.000000	3448.284271	.675505	47.506566	52.049262-	11.068483
30.000000	2283.557550	.095571	84.515801	31.842244-	8.192879
45.000000	1391.926394	.348386-	110.388742	21.418308-	4.108069
60.000000	841.822110	.622291-	128.483724	15.230937-	1.893039
75.000000	518.408246	.783324-	141.565954	11.127413-	.917734
90.000000	329.649740	.877309-	151.319472	8.208479-	.480817
105.000000	219.643720	.932080-	158.761507	6.039261-	.270809
120.000000	155.602809	.963970-	164.573018	4.370464-	.163290
135.000000	118.431320	.982478-	169.258609	3.036619-	.105979
150.000000	97.355074	.992972-	173.203137	1.919179-	.074840
165.000000	86.564545	.998345-	176.722878	.930368-	.058050
180.000000	83.229600	1.000000-	180.000000		.049816
					.047275

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\alpha_B/d\alpha_L$
4150.000000	.203583	2.798961	9.409972	9.356686	1.779652
	4150.000000	1.000000		90.000000-	11.175074
15.000000	3484.896175	.672891	47.709279	51.798880-	8.246058
30.000000	2301.386324	.090820	84.789160	31.611571-	4.111742
45.000000	1399.815861	.352589-	110.645828	21.243613-	1.886691
60.000000	845.487544	.625218-	128.698296	15.100761-	.912265
75.000000	520.262182	.785169-	141.736409	11.030125-	.477215
90.000000	330.681568	.878408-	151.450966	8.135943-	.268543
105.000000	220.279858	.932706-	158.860686	5.985575-	.161837
120.000000	156.024225	.964308-	164.645955	4.331446-	.105005
135.000000	118.743681	.982643-	169.309373	3.009518-	.074136
150.000000	97.605753	.993039-	173.235681	1.901933-	.057516
165.000000	86.784629	.998361-	176.718921	.921946-	.049275
180.000000	83.451788	1.000000-	180.000000		.046824

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\alpha_B/d\alpha_L$
4200.000000	.201121	2.816039	9.511297	9.458581	1.787091
	4200.000000	1.000000		90.000000-	11.281651
15.000000	3521.380271	.670285	47.910845	51.550388-	8.298779
30.000000	2319.054229	.086111	85.060054	31.383935-	4.115191
45.000000	1407.598740	.356738-	110.900107	21.071669-	1.880352
60.000000	849.090309	.628100-	128.910176	14.972705-	.906856
75.000000	522.085030	.785982-	141.904401	10.934613-	.473571
90.000000	331.692178	.879488-	151.580741	8.064667-	.266309
105.000000	220.896191	.933321-	158.958604	5.932806-	.160407
120.000000	156.437746	.964639-	164.717804	4.293172-	.104050
135.000000	119.047654	.982806-	169.359793	2.982751-	.073444
150.000000	97.850510	.993105-	173.267824	1.835031-	.056976
165.000000	86.998792	.998377-	176.734964	.913638-	.048703
180.000000	83.658549	1.000000-	180.000000		.046382

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\alpha_B/d\alpha_L$
4250.000000	.198716	2.833025	9.612622	9.560465	1.794501
	4250.000000	1.000000		90.000000-	11.388242
15.000000	3557.768636	.667688	48.111037	51.303443-	8.351139
30.000000	2336.580018	.081443	85.328427	31.159278-	4.118436
45.000000	1415.286875	.360835-	111.151578	20.902302-	1.874021
60.000000	852.642246	.630939-	129.119535	14.846768-	.901499
75.000000	523.879751	.788765-	142.070272	10.840705-	.470172
90.000000	332.689464	.880548-	151.708625	7.994652-	.264115
105.000000	221.504630	.933924-	159.055090	5.880896-	.159006
120.000000	156.846333	.964964-	164.788564	4.255586-	.103107
135.000000	119.347679	.982965-	169.409297	2.956634-	.072775
150.000000	98.094280	.993168-	173.298649	1.868644-	.056461
165.000000	87.212461	.998392-	176.750090	.905617-	.048404
180.000000	83.862842	1.000000-	180.000000		.045948

$E$	$\lambda^2$	$\eta_0$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\alpha_B/d\alpha_L$
4300.000000	.196370	2.849903	9.713947	9.662337	1.801880
	4300.000000	1.000000		90.000000-	11.494825
15.000000	3594.027221	.665096	48.310082	51.058274-	8.403099
30.000000	2353.945925	.076814	85.594509	30.937429-	4.121478
45.000000	1422.872369	.364880-	111.400299	20.735457-	1.867694
60.000000	856.135956	.633735-	129.326315	14.722895-	.896205
75.000000	525.640916	.790519-	142.234138	10.748344-	.466725
90.000000	333.664545	.881591-	151.834962	7.925725-	.261955
105.000000	222.098758	.934517-	159.150373	5.830017-	.157627
120.000000	157.242089	.965284-	164.858637	4.218459-	.102184
135.000000	119.639808	.982122-	169.458285	2.930906-	.072109
150.000000	98.322674	.993262-	173.230105	1.852200-	.055902
165.000000	87.410715	.998401-	176.701515	.907710-	.047835
180.000000	83.062815	1.000000-	180.000000		.045521

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\theta/d\eta_L$
4350.000000	.194077	2.866684	9.815272	9.764198	1.809230
	4350.000000	1.000000		90.000000-	11.601408
15.000000	3630.179218	.662517	48.507810	50.814825-	8.454755
30.000000	2371.166261	.072225	85.858184	30.718444-	4.124308
45.000000	1430.365093	.368873-	111.646270	20.571247-	1.861380
60.000000	859.578345	.636488-	129.530575	14.601084-	.690970
75.000000	527.372473	.792244-	142.395769	10.657473-	.463329
90.000000	334.623834	.882615-	151.959523	7.858058-	.259329
105.000000	222.682030	.935099-	159.244224	5.779940-	.156275
120.000000	157.634885	.965597-	164.927392	4.182190-	.101275
135.000000	119.927003	.983276-	169.506643	2.905583-	.071455
150.000000	98.562575	.993293-	173.360242	1.836387-	.055406
155.000000	87.623514	.998422-	176.780686	.889803-	.047516
180.000000	84.256625	1.000000-	180.000000		.045103

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\theta/d\eta_L$
4400.000000	.191836	2.883380	9.916597	9.866047	1.816551
	4400.000000	1.000000		90.000000-	11.707989
15.000000	3666.229562	.659942	48.704449	50.572922-	8.506157
30.000000	2388.252375	.067675	86.119510	30.502267-	4.126949
45.000000	1437.774421	.372816-	111.889491	20.409501-	1.855078
60.000000	862.979284	.639199-	129.732199	14.481164-	.685788
75.000000	529.083305	.793940-	142.555338	10.568206-	.459981
90.000000	335.572761	.883621-	152.082423	7.791538-	.257741
105.000000	223.259273	.935671-	159.336928	5.730723-	.154942
120.000000	158.022746	.965905-	164.995459	4.146438-	.100387
135.000000	120.213704	.983427-	169.554255	2.880659-	.070814
150.000000	98.793022	.993354-	173.390723	1.820573-	.054901
155.000000	87.826821	.998436-	176.795010	.882297-	.046825
180.000000	84.452035	1.000000-	180.000000		.044693

$E$	$\theta_K$	$E_K$	$\gamma^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
450.000000		189647		2.899674	10.017922	9.967886	1.823843
		$E_K$		$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
15.000000		4450.000000		1.000000		90.000000-	11.814570
30.000000		3702.167396		.657379	48.899599	50.332853-	8.557022
45.000000		2405.184035		.063163	86.378544	30.288783-	4.129400
60.000000		1445.081603		.376711-	112.130190	20.250104-	1.848786
75.000000		866.322474		.641871-	129.931588	14.363192-	.880659
90.000000		530.762542		.795608-	142.712787	10.480372-	.456680
105.000000		336.501457		.824610-	152.203603	7.726106-	.255686
120.000000		223.820861		.936232-	159.426200	5.682308-	.153638
135.000000		158.400244		.966207-	165.062381	4.111315-	.099514
150.000000		120.492510		.983575-	169.601066	2.856251-	.070188
165.000000		99.017053		.993414-	173.420632	1.805046-	.054425
180.000000		88.025192		.998450-	176.809391	.874791-	.046599
195.000000		84.641031		1.000000-	180.001000		.044290

$E$	$\theta_K$	$E_K$	$\gamma^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
450.000000		187508		2.916467	10.119247	10.069714	1.831106
		$E_K$		$\cos \chi$	$\chi$	$\theta_p$	$d\eta_B/d\eta_L$
15.000000		4500.000000		1.000000		90.000000-	11.921158
30.000000		3737.976991		.994900	49.093946	50.034215-	8.607356
45.000000		2421.059521		.950600	95.625304	30.078049-	4.131657
60.000000		1452.049531		.380358-	117.361369	20.092171-	1.842515
75.000000		859.913014		.644907-	130.128874	14.247054-	.875582
90.000000		522.414217		.707251-	141.568409	10.333970-	.454424
105.000000		327.411814		.821181-	150.323406	7.081763-	.253060
120.000000		221.378058		.905101-	159.511015	5.192305-	.152305
135.000000		159.771817		.951191-	168.119117	3.096023-	.099651
150.000000		120.711111		.973011-	176.309111	1.871311-	.069576
165.000000		99.025192		.983575-	179.601066	.874791-	.053942
180.000000		88.025192		1.000000-	180.001000		.046238

$E$	$\bar{x}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
4550.000000	.185417	2.932870	10.220572	10.171533	1.838341
	4550.000000	1.000000		90.000000-	12.027752
15.000000	3773.681851	.652271	49.286918	49.857469-	8.657780
30.000000	2438.611630	.054252	86.890024	29.869779-	4.133746
45.000000	1459.419629	.384359-	112.604026	19.938473-	1.836256
60.000000	872.852467	.647100-	130.323376	14.132691-	.870570
75.000000	534.031740	.798868-	143.022241	10.308885-	.450214
90.000000	338.306046	.886540-	152.441725	7.598451-	.251667
105.000000	224.921853	.937328-	159.607593	5.587885-	.151082
120.000000	159.132048	.966797-	165.194104	4.042732-	.097806
135.000000	121.030383	.983864-	169.693312	2.808524-	.068966
150.000000	99.448832	.993531-	173.479245	1.774851-	.053450
165.000000	88.404664	.998478-	176.838382	.860009-	.045640
180.000000	85.006686	1.000000-	180.000000		.043504

$E$	$\bar{x}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
4600.000000	.183369	2.949198	10.321897	10.273342	1.845549
	4600.000000	1.000000		90.000000-	12.134333
15.000000	3809.294001	.649728	49.478859	49.622156-	8.707800
30.000000	2455.132237	.049853	87.142355	29.664259-	4.135633
45.000000	1466.470704	.388111-	112.837105	19.786066-	1.830002
60.000000	876.057501	.649656-	130.515833	14.020220-	.865604
75.000000	535.638451	.800457-	143.173846	10.225291-	.447051
90.000000	339.191317	.887480-	152.558322	7.536228-	.249705
105.000000	225.464167	.937860-	159.695256	5.541934-	.149842
120.000000	159.496223	.967083-	165.258332	4.009444-	.096975
135.000000	121.298333	.984004-	169.738175	2.785377-	.068370
150.000000	99.664969	.993587-	173.507779	1.760183-	.052988
165.000000	88.594647	.998491-	176.851962	.852962-	.045292
180.000000	85.187787	1.000000-	180.000000		.043123

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
4650.000000	.181367	2.965434	10.423222	10.375141	1.852729
	4650.000000	1.000000		90.000000-	12.240915
15.000000	3844.798083	.647195	49.669482	49.388561-	8.757160
30.000000	2471.514181	.045491	87.392622	29.461318-	4.137360
45.000000	1473.435424	.391818-	113.067778	19.635836-	1.823771
60.000000	879.215657	.652175-	130.705883	13.909467-	.860689
75.000000	537.217036	.802022-	143.323732	10.143014-	.443929
90.000000	340.065731	.888404-	152.673429	7.474979-	.247776
105.000000	225.995132	.938384-	159.781944	5.496670-	.148617
120.000000	159.851022	.967365-	165.322045	3.976556-	.096156
135.000000	121.559868	.984142-	169.782694	2.762516-	.067790
150.000000	99.875183	.993643-	173.536140	1.745687-	.052519
165.000000	88.781669	.998504-	176.865598	.845972-	.044940
180.000000	85.365927	1.000000-	180.000000		.042748

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
4700.000000	.179410	2.981566	10.524547	10.476931	1.859881
	4700.000000	1.000000		90.000000-	12.347500
15.000000	3880.165475	.644668	49.859188	49.156627-	8.806351
30.000000	2487.742165	.041164	87.640771	29.260840-	4.138919
45.000000	1480.302438	.395481-	113.296045	19.487899-	1.817559
60.000000	882.319038	.654659-	130.893670	13.800376-	.855828
75.000000	538.761571	.803564-	143.471898	10.061998-	.440848
90.000000	340.915472	.889314-	152.787218	7.414704-	.245874
105.000000	226.509813	.938000-	159.867716	5.452037-	.147412
120.000000	160.194471	.967642-	165.384641	3.944241-	.095356
135.000000	121.811533	.984278-	169.823754	2.739998-	.067213
150.000000	100.080463	.993697-	173.563528	1.731593-	.052080
165.000000	88.959822	.998517-	176.871134	.839039-	.044585
180.000000	85.335984	1.000000-	180.000000		.042378

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
4750.000000	.177493	2.997620	10.625872	10.578712	1.867006
	4750.000000	1.000000		90.000000-	12.454060
15.000000	3915.436643	.642150	50.047577	48.926298-	8.855241
30.000000	2503.843329	.036873	87.886799	29.062826-	4.140298
45.000000	1487.090498	.399101-	113.522076	19.342024-	1.811365
60.000000	885.381462	.657108-	131.079795	13.693003-	.851018
75.000000	540.287355	.805081-	143.618175	9.982242-	.437814
90.000000	341.753864	.890210-	152.899690	7.355403-	.244001
105.000000	227.018572	.939407-	159.952285	5.408263-	.146226
120.000000	160.536933	.967914-	165.446721	3.912442-	.094557
135.000000	122.061225	.984412-	169.870184	2.717882-	.066642
150.000000	100.281302	.993751-	173.591431	1.717498-	.051634
165.000000	89.138442	.998529-	176.891954	.832450-	.044215
180.000000	85.706909	1.000000-	180.000000		.042015

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\eta_B/d\eta_L$
4800.000000	.175617	3.013591	10.727197	10.680484	1.874105
	4800.000000	1.000000		90.000000-	12.560673
15.000000	3950.603690	.639539	50.234991	48.697574-	8.903744
30.000000	2519.817181	.032618	88.130764	28.867332-	4.141522
45.000000	1493.803059	.402677-	113.745702	19.198211-	1.805191
60.000000	888.400461	.659523-	131.263600	13.587178-	.846255
75.000000	541.790439	.806575-	143.762732	9.903690-	.434817
90.000000	342.581399	.891091-	153.010786	7.296961-	.242155
105.000000	227.520422	.939906-	160.035879	5.365119-	.145061
120.000000	160.871994	.968182-	165.507913	3.881158-	.093791
135.000000	122.308943	.984543-	169.912984	2.696110-	.066085
150.000000	100.479674	.993804-	173.618589	1.703747-	.051219
165.000000	89.311647	.998542-	176.905705	.825632-	.043854
180.000000	85.875179	1.000000-	180.000000		.041656



$E$	$\theta_K$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma_0$	$d\eta_e/d\Omega_L$
4850.000000		.173780	3.029474	10.828522	10.782248	1.881177	
	$E_K$		$\cos \chi$	$\chi$	$\theta_p$		$d\eta_e/d\Omega_L$
	4850.000000		1.000000		90.000000-		12.667255
	3985.656748		.637137	50.421260	48.470453-		8.951845
	2535.651382		.028396	88.372781	28.674074-		4.142333
	1500.429757		.406211-	113.967093	19.056404-		1.799029
	891.376035		.661904-	131.445342	13.483014-		.641546
	543.266383		.808047-	143.905628	9.826455-		.431850
	343.391170		.891958-	153.120393	7.239550-		.240335
	228.011417		.940397-	160.118385	5.322306-		.143911
	161.199653		.968446-	165.568474	3.850333-		.093028
	122.549752		.984672-	169.955211	2.674738-		.065545
	100.671631		.993357-	173.645804	1.690110-		.050750
	89.483372		.998554-	176.918482	.819157-		.043478
	86.038022		1.000000-	180.000000			.041508

$E$	$\theta_K$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma_0$	$d\eta_e/d\Omega_L$
4900.000000		.171981	3.045276	10.929847	10.884004	1.888223	
	$E_K$		$\cos \chi$	$\chi$	$\theta_p$		$d\eta_e/d\Omega_L$
	4900.000000		1.000000		90.000000-		12.773610
	4020.606178		.634642	50.606440	48.264937-		8.990727
	2551.361231		.024210	88.612670	28.483370-		4.143508
	1506.981449		.409703-	114.186249	18.915717-		1.792639
	894.312133		.664251-	131.625022	13.380340-		.636001
	544.723576		.809496-	144.046747	9.750309-		.421945
	344.192056		.892811-	153.226622	7.153020-		.238347
	228.495503		.944380-	160.193074	5.322306-		.143778
	161.523364		.965707-	165.623177	3.850333-		.092272
	122.767601		.984789-	169.957153	2.674738-		.063497
	100.866055		.993907-	173.645153	1.690110-		.050379
	89.451149		.998554-	176.918482	.819157-		.043478
	86.038022		1.000000-	180.000000			.041508

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\delta_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\Omega_B/d\Omega_L$
4950.000000	.170218	3.061012	11.031172	10.985752	1.895244
	4950.000000	1.000000		90.000000-	12.880425
15.000000	4055.467773	.632154	50.790703	48.020968-	9.047082
30.000000	2566.956104	.020057	88.850685	28.294776-	4.144274
45.000000	1513.466524	.413154-	114.403171	18.778921-	1.780769
60.000000	897.214182	.666566-	131.802696	13.279271-	.832267
75.000000	546.163498	.810923-	144.186320	9.675366-	.426065
90.000000	344.982584	.893651-	153.335825	7.127251-	.236782
105.000000	228.978602	.941354-	160.280246	5.239699-	.141671
120.000000	161.844607	.968960-	165.687134	3.790173-	.091535
135.000000	123.023475	.984924-	170.038519	2.632798-	.064457
150.000000	101.055051	.993958-	173.698402	1.663640-	.049937
165.000000	89.821393	.998577-	176.943119	.806609-	.042703
180.000000	86.360746	1.000000-	180.000000		.040625

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\delta_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_p$	$d\Omega_B/d\Omega_L$
5000.000000	.168491	3.076653	11.132496	11.087491	1.902239
	5000.000000	1.000000		90.000000-	12.997014
15.000000	4090.196132	.629672	50.973992	47.798431-	9.094446
30.000000	2582.410834	.015938	89.086744	28.108507-	4.144865
45.000000	1519.862775	.416566-	114.618087	18.643015-	1.780669
60.000000	900.068858	.668849-	131.978365	13.179690-	.827699
75.000000	547.574798	.812329-	144.324173	9.601559-	.423225
90.000000	345.756332	.894478-	153.441536	7.072419-	.235045
105.000000	229.444430	.941822-	160.359830	5.199190-	.140574
120.000000	162.157462	.969211-	165.745346	3.760750-	.090807
135.000000	123.254909	.985046-	170.078913	2.612458-	.063953
150.000000	101.239112	.994007-	173.723956	1.650806-	.049535
165.000000	89.980288	.998590-	176.956641	.800078-	.042317
180.000000	86.515699	1.000000-	180.000000		.040291

$E$	$\chi^2$	$n_B$	$\chi_L$	$n_L$	$\gamma_0$
5050.000000	166799	3.092217	11.232821	11.189224	1.909208
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
15.000000	5050.000000	1.000000		90.000000	13.0933592
30.000000	4124.830734	.627201	51.155964	47.577613	9.141140
45.000000	2597.742198	.011852	89.320355	27.924530	4.145254
60.000000	1526.190436	.419937	114.830712	18.509057	1.774592
75.000000	902.883564	.671102	132.152258	13.081486	.823182
90.000000	548.967347	.813715	144.460594	9.528861	.420421
105.000000	346.519718	.895292	153.546044	7.018389	.233350
120.000000	229.906310	.942282	160.438497	5.159255	.139493
135.000000	162.464889	.969458	165.802929	3.731846	.090086
150.000000	123.478447	.985168	170.119536	2.592232	.063435
165.000000	101.421693	.994056	173.749853	1.638029	.049127
180.000000	86.669653	.998601	176.968501	.794004	.041916
		1.000000	180.000000		.039963

$E$	$\chi^2$	$n_B$	$\chi_L$	$n_L$	$\gamma_0$
5100.000000	165141	3.107708	11.335146	11.290949	1.916153
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
15.000000	5100.000000	1.000000		90.000000	13.220135
30.000000	4159.359255	.624734	51.337243	47.358229	9.197776
45.000000	2612.956511	.007799	89.553074	27.742789	4.145590
60.000000	1532.443583	.423271	115.041389	18.375933	1.769553
75.000000	905.665208	.673324	132.324260	12.954713	.818704
90.000000	550.340158	.815080	144.505354	9.447241	.427359
105.000000	347.274221	.890293	153.640233	6.905210	.231944
120.000000	230.365230	.942334	160.515003	5.100003	.138453
135.000000	162.769848	.959701	165.859958	3.703312	.089381
150.000000	123.764946	.985286	170.150070	2.572455	.062930
165.000000	101.601805	.994104	173.749853	1.607431	.048710
180.000000	86.669653	.998601	176.968501	.794004	.041916
		1.000000	180.000000		.039963

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$n_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d n_B / d n_L$
5150.000000	.163514	3.123132	11.436471	11.392667	1.923073
	5150.000000	1.000000		90.000000-	13.306758
15.000000	4193.804848	.622279	51.517156	47.140504-	9.233872
30.000000	2628.056048	.003778	89.783461	27.563108-	4.145880
45.000000	1538.635542	.426565-	115.249831	18.246643-	1.762505
60.000000	908.414284	.675515-	132.494256	12.889430-	.814278
75.000000	551.699152	.816424-	144.728452	9.386710-	.414924
90.000000	348.018361	.896882-	153.751277	6.912850-	.229980
105.000000	230.817241	.943179-	160.592508	5.081333-	.137392
120.000000	163.072834	.969939-	165.915744	3.675352-	.088688
135.000000	123.926511	.985403-	170.198432	2.552928-	.062433
150.000000	101.782907	.994150-	173.799529	1.613219-	.048370
165.000000	90.457465	.998624-	176.993597	.781800-	.041391
180.000000	86.972638	1.000000-	180.000000		.039324

$E$	$\lambda^2$	$n_B$	$\gamma_L$	$n_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d n_B / d n_L$
5200.000000	.161921	3.138457	11.537796	11.494378	1.929968
	5200.000000	1.000000		90.000000-	13.413349
15.000000	4228.103896	.619828	51.696320	46.924269-	9.279744
30.000000	2643.018303	.000210-	90.012071	27.385663-	4.145932
45.000000	1544.739171	.429823-	115.456439	18.118071-	1.756496
60.000000	911.111052	.677579-	132.662649	12.795408-	.809896
75.000000	553.025084	.817751-	144.860347	9.317153-	.412228
90.000000	348.742763	.897660-	153.852232	6.861226-	.228338
105.000000	231.251487	.943519-	160.668539	5.043174-	.136360
120.000000	163.362002	.970175-	165.971436	3.647678-	.088007
135.000000	124.139686	.985518-	170.237164	2.533733-	.061956
150.000000	101.951177	.994197-	173.824453	1.601015-	.047947
165.000000	90.606964	.998633-	177.005629	.775842-	.040981
180.000000	87.116224	1.000000-	180.000000		.039010

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5250.000000	.160357	3.153724	11.639121	11.596082	1.936839
	5250.000000	1.000000		90.000000-	13.519931
15.000000	4262.319549	.617383	51.874625	46.709467-	9.325281
30.000000	2657.870022	.004168-	90.238905	27.210224-	4.145863
45.000000	1550.784077	.433044-	115.660985	17.991218-	1.750506
60.000000	913.781668	.679813-	132.829150	12.702818-	.805555
75.000000	554.342627	.819057-	144.990580	9.248684-	.409568
90.000000	349.461737	.898426-	153.951984	6.810348-	.226720
105.000000	231.686720	.944051-	160.743482	5.005645-	.135341
120.000000	163.655612	.970406-	166.026153	3.620463-	.087335
135.000000	124.350888	.985632-	170.275724	2.514711-	.061458
150.000000	102.124876	.994242-	173.848574	1.589041-	.047593
165.000000	90.759464	.998645-	177.016630	.770284-	.040567
180.000000	87.261313	1.000000-	180.000000		.038703

$E$	$\lambda^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5300.000000	.158823	3.168916	11.740446	11.697780	1.943686
	5300.000000	1.000000		90.000000-	13.526515
15.000000	4296.437003	.614949	52.051726	46.496270-	9.370533
30.000000	2672.604297	.008094-	90.463848	27.036904-	4.145668
45.000000	1556.760886	.436228-	115.863526	17.856142-	1.744544
60.000000	916.417247	.681919-	132.993875	12.611488-	.801259
75.000000	555.635003	.820346-	145.119553	9.181133-	.406939
90.000000	350.170348	.899180-	154.050533	6.760214-	.225127
105.000000	232.116032	.944476-	160.817394	4.958632-	.134344
120.000000	163.936885	.970635-	166.080641	3.593591-	.086666
135.000000	124.562089	.985743-	170.313539	2.496090-	.060092
150.000000	102.291172	.994288-	173.873039	1.577180-	.047187
165.000000	90.907009	.998656-	177.028776	.764440-	.040430
180.000000	87.402937	1.000000-	180.000000		.038400

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5350.000000	.157318	3.184036	11.841771	11.799472	1.950510
	5350.000000	1.000000		90.000000-	13.733109
15.000000	4330.448363	.612520	52.227968	46.284505-	9.415357
30.000000	2687.225076	.011989-	90.687015	26.865647-	4.145337
45.000000	1562.666637	.439378-	116.064290	17.742669-	1.738605
60.000000	919.016804	.683998-	133.156939	12.521477-	.797007
75.000000	556.911589	.821616-	145.246922	9.114612-	.404346
90.000000	350.866129	.899924-	154.148165	6.710825-	.223553
105.000000	232.537448	.944895-	160.890560	4.932192-	.133357
120.000000	164.220132	.970859-	166.134098	3.567235-	.086013
135.000000	124.767369	.985853-	170.351068	2.477698-	.060519
150.000000	102.459443	.994331-	173.896301	1.565721-	.046874
165.000000	91.051100	.998667-	177.040980	.758653-	.040011
180.000000	87.542587	1.000000-	180.000000		.038102

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5400.000000	.155841	3.199087	11.943096	11.901157	1.957310
	5400.000000	1.000000		90.000000-	13.839694
15.000000	4364.358069	.610098	52.403350	46.074115-	9.450003
30.000000	2701.731372	.015854-	90.908463	26.696338-	4.144629
45.000000	1568.512185	.442492-	116.263049	17.620858-	1.732686
60.000000	921.586259	.686049-	133.318284	12.432668-	.792797
75.000000	558.173370	.822268-	145.372972	9.048951-	.401783
90.000000	351.555002	.900656-	154.244479	6.562181-	.222005
105.000000	232.952450	.945308-	160.963040	4.836268-	.132366
120.000000	164.498445	.971080-	166.186992	3.541222-	.085370
135.000000	124.971169	.985961-	170.368024	2.459593-	.060066
150.000000	102.622779	.994376-	173.919965	1.554205-	.046506
165.000000	91.198151	.998676-	177.050930	.753439-	.039871
180.000000	87.542587	1.000000-	180.000000		.037809

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$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5450.000000	.154392	3.214063	12.044421	12.002836	1.964086
	5450.000000	1.000000		90.000000-	13.946273
15.000000	4398.161188	.607685	52.577587	45.865386-	9.504259
30.000000	2716.120718	.019688-	91.128193	26.529034-	4.144335
45.000000	1574.290129	.445571-	116.459975	17.500709-	1.726796
60.000000	924.114757	.688075-	133.478082	12.345120-	.788629
75.000000	559.411959	.824103-	145.497705	8.984322-	.399252
90.000000	352.230551	.901378-	154.339877	6.614167-	.220475
105.000000	233.360049	.945715-	161.034602	4.860859-	.131430
120.000000	164.769355	.971298-	166.239351	3.515497-	.084739
135.000000	125.169541	.986068-	170.424807	2.441774-	.059608
150.000000	102.783154	.994418-	173.943341	1.542860-	.046133
165.000000	91.336814	.998687-	177.063268	.747709-	.039434
180.000000	87.815964	1.000000-	180.000000		.037520

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5500.000000	.152959	3.228979	12.145746	12.104509	1.970840
	5500.000000	1.000000		90.000000-	14.052849
15.000000	4431.876964	.605279	52.750964	45.658090-	9.548387
30.000000	2730.404956	.023493-	91.346260	26.363621-	4.143642
45.000000	1580.011819	.448616-	116.655010	17.382107-	1.720922
60.000000	926.621543	.690073-	133.635989	12.258833-	.784505
75.000000	560.643640	.825319-	145.620891	8.920551-	.396754
90.000000	352.903633	.902088-	154.433899	6.566955-	.213968
105.000000	233.765181	.946115-	161.105305	4.826023-	.130489
120.000000	165.041253	.971512-	166.291031	3.490287-	.084116
135.000000	125.367419	.986173-	170.461076	2.424127-	.059169
150.000000	102.942542	.994460-	173.966145	1.531802-	.045795
165.000000	91.476464	.998597-	177.074698	.742266-	.038995
180.000000	87.950186	1.000000-	180.000000		.037221

$E$	$\bar{\alpha}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
5550.000000	.151573	3.243815	12.247071	12.206176	1.977570
	5550.000000	1.000000		90.000000-	14.159431
15.000000	4465.472336	.602880	52.923481	45.452283-	9.591991
30.000000	2744.566322	.027269-	91.562667	26.200099-	4.142860
45.000000	1585.657515	.451629-	116.848326	17.265051-	1.715086
60.000000	929.087865	.692047-	133.792521	12.173634-	.780418
75.000000	561.844233	.826521-	145.743046	8.857698-	.394285
90.000000	353.557963	.902790-	154.527291	6.520317-	.217479
105.000000	234.160444	.946510-	161.175320	4.791588-	.129557
120.000000	165.301307	.971724-	166.342426	3.465306-	.083500
135.000000	125.560856	.986276-	170.496656	2.406881-	.058724
150.000000	103.096502	.994502-	173.989178	1.520744-	.045454
165.000000	91.611672	.998707-	177.085786	.736881-	.038849
180.000000	88.080460	1.000000-	180.000000		.036955

$E$	$\bar{\alpha}^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos \chi$	$\chi$	$\theta_P$	$d\Omega_B/d\Omega_L$
5600.000000	.150202	3.258590	12.348396	12.307838	1.984279
	5600.000000	1.000000		90.000000-	14.266031
15.000000	4498.974443	.600486	53.095197	45.247737-	9.635352
30.000000	2758.628502	.031015-	91.777411	26.038525-	4.141950
45.000000	1591.248930	.454609-	117.039865	17.149543-	1.709265
60.000000	931.524579	.693996-	133.947392	12.089581-	.776373
75.000000	563.034462	.827706-	145.863883	8.795647-	.391346
90.000000	354.203411	.903482-	154.619709	6.474308-	.216010
105.000000	234.551266	.946899-	161.244476	4.757659-	.128640
120.000000	165.563829	.971932-	166.392903	3.440726-	.082895
135.000000	125.751332	.986373-	170.532122	2.339749-	.058300
150.000000	103.248982	.994543-	174.011466	1.509972-	.045107
165.000000	91.748855	.998716-	177.049927	.731838-	.038690
180.000000	88.209747	1.000000-	180.000000		.036679



$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5650.000000	.148854	3.273304	12.449721	12.409494	1.990965
15.000000	5650.000000	1.000000	90.000000-	90.000000-	14.372606
30.000000	4532.389207	.598102	53.265824	45.044796-	9.678468
45.000000	2772.584095	.034733-	91.990552	25.878727-	4.140922
60.000000	1596.785078	.457556-	117.229629	17.035467-	1.703470
75.000000	933.934647	.695920-	134.100715	12.006731-	.772367
90.000000	564.213836	.828873-	145.983230	8.734512-	.389438
105.000000	354.844911	.904163-	154.710867	6.428987-	.214562
120.000000	234.938633	.947282-	161.312945	4.724266-	.127738
135.000000	165.821909	.972137-	166.442980	3.416547-	.082300
150.000000	125.941315	.986478-	170.566958	2.372962-	.057870
165.000000	103.401955	.994583-	174.033582	1.499373-	.044794
180.000000	91.885544	.998725-	177.106183	.726854-	.038243
	88.338540	1.000000-	180.000000		.036407

$E$	$\chi^2$	$\eta_B$	$\gamma_L$	$\eta_L$	$\gamma_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\eta_B/d\eta_L$
5700.000000	.147531	3.287952	12.551046	12.511145	1.997629
15.000000	5700.000000	1.000000	90.000000-	90.000000-	14.479196
30.000000	4565.700838	.595724	53.435648	44.843287-	9.721149
45.000000	2786.434580	.038422-	92.202030	25.720763-	4.139812
60.000000	1602.259050	.460472-	117.417617	16.922881-	1.697704
75.000000	936.314119	.697820-	134.252492	11.9224970-	.758401
90.000000	565.374952	.830026-	146.101488	8.074237-	.387057
105.000000	355.476542	.904835-	154.801165	6.384239-	.218132
120.000000	235.320573	.947660-	161.330554	4.691263-	.126846
135.000000	166.073031	.972340-	166.492713	3.392540-	.081705
150.000000	126.127844	.986577-	170.601794	2.386221-	.057448
165.000000	103.352461	.994623-	174.058526	1.488088-	.044438
180.000000	91.815324	.998736-	177.111327	.721589-	.038068
	88.333330	1.000000-	180.000000		.036187

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\delta_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\Omega_L$
5750.000000	.146232	3.302521	12.652371	12.612790	2.004270
	5750.000000	1.000000		90.000000-	14.585776
15.000000	4598.891077	.593353	53.604556	44.643152-	9.752705
30.000000	2800.160713	.042084-	92.412019	25.564632-	4.132597
45.000000	1607.663936	.463357-	117.604000	16.811727-	1.691866
60.000000	938.656089	.699697-	134.402779	11.844355-	.764475
75.000000	566.511394	.831164-	146.218601	8.614707-	.384703
90.000000	356.095343	.905498-	154.890489	6.340179-	.211722
105.000000	235.690669	.948033-	161.447705	4.658719-	.125066
120.000000	166.322279	.972539-	166.541643	3.369049-	.081129
135.000000	126.307464	.986675-	170.636114	2.339845-	.057035
150.000000	103.697538	.994662-	174.077242	1.478517-	.044121
165.000000	92.143131	.998744-	177.127841	.716598-	.037616
180.000000	88.587245	1.000000-	180.000000		.035875

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\delta_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\Omega_L$
5800.000000	.144954	3.317045	12.753696	12.714431	2.010891
	5800.000000	1.000000		90.000000-	14.692364
15.000000	4632.015193	.590990	53.772605	44.444451-	9.805910
30.000000	2813.806412	.045717-	92.620404	25.410162-	4.137265
45.000000	1613.023918	.466211-	117.788721	16.701949-	1.686248
60.000000	940.973814	.701550-	134.551633	11.764714-	.760583
75.000000	567.646356	.832285-	146.334224	8.556093-	.382387
90.000000	356.710690	.906151-	154.978839	6.296691-	.210330
105.000000	236.062739	.948400-	161.513824	4.626634-	.125112
120.000000	166.568023	.972736-	166.590230	3.345729-	.080551
135.000000	126.488071	.986771-	170.670091	2.322630-	.056615
150.000000	103.846070	.994700-	174.098498	1.468316-	.043523
165.000000	92.271924	.998753-	177.138154	.711570-	.037450
180.000000	88.710117	1.000000-	180.000000		.035615

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\Omega_L$
5850.000000	.143700	3.331486	12.855021	12.816066	2.017489
15.000000	5850.000000	1.000000		90.000000-	14.798947
30.000000	4665.005087	.588633	53.939851	44.247124-	9.847873
45.000000	2827.326771	.049323-	92.827242	25.257526-	4.135857
60.000000	1618.313335	.469035-	117.971724	16.593602-	1.680558
75.000000	943.262061	.703381-	134.698998	11.686161-	.756732
90.000000	568.752698	.833393-	146.448930	8.498167-	.380092
105.000000	357.309753	.906796-	155.066330	6.253777-	.206957
120.000000	236.421486	.948763-	161.579599	4.595006-	.124245
135.000000	166.805872	.972930-	166.638187	3.322811-	.079956
150.000000	126.662263	.986866-	170.703666	2.307759-	.056217
165.000000	103.983746	.994739-	174.120099	1.458177-	.043509
180.000000	92.395290	.998762-	177.148524	.706800-	.037284
	88.828055	1.000000-	180.000000		.035358

$E$	$\chi^2$	$\eta_B$	$\chi_L$	$\eta_L$	$\chi_0$
$\theta_K$	$E_K$	$\cos X$	$X$	$\theta_P$	$d\Omega_B/d\Omega_L$
5900.000000	.142466	3.345888	12.956346	12.917697	2.024067
15.000000	5900.000000	1.000000		90.000000-	14.905537
30.000000	4697.938232	.586224	54.106181	44.051230-	9.889304
45.000000	2940.768177	.052902-	93.032533	25.106552-	4.134338
60.000000	1523.564262	.471829-	118.153180	16.486631-	1.674093
75.000000	945.528531	.705190-	134.844987	11.608040-	.752013
90.000000	569.856078	.834486-	146.562433	8.443043-	.377123
105.000000	357.911776	.907431-	155.152789	6.211492-	.207101
120.000000	236.783104	.949119-	161.644172	4.552395-	.124106
135.000000	167.032109	.973120-	166.685306	3.300294-	.079703
150.000000	126.841633	.986959-	170.726703	2.300002-	.056007
165.000000	103.9129611	.994776-	174.140047	1.458177-	.043509
180.000000	92.321123	.998771-	177.139825	.706800-	.037284
	88.828055	1.000000-	180.000000		.035358