

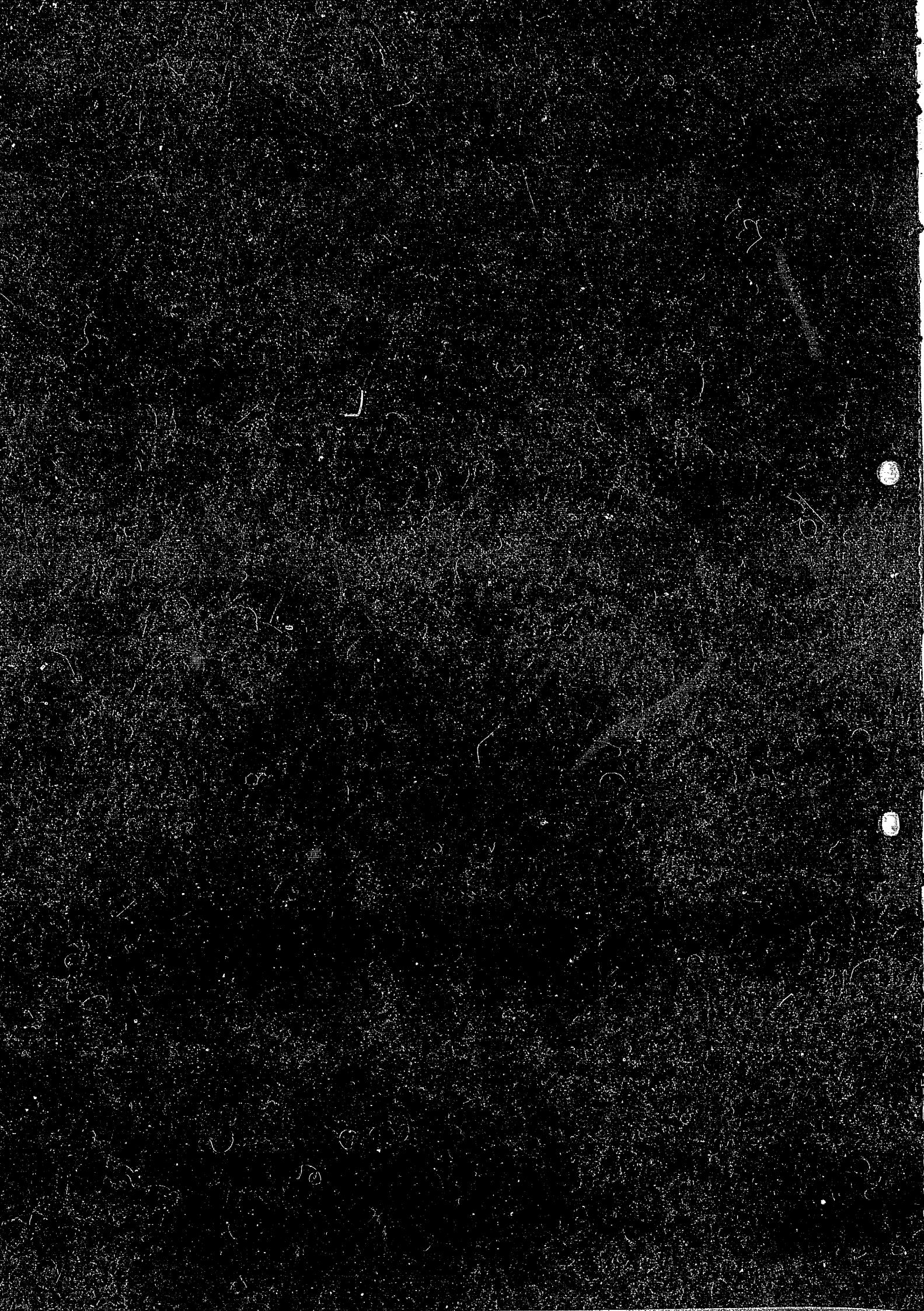
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AND
RADIAL FUNCTIONS

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Two-centre Coulomb Phaseshifts and Radial Functions

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Abstract

Two-centre radial Coulomb functions and phaseshifts are calculated numerically, and are tabulated. Only the homonuclear case is considered.

§1. Introduction

Phaseshifts and wavefunctions derived from the two-centre attractive Coulomb potentials are important quantities to elucidate various kinds of molecular processes in which the ionized continuum states of diatomic molecules participate. Taking, for instance, the H_2^+ molecules which play an important role in the atomic and molecular processes in the nuclear fusion plasma, we need a knowledge of the two-centre Coulomb functions and phaseshifts to understand the dynamic processes such as elastic and inelastic scattering of electrons by H_2^+ , a variety of decay modes of the highly excited (superexcited) states of H_2 , photoionization of H_2 , and so on.

In this report, numerical data for the continuum wavefunctions and the phase shifts are presented for the homonuclear case. The method of numerical computations is also described.

§2. Two-centre Radial Coulomb Functions

In terms of the spheroidal coordinates ξ , η , ψ , the Schrödinger equation for the motion of a particle with mass M and charge $-Ze$ in the two-centre Coulomb potential of the positive charges $Z_1 e$ and $Z_2 e$ separated by the distance R can be written as,

$$\left\{ \frac{d}{d\xi}(\xi^2 - 1) \frac{d}{d\xi} - \frac{m^2}{\xi^2 - 1} + \kappa^2 \xi^2 + a\xi - \lambda_{ml} \right\} \alpha_{ml}(\xi) = 0, \quad (1)$$

and

$$\left\{ \frac{d}{d\eta}(1-\eta^2) \frac{d}{d\eta} - \frac{m^2}{1-\eta^2} - \kappa^2 \eta^2 - b\eta + \lambda_{ml} \right\} \beta_{ml}(\eta) = 0, \quad (2)$$

where the total wavefunction is given by

$$\psi_{ml}(\xi, \eta, \psi) = \alpha_{ml}(\xi) \beta_{ml}(\eta) e^{im\psi/\sqrt{2\pi}}, \quad (3)$$

$$\text{and } a = RZ(z_1 + z_2) Me^2/\hbar^2, \quad (4)$$

$$b = RZ(z_1 - z_2) Me^2/\hbar^2, \quad (5)$$

$$\kappa = kR/2, \quad (6)$$

k is the wavenumber, and λ_{ml} the separation constant.

Here we consider only the case of $z_1 = z_2$; thus $b=0$. In this case the angle function $\beta_{ml}(\eta)$ is equal to the spheroidal angle function $S_{ml}(\kappa, \eta)$ in the conventional notation.¹⁾⁻²⁾

The regular and irregular radial functions satisfy the following boundary conditions:

$$\text{regular function: } F_{ml}(\kappa, \xi) \xrightarrow{\xi \rightarrow 1} \alpha (\xi - 1)^{m/2}, \quad (7.a)$$

$$\xrightarrow{\xi \rightarrow \infty} \alpha \frac{1}{\xi} \sin\{\gamma_l(\xi) + \eta_{ml}(\kappa, a)\}, \quad (7.b)$$

irregular function: $G_{ml}(\kappa, \xi) \xrightarrow{\xi \rightarrow 1} \alpha (\xi - 1)^{-m/2}$ $m \neq 0$, (8a)

$\propto \log(\xi - 1)$ $m = 0$, (8b)

$\xrightarrow{\xi \rightarrow \infty} \alpha \frac{1}{\xi} \cos\{\gamma_l(\xi) + \eta_{ml}(\kappa, a)\}$, (8c)

where

$$\gamma_l(\xi) = \kappa \xi + \frac{a}{2\kappa} \log(2\kappa\xi) - l\pi/2, \quad (9)$$

and $\eta_{ml}(\kappa, a)$ is the two-center Coulomb phaseshift. Readers should refer to references 3)-5) concerning the properties of the phaseshifts such as the asymptotic behaviour with respect to the parameters.

§3. Method of Numerical Calculations

In the region of ξ close to 1.0, equation (1) is solved by using the power series expansion method to obtain the regular function $F_{ml}(\kappa, \xi)$ with the relative error 10^{-7} . By starting with this solution at $\xi \approx 1.0$, the forward Numerov procedure is employed to obtain the solution up to $\xi \approx 7.0$. The matching is performed there with the solution obtained by the backward Numerov procedure started from large ξ , where the solution is calculated by the asymptotic expansion method (relative error 10^{-7}).

The irregular function $G_{ml}(\kappa, \xi)$ is solved by using the backward Numerov procedure down to $\xi \approx 1.0$. The step size of integration was taken to be 0.01 for $\kappa < 4.0$, and 0.005 for

$\kappa \geq 4.0$. The convergence of the results was confirmed.

The separation constants λ_{ml} are calculated by using the computer programme coded by Itikawa⁶⁾ for $\kappa=0.1 \sim 1.0$, and are taken from the tables given by Stratton et al²⁾ for $\kappa=2.0 \sim 8.0$.

§4. Introduction to the Tables and Figures

Tables 1-18 give the phaseshifts $\eta_{ml}(\kappa, a)$ for

$$\kappa = 0.1 \text{ (0.1)} \quad 1.0, \quad 2.0 \text{ (1.0)} \quad 8.0,$$

$$a = 0.2 \text{ (0.2)} \quad 2.0, \quad 3.0 \text{ (1.0)} \quad 10.0,$$

and $(m, l) = (0, 0) \sim (3, 3)$.

Some of the results are shown in figures 1-10.

The values of the radial functions $F_{ml}(\kappa, \xi)$ and $G_{ml}(\kappa, \xi)$ are tabulated in Tables 19-36 for

$$\kappa = 0.4, \quad 1.0, \quad 4.0, \quad a = 0.4, \quad 1.0, \quad 4.0,$$

$$(m, l) = (0, 0) \sim (3, 3),$$

and $\xi = 1.0 \text{ (or 1.2)} \quad (0.2) \quad 20.0$.

Some of them are also shown in figures 11-22. These functions are normalized as

$$\begin{bmatrix} F_{ml}(\kappa, \xi) \\ G_{ml}(\kappa, \xi) \end{bmatrix} \xrightarrow{\xi \rightarrow \infty} \frac{1}{\kappa} \begin{bmatrix} \sin\{\gamma_l(\xi) + \eta_{ml}(\kappa, a)\} \\ \cos\{\gamma_l(\xi) + \eta_{ml}(\kappa, a)\} \end{bmatrix}.$$

Authors would like to thank Prof. Itikawa of Institute of Plasma Physics, Nagoya University, for providing us his programme to compute the separation constants λ_{ml} .

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a = 0.2

Table 1. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	0.2843378	2.662679	2.655419	-0.940556	-0.946984	-0.948252	1.872776	1.872436	1.872012
0.20	0.226056	2.928457	2.918781	-0.463272	-0.463931	-0.465854	2.512291	2.511874	2.511185
0.30	0.158751	3.006374	2.99473	-0.546175	-0.507686	-0.510286	2.722975	2.722390	2.721429
0.40	0.116618	3.044740	3.029351	-0.228835	-0.230030	-0.235303	2.828353	2.827346	2.826119
0.50	0.088508	3.068016	3.050227	-0.101997	-0.183496	-0.187429	2.891485	2.890246	2.888754
0.60	0.068361	3.083844	3.063355	-0.156633	-0.152466	-0.157040	2.933628	2.932150	2.930398
0.70	0.053093	3.095391	3.073221	-0.120955	-0.130284	-0.135477	2.963788	2.963345	2.960059
0.80	0.041027	3.104239	3.079459	-0.111052	-0.113635	-0.119421	2.984644	2.985952	2.982235
0.90	0.031190	3.111149	3.065017	-0.097631	-0.100680	-0.107029	3.004153	3.003567	3.001919
1.00	0.022978	3.110712	3.068910	-0.086783	-0.090317	-0.097200	3.018353	3.017689	3.015851
2.00	-0.017787	3.136064	3.103409	-0.054128	-0.044672	-0.054860	3.083842	3.081922	3.073527
3.00	-0.028811	3.130127	3.106797	-0.014639	-0.032173	-0.042203	3.108484	3.103458	3.097605
4.00	-0.030655	3.122178	3.108444	-0.010236	-0.028145	-0.036185	3.122913	3.113130	3.106369
5.00	-0.029803	3.118309	3.110977	-0.013740	-0.026592	-0.032439	3.130333	3.117345	3.110978
6.00	-0.028275	3.117356	3.112918	-0.01787	-0.025549	-0.029697	3.130823	3.118996	3.113790
7.00	-0.026662	3.117669	3.114704	-0.019847	-0.024519	-0.027507	3.127939	3.119726	3.115778
8.00	-0.025137	3.118446	3.116314	-0.020423	-0.023461	-0.025678	3.120282	3.125390	3.117351

Table 2. Two-centre Coulomb phasshift $\eta_{m\ell}$ (radian)

a = 0.4

(m, ℓ)	(0, 0)	(0, 1)	(1, 1)	(0, 2)	(1, 2)	(2, 2)	(0, 3)	(1, 3)	(2, 3)	(3, 3)
0.10	-0.187261	1.921956	1.896316	-2.019522	-2.020874	-2.024845	0.532372	0.532128	0.531396	0.530180
0.20	0.243917	2.676955	2.648336	-0.943991	-0.945740	-0.950778	1.873798	1.873455	1.872431	1.870742
0.30	0.228099	2.862531	2.829740	-0.613348	-0.620594	-0.626872	2.302054	2.301605	2.300258	2.298050
0.40	0.183952	2.940747	2.909444	-0.459305	-0.462114	-0.469667	2.514100	2.513532	2.511854	2.509125
0.50	0.144736	2.995814	2.95415	-0.364486	-0.367918	-0.376736	2.640965	2.640277	2.638255	2.635007
0.60	0.113242	3.028403	2.982294	-0.301246	-0.305368	-0.315422	2.725516	2.724702	2.722330	2.718571
0.70	0.087932	3.051803	3.001569	-0.255882	-0.260766	-0.272014	2.785971	2.785024	2.782294	2.778035
0.80	0.067244	3.069456	3.015941	-0.221621	-0.227344	-0.239735	2.831400	2.830312	2.827216	2.824669
0.90	0.050026	3.083202	3.026043	-0.194720	-0.201368	-0.214845	2.866825	2.865588	2.862118	2.856899
1.00	0.035464	3.094113	3.034126	-0.172953	-0.180611	-0.195111	2.895258	2.893859	2.890007	2.884333
2.00	-0.038333	3.130187	3.064254	-0.067448	-0.089456	-0.110131	3.026391	3.022361	3.014340	3.005257
3.00	-0.058473	3.117684	3.071519	-0.028897	-0.064561	-0.084666	3.075706	3.065371	3.053525	3.043306
4.00	-0.061634	3.102193	3.076051	-0.020705	-0.056496	-0.072532	3.104542	3.084632	3.071050	3.061454
5.00	-0.059761	3.094763	3.080228	-0.027835	-0.053331	-0.064979	3.119135	3.093013	3.080283	3.072151
6.00	-0.056635	3.092991	3.084164	-0.035795	-0.051193	-0.059458	3.119888	3.096311	3.085926	3.079390
7.00	-0.053376	3.093673	3.087765	-0.039811	-0.049101	-0.055057	3.114108	3.097790	3.089917	3.084768
8.00	-0.050308	3.095254	3.091002	-0.040911	-0.046964	-0.051386	3.109076	3.098922	3.093076	3.089017

Table 3. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

a = 0.6

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	-1.163617	0.876739	0.820350	3.003654	3.000766	2.992412	-0.927025	-0.927520	-0.929000	-0.931451
0.20	0.052667	2.360884	2.302490	-1.456814	-1.460196	-1.469771	1.217058	1.216435	1.214579	1.211523
0.30	0.191177	2.699788	2.636989	-0.939649	-0.943738	-0.954943	1.875504	1.874729	1.872415	1.868633
0.40	0.188390	2.842978	2.774372	-0.693539	-0.698466	-0.711433	2.197655	2.196707	2.193908	2.189375
0.50	0.160059	2.922584	2.848926	-0.548542	-0.554420	-0.569173	2.389428	2.388300	2.38494	2.379705
0.60	0.129283	2.973860	2.894769	-0.452438	-0.459381	-0.475893	2.516911	2.515593	2.511765	2.505727
0.70	0.101181	3.009896	2.925701	-0.383748	-0.391875	-0.410093	2.607950	2.606410	2.602046	2.595274
0.80	0.076583	3.036639	2.947797	-0.331984	-0.341418	-0.361273	2.676261	2.674528	2.669615	2.662127
0.90	0.055245	3.057179	2.964226	-0.291402	-0.302275	-0.323683	2.729515	2.727552	2.722078	2.713896
1.00	0.036708	3.073285	2.976811	-0.258594	-0.271039	-0.293908	2.772239	2.770030	2.763981	2.755130
2.00	-0.061542	3.123706	3.024101	-0.099953	-0.134329	-0.165831	2.969195	2.962902	2.950594	2.936772
3.00	-0.088961	3.104237	3.035761	-0.042814	-0.097175	-0.127390	3.043268	3.027327	3.009348	2.993941
4.00	-0.092934	3.081646	3.042914	-0.051433	-0.085054	-0.109058	3.086477	3.06095	3.035634	3.021229
5.00	-0.089872	3.070958	3.049347	-0.042886	-0.080217	-0.097619	3.107983	3.068595	3.049506	3.037322
6.00	-0.085080	3.068498	3.055332	-0.054023	-0.076932	-0.089284	3.108779	3.073539	3.057999	3.048214
7.00	-0.080142	3.069606	3.060778	-0.059891	-0.073743	-0.082650	3.100102	3.075786	3.064011	3.056301
8.00	-0.075514	3.072017	3.065657	-0.061463	-0.070507	-0.077124	3.092654	3.07514	3.068768	3.062690

Table 4. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

$a = 0.8$

κ	(m, ℓ)	$(0,0)$	$(0,1)$	$(1,1)$	$(0,2)$	$(1,2)$	$(2,2)$	$(0,3)$	$(1,3)$	$(2,3)$	$(3,3)$
0.10	-2.479054	-0.428376	-0.525614	1.550404	1.545302	1.530851	-2.525012	-2.525856	-2.528377	-2.532539	
0.20	-0.298997	1.971318	1.872400	-2.011385	-2.017041	-2.032700	0.535308	0.534319	0.531376	0.526545	
0.30	0.058943	2.511355	2.408725	-1.274735	-1.281273	-1.298773	1.441037	1.439857	1.436347	1.430633	
0.40	0.132025	2.729562	2.621385	-0.933439	-0.941081	-0.960691	1.877905	1.876502	1.872368	1.865704	
0.50	0.133908	2.846023	2.732725	-0.735161	-0.744089	-0.765897	2.136294	2.134653	2.129856	2.122221	
0.60	0.115520	2.918711	2.799748	-0.604772	-0.615157	-0.639160	2.307478	2.305582	2.300097	2.291494	
0.70	0.092062	2.968585	2.844247	-0.512017	-0.524032	-0.550178	2.429454	2.427287	2.421092	2.411535	
0.80	0.068528	3.004901	2.875687	-0.442328	-0.456147	-0.484355	2.520911	2.518455	2.511530	2.501043	
0.90	0.046555	3.032355	2.898894	-0.387802	-0.403609	-0.433774	2.592128	2.589362	2.581688	2.570298	
1.00	0.026584	3.053585	2.916586	-0.343782	-0.361758	-0.393763	2.649231	2.646129	2.637689	2.625428	
2.00	-0.087315	3.116369	2.982929	-0.131640	-0.179383	-0.221980	2.912255	2.905334	2.886751	2.868061	
3.00	-0.120251	3.089763	2.999524	-0.056438	-0.130027	-0.170379	3.011175	3.0089317	2.965068	2.944424	
4.00	-0.124547	3.060548	3.009535	-0.042451	-0.113825	-0.145706	3.068713	3.027514	3.000119	2.980900	
5.00	-0.120133	3.046900	3.018334	-0.057094	-0.107250	-0.130359	3.096862	3.044090	3.018647	3.002421	
6.00	-0.113609	3.043879	3.026423	-0.072467	-0.102765	-0.119174	3.097492	3.050679	3.030010	3.016987	
7.00	-0.106960	3.045469	3.033741	-0.080084	-0.098446	-0.110286	3.085920	3.053713	3.038060	3.027800	
8.00	-0.100754	3.048737	3.040278	-0.082079	-0.094089	-0.102892	3.076124	3.056057	3.044427	3.03338	

Table 5. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian) $a = 1.0$

$\kappa \backslash (m, \ell)$	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	2.35607	-1.947398	-2.095836	-0.381021	-0.089075	-0.111298	2.019952	2.014791	2.008434	
0.20	-0.774276	1.509236	1.360058	-2.612644	-2.621301	-2.644631	-0.176375	-0.177826	-0.182133	-0.189173
0.30	-0.151070	2.293549	2.141889	-1.626644	-1.636336	-1.661565	0.996525	0.994853	0.989897	0.981863
0.40	0.022462	2.603444	2.447831	-1.180613	-1.191665	-1.219211	1.553831	1.551889	1.546187	1.537042
0.50	0.069714	2.763942	2.603559	-0.925233	-0.937909	-0.967945	1.881014	1.878779	1.872270	1.861966
0.60	0.973578	2.861354	2.695970	-0.758767	-0.773306	-0.805873	2.096892	2.094339	2.086983	2.075512
0.70	0.951421	2.926625	2.756433	-0.641403	-0.657640	-0.692701	2.250340	2.247446	2.239210	2.226585
0.80	0.043595	2.973220	2.798695	-0.552846	-0.571813	-0.609282	2.365215	2.361955	2.352811	2.339056
0.90	0.024326	3.007853	2.829050	-0.484040	-0.505576	-0.545336	2.454574	2.450918	2.440841	2.425988
1.00	0.005392	3.034235	2.853124	-0.428589	-0.452925	-0.494837	2.526170	2.522086	2.511052	2.495140
2.00	-0.115549	3.107937	2.940720	-0.162511	-0.224635	-0.278597	2.855572	2.844250	2.822798	2.799112
3.00	-0.152319	3.074248	2.962910	-0.069816	-0.163128	-0.213635	2.979435	2.951338	2.920681	2.894752
4.00	-0.156469	3.038906	2.975917	-0.053788	-0.142807	-0.182534	3.051246	2.998886	2.964505	2.940465
5.00	-0.150543	3.022592	2.987190	-0.072261	-0.134429	-0.163199	3.085755	3.019494	2.987704	2.967447
6.00	-0.142221	3.019136	2.997436	-0.091125	-0.128693	-0.149128	3.086018	3.027731	3.001959	2.985709
7.00	-0.133829	3.021262	3.006555	-0.100391	-0.123209	-0.137965	3.071564	3.031572	3.012064	2.999263
8.00	-0.126028	3.025413	3.014368	-0.102759	-0.117712	-0.128689	3.059488	3.034551	3.020054	3.009960

Table 6. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

a = 1.2

$\kappa \backslash m, \ell$	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0•10	0•465712	2•637650	2•429796	-1•8/1365	-1•883182	-1•914783	0•148215	0•146359	0•140843	0•131811
0•20	-1•348762	0•979185	0•771580	3•021099	3•006627	2•976059	-0•921084	-0•923097	-0•929058	-0•938758
0•30	-0•425027	4•044742	1•836172	-1•997415	-2•011066	-2•045477	0•540227	0•537967	0•531297	0•520540
0•40	-0•132396	2•462250	2•251400	-1•436346	-1•451605	-1•488408	1•224523	1•221953	1•214433	1•202439
0•50	-0•028021	2•074268	2•460242	-1•119523	-1•136746	-1•176213	1•623078	1•620161	1•611702	1•598392
0•60	0•06098	2•000091	2•582523	-0•914834	-0•934390	-0•976617	1•884847	1•881551	1•872094	1•857443
0•70	0•010883	2•882620	2•661589	-0•770990	-0•793083	-0•838058	2•070393	2•066684	2•056184	2•040198
0•80	0•002843	2•940418	2•716330	-0•663712	-0•688688	-0•736334	2•209044	2•204889	2•193307	2•176010
0•90	-0•010704	2•982655	2•756135	-0•580223	-0•608379	-0•658572	2•316762	2•312125	2•299428	2•280855
1•00	-0•026314	3•014345	2•786159	-0•513078	-0•544697	-0•597284	2•402994	2•397832	2•383988	2•364183
2•00	-0•146142	3•098188	2•897461	-0•192570	-0•270119	-0•335697	2•799149	2•785038	2•758721	2•729914
3•00	-0•185143	3•057681	2•925623	-0•083009	-0•196490	-0•257160	2•948054	2•913381	2•876183	2•844923
4•00	-0•188695	3•016732	2•942060	-0•065472	-0•172003	-0•219524	3•034069	2•970200	2•928788	2•899924
5•00	-0•181102	2•998039	2•955916	-0•087786	-0•161755	-0•196138	3•074647	2•994806	2•956680	2•932402
6•00	-0•170917	2•994270	2•968373	-0•109994	-0•154714	-0•179146	3•074354	3•004693	2•973845	2•954382
7•00	-0•160749	2•996985	2•979521	-0•120809	-0•148032	-0•165687	3•057034	3•009363	2•986029	2•970690
8•00	-0•151336	3•002046	2•989424	-0•123501	-0•141375	-0•154516	3•042746	3•012997	2•995648	2•983556

Table 7. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian) $a = 1.4$

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0•10	-1•471194	0•785744	0•512235	2•480487	2•464008	2•421504	-1•847445	-1•849969	-1•857448	-1•869628
0•20	-2•005706	0•386186	0•113936	2•324107	2•306911	2•263597	-1•700415	-1•703098	-1•711017	-1•723829
0•30	-0•752624	1•784386	1•492822	-2•388228	-2•406745	-2•451767	0•070795	0•067847	0•056179	0•045281
0•40	-0•325924	2•304099	2•032271	-1•701599	-1•721969	-1•769348	0•889192	0•885897	0•876293	0•861071
0•50	-0•155010	2•575034	2•302151	-1•318661	-1•341340	-1•391441	1•362021	1•358328	1•347666	1•331001
0•60	-0•084139	2•733172	2•458826	-1•073523	-1•098918	-1•151900	1•666923	1•655122	1•636969	
0•70	-0•057704	2•835062	2•559243	-0•902226	-0•930719	-0•986608	1•889427	1•884809	1•871809	1•852162
0•80	-0•052455	2•905200	2•628226	-0•715085	-0•807055	-0•865769	2•052272	2•047127	2•032876	2•011756
0•90	-0•057623	2•955647	2•67870	-0•676450	-0•712216	-0•773672	2•178608	2•172890	2•157345	2•134788
1•00	-0•067863	2•992946	2•715478	-0•597348	-0•637224	-0•701245	2•279645	2•273298	2•256421	2•232474
2•00	-0•178992	3•086924	2•853139	-0•221831	-0•315869	-0•393297	2•742988	2•725890	2•694507	2•660456
3•00	-0•218702	3•040059	2•887963	-0•096068	-0•230122	-0•300958	2•917040	2•875441	2•831568	2•794935
4•00	-0•221220	2•994035	2•907966	-0•077526	-0•201416	-0•256674	3•017175	2•941458	2•892968	2•859278
5•00	-0•211807	2•973245	2•924514	-0•103669	-0•189227	-0•229176	3•063523	2•970023	2•925572	2•897284
6•00	-0•199694	2•969282	2•939234	-0•129071	-0•180834	-0•209228	3•062494	2•981566	2•945669	2•923005
7•00	-0•187720	2•972638	2•952338	-0•141330	-0•172915	-0•193451	3•042330	2•987086	2•959936	2•942082
8•00	-0•176677	2•978656	2•963949	-0•144300	-0•180372	-0•165077	3•025900	2•991395	2•971209	2•957127

Table 8. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

a = 1.6

(lm, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	2.732500	-1.201293	-1.544492	0.423557	0.401417	0.346575	2.322812	2.313056	2.297267	
0.20	-2.733050	-0.265345	-0.606283	1.501359	1.558428	1.502938	-2.518334	-2.528521	-2.544898	
0.30	-1.126187	1.422397	1.113816	-2.799585	-2.823986	-2.880995	-0.412755	-0.416499	-0.427461	-0.444921
0.40	-0.552872	2.127459	1.790787	-1.970532	-2.003534	-2.062775	0.547178	0.543052	0.531085	0.512246
0.50	-0.307613	2.464408	2.129102	-1.523143	-1.552305	-1.614222	1.097428	1.092857	1.079727	1.059350
0.60	-0.194590	2.658855	2.324272	-1.235018	-1.267338	-1.332158	1.455256	1.450182	1.435783	1.413796
0.70	-0.142550	2.782403	2.449197	-1.034936	-1.070877	-1.138666	1.707269	1.701639	1.685891	1.662277
0.80	-0.121018	2.860224	2.534133	-0.887104	-0.927100	-0.997818	1.894781	1.888542	1.871380	1.846152
0.90	-0.115494	2.925667	2.595262	-0.772806	-0.817277	-0.890811	2.040028	2.033121	2.014492	1.987684
1.00	-0.118549	2.969042	2.640925	-0.681329	-0.730670	-0.806854	2.156054	2.148416	2.128273	2.099936
2.00	-0.214004	3.073970	2.807748	-0.250315	-0.361922	-0.451411	2.666795	2.630145	2.590729	
3.00	-0.025297	3.021381	2.849835	-0.109056	-0.264035	-0.345029	2.886399	2.837512	2.786828	2.744785
4.00	-0.0254039	2.970826	2.873641	-0.089975	-0.231046	-0.293985	3.00555	2.912654	2.857042	2.818524
5.00	-0.0242658	2.948212	2.892963	-0.119908	-0.216845	-0.262313	3.052365	2.945145	2.894382	2.862094
6.00	-0.0228554	2.944174	2.910018	-0.148354	-0.207041	-0.239373	3.050432	2.958350	2.917431	2.891578
7.00	-0.0214742	2.948223	2.925107	-0.161976	-0.197858	-0.221257	3.027455	2.964740	2.933804	2.913439
8.00	-0.0202052	2.955182	2.938440	-0.165173	-0.188819	-0.206258	3.008950	2.969746	2.946738	2.930672

$a = 1.8$

Table 9. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

(m, ℓ)	$(0,0)$	$(0,1)$	$(1,1)$	$(0,2)$	$(1,2)$	$(2,2)$	$(0,3)$	$(1,3)$	$(2,3)$	$(3,3)$
$0 \cdot 10$	$0 \cdot 528648$	$2 \cdot 973761$	$2 \cdot 559081$	$-1 \cdot 746042$	$-1 \cdot 774955$	$-1 \cdot 843473$	$0 \cdot 111871$	$0 \cdot 107669$	$0 \cdot 095317$	$0 \cdot 075466$
$0 \cdot 20$	$2 \cdot 761432$	$-0 \cdot 971770$	$-1 \cdot 383246$	$0 \cdot 795184$	$0 \cdot 765593$	$0 \cdot 696391$	$2 \cdot 918994$	$2 \cdot 914632$	$2 \cdot 901861$	$2 \cdot 881472$
$0 \cdot 30$	$-1 \cdot 539867$	$1 \cdot 108881$	$0 \cdot 701388$	$3 \cdot 051694$	$3 \cdot 020275$	$2 \cdot 949976$	$-0 \cdot 911086$	$-0 \cdot 91542$	$-0 \cdot 929302$	$-0 \cdot 950748$
$0 \cdot 40$	$-0 \cdot 809115$	$1 \cdot 931094$	$1 \cdot 527577$	$-2 \cdot 263049$	$-2 \cdot 296825$	$-2 \cdot 369159$	$0 \cdot 197938$	$0 \cdot 192872$	$0 \cdot 178249$	$0 \cdot 155402$
$0 \cdot 50$	$-0 \cdot 482835$	$2 \cdot 340759$	$1 \cdot 941125$	$-1 \cdot 753339$	$-1 \cdot 770130$	$-1 \cdot 845007$	$0 \cdot 828935$	$0 \cdot 823376$	$0 \cdot 807498$	$0 \cdot 783047$
$0 \cdot 60$	$-0 \cdot 323064$	$2 \cdot 575505$	$2 \cdot 179672$	$-1 \cdot 399639$	$-1 \cdot 440041$	$-1 \cdot 517746$	$1 \cdot 237202$	$1 \cdot 231079$	$1 \cdot 213813$	$1 \cdot 187659$
$0 \cdot 70$	$-0 \cdot 242043$	$2 \cdot 723152$	$2 \cdot 331002$	$-1 \cdot 169298$	$-1 \cdot 213858$	$-1 \cdot 294502$	$1 \cdot 523754$	$1 \cdot 517002$	$1 \cdot 498246$	$1 \cdot 470354$
$0 \cdot 80$	$-0 \cdot 201649$	$2 \cdot 822178$	$2 \cdot 433998$	$-0 \cdot 944888$	$-1 \cdot 049116$	$-1 \cdot 132687$	$1 \cdot 736460$	$1 \cdot 729013$	$1 \cdot 708688$	$1 \cdot 679062$
$0 \cdot 90$	$-0 \cdot 183418$	$2 \cdot 891588$	$2 \cdot 507550$	$-0 \cdot 869365$	$-0 \cdot 923746$	$-1 \cdot 010143$	$1 \cdot 900943$	$1 \cdot 892731$	$1 \cdot 870771$	$1 \cdot 839443$
$1 \cdot 00$	$-0 \cdot 177687$	$2 \cdot 941665$	$2 \cdot 562368$	$-0 \cdot 765186$	$-0 \cdot 825169$	$-0 \cdot 914230$	$2 \cdot 032176$	$2 \cdot 023124$	$1 \cdot 999470$	$1 \cdot 966492$
$2 \cdot 00$	$-0 \cdot 251084$	$3 \cdot 059181$	$2 \cdot 761285$	$-0 \cdot 276049$	$-0 \cdot 408310$	$-0 \cdot 510055$	$2 \cdot 631467$	$2 \cdot 607743$	$2 \cdot 565619$	$2 \cdot 520720$
$3 \cdot 00$	$-0 \cdot 287948$	$3 \cdot 001652$	$2 \cdot 811242$	$-0 \cdot 122037$	$-0 \cdot 298258$	$-0 \cdot 389375$	$2 \cdot 856137$	$2 \cdot 799585$	$2 \cdot 741971$	$2 \cdot 694470$
$4 \cdot 00$	$-0 \cdot 287147$	$2 \cdot 947113$	$2 \cdot 839082$	$-0 \cdot 102840$	$-0 \cdot 260895$	$-0 \cdot 331457$	$2 \cdot 984199$	$2 \cdot 883782$	$2 \cdot 821010$	$2 \cdot 77663$
$5 \cdot 00$	$-0 \cdot 273652$	$2 \cdot 922946$	$2 \cdot 861325$	$-0 \cdot 156504$	$-0 \cdot 244608$	$-0 \cdot 295549$	$3 \cdot 041159$	$2 \cdot 920169$	$2 \cdot 863106$	$2 \cdot 826831$
$6 \cdot 00$	$-0 \cdot 257494$	$2 \cdot 918946$	$2 \cdot 880727$	$-0 \cdot 167840$	$-0 \cdot 233334$	$-0 \cdot 269582$	$3 \cdot 038164$	$2 \cdot 935043$	$2 \cdot 889131$	$2 \cdot 860101$
$7 \cdot 00$	$-0 \cdot 241814$	$2 \cdot 923747$	$2 \cdot 8897828$	$-0 \cdot 182722$	$-0 \cdot 222860$	$-0 \cdot 249106$	$3 \cdot 012409$	$2 \cdot 942326$	$2 \cdot 907628$	$2 \cdot 884760$
$8 \cdot 00$	$-0 \cdot 227460$	$2 \cdot 931686$	$2 \cdot 912900$	$-0 \cdot 166101$	$-0 \cdot 212599$	$-0 \cdot 232173$	$2 \cdot 991898$	$2 \cdot 948048$	$2 \cdot 922235$	$2 \cdot 904192$

Table 10. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian) $a = 2.0$

m, ℓ	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	-1.785460	0.755458	0.269594	2.265719	2.228796	2.145371	-2.198594	-2.203814	-2.219083	-2.243433
0.20	1.918380	-1.730064	-2.211459	-0.031905	-0.069805	-0.153550	2.035546	2.030164	2.014487	1.989650
0.30	-1.989097	0.734092	0.257773	2.599574	2.559875	2.475076	-1.424596	-1.430283	-1.446758	-1.472607
0.40	-1.091372	1.714080	1.243881	-2.559841	-2.602159	-2.688746	-0.158951	-0.165078	-0.182658	-0.20907
0.50	-0.678230	2.202734	1.738362	-1.949502	-1.995198	-2.084119	0.556227	0.549562	0.530648	0.501759
0.60	-0.467714	2.481700	2.024205	-1.567593	-1.617360	-1.708950	1.016677	1.009388	0.988976	0.958318
0.70	-0.354779	2.655974	2.204927	-1.305461	-1.359932	-1.454345	1.338732	1.330739	1.308706	1.276224
0.80	-0.293278	2.71874	2.327454	-1.135357	-1.173300	-1.270553	1.577202	1.568426	1.544674	1.510362
0.90	-0.260570	2.852376	2.414890	-0.966193	-1.031797	-1.131809	1.761280	1.751638	1.726088	1.689971
1.00	-0.244634	2.909936	2.479803	-0.848919	-0.920867	-1.023482	1.907954	1.897356	1.869941	1.832070
2.00	-0.290143	3.042438	2.713747	-0.305073	-0.455068	-0.569239	2.576114	2.548722	2.500919	2.450422
3.00	-0.323596	2.980881	2.772186	-0.135076	-0.332741	-0.433999	2.826259	2.761653	2.696980	2.643989
4.00	-0.320540	2.922907	2.804293	-0.116141	-0.290962	-0.369090	2.968097	2.854837	2.784870	2.736694
5.00	-0.304789	2.897449	2.829540	-0.153454	-0.272516	-0.328884	3.029888	2.895092	2.831746	2.791496
6.00	-0.286516	2.893601	2.851360	-0.187526	-0.259726	-0.299853	3.025686	2.911647	2.860768	2.828573
7.00	-0.268937	2.899189	2.870502	-0.203574	-0.247920	-0.276996	2.997192	2.919845	2.881406	2.856047
8.00	-0.252901	2.908147	2.887327	-0.207091	-0.236420	-0.258117	2.974745	2.926303	2.897699	2.877692

a = 3.0

Table 11. Two-centre Coulomb phaseshift $\eta_{m\lambda}$ (radian)

$k \backslash (m, \lambda)$	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	-2.0113114	0.847410	0.056273	2.225048	2.124694	1.952184	-2.396207	-2.408551	-2.443385	-2.496307
0.20	-2.0948118	0.072277	-0.712217	1.585086	1.483163	1.311115	-2.853636	-2.866175	-2.901381	-2.954526
0.30	-1.622079	-1.585358	-2.359792	0.588828	-0.45861	-0.217654	2.062141	2.049224	2.013228	1.959417
0.40	-2.0814810	0.311828	-0.449904	2.080821	1.972132	1.800177	-2.06369	-2.079872	-2.117079	-2.172003
0.50	-1.0898249	1.274888	0.527330	-3.122565	3.046727	2.874155	-0.878184	-0.892456	-0.931251	-0.987660
0.60	-1.387157	1.828182	1.097214	-2.461058	-2.581291	-2.754860	-0.128911	-0.144127	-0.184817	-0.242969
0.70	-1.080531	2.172815	1.458330	-2.016496	-2.144111	-2.318937	0.386682	0.370354	0.327523	0.267468
0.80	-0.887410	2.399864	1.703748	-1.697177	-1.833109	-2.009324	0.763721	0.746116	0.700945	0.638906
0.90	-0.761712	2.555541	1.877672	-1.456095	-1.601175	-1.778796	1.05204	1.032953	0.985281	0.921237
1.00	-0.678098	2.665336	2.006053	-1.266963	-1.421903	-1.600849	1.259366	1.209062	1.143036	
2.00	-0.512355	2.927113	2.460021	-0.431658	-0.695537	-0.873674	2.303633	2.253705	2.174346	2.094249
3.00	-0.511412	2.861840	2.570103	-0.203443	-0.510031	-0.661322	2.682815	2.571677	2.469929	2.389018
4.00	-0.491630	2.794822	2.526954	-0.189736	-0.444645	-0.559657	2.890894	2.708875	2.602499	2.530217
5.00	-0.462560	2.766635	2.668750	-0.243430	-0.414216	-0.497024	2.972001	2.768152	2.673670	2.613731
6.00	-0.432819	2.765145	2.703414	-0.288871	-0.393046	-0.452150	2.960027	2.793303	2.718020	2.670188
7.00	-0.405295	2.775434	2.733156	-0.309401	-0.374101	-0.417078	2.918602	2.806426	2.749627	2.711952
8.00	-0.380604	2.789820	2.758993	-0.312937	-0.356105	-0.388275	2.887494	2.816869	2.774537	2.744778

Table 12. Two-centre Coulomb phaseshift $\eta_{m\lambda}$ (radian) $a = 4.0$

$\kappa \backslash (m, \lambda)$	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	2.168425	-0.866962	-1.853176	0.581513	0.367302	0.091766	2.095600	2.071879	2.008786	1.918676
0.20	-2.350856	0.940218	-0.03931	2.493718	2.277406	2.002985	-2.153596	-2.157595	-2.221051	-2.311139
0.30	-1.588620	1.741670	0.773525	-2.881877	-3.101726	2.908551	-1.095478	-1.119995	-1.184231	-1.274579
0.40	1.353395	-1.564201	-2.518117	0.200641	-0.024241	-0.295601	2.102825	2.077512	2.012052	1.921097
0.50	2.855252	-0.30889	-0.967808	1.857376	1.605967	1.336027	-2.442510	-2.468895	-2.536038	-2.627970
0.60	-2.553045	0.871761	-0.045362	2.840298	2.600991	2.332330	-1.352971	-1.380709	-1.449945	-1.543165
0.70	-2.013395	1.435934	0.539300	-2.781939	-3.030374	2.985291	-0.618061	-0.647430	-0.719114	-0.813847
0.80	-1.656760	1.813823	0.939521	-2.311203	-2.569863	-2.836357	-0.084462	-0.115743	-0.190170	-0.286562
0.90	-1.409476	2.079278	1.228323	-1.956962	-2.226771	-2.492282	0.323288	0.289809	0.212396	0.144271
1.00	-1.237590	2.266538	1.439636	-1.685010	-1.966674	-2.231154	0.641097	0.605122	0.524519	0.424637
2.00	-0.766490	2.765419	2.187136	-0.545887	-0.942908	-1.136172	2.045760	1.964568	1.848396	1.736370
3.00	-0.703684	2.729297	2.367206	-0.272665	-0.685743	-0.885579	2.559595	2.390578	2.249147	2.139737
4.00	-0.675976	2.649086	2.437395	-0.282814	-0.610663	-0.760940	2.810858	2.553718	2.410503	2.314260
5.00	-0.632095	2.622177	2.496528	-0.350206	-0.567853	-0.675974	2.901822	2.630096	2.505056	2.425763
6.00	-0.591125	2.623859	2.543588	-0.404884	-0.538648	-0.616049	2.878668	2.662630	2.563668	2.500516
7.00	-0.554593	2.638336	2.582921	-0.429443	-0.513431	-0.569915	2.824249	2.679628	2.605024	2.555267
8.00	-0.522509	2.657077	2.616467	-0.433618	-0.490128	-0.532539	2.784488	2.692897	2.637199	2.597057

a = 5.0

Table 13. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	-1.068796	2.369960	1.265676	-2.255304	-2.637793	-3.018242	-0.902038	-0.943261	-1.043698	-1.177400
0.20	-2.368211	1.14529	0.06857	2.847977	2.463379	2.084595	-1.965874	-2.007515	-2.108310	-2.241758
0.30	1.092269	-1.688088	-2.77497	0.142838	-0.245270	-0.621519	1.721759	1.679362	1.577804	1.444498
0.40	-1.060155	2.469461	1.396485	-1.894026	-2.287038	-2.660284	-0.213489	-0.257015	-0.359767	-0.493121
0.50	1.104780	-1.625630	-2.681696	0.382987	-0.016370	-0.386366	2.155733	2.110690	2.006259	1.872569
0.60	2.370597	-6.339662	-1.376227	1.757417	1.350450	0.983892	-2.669897	-2.716866	-2.823444	-2.957750
0.70	-5.101062	0.526196	-0.5288860	2.672952	2.257296	1.894268	-1.680416	-1.729723	-1.838859	-1.973998
0.80	-2.557769	1.046401	0.054580	-2.967444	2.890443	2.530976	-0.971819	-1.023887	-1.135946	-1.272093
0.90	-2.181291	1.434462	0.467278	-2.496353	-2.932037	2.995276	-0.442120	-0.497383	-0.612676	-0.749945
1.00	-1.907359	1.717509	0.775994	-2.132962	-2.579503	-2.931708	-0.926421	-0.085326	-0.204106	-0.342547
2.00	-1.073802	2.534549	1.868860	-0.691375	-1.227612	-1.534919	1.776056	1.652191	1.494196	1.348439
3.00	-0.939577	2.545163	2.123339	-0.389527	-0.901099	-1.147459	2.415624	2.176779	1.993609	1.855367
4.00	-0.846202	2.513679	2.262787	-0.368971	-0.762113	-0.945966	2.752087	2.415739	2.235647	2.115698
5.00	-0.779664	2.497997	2.346552	-0.439765	-0.699799	-0.832125	2.851255	2.514304	2.359415	2.261145
6.00	-0.721143	2.510080	2.412158	-0.495079	-0.656273	-0.751304	2.821635	2.559795	2.437911	2.359762
7.00	-0.669919	2.534812	2.466711	-0.516736	-0.619019	-0.688611	2.761134	2.586311	2.494462	2.432873
8.00	-0.625047	2.563470	2.513339	-0.515578	-0.584947	-0.637352	2.719327	2.607906	2.539212	2.490467

Table 14. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

a = 6.0

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	0.982926	-1.727792	-2.907144	0.206482	-0.375876	-0.855100	1.406371	1.338550	1.191732	1.010237
0.20	-2.864601	0.735747	-0.437317	2.741123	2.157332	1.680262	-2.243630	-2.312083	-2.459245	-2.640274
0.30	-2.833252	0.791572	-0.371507	2.870155	2.283926	1.810109	-2.019171	-2.088722	-2.236584	-2.417077
0.40	2.583705	-0.053401	-1.203195	2.099803	1.510144	1.040420	-2.698531	-2.769699	-2.918685	-3.098699
0.50	-0.835286	2.829006	1.695411	-1.225604	-1.819632	-2.284635	0.344930	0.271611	0.121036	-0.058650
0.60	0.871206	-1.732349	-2.847197	0.571727	-0.027514	-0.487341	2.222209	2.146181	1.993555	1.814016
0.70	1.970485	-0.620445	-1.714346	1.758693	1.153524	0.699203	-2.799839	-2.879153	-3.034266	3.069349
0.80	2.718898	0.137835	-0.933241	2.391085	1.979434	1.530857	-1.898803	-1.981995	-2.139988	-2.319742
0.90	-3.033945	0.676029	-0.370641	-3.081188	2.583484	2.140832	-1.224335	-1.312012	-1.473226	-1.653277
1.00	-2.645655	1.069695	0.048743	-2.616593	3.041033	2.604455	-0.706705	-0.793488	-0.958209	-1.138626
2.00	-1.388124	2.282962	1.548369	-0.842837	-1.510163	-1.88710	1.536768	1.356027	1.151809	0.971099
3.00	-1.156746	2.372952	1.900105	-0.496530	-1.095429	-1.385910	2.310081	1.990124	1.763824	1.596697
4.00	-1.042380	2.349105	2.062900	-0.488345	-0.939342	-1.155099	2.671013	2.254116	2.037444	1.894115
5.00	-0.955531	2.344062	2.168528	-0.561699	-0.860323	-1.015814	2.768793	2.370298	2.186406	2.069533
6.00	-0.883186	2.363598	2.248807	-0.619471	-0.806189	-0.918239	2.728691	2.424516	2.280451	2.187615
7.00	-0.821594	2.394597	2.314196	-0.641439	-0.761139	-0.843486	2.659202	2.456229	2.347656	2.274454
8.00	-0.768552	2.428715	2.369269	-0.639044	-0.720846	-0.783041	2.611886	2.481656	2.400294	2.342293

Table 15. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian) $a = 7.0$

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.10	2.212056	-0.399692	-1.629848	1.812180	1.038804	0.470959	2.906299	2.798539	2.597001	2.365485
0.20	2.519027	-0.069031	-1.293292	2.202944	1.429103	0.863796	-2.899951	-3.008625	3.072735	2.841901
0.30	-0.739637	2.975992	1.760985	-0.973256	-1.748041	-2.309668	0.292426	0.182210	-0.020202	-0.250152
0.40	-0.249195	-2.799267	2.281577	-0.402403	-1.178626	-1.735358	0.946506	0.834022	0.630611	0.401614
0.50	-2.927479	0.820569	-0.366482	-3.002240	2.503052	1.952101	-1.572527	-1.687976	-1.892769	-2.120784
0.60	-0.751748	3.008406	1.839164	-0.750750	-1.530704	-2.075252	0.756432	0.637283	0.430684	0.203571
0.70	0.655187	-1.858162	-3.007260	0.729392	-0.052920	-0.590463	2.310904	2.187277	1.978435	1.752105
0.80	1.623432	-0.882591	-2.009661	1.767772	0.982990	0.452872	-2.862975	-2.991852	3.079874	2.854242
0.90	2.320057	-0.180908	-1.284287	2.531241	1.743961	1.221587	-2.031848	-2.166764	-2.381168	-2.606182
1.00	2.832122	0.334187	-0.744069	3.106746	2.317087	1.802770	-1.391586	-1.533355	-1.751005	-1.975466
2.00	-1.726659	1.996410	1.206641	-1.031100	-1.812129	-2.238066	1.307620	1.053583	0.799608	0.583306
3.00	-1.384675	2.184410	1.667543	-0.625072	-1.299286	-1.631315	2.209290	1.799220	1.529067	1.333205
4.00	-1.243983	2.176343	1.858138	-0.620095	-1.122085	-1.368090	2.584601	2.088612	1.835973	1.669670
5.00	-1.134395	2.185813	1.987720	-0.690928	-1.024181	-1.201830	2.678787	2.223171	2.011161	1.876088
6.00	-1.047034	2.214669	2.083743	-0.747675	-0.958196	-1.086673	2.630085	2.286931	2.121438	2.014230
7.00	-0.974433	2.252880	2.160561	-0.768324	-0.904621	-0.999373	2.553756	2.324532	2.199752	2.115166
8.00	-0.912848	2.292975	2.224430	-0.763840	-0.857668	-0.929439	2.502372	2.354286	2.260567	2.193490

a = 8.0

Table 16. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

(m, ℓ)	(0,0)	(0,1)	(1,1)	(0,2)	(1,2)	(2,2)	(0,3)	(1,3)	(2,3)	(3,3)
0.0	2.744007	0.208998	-1.057538	2.660926	1.732664	1.087483	-2.558943	-2.725215	-2.988357	3.012728
0.20	1.266525	-1.247855	-2.508982	1.256086	0.328146	-0.314355	2.396554	2.229054	1.965733	1.684510
0.30	1.135431	-1.361516	-2.613833	1.195567	0.267842	-0.370665	2.413307	2.243732	1.979965	1.699905
0.40	3.026640	0.544655	-0.695727	-3.127546	2.228177	1.595106	-1.832589	-2.005174	-2.269710	-2.548361
0.50	1.141786	-1.327845	-2.553792	1.357114	0.410130	-0.216521	2.708206	2.531733	2.266136	1.989055
0.60	-2.490324	1.333083	0.124164	-2.230808	3.125821	2.506420	-0.784663	-0.965965	-1.233010	-1.508516
0.70	-0.749347	3.081655	1.891985	-0.428339	-1.354333	-1.965665	1.091175	0.904071	0.635205	0.361276
0.80	0.451830	-1.994959	3.119716	0.831597	-0.093640	-0.696345	2.422807	2.228950	1.957937	1.685564
0.90	1.313143	-1.130351	-2.275962	1.748798	0.824535	0.230919	-2.873209	-3.074782	2.934940	2.664084
1.00	1.956301	-0.485839	-1.607143	2.444675	1.521786	0.937671	-2.109119	-2.319374	-2.595539	-2.8644883
2.00	-2.108090	1.658774	0.823965	-1.280386	-2.154998	-2.633974	1.066032	0.721752	0.415627	0.163567
3.00	-1.653442	1.950479	1.395221	-0.805286	-1.543475	-1.914454	2.077637	1.572304	1.258231	1.033969
4.00	-1.430355	2.016418	1.669056	-0.742999	-1.289875	-1.564516	2.510445	1.939223	1.651496	1.462695
5.00	-1.290836	2.048796	1.829521	-0.801070	-1.165997	-1.364832	2.606122	2.098121	1.858959	1.706111
6.00	-1.182359	2.093644	1.947280	-0.849218	-1.081986	-1.226308	2.556258	2.177295	1.991124	1.869875
7.00	-1.093154	2.144940	2.041083	-0.862076	-1.014202	-1.121006	2.480185	2.226464	2.085991	1.990259
8.00	-1.017678	2.196496	2.119076	-0.849729	-0.955175	-1.036300	2.431071	2.160319	2.084295	

a = 9.0

Table 17. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

κ	(m, ℓ)	$(0, 0)$	$(0, 1)$	$(1, 1)$	$(0, 2)$	$(1, 2)$	$(2, 2)$	$(0, 3)$	$(1, 3)$	$(2, 3)$	$(3, 3)$
0.10	2.652758	0.179553	-1.114438	2.825885	1.782691	1.070804	-2.346163	-2.594534	-2.924050	3.027184	
0.20	-0.281073	-2.736285	2.258103	-0.044107	-1.086666	-1.795844	1.136600	0.886684	0.557081	0.226107	
0.30	2.804598	0.364735	-0.915728	3.103406	2.061853	1.356953	-1.928270	-2.180783	-2.510623	-2.840147	
0.40	-0.118221	-2.545246	2.468694	0.240323	-0.799876	-1.499125	1.563361	1.307158	0.976879	0.649160	
0.50	-1.195255	2.671356	1.415960	-0.779200	-1.817706	-2.510114	0.615647	0.354660	0.023687	0.301988	
0.60	1.970157	-0.438236	-1.677393	2.441377	1.404910	0.720360	-2.375239	-2.642117	-2.974058	2.985653	
0.70	-2.232319	1.648492	0.427731	-1.708405	-2.742469	2.864885	-0.170488	-0.444365	-0.777552	-1.098731	
0.80	-0.786953	3.097817	1.897386	-0.212940	-1.244207	-1.910598	1.395742	1.113766	0.779065	0.460235	
0.90	0.259336	-2.137084	2.967721	0.880737	-0.147302	-0.803654	2.559459	2.268299	1.931841	1.615391	
1.00	1.041376	-1.354922	-2.509729	1.707338	0.683010	0.037190	-2.827888	-3.129289	2.815472	2.501420	
2.00	-2.487782	1.316523	0.444215	-1.546487	-2.496066	-3.023581	0.850030	0.400921	0.041474	-0.246033	
3.00	-1.900587	1.734386	1.145336	-0.973980	-1.766179	-2.173509	1.971132	1.370132	1.012690	0.760542	
4.00	-1.641934	1.829258	1.455147	-0.896746	-1.483220	-1.784974	2.405996	1.765103	1.443352	1.232555	
5.00	-1.475341	1.882675	1.643422	-0.942371	-1.336226	-1.555350	2.500243	1.744605	1.679274	1.309062	
6.00	-1.349649	1.940126	1.778931	-0.984351	-1.237996	-1.397639	2.447039	2.035188	1.829060	1.694068	
7.00	-1.248229	2.000364	1.885290	-0.993025	-1.160302	-1.278850	2.368286	2.091642	1.935748	1.829276	
8.00	-1.163500	2.058866	1.972753	-0.977059	-1.093777	-1.184073	2.317711	2.136492	2.019081	1.934268	

Table 18. Two-centre Coulomb phaseshift $\eta_{m\ell}$ (radian)

a = 10.0

(m, ℓ)	(0, 0)	(0, 1)	(1, 1)	(0, 2)	(1, 2)	(2, 2)	(0, 3)	(1, 3)	(2, 3)	(3, 3)
0.10	2.013817	-0.408414	-1.723851	2.393223	1.267018	0.497727	-2.663612	-3.019975	2.864961	2.484736
0.20	-2.097570	1.779431	0.469075	-1.661108	-2.786597	2.730157	-0.371536	-0.729717	-1.127981	-1.507133
0.30	-1.985886	1.904750	0.602135	-1.494489	-2.618412	2.902656	-0.139809	-0.500890	-0.899077	-1.276507
0.40	2.890534	0.509082	-0.782702	-2.848430	2.312618	1.556272	-1.427564	-1.792792	-2.191104	-2.566459
0.50	2.648647	0.276300	-1.002286	-3.039534	2.123917	1.374738	-1.551313	-1.921933	-2.320498	-2.693359
0.60	0.064393	-2.301164	2.718886	0.707587	-0.409152	-1.150202	2.263549	1.886416	1.487485	1.117385
0.70	2.497860	0.137102	-1.108309	-3.096028	2.073762	1.341856	-1.471837	-1.856692	-2.256236	-2.623439
0.80	-2.085781	1.839499	0.613651	-1.352935	-2.462400	3.098840	0.339554	-0.054163	-0.454481	-0.818630
0.90	-0.846519	3.079704	1.875145	-0.072721	-1.177699	-1.889020	1.687935	1.284273	0.883026	0.522030
1.00	0.080620	-2.270791	2.824299	0.892768	-0.207118	-0.907162	2.721454	2.306756	1.904417	1.546658
2.00	-2.885206	0.951615	0.047543	-1.846565	-2.855777	2.955676	0.631254	0.068473	-0.344267	-0.666557
3.00	-2.156309	1.506592	0.887497	-1.160052	-1.997884	-2.439104	1.853855	1.161317	0.761565	0.482167
4.00	-1.858162	1.635668	1.236903	-1.060131	-1.681660	-2.009074	2.290406	1.586347	1.231801	0.999557
5.00	-1.662538	1.712910	1.454775	-1.089160	-1.509523	-1.748074	2.386556	1.787855	1.497361	1.310210
6.00	-1.518609	1.784427	1.608981	-1.122670	-1.395946	-1.570397	2.332905	1.890848	1.665476	1.517051
7.00	-1.404402	1.854403	1.728434	-1.125895	-1.307684	-1.437665	2.253407	1.955289	1.784841	1.667446
8.00	-1.310079	1.920309	1.825690	-1.105609	-1.233257	-1.332533	2.202544	2.005901	1.877078	1.783626

Table 19a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A = 0.4	KAPPA=0.4	F(0,0)	F(0,1)	F(0,2)	F(0,3)	F(1,1)
1.0	5.8839E-01	1.0692E-01	5.9432E-03	2.0654E-04	0.0000E-01		
1.2	5.5833E-01	1.2276E-01	9.4870E-03	5.0337E-04	6.2758E-02		
1.4	5.2792E-01	1.3742E-01	1.3523E-02	9.2923E-04	9.0077E-02		
1.6	4.9727E-01	1.5087E-01	1.8005E-02	1.4997E-03	1.1140E-01		
1.8	4.6652E-01	1.6311E-01	2.2888E-02	2.2286E-03	1.2931E-01		
2.0	4.3578E-01	1.7410E-01	2.8122E-02	3.1279E-03	1.4472E-01		
2.2	4.0516E-01	1.8386E-01	3.3659E-02	4.2073E-03	1.5808E-01		
2.4	3.7478E-01	1.9236E-01	3.9450E-02	5.4749E-03	1.6964E-01		
2.6	3.4474E-01	1.9963E-01	4.5443E-02	6.9365E-03	1.7954E-01		
2.8	3.1513E-01	2.0565E-01	5.1590E-02	8.5961E-03	1.8791E-01		
3.0	2.8605E-01	2.1046E-01	5.7839E-02	1.0455E-02	1.9480E-01		
3.2	2.5759E-01	2.1407E-01	6.4142E-02	1.2514E-02	2.0030E-01		
3.4	2.2983E-01	2.1649E-01	7.0450E-02	1.4770E-02	2.0446E-01		
3.6	2.0285E-01	2.1777E-01	7.6714E-02	1.7220E-02	2.0732E-01		
3.8	1.7671E-01	2.1792E-01	8.2888E-02	1.9856E-02	2.0895E-01		
4.0	1.5150E-01	2.1700E-01	8.8926E-02	2.2671E-02	2.0939E-01		
4.2	1.2726E-01	2.1504E-01	9.4786E-02	2.5656E-02	2.0869E-01		
4.4	1.0406E-01	2.1208E-01	1.0043E-01	2.8798E-02	2.0691E-01		
4.6	8.1941E-02	2.0818E-01	1.0580E-01	3.2086E-02	2.0410E-01		
4.8	6.0949E-02	2.0338E-01	1.1089E-01	3.5503E-02	2.0032E-01		
5.0	4.1120E-02	1.9774E-01	1.1563E-01	3.9034E-02	1.9563E-01		
5.2	2.2486E-02	1.9132E-01	1.2002E-01	4.2663E-02	1.9008E-01		
5.4	5.0725E-03	1.8417E-01	1.2401E-01	4.6370E-02	1.8375E-01		
5.6	-1.1102E-02	1.7636E-01	1.2758E-01	5.0137E-02	1.7668E-01		
5.8	-2.6025E-02	1.6796E-01	1.3071E-01	5.3942E-02	1.6896E-01		
6.0	-3.9688E-02	1.5901E-01	1.3337E-01	5.7766E-02	1.6064E-01		
6.2	-5.2090E-02	1.4959E-01	1.3554E-01	6.1586E-02	1.5178E-01		
6.4	-6.3235E-02	1.3977E-01	1.3723E-01	6.5380E-02	1.4247E-01		
6.6	-7.3134E-02	1.2961E-01	1.3840E-01	6.9128E-02	1.3276E-01		
6.8	-8.1800E-02	1.1917E-01	1.3906E-01	7.2805E-02	1.2271E-01		
7.0	-8.9255E-02	1.0852E-01	1.3920E-01	7.6390E-02	1.1241E-01		
7.2	-9.5522E-02	9.7719E-02	1.3882E-01	7.9861E-02	1.0191E-01		
7.4	-1.0063E-01	8.6839E-02	1.3792E-01	8.3196E-02	9.1276E-02		
7.6	-1.0462E-01	7.5936E-02	1.3650E-01	8.6374E-02	8.0574E-02		
7.8	-1.0752E-01	6.5072E-02	1.3458E-01	8.9374E-02	6.9864E-02		
8.0	-1.0938E-01	5.4304E-02	1.3216E-01	9.2177E-02	5.9207E-02		
8.2	-1.1024E-01	4.3689E-02	1.2926E-01	9.4763E-02	4.8661E-02		
8.4	-1.1015E-01	3.3279E-02	1.2590E-01	9.7115E-02	3.8281E-02		
8.6	-1.0916E-01	2.3125E-02	1.2209E-01	9.9216E-02	2.8119E-02		
8.8	-1.0733E-01	1.3276E-02	1.1785E-01	1.0105E-01	1.8227E-02		
9.0	-1.0471E-01	3.7769E-03	1.1321E-01	1.0260E-01	8.6504E-03		
9.2	-1.0136E-01	-5.3310E-03	1.0820E-01	1.0387E-01	-5.6592E-04		
9.4	-9.7343E-02	-1.4009E-02	1.0284E-01	1.0482E-01	-9.3814E-03		
9.6	-9.2716E-02	-2.2222E-02	9.7160E-02	1.0547E-01	-1.7759E-02		
9.8	-8.7542E-02	-2.9939E-02	9.1194E-02	1.0579E-01	-2.5665E-02		
10.0	-8.1884E-02	-3.7133E-02	8.4972E-02	1.0578E-01	-3.3068E-02		
10.2	-7.5803E-02	-4.3778E-02	7.8529E-02	1.0545E-01	-3.9944E-02		
10.4	-6.9361E-02	-4.9854E-02	7.1898E-02	1.0478E-01	-4.6268E-02		
10.6	-6.2622E-02	-5.5346E-02	6.5116E-02	1.0377E-01	-5.2023E-02		
10.8	-5.5646E-02	-6.0241E-02	5.8217E-02	1.0244E-01	-5.7194E-02		
11.0	-4.8492E-02	-6.4529E-02	5.1236E-02	1.0077E-01	-6.1768E-02		
11.2	-4.1220E-02	-6.8205E-02	4.4211E-02	9.8776E-02	-6.5738E-02		
11.4	-3.3886E-02	-7.1268E-02	3.7177E-02	9.6465E-02	-6.9101E-02		
11.6	-2.6546E-02	-7.3720E-02	3.0169E-02	9.3845E-02	-7.1857E-02		
11.8	-1.9253E-02	-7.5566E-02	2.3222E-02	9.0925E-02	-7.4008E-02		
12.0	-1.2057E-02	-7.6815E-02	1.6371E-02	8.7717E-02	-7.5562E-02		
12.2	-5.0062E-03	-7.7479E-02	9.6471E-03	8.4236E-02	-7.6529E-02		
12.4	1.8536E-03	-7.7573E-02	3.0840E-03	8.0495E-02	-7.6921E-02		
12.6	8.4802E-03	-7.7115E-02	-3.2880E-03	7.6511E-02	-7.6756E-02		
12.8	1.4834E-02	-7.6127E-02	-9.4397E-03	7.2302E-02	-7.6052E-02		
13.0	2.0879E-02	-7.4631E-02	-1.5343E-02	6.7887E-02	-7.4832E-02		
13.2	2.6583E-02	-7.2654E-02	-2.0973E-02	6.3286E-02	-7.3119E-02		
13.4	3.1915E-02	-7.0223E-02	-2.6304E-02	5.8520E-02	-7.0940E-02		
13.6	3.6850E-02	-6.7369E-02	-3.1316E-02	5.3611E-02	-6.8325E-02		
13.8	4.1365E-02	-6.4122E-02	-3.5987E-02	4.8581E-02	-6.5302E-02		
14.0	4.5441E-02	-6.0517E-02	-4.0300E-02	4.3454E-02	-6.1906E-02		
14.2	4.9063E-02	-5.6587E-02	-4.4239E-02	3.8254E-02	-5.8168E-02		
14.4	5.2219E-02	-5.2369E-02	-4.7792E-02	3.3005E-02	-5.4125E-02		
14.6	5.4900E-02	-4.7898E-02	-5.0947E-02	2.7731E-02	-4.9811E-02		
14.8	5.7101E-02	-4.3211E-02	-5.3695E-02	2.2456E-02	-4.5264E-02		
15.0	5.8820E-02	-3.8346E-02	-5.6031E-02	1.7206E-02	-4.0519E-02		
15.2	6.0060E-02	-3.3341E-02	-5.7951E-02	1.2003E-02	-3.5615E-02		
15.4	6.0824E-02	-2.8231E-02	-5.9453E-02	6.8730E-03	-3.0588E-02		
15.6	6.1121E-02	-2.3055E-02	-6.0539E-02	1.8380E-03	-2.5476E-02		
15.8	6.0961E-02	-1.7849E-02	-6.1212E-02	-3.0790E-03	-2.0314E-02		
16.0	6.0358E-02	-1.2649E-02	-6.1477E-02	-7.8558E-03	-1.5140E-02		
16.2	5.9328E-02	-7.4882E-03	-6.1344E-02	-1.2471E-02	-9.9873E-03		
16.4	5.7890E-02	-2.4017E-03	-6.0820E-02	-1.6905E-02	-4.8909E-03		
16.6	5.6063E-02	2.5786E-03	-5.9919E-02	-2.1138E-02	1.1657E-04		
16.8	5.3871E-02	7.4218E-03	-5.8655E-02	-2.5153E-02	5.0036E-03		
17.0	5.1339E-02	1.2099E-02	-5.7044E-02	-2.8932E-02	9.7401E-03		
17.2	4.8493E-02	1.6582E-02	-5.5102E-02	-3.2460E-02	1.4298E-02		
17.4	4.5361E-02	2.0846E-02	-5.2850E-02	-3.5723E-02	1.8651E-02		
17.6	4.1971E-02	2.4867E-02	-5.0308E-02	-3.8710E-02	2.2774E-02		
17.8	3.8353E-02	2.8625E-02	-4.7498E-02	-4.1408E-02	2.6645E-02		
18.0	3.4539E-02	3.2098E-02	-4.4442E-02	-4.3809E-02	3.0244E-02		
18.2	3.0560E-02	3.5272E-02	-4.1167E-02	-4.5906E-02	3.3552E-02		
18.4	2.6447E-02	3.8130E-02	-3.7695E-02	-4.7692E-02	3.6555E-02		
18.6	2.2233E-02	4.0662E-02	-3.4054E-02	-4.9163E-02	3.9238E-02		
18.8	1.7948E-02	4.2856E-02	-3.0268E-02	-5.0316E-02	4.1590E-02		
19.0	1.3625E-02	4.4706E-02	-2.6366E-02	-5.1152E-02	4.3603E-02		
19.2	9.2943E-03	4.6207E-02	-2.2374E-02	-5.1671E-02	4.5270E-02		
19.4	4.9866E-03	4.7355E-02	-1.8318E-02	-5.1875E-02	4.6589E-02		
19.6	7.3130E-04	4.8151E-02	-1.4225E-02	-5.1770E-02	4.7556E-02		
19.8	-3.4430E-03	4.8597E-02	-1.0123E-02	-5.1361E-02	4.8173E-02		
20.0	-7.5090E-03	4.8697E-02	-6.0368E-03	-5.0655E-02	4.8444E-02		

Table 19b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A = 0.4	KAPPA=0.4
F(1+2)	F(1+3)	F(2+2)
1.0	0.0000E-01	0.0000E-01
1.2	6.6608E-03	4.0739E-04
1.4	1.1212E-02	8.3749E-04
1.6	1.5955E-02	1.4048E-03
1.8	2.1000E-02	2.1283E-03
2.0	2.6351E-02	3.0212E-03
2.2	3.1978E-02	4.0941E-03
2.4	3.7844E-02	5.3551E-03
2.6	4.3904E-02	6.8104E-03
2.8	5.0111E-02	8.4638E-03
3.0	5.6417E-02	1.0317E-02
3.2	6.2775E-02	1.2371E-02
3.4	6.9137E-02	1.4622E-02
3.6	7.5454E-02	1.7067E-02
3.8	8.1682E-02	1.9699E-02
4.0	8.7774E-02	2.2511E-02
4.2	9.3687E-02	2.5493E-02
4.4	9.9381E-02	2.8633E-02
4.6	1.0481E-01	3.1918E-02
4.8	1.0995E-01	3.5334E-02
5.0	1.1476E-01	3.8865E-02
5.2	1.1920E-01	4.2493E-02
5.4	1.2324E-01	4.6201E-02
5.6	1.2687E-01	4.9968E-02
5.8	1.3005E-01	5.3775E-02
6.0	1.3276E-01	5.7601E-02
6.2	1.3500E-01	6.1423E-02
6.4	1.3673E-01	6.5221E-02
6.6	1.3796E-01	6.8972E-02
6.8	1.3867E-01	7.2653E-02
7.0	1.3887E-01	7.6242E-02
7.2	1.3854E-01	7.9718E-02
7.4	1.3768E-01	8.3058E-02
7.6	1.3632E-01	8.6242E-02
7.8	1.3444E-01	8.9246E-02
8.0	1.3207E-01	9.2057E-02
8.2	1.2921E-01	9.4650E-02
8.4	1.2589E-01	9.7008E-02
8.6	1.2212E-01	9.9116E-02
8.8	1.1792E-01	1.0096E-01
9.0	1.1332E-01	1.0252E-01
9.2	1.0834E-01	1.0379E-01
9.4	1.0300E-01	1.0475E-01
9.6	9.7354E-02	1.0540E-01
9.8	9.1413E-02	1.0573E-01
10.0	8.5215E-02	1.0574E-01
10.2	7.8793E-02	1.0541E-01
10.4	7.2180E-02	1.0475E-01
10.6	6.5414E-02	1.0375E-01
10.8	5.8528E-02	1.0242E-01
11.0	5.1559E-02	1.0076E-01
11.2	4.4543E-02	9.8773E-02
11.4	3.7515E-02	9.6469E-02
11.6	3.0511E-02	9.3855E-02
11.8	2.3566E-02	9.0942E-02
12.0	1.6714E-02	8.7740E-02
12.2	9.9882E-03	8.4265E-02
12.4	3.4207E-03	8.0529E-02
12.6	-2.9576E-03	7.6550E-02
12.8	-9.1174E-03	7.2346E-02
13.0	-1.5031E-02	6.7936E-02
13.2	-2.0672E-02	6.3339E-02
13.4	-2.6016E-02	5.8576E-02
13.6	-3.1042E-02	5.3670E-02
13.8	-3.5728E-02	4.8643E-02
14.0	-4.0058E-02	4.3519E-02
14.2	-4.4014E-02	3.8321E-02
14.4	-4.7585E-02	3.3073E-02
14.6	-5.0759E-02	2.7800E-02
14.8	-5.3527E-02	2.2526E-02
15.0	-5.5883E-02	1.7276E-02
15.2	-5.7823E-02	1.2073E-02
15.4	-5.9346E-02	6.9426E-03
15.6	-6.0452E-02	1.9067E-03
15.8	-6.1146E-02	-3.0113E-03
16.0	-6.1431E-02	-7.7896E-03
16.2	-6.1317E-02	-1.2407E-02
16.4	-6.0813E-02	-1.6843E-02
16.6	-5.9931E-02	-2.1078E-02
16.8	-5.8685E-02	-2.5095E-02
17.0	-5.7091E-02	-2.8877E-02
17.2	-5.5167E-02	-3.2409E-02
17.4	-5.2930E-02	-3.5675E-02
17.6	-5.0403E-02	-3.8665E-02
17.8	-4.7607E-02	-4.1367E-02
18.0	-4.4564E-02	-4.3772E-02
18.2	-4.1300E-02	-4.5873E-02
18.4	-3.7839E-02	-4.7662E-02
18.6	-3.4207E-02	-4.9137E-02
18.8	-3.0430E-02	-5.0295E-02
19.0	-2.6534E-02	-5.1135E-02
19.2	-2.2547E-02	-5.1658E-02
19.4	-1.8495E-02	-5.1866E-02
19.6	-1.4406E-02	-5.1765E-02
19.8	-1.0305E-02	-5.1360E-02
20.0	-6.2194E-03	-5.0658E-02
F(2+3)	F(2+3)	F(3+3)
0.0000E-01	0.0000E-01	0.0000E-01
2.5838E-04	1.4111E-04	4.4812E-04
6.4681E-04	1.810E-03	9.1406E-04
7.6844E-03	1.7196E-02	1.5475E-03
1.2235E-02	2.2518E-02	2.3582E-03
1.8749E-03	2.8154E-02	3.3550E-03
2.7404E-03	3.7877E-03	4.5454E-03
5.0247E-03	5.0247E-03	4.5454E-03
6.4575E-03	6.4575E-03	5.9350E-03
8.0900E-03	8.0900E-03	7.5276E-03
9.9241E-03	9.9241E-03	9.3249E-03
1.1960E-02	1.1960E-02	1.1327E-02
1.4195E-02	1.4195E-02	1.3531E-02
1.6625E-02	1.6625E-02	1.5933E-02
1.9244E-02	1.9244E-02	1.8528E-02
2.2044E-02	2.2044E-02	2.1307E-02
2.5016E-02	2.5016E-02	2.4260E-02
2.8148E-02	2.8148E-02	2.7377E-02
3.1427E-02	3.1427E-02	3.0643E-02
3.4839E-02	3.4839E-02	3.4045E-02
3.8367E-02	3.8367E-02	3.7566E-02
4.1994E-02	4.1994E-02	4.1190E-02
4.5702E-02	4.5702E-02	4.4897E-02
4.9471E-02	4.9471E-02	4.8669E-02
5.3282E-02	5.3282E-02	5.2485E-02
5.7113E-02	5.7113E-02	5.6923E-02
6.0943E-02	6.0943E-02	6.0163E-02
6.4749E-02	6.4749E-02	6.3983E-02
6.8510E-02	6.8510E-02	6.7759E-02
7.2202E-02	7.2202E-02	7.1469E-02
7.5805E-02	7.5805E-02	7.5092E-02
7.9295E-02	7.9295E-02	7.8604E-02
8.2650E-02	8.2650E-02	8.1984E-02
8.5850E-02	8.5850E-02	8.5210E-02
8.8873E-02	8.8873E-02	8.8261E-02
9.1701E-02	9.1701E-02	9.1118E-02
9.4313E-02	9.4313E-02	9.3762E-02
9.6692E-02	9.6692E-02	9.6173E-02
9.8820E-02	9.8820E-02	9.8335E-02
1.0068E-01	1.0068E-01	1.0023E-01
1.0227E-01	1.0227E-01	1.0185E-01
1.0356E-01	1.0356E-01	1.0318E-01
1.0454E-01	1.0454E-01	1.0420E-01
1.0522E-01	1.0522E-01	1.0491E-01
1.0557E-01	1.0557E-01	1.0530E-01
1.0560E-01	1.0560E-01	1.0537E-01
1.0529E-01	1.0529E-01	1.0510E-01
1.0465E-01	1.0465E-01	1.0449E-01
1.0368E-01	1.0368E-01	1.0356E-01
1.0237E-01	1.0237E-01	1.0228E-01
1.0073E-01	1.0073E-01	1.0068E-01
9.8765E-02	9.8765E-02	9.8750E-02
9.6482E-02	9.6482E-02	9.6500E-02
9.3887E-02	9.3887E-02	9.3938E-02
9.0993E-02	9.0993E-02	9.1074E-02
8.7809E-02	8.7809E-02	8.7920E-02
8.4350E-02	8.4350E-02	8.4489E-02
8.0631E-02	8.0631E-02	8.0796E-02
7.6667E-02	7.6667E-02	7.6857E-02
7.2477E-02	7.2477E-02	7.2690E-02
6.8079E-02	6.8079E-02	6.8314E-02
6.3494E-02	6.3494E-02	6.3748E-02
5.8742E-02	5.8742E-02	5.9013E-02
5.3846E-02	5.3846E-02	5.4132E-02
4.8827E-02	4.8827E-02	4.9127E-02
4.3710E-02	4.3710E-02	4.4022E-02
3.8517E-02	3.8517E-02	3.8839E-02
3.3274E-02	3.3274E-02	3.3604E-02
2.8005E-02	2.8005E-02	2.8340E-02
2.2733E-02	2.2733E-02	2.3072E-02
1.7484E-02	1.7484E-02	1.7825E-02
1.2281E-02	1.2281E-02	1.2622E-02
7.1494E-03	7.1494E-03	7.4882E-03
2.1113E-03	2.1113E-03	2.4464E-03
-2.8102E-03	-2.8102E-03	-2.4804E-03
-7.5928E-03	-7.5928E-03	-7.2701E-03
-1.2215E-02	-1.2215E-02	-1.1901E-02
-1.6657E-02	-1.6657E-02	-1.6353E-02
-2.0900E-02	-2.0900E-02	-2.0608E-02
-2.4925E-02	-2.4925E-02	-2.4645E-02
-2.8715E-02	-2.8715E-02	-2.8450E-02
-3.2256E-02	-3.2256E-02	-3.2005E-02
-3.5533E-02	-3.5533E-02	-3.5298E-02
-3.8533E-02	-3.8533E-02	-3.8315E-02
-4.1246E-02	-4.1246E-02	-4.1046E-02
-4.3662E-02	-4.3662E-02	-4.3481E-02
-4.5774E-02	-4.5774E-02	-4.5611E-02
-4.7576E-02	-4.7576E-02	-4.7432E-02
-4.9063E-02	-4.9063E-02	-4.8939E-02
-5.0232E-02	-5.0232E-02	-5.0128E-02
-5.1084E-02	-5.1084E-02	-5.1000E-02
-5.1619E-02	-5.1619E-02	-5.1555E-02
-5.1898E-02	-5.1898E-02	-5.1795E-02
-5.1750E-02	-5.1750E-02	-5.1725E-02
-5.1357E-02	-5.1357E-02	-5.1351E-02
-5.0666E-02	-5.0666E-02	-5.0679E-02

Table 20a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A= 0.4	KAPPA=0.4
1.2	G(0.0) 7.1542E-01	G(0.1) 2.0764E 00
1.4	4.6090E-01	1.3239E 00
1.6	3.1146E-01	9.7695E-01
1.8	2.0663E-01	7.7209E-01
2.0	1.2714E-01	6.3475E-01
2.2	6.4313E-02	5.3486E-01
2.4	1.3447E-02	4.5782E-01
2.6	-2.8286E-02	3.9569E-01
2.8	-6.2735E-02	3.4381E-01
3.0	-9.1185E-02	2.9929E-01
3.2	-1.1457E-01	2.6023E-01
3.4	-1.3360E-01	2.2537E-01
3.6	-1.4882E-01	1.9385E-01
3.8	-1.6070E-01	1.6504E-01
4.0	-1.6959E-01	1.3851E-01
4.2	-1.7582E-01	1.1394E-01
4.4	-1.7967E-01	9.1110E-02
4.6	-1.8137E-01	6.9847E-02
4.8	-1.8114E-01	5.0025E-02
5.0	-1.7918E-01	3.1554E-02
5.2	-1.7568E-01	1.4364E-02
5.4	-1.7080E-01	-1.5971E-03
5.6	-1.6470E-01	-1.6368E-02
5.8	-1.5752E-01	-2.9981E-02
6.0	-1.4941E-01	-4.2460E-02
6.2	-1.4051E-01	-5.3828E-02
6.4	-1.3092E-01	-6.4103E-02
6.6	-1.2079E-01	-7.3304E-02
6.8	-1.1021E-01	-8.1450E-02
7.0	-9.9295E-02	-8.8560E-02
7.2	-8.8150E-02	-9.4654E-02
7.4	-7.6869E-02	-9.9755E-02
7.6	-6.5544E-02	-1.0389E-01
7.8	-5.4259E-02	-1.0708E-01
8.0	-4.3096E-02	-1.0936E-01
8.2	-3.2128E-02	-1.1076E-01
8.4	-2.1426E-02	-1.1131E-01
8.6	-1.1053E-02	-1.1105E-01
8.8	-1.0676E-03	-1.1002E-01
9.0	8.4770E-03	-1.0826E-01
9.2	1.7533E-02	-1.0582E-01
9.4	2.6059E-02	-1.0273E-01
9.6	3.4017E-02	-9.9038E-02
9.8	4.1376E-02	-9.4801E-02
10.0	4.8110E-02	-9.0063E-02
10.2	5.4197E-02	-8.4875E-02
10.4	5.9622E-02	-7.9287E-02
10.6	6.4373E-02	-7.3350E-02
10.8	6.8444E-02	-6.7114E-02
11.0	7.1834E-02	-6.0632E-02
11.2	7.4544E-02	-5.3953E-02
11.4	7.6582E-02	-4.7128E-02
11.6	7.7959E-02	-4.0206E-02
11.8	7.8690E-02	-3.3236E-02
12.0	7.8794E-02	-2.6265E-02
12.2	7.8292E-02	-1.9337E-02
12.4	7.7210E-02	-1.2498E-02
12.6	7.5576E-02	-5.7894E-03
12.8	7.3421E-02	7.4956E-04
13.0	7.0777E-02	7.0808E-03
13.2	6.7650E-02	3.1369E-02
13.4	6.4167E-02	1.8982E-02
13.6	6.0276E-02	2.4488E-02
13.8	5.6047E-02	2.9662E-02
14.0	5.1520E-02	3.4477E-02
14.2	4.6737E-02	3.8914E-02
14.4	4.1740E-02	4.2952E-02
14.6	3.6570E-02	4.6578E-02
14.8	3.1270E-02	4.9777E-02
15.0	2.5880E-02	5.2540E-02
15.2	2.0441E-02	5.4861E-02
15.4	1.4994E-02	5.6736E-02
15.6	9.5760E-03	5.8165E-02
15.8	4.2257E-03	5.9149E-02
16.0	-1.0213E-03	5.9694E-02
16.2	-6.1309E-03	5.9807E-02
16.4	-1.1070E-02	5.9498E-02
16.6	-1.5810E-02	5.8780E-02
16.8	-2.0321E-02	5.7669E-02
17.0	-2.4577E-02	5.6180E-02
17.2	-2.8555E-02	5.4333E-02
17.4	-3.2235E-02	5.2149E-02
17.6	-3.5597E-02	4.9651E-02
17.8	-3.8625E-02	4.6863E-02
18.0	-4.1307E-02	4.3810E-02
18.2	-4.3631E-02	4.0520E-02
18.4	-4.5590E-02	3.7018E-02
18.6	-4.7178E-02	3.3335E-02
18.8	-4.8394E-02	2.9498E-02
19.0	-4.9235E-02	2.5537E-02
19.2	-4.9706E-02	2.1481E-02
19.4	-4.9811E-02	1.7359E-02
19.6	-4.9557E-02	1.3202E-02
19.8	-4.8954E-02	9.0368E-03
20.0	-4.8013E-02	4.8926E-03
		G(0.0) 2.0764E 00
		1.4162E 01
		1.8141E 02
		2.3674E 00
		6.5969E 01
		1.4122E 00
		1.0167E 00
		7.9472E-01
		6.5035E-01
		5.4737E-01
		4.6897E-01
		4.0628E-01
		3.5424E-01
		2.8590E 00
		2.208 E 00
		3.0971E-01
		2.7071E-01
		2.3592E-01
		2.0444E-01
		1.7564E-01
		1.4907E-01
		1.2441E-01
		1.0144E-01
		7.9985E-02
		5.9929E-02
		4.1180E-02
		2.3673E-02
		7.3392E-03
		-7.7970E-03
		-2.1823E-02
		-3.4741E-02
		-4.6568E-02
		-5.7320E-02
		-6.7013E-02
		-7.5661E-02
		-8.3282E-02
		-8.9891E-02
		-9.5509E-02
		-1.0016E-01
		-1.0386E-01
		-1.0665E-01
		-1.0854E-01
		-1.0958E-01
		-1.0979E-01
		-1.0922E-01
		-1.0789E-01
		-1.0586E-01
		-1.0317E-01
		-1.0275E-01
		-1.0275E-01
		-1.0257E-01
		-1.0235E-01
		-1.0213E-01
		-1.0189E-01
		-1.0155E-01
		-1.0122E-01
		-1.0086E-01
		-1.0053E-01
		-1.0021E-01
		-1.0006E-01
		-8.6673E-02
		-8.1559E-02
		-7.5670E-02
		-6.9655E-02
		-6.3366E-02
		-5.6854E-02
		-5.0167E-02
		-4.3357E-02
		-3.6472E-02
		-2.9698E-02
		-2.2664E-02
		-1.5832E-02
		-9.1068E-03
		-2.5283E-03
		3.8644E-03
		1.0035E-02
		1.5949E-02
		2.1576E-02
		2.6886E-02
		3.1854E-02
		3.6456E-02
		4.0673E-02
		4.4487E-02
		4.7884E-02
		5.0853E-02
		5.4211E-02
		5.3385E-02
		5.5476E-02
		5.7123E-02
		5.8327E-02
		5.9091E-02
		5.9421E-02
		5.9327E-02
		5.8819E-02
		5.7911E-02
		5.6619E-02
		5.4961E-02
		5.2958E-02
		5.0629E-02
		4.3603E-02
		4.7999E-02
		4.5093E-02
		4.1937E-02
		3.8556E-02
		3.4980E-02
		3.1237E-02
		2.7355E-02
		2.3364E-02
		1.9293E-02
		1.5171E-02
		1.1027E-02
		6.8892E-03

Table 20b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

	A= 0.4	KAPPA=0.4			
1.2	G(1,2)	G(1,3)	G(2,2)	G(2,3)	G(3,3)
1.4	1.5802E 01	1.9764E 02	2.1598E 01	2.5344E 02	6.7908E 01
1.6	7.1359E 00	6.9142E 01	8.4944E 00	7.9403E 01	3.2710E 01
1.8	4.1619E 00	3.3165E 01	4.6686E 00	3.6373E 01	1.9071E 01
2.0	2.7486E 00	1.8587E 01	2.9825E 00	1.9875E 01	1.2214E 01
2.2	1.4779E 00	7.5958E 00	1.5478E 00	7.9093E 00	5.9078E 00
2.4	1.1599E 00	5.2912E 00	1.2023E 00	5.4672E 00	4.3475E 00
2.6	9.3977E-01	3.8394E 00	9.6681E-01	3.9442E 00	3.2912E 00
2.8	7.8116E-01	2.8805E 00	7.9906E-01	2.9460E 00	2.5522E 00
3.0	6.6296E-01	2.2225E 00	6.7522E-01	2.2650E 00	2.0209E 00
3.2	5.7232E-01	1.7565E 00	5.8099E-01	1.7850E 00	1.6301E 00
3.4	5.0104E-01	1.4175E 00	5.0737E-01	1.4371E 00	1.3369E 00
3.6	4.4370E-01	1.1652E 00	4.4847E-01	1.1790E 00	1.1130E 00
3.8	3.9658E-01	9.7353E-01	4.0031E-01	9.8345E-01	9.3936E-01
4.0	3.5712E-01	8.2539E-01	3.6014E-01	8.3264E-01	8.0280E-01
4.2	3.2344E-01	7.0904E-01	3.2598E-01	7.1443E-01	6.9400E-01
4.4	2.9422E-01	6.1633E-01	2.9644E-01	6.2038E-01	6.0627E-01
4.6	2.6845E-01	5.4146E-01	2.7046E-01	5.4456E-01	5.3474E-01
4.8	2.4539E-01	4.8026E-01	2.4726E-01	4.8265E-01	4.7578E-01
5.0	2.2447E-01	4.2962E-01	2.2626E-01	4.3150E-01	4.2667E-01
5.2	2.0527E-01	3.8727E-01	2.0701E-01	3.8875E-01	3.8537E-01
5.4	1.8746E-01	3.5144E-01	1.8917E-01	3.5263E-01	3.5027E-01
5.6	1.7078E-01	3.2081E-01	1.7248E-01	3.2178E-01	3.2015E-01
5.8	1.5503E-01	2.9434E-01	1.5673E-01	2.9514E-01	2.9405E-01
6.0	1.4008E-01	2.7123E-01	1.4179E-01	2.7191E-01	2.7120E-01
6.2	1.2579E-01	2.5083E-01	1.2751E-01	2.5142E-01	2.5099E-01
6.4	1.1210E-01	2.3265E-01	1.1382E-01	2.3316E-01	2.3295E-01
6.6	9.8927E-02	2.1627E-01	1.0066E-01	2.1673E-01	2.1668E-01
6.8	8.6230E-02	2.0137E-01	8.7962E-02	2.0179E-01	2.0187E-01
7.0	7.3977E-02	1.8769E-01	7.5706E-02	1.8808E-01	1.8825E-01
7.2	6.2147E-02	1.7500E-01	6.3868E-02	1.7537E-01	1.7562E-01
7.4	5.0726E-02	1.6313E-01	5.2434E-02	1.6349E-01	1.6380E-01
7.6	3.9712E-02	1.5195E-01	4.1400E-02	1.5230E-01	1.5265E-01
7.8	2.9103E-02	1.4133E-01	3.0766E-02	1.4167E-01	1.4207E-01
8.0	1.8905E-02	1.3118E-01	2.0538E-02	1.3152E-01	1.3195E-01
8.2	9.1269E-03	1.2143E-01	1.0722E-02	1.2176E-01	1.2222E-01
8.4	-2.2146E-04	1.1200E-01	1.3312E-03	1.1234E-01	1.1282E-01
8.6	-9.1277E-03	1.0286E-01	-7.6232E-03	1.0320E-01	1.0370E-01
8.8	-1.7579E-02	9.3971E-02	-1.6127E-02	9.4311E-02	9.4828E-02
9.0	-2.5561E-02	8.5295E-02	-2.4168E-02	8.5637E-02	8.6167E-02
9.2	-3.3060E-02	7.6815E-02	-3.1730E-02	7.7158E-02	7.699E-02
9.4	-4.0065E-02	6.8515E-02	-3.8801E-02	6.8860E-02	6.9410E-02
9.6	-4.6562E-02	6.0387E-02	-4.5369E-02	6.0733E-02	6.1289E-02
9.8	-5.2941E-02	5.2426E-02	-5.1212E-02	5.2773E-02	5.3331E-02
10.0	-5.7992E-02	4.4631E-02	-5.6949E-02	4.4977E-02	4.5538E-02
10.2	-6.2908E-02	3.7006E-02	-6.1943E-02	3.7350E-02	3.7910E-02
10.4	-6.7282E-02	2.9554E-02	-6.6398E-02	2.9897E-02	3.0454E-02
10.6	-7.1111E-02	2.2286E-02	-7.0309E-02	2.2624E-02	2.3177E-02
10.8	-7.4392E-02	1.5209E-02	-7.3674E-02	1.5543E-02	1.6090E-02
11.0	-7.7126E-02	8.3362E-03	-7.6492E-02	8.6648E-03	9.2026E-03
11.2	-7.9315E-02	6.1678E-03	-7.8765E-02	2.0008E-03	2.5284E-03
11.4	-8.0965E-02	-4.7495E-03	-8.0498E-02	-4.4352E-03	-3.9198E-03
11.6	-8.2082E-02	-1.0935E-02	-8.1698E-02	-1.0630E-02	-1.0128E-02
11.8	-8.2675E-02	-1.6864E-02	-8.2373E-02	-1.6568E-02	-1.6082E-02
12.0	-8.2756E-02	-2.2523E-02	-8.2535E-02	-2.2237E-02	-2.1768E-02
12.2	-8.2340E-02	-2.7897E-02	-8.2197E-02	-2.7623E-02	-2.7172E-02
12.4	-8.1642E-02	-3.2973E-02	-8.1375E-02	-3.2711E-02	-3.2280E-02
12.6	-8.0079E-02	-3.7738E-02	-8.0086E-02	-3.7489E-02	-3.7080E-02
12.8	-7.8273E-02	-4.2181E-02	-7.8351E-02	-4.1946E-02	-4.1559E-02
13.0	-7.6045E-02	-4.6289E-02	-7.6190E-02	-4.6069E-02	-4.5705E-02
13.2	-7.3419E-02	-5.0054E-02	-7.3628E-02	-4.9848E-02	-4.9510E-02
13.4	-7.0419E-02	-5.3466E-02	-7.0689E-02	-5.3275E-02	-5.2962E-02
13.6	-6.7073E-02	-5.6517E-02	-6.7399E-02	-5.6343E-02	-5.6055E-02
13.8	-6.3409E-02	-5.9202E-02	-6.3787E-02	-5.9043E-02	-5.8782E-02
14.0	-5.9455E-02	-6.1515E-02	-5.9881E-02	-6.1373E-02	-6.1139E-02
14.2	-5.5242E-02	-6.3453E-02	-5.5712E-02	-6.3327E-02	-6.3120E-02
14.4	-5.0800E-02	-6.5014E-02	-5.1310E-02	-6.4905E-02	-6.4726E-02
14.6	-4.6162E-02	-6.6199E-02	-4.6707E-02	-6.6107E-02	-6.5955E-02
14.8	-4.1360E-02	-6.7009E-02	-4.1934E-02	-6.6933E-02	-6.6808E-02
15.0	-3.6425E-02	-6.7446E-02	-3.7024E-02	-6.7388E-02	-6.7290E-02
15.2	-3.1389E-02	-6.7517E-02	-3.2010E-02	-6.7475E-02	-6.7404E-02
15.4	-2.6287E-02	-6.7228E-02	-2.6923E-02	-6.7201E-02	-6.7156E-02
15.6	-2.1148E-02	-6.6586E-02	-2.1796E-02	-6.6575E-02	-6.6555E-02
15.8	-1.6005E-02	-6.5601E-02	-1.6660E-02	-6.5605E-02	-6.5611E-02
16.0	-1.0890E-02	-6.4285E-02	-1.1547E-02	-6.4304E-02	-6.4334E-02
16.2	-5.8314E-03	-6.2650E-02	-6.4868E-03	-6.2683E-02	-6.2736E-02
16.4	-8.5945E-04	-6.0711E-02	-5.1088E-03	-6.0758E-02	-6.0833E-02
16.6	3.9977E-03	-5.8484E-02	3.3584E-03	-5.8543E-02	-5.8639E-02
16.8	8.7132E-03	-5.5984E-02	8.0878E-03	-5.6055E-02	-5.6171E-02
17.0	1.3261E-02	-5.3230E-02	1.2653E-02	-5.3313E-02	-5.3447E-02
17.2	1.7618E-02	-5.0241E-02	1.7031E-02	-5.0335E-02	-5.0487E-02
17.4	2.1760E-02	-4.7038E-02	2.1197E-02	-4.7141E-02	-4.7309E-02
17.6	2.5667E-02	-4.3641E-02	2.5132E-02	-4.3752E-02	-4.3935E-02
17.8	2.9320E-02	-4.0071E-02	2.8815E-02	-4.0191E-02	-4.0386E-02
18.0	3.2702E-02	-3.6352E-02	3.2229E-02	-3.6479E-02	-3.6685E-02
18.2	3.5797E-02	-3.2506E-02	3.3359E-02	-3.2638E-02	-3.2855E-02
18.4	3.8592E-02	-2.8556E-02	3.8191E-02	-2.8694E-02	-2.8919E-02
18.6	4.1077E-02	-2.4526E-02	4.0713E-02	-2.4667E-02	-2.4899E-02
18.8	4.3241E-02	-2.0439E-02	4.2917E-02	-2.0584E-02	-2.0821E-02
19.0	4.5078E-02	-1.6319E-02	4.4795E-02	-1.6466E-02	-1.6707E-02
19.2	4.6583E-02	-1.2190E-02	4.6361E-02	-1.2338E-02	-1.2581E-02
19.4	4.7753E-02	-8.0741E-03	4.7553E-02	-8.2231E-03	-8.4671E-03
19.6	4.8587E-02	-3.9952E-03	4.8430E-02	-4.1437E-03	-4.3869E-03
19.8	4.9088E-02	2.4642E-05	4.8973E-02	-1.2248E-04	-3.6350E-04
20.0	4.9257E-02	3.9638E-03	4.9184E-02	3.8188E-03	3.5814E-03

Table 21a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

<i>t</i>	A= 0.4	KAPPA=1.0
1.0	1.0553E 00	4.1500E-01
1.2	9.3778E-01	4.5841E-01
1.4	8.1522E-01	4.8930E-01
1.6	6.9034E-01	5.0741E-01
1.8	5.6579E-01	5.1285E-01
2.0	4.4414E-01	5.0604E-01
2.2	3.2777E-01	4.8775E-01
2.4	2.1883E-01	4.5903E-01
2.6	1.1919E-01	4.2117E-01
2.8	3.0375E-02	3.7566E-01
3.0	-4.6417E-02	3.2417E-01
3.2	-1.1038E-01	2.6843E-01
3.4	-1.6107E-01	2.1026E-01
3.6	-1.9843E-01	1.5142E-01
3.8	-2.2278E-01	9.3653E-02
4.0	-2.3474E-01	3.8555E-02
4.2	-2.3526E-01	-1.2421E-02
4.4	-2.2554E-01	-5.8022E-02
4.6	-2.0699E-01	-9.7223E-02
4.8	-1.8118E-01	-1.2925E-01
5.0	-1.4979E-01	-1.5359E-01
5.2	-1.1454E-01	-1.7001E-01
5.4	-7.7138E-02	-1.7852E-01
5.6	-3.9240E-02	-1.7942E-01
5.8	-2.3856E-03	-1.7321E-01
6.0	3.2041E-02	-1.6060E-01
6.2	6.2842E-02	-1.4250E-01
6.4	8.9040E-02	-1.1993E-01
6.6	1.0989E-01	-9.4022E-02
6.8	1.2492E-01	-6.5945E-02
7.0	1.3386E-01	-3.6891E-02
7.2	1.3674E-01	-8.0183E-03
7.4	1.3379E-01	1.9582E-02
7.6	1.2546E-01	4.4925E-02
7.8	1.1237E-01	6.7156E-02
8.0	9.5305E-02	8.5583E-02
8.2	7.5151E-02	9.9685E-02
8.4	5.2873E-02	1.0913E-01
8.6	2.9469E-02	1.1377E-01
8.8	5.9294E-03	1.1366E-01
9.0	-1.6794E-02	1.0901E-01
9.2	-3.7828E-02	1.0021E-01
9.4	-5.6404E-02	8.7778E-02
9.6	-7.1885E-02	7.2363E-02
9.8	-8.3782E-02	5.4689E-02
10.0	-9.1768E-02	3.5541E-02
10.2	-9.5682E-02	1.5729E-02
10.4	-9.5532E-02	-3.9441E-03
10.6	-9.1483E-02	-2.2710E-02
10.8	-8.3849E-02	-3.9865E-02
11.0	-7.3072E-02	-5.4794E-02
11.2	-5.9701E-02	-6.6990E-02
11.4	-4.4369E-02	-7.6072E-02
11.6	-2.1776E-02	-8.1789E-02
11.8	-1.0588E-02	-8.4033E-02
12.0	6.4390E-03	-8.2833E-02
12.2	2.2642E-02	-7.8353E-02
12.4	3.7398E-02	-7.0877E-02
12.6	5.0161E-02	-6.0799E-02
12.8	6.0483E-02	-4.8600E-02
13.0	6.8028E-02	-3.4829E-02
13.2	7.2579E-02	-2.0082E-02
13.4	7.4045E-02	-4.9719E-03
13.6	7.2462E-02	9.8906E-03
13.8	6.7984E-02	2.3923E-02
14.0	6.0875E-02	3.6594E-02
14.2	5.1499E-02	4.7437E-02
14.4	4.0296E-02	5.6076E-02
14.6	2.7768E-02	6.2227E-02
14.8	1.4454E-02	6.5716E-02
15.0	9.1135E-04	6.6475E-02
15.2	-1.2310E-02	6.4548E-02
15.4	-2.4689E-02	6.0082E-02
15.6	-3.5749E-02	5.3321E-02
15.8	-4.5080E-02	4.4593E-02
16.0	-5.2353E-02	3.4295E-02
16.2	-5.7328E-02	2.2877E-02
16.4	-5.9861E-02	1.0821E-02
16.6	-5.9913E-02	-1.3782E-03
16.8	-5.7540E-02	-1.3230E-02
17.0	-5.2897E-02	-2.4272E-02
17.2	-4.6224E-02	-3.4082E-02
17.4	-3.7837E-02	-4.2299E-02
17.6	-2.8112E-02	-4.8632E-02
17.8	-1.7471E-02	-5.2871E-02
18.0	-6.3611E-03	-5.4896E-02
18.2	4.7606E-03	-5.4673E-02
18.4	1.5448E-02	-5.2263E-02
18.6	2.5281E-02	-4.7809E-02
18.8	3.3883E-02	-4.1532E-02
19.0	4.0937E-02	-3.3722E-02
19.2	4.6191E-02	-2.4722E-02
19.4	4.9472E-02	-1.4918E-02
19.6	5.0691E-02	-4.7151E-03
19.8	4.9840E-02	-5.4699E-03
20.0	4.6997E-02	1.5231E-02
		-4.7996E-02
		-1.7624E-02
		1.1877E-02

Table 21b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A= 0.4		KAPPA=1.0		
	F(1,2)	F(1,3)	F(2,2)	F(2,3)	F(3,3)
1.0	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
1.2	6.4065E-02	9.8427E-03	3.5312E-02	6.2561E-03	3.4574E-03
1.4	1.0441E-01	1.9710E-02	7.3184E-02	1.5278E-02	1.0713E-02
1.6	1.4304E-01	3.2090E-02	1.1223E-01	2.7103E-02	2.1233E-02
1.8	1.8020E-01	4.7000E-02	1.5106E-01	4.1627E-02	3.4784E-02
2.0	2.1508E-01	6.4233E-02	1.8829E-01	5.8610E-02	5.1071E-02
2.2	2.4667E-01	8.3432E-02	2.2265E-01	7.7685E-02	6.9694E-02
2.4	2.7397E-01	1.0412E-01	2.5296E-01	9.8368E-02	9.0151E-02
2.6	2.9607E-01	1.2573E-01	2.7821E-01	1.2008E-01	1.1185E-01
2.8	3.1224E-01	1.4762E-01	2.9756E-01	1.4217E-01	1.3411E-01
3.0	3.2194E-01	1.6909E-01	3.1039E-01	1.6394E-01	1.5622E-01
3.2	3.2483E-01	1.8943E-01	3.1631E-01	1.8466E-01	1.7743E-01
3.4	3.2081E-01	2.0794E-01	3.1515E-01	2.0362E-01	1.9701E-01
3.6	3.0999E-01	2.2393E-01	3.0696E-01	2.2011E-01	2.1423E-01
3.8	2.9270E-01	2.3679E-01	2.9206E-01	2.3353E-01	2.2846E-01
4.0	2.6949E-01	2.4600E-01	2.7095E-01	2.4332E-01	2.3912E-01
4.2	2.4108E-01	2.5113E-01	2.4432E-01	2.4904E-01	2.4574E-01
4.4	2.0834E-01	2.5186E-01	2.1305E-01	2.5037E-01	2.4797E-01
4.6	1.7228E-01	2.4804E-01	1.7812E-01	2.4713E-01	2.4563E-01
4.8	1.3398E-01	2.3963E-01	1.4063E-01	2.3927E-01	2.3863E-01
5.0	9.4593E-02	2.2675E-01	1.0172E-01	2.2690E-01	2.2706E-01
5.2	5.5259E-02	2.0965E-01	6.2582E-02	2.1027E-01	2.1117E-01
5.4	1.7106E-02	1.8874E-01	2.4345E-02	1.8977E-01	1.9131E-01
5.6	-1.8806E-02	1.6453E-01	-1.1896E-02	1.6591E-01	1.6799E-01
5.8	-5.1514E-02	1.3765E-01	-4.5143E-02	1.3930E-01	1.4182E-01
6.0	-8.0181E-02	1.0881E-01	-7.4525E-02	1.1066E-01	1.1351E-01
6.2	-1.0412E-01	7.8774E-02	-9.9319E-02	8.0754E-02	8.3819E-02
6.4	-1.2283E-01	4.8359E-02	-1.1697E-01	5.0398E-02	5.3566E-02
6.6	-1.3597E-01	1.8384E-02	-1.3312E-01	2.0414E-02	2.3579E-02
6.8	-1.4341E-01	-1.0348E-02	-1.4157E-01	-8.3903E-03	-5.3282E-03
7.0	-1.4520E-01	-3.7078E-02	-1.4436E-01	-3.5248E-02	-3.2378E-02
7.2	-1.4157E-01	-6.1114E-02	-1.4168E-01	-5.9461E-02	-5.6860E-02
7.4	-1.3293E-01	-8.1855E-02	-1.3391E-01	-8.0418E-02	-7.8151E-02
7.6	-1.1983E-01	-9.8810E-02	-1.2157E-01	-9.7620E-02	-9.5735E-02
7.8	-1.0296E-01	-1.1161E-01	-1.0534E-01	-1.1069E-01	-1.0922E-01
8.0	-8.3104E-02	-1.2003E-01	-8.5984E-02	-1.1939E-01	-1.1835E-01
8.2	-6.1112E-02	-1.2398E-01	-6.4350E-02	-1.2362E-01	-1.2302E-01
8.4	-3.7884E-02	-1.2351E-01	-4.1330E-02	-1.2342E-01	-1.2325E-01
8.6	-1.4321E-02	-1.1881E-01	-1.7830E-02	-1.1898E-01	-1.1921E-01
8.8	8.6993E-03	-1.1021E-01	5.2655E-03	-1.1061E-01	-1.1121E-01
9.0	3.0352E-02	-9.8149E-02	2.7120E-02	-9.8752E-02	-9.9668E-02
9.2	4.9896E-02	-8.3169E-02	4.6976E-02	-8.3939E-02	-8.5121E-02
9.4	6.6692E-02	-6.5891E-02	6.4177E-02	-6.6791E-02	-6.8178E-02
9.6	8.0227E-02	-4.6997E-02	7.8190E-02	-4.7986E-02	-4.9516E-02
9.8	9.0126E-02	-2.7202E-02	8.8616E-02	-2.8238E-02	-2.9847E-02
10.0	9.6161E-02	-7.2285E-03	9.5206E-02	-8.2720E-03	-9.8958E-03
10.2	9.8253E-02	1.2215E-02	9.7858E-02	1.1202E-02	9.6231E-03
10.4	9.6473E-02	3.0459E-02	9.6622E-02	2.9513E-02	2.8033E-02
10.6	9.1033E-02	4.6898E-02	9.1691E-02	4.6049E-02	4.4718E-02
10.8	8.2272E-02	6.1007E-02	8.3387E-02	6.0280E-02	5.9137E-02
11.0	7.0645E-02	7.2357E-02	7.2148E-02	7.1774E-02	7.0851E-02
11.2	5.6694E-02	8.0633E-02	5.8507E-02	8.0206E-02	7.9525E-02
11.4	4.1033E-02	8.5633E-02	4.3071E-02	8.5372E-02	8.4945E-02
11.6	2.4320E-02	8.7288E-02	2.6491E-02	8.7189E-02	8.7020E-02
11.8	7.2300E-03	8.5639E-02	9.4442E-03	8.5700E-02	8.5780E-02
12.0	-9.5678E-03	8.0851E-02	-7.3996E-03	8.1062E-02	8.1375E-02
12.2	-2.5438E-02	7.3200E-02	-2.3398E-02	7.3545E-02	7.4068E-02
12.4	-3.9798E-02	6.3053E-02	-3.7961E-02	6.3513E-02	6.4216E-02
12.6	-5.2143E-02	5.0863E-02	-5.0571E-02	5.1414E-02	5.2262E-02
12.8	-6.2059E-02	3.7141E-02	-6.0802E-02	3.7759E-02	3.8712E-02
13.0	-6.9236E-02	2.2443E-02	-6.8330E-02	2.3102E-02	2.4119E-02
13.2	-7.3481E-02	7.3450E-03	-7.2949E-02	8.0170E-03	9.0579E-03
13.4	-7.4715E-02	-7.5777E-03	-7.4557E-02	-6.9184E-03	-5.8999E-03
13.6	-7.2979E-02	-2.1772E-02	-7.3189E-02	-2.1149E-02	-2.0181E-02
13.8	-6.8426E-02	-3.4724E-02	-6.8980E-02	-3.4161E-02	-3.3283E-02
14.0	-6.1315E-02	-4.5983E-02	-6.2177E-02	-4.5498E-02	-4.4739E-02
14.2	-5.1992E-02	-5.5170E-02	-5.3118E-02	-5.4778E-02	-5.4163E-02
14.4	-4.0884E-02	-6.1994E-02	-4.2218E-02	-6.1707E-02	-6.1252E-02
14.6	-2.8471E-02	-6.6260E-02	-2.9953E-02	-6.6084E-02	-6.5800E-02
14.8	-1.5274E-02	-6.7874E-02	-1.6840E-02	-6.7810E-02	-6.7702E-02
15.0	-1.8275E-03	-6.6842E-02	-3.4129E-03	-6.6890E-02	-6.6954E-02
15.2	1.1335E-02	-6.3272E-02	9.7937E-03	-6.3425E-02	-6.3651E-02
15.4	2.3707E-02	-5.7364E-02	2.2269E-02	-5.7611E-02	-5.7986E-02
15.6	3.4825E-02	-4.9401E-02	3.3543E-02	-4.9730E-02	-5.0232E-02
15.8	4.4284E-02	-3.9738E-02	4.3204E-02	-4.0133E-02	-4.0739E-02
16.0	5.1757E-02	-2.8786E-02	5.0914E-02	-2.9229E-02	-2.9911E-02
16.2	5.6999E-02	-1.6994E-02	5.6418E-02	-1.7467E-02	-1.8195E-02
16.4	5.9859E-02	-4.8342E-03	5.9555E-02	-5.3174E-03	-6.0632E-03
16.6	6.0282E-02	7.2181E-03	6.0258E-02	6.7437E-03	6.0103E-03
16.8	5.8311E-02	1.8703E-02	5.8558E-02	1.8256E-02	1.7562E-02
17.0	5.4078E-02	2.9192E-02	5.4579E-02	2.8788E-02	2.8161E-02
17.2	4.7803E-02	3.8305E-02	4.8529E-02	3.7958E-02	3.7419E-02
17.4	3.9780E-02	4.5722E-02	4.0695E-02	4.5444E-02	4.5010E-02
17.6	3.0363E-02	5.1194E-02	3.1427E-02	5.0993E-02	5.0678E-02
17.8	1.9957E-02	5.4554E-02	2.1121E-02	5.4436E-02	5.4248E-02
18.0	8.9909E-03	5.5717E-02	1.0208E-02	5.5684E-02	5.5626E-02
18.2	-2.0896E-03	5.4688E-02	-8.7069E-04	5.4737E-02	5.4808E-02
18.4	-1.2846E-02	5.1551E-02	-1.1673E-02	5.1679E-02	5.1871E-02
18.6	-2.2860E-02	4.6474E-02	-2.1779E-02	4.6673E-02	4.6975E-02
18.8	-3.1754E-02	3.9694E-02	-3.0804E-02	3.9954E-02	4.0350E-02
19.0	-3.9200E-02	3.1508E-02	-3.8416E-02	3.1818E-02	3.2290E-02
19.2	-4.4935E-02	2.2264E-02	-4.4343E-02	2.2609E-02	2.3137E-02
19.4	-4.8768E-02	1.2342E-02	-4.8385E-02	1.2707E-02	1.3269E-02
19.6	-5.0585E-02	2.1401E-03	-5.0423E-02	2.3119E-03	3.0840E-03
19.8	-5.0358E-02	-7.9385E-03	-5.0416E-02	-7.5752E-03	-7.0154E-03
20.0	-4.8135E-02	-1.7504E-02	-4.8405E-02	-1.7164E-02	-1.6638E-02

Table 22a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 0.4	KAPPA=1.0
1.2	G(0,0)	G(0,1)
1.4	5.8263E-01	1.5259E 00
1.6	1.8931E-01	9.6493E-01
1.8	-3.6582E-02	6.6854E-01
2.0	-1.8290E-01	4.6596E-01
2.2	-2.7839E-01	3.1017E-01
2.4	-3.3677E-01	1.8319E-01
2.6	-3.6621E-01	7.7062E-02
2.8	-3.7242E-01	-1.1993E-02
3.0	-3.5993E-01	-8.5877E-02
3.2	-3.3258E-01	-1.4562E-01
3.4	-2.9381E-01	-1.9188E-01
3.6	-2.4679E-01	-2.2522E-01
3.8	-1.9443E-01	-2.4628E-01
4.0	-1.3941E-01	-2.5581E-01
4.2	-0.8212E-02	-2.4408E-01
4.4	1.8721E-02	-2.2517E-01
4.6	6.2927E-02	-1.9933E-01
4.8	1.0058E-01	-1.6807E-01
5.0	1.3079E-01	-1.3289E-01
5.2	1.5303E-01	-9.5362E-02
5.4	1.6707E-01	-5.6990E-02
5.6	1.7302E-01	-1.9222E-02
5.8	1.7125E-01	1.6614E-02
6.0	1.6240E-01	4.9336E-02
6.2	1.4734E-01	7.7943E-02
6.4	1.2707E-01	1.0164E-01
6.6	1.0276E-01	1.1984E-01
6.8	7.5628E-02	1.3220E-01
7.0	4.6932E-02	1.3859E-01
7.2	1.7912E-02	1.3912E-01
7.4	-0.0252E-02	1.3409E-01
7.6	-3.6483E-02	1.2400E-01
7.8	-5.9836E-02	1.0949E-01
8.0	-7.9532E-02	9.1362E-02
8.2	-9.4969E-02	7.0487E-02
8.4	-1.0575E-01	4.7809E-02
8.6	-1.1166E-01	2.4293E-02
8.8	-1.1271E-01	8.8996E-04
9.0	-1.0908E-01	-2.1495E-02
9.2	-1.0113E-01	-4.2036E-02
9.4	-8.9366E-02	-6.0012E-02
9.6	-7.4438E-02	-7.4831E-02
9.8	-5.7075E-02	-8.6045E-02
10.0	-3.8077E-02	-9.3363E-02
10.2	-1.8273E-02	-9.6654E-02
10.4	1.5088E-03	-9.5948E-02
10.6	2.0476E-02	-9.1427E-02
10.8	3.7899E-02	-8.3413E-02
11.0	5.3135E-02	-7.2352E-02
11.2	6.5655E-02	-5.8791E-02
11.4	7.5055E-02	-4.3354E-02
11.6	8.1069E-02	-2.6716E-02
11.8	8.3575E-02	-9.5748E-03
12.0	8.2593E-02	7.3743E-03
12.2	7.8282E-02	2.3468E-02
12.4	7.0925E-02	3.8099E-02
12.6	6.0918E-02	5.0735E-02
12.8	4.8749E-02	6.0939E-02
13.0	3.4976E-02	6.8384E-02
13.2	2.0201E-02	7.2860E-02
13.4	5.0495E-03	7.4279E-02
13.6	-9.8593E-03	7.2678E-02
13.8	-2.3933E-02	6.8209E-02
14.0	-3.6632E-02	6.1133E-02
14.2	-4.7486E-02	5.1805E-02
14.4	-5.6110E-02	4.0659E-02
14.6	-6.2223E-02	2.8190E-02
14.8	-6.5648E-02	1.4928E-02
15.0	-6.6321E-02	1.4231E-03
15.2	-6.4289E-02	-1.1782E-02
15.4	-5.9707E-02	-2.4170E-02
15.6	-5.2826E-02	-3.5270E-02
15.8	-4.3981E-02	-4.4673E-02
16.0	-3.3577E-02	-5.2048E-02
16.2	-2.2074E-02	-5.7152E-02
16.4	-9.9583E-03	-5.9839E-02
16.6	2.2668E-03	-6.0061E-02
16.8	1.4108E-02	-5.7868E-02
17.0	2.5099E-02	-5.3405E-02
17.2	3.4820E-02	-4.6905E-02
17.4	4.2909E-02	-3.8673E-02
17.6	4.9079E-02	-2.9078E-02
17.8	5.3128E-02	-1.8533E-02
18.0	5.4941E-02	-7.4789E-03
18.2	5.4494E-02	3.6310E-03
18.4	5.1857E-02	1.4353E-02
18.6	4.7184E-02	2.4268E-02
18.8	4.0705E-02	3.2999E-02
19.0	3.2720E-02	4.0221E-02
19.2	2.3582E-02	4.5679E-02
19.4	1.3681E-02	4.9193E-02
19.6	3.4303E-03	5.0662E-02
19.8	-6.7509E-03	5.0069E-02
20.0	-1.6456E-02	4.7480E-02
		1.3961E-02
		-4.6975E-02

Table 22b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 0.4	KAPPA=1.0
1.2	4.4172E 00	2.1158E 01
1.4	2.1910E 00	7.8166E 00
1.6	1.4059E 00	3.9975E 00
1.8	1.0155E 00	2.4145E 00
2.0	7.8162E-01	1.6239E 00
2.2	6.2181E-01	1.1789E 00
2.4	5.0091E-01	9.0503E-01
2.6	4.0205E-01	7.2360E-01
2.8	3.1661E-01	5.9503E-01
3.0	2.4010E-01	4.9795E-01
3.2	1.7025E-01	4.2011E-01
3.4	1.0605E-01	3.5424E-01
3.6	4.7239E-02	2.9596E-01
3.8	-6.0503E-03	2.4261E-01
4.0	-5.3461E-02	1.9268E-01
4.2	-9.4561E-02	1.4537E-01
4.4	-1.2893E-01	1.0036E-01
4.6	-1.5624E-01	5.7701E-02
4.8	-1.7628E-01	1.7631E-02
5.0	-1.8899E-01	-1.9465E-02
5.2	-1.9449E-01	-5.3134E-02
5.4	-1.9308E-01	-8.2910E-02
5.6	-1.8523E-01	-1.0835E-01
5.8	-1.7157E-01	-1.2908E-01
6.0	-1.5287E-01	-1.4481E-01
6.2	-1.3003E-01	-1.5536E-01
6.4	-1.0404E-01	-1.6068E-01
6.6	-7.5938E-02	-1.6084E-01
6.8	-4.6782E-02	-1.5607E-01
7.0	-1.7626E-02	-1.4670E-01
7.2	1.0521E-02	-1.3321E-01
7.4	3.6730E-02	-1.1617E-01
7.6	6.0174E-02	-9.6251E-02
7.8	8.0157E-02	-7.4188E-02
8.0	9.6130E-02	-5.0768E-02
8.2	1.0771E-01	-2.6794E-02
8.4	1.1467E-01	-3.0654E-03
8.6	1.1697E-01	1.9648E-02
8.8	1.1474E-01	4.0633E-02
9.0	1.0825E-01	5.9254E-02
9.2	9.7916E-02	7.4971E-02
9.4	8.4291E-02	8.7359E-02
9.6	6.8013E-02	9.6115E-02
9.8	4.9798E-02	1.0107E-01
10.0	3.0404E-02	1.0219E-01
10.2	1.0608E-02	9.9575E-02
10.4	-8.8282E-03	9.3446E-02
10.6	-2.7183E-02	8.4145E-02
10.8	-4.3800E-02	7.2113E-02
11.0	-5.8110E-02	5.7874E-02
11.2	-6.9649E-02	4.2016E-02
11.4	-7.8073E-02	2.5166E-02
11.6	-8.3167E-02	7.9685E-03
11.8	-8.4847E-02	-8.9379E-03
12.0	-8.3161E-02	-2.4943E-02
12.2	-7.8288E-02	-3.9487E-02
12.4	-7.0509E-02	-5.2079E-02
12.6	-6.0224E-02	-6.2313E-02
12.8	-4.7904E-02	-6.9878E-02
13.0	-3.4090E-02	-7.4574E-02
13.2	-1.9360E-02	-7.6307E-02
13.4	-4.3124E-03	-7.5099E-02
13.6	1.0459E-02	-7.1077E-02
13.8	2.4389E-02	-6.4472E-02
14.0	3.6961E-02	-5.5603E-02
14.2	4.7722E-02	-4.4865E-02
14.4	5.6305E-02	-3.2713E-02
14.6	6.2434E-02	-1.9646E-02
14.8	6.5936E-02	-6.1816E-03
15.0	6.6746E-02	7.1591E-03
15.2	6.4901E-02	1.9872E-02
15.4	6.0544E-02	3.1490E-02
15.6	5.3910E-02	4.1597E-02
15.8	4.5314E-02	4.9846E-02
16.0	3.5145E-02	5.5965E-02
16.2	2.3838E-02	5.9773E-02
16.4	1.1866E-02	6.1178E-02
16.6	-2.8596E-04	6.0185E-02
16.8	-1.2136E-02	5.6885E-02
17.0	-2.3226E-02	5.1461E-02
17.2	-3.3138E-02	4.4168E-02
17.4	-4.1509E-02	3.5330E-02
17.6	-4.8045E-02	2.5322E-02
17.8	-5.2530E-02	1.4555E-02
18.0	-5.4832E-02	3.4630E-03
18.2	-5.4911E-02	-7.5195E-03
18.4	-5.2810E-02	-1.7970E-02
18.6	-4.8660E-02	-2.7494E-02
18.8	-4.2669E-02	-3.5744E-02
19.0	-3.5110E-02	-4.2425E-02
19.2	-2.6316E-02	-4.7311E-02
19.4	-1.6660E-02	-5.0249E-02
19.6	-6.5391E-03	-5.1163E-02
19.8	3.6361E-03	-5.0058E-02
20.0	1.3463E-02	-4.7018E-02
		1.2422E-02
		-4.7139E-02
		-4.7321E-02

Table 23a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

	A= 0.4	KAPPA=4.0			
ξ	F(0,0)	F(0,1)	F(0,2)	F(0,3)	F(1,1)
1.0	2.5022E 00	2.4093E 00	1.8724E 00	8.9165E-01	0.0000E-01
1.2	5.8401E-02	8.6993E-01	1.4137E 00	1.1602E 00	1.1867E 00
1.4	-7.9680E-01	-2.5160E-01	6.3985E-01	1.0741E 00	2.4263E-01
1.6	-5.8740E-01	-7.0287E-01	-1.0580E-01	6.6935E-01	-4.8505E-01
1.8	4.1617E-03	-5.5379E-01	-5.4008E-01	1.2654E-01	-6.1871E-01
2.0	4.3418E-01	-1.0174E-01	-5.6038E-01	-3.2190E-01	-2.8995E-01
2.2	4.7003E-01	3.0726E-01	-2.6667E-01	-5.0586E-01	1.5566E-01
2.4	1.8835E-01	4.4722E-01	1.1546E-01	-3.9419E-01	4.1043E-01
2.6	-1.6430E-01	2.9310E-01	3.6266E-01	-9.7035E-02	3.5806E-01
2.8	-3.5487E-01	-1.0988E-02	3.6349E-01	2.0238E-01	8.9349E-02
3.0	-2.9384E-01	-2.6277E-01	1.5713E-01	3.4668E-01	-1.9471E-01
3.2	-5.8134E-02	-3.2315E-01	-1.1039E-01	2.8074E-01	-3.1928E-01
3.4	1.8329E-01	-1.8358E-01	-2.7984E-01	6.7976E-02	-2.3183E-01
3.6	2.8295E-01	4.8252E-02	-2.6747E-01	-1.5690E-01	-1.3195E-02
3.8	1.9801E-01	2.2520E-01	-1.0184E-01	-2.6802E-01	1.8881E-01
4.0	1.2161E-03	2.4956E-01	1.0512E-01	-2.1574E-01	2.5466E-01
4.2	-1.7651E-01	1.2330E-01	2.3004E-01	-4.6225E-02	1.5961E-01
4.4	-2.3005E-01	-6.4055E-02	2.0900E-01	1.3334E-01	-2.2870E-02
4.6	-1.3927E-01	-1.9628E-01	6.7940E-02	2.2009E-01	-1.7492E-01
4.8	2.7899E-02	-2.0043E-01	-1.0052E-01	1.7279E-01	-2.0828E-01
5.0	1.6431E-01	-8.5185E-02	-1.9608E-01	2.9851E-02	-1.1340E-01
5.2	1.9066E-01	7.1474E-02	-1.6906E-01	-1.1889E-01	4.2159E-02
5.4	1.0001E-01	1.7365E-01	-4.4873E-02	-1.8732E-01	1.6046E-01
5.6	-4.4239E-02	1.6506E-01	9.6514E-02	-1.4192E-01	1.7359E-01
5.8	-1.5161E-01	5.8925E-02	1.7106E-01	-1.7192E-02	8.1508E-02
6.0	-1.6038E-01	-7.4982E-02	1.3974E-01	1.0899E-01	-5.3224E-02
6.2	-7.2085E-02	-1.5541E-01	2.8110E-02	1.6317E-01	-1.4709E-01
6.4	5.3915E-02	-1.3818E-01	-9.2951E-02	1.1846E-01	-1.4667E-01
6.6	1.3970E-01	-3.9753E-02	-1.5160E-01	7.1565E-03	-5.8258E-02
6.8	1.3637E-01	7.6439E-02	-1.1712E-01	-1.0164E-01	5.9799E-02
7.0	5.1296E-02	1.4032E-01	-1.5369E-02	-1.4441E-01	1.3510E-01
7.2	-5.9785E-02	1.1696E-01	8.9713E-02	-9.9880E-02	1.2510E-01
7.4	-1.2885E-01	2.5162E-02	1.3587E-01	9.6712E-04	4.0615E-02
7.6	-1.1683E-01	-7.6723E-02	9.9019E-02	9.5838E-02	-6.3716E-02
7.8	-3.5274E-02	-1.2754E-01	5.3664E-03	1.2926E-01	-1.2440E-01
8.0	6.3326E-02	-9.9677E-02	-8.6713E-02	8.4713E-02	-1.0739E-01
8.2	1.1902E-01	-1.3711E-02	-1.2275E-01	-7.6516E-03	-2.6810E-02
8.4	1.0056E-01	7.6289E-02	-8.4125E-02	-9.1029E-02	6.5961E-02
8.6	2.2591E-02	1.1650E-01	2.6737E-03	-1.1664E-01	1.1480E-01
8.8	-6.5360E-02	8.5274E-02	8.3886E-02	-7.2033E-02	9.2525E-02
9.0	-1.1011E-01	4.5139E-03	1.1154E-01	1.3222E-02	1.5752E-02
9.2	-8.6779E-02	-7.5391E-02	7.1600E-02	8.6888E-02	-6.7097E-02
9.4	-1.2342E-02	-1.0680E-01	-9.2515E-03	1.0586E-01	-1.0613E-01
9.6	6.6374E-02	-7.3038E-02	-8.1187E-02	6.1229E-02	-7.9841E-02
9.8	1.0199E-01	3.0041E-03	-1.0178E-01	-1.7908E-02	-6.7300E-03
10.0	7.4917E-02	7.4178E-02	-6.0879E-02	-8.3210E-02	6.7467E-02
10.2	3.9251E-03	9.8161E-02	1.4703E-02	-9.6482E-02	9.8240E-02
10.4	-6.6670E-02	6.2482E-02	7.8581E-02	-5.1883E-02	6.8859E-02
10.6	-9.4536E-02	-9.2316E-03	9.3143E-02	2.1875E-02	-7.3500E-04
10.8	-6.4578E-02	-7.2741E-02	5.1572E-02	7.9861E-02	-6.7290E-02
11.0	3.0742E-03	-9.0375E-02	-1.9263E-02	8.8184E-02	-9.1010E-02
11.2	6.6446E-02	-5.3259E-02	-7.6045E-02	4.3695E-02	-5.9238E-02
11.4	8.7660E-02	1.4441E-02	-8.5395E-02	-2.5249E-02	6.9791E-03
11.6	5.5470E-02	7.1140E-02	-4.3398E-02	-7.6751E-02	6.6707E-02
11.8	-8.9498E-03	8.3284E-02	2.3102E-02	-8.0741E-02	8.4337E-02
12.0	-6.5638E-02	4.5118E-02	7.3559E-02	-3.6450E-02	5.0726E-02
12.2	-8.1276E-02	-1.8828E-02	7.8368E-02	2.8122E-02	-1.2244E-02
12.4	-4.7376E-02	-6.9413E-02	3.6151E-02	7.3816E-02	-6.5815E-02
12.6	1.3916E-02	-7.6770E-02	-2.6343E-02	7.3991E-02	-7.8139E-02
12.8	6.4917E-02	-3.7868E-02	-7.1110E-02	2.9985E-02	-4.3132E-02
13.0	7.5319E-02	2.2538E-02	-7.1935E-02	-3.0567E-02	1.6708E-02
13.2	4.0127E-02	6.7587E-02	-2.9676E-02	-7.1013E-02	6.4685E-02
13.4	-1.8133E-02	7.0743E-02	2.9082E-02	-6.7812E-02	7.2352E-02
13.6	-6.3769E-02	3.1367E-02	6.8688E-02	-2.4177E-02	3.6310E-02
13.8	-6.9734E-02	-2.5682E-02	6.6000E-02	3.2641E-02	-2.0505E-02
14.0	-3.3597E-02	-6.5682E-02	2.3854E-02	6.8308E-02	-6.3364E-02
14.2	2.1721E-02	-6.5132E-02	-3.1392E-02	6.2111E-02	-6.6921E-02
14.4	6.2433E-02	-2.5503E-02	-6.6284E-02	1.8930E-02	-3.0148E-02
14.6	6.4476E-02	2.8344E-02	-6.0489E-02	-3.4389E-02	2.3739E-02
14.8	2.7683E-02	6.3713E-02	-1.8591E-02	-6.5679E-02	6.1890E-02
15.0	-2.4776E-02	5.9880E-02	3.3330E-02	-5.6815E-02	6.1805E-02
15.2	-6.0946E-02	2.0190E-02	6.3893E-02	-1.4169E-02	2.4555E-02
15.4	-5.9508E-02	-3.0590E-02	5.5342E-02	3.5850E-02	-2.6491E-02
15.6	-2.2305E-02	-6.1689E-02	1.3816E-02	6.3108E-02	-6.0290E-02
15.8	2.7372E-02	-5.4942E-02	-3.4942E-02	5.1869E-02	-5.6967E-02
16.0	5.9333E-02	-1.5357E-02	-6.1513E-02	9.8341E-03	-1.9460E-02
16.2	5.4799E-02	3.2474E-02	-5.0513E-02	-3.7052E-02	2.8824E-02
16.4	1.7399E-02	5.9621E-02	-9.4684E-03	-6.0582E-02	5.8586E-02
16.6	-2.9568E-02	5.0283E-02	3.6267E-02	-4.7228E-02	5.2379E-02
16.8	-5.7618E-02	1.0949E-02	5.9139E-02	-5.8772E-03	1.4805E-02
17.0	-5.0326E-02	-3.4038E-02	4.3966E-02	3.8021E-02	-3.0791E-02
17.2	-1.2911E-02	-5.7515E-02	5.5014E-03	5.8093E-02	-5.6794E-02
17.4	3.1412E-02	-4.5874E-02	-3.7334E-02	4.2857E-02	-4.8018E-02
17.6	5.5816E-02	-6.9184E-03	-5.6771E-02	2.2586E-03	-1.0542E-02
17.8	4.6066E-02	3.5319E-02	-4.1671E-02	-3.8779E-02	3.2435E-02
18.0	8.7988E-03	5.5377E-02	-1.8757E-03	-5.5633E-02	5.4930E-02
18.2	-3.2945E-02	4.1691E-02	3.8169E-02	-3.8727E-02	4.3864E-02
18.4	-5.3942E-02	3.2289E-03	5.4408E-02	1.0542E-03	6.6326E-03
18.6	-4.2004E-02	-3.6346E-02	3.7603E-02	3.9345E-02	-3.3789E-02
18.8	-5.0255E-03	-5.3213E-02	-1.4409E-03	5.3197E-02	-5.3005E-02
19.0	3.4199E-02	-3.7714E-02	-3.8794E-02	3.4816E-02	-3.9900E-02
19.2	5.2007E-02	1.5118E-04	-5.2050E-02	-4.0884E-03	-3.0438E-03
19.4	3.8123E-02	3.7142E-02	-3.3742E-02	-3.9733E-02	3.4884E-02
19.6	1.5612E-03	5.1028E-02	4.4755E-03	-5.0783E-02	5.1028E-02
19.8	-3.5201E-02	3.3927E-02	3.9229E-02	-3.1104E-02	3.6114E-02
20.0	-5.0022E-02	-3.2485E-03	4.9697E-02	6.8670E-03	-2.5190E-04

Table 23b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

	A= 0.4	KAPPA=4.0			
ξ	F(1,2)	F(1,3)	F(2,2)	F(2,3)	F(3,3)
1.0	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
1.2	1.2376E 00	9.2354E-01	9.6364E-01	6.6326E-01	4.4489E-01
1.4	8.4059E-01	1.0295E 00	9.3458E-01	9.4299E-01	8.2488E-01
1.6	1.3860E-01	7.2672E-01	3.6375E-01	7.8185E-01	8.0868E-01
1.8	-4.0592E-01	2.1309E-01	-2.3973E-01	3.2708E-01	4.3835E-01
2.0	-5.6330E-01	-2.5803E-01	-5.2863E-01	-1.6203E-01	-5.0601E-02
2.2	-3.5484E-01	-4.8730E-01	-4.2449E-01	-4.5064E-01	-3.9626E-01
2.4	1.8253E-02	-4.1557E-01	-8.1981E-02	-4.3801E-01	-4.5166E-01
2.6	3.1263E-01	-1.3583E-01	2.4813E-01	-1.8841E-01	-2.4332E-01
2.8	3.7562E-01	1.7094E-01	3.7385E-01	1.2408E-01	6.8538E-02
3.0	2.0924E-01	3.3734E-01	2.5528E-01	3.1978E-01	2.9401E-01
3.2	-5.6591E-02	2.9349E-01	-3.2211E-04	3.0783E-01	3.1903E-01
3.4	-2.5489E-01	9.1284E-02	-2.2280E-01	1.2275E-01	1.5662E-01
3.6	-2.7964E-01	-1.3778E-01	-2.8502E-01	-1.0994E-01	-7.6890E-02
3.8	-1.3728E-01	-2.6278E-01	-1.6967E-01	-2.5320E-01	-2.3922E-01
4.0	7.0614E-02	-2.2486E-01	3.4809E-02	-2.3548E-01	-2.4485E-01
4.2	2.1593E-01	-6.2279E-02	1.9786E-01	-8.3667E-02	-1.0699E-01
4.4	2.2009E-01	1.2038E-01	2.2715E-01	1.0197E-01	8.0206E-02
4.6	9.4098E-02	2.1703E-01	1.1818E-01	2.1146E-01	2.0331E-01
4.8	-7.6442E-02	1.7995E-01	-5.1824E-02	1.8842E-01	1.9640E-01
5.0	-1.8762E-01	4.1820E-02	1.7675E-01	5.7504E-02	7.4692E-02
5.2	-1.7904E-01	-1.0952E-01	-1.8626E-01	-9.6509E-02	-8.1217E-02
5.4	-6.5230E-02	-1.8555E-01	-8.3908E-02	-1.8226E-01	-1.7734E-01
5.6	7.8784E-02	-1.4787E-01	6.0959E-02	-1.5493E-01	-1.6183E-01
5.8	1.6591E-01	-2.6586E-02	1.5917E-01	-3.8680E-02	-5.1944E-02
6.0	1.4875E-01	1.0191E-01	1.5566E-01	9.2303E-02	8.1078E-02
6.2	4.4545E-02	1.6223E-01	5.9496E-02	1.6033E-01	1.5737E-01
6.4	-7.9413E-02	1.2358E-01	-6.6029E-02	1.2963E-01	1.3569E-01
6.6	-1.4855E-01	1.4794E-02	-1.4436E-01	2.4456E-02	3.5035E-02
6.8	-1.2532E-01	-9.6136E-02	-1.3179E-01	-8.8814E-02	-8.0315E-02
7.0	-2.8995E-02	-1.4403E-01	-4.1253E-02	-1.4305E-01	-1.4133E-01
7.2	7.9110E-02	-1.0439E-01	6.8796E-02	-1.0970E-01	-1.1507E-01
7.4	1.3422E-01	-5.4027E-03	1.3169E-01	-1.3325E-02	-2.1974E-02
7.6	1.0654E-01	9.1470E-02	1.1254E-01	8.5767E-02	7.9186E-02
7.8	1.6890E-02	1.2928E-01	2.7131E-02	1.2891E-01	1.2803E-01
8.0	-7.8259E-02	8.8763E-02	-7.0159E-02	9.3481E-02	9.8301E-02
8.2	-1.2209E-01	-2.2372E-03	-1.2069E-01	4.3880E-03	1.1592E-02
8.4	-9.1060E-02	-8.7516E-02	9.6622E-02	-8.3003E-02	-7.7825E-02
8.6	-7.2207E-03	-1.1694E-01	-1.5903E-02	-1.1701E-01	-1.1671E-01
8.8	7.7063E-02	-7.5714E-02	7.0614E-02	-7.9960E-02	-8.4317E-02
9.0	1.1159E-01	8.5531E-03	1.1100E-01	2.9283E-03	-3.1611E-03
9.2	7.8030E-02	8.4037E-02	8.3186E-02	8.0428E-02	7.6308E-02
9.4	-6.5685E-04	1.0638E-01	6.7893E-03	1.0676E-01	1.0687E-01
9.6	-7.5637E-02	6.4607E-02	-7.0465E-02	6.8463E-02	7.2426E-02
9.8	-1.0236E-01	-1.3837E-02	-1.0234E-01	-9.0053E-03	-3.7984E-03
10.0	-6.6868E-02	-8.0885E-02	7.1654E-02	-7.7981E-02	-7.4678E-02
10.2	7.1700E-03	-9.7170E-02	7.2429E-04	-9.7772E-02	-9.8180E-02
10.4	7.4050E-02	-5.5005E-02	6.9860E-02	-5.8531E-02	-6.2157E-02
10.6	9.4121E-02	1.8297E-02	9.4515E-02	1.4107E-02	9.6142E-03
10.8	5.7171E-02	7.7964E-02	6.1621E-02	7.5619E-02	7.2961E-02
11.0	-1.2615E-02	8.8998E-02	-6.9938E-03	8.9767E-02	9.0391E-02
11.2	7.2343E-02	4.6597E-02	-6.8947E-02	4.9841E-02	5.3172E-02
11.4	-8.6678E-02	-2.2082E-02	-8.7383E-02	-1.8424E-02	-1.4518E-02
11.6	-4.8647E-02	-7.5207E-02	-5.2792E-02	-7.3316E-02	-7.1176E-02
11.8	1.7202E-02	-8.1653E-02	1.2277E-02	-8.2547E-02	-8.3300E-02
12.0	7.0543E-02	-3.9159E-02	6.7794E-02	-4.2155E-02	-4.5227E-02
12.2	7.9886E-02	2.5306E-02	8.0324E-02	2.2093E-02	1.8680E-02
12.4	4.1084E-02	7.2566E-02	4.4950E-02	7.1050E-02	6.9333E-02
12.6	-2.1087E-02	7.4980E-02	-1.6744E-02	7.5966E-02	7.6865E-02
12.8	-6.8671E-02	3.2522E-02	-6.6453E-02	3.5300E-02	3.8141E-02
13.0	-7.3635E-02	-2.8055E-02	-7.4748E-02	-2.5221E-02	-2.2224E-02
13.2	-3.4319E-02	-7.0017E-02	-3.7931E-02	-6.8809E-02	-6.7439E-02
13.4	2.4387E-02	-6.8860E-02	2.0547E-02	-6.9914E-02	-7.0898E-02
13.6	6.6738E-02	-2.6559E-02	6.4963E-02	-2.9142E-02	-3.1776E-02
13.8	6.7841E-02	3.0394E-02	6.9084E-02	2.7887E-02	2.5240E-02
14.0	2.8231E-02	6.7528E-02	2.160RE-02	6.6581E-02	6.5502E-02
14.2	-2.7190E-02	6.3203E-02	-2.3787E-02	6.4307E-02	6.5351E-02
14.4	-6.4754E-02	2.1171E-02	-6.3352E-02	2.3577E-02	2.6042E-02
14.6	-6.2437E-02	-3.2378E-02	-6.3778E-02	-3.0156E-02	-2.7826E-02
14.8	-2.2721E-02	-6.5086E-02	-2.5882E-02	-6.4361E-02	-6.3526E-02
15.0	2.9566E-02	-5.7941E-02	2.6547E-02	-5.9079E-02	-6.0166E-02
15.2	6.2727E-02	-1.6280E-02	6.1641E-02	-1.8526E-02	-2.0801E-02
15.4	5.7372E-02	3.4048E-02	5.8783E-02	3.2076E-02	3.0017E-02
15.6	1.7714E-02	6.2679E-02	2.0675E-02	6.2143E-02	6.1515E-02
15.8	-3.1572E-02	5.3019E-02	-2.8890E-02	5.4180E-02	5.5295E-02
16.0	-6.0663E-02	1.1824E-02	-5.9848E-02	1.3923E-02	1.6042E-02
16.2	-5.2604E-02	-3.5439E-02	-5.4065E-02	-3.3688E-02	-3.1868E-02
16.4	-1.3149E-02	-6.0296E-02	-1.5923E-02	-5.9923E-02	-5.9473E-02
16.6	3.3250E-02	-4.8395E-02	3.0869E-02	-4.9569E-02	-5.0701E-02
16.8	5.8567E-02	-7.7538E-03	5.7984E-02	-9.7165E-03	-1.1692E-02
17.0	4.8100E-02	3.6579E-02	4.9593E-02	3.5027E-02	3.3418E-02
17.2	8.9764E-03	5.7933E-02	1.1576E-02	5.7701E-02	5.7403E-02
17.4	-3.4639E-02	4.4034E-02	-3.2526E-02	4.5214E-02	4.6352E-02
17.6	-5.6443E-02	4.0286E-03	-5.6061E-02	5.8649E-03	5.7062E-03
17.8	-4.3832E-02	-3.7493E-02	-4.5345E-02	-3.6119E-02	-3.4699E-02
18.0	-5.1557E-03	-5.5585E-02	-7.5911E-03	-5.5476E-02	-5.5308E-02
18.2	3.5767E-02	-3.9909E-02	3.3897E-02	-4.1088E-02	-4.2226E-02
18.4	5.4295E-02	-6.1477E-04	5.4087E-02	-2.3330E-03	-4.0500E-03
18.6	3.9779E-02	3.8201E-02	4.1300E-02	3.6987E-02	3.5737E-02
18.8	1.6633E-02	5.3248E-02	3.9342E-03	5.3247E-02	5.3192E-02
19.0	-3.6662E-02	3.5997E-02	-3.5010E-02	3.7169E-02	3.8301E-02
19.2	5.2128E-02	-2.5155E-03	-5.2072E-02	-9.0812E-04	6.9273E-04
19.4	-3.5922E-02	-3.8721E-02	-3.7442E-02	-3.7653E-02	-3.6555E-02
19.6	1.5592E-03	-5.0922E-02	-5.7597E-04	-5.1015E-02	-5.1058E-02
19.8	3.7344E-02	-3.2800E-02	3.5890E-02	-3.3441E-02	-3.4562E-02
20.0	4.9945E-02	5.3858E-03	5.0021E-02	3.8827E-03	2.3908E-03

Table 24a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

A= 0.4						KAPPA=4.0
ξ	G(0,0)	G(0,1)	G(0,2)	G(0,3)	G(1,1)	
1.2	-1.1549E 00	-9.2597E-01	1.4789E-03	1.1709E 00	-1.8783E-01	
1.4	-3.5708E-01	-8.9522E-01	-7.5804E-01	1.0282E-01	-8.5557E-01	
1.6	4.1480E-01	-2.6966E-01	-7.7994E-01	-4.9290E-01	-5.4233E-01	
1.8	6.1686E-01	3.1863E-01	-3.7985E-01	-6.7468E-01	6.3840E-02	
2.0	3.2525E-01	5.4846E-01	1.1573E-01	-4.9353E-01	4.6251E-01	
2.2	-1.2087E-01	3.8996E-01	4.3082E-01	-1.1372E-01	4.6219E-01	
2.4	-3.9734E-01	2.8001E-02	4.4077E-01	2.4518E-01	1.6258E-01	
2.6	-3.6727E-01	-2.8499E-01	2.0087E-01	4.0969E-01	-1.8639E-01	
2.8	-1.0848E-01	-3.7603E-01	-1.1313E-01	3.2831E-01	-3.6123E-01	
3.0	1.7982E-01	-2.2906E-01	-3.1519E-01	8.1523E-02	-2.8518E-01	
3.2	3.1628E-01	3.3882E-02	-3.0869E-01	-1.7538E-01	-4.3558E-02	
3.4	2.3951E-01	2.4277E-01	-1.2567E-01	-3.0181E-01	1.9376E-01	
3.6	2.4563E-02	2.8224E-01	1.0768E-01	-2.4447E-01	2.8416E-01	
3.8	-1.8120E-01	1.4962E-01	2.5228E-01	-5.6299E-02	1.9131E-01	
4.0	-2.5446E-01	-5.7682E-02	2.3514E-01	1.4350E-01	-7.8285E-03	
4.2	-1.6544E-01	-2.0981E-01	8.3096E-02	2.4152E-01	-1.8216E-01	
4.4	1.5551E-02	-2.2280E-01	-1.0274E-01	1.9232E-01	-2.2968E-01	
4.6	1.7064E-01	-1.0231E-01	-2.1164E-01	3.7465E-02	-1.3419E-01	
4.8	2.0898E-01	6.8438E-02	-1.8734E-01	-1.2536E-01	3.3905E-02	
5.0	1.1784E-01	1.8431E-01	-5.5412E-02	-2.0233E-01	1.6760E-01	
5.2	-3.7172E-02	1.8143E-01	9.8453E-02	-1.5621E-01	1.8977E-01	
5.4	-1.5790E-01	7.0946E-02	1.8271E-01	-2.3137E-02	9.6107E-02	
5.6	-1.7459E-01	-7.3567E-02	1.5337E-01	1.1353E-01	-4.8422E-02	
5.8	-8.4951E-02	-1.6407E-01	3.5879E-02	1.7422E-01	-1.5360E-01	
6.0	4.9685E-02	-1.5077E-01	-9.4685E-02	1.2946E-01	-1.5934E-01	
6.2	1.4553E-01	-4.8644E-02	-1.6077E-01	1.1898E-02	-6.9033E-02	
6.4	1.9772E-01	7.5898E-02	-1.2775E-01	-1.0508E-01	5.6931E-02	
6.6	6.0976E-02	1.4753E-01	-2.1333E-02	-1.5325E-01	1.4093E-01	
6.8	-5.7212E-02	1.2699E-01	9.1298E-02	-1.0867E-01	1.3533E-01	
7.0	-1.3414E-01	3.1992E-02	1.4335E-01	-2.8895E-03	4.8867E-02	
7.2	-1.2613E-01	-7.6693E-02	1.0760E-01	9.8588E-02	-6.2015E-02	
7.4	-4.2794E-02	-1.3368E-01	1.0082E-02	1.3646E-01	-1.2960E-01	
7.6	6.1785E-02	-1.0790E-01	-8.8188E-02	9.1937E-02	-1.1584E-01	
7.8	1.2381E-01	-1.9109E-02	-1.2903E-01	-4.4662E-03	-3.3312E-02	
8.0	1.0834E-01	7.6577E-02	-9.1232E-02	-9.3334E-02	6.5005E-02	
8.2	2.8581E-02	1.2183E-01	-1.1372E-03	-1.2268E-01	1.1947E-01	
8.4	-6.4495E-02	9.2167E-02	8.5281E-02	-7.8106E-02	9.9648E-02	
8.6	-1.1446E-01	8.8721E-03	1.1694E-01	1.0560E-02	2.0989E-02	
8.8	-9.3401E-02	-7.5887E-02	7.7607E-02	8.8890E-02	-6.6642E-02	
9.0	-1.7206E-02	-1.1150E-01	-6.1214E-03	1.1105E-01	-1.1036E-01	
9.2	6.5972E-02	-7.8919E-02	-8.2523E-02	6.6426E-02	-8.5944E-02	
9.4	1.0596E-01	-5.7265E-04	-1.0650E-01	-1.5664E-02	-1.1020E-02	
9.6	8.0636E-02	7.4817E-02	-6.6041E-02	-8.5001E-02	6.7362E-02	
9.8	7.9340E-03	1.0236E-01	1.2102E-02	-1.0102E-01	1.0209E-01	
10.0	-6.6598E-02	6.7574E-02	7.9874E-02	-5.6359E-02	7.4161E-02	
10.2	-9.8184E-02	-6.2600E-03	9.7338E-02	1.9973E-02	2.8266E-03	
10.4	-6.9577E-02	-7.3483E-02	5.6068E-02	8.1501E-02	-6.7437E-02	
10.6	-2.6884E-04	-9.4173E-02	-1.7083E-02	9.2214E-02	-9.4550E-02	
10.8	6.6614E-02	-5.7721E-02	-7.7306E-02	4.7659E-02	-6.3896E-02	
11.0	9.1032E-02	1.1950E-02	-8.9170E-02	-2.3630E-02	3.9928E-03	
11.2	5.9885E-02	7.1958E-02	-4.7357E-02	-7.8281E-02	6.7042E-02	
11.4	-6.1376E-03	8.6751E-02	2.1264E-02	-8.4367E-02	8.7610E-02	
11.6	-6.6181E-02	4.9066E-02	7.4797E-02	-3.9966E-02	5.4857E-02	
11.8	-8.4411E-02	-1.6727E-02	8.1800E-02	2.6743E-02	-9.7215E-03	
12.0	-5.1308E-02	-7.0290E-02	3.9669E-02	7.5256E-02	-6.6295E-02	
12.2	1.1536E-02	-7.9961E-02	-2.4790E-02	7.7288E-02	-8.1183E-02	
12.4	6.5407E-02	-4.1391E-02	-7.2331E-02	3.3128E-02	-4.6824E-02	
12.6	7.8248E-02	2.0760E-02	-7.5084E-02	-2.9394E-02	1.4567E-02	
12.8	4.3654E-02	6.8511E-02	-3.2825E-02	-7.2400E-02	6.5277E-02	
13.0	-1.6110E-02	7.3701E-02	2.7770E-02	-7.0837E-02	7.5198E-02	
13.2	-6.4369E-02	3.4531E-02	6.9896E-02	-2.7005E-02	3.9632E-02	
13.4	-7.2483E-02	-2.4175E-02	6.8911E-02	3.1647E-02	-1.8683E-02	
13.6	-3.6777E-02	-6.6644E-02	2.6690E-02	6.9650E-02	-6.4046E-02	
13.8	1.9999E-02	-6.7889E-02	-3.0286E-02	6.4907E-02	-6.9595E-02	
14.0	6.3122E-02	-2.8361E-02	-6.7484E-02	2.1488E-02	-3.3153E-02	
14.2	6.7067E-02	2.7069E-02	-6.3196E-02	-3.3553E-02	2.2187E-02	
14.4	3.0568E-02	6.4705E-02	-2.1157E-02	-6.6985E-02	6.2644E-02	
14.6	-2.3310E-02	6.2464E-02	3.2404E-02	-5.9416E-02	6.4326E-02	
14.8	-6.1707E-02	2.2783E-02	6.5087E-02	-1.6493E-02	2.7285E-02	
15.0	-6.1958E-02	-2.9515E-02	5.7873E-02	3.5153E-02	-2.5171E-02	
15.2	-2.4932E-02	-6.2707E-02	1.6147E-02	6.4387E-02	-6.1104E-02	
15.4	2.6128E-02	-5.7374E-02	-3.4174E-02	5.4301E-02	-5.9353E-02	
15.6	6.0154E-02	-1.7717E-02	-6.2702E-02	1.1951E-02	-2.1349E-02	
15.8	5.7123E-02	3.1574E-02	-5.2890E-02	-3.6481E-02	2.7706E-02	
16.0	1.9797E-02	6.0660E-02	-1.1592E-02	-6.1840E-02	5.9450E-02	
16.2	-2.8517E-02	5.2580E-02	3.5639E-02	-4.9512E-02	5.4643E-02	
16.4	-5.8487E-02	1.3103E-02	6.0325E-02	-7.8111E-03	1.7081E-02	
16.6	-5.2535E-02	-3.3294E-02	4.8207E-02	3.7564E-02	-2.9851E-02	
16.8	-1.5106E-02	-5.8572E-02	7.4400E-03	5.9334E-02	-5.7700E-02	
17.0	3.0532E-02	-4.8049E-02	-3.6831E-02	4.5011E-02	-5.0172E-02	
17.2	5.6727E-02	-8.8887E-03	-5.7954E-02	4.0278E-03	-1.2627E-02	
17.4	4.8170E-02	3.4712E-02	-4.3789E-02	-3.8426E-02	3.1651E-02	
17.6	1.0811E-02	5.6450E-02	-3.6481E-03	-5.6860E-02	5.5871E-02	
17.8	-3.2216E-02	4.3756E-02	3.7779E-02	-4.0763E-02	4.5916E-02	
18.0	-5.4887E-02	5.0332E-03	5.5589E-02	-5.6581E-04	8.5454E-03	
18.2	-4.4011E-02	-3.5863E-02	3.9610E-02	3.9085E-02	-3.3146E-02	
18.4	-6.8718E-03	-5.4298E-02	1.8061E-04	5.4412E-02	-5.3975E-02	
18.6	3.3605E-02	-3.9678E-02	-3.8507E-02	3.6746E-02	-4.1859E-02	
18.8	5.2981E-02	-1.5020E-03	-5.3228E-02	-2.6046E-03	-4.7999E-03	
19.0	4.0041E-02	3.6771E-02	-3.5648E-02	-3.9560E-02	3.4367E-02	
19.2	3.2564E-03	5.2123E-02	2.9919E-03	-5.1988E-02	5.2023E-02	
19.4	-3.4730E-02	3.5797E-02	3.9034E-02	-3.2936E-02	3.7986E-02	
19.6	-5.1020E-02	-1.7337E-03	5.0873E-02	5.5084E-03	1.3608E-03	
19.8	-3.6248E-02	-3.7462E-02	3.1885E-02	3.9865E-02	-3.5342E-02	
20.0	6.3266E-05	-4.9929E-02	-5.8943E-03	4.9584E-02	-5.0024E-02	

Table 24b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

	A= C.4	KAPPA=4,0		
t	G(1,2)	G(1,3)	G(2,2)	G(2,3)
1,2	5.6414E-01	1.3511E 00	9.8383E-01	1.5731E 00
1,4	-4.6701E-01	2.7408E-01	-1.4413E-01	4.8664E-01
1,6	-7.5624E-01	-3.8515E-01	-6.6149E-01	-2.2752E-01
1,8	-5.0565E-01	-6.4646E-01	-5.9120E-01	-5.8918E-01
2,0	-2.8723E-02	-5.2529E-01	-1.7300E-01	-5.5695E-01
2,2	3.5337E-01	-1.6852E-01	2.5433E-01	-2.4228E-01
2,4	4.5087E-01	2.0204E-01	4.3907E-01	1.3721E-01
2,6	2.6708E-01	3.9678E-01	3.2334E-01	3.7196E-01
2,8	-4.2594E-02	3.4430E-01	3.1008E-02	3.6176E-01
3,0	-2.8064E-01	1.1091E-01	-2.3607E-01	1.5075E-01
3,2	-3.2115E-01	-1.5129E-01	-3.2416E-01	-1.1578E-01
3,4	-1.6810E-01	-2.9488E-01	-2.0641E-01	-2.8205E-01
3,6	6.5162E-02	-2.5509E-01	2.0809E-02	-2.6728E-01
3,8	2.3371E-01	-7.3404E-02	2.0989E-01	-1.0104E-01
4,0	2.4681E-01	1.2792E-01	2.5334E-01	1.0551E-01
4,2	1.1330E-01	2.3752E-01	1.4106E-01	2.3026E-01
4,4	-7.4148E-02	2.0033E-01	-4.4688E-02	2.0975E-01
4,6	-2.0076E-01	5.1240E-02	-1.8682E-01	6.9418E-02
4,8	-1.9787E-01	-1.1440E-01	-2.0510E-01	-9.9032E-02
5,0	-7.8363E-02	-1.9999E-01	-9.9477E-02	-1.9571E-01
5,2	7.7903E-02	-1.6270E-01	5.7067E-02	-1.7040E-01
5,4	1.7611E-01	-3.3685E-02	1.6757E-01	-4.7386E-02
5,6	1.6285E-01	1.0542E-01	1.6994E-01	9.4291E-02
5,8	5.4099E-02	1.7310E-01	7.0753E-02	1.7059E-01
6,0	-7.9251E-02	1.3495E-01	-6.3863E-02	1.4147E-01
6,2	-1.5678E-01	2.0336E-02	-1.5146E-01	3.1106E-02
6,4	-1.3635E-01	-9.8850E-02	-1.4304E-01	-9.0490E-02
6,6	-3.6255E-02	-1.5262E-01	-4.9757E-02	-1.5122E-01
6,8	7.9348E-02	-1.1346E-01	6.7632E-02	-1.1911E-01
7,0	1.4107E-01	-9.8453E-03	1.3779E-01	-1.8570E-02
7,2	1.1545E-01	9.3694E-02	1.2168E-01	8.7247E-02
7,4	2.2586E-02	1.3630E-01	3.3768E-02	1.3565E-01
7,6	-7.8738E-02	9.6205E-02	-6.9616E-02	1.0120E-01
7,8	-1.2792E-01	1.3945E-03	-1.2601E-01	8.6239E-03
8,0	-9.8447E-02	-8.9421E-02	-1.0423E-01	-8.4356E-02
8,2	-1.1798E-02	-1.2285E-01	-2.1212E-02	-1.2272E-01
8,4	7.7696E-02	-8.1962E-02	7.0478E-02	-8.6432E-02
8,6	1.1666E-01	5.5399E-03	1.1570E-01	-5.5449E-04
8,8	8.4280E-02	8.5728E-02	8.9635E-02	8.1696E-02
9,0	3.0885E-03	1.1147E-01	1.1118E-02	1.1171E-01
9,2	-7.6374E-02	6.9949E-02	-7.0598E-02	7.3991E-02
9,4	-1.0684E-01	-1.1310E-02	-1.0655E-01	-6.1031E-03
9,6	-7.2244E-02	-8.2427E-02	-7.7210E-02	-7.9192E-02
9,8	4.0631E-03	-1.0163E-01	-2.8577E-03	-1.0213E-01
10,0	7.4861E-02	-5.9640E-02	7.0203E-02	-6.3324E-02
10,2	9.8131E-02	1.6160E-02	9.8331E-02	1.1665E-02
10,4	6.1857E-02	7.9400E-02	6.6470E-02	7.6791E-02
10,6	-1.0011E-02	9.2969E-02	-3.9968E-03	9.3661E-02
10,8	-7.3209E-02	5.0667E-02	-6.9438E-02	5.4047E-02
11,0	-9.0310E-02	-2.0266E-02	-9.0871E-02	-1.6354E-02
11,2	-5.2777E-02	-7.6568E-02	-5.7071E-02	-7.4462E-02
11,4	1.5005E-02	-8.5233E-02	9.7440E-03	-8.6069E-02
11,6	7.1453E-02	-4.2769E-02	6.8397E-02	-4.5885E-02
11,8	8.3208E-02	2.3759E-02	8.4038E-02	2.0332E-02
12,0	4.4757E-02	7.3875E-02	4.8759E-02	7.2179E-02
12,2	-1.9224E-02	7.8241E-02	-1.8599E-02	7.9184E-02
12,4	-6.9615E-02	3.5749E-02	-6.7144E-02	3.8633E-02
12,6	-7.6699E-02	-2.6736E-02	-7.7730E-02	-2.3719E-02
12,8	-3.7610E-02	-7.1284E-02	-4.1347E-02	-6.9927E-02
13,0	2.2804E-02	-7.1857E-02	1.8722E-02	-7.2880E-02
13,2	6.7711E-02	-2.9463E-02	1.5724E-02	-3.2141E-02
13,4	7.0686E-02	2.9272E-02	7.1868E-02	2.6608E-02
13,6	3.1197E-02	6.8766E-02	3.4690E-02	6.7694E-02
13,8	-2.5846E-02	6.5978E-02	-2.2232E-02	6.7059E-02
14,0	-6.5752E-02	2.3798E-02	-6.4171E-02	2.6291E-02
14,2	-6.5094E-02	-3.1428E-02	-6.6389E-02	-2.9068E-02
14,4	-2.5408E-02	-6.6302E-02	-2.8676E-02	-6.5471E-02
14,6	2.8428E-02	-6.0526E-02	2.5223E-02	-6.1649E-02
14,8	6.3746E-02	-1.8667E-02	6.2508E-02	-2.0992E-02
15,0	5.9865E-02	3.3250E-02	6.1244E-02	3.1156E-02
15,2	2.0159E-02	6.3879E-02	2.3218E-02	6.3252E-02
15,4	-3.0612E-02	5.5441E-02	-2.7767E-02	5.6591E-02
15,6	-6.1700E-02	1.4001E-02	-6.0754E-02	1.6172E-02
15,8	-5.4953E-02	-3.4776E-02	-5.6391E-02	-3.2918E-02
16,0	-1.5380E-02	-6.1485E-02	-1.8245E-02	-6.1033E-02
16,2	3.2449E-02	-5.0672E-02	2.9922E-02	-5.1841E-02
16,4	5.9619E-02	-9.7434E-03	5.8924E-02	-1.1773E-02
16,6	5.0321E-02	3.6039E-02	5.1800E-02	3.4390E-02
16,8	1.1016E-02	5.9112E-02	1.3702E-02	5.8813E-02
17,0	-3.3979E-02	4.6184E-02	-3.1736E-02	4.7361E-02
17,2	-5.7508E-02	5.8503E-03	-5.7029E-02	7.7487E-03
17,4	-4.5938E-02	-3.7063E-02	-4.7442E-02	-3.5602E-02
17,6	-7.0243E-03	-5.6757E-02	-9.5404E-03	-5.6589E-02
17,8	3.5234E-02	-4.1944E-02	3.3246E-02	-4.3123E-02
18,0	5.5372E-02	-2.2846E-03	5.5080E-02	-4.0609E-03
18,2	4.1780E-02	3.7872E-02	4.3298E-02	3.6580E-02
18,4	3.3665E-03	5.4415E-02	5.7236E-03	5.4362E-02
18,6	-3.6242E-02	3.7928E-02	-3.4484E-02	3.9104E-02
18,8	-5.3214E-02	-9.8426E-04	-5.3085E-02	6.7769E-04
19,0	-3.7827E-02	-3.8484E-02	-3.9348E-02	-3.7344E-02
19,2	-1.2257E-05	-5.2084E-02	-2.2194E-03	-5.2131E-02
19,4	3.7028E-02	-3.4115E-02	3.5478E-02	-3.5283E-02
19,6	5.1038E-02	3.9819E-03	5.1051E-02	2.4274E-03
19,8	3.4063E-02	3.8915E-02	3.5579E-02	3.7914E-02
20,0	-3.0642E-03	4.9763E-02	-9.9891E-04	4.9985E-02

Table 25a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

	A= 1.0					KAPPA=0.4					
t	F(0,0)	F(0,1)	F(0,2)	F(0,3)	F(1,1)		F(0,0)	F(0,1)	F(0,2)	F(0,3)	F(1,1)
1.0	7.1181E-01	2.3466E-01	1.5173E-02	5.6102E-04	0.0000E-01						
1.2	6.3450E-01	2.5452E-01	2.3063E-02	1.3119E-03	1.1500E-01						
1.4	5.6038E-01	2.7036E-01	3.1678E-02	2.3574E-03	1.5997E-01						
1.6	4.8973E-01	2.8239E-01	4.0856E-02	3.7202E-03	1.9159E-01						
1.8	4.2275E-01	2.9086E-01	5.0444E-02	5.4167E-03	2.1514E-01						
2.0	3.5958E-01	2.9600E-01	6.0293E-02	7.4569E-03	2.3271E-01						
2.2	3.0034E-01	2.9804E-01	7.0263E-02	9.8450E-03	2.4540E-01						
2.4	2.4507E-01	2.9723E-01	8.0221E-02	1.2580E-02	2.5392E-01						
2.6	1.9381E-01	2.9378E-01	9.0044E-02	1.5654E-02	2.5880E-01						
2.8	1.4656E-01	2.8795E-01	9.9615E-02	1.9055E-02	2.6044E-01						
3.0	1.0329E-01	2.7996E-01	1.0883E-01	2.2768E-02	2.5919E-01						
3.2	6.3945E-02	2.7004E-01	1.1759E-01	2.6772E-02	2.5537E-01						
3.4	2.8455E-02	2.5840E-01	1.2580E-01	3.1041E-02	2.4926E-01						
3.6	-3.2704E-03	2.4528E-01	1.3340E-01	3.5547E-02	2.4113E-01						
3.8	-3.1338E-02	2.3089E-01	1.4030E-01	4.0259E-02	2.3121E-01						
4.0	-5.5870E-02	2.1542E-01	1.4646E-01	4.5144E-02	2.1975E-01						
4.2	-7.7000E-02	1.9909E-01	1.5181E-01	5.0163E-02	2.0698E-01						
4.4	-9.4875E-02	1.8209E-01	1.5633E-01	5.5281E-02	1.9309E-01						
4.6	-1.0965E-01	1.6460E-01	1.5997E-01	6.0457E-02	1.7831E-01						
4.8	-1.2149E-01	1.4680E-01	1.6272E-01	6.5650E-02	1.6282E-01						
5.0	-1.3056E-01	1.2886E-01	1.6456E-01	7.0819E-02	1.4682E-01						
5.2	-1.3703E-01	1.1093E-01	1.6548E-01	7.5924E-02	1.3046E-01						
5.4	-1.4110E-01	9.3156E-02	1.6549E-01	8.0922E-02	1.1393E-01						
5.6	-1.4294E-01	7.5683E-02	1.5461E-01	8.5775E-02	9.7374E-02						
5.8	-1.4272E-01	5.8634E-02	1.6283E-01	9.0441E-02	8.0939E-02						
6.0	-1.4065E-01	4.2126E-02	1.6020E-01	9.4883E-02	6.4758E-02						
6.2	-1.3689E-01	2.6263E-02	1.5674E-01	9.9064E-02	4.8956E-02						
6.4	-1.3164E-01	1.1138E-02	1.5248E-01	1.0295E-01	3.3647E-02						
6.6	-1.2507E-01	-3.1656E-03	1.4748E-01	1.0651E-01	1.8933E-02						
6.8	-1.1735E-01	-1.6576E-02	1.4177E-01	1.0970E-01	4.9050E-03						
7.0	-1.0866E-01	-2.9031E-02	1.3540E-01	1.1252E-01	-8.3553E-03						
7.2	-9.9160E-02	-4.0481E-02	1.2844E-01	1.1492E-01	-2.0778E-02						
7.4	-8.9015E-02	-5.0886E-02	1.2094E-01	1.1689E-01	-3.2302E-02						
7.6	-7.8375E-02	-6.0215E-02	1.1296E-01	1.1841E-01	-4.2880E-02						
7.8	-6.7389E-02	-6.8450E-02	1.0456E-01	1.1946E-01	-5.2471E-02						
8.0	-5.6193E-02	-7.5578E-02	9.5806E-02	1.2003F-01	-6.1046E-02						
8.2	-4.4920E-02	-8.1598E-02	8.6767E-02	1.2012E-01	-6.8584E-02						
8.4	-3.3691E-02	-8.6517E-02	7.7508E-02	1.1972E-01	-7.5076E-02						
8.6	-2.2621E-02	-9.0350E-02	6.8093E-02	1.1883E-01	-8.0518E-02						
8.8	-1.1814E-02	-9.3120E-02	5.8589E-02	1.1744E-01	-8.4917E-02						
9.0	-1.3649E-03	-9.4857E-02	4.9061E-02	1.1557E-01	-8.8288E-02						
9.2	8.6388E-03	-9.5597E-02	3.9571E-02	1.1323E-01	-9.0651E-02						
9.4	1.8120E-02	-9.5382E-02	3.0182E-02	1.1042E-01	-9.2035E-02						
9.6	2.7012E-02	-9.4260E-02	2.0952E-02	1.0717E-01	-9.2475E-02						
9.8	3.5255E-02	-9.2283E-02	1.1939E-02	1.0348E-01	-9.2011E-02						
10.0	4.2800E-02	-8.9510E-02	3.1960E-03	9.9385E-02	-9.0689E-02						
10.2	4.9608E-02	-8.5999E-02	-5.2257E-03	9.4905E-02	-8.8559E-02						
10.4	5.5645E-02	-8.1816E-02	-1.3279E-02	9.0065E-02	-8.5677E-02						
10.6	6.0890E-02	-7.7024E-02	-2.0921E-02	8.4895E-02	-8.2100E-02						
10.8	6.5332E-02	-7.1694E-02	-2.8111E-02	7.9425E-02	-7.7889E-02						
11.0	6.8949E-02	-6.5893E-02	-3.4815E-02	7.3687E-02	-7.3108E-02						
11.2	7.1758E-02	-5.9692E-02	-4.1001E-02	6.7715E-02	-6.7822E-02						
11.4	7.3761E-02	-5.3161E-02	-4.6642E-02	6.1544E-02	-6.2098E-02						
11.6	7.4972E-02	-4.6369E-02	-5.1716E-02	5.5211E-02	-5.6002E-02						
11.8	7.5412E-02	-3.9386E-02	-5.6206E-02	4.8752E-02	-4.9602E-02						
12.0	7.5109E-02	-3.2279E-02	-6.0097E-02	4.2205E-02	-4.2965E-02						
12.2	7.4093E-02	-2.5114E-02	-6.3382E-02	3.5608E-02	-3.6157E-02						
12.4	7.2431E-02	-1.7956E-02	-6.6055E-02	2.8998E-02	-2.9243E-02						
12.6	7.0074E-02	-1.0864E-02	-6.8117E-02	2.2414E-02	-2.2288E-02						
12.8	6.7158E-02	-3.8988E-03	-6.9572E-02	1.5892E-02	-1.5351E-02						
13.0	6.3700E-02	2.8859E-03	-7.0429E-02	9.4679E-03	-8.4911E-03						
13.2	5.9750E-02	9.6383E-03	-7.0699E-02	3.1780E-03	-1.7650E-03						
13.4	5.5362E-02	1.5710E-02	-7.0398E-02	-2.9440E-03	4.7748E-03						
13.6	5.0589E-02	2.1658E-02	-6.9547E-02	-8.8654E-03	1.1079E-02						
13.8	4.5489E-02	2.7242E-02	-6.8168E-02	-1.4555E-02	1.7102E-02						
14.0	4.0116E-02	3.2427E-02	-6.6287E-02	-1.9984E-02	2.2802E-02						
14.2	3.4529E-02	3.7182E-02	-6.3933E-02	-2.5125E-02	2.8141E-02						
14.4	2.8783E-02	4.1479E-02	-6.1138E-02	-2.9952E-02	3.3085E-02						
14.6	2.2933E-02	4.5298E-02	-5.7935E-02	-3.4444E-02	3.7605E-02						
14.8	1.7035E-02	4.8621E-02	-5.4360E-02	-3.8579E-02	4.1677E-02						
15.0	1.1141E-02	5.1435E-02	-5.0451E-02	-4.2339E-02	4.5279E-02						
15.2	5.3037E-03	5.3732E-02	-4.6246E-02	-4.5711E-02	4.8395E-02						
15.4	-4.2922E-04	5.5508E-02	-4.1785E-02	-4.8679E-02	5.1014E-02						
15.6	-6.0107E-03	5.6762E-02	-3.7109E-02	-5.1236E-02	5.3129E-02						
15.8	-1.1397E-02	5.7500E-02	-3.2259E-02	-5.3374E-02	5.4735E-02						
16.0	-1.6547E-02	5.7730E-02	-2.7277E-02	-5.5088E-02	5.5835E-02						
16.2	-2.1424E-02	5.7464E-02	-2.2203E-02	-5.6376E-02	5.6432E-02						
16.4	-2.5994E-02	5.6717E-02	-1.7078E-02	-5.7241E-02	5.6536E-02						
16.6	-3.0225E-02	5.5510E-02	-1.1944E-02	-5.7685E-02	5.6160E-02						
16.8	-3.4092E-02	5.3863E-02	-6.8380E-03	-5.7715E-02	5.5319E-02						
17.0	-3.7571E-02	5.1802E-02	-1.7990E-03	-5.7340E-02	5.4032E-02						
17.2	-4.0644E-02	4.9355E-02	-3.1364E-03	-5.5572E-02	5.2321E-02						
17.4	-4.2294E-02	4.6551E-02	-7.9335E-03	-5.5423E-02	5.0212E-02						
17.6	-4.5511E-02	4.3423E-02	-1.2559E-02	-5.3911E-02	4.7731E-02						
17.8	-4.7287E-02	4.0004E-02	-1.6982E-02	-5.2052E-02	4.4908E-02						
18.0	-4.8618E-02	3.6328E-02	-2.1174E-02	-4.9867E-02	4.1775E-02						
18.2	-4.9505E-02	3.2432E-02	-2.5108E-02	-4.7378E-02	3.8364E-02						
18.4	-4.9951E-02	2.8353E-02	-2.8761E-02	-4.4608E-02	3.4710E-02						
18.6	-4.9963E-02	2.4128E-02	-3.2111E-02	-4.1582E-02	3.0848E-02						
18.8	-4.9551E-02	1.9794E-02	-3.5140E-02	-3.8325E-02	2.6813E-02						
19.0	-4.8730E-02	1.5389E-02	-3.7831E-02	-3.4865E-02	2.2644E-02						
19.2	-4.7514E-02	1.0949E-02	-4.0173E-02	-3.1229E-02	1.8375E-02						
19.4	-4.5925E-02	6.5121E-03	-4.2154E-02	-2.7446E-02	1.4045E-02						
19.6	-4.3983E-02	2.1124E-03	-4.3769E-02	-2.3545E-02	9.6876E-03						
19.8	-4.1712E-02	-2.2154E									

Table 25b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A = 1.0	KAPPA=0.4
1.0	F(1,2) 0.0000E-01	F(1,3) 0.0000E-01
1.2	1.5576E-02	1.0487E-03
1.4	2.5525E-02	2.1080E-03
1.6	3.5401E-02	3.4648E-03
1.8	4.5444E-02	5.1491E-03
2.0	5.5633E-02	7.1750E-03
2.2	6.5881E-02	9.5485E-03
2.4	7.6084E-02	1.2269E-02
2.6	8.6132E-02	1.5329E-02
2.8	9.5918E-02	1.8719E-02
3.0	1.0534E-01	2.2421E-02
3.2	1.1431E-01	2.6415E-02
3.4	1.2273E-01	3.0676E-02
3.6	1.3053E-01	3.5176E-02
3.8	1.3764E-01	3.9883E-02
4.0	1.4401E-01	4.4765E-02
4.2	1.4957E-01	4.9783E-02
4.4	1.5429E-01	5.4901E-02
4.6	1.5814E-01	6.0079E-02
4.8	1.6110E-01	6.5276E-02
5.0	1.6314E-01	7.0452E-02
5.2	1.6427E-01	7.5564E-02
5.4	1.6448E-01	8.0571E-02
5.6	1.6378E-01	8.5434E-02
5.8	1.6220E-01	9.0112E-02
6.0	1.5975E-01	9.4566E-02
6.2	1.5646E-01	9.8762E-02
6.4	1.5237E-01	1.0266E-01
6.6	1.4753E-01	1.0624E-01
6.8	1.4197E-01	1.0945E-01
7.0	1.3574E-01	1.1228E-01
7.2	1.2891E-01	1.1470E-01
7.4	1.2153E-01	1.1669E-01
7.6	1.1366E-01	1.1823E-01
7.8	1.0536E-01	1.1930E-01
8.0	9.6695E-02	1.1990E-01
8.2	8.7733E-02	1.2001E-01
8.4	7.8540E-02	1.1963E-01
8.6	6.9181E-02	1.1876E-01
8.8	5.9721E-02	1.1739E-01
9.0	5.0226E-02	1.1554E-01
9.2	4.0759E-02	1.1322E-01
9.4	3.1383E-02	1.1043E-01
9.6	2.2156E-02	1.0719E-01
9.8	1.3135E-02	1.0353E-01
10.0	4.3765E-03	9.9448E-02
10.2	-4.0700E-03	9.4984E-02
10.4	-1.2156E-02	9.0159E-02
10.6	-1.9839E-02	8.5003E-02
10.8	-2.7077E-02	7.9546E-02
11.0	-3.3834E-02	7.3820E-02
11.2	-4.0080E-02	6.7859E-02
11.4	-4.5786E-02	6.1697E-02
11.6	-5.0929E-02	5.5372E-02
11.8	-5.5492E-02	4.8920E-02
12.0	-5.9460E-02	4.2379E-02
12.2	-6.2823E-02	3.5786E-02
12.4	-6.5577E-02	2.9180E-02
12.6	-6.7720E-02	2.2597E-02
12.8	-6.9257E-02	1.6075E-02
13.0	-7.0195E-02	9.6509E-03
13.2	-7.0546E-02	3.3591E-03
13.4	-7.0325E-02	-2.7659E-03
13.6	-6.9551E-02	-8.6913E-03
13.8	-6.8247E-02	-1.4386E-02
14.0	-6.6439E-02	-1.9821E-02
14.2	-6.4154E-02	-2.4969E-02
14.4	-6.1424E-02	-2.9804E-02
14.6	-5.8282E-02	-3.4304E-02
14.8	-5.4763E-02	-3.8449E-02
15.0	-5.0905E-02	-4.2219E-02
15.2	-4.6747E-02	-4.5601E-02
15.4	-4.2327E-02	-4.8581E-02
15.6	-3.7687E-02	-5.1149E-02
15.8	-3.2867E-02	-5.3298E-02
16.0	-2.7909E-02	-5.5024E-02
16.2	-2.2854E-02	-5.6324E-02
16.4	-1.7743E-02	-5.7201E-02
16.6	-1.2617E-02	-5.7657E-02
16.8	-7.5130E-03	-5.7699E-02
17.0	-2.4709E-03	-5.7336E-02
17.2	2.4728E-03	-5.6578E-02
17.4	7.2832E-03	-5.5441E-02
17.6	1.1927E-02	-5.3939E-02
17.8	1.6373E-02	-5.2090E-02
18.0	2.0591E-02	-4.9915E-02
18.2	2.4556E-02	-4.7435E-02
18.4	2.8243E-02	-4.4674E-02
18.6	3.1631E-02	-4.1655E-02
18.8	3.4700E-02	-3.8405E-02
19.0	3.7435E-02	-3.4951E-02
19.2	3.9821E-02	-3.1321E-02
19.4	4.1850E-02	-2.7543E-02
19.6	4.3512E-02	-2.3646E-02
19.8	4.4804E-02	-1.9660E-02
20.0	4.5723E-02	-1.5614E-02
		F(2,3) 0.0000E-01
		6.5195E-04
		1.6025E-03
		2.8747E-03
		4.4853E-03
		6.4447E-03
		8.7576E-03
		1.1423E-02
		1.0216E-02
		1.3131E-02
		1.6388E-02
		1.9974E-02
		2.3867E-02
		2.8043E-02
		3.2473E-02
		3.7126E-02
		4.1968E-02
		4.6963E-02
		5.2072E-02
		5.7255E-02
		6.2471E-02
		6.7680E-02
		7.2839E-02
		7.7906E-02
		8.2840E-02
		8.7602E-02
		9.2152E-02
		9.6452E-02
		1.0047E-01
		1.0416E-01
		1.0751E-01
		1.1048E-01
		1.1304E-01
		1.1518E-01
		1.1687E-01
		1.1810E-01
		1.1886E-01
		1.1913E-01
		1.1891E-01
		1.1819E-01
		1.1699E-01
		1.1529E-01
		1.1312E-01
		1.1048E-01
		1.0739E-01
		1.0386E-01
		9.9912E-02
		9.5573E-02
		9.0866E-02
		8.5820E-02
		8.0464E-02
		7.4830E-02
		6.8952E-02
		6.2865E-02
		5.6604E-02
		5.0206E-02
		4.3710E-02
		3.7152E-02
		3.0570E-02
		2.4003E-02
		1.7486E-02
		1.1058E-02
		4.7536E-03
		-1.3932E-03
		-7.3489E-03
		-1.3082E-02
		-1.8563E-02
		-2.3763E-02
		-2.8658E-02
		-3.3224E-02
		-3.7439E-02
		-4.1286E-02
		-4.4748E-02
		-4.7811E-02
		-5.0466E-02
		-5.2704E-02
		-5.4521E-02
		-5.6619E-02
		-5.5913E-02
		-5.6882E-02
		-5.7430E-02
		-5.7563E-02
		-5.7289E-02
		-5.6595E-02
		-5.5567E-02
		-5.4147E-02
		-5.2377E-02
		-5.0277E-02
		-4.7867E-02
		-4.5170E-02
		-4.2212E-02
		-3.9017E-02
		-3.5612E-02
		-3.2025E-02
		-2.8285E-02
		-2.4419E-02
		-2.0458E-02
		-1.6430E-02

Table 26a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 1.0	KAPPA=0.4			
1.2	G(0,0)	G(0,1)	G(0,2)	G(0,3)	G(1,1)
1.4	3.7344E-01	1.2229E 00	6.3103E 00	7.2074E 01	1.4229E 00
1.6	1.4162E-01	8.2008E-01	3.1704E 00	2.7090E 01	9.0405E-01
1.8	8.7457E-03	6.1553E-01	1.9872E 00	1.3593E 01	6.7368E-01
2.0	-7.9022E-02	4.8276E-01	1.3935E 00	7.9017E 00	5.3323E-01
2.2	-1.3969E-01	3.8540E-01	1.0487E 00	5.0450E 00	4.3349E-01
2.4	-1.8183E-01	3.0859E-01	8.2887E-01	3.4438E 00	3.5599E-01
2.6	-2.1036E-01	2.4508E-01	6.7891E-01	2.4739E 00	2.9224E-01
2.8	-2.2841E-01	1.9095E-01	5.7100E-01	1.8509E 00	2.3779E-01
3.0	-2.3821E-01	1.4386E-01	4.8984E-01	1.4319E 00	1.9014E-01
3.2	-2.4138E-01	1.0239E-01	4.2641E-01	1.1394E 00	1.4779E-01
3.4	-2.3919E-01	6.5591E-02	3.7514E-01	9.2875E-01	1.0979E-01
3.6	-2.3266E-01	3.2835E-02	3.3244E-01	7.7291E-01	7.5510E-02
3.8	-2.2262E-01	3.6762E-03	2.9590E-01	6.5490E-01	4.4545E-02
4.0	-2.0977E-01	-2.2212E-02	2.6391E-01	5.6363E-01	1.6598E-02
4.2	-1.9473E-01	-4.5079E-02	2.3534E-01	4.9169E-01	-8.5445E-03
4.4	-1.7800E-01	-6.5120E-02	2.0938E-01	4.3395E-01	-3.1044E-02
4.6	-1.6005E-01	-8.2503E-02	1.8547E-01	3.8681E-01	-5.1031E-02
4.8	-1.4126E-01	-9.7369E-02	1.6321E-01	3.4769E-01	-6.8617E-02
5.0	-1.2199E-01	-1.0985E-01	1.4231E-01	3.1471E-01	-8.3900E-02
5.2	-1.0253E-01	-1.2007E-01	1.2255E-01	2.8645E-01	-9.6973E-02
5.4	-8.3171E-02	-1.2815E-01	1.0381E-01	2.6188E-01	-1.0793E-01
5.6	-6.4132E-02	-1.3420E-01	8.5984E-02	2.4019E-01	-1.1685E-01
5.8	-4.5621E-02	-1.3835E-01	6.9006E-02	2.2077E-01	-1.2384E-01
6.0	-2.7814E-02	-1.4070E-01	5.2840E-02	2.0314E-01	-1.2899E-01
6.2	-1.0863E-02	-1.4138E-01	3.7465E-02	1.8695E-01	-1.3239E-01
6.4	5.1051E-03	-1.4050E-01	2.2876E-02	1.7189E-01	-1.3415E-01
6.6	1.9985E-02	-1.3820E-01	9.0742E-03	1.5776E-01	-1.3437E-01
6.8	3.3692E-02	-1.3458E-01	-3.9309E-03	1.4437E-01	-1.3316E-01
7.0	4.6160E-02	-1.2977E-01	-1.6126E-02	1.3159E-01	-1.3062E-01
7.2	5.7341E-02	-1.2390E-01	-2.7497E-02	1.1932E-01	-1.2687E-01
7.4	6.7202E-02	-1.1708E-01	-3.8029E-02	1.0748E-01	-1.2203E-01
7.6	7.5728E-02	-1.0944E-01	-4.7707E-02	9.6010E-02	-1.1619E-01
7.8	8.2914E-02	-1.0110E-01	-5.6518E-02	8.4874E-02	-1.0948E-01
8.0	8.8771E-02	-9.2164E-02	-6.4452E-02	7.4042E-02	-1.0201E-01
8.2	9.3321E-02	-8.2759E-02	-7.1503E-02	6.3499E-02	-9.3894E-02
8.4	9.6595E-02	-7.2994E-02	-7.7666E-02	5.3236E-02	-8.5238E-02
8.6	9.8636E-02	-6.2975E-02	-8.2943E-02	4.3253E-02	-7.6150E-02
8.8	9.9495E-02	-5.2807E-02	-8.7338E-02	3.3558E-02	-6.6738E-02
9.0	9.7902E-02	-3.2416E-02	-9.3520E-02	1.5071E-02	-4.7342E-02
9.2	9.5587E-02	-2.2376E-02	-9.5339E-02	6.3099E-03	-3.7550E-02
9.4	9.2357E-02	-1.2551E-02	-9.6337E-02	-2.1048E-03	-2.7816E-02
9.6	8.8291E-02	-3.0205E-03	-9.6539E-02	-1.0154E-02	-1.8224E-02
9.8	8.3473E-02	6.1462E-03	-9.5976E-02	-1.7817E-02	-8.8536E-03
10.0	7.7985E-02	1.4884E-02	-9.4681E-02	-2.5075E-02	2.2269E-04
10.2	7.1914E-02	2.3135E-02	-9.2692E-02	-3.1907E-02	8.9375E-03
10.4	6.5346E-02	3.0848E-02	-9.0047E-02	-3.8294E-02	1.7230E-02
10.6	5.8367E-02	3.7979E-02	-8.6790E-02	-4.4219E-02	2.5044E-02
10.8	5.1062E-02	4.4488E-02	-8.2968E-02	-4.9666E-02	3.2333E-02
11.0	4.3515E-02	5.0346E-02	-7.8628E-02	-5.4619E-02	3.9054E-02
11.2	3.5809E-02	5.5528E-02	-7.3819E-02	-5.9068E-02	4.5170E-02
11.4	2.8023E-02	6.0015E-02	-6.8594E-02	-6.3002E-02	5.0655E-02
11.6	2.0232E-02	6.3797E-02	-6.3005E-02	-6.6413E-02	5.5483E-02
11.8	1.2511E-02	6.6866E-02	-5.7106E-02	-6.9296E-02	5.9639E-02
12.0	4.9279E-03	6.9225E-02	-5.0950E-02	-7.1649E-02	6.3112E-02
12.2	-2.4523E-03	7.0879E-02	-4.4592E-02	-7.3472E-02	6.5899E-02
12.4	-9.5695E-03	7.1840E-02	-3.8085E-02	-7.4768E-02	6.7999E-02
12.6	-1.6368E-02	7.2125E-02	-3.1483E-02	-7.5542E-02	6.9420E-02
12.8	-2.2799E-02	7.1755E-02	-2.4838E-02	-7.5805E-02	7.0174E-02
13.0	-2.8815E-02	7.0756E-02	-1.8201E-02	-7.5565E-02	7.0277E-02
13.2	-3.4378E-02	6.9159E-02	-1.1621E-02	-7.4838E-02	6.9752E-02
13.4	-3.9454E-02	6.6997E-02	-5.1465E-03	-7.3639E-02	6.8623E-02
13.6	-4.4014E-02	6.4307E-02	1.1774E-03	-7.1988E-02	6.6922E-02
13.8	-4.8034E-02	6.1130E-02	7.3077E-03	-6.9905E-02	6.4680E-02
14.0	-5.1497E-02	5.7507E-02	1.3204E-02	-6.7414E-02	6.1934E-02
14.2	-5.4391E-02	5.3485E-02	1.8828E-02	-6.4540E-02	5.8724E-02
14.4	-5.6708E-02	4.9109E-02	2.4146E-02	-6.1311E-02	5.5091E-02
14.6	-5.8446E-02	4.4426E-02	2.9127E-02	-5.7754E-02	5.1778E-02
14.8	-5.9609E-02	3.9486E-02	3.3741E-02	-5.3901E-02	4.6732E-02
15.0	-6.0204E-02	3.4337E-02	3.7936E-02	-4.9783E-02	4.2098E-02
15.2	-6.0243E-02	2.9029E-02	4.1777E-02	-4.5433E-02	3.7223E-02
15.4	-5.9743E-02	2.3610E-02	4.5159E-02	-4.0884E-02	3.2156E-02
15.6	-5.8723E-02	1.8128E-02	4.8097E-02	-3.6170E-02	2.6943E-02
15.8	-5.7209E-02	1.2630E-02	5.0582E-02	-3.1326E-02	2.1633E-02
16.0	-5.5227E-02	7.1632E-03	5.2605E-02	-2.6386E-02	1.6271E-02
16.2	-5.2807E-02	1.7709E-03	5.4164E-02	-2.1385E-02	1.0904E-02
16.4	-4.9983E-02	-3.5045E-03	5.5258E-02	-1.6358E-02	5.5756E-03
16.6	-4.6790E-02	-8.6227E-03	5.5891E-02	-1.1339E-02	3.2905E-04
16.8	-4.3266E-02	-1.3346E-02	5.6071E-02	-6.3597E-03	-4.7949E-03
17.0	-3.9448E-02	-1.8239E-02	5.5806E-02	-1.4537E-03	-9.7575E-03
17.2	-3.5377E-02	-2.2670E-02	5.5109E-02	3.3479E-03	-1.4522E-02
17.4	-3.1095E-02	-2.6808E-02	5.3997E-02	8.0153E-03	-1.9056E-02
17.6	-2.6642E-02	-3.0629E-02	5.2488E-02	1.2520E-02	-2.3327E-02
17.8	-2.2061E-02	-3.4108E-02	5.0603E-02	1.6834E-02	-2.7307E-02
18.0	-1.7393E-02	-3.7227E-02	4.8364E-02	2.0934E-02	-3.0971E-02
18.2	-1.2679E-02	-3.9968E-02	4.5797E-02	2.4795E-02	-3.4298E-02
18.4	-7.9601E-03	-4.2319E-02	4.2929E-02	2.8397E-02	-3.7268E-02
18.6	-3.2753E-03	-4.4269E-02	3.9789E-02	3.1720E-02	-3.9866E-02
18.8	1.3373E-03	-4.5813E-02	3.6406E-02	3.4746E-02	-4.2079E-02
19.0	5.8412E-03	-4.6949E-02	3.2811E-02	3.7462E-02	-4.3900E-02
19.2	1.0202E-02	-4.7675E-02	2.9037E-02	3.9855E-02	-4.5323E-02
19.4	1.4387E-02	-4.7996E-02	2.5116E-02	4.1916E-02	-4.6345E-02
19.6	1.8365E-02	-4.7918E-02	2.1080E-02	4.3635E-02	-4.6966E-02
19.8	2.2109E-02	-4.7451E-02	1.6962E-02	4.5009E-02	-4.7192E-02
20.0	2.5594E-02	-4.6607E-02	1.2796E-02	4.6035E-02	-4.7029E-02

Table 26b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

	A = 1.0	KAPPA=0.4			
1.2	7.1055E 00	7.8843E 01	9.9407E 00	1.0226E 02	2.7853E 01
1.4	3.3834E 00	2.8475E 01	4.0853E 00	3.2970E 01	1.3752E 01
1.6	2.0728E 00	1.4055E 01	2.3456E 00	1.5513E 01	8.2145E 00
1.8	1.4351E 00	8.0962E 00	1.5654E 00	8.7019E 00	5.3908E 00
2.0	1.0715E 00	5.1397E 00	1.1419E 00	5.4320E 00	3.7596E 00
2.2	8.4246E -01	3.4948E 00	8.8391E -01	3.6511E 00	2.7417E 00
2.4	6.8760E -01	2.5033E 00	7.1376E -01	2.5934E 00	2.0710E 00
2.6	5.7694E -01	1.8689E 00	5.9451E -01	1.9238E 00	1.6106E 00
2.8	4.9417E -01	1.4434E 00	5.0670E -01	1.4785E 00	1.2841E 00
3.0	4.2978E -01	1.1471E 00	4.3929E -01	1.1703E 00	1.0461E 00
3.2	3.7793E -01	9.3399E -01	3.8560E -01	9.4983E -01	8.6849E -01
3.4	3.3488E -01	7.7659E -01	3.4143E -01	7.8769E -01	7.3332E -01
3.6	2.9814E -01	6.5754E -01	3.0402E -01	6.6550E -01	6.2652E -01
3.8	2.6604E -01	5.6557E -01	2.7154E -01	5.7140E -01	5.4589E -01
4.0	2.3741E -01	4.9314E -01	2.4270E -01	4.9750E -01	4.7970E -01
4.2	2.1143E -01	4.3505E -01	2.1663E -01	4.3838E -01	4.2586E -01
4.4	1.8752E -01	3.8767E -01	1.9269E -01	3.9027E -01	3.8143E -01
4.6	1.6527E -01	3.4838E -01	1.7044E -01	3.5045E -01	3.4422E -01
4.8	1.4438E -01	3.1527E -01	1.4957E -01	3.1696E -01	3.1261E -01
5.0	1.2463E -01	2.8693E -01	1.2984E -01	2.8835E -01	2.8536E -01
5.2	1.0589E -01	2.6229E -01	1.1112E -01	2.6351E -01	2.6154E -01
5.4	8.8062E -02	2.4055E -01	9.3283E -02	2.4164E -01	2.4042E -01
5.6	7.1071E -02	2.2110E -01	7.6269E -02	2.2209E -01	2.2144E -01
5.8	5.4883E -02	2.0345E -01	6.0034E -02	2.0437E -01	2.0417E -01
6.0	3.9476E -02	1.8724E -01	4.4557E -02	1.8812E -01	1.8825E -01
6.2	2.4845E -02	1.7218E -01	2.9829E -02	1.7303E -01	1.7343E -01
6.4	1.0992E -02	1.5804E -01	1.5855E -02	1.5887E -01	1.5949E -01
6.6	-2.0741E -03	1.4465E -01	2.6436E -03	1.4547E -01	1.4626E -01
6.8	-1.4340E -02	1.3187E -01	-9.7906E -03	1.3269E -01	1.3361E -01
7.0	-2.5789E -02	1.1960E -01	-2.1431E -02	1.2043E -01	1.2145E -01
7.2	-3.6407E -02	1.0776E -01	-3.2260E -02	1.0859E -01	1.0971E -01
7.4	-4.6178E -02	9.6295E -02	-4.2260E -02	9.7133E -02	9.8314E -02
7.6	-5.5088E -02	8.5161E -02	-5.1417E -02	8.6004E -02	8.7238E -02
7.8	-6.3128E -02	7.4330E -02	-5.9716E -02	7.5177E -02	7.6452E -02
8.0	-7.0288E -02	6.3787E -02	-6.7149E -02	6.4637E -02	6.5941E -02
8.2	-7.6564E -02	5.3524E -02	-7.3709E -02	5.4373E -02	5.5697E -02
8.4	-8.1957E -02	4.3541E -02	-7.9393E -02	4.4387E -02	4.5721E -02
8.6	-8.6470E -02	3.3843E -02	-8.4203E -02	3.4684E -02	3.6019E -02
8.8	-9.0111E -02	2.4441E -02	-8.8144E -02	2.5273E -02	2.6602E -02
9.0	-9.2891E -02	1.5349E -02	-9.1226E -02	1.6169E -02	1.7484E -02
9.2	-9.4829E -02	6.5831E -03	-9.3465E -02	7.3877E -03	8.6830E -03
9.4	-9.5944E -02	-1.8381E -03	-9.4878E -02	-1.0520E -03	2.1643E -04
9.6	-9.6263E -02	-9.8948E -03	-9.5490E -02	-9.1306E -03	-7.8950E -03
9.8	-9.5812E -02	-1.7567E -02	-9.5327E -02	-1.6828E -02	-1.5631E -02
10.0	-9.4627E -02	-1.4834E -02	-9.4420E -02	-2.4123E -02	-2.2970E -02
10.2	-9.2742E -02	-3.1676E -02	-9.2804E -02	-3.0996E -02	-2.9892E -02
10.4	-9.0198E -02	-3.8075E -02	-9.0517E -02	-3.7429E -02	-3.6378E -02
10.6	-8.7037E -02	-4.4012E -02	-8.7600E -02	-4.3402E -02	-4.2410E -02
10.8	-8.3304E -02	-4.9472E -02	-8.4097E -02	-4.8900E -02	-4.7969E -02
11.0	-7.9047E -02	-5.4440E -02	-8.0055E -02	-5.3908E -02	-5.3042E -02
11.2	-7.4316E -02	-5.8903E -02	-7.5522E -02	-5.8413E -02	-5.7616E -02
11.4	-6.9161E -02	-6.2851E -02	-7.0548E -02	-6.2406E -02	-6.1678E -02
11.6	-6.3635E -02	-6.6277E -02	-6.5186E -02	-6.5877E -02	-6.5222E -02
11.8	-5.7791E -02	-6.9176E -02	-5.9487E -02	-6.8222E -02	-6.8241E -02
12.0	-5.1683E -02	-7.1545E -02	-5.3506E -02	-7.1237E -02	-7.0732E -02
12.2	-4.5366E -02	-7.3384E -02	-4.7296E -02	-7.3123E -02	-7.2694E -02
12.4	-3.8982E -02	-7.4696E -02	-4.0910E -02	-7.4483E -02	-7.4129E -02
12.6	-3.2155E -02	-7.5487E -02	-3.4403E -02	-7.532UE -02	-7.5043E -02
12.8	-2.5688E -02	-7.5765E -02	-2.7826E -02	-7.5645E -02	-7.5442E -02
13.0	-1.9062E -02	-7.5541E -02	-2.1230E -02	-7.5467E -02	-7.5338E -02
13.2	-1.2486E -02	-7.4829E -02	-1.4667E -02	-7.4799E -02	-7.4744E -02
13.4	-6.0075E -03	-7.3645E -02	-8.1840E -03	-7.3659E -02	-7.3674E -02
13.6	3.2680E -03	-7.2008E -02	1.8275E -03	-7.2064E -02	-7.2147E -02
13.8	6.4739E -03	-6.9939E -02	4.3582E -03	-7.0036E -02	-7.0184E -02
14.0	1.2393E -02	-6.7461E -02	1.0332E -02	-6.7596E -02	-6.7808E -02
14.2	1.8046E -02	-6.4599E -02	1.6054E -02	-6.4771E -02	-6.5042E -02
14.4	2.3398E -02	-6.1381E -02	2.1489E -02	-6.1588E -02	-6.1914E -02
14.6	2.8418E -02	-5.7836E -02	2.6604E -02	-5.8074E -02	-5.8452E -02
14.8	3.3076E -02	-5.3993E -02	3.1369E -02	-5.4260E -02	-5.4686E -02
15.0	3.7347E -02	-4.9884E -02	3.5758E -02	-5.0178E -02	-5.0646E -02
15.2	4.1210E -02	-4.5541E -02	3.9748E -02	-4.5859E -02	-4.6367E -02
15.4	4.4646E -02	-4.0999E -02	4.3319E -02	-4.1338E -02	-4.1880E -02
15.6	4.7641E -02	-3.6291E -02	4.6456E -02	-3.6648E -02	-3.7219E -02
15.8	5.0184E -02	-3.1452E -02	4.9146E -02	-3.1824E -02	-3.2420E -02
16.0	5.2268E -02	-2.6516E -02	5.1381E -02	-2.6900E -02	-2.7516E -02
16.2	5.3888E -02	-2.1519E -02	5.3156E -02	-2.1911E -02	-2.2543E -02
16.4	5.5045E -02	-1.6494E -02	5.4469E -02	-1.6892E -02	-1.7534E -02
16.6	5.5740E -02	-1.1475E -02	5.5321E -02	-1.1877E -02	-1.2524E -02
16.8	5.5981E -02	-6.4962E -03	5.5718E -02	-6.8980E -03	-7.5455E -03
17.0	5.5777E -02	-1.5892E -03	5.5667E -02	-1.9884E -03	-2.6321E -03
17.2	5.5140E -02	3.2143E -03	5.5182E -02	2.8206E -03	2.1851E -03
17.4	5.4086E -02	7.8845E -03	5.4274E -02	7.4988E -03	6.8759E -03
17.6	5.2633E -02	1.2393E -02	5.2963E -02	1.2018E -02	1.1411E -02
17.8	5.0800E -02	1.6712E -02	5.1266E -02	1.6350E -02	1.5764E -02
18.0	4.8612E -02	2.0817E -02	4.9207E -02	2.0470E -02	1.9908E -02
18.2	4.6093E -02	2.4684E -02	4.6809E -02	2.4354E -02	2.3820E -02
18.4	4.3269E -02	2.8292E -02	4.4098E -02	2.7981E -02	2.7478E -02
18.6	4.0169E -02	3.1622E -02	4.1101E -02	3.1332E -02	3.0862E -02
18.8	3.6822E -02	3.4656E -02	3.7849E -02	3.4389E -02	3.3955E -02
19.0	3.3260E -02	3.7380E -02	3.4371E -02	3.7137E -02	3.6741E -02
19.2	2.9514E -02	3.9782E -02	3.0698E -02	3.9564E -02	3.9208E -02
19.4	2.5616E -02	4.1851E -02	2.6863E -02	4.1659E -02	4.1345E -02
19.6	2.1600E -02	4.3580E -02	2.2898E -02	4.3415E -02	4.3144E -02
19.8	1.7497E -02	4.4963E -02	1.8836E -02	4.4825E -02	4.4598E -02
20.0	1.3342E -02	4.5998E -02	1.4709E -02	4.5888E -02	4.5706E -02

Table 27a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A= 1.0	KAPPA=1.0	F(0.0)	F(0.1)	F(0.2)	F(0.3)	F(1.1)
1.0	1.1505E 00	5.9054E-01	9.2408E-02	8.0688E-03	0.0000E-01		
1.2	9.5832E-01	6.1561E-01	1.3523E-01	1.8253E-02	3.1339E-01		
1.4	7.7141E-01	6.2144E-01	1.7856E-01	3.1833E-02	4.1586E-01		
1.6	5.9347E-01	6.0941E-01	2.2047E-01	4.8649E-02	4.7029E-01		
1.8	4.2774E-01	5.8130E-01	2.5917E-01	6.8350E-02	4.9303E-01		
2.0	2.7690E-01	5.3921E-01	2.9305E-01	9.0418E-02	4.9139E-01		
2.2	1.4308E-01	4.8552E-01	3.2078E-01	1.1419E-01	4.7017E-01		
2.4	2.7778E-02	4.2279E-01	3.4127E-01	1.3887E-01	4.3327E-01		
2.6	-6.8088E-02	3.5367E-01	3.5378E-01	1.6363E-01	3.8419E-01		
2.8	-1.4420E-01	2.8081E-01	3.5787E-01	1.8754E-01	3.2620E-01		
3.0	-2.0080E-01	2.0683E-01	3.5342E-01	2.0972E-01	2.6242E-01		
3.2	-2.3865E-01	1.3415E-01	3.4064E-01	2.2929E-01	1.9578E-01		
3.4	-2.5898E-01	6.5028E-02	3.2002E-01	2.4545E-01	1.2898E-01		
3.6	-2.6343E-01	1.4157E-03	2.9234E-01	2.5753E-01	6.4463E-02		
3.8	-2.5392E-01	-5.5035E-02	2.5859E-01	2.6494E-01	4.3833E-03		
4.0	-2.3268E-01	-1.0303E-01	2.1995E-01	2.6730E-01	-4.9463E-02		
4.2	-2.0203E-01	-1.4164E-01	1.7777E-01	2.6437E-01	-9.5645E-02		
4.4	-1.6442E-01	-1.7032E-01	1.3343E-01	2.5609E-01	-1.3312E-01		
4.6	-1.2227E-01	-1.8892E-01	8.8395E-02	2.4260E-01	-1.6124E-01		
4.8	-7.7916E-02	-1.9761E-01	4.4079E-02	2.2421E-01	-1.7974E-01		
5.0	-3.3546E-02	-1.9694E-01	1.8303E-03	2.0140E-01	-1.8872E-01		
5.2	8.8630E-03	-1.8772E-01	-3.7089E-02	1.7480E-01	-1.8863E-01		
5.4	4.7601E-02	-1.7102E-01	-7.1621E-02	1.4516E-01	-1.8022E-01		
5.6	8.1259E-02	-1.4810E-01	-1.0086E-01	1.1336E-01	-1.6450E-01		
5.8	1.0876E-01	-1.2037E-01	-1.2414E-01	8.0309E-02	-1.4265E-01		
6.0	1.2935E-01	-8.9311E-02	-1.4100E-01	4.6981E-02	-1.1605E-01		
6.2	1.4265E-01	-5.6437E-02	-1.5123E-01	1.4340E-02	-8.6134E-02		
6.4	1.4858E-01	-2.3225E-02	-1.5487E-01	-1.6681E-02	-5.4368E-02		
6.6	1.4739E-01	8.9303E-03	-1.5217E-01	-4.5211E-02	-2.2202E-02		
6.8	1.3960E-01	3.8766E-02	-1.4360E-01	-7.0475E-02	8.9964E-03		
7.0	1.2598E-01	6.5188E-02	-1.2982E-01	-9.1820E-02	3.7983E-02		
7.2	1.0746E-01	8.7304E-02	-1.1164E-01	-1.0873E-01	6.3679E-02		
7.4	8.5161E-02	1.0445E-01	-8.9989E-02	-1.2085E-01	8.5202E-02		
7.6	6.0253E-02	1.1618E-01	-6.5888E-02	-1.2799E-01	1.0189E-01		
7.8	3.3964E-02	1.2232E-01	-4.0394E-02	-1.3012E-01	1.1330E-01		
8.0	7.5046E-03	1.2290E-01	-1.4567E-02	-1.2741E-01	1.1925E-01		
8.2	-1.7977E-02	1.1819E-01	1.0569E-02	-1.2015E-01	1.1977E-01		
8.4	-4.1435E-02	1.0865E-01	3.4063E-02	-1.0881E-01	1.1512E-01		
8.6	-6.1964E-02	9.4919E-02	5.5068E-02	-9.3949E-02	1.0574E-01		
8.8	-7.8829E-02	7.7771E-02	7.2870E-02	-7.6262E-02	9.2265E-02		
9.0	-9.1483E-02	5.8080E-02	8.6911E-02	-5.6506E-02	7.5441E-02		
9.2	-9.9584E-02	3.6781E-02	9.6799E-02	-3.5485E-02	5.6131E-02		
9.4	-1.0299E-01	1.4834E-02	1.0232E-01	-1.4024E-02	3.5233E-02		
9.6	-1.0178E-01	-6.8190E-03	1.0344E-01	7.0667E-03	1.3751E-02		
9.8	-9.6193E-02	-2.7289E-02	1.0029E-01	2.7017E-02	-7.4514E-03		
10.0	-8.6663E-02	-4.5775E-02	9.3183E-02	4.5124E-02	-2.7479E-02		
10.2	-7.3760E-02	-6.1588E-02	8.2548E-02	6.0777E-02	-4.5545E-02		
10.4	-5.8170E-02	-7.4180E-02	6.8954E-02	7.3477E-02	-6.0975E-02		
10.6	-4.0665E-02	-8.3153E-02	5.3059E-02	8.2849E-02	-7.3228E-02		
10.8	-2.2062E-02	-8.8276E-02	3.5588E-02	8.8656E-02	-8.1919E-02		
11.0	-3.1921E-03	-8.9483E-02	1.7301E-02	9.0802E-02	-8.6819E-02		
11.2	1.5136E-02	-8.6869E-02	-1.0346E-03	8.9331E-02	-8.7868E-02		
11.4	3.2166E-02	-8.0684E-02	-1.8680E-02	8.4422E-02	-8.5163E-02		
11.6	4.7228E-02	-7.1313E-02	-3.4947E-02	7.6380E-02	-7.8953E-02		
11.8	5.9755E-02	-5.9260E-02	-4.9227E-02	6.5618E-02	-6.9621E-02		
12.0	6.9308E-02	-4.5117E-02	-6.1012E-02	5.2639E-02	-5.7665E-02		
12.2	7.5589E-02	-2.9543E-02	-6.9907E-02	3.8019E-02	-4.3672E-02		
12.4	7.8444E-02	-1.3234E-02	-7.5648E-02	2.2375E-02	-2.8294E-02		
12.6	7.7868E-02	3.1100E-03	-7.8106E-02	6.3485E-03	-1.2217E-02		
12.8	7.3998E-02	1.8881E-02	-7.7284E-02	-9.4248E-03	3.8698E-03		
13.0	6.7104E-02	3.3235E-02	-7.3320E-02	-2.4337E-02	1.9296E-02		
13.2	5.7571E-02	4.5827E-02	-6.6470E-02	-3.7831E-02	3.3441E-02		
13.4	4.5884E-02	5.6121E-02	-5.7101E-02	-4.9419E-02	4.5758E-02		
13.6	3.2598E-02	6.3762E-02	-4.5667E-02	-5.8704E-02	5.5791E-02		
13.8	1.8320E-02	6.8512E-02	-3.2695E-02	-6.5385E-02	6.3192E-02		
14.0	3.6765E-03	7.0261E-02	-1.8754E-02	-6.9274E-02	6.7734E-02		
14.2	-1.0708E-02	6.9024E-02	-4.4391E-03	-7.0296E-02	6.9311E-02		
14.4	-2.4238E-02	6.4938E-02	9.6584E-03	-8.8490E-02	6.7943E-02		
14.6	-3.6374E-02	5.8253E-02	2.2972E-02	-6.4002E-02	6.3771E-02		
14.8	-4.6647E-02	4.9319E-02	3.4982E-02	-5.7083E-02	5.7047E-02		
15.0	-5.4681E-02	3.8568E-02	4.5236E-02	-4.8071E-02	4.8119E-02		
15.2	-6.0201E-02	2.6492E-02	5.3365E-02	-3.7376E-02	3.7419E-02		
15.4	-6.3045E-02	1.3628E-02	5.9094E-02	-2.5466E-02	2.5435E-02		
15.6	-6.3167E-02	5.2760E-04	6.2253E-02	-1.2844E-02	1.2700E-02		
15.8	-6.0633E-02	-1.2262E-02	6.2780E-02	-2.9497E-05	-2.4180E-04		
16.0	-5.5618E-02	-2.4220E-02	6.0720E-02	1.2465E-02	-1.2848E-02		
16.2	-4.8395E-02	-3.4875E-02	5.6224E-02	2.4150E-02	-2.4607E-02		
16.4	-3.9320E-02	-4.3819E-02	4.9533E-02	3.4581E-02	-3.5054E-02		
16.6	-2.8818E-02	-5.0726E-02	4.0974E-02	4.3374E-02	-4.3790E-02		
16.8	-1.7360E-02	-5.5361E-02	3.0941E-02	5.0216E-02	-5.0495E-02		
17.0	-5.4463E-03	-5.7588E-02	1.9878E-02	5.4881E-02	-5.4943E-02		
17.2	6.4171E-03	-5.7373E-02	8.2580E-03	5.7234E-02	-5.7004E-02		
17.4	1.7739E-02	-5.4783E-02	-3.4321E-03	5.7233E-02	-5.6690E-02		
17.6	2.8061E-02	-4.9980E-02	-1.4715E-02	5.4934E-02	-5.3931E-02		
17.8	3.6980E-02	-4.3214E-02	-2.5141E-02	5.0478E-02	-4.9074E-02		
18.0	4.4157E-02	-3.4807E-02	-3.4305E-02	4.4092E-02	-4.2270E-02		
18.2	4.9334E-02	-2.5144E-02	-4.1863E-02	3.6074E-02	-3.3863E-02		
18.4	5.2343E-02	-1.4651E-02	-4.7542E-02	2.6779E-02	-2.4235E-02		
18.6	5.3106E-02	-3.7770E-03	-5.1152E-02	1.6607E-02	-1.3811E-02		
18.8	5.1641E-02	7.0209E-03	-5.2592E-02	5.9842E-03	-3.0368E-03		
19.0	4.8059E-02	1.7301E-02	-5.1848E-02	-4.65355E-03	7.6356E-03		
19.2	4.2551E-02	2.6650E-02	-4.8999E-02	-4.4885E-02	1.7769E-02		
19.4	3.5389E-02	3.4705E-02	-4.4204E-02	-2.4304E-02	2.6958E-02		
19.6	2.6902E-02	4.1160E-02	-3.7698E-02	-3.2551E-02	3.4843E-02		
19.8	1.7469E-02	4.5785E-02	-2.9782E-02	-3.9320E-02	4.1128E-02		
20.0	7.4996E-03	4.8426E-02	-2.0807E-02	-4.4368E-02	4.5587E-02		

Table 27b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A = 1.0		KAPPA=1.0		
	F(1,2)	F(1,3)	F(2,2)	F(2,3)	F(3,3)
1.0	0.0000E+01	0.0000E+01	0.0000E+01	0.0000E+01	0.0000E+01
1.2	9.0378E-02	1.4521E-02	4.8124E-02	9.0572E-03	4.9106E-03
1.4	1.4329E-01	2.8420E-02	9.7679E-02	2.1712E-02	1.4983E-02
1.6	1.9108E-01	4.5307E-02	1.4666E-01	3.7822E-02	2.9235E-02
1.8	2.3431E-01	6.5033E-02	1.9296E-01	5.7050E-02	4.7131E-02
2.0	2.7211E-01	8.7136E-02	2.3498E-01	7.8881E-02	6.8073E-02
2.2	3.0341E-01	1.1097E-01	2.7116E-01	1.0265E-01	9.1344E-02
2.4	3.2726E-01	1.3577E-01	3.0025E-01	1.2757E-01	1.1612E-01
2.6	3.4294E-01	1.6068E-01	3.2131E-01	1.5278E-01	1.4151E-01
2.8	3.5000E-01	1.8480E-01	3.3372E-01	1.7735E-01	1.6655E-01
3.0	3.4832E-01	2.0722E-01	3.3722E-01	2.0037E-01	1.9029E-01
3.2	3.3807E-01	2.2707E-01	3.3186E-01	2.2093E-01	2.1179E-01
3.4	3.1973E-01	2.4354E-01	3.1670E-01	2.3822E-01	2.3019E-01
3.6	2.9405E-01	2.5594E-01	2.9630E-01	2.5150E-01	2.4473E-01
3.8	2.6199E-01	2.6370E-01	2.6768E-01	2.6019E-01	2.5476E-01
4.0	2.2473E-01	2.6640E-01	2.3325E-01	2.6384E-01	2.5981E-01
4.2	1.8359E-01	2.6381E-01	1.9432E-01	2.6219E-01	2.5956E-01
4.4	1.3998E-01	2.5586E-01	1.5228E-01	2.5515E-01	2.5389E-01
4.6	9.5353E-02	2.4268E-01	1.0860E-01	2.4283E-01	2.4286E-01
4.8	5.1146E-02	2.2457E-01	6.4753E-02	2.2550E-01	2.2674E-01
5.0	8.7381E-03	2.0200E-01	2.2152E-02	2.0363E-01	2.0594E-01
5.2	-3.0602E-02	1.7561E-01	-1.7876E-02	1.7783E-01	1.8105E-01
5.4	-6.5757E-02	1.4614E-01	-5.4144E-02	1.4884E-01	1.5280E-01
5.6	-9.5794E-02	1.1466E-01	-8.5644E-02	1.1751E-01	1.2203E-01
5.8	-1.1999E-01	8.1489E-02	-1.1157E-01	8.4766E-02	8.9655E-02
6.0	-1.3786E-01	4.8195E-02	-1.3136E-01	5.1574E-02	5.6646E-02
6.2	-1.4915E-01	1.5544E-02	-1.4466E-01	1.8908E-02	2.3979E-02
6.4	-1.5384E-01	-1.5525E-02	-1.5138E-01	-1.2289E-02	-7.3884E-03
6.6	-1.5216E-01	-4.4139E-02	-1.5167E-01	-4.1132E-02	-3.6556E-02
6.8	-1.4454E-01	-6.9519E-02	-1.4589E-01	-6.6827E-02	-6.2709E-02
7.0	-1.3160E-01	-9.1003E-02	-1.3461E-01	-8.8697E-02	-8.5148E-02
7.2	-1.1413E-01	-1.0807E-01	-1.1856E-01	-1.0621E-01	-1.0331E-01
7.4	-9.3050E-02	-1.2036E-01	-9.8614E-02	-1.1897E-01	-1.1679E-01
7.6	-6.9357E-02	-1.2768E-01	-7.5761E-02	-1.2678E-01	-1.2534E-01
7.8	-4.4105E-02	-1.2999E-01	-5.1036E-02	-1.2959E-01	-1.2889E-01
8.0	-1.8356E-02	-1.2745E-01	-2.5498E-02	-1.2752E-01	-1.2754E-01
8.2	6.8599E-03	-1.2035E-01	-1.9056E-04	-1.2086E-01	-1.2155E-01
8.4	3.0579E-02	-1.0914E-01	2.3902E-02	-1.1005E-01	-1.1134E-01
8.6	5.1939E-02	-9.4403E-02	4.5885E-02	-9.5647E-02	-9.7458E-02
8.8	7.0205E-02	-7.6812E-02	6.4984E-02	-7.8326E-02	-8.0555E-02
9.0	8.4792E-02	-5.7125E-02	8.0573E-02	-5.8836E-02	-6.1373E-02
9.2	9.5285E-02	-3.6146E-02	9.2185E-02	-3.7978E-02	-4.0709E-02
9.4	1.0144E-01	-1.4699E-02	9.9529E-02	-1.6575E-02	-1.9386E-02
9.6	1.0320E-01	6.4037E-03	1.0249E-01	4.5576E-03	1.7798E-03
9.8	1.0068E-01	2.6391E-02	1.0114E-01	2.4644E-02	2.2003E-02
10.0	9.4141E-02	4.4557E-02	9.5699E-02	4.2971E-02	4.0562E-02
10.2	9.4016E-02	6.0288E-02	8.6553E-02	5.8916E-02	5.6820E-02
10.4	7.0848E-02	7.3080E-02	7.4214E-02	7.1964E-02	7.0247E-02
10.6	5.5283E-02	8.2556E-02	5.9302E-02	8.1727E-02	8.0435E-02
10.8	3.8037E-02	8.8473E-02	4.2514E-02	8.7949E-02	8.7113E-02
11.0	1.9866E-02	9.0731E-02	2.4597E-02	9.0518E-02	9.0147E-02
11.2	1.5358E-03	8.9370E-02	6.3163E-03	8.9461E-02	8.9549E-02
11.4	-1.6209E-02	8.4565E-02	-1.1577E-02	8.4943E-02	8.5464E-02
11.6	-3.2674E-02	7.6615E-02	-2.8374E-02	7.7254E-02	7.8168E-02
11.8	-4.7237E-02	6.5933E-02	-4.3432E-02	6.6794E-02	6.8048E-02
12.0	-5.9374E-02	5.3018E-02	-5.6201E-02	5.4059E-02	5.5589E-02
12.2	-6.8676E-02	3.8444E-02	-6.6239E-02	3.9616E-02	4.1349E-02
12.4	-7.4860E-02	2.2828E-02	-7.3231E-02	2.4079E-02	2.5938E-02
12.6	-7.7776E-02	6.8101E-03	-7.6991E-02	8.0879E-03	9.9945E-03
12.8	-7.7410E-02	-8.9732E-03	-7.7470E-02	-7.7202E-03	-5.8434E-03
13.0	-7.3880E-02	-2.3913E-02	-7.4751E-02	-2.2733E-02	-2.0959E-02
13.2	-6.7427E-02	-3.7450E-02	-6.9044E-02	-3.6387E-02	-3.4783E-02
13.4	-5.8402E-02	-4.9095E-02	-6.0672E-02	-4.8187E-02	-4.6809E-02
13.6	-4.7248E-02	-5.8444E-02	-5.0054E-02	-5.7724E-02	-5.6618E-02
13.8	-3.4480E-02	-6.5203E-02	-3.7690E-02	-6.4688E-02	-6.3888E-02
14.0	-2.0664E-02	-6.9172E-02	-2.4133E-02	-6.8877E-02	-6.8403E-02
14.2	-6.3923E-03	-7.0275E-02	-9.9678E-03	-7.0203E-02	-7.0063E-02
14.4	7.7436E-03	-6.8547E-02	4.2112E-03	-6.8694E-02	-6.8881E-02
14.6	2.1173E-02	-6.4134E-02	1.7827E-02	-6.4486E-02	-6.4981E-02
14.8	3.3369E-02	-5.7281E-02	3.0341E-02	-5.7817E-02	-5.8590E-02
15.0	4.3870E-02	-4.8324E-02	4.1274E-02	-4.9017E-02	-5.0027E-02
15.2	5.2293E-02	-3.7674E-02	5.0223E-02	-3.8490E-02	-3.9689E-02
15.4	5.8353E-02	-2.5795E-02	5.6876E-02	-2.6698E-02	-2.8031E-02
15.6	6.1863E-02	-1.3190E-02	6.1023E-02	-1.4141E-02	-1.5551E-02
15.8	6.2748E-02	-3.7699E-04	6.2560E-02	-1.3366E-03	-2.7643E-03
16.0	6.1037E-02	1.2129E-02	6.1490E-02	1.1200E-02	9.8119E-03
16.2	5.6866E-02	2.3839E-02	5.7924E-02	2.2976E-02	2.1683E-02
16.4	5.0466E-02	3.4307E-02	5.2067E-02	3.3543E-02	3.2393E-02
16.6	4.2153E-02	4.3145E-02	4.4216E-02	4.2508E-02	4.1543E-02
16.8	3.2310E-02	5.0041E-02	3.4738E-02	4.9553E-02	4.68805E-02
17.0	2.1375E-02	5.4766E-02	2.4059E-02	5.4441E-02	5.3935E-02
17.2	9.8196E-03	5.7181E-02	1.2643E-02	5.7028E-02	5.6777E-02
17.4	-1.8718E-03	5.7244E-02	9.7112E-04	5.7264E-02	5.7270E-02
17.6	-1.3220E-02	5.5005E-02	-1.0474E-02	5.5193E-02	5.5448E-02
17.8	-2.3771E-02	5.0605E-02	-2.1232E-02	5.0948E-02	5.1436E-02
18.0	-3.3112E-02	4.4269E-02	-3.0880E-02	4.4749E-02	4.5443E-02
18.2	-4.0892E-02	3.6291E-02	-3.9049E-02	3.6886E-02	3.7753E-02
18.4	-4.6828E-02	2.7028E-02	-4.5440E-02	2.7709E-02	2.8710E-02
18.6	-5.0718E-02	1.6876E-02	-4.9831E-02	1.7616E-02	1.8705E-02
18.8	-5.2448E-02	6.2624E-03	-5.2086E-02	7.0277E-03	8.1601E-03
19.0	-5.1995E-02	-4.3797E-03	-5.2160E-02	-3.6196E-03	-2.4910E-03
19.2	-4.9423E-02	-1.4623E-02	-5.0096E-02	-1.3899E-02	-1.2819E-02
19.4	-4.6882E-02	-2.4066E-02	-4.6023E-02	-2.3405E-02	-2.2417E-02
19.6	-3.8596E-02	-3.2346E-02	-4.0148E-02	-3.1774E-02	-3.0914E-02
19.8	-3.0859E-02	-3.9154E-02	-3.2748E-02	-3.8692E-02	-3.7993E-02
20.0	-2.2014E-02	-4.4248E-02	-2.4156E-02	-4.3912E-02	-4.3397E-02

Table 28a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

	A= 1.0					KAPPA=1.0
ϵ	G(0,0)	G(0,1)	G(0,2)	G(0,3)	G(1,1)	
1.2	3.1005E-01	1.1985E 00	3.0145E 00	1.3558E 01	1.3846E 00	
1.4	-5.8390E-02	7.1940E-01	1.6587E-00	5.4121E-00	8.6287E-01	
1.6	-2.5198E-01	4.4525E-01	1.1230E-00	2.9139E-00	5.8606E-01	
1.8	-3.5884E-01	2.5071E-01	8.3234E-01	1.8365E-00	3.8882E-01	
2.0	-4.1011E-01	1.0095E-01	6.4297E-01	1.2813E-00	2.3236E-01	
2.2	-4.2202E-01	-1.7485E-02	5.0283E-01	9.5914E-01	1.0342E-01	
2.4	-4.0509E-01	-1.1080E-01	3.8941E-01	7.5383E-01	-3.3599E-03	
2.6	-3.6711E-01	-1.8230E-01	2.9211E-01	6.1190E-01	-9.0404E-02	
2.8	-3.1436E-01	-2.3412E-01	2.0576E-01	5.0611E-01	-1.5901E-01	
3.0	-2.5213E-01	-2.6795E-01	1.2799E-01	4.2165E-01	-2.1013E-01	
3.2	-1.8493E-01	-2.8538E-01	5.7857E-02	3.5010E-01	-2.4469E-01	
3.4	-1.1664E-01	-2.8807E-01	-4.7732E-03	2.8659E-01	-2.6378E-01	
3.6	-5.0556E-02	-2.7780E-01	-5.9665E-02	2.2832E-01	-2.6872E-01	
3.8	1.0612E-02	-2.5651E-01	-1.0643E-01	1.7380E-01	-2.6103E-01	
4.0	6.4708E-02	-2.2623E-01	-1.4468E-01	1.2235E-01	-2.4248E-01	
4.2	1.1012E-01	-1.8909E-01	-1.7413E-01	7.3816E-02	-2.1495E-01	
4.4	1.4577E-01	-1.4722E-01	-1.9467E-01	2.8393E-02	-1.8048E-01	
4.6	1.7109E-01	-1.0272E-01	-2.0638E-01	-1.3524E-02	-1.4111E-01	
4.8	1.8598E-01	-5.7614E-02	-2.0956E-01	-5.1432E-02	-9.8915E-02	
5.0	1.9076E-01	-1.3749E-02	-2.0474E-01	-8.4800E-02	-5.5850E-02	
5.2	1.8613E-01	2.7208E-02	-1.9264E-01	-1.1313E-01	-1.3758E-02	
5.4	1.7312E-01	6.3833E-02	-1.7418E-01	-1.3598E-01	2.5709E-02	
5.6	1.5299E-01	9.4973E-02	-1.5043E-01	-1.5306E-01	6.1130E-02	
5.8	1.2720E-01	1.1976E-01	-1.2258E-01	-1.6418E-01	9.1343E-02	
6.0	9.7313E-02	1.3765E-01	-9.1876E-02	-1.6932E-01	1.1548E-01	
6.2	6.4941E-02	1.4838E-01	-5.9624E-02	-1.6861E-01	1.3295E-01	
6.4	3.1679E-02	1.5200E-01	-2.7099E-02	-1.6237E-01	1.4350E-01	
6.6	-9.6023E-04	1.4881E-01	4.4757E-03	-1.5104E-01	1.4713E-01	
6.8	-3.1593E-02	1.3939E-01	3.3972E-02	-1.3523E-01	1.4414E-01	
7.0	-5.9015E-02	1.2451E-01	6.0396E-02	-1.1565E-01	1.3506E-01	
7.2	-8.2233E-02	1.0510E-01	8.2910E-02	-9.3126E-02	1.2063E-01	
7.4	-1.0049E-01	8.2240E-02	1.0086E-01	-8.8537E-02	1.0177E-01	
7.6	-1.1329E-01	5.7070E-02	1.1381E-01	-4.2810E-02	7.9525E-02	
7.8	-1.2038E-01	3.0764E-02	1.2150E-01	-1.6879E-02	5.5003E-02	
8.0	-1.2178E-01	4.4746E-03	1.2390E-01	8.3486E-03	2.9355E-02	
8.2	-1.1772E-01	-2.0704E-02	1.2117E-01	3.2019E-02	3.7125E-03	
8.4	-1.0866E-01	-4.3731E-02	1.1368E-01	5.3361E-02	-2.0850E-02	
8.6	-9.5257E-02	-6.3899E-02	1.0193E-01	7.1712E-02	-4.3360E-02	
8.8	-7.8286E-02	-8.0364E-02	8.6583E-02	8.6535E-02	-6.2974E-02	
9.0	-5.8651E-02	-9.2662E-02	6.8412E-02	9.7438E-02	-7.9008E-02	
9.2	-3.7318E-02	-1.0047E-01	4.8259E-02	1.0418E-01	-9.0957E-02	
9.4	-1.5275E-02	-1.0367E-01	2.7008E-02	1.0688E-01	-9.8506E-02	
9.6	6.5040E-03	-1.0233E-01	5.5524E-03	1.0501E-01	-1.0153E-01	
9.8	2.7102E-02	-9.6701E-02	-1.5245E-02	9.9399E-02	-1.0011E-01	
10.0	4.5694E-02	-8.7195E-02	-3.4579E-02	9.0200E-02	-9.4477E-02	
10.2	6.1571E-02	-7.4370E-02	-5.1736E-02	7.7895E-02	-8.5051E-02	
10.4	7.4173E-02	-5.8893E-02	-6.6112E-02	6.3060E-02	-7.2376E-02	
10.6	8.3094E-02	-4.1514E-02	-7.7239E-02	4.6351E-02	-5.7112E-02	
10.8	8.8104E-02	-2.3029E-02	-8.4791E-02	2.8467E-02	-3.9995E-02	
11.0	8.9141E-02	-4.2495E-03	-8.8598E-02	1.0133E-02	-2.1812E-02	
11.2	8.6312E-02	1.4034E-02	-8.8641E-02	-7.9364E-03	-3.3593E-03	
11.4	7.9882E-02	3.1079E-02	-8.5054E-02	-2.5056E-02	1.4583E-02	
11.6	7.0253E-02	4.6222E-02	-7.8108E-02	-4.0601E-02	3.1285E-02	
11.8	5.7948E-02	5.8901E-02	-6.8201E-02	-5.4022E-02	4.6097E-02	
12.0	4.3581E-02	6.8677E-02	-5.5832E-02	-6.4871E-02	5.8466E-02	
12.2	2.7827E-02	7.5241E-02	-4.1583E-02	-7.2809E-02	6.7962E-02	
12.4	1.1399E-02	7.8431E-02	-2.6093E-02	-7.7621E-02	7.4287E-02	
12.6	-4.9896E-03	7.8225E-02	-1.0029E-02	-7.9217E-02	7.7282E-02	
12.8	-2.0651E-02	7.4743E-02	5.9418E-03	-7.7632E-02	7.6933E-02	
13.0	-3.4950E-02	6.8233E-02	2.1174E-02	-7.3026E-02	7.3360E-02	
13.2	-4.7330E-02	5.9062E-02	3.5074E-02	-6.5668E-02	6.6815E-02	
13.4	-5.7332E-02	4.7692E-02	4.7119E-02	-5.5927E-02	5.7662E-02	
13.6	-6.4609E-02	3.4662E-02	5.6876E-02	-4.254E-02	4.6360E-02	
13.8	-6.8939E-02	2.0561E-02	6.4016E-02	-3.1164E-02	3.3443E-02	
14.0	-7.0230E-02	6.0046E-03	6.8327E-02	-1.7210E-02	1.9497E-02	
14.2	-6.8517E-02	-8.3904E-03	6.9713E-02	-2.9662E-03	5.1284E-03	
14.4	-6.3960E-02	-2.2035E-02	6.8203E-02	1.0998E-02	-9.0534E-03	
14.6	-5.6829E-02	-3.4380E-02	6.3938E-02	2.4139E-02	-2.2466E-02	
14.8	-4.7498E-02	-4.4958E-02	5.7167E-02	3.5960E-02	-3.4576E-02	
15.0	-3.6415E-02	-5.3377E-02	4.8234E-02	4.6029E-02	-4.4917E-02	
15.2	-2.4093E-02	-5.9345E-02	3.7559E-02	5.3993E-02	-5.3109E-02	
15.4	-1.1079E-02	-6.2691E-02	2.5623E-02	5.9591E-02	-5.8871E-02	
15.6	2.0650E-03	-6.3338E-02	1.2944E-02	6.2661E-02	-6.2029E-02	
15.8	1.4789E-02	-6.1331E-02	5.6900E-05	6.3145E-02	-6.2521E-02	
16.0	2.6572E-02	-5.6822E-02	-1.2509E-02	6.1089E-02	-6.0395E-02	
16.2	3.6950E-02	-5.0062E-02	-2.4251E-02	5.6636E-02	-5.5806E-02	
16.4	4.5524E-02	-4.1387E-02	-3.4712E-02	5.0022E-02	-4.9007E-02	
16.6	5.1985E-02	-3.1201E-02	-4.3497E-02	4.1562E-02	-4.0332E-02	
16.8	5.6115E-02	-1.9963E-02	-5.0291E-02	3.1637E-02	-3.0188E-02	
17.0	5.7800E-02	-8.1614E-03	-5.4863E-02	2.0677E-02	-1.9028E-02	
17.2	5.7028E-02	3.7037E-03	-5.7081E-02	9.1419E-03	-7.3373E-03	
17.4	5.3892E-02	1.5141E-02	-5.6911E-02	-2.4940E-03	4.3883E-03	
17.6	4.8576E-02	2.5691E-02	-5.4413E-02	-1.3764E-02	1.5664E-02	
17.8	4.1352E-02	3.4937E-02	-4.9743E-02	-2.4227E-02	2.6036E-02	
18.0	3.2564E-02	4.2529E-02	-4.3140E-02	-3.3483E-02	3.5097E-02	
18.2	2.2612E-02	4.8193E-02	-3.4916E-02	-4.1188E-02	4.2502E-02	
18.4	1.1934E-02	5.1737E-02	-2.5443E-02	-4.7069E-02	4.7984E-02	
18.6	9.8948E-04	5.3064E-02	-1.5132E-02	-5.0928E-02	5.1359E-02	
18.8	-9.7629E-03	5.2166E-02	-4.4218E-03	-5.2655E-02	5.2535E-02	
19.0	-1.9882E-02	4.9130E-02	-6.2433E-03	-5.2226E-02	5.1510E-02	
19.2	-2.8963E-02	4.4125E-02	1.6430E-02	-4.9703E-02	4.8375E-02	
19.4	-3.6651E-02	3.7400E-02	2.5734E-02	-4.5230E-02	4.3303E-02	
19.6	-4.2659E-02	2.9266E-02	3.3795E-02	-3.9027E-02	3.6543E-02	
19.8	-4.6773E-02	2.0089E-02	4.0310E-02	-3.1377E-02	2.8409E-02	
20.0	-4.8863E-02	1.0266E-02	4.5046E-02	-2.2615E-02	1.9264E-02	

Table 28b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A= 1.0	KAPPA=1.0
1.2	G(1,2)	G(1,3)
1.4	3.3145E 00	1.4768E 01
1.6	1.7320E 00	5.6573E 00
1.8	1.1524E 00	2.9937E 00
2.0	8.4952E-01	1.8690E 00
2.2	6.5652E-01	1.2966E 00
2.4	5.1553E-01	9.6713E-01
2.6	4.0215E-01	7.5851E-01
2.8	3.0504E-01	6.1502E-01
3.0	2.1876E-01	5.0850E-01
3.2	1.4080E-01	4.2373E-01
3.4	7.0197E-02	3.5208E-01
3.6	6.8118E-03	2.8856E-01
3.8	-4.9089E-02	2.3032E-01
4.0	-9.7076E-02	1.7583E-01
4.2	-1.3672E-01	1.2438E-01
4.4	-1.6768E-01	7.5821E-02
4.6	-1.8978E-01	3.0333E-02
4.8	-2.0307E-01	-1.1687E-02
5.0	-2.0779E-01	-4.9736E-02
5.2	-2.0442E-01	-8.3277E-02
5.4	-1.9364E-01	-1.1180E-01
5.6	-1.7635E-01	-1.3489E-01
5.8	-1.5358E-01	-1.5220E-01
6.0	-1.2650E-01	-1.6356E-01
6.2	-9.6353E-02	-1.6895E-01
6.4	-6.4437E-02	-1.6848E-01
6.6	-3.2033E-02	-1.6246E-01
6.8	-3.7371E-04	-1.5133E-01
7.0	2.9395E-02	-1.3570E-01
7.2	5.6254E-02	-1.1627E-01
7.4	7.9341E-02	-9.3857E-02
7.6	9.7973E-02	-6.9349E-02
7.8	1.1167E-01	-4.3669E-02
8.0	1.2015E-01	-1.7750E-02
8.2	1.2335E-01	7.4988E-03
8.4	1.2140E-01	3.1220E-02
8.6	1.0352E-01	7.1090E-02
8.8	8.8716E-02	8.6030E-02
9.0	7.0973E-02	9.7062E-02
9.2	5.1121E-02	1.0394E-01
9.4	3.0040E-02	1.0658E-01
9.6	8.6218E-03	1.0504E-01
9.8	-1.2265E-02	9.9557E-02
10.0	-3.1806E-02	9.0471E-02
10.2	-4.9273E-02	7.8263E-02
10.4	-6.4047E-02	6.3506E-02
10.6	-7.5638E-02	4.6854E-02
10.8	-8.3700E-02	2.9005E-02
11.0	-8.8040E-02	1.0682E-02
11.2	-8.8617E-02	-7.3971E-03
11.4	-8.5542E-02	-2.4548E-02
11.6	-7.9070E-02	-4.0141E-02
11.8	-6.9577E-02	-5.3628E-02
12.0	-5.7550E-02	-6.4555E-02
12.2	-4.3561E-02	-7.2579E-02
12.4	-2.8239E-02	-7.7484E-02
12.6	-1.2249E-02	-7.9173E-02
12.8	3.7406E-03	-7.7681E-02
13.0	1.9082E-02	-7.3161E-02
13.2	3.3173E-02	-6.5881E-02
13.4	4.5480E-02	-5.6206E-02
13.6	5.5558E-02	-4.4587E-02
13.8	6.3062E-02	-3.1534E-02
14.0	6.7764E-02	-1.7602E-02
14.2	6.9553E-02	-3.3133E-03
14.4	6.8439E-02	1.0611E-02
14.6	6.4547E-02	2.3778E-02
14.8	5.8114E-02	3.5639E-02
15.0	4.9470E-02	4.5759E-02
15.2	3.9025E-02	5.3782E-02
15.4	2.7252E-02	5.9447E-02
15.6	1.4664E-02	6.2587E-02
15.8	1.7951E-03	6.3142E-02
16.0	-1.0824E-02	6.1154E-02
16.2	-2.2687E-02	5.6765E-02
16.4	-3.3303E-02	5.0208E-02
16.6	-4.2349E-02	4.1796E-02
16.8	-4.9416E-02	3.1908E-02
17.0	-5.4292E-02	2.0973E-02
17.2	-5.6829E-02	9.4502E-03
17.4	-5.6978E-02	-2.1860E-03
17.6	-5.4790E-02	-1.3469E-02
17.8	-5.0407E-02	-2.3956E-02
18.0	-4.4057E-02	-3.3246E-02
18.2	-3.6042E-02	-4.0994E-02
18.4	-2.6726E-02	-6.6924E-02
18.6	-1.6517E-02	-5.0838E-02
18.8	-5.8487E-03	-5.2621E-02
19.0	4.8334E-03	-5.2249E-02
19.2	1.5095E-02	-4.9779E-02
19.4	2.4526E-02	-4.5356E-02
19.6	3.2760E-02	-3.9196E-02
19.8	3.9488E-02	-3.1581E-02
20.0	4.4464E-02	-2.2846E-02
		4.3329E-02
		4.3329E-02
		-2.3477E-02
		-2.4404E-02

Table 29a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A= 1.0	KAPPA=4,0
1.0	F(0,0)	F(0,1)
1.2	2.5031E 00	2.4286E 00
1.4	-4.7107E-03	7.8465E-01
1.6	-8.1508E-01	-3.3715E-01
1.8	-5.4554E-01	-7.2403E-01
2.0	6.4544E-02	-5.0564E-01
2.2	4.6449E-01	-2.5461E-02
2.4	4.5089E-01	3.5905E-01
2.6	1.3742E-01	4.4434E-01
2.8	-2.0979E-01	2.4287E-01
3.0	-3.6508E-01	-7.2938E-02
3.2	-2.6469E-01	-2.9717E-01
3.4	-1.1240E-02	-3.1114E-01
3.6	2.1674E-01	-1.3612E-01
3.8	2.8259E-01	9.9588E-02
4.0	1.6617E-01	2.4889E-01
4.2	-4.0286E-02	2.3307E-01
4.4	-2.0123E-01	7.9207E-02
4.6	-2.2354E-01	-1.0735E-01
4.8	-1.0723E-01	-2.1263E-01
5.0	6.4371E-02	1.8147E-01
5.2	1.8252E-01	-4.4306E-02
5.4	1.8030E-01	1.0843E-01
5.6	6.8760E-02	1.8457E-01
5.8	-7.6278E-02	1.4464E-01
6.0	-1.6480E-01	2.0988E-02
6.2	-1.4747E-01	-1.0676E-01
6.4	-4.2038E-02	1.6215E-01
6.6	8.2079E-02	-1.1692E-01
6.8	1.4889E-01	-4.4893E-03
7.0	1.2173E-01	1.0387E-01
7.2	2.2622E-02	1.4371E-01
7.4	-8.4542E-02	9.5210E-02
7.6	-1.3478E-01	-7.6606E-03
7.8	-1.0100E-01	-1.0044E-01
8.0	-8.0317E-03	1.2819E-01
8.2	8.5063E-02	-7.7702E-02
8.4	1.2225E-01	1.6866E-02
8.6	8.3918E-02	9.6757E-02
8.8	-3.2093E-03	1.1486E-01
9.0	-8.4395E-02	6.3251E-02
9.2	-1.1105E-01	-2.3981E-02
9.4	-6.9594E-02	-9.2991E-02
9.6	1.2033E-02	-1.0324E-01
9.8	8.2972E-02	-5.1102E-02
10.0	1.0098E-01	2.9554E-02
10.2	5.7399E-02	8.9214E-02
10.4	-1.9052E-02	9.2955E-02
10.6	-8.1055E-02	4.0739E-02
10.8	-9.1850E-02	-3.3953E-02
11.0	-4.6888E-02	8.5465E-02
11.2	2.4686E-02	-8.3755E-02
11.4	7.8807E-02	-3.1794E-02
11.6	8.3522E-02	3.7433E-02
11.8	3.7736E-02	8.1764E-02
12.0	-2.9231E-02	7.5447E-02
12.2	-7.6334E-02	2.3999E-02
12.4	-7.5877E-02	-4.0177E-02
12.6	-2.9703E-02	-7.8119E-02
12.8	3.2901E-02	-6.7884E-02
13.0	7.3706E-02	-1.7155E-02
13.2	6.8823E-02	4.2320E-02
13.4	-3.5835E-02	6.0952E-02
13.6	-7.0972E-02	1.1110E-02
13.8	-6.2282E-02	-4.3963E-02
14.0	-1.6295E-02	-7.1007E-02
14.2	3.8215E-02	-5.4563E-02
14.4	6.8165E-02	-5.7461E-03
14.6	5.6194E-02	4.5185E-02
14.8	1.0666E-02	6.7341E-02
15.0	-4.0073E-02	4.8647E-02
15.2	-6.5310E-02	9.7053E-04
15.4	-5.0507E-02	-4.6047E-02
15.6	-5.6289E-03	-6.4133E-02
15.8	4.1504E-02	-4.3148E-02
16.0	6.2425E-02	3.2910E-03
16.2	4.5181E-02	4.6597E-02
16.4	1.1103E-03	6.0783E-02
16.6	-4.2564E-02	3.8020E-02
16.8	-5.9524E-02	-7.0985E-03
17.0	-4.0180E-02	-4.6876E-02
17.2	2.9479E-03	-5.7489E-02
17.4	4.3304E-02	-3.3226E-02
17.6	5.6618E-02	1.0501E-02
17.8	3.5478E-02	4.6916E-02
18.0	-6.5943E-03	5.4251E-02
18.2	-4.3761E-02	2.8735E-02
18.4	-5.3716E-02	-1.3540E-02
18.6	-3.1048E-02	-4.6745E-02
18.8	9.8691E-03	-5.1069E-02
19.0	4.3968E-02	-2.4523E-02
19.2	5.0825E-02	1.6250E-02
19.4	2.6872E-02	4.6385E-02
19.6	-1.2807E-02	4.7943E-02
19.8	-4.3954E-02	2.0568E-02
20.0	-4.7952E-02	-1.8658E-02
		4.4697E-02
		2.2433E-02
		-1.4085E-02

Table 29b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

<i>t</i>	A = 1.0		KAPPA=4.0		
	F(1,2)	F(1,3)	F(2,2)	F(2,3)	F(3,3)
1.0	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
1.2	1.2475E-00	9.6111E-01	9.8149E-01	6.8931E-01	4.6226E-01
1.4	7.9488E-01	1.0320E-00	9.1679E-01	9.5387E-01	8.3939E-01
1.6	6.8491E-02	5.8354E-01	3.1463E-01	7.5743E-01	7.9732E-01
1.8	-4.5310E-01	1.4578E-01	-2.8525E-01	2.7625E-01	4.0036E-01
2.0	-5.5980E-01	-3.1301E-01	-5.3935E-01	-2.1107E-01	-9.4627E-02
2.2	-3.0751E-01	-5.0134E-01	-3.9520E-01	-4.7024E-01	-4.2020E-01
2.4	7.6279E-02	-3.8429E-01	-3.4355E-02	-4.1858E-01	-4.4185E-01
2.6	3.4482E-01	-8.0371E-02	2.8222E-01	-1.4356E-01	-2.0710E-01
2.8	3.6437E-01	2.1729E-01	3.7356E-01	1.6662E-01	1.0814E-01
3.0	1.6472E-01	3.4880E-01	2.2293E-01	3.3524E-01	3.1300E-01
3.2	-1.0492E-01	2.6597E-01	-4.2527E-02	2.8878E-01	3.0703E-01
3.4	-2.7750E-01	4.3355E-02	-2.4799E-01	8.2441E-02	1.2243E-01
3.6	-2.6457E-01	-1.7697E-01	-2.7856E-01	-1.4649E-01	-1.1159E-01
3.8	-9.6029E-02	-2.7097E-01	-1.3730E-01	-2.6459E-01	-2.5355E-01
4.0	1.1155E-01	-1.9915E-01	7.1766E-02	-2.1634E-01	-2.3119E-01
4.2	2.2189E-01	-1.9706E-02	2.1649E-01	-4.6941E-02	-7.4875E-02
4.4	2.0287E-01	1.5388E-01	2.1697E-01	1.3359E-01	1.1061E-01
4.6	5.5888E-02	2.2226E-01	8.6836E-02	2.1944E-01	2.1381E-01
4.8	-1.1154E-01	1.5531E-01	-8.4208E-02	1.6915E-01	1.8158E-01
5.0	-1.9864E-01	3.3705E-03	-1.9039E-01	2.3734E-02	4.4544E-02
5.2	-1.6054E-01	-1.3838E-01	-1.7370E-01	-1.2402E-01	-1.0793E-01
5.4	-2.9754E-02	-1.8822E-01	-5.3931E-02	-1.8739E-01	-1.8471E-01
5.6	1.0911E-01	-1.2398E-01	8.9401E-02	-1.3559E-01	-1.4621E-01
5.8	1.7308E-01	8.5162E-03	1.6887E-01	-7.4297E-03	-2.3622E-02
6.0	1.2947E-01	1.2690E-01	1.4151E-01	1.1632E-01	1.0460E-01
6.2	1.1528E-02	1.6270E-01	3.0996E-02	1.6307E-01	1.6213E-01
6.4	-1.0574E-01	1.0026E-01	-9.1052E-02	1.1027E-01	1.1952E-01
6.6	-1.5263E-01	-1.7481E-02	-1.5088E-01	-4.5878E-03	8.4066E-03
6.8	-1.0557E-01	-1.1781E-01	-1.1654E-01	-1.0982E-01	-1.0103E-01
7.0	1.7924E-03	-1.4261E-01	-1.4243E-02	-1.4374E-01	-1.4389E-01
7.2	1.0201E-01	-8.1583E-02	9.0815E-02	-9.0381E-02	-9.8542E-02
7.4	1.3575E-01	2.4414E-02	1.3557E-01	1.3745E-02	3.0760E-03
7.6	8.6536E-02	1.1026E-01	9.6545E-02	1.3412E-01	9.7418E-02
7.8	-1.1855E-02	1.2621E-01	1.5825E-03	1.2784E-01	1.2870E-01
8.0	-9.8160E-02	6.6417E-02	-8.9511E-02	7.4264E-02	8.1547E-02
8.2	-1.2147E-01	-2.9868E-02	-1.2233E-01	-2.0887E-02	-1.1976E-02
8.4	-7.0964E-02	-1.0375E-01	-8.0128E-02	-9.8998E-02	-9.3828E-02
8.6	1.9636E-02	-1.1244E-01	8.2261E-03	-1.1494E-01	-1.1574E-01
8.8	9.4310E-02	-5.3818E-02	8.7574E-02	-6.0893E-02	-6.7450E-02
9.0	1.0915E-01	3.4204E-02	1.1075E-01	2.6548E-02	1.9007E-02
9.2	5.7960E-02	9.7979E-02	6.6379E-02	9.4298E-02	9.0292E-02
9.4	-2.5751E-02	1.0062E-01	-1.5965E-02	1.0283E-01	1.0448E-01
9.6	-9.0507E-02	4.3160E-02	-8.5250E-02	4.9592E-02	5.5538E-02
9.8	-9.8349E-02	-3.7671E-02	-1.0045E-01	-3.1082E-02	-2.4637E-02
10.0	-4.6919E-02	-9.2758E-02	-5.4678E-02	-8.9920E-02	-8.6820E-02
10.2	3.0607E-02	-9.0298E-02	2.2149E-02	-9.2673E-02	-9.4539E-02
10.4	8.6770E-02	-3.015E-02	8.2682E-02	-3.9899E-02	-4.5321E-02
10.6	8.8752E-02	4.0442E-02	9.1212E-02	3.4732E-02	2.9181E-02
10.8	3.7419E-02	8.7953E-02	4.4590E-02	8.5794E-02	8.3411E-02
11.0	-3.4484E-02	8.1153E-02	-2.7131E-02	8.3636E-02	8.5651E-02
11.2	-8.3105E-02	2.6078E-02	-7.9959E-02	3.1488E-02	3.6454E-02
11.4	-8.0131E-02	-4.2645E-02	-8.2839E-02	-3.7672E-02	-3.2865E-02
11.6	-2.9159E-02	-8.3470E-02	-3.5802E-02	-8.1866E-02	-8.0064E-02
11.8	3.7579E-02	-7.2954E-02	3.1163E-02	-7.5508E-02	-7.7620E-02
12.0	7.9513E-02	-1.9126E-02	7.7137E-02	-2.4119E-02	-2.8684E-02
12.2	7.2313E-02	4.4376E-02	7.5194E-02	4.0029E-02	3.5851E-02
12.4	2.1914E-02	7.9242E-02	2.8079E-02	7.8099E-02	7.6773E-02
12.6	-4.0039E-02	6.5532E-02	-3.4424E-02	6.8127E-02	7.0300E-02
12.8	-7.5991E-02	1.2993E-02	-7.4252E-02	1.7614E-02	2.1822E-02
13.0	-6.5170E-02	-4.5705E-02	-6.8167E-02	-4.1901E-02	-3.8259E-02
13.2	-1.5517E-02	-7.5222E-02	-2.1247E-02	-7.4466E-02	-7.3532E-02
13.4	4.1972E-02	-5.8759E-02	3.7053E-02	-6.1373E-02	-6.3579E-02
13.6	7.2534E-02	-7.5526E-03	7.1328E-02	-1.1838E-02	-1.5725E-02
13.8	5.8602E-02	4.6691E-02	6.1672E-02	4.3360E-02	4.0183E-02
14.0	9.8380E-03	7.1372E-02	1.5169E-02	7.0944E-02	7.0340E-02
14.2	-4.3461E-02	5.2537E-02	-3.9150E-02	5.5153E-02	5.7371E-02
14.4	-6.619138E-02	2.7050E-03	-6.8383E-02	6.6846E-03	1.0281E-02
14.6	-5.2529E-02	-4.7379E-02	-5.5639E-02	-4.4464E-02	-4.1692E-02
14.8	-4.7761E-03	-6.7666E-02	-9.7380E-03	-6.7517E-02	-6.7191E-02
15.0	4.4571E-02	-4.6789E-02	4.0798E-02	-4.9393E-02	-5.1607E-02
15.2	6.5801E-02	1.6272E-03	6.5429E-02	-2.0721E-03	-5.4033E-03
15.4	4.6889E-02	4.7804E-02	5.0013E-02	4.5260E-02	4.2845E-02
15.6	2.5098E-04	6.4082E-02	4.8708E-03	6.4174E-02	6.4083E-02
15.8	-4.5353E-02	4.1456E-02	-4.2058E-02	4.4036E-02	4.6234E-02
16.0	-6.2519E-02	-5.5065E-03	-6.2475E-02	-2.0664E-03	1.0205E-03
16.2	-4.1632E-02	-4.7997E-02	-4.4750E-02	-4.5784E-02	-4.3687E-02
16.4	3.8019E-03	-6.0606E-02	-4.9881E-04	-6.0904E-02	-6.1014E-02
16.6	4.5849E-02	-3.6489E-02	4.2983E-02	-3.9036E-02	-4.1208E-02
16.8	5.9290E-02	8.9835E-03	5.9528E-02	5.7847E-03	2.9237E-03
17.0	3.6718E-02	4.7982E-02	3.9813E-02	4.6069E-02	4.4254E-02
17.2	-7.4352E-03	5.7225E-02	-3.4334E-03	5.7702E-02	5.7984E-02
17.4	-4.6094E-02	3.1849E-02	-4.3614E-02	3.4356E-02	3.6494E-02
17.6	-5.6114E-02	-1.2100E-02	-5.6593E-02	-9.1269E-03	-6.4758E-03
17.8	-3.2114E-02	-4.7781E-02	-3.5172E-02	-4.6138E-02	-4.4578E-02
18.0	1.0692E-02	-5.3930E-02	6.9716E-03	-5.4562E-02	-5.4991E-02
18.2	4.6115E-02	-2.7505E-02	4.3984E-02	-2.9965E-02	-3.2062E-02
18.4	5.2987E-02	1.4891E-02	5.3676E-02	1.2130E-02	9.6746E-03
18.6	2.7792E-02	4.7413E-02	3.0802E-02	4.6016E-02	4.4685E-02
18.8	-1.3609E-02	5.0714E-02	-1.0154E-02	5.1480E-02	5.2035E-02
19.0	-4.5937E-02	2.3430E-02	-4.4124E-02	2.5839E-02	2.7889E-02
19.2	-4.9912E-02	-1.7384E-02	-5.0781E-02	-1.4824E-02	-1.2552E-02
19.4	-2.3729E-02	-4.6892E-02	-2.6682E-02	-4.5720E-02	-4.4596E-02
19.6	1.6217E-02	-4.7573E-02	1.3013E-02	-4.8455E-02	-4.9118E-02
19.8	4.5581E-02	-1.9603E-02	4.4057E-02	-2.1955E-02	-2.3955E-02
20.0	4.6886E-02	1.9606E-02	4.7911E-02	1.7235E-02	1.5137E-02

Table 30a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 1.0	KAPPA=4.0
1.2	G(0,0) -1.1463E 00	G(0,1) -9.7981E-01
1.4	-2.9531E-01	-8.5771E-01
1.6	4.6172E-01	-1.8539E-01
1.8	6.1017E-01	3.8414E-01
2.0	2.7521E-01	5.5427E-01
2.2	-1.7381E-01	3.3947E-01
2.4	-4.1587E-01	-4.0604E-02
2.6	-3.4161E-01	-3.2689E-01
2.8	-5.9138E-02	-3.6769E-01
3.0	2.1880E-01	-1.8004E-01
3.2	3.2044E-01	9.0131E-02
3.4	2.0853E-01	2.7126E-01
3.6	-1.9654E-02	2.6764E-01
3.8	-2.0994E-01	1.0389E-01
4.0	-2.5065E-01	-1.0474E-01
4.2	-1.3331E-01	-2.2952E-01
4.4	5.4466E-02	-2.0490E-01
4.6	1.9188E-01	-5.9857E-02
4.8	2.0034E-01	1.0839E-01
5.0	8.6125E-02	1.9776E-01
5.2	-7.1352E-02	1.6165E-01
5.4	-1.7346E-01	3.1573E-02
5.6	-1.6283E-01	-1.0781E-01
5.8	-5.4271E-02	-1.7277E-01
6.0	7.9723E-02	-1.2988E-01
6.2	1.5661E-01	-1.2075E-02
6.4	1.3387E-01	1.0541E-01
6.6	3.1603E-02	1.5251E-01
6.8	-8.3620E-02	1.0545E-01
7.0	-1.4163E-01	-2.0245E-03
7.2	-1.1084E-01	-1.0220E-01
7.4	-1.4832E-02	-1.3564E-01
7.6	8.4988E-02	-8.6014E-02
7.8	1.2833E-01	1.2569E-02
8.0	9.2065E-02	9.8615E-02
8.2	2.0603E-03	1.2129E-01
8.4	-8.4845E-02	7.0148E-02
8.6	-1.1650E-01	-2.0645E-02
8.8	-7.6456E-02	-9.4879E-02
9.0	7.8792E-03	-1.0886E-01
9.2	8.3759E-02	-5.6925E-02
9.4	1.0589E-01	2.6934E-02
9.6	6.3261E-02	9.1101E-02
9.8	-1.5738E-02	9.7946E-02
10.0	-8.2063E-02	4.5723E-02
10.2	-9.6306E-02	-3.1883E-02
10.4	-5.1955E-02	-8.7335E-02
10.6	2.2021E-02	-8.8233E-02
10.8	7.9965E-02	-3.6108E-02
11.0	8.7594E-02	3.5795E-02
11.2	4.2159E-02	8.3608E-02
11.4	-2.7079E-02	7.9500E-02
11.6	-7.7594E-02	2.7766E-02
11.8	-7.9621E-02	-3.8888E-02
12.0	-3.3592E-02	-7.9934E-02
12.2	3.1164E-02	-7.1580E-02
12.4	7.5036E-02	-2.0468E-02
12.6	7.2281E-02	4.1317E-02
12.8	2.6046E-02	7.6318E-02
13.0	-3.4459E-02	6.4345E-02
13.2	-7.2350E-02	1.4041E-02
13.4	-6.5492E-02	-4.3199E-02
13.6	-1.9357E-02	-7.2762E-02
13.8	3.7103E-02	-5.7694E-02
14.0	6.9576E-02	-8.3492E-03
14.2	5.9185E-02	4.4623E-02
14.4	1.3402E-02	6.9266E-02
14.6	-3.9202E-02	5.1550E-02
14.8	-6.6742E-02	3.2898E-03
15.0	-5.3303E-02	-4.5658E-02
15.2	-8.0786E-03	-6.5830E-02
15.4	4.0838E-02	-4.5848E-02
15.6	6.3870E-02	1.2204E-03
15.8	4.7801E-02	4.6358E-02
16.0	3.3086E-03	6.2451E-02
16.2	-4.2077E-02	4.0540E-02
16.4	-6.0976E-02	-5.2482E-03
16.6	-4.2642E-02	-6.6768E-02
16.8	9.7312E-04	5.9129E-02
17.0	4.2972E-02	-3.5583E-02
17.2	5.8071E-02	8.8477E-03
17.4	3.7793E-02	4.6924E-02
17.6	-4.8199E-03	5.5863E-02
17.8	-4.3565E-02	3.0944E-02
18.0	-5.5166E-02	-1.2064E-02
18.2	-3.3230E-02	-4.6855E-02
18.4	8.2759E-03	-5.2653E-02
18.6	4.3894E-02	-2.6596E-02
18.8	5.2269E-02	1.4934E-02
19.0	2.8930E-02	4.6587E-02
19.2	-1.1378E-02	4.9499E-02
19.4	-4.3987E-02	2.2514E-02
19.6	-4.9386E-02	-1.7490E-02
19.8	-2.4874E-02	-4.6141E-02
20.0	1.4158E-02	-4.6400E-02
		-2.2458E-02
		4.4722E-02
		-4.7976E-02

Table 30b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 1.0	KAPPA=4.0
1.2	4.9057E-01	1.2787E 00
1.4	-5.2396E-01	1.9850E-01
1.6	-7.5978E-01	-4.4286E-01
1.8	-4.5799E-01	-6.5955E-01
2.0	3.5207E-02	-4.9012E-01
2.2	3.9215E-01	-1.0789E-01
2.4	4.4275E-01	2.5262E-01
2.6	2.2100E-01	4.0979E-01
2.8	-9.5432E-02	3.1529E-01
3.0	-3.0755E-01	5.9583E-02
3.2	-3.0769E-01	-1.9385E-01
3.4	-1.2523E-01	-3.0468E-01
3.6	1.0956E-01	-2.2861E-01
3.8	2.5272E-01	-3.0349E-02
4.0	2.3052E-01	1.6411E-01
4.2	7.3609E-02	2.4418E-01
4.4	-1.1200E-01	1.7521E-01
4.6	-2.1408E-01	1.0848E-02
4.8	-1.7993E-01	-1.4548E-01
5.0	-4.1557E-02	-2.0389E-01
5.2	1.1050E-01	-1.3846E-01
5.4	1.8509E-01	3.0133E-03
5.6	1.4391E-01	1.3227E-01
5.8	1.9885E-02	1.7463E-01
6.0	-1.0750E-01	1.1136E-01
6.2	-1.6233E-01	-1.3298E-02
6.4	-1.1680E-01	-1.2213E-01
6.6	-4.3787E-03	-1.5211E-01
6.8	1.0390E-01	-9.0407E-02
7.0	1.4381E-01	2.1161E-02
7.2	9.5549E-02	1.1388E-01
7.4	-7.1588E-03	1.3403E-01
7.6	-1.0009E-01	7.3630E-02
7.8	-1.2833E-01	-2.7300E-02
8.0	-7.8382E-02	-1.0689E-01
8.2	1.5986E-02	-1.1904E-01
8.4	9.6231E-02	-5.9842E-02
8.6	1.1510E-01	3.2158E-02
8.8	6.4184E-02	1.0078E-01
9.0	-2.2872E-02	1.0632E-01
9.2	-9.2401E-02	4.8277E-02
9.4	-1.0358E-01	-3.6034E-02
9.6	-5.2224E-02	-9.5310E-02
9.8	2.8316E-02	-9.5294E-02
10.0	8.8629E-02	-3.8420E-02
10.2	9.3416E-02	3.9134E-02
10.4	4.1997E-02	9.0311E-02
10.6	-3.2654E-02	8.5594E-02
10.8	-8.4929E-02	2.9911E-02
11.0	-8.4331E-02	-4.1608E-02
11.2	-3.3149E-02	-8.5676E-02
11.4	3.6119E-02	-7.6947E-02
11.6	8.1301E-02	-2.2490E-02
11.8	7.6130E-02	4.3565E-02
12.0	2.5421E-02	8.1328E-02
12.2	-3.8891E-02	6.9155E-02
12.4	-7.7744E-02	1.5966E-02
12.6	-6.8664E-02	-4.5087E-02
12.8	-1.8618E-02	-7.7209E-02
13.0	4.1066E-02	-6.2071E-02
13.2	7.4254E-02	-1.0193E-02
13.4	6.1820E-02	4.6238E-02
13.6	1.2595E-02	7.3277E-02
13.8	-4.2768E-02	5.5585E-02
14.0	-7.0828E-02	5.0599E-03
14.2	-5.5507E-02	-4.7070E-02
14.4	-7.2353E-03	-6.9502E-02
14.6	4.4060E-02	-4.9608E-02
14.8	6.7462E-02	-4.7869E-04
15.0	4.9658E-02	4.7622E-02
15.2	2.4508E-03	6.5860E-02
15.4	-4.5000E-02	4.4074E-02
15.6	-6.4153E-02	-3.6200E-03
15.8	-4.4215E-02	-4.7928E-02
16.0	1.8310E-03	-6.2332E-02
16.2	4.5634E-02	-3.8929E-02
16.4	6.0898E-02	7.2925E-03
16.6	3.9135E-02	4.8014E-02
16.8	-5.6681E-03	5.8904E-02
17.0	-4.6001E-02	3.4130E-02
17.2	-5.7696E-02	-1.0584E-02
17.4	-3.4379E-02	-4.7904E-02
17.6	9.1084E-03	-5.5567E-02
17.8	4.6131E-02	-2.9641E-02
18.0	5.4544E-02	1.3534E-02
18.2	2.9919E-02	4.7617E-02
18.4	-1.2191E-02	5.2313E-02
18.6	-4.6050E-02	2.5435E-02
18.8	-5.1443E-02	-1.6173E-02
19.0	-2.5729E-02	-4.7171E-02
19.2	1.4950E-02	-4.9135E-02
19.4	4.5781E-02	-2.1487E-02
19.6	4.8393E-02	1.8528E-02
19.8	2.1789E-02	4.6580E-02
20.0	-1.7413E-02	4.6029E-02
		-1.4329E-02
		4.6962E-02
		4.7673E-02

Table 31a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

A = 4.0					
KAPPA=0.4					
ξ	F(0,0)	F(0,1)	F(0,2)	F(0,3)	F(1,1)
1.0	7.8717E-01	7.3656E-01	2.3212E-01	1.5323E-02	0,0000E-01
1.2	4.9555E-01	5.8539E-01	2.7151E-01	2.8837E-02	3.2448E-01
1.4	2.6399E-01	4.4048E-01	2.9990E-01	4.4693E-02	3.7994E-01
1.6	8.6567E-02	3.0697E-01	3.1717E-01	6.2227E-02	3.7584E-01
1.8	-4.3295E-02	1.8816E-01	3.2373E-01	8.0731E-02	3.4032E-01
2.0	-1.3239E-01	8.5958E-02	3.2040E-01	9.9502E-02	2.8736E-01
2.2	-1.8738E-01	1.1348E-03	3.0828E-01	1.1786E-01	2.2573E-01
2.4	-2.1456E-01	-6.6390E-02	2.8864E-01	1.3520E-01	1.6145E-01
2.6	-2.1973E-01	-1.1734E-01	2.6288E-01	1.5096E-01	9.8756E-02
2.8	-2.0815E-01	-1.5290E-01	2.3237E-01	1.6468E-01	4.0604E-02
3.0	-1.8442E-01	-1.7457E-01	1.9852E-01	1.7599E-01	-1.1021E-02
3.2	-1.5257E-01	-1.8405E-01	1.6261E-01	1.8461E-01	-5.4888E-02
3.4	-1.1597E-01	-1.8315E-01	1.2587E-01	1.9036E-01	-9.0368E-02
3.6	-7.7458E-02	-1.736E-01	8.9397E-02	1.9314E-01	-1.1730E-01
3.8	-3.9306E-02	-1.5745E-01	5.4138E-02	1.9293E-01	-1.3589E-01
4.0	-3.2976E-03	-1.3614E-01	2.0912E-02	1.8981E-01	-1.4662E-01
4.2	2.9231E-02	-1.1132E-01	-9.6106E-03	1.8389E-01	-1.5017E-01
4.4	5.7340E-02	-8.4428E-02	3.6906E-02	1.7538E-01	-1.4739E-01
4.6	8.0433E-02	-5.6737E-02	-6.0589E-02	1.6451E-01	-1.3917E-01
4.8	9.8211E-02	-2.9334E-02	-8.0407E-02	1.5156E-01	-1.2648E-01
5.0	1.1062E-01	-3.1752E-03	-9.6229E-02	1.3686E-01	-1.1028E-01
5.2	1.1782E-01	2.1016E-02	-1.0803E-01	1.2073E-01	-9.1519E-02
5.4	1.2011E-01	4.2640E-02	-1.1590E-01	1.0351E-01	-7.1088E-02
5.6	1.1794E-01	6.1264E-02	-1.2000E-01	8.5568E-02	-4.9816E-02
5.8	1.1184E-01	7.6600E-02	-1.2056E-01	6.7233E-02	-2.8455E-02
6.0	1.0239E-01	8.8909E-02	-1.1788E-01	4.8847E-02	-7.6659E-03
6.2	9.0208E-02	9.6896E-02	-1.1230E-01	3.0727E-02	1.1981E-02
6.4	7.5935E-02	1.0188E-01	-1.0419E-01	1.3171E-02	3.0014E-02
6.6	6.0187E-02	1.0359E-01	-9.3960E-02	-3.5523E-03	4.6055E-02
6.8	4.3562E-02	1.0225E-01	-8.2012E-02	-1.9201E-02	5.9822E-02
7.0	2.6616E-02	9.8148E-02	-6.8757E-02	-3.3565E-02	7.1119E-02
7.2	9.8597E-03	9.1599E-02	-5.4599E-02	-4.6471E-02	7.9836E-02
7.4	-6.2540E-03	8.2964E-02	-3.9928E-02	-5.7779E-02	8.5937E-02
7.6	-2.1333E-02	7.2616E-02	-2.5111E-02	-6.7383E-02	8.9457E-02
7.8	-3.5048E-02	6.0940E-02	-1.0488E-02	-7.5214E-02	9.0491E-02
8.0	-4.7136E-02	4.8318E-02	3.6300E-03	-8.1236E-02	8.9185E-02
8.2	-5.7398E-02	3.5121E-02	1.6968E-02	-8.5455E-02	8.5729E-02
8.4	-6.5697E-02	2.1705E-02	2.9289E-02	-8.7868E-02	8.0347E-02
8.6	-7.1954E-02	8.4006E-03	4.0392E-02	-8.8562E-02	7.3289E-02
8.8	-7.6147E-02	-4.4902E-03	5.0117E-02	-8.7605E-02	6.4825E-02
9.0	-7.8304E-02	-1.6697E-02	5.8342E-02	-8.5104E-02	5.5234E-02
9.2	-7.8498E-02	-2.7986E-02	6.4985E-02	-8.1179E-02	4.4800E-02
9.4	-7.6839E-02	-3.8159E-02	6.9999E-02	-7.5973E-02	3.3803E-02
9.6	-7.3474E-02	-4.7056E-02	7.3372E-02	-6.9637E-02	2.2518E-02
9.8	-6.8574E-02	-5.4556E-02	7.5124E-02	-6.2336E-02	1.1205E-02
10.0	-6.2333E-02	-6.0575E-02	7.5306E-02	-5.4239E-02	1.0546E-04
10.2	-5.4960E-02	-5.0565E-02	7.3995E-02	-4.5521E-02	-1.0557E-02
10.4	-4.6675E-02	-6.8013E-02	7.1290E-02	-3.6356E-02	-2.0584E-02
10.6	-3.7701E-02	-6.2436E-02	6.7312E-02	-2.6917E-02	-2.9801E-02
10.8	-2.8261E-02	-6.9382E-02	6.2196E-02	-1.7373E-02	-3.8063E-02
11.0	-1.8575E-02	-6.7924E-02	5.6091E-02	-7.8862E-03	-4.5250E-02
11.2	-8.8534E-03	-6.5159E-02	4.9156E-02	1.3918E-03	-5.1272E-02
11.4	7.0588E-04	-6.1202E-02	4.1555E-02	1.0319E-02	-5.6066E-02
11.6	9.9192E-03	-5.6185E-02	3.3455E-02	1.8765E-02	-5.9595E-02
11.8	1.8620E-02	-5.0252E-02	2.5024E-02	2.6615E-02	-6.1850E-02
12.0	2.6663E-02	-4.3957E-02	1.6424E-02	3.3767E-02	-6.2845E-02
12.2	3.3920E-02	-3.6257E-02	7.8155E-03	4.0137E-02	-6.2616E-02
12.4	4.0288E-02	-2.8515E-02	-6.5218E-04	4.5654E-02	-6.1220E-02
12.6	4.5684E-02	-2.0490E-02	-8.8381E-03	5.0265E-02	-5.8731E-02
12.8	5.0048E-02	-1.2342E-02	-1.6613E-02	5.3933E-02	-5.5242E-02
13.0	5.3342E-02	-4.2210E-03	-2.3862E-02	5.6637E-02	-5.0855E-02
13.2	5.5550E-02	3.7286E-03	-3.0482E-02	5.8370E-02	-4.5685E-02
13.4	5.6675E-02	1.1373E-02	-3.6387E-02	5.9142E-02	-3.9854E-02
13.6	5.6738E-02	1.8591E-02	-4.1506E-02	5.8975E-02	-3.3490E-02
13.8	5.5781E-02	2.5273E-02	-4.5785E-02	5.7906E-02	-2.6724E-02
14.0	5.3859E-02	3.1324E-02	-4.9183E-02	5.5981E-02	-1.9688E-02
14.2	5.1042E-02	3.6665E-02	-5.1678E-02	5.3260E-02	-1.2512E-02
14.4	4.7412E-02	4.1230E-02	-5.3261E-02	4.9810E-02	-5.3216E-03
14.6	4.3060E-02	4.4973E-02	-5.3940E-02	4.5706E-02	1.7608E-03
14.8	3.8087E-02	4.7858E-02	-5.3734E-02	4.1031E-02	8.6214E-03
15.0	3.2599E-02	4.9869E-02	-5.2678E-02	3.5872E-02	1.5155E-02
15.2	2.6705E-02	5.1003E-02	-5.0816E-02	3.0319E-02	2.1265E-02
15.4	2.0518E-02	5.1272E-02	-4.8204E-02	2.4466E-02	2.6867E-02
15.6	1.4149E-02	5.0699E-02	-4.4907E-02	1.8406E-02	3.1887E-02
15.8	7.7084E-03	4.9322E-02	-4.0998E-02	1.2233E-02	3.6265E-02
16.0	1.3035E-03	4.7189E-02	-3.6555E-02	6.0374E-03	3.9951E-02
16.2	-4.9639E-03	4.4357E-02	-3.1664E-02	-9.1195E-05	4.2910E-02
16.4	-1.0998E-02	4.0894E-02	-2.6410E-02	-6.0685E-03	4.5118E-02
16.6	-1.6711E-02	3.6873E-02	-2.0885E-02	-1.8181E-02	4.6364E-02
16.8	-2.2021E-02	3.2374E-02	-1.5178E-02	-1.7257E-02	4.7250E-02
17.0	-2.6860E-02	2.7480E-02	-9.3797E-03	-2.2328E-02	4.7188E-02
17.2	-3.1165E-02	2.2277E-02	-3.5773E-03	-2.6967E-02	4.6402E-02
17.4	-3.4886E-02	1.6854E-02	-2.1441E-03	-3.1124E-02	4.4924E-02
17.6	-3.7984E-02	1.1299E-02	7.7037E-03	-3.4755E-02	4.2798E-02
17.8	-4.0429E-02	5.6981E-03	1.3026E-02	-3.7824E-02	4.0075E-02
18.0	-4.2204E-02	1.3707E-04	1.8041E-02	-4.0305E-02	3.6811E-02
18.2	-4.3301E-02	-5.3035E-03	2.2685E-02	-4.2180E-02	3.3071E-02
18.4	-4.3722E-02	-1.0547E-02	2.6904E-02	-4.3441E-02	2.8922E-02
18.6	-4.3481E-02	-1.5522E-02	3.0648E-02	-4.4086E-02	2.4437E-02
18.8	-4.2598E-02	-2.0165E-02	3.3878E-02	-4.4122E-02	1.9690E-02
19.0	-4.1105E-02	-2.4416E-02	3.6562E-02	-4.3566E-02	1.4757E-02
19.2	-3.9040E-02	-2.8225E-02	3.8678E-02	-4.2439E-02	9.7134E-03
19.4	-3.6447E-02	-3.1550E-02	4.0210E-02	-4.0711E-02	4.6342E-03
19.6	-3.3378E-02	-3.4355E-02	4.1153E-02	-3.8596E-02	-4.0743E-04
19.8	-2.9890E-02	-3.6616E-02	4.1509E-02	-3.5957E-02	-5.3412E-03
20.0	-2.6043E-02	-3.8313E-02	4.1287E-02	-3.2898E-02	-1.0101E-02

Table 31b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A = 4,0	KAPPA=0.4
1.0	F(1,2) 0.0000E-01	F(1,3) 0.0000E-01
1.2	1.4164E-01	2.1184E-02
1.4	2.0085E-01	3.7813E-02
1.6	2.4095E-01	5.5647E-02
1.8	2.6690E-01	7.4360E-02
2.0	2.8076E-01	9.3353E-02
2.2	2.8402E-01	1.1199E-01
2.4	2.7805E-01	1.2968E-01
2.6	2.6420E-01	1.4585E-01
2.8	2.4387E-01	1.6006E-01
3.0	2.1842E-01	1.7191E-01
3.2	1.8918E-01	1.8112E-01
3.4	1.5743E-01	1.8749E-01
3.6	1.2433E-01	1.9090E-01
3.8	9.0944E-02	1.9133E-01
4.0	5.8230E-02	1.8883E-01
4.2	2.6998E-02	1.8353E-01
4.4	-2.0656E-03	1.7560E-01
4.6	-2.8411E-02	1.6527E-01
4.8	-5.1617E-02	1.5282E-01
5.0	-7.1387E-02	1.3856E-01
5.2	-8.7538E-02	1.2280E-01
5.4	-9.9997E-02	1.0590E-01
5.6	-1.0878E-01	8.8207E-02
5.8	-1.1401E-01	7.0057E-02
6.0	-1.1585E-01	5.1789E-02
6.2	-1.1454E-01	3.3723E-02
6.4	-1.1038E-01	1.6160E-02
6.6	-1.0370E-01	-6.2763E-04
6.8	-9.4842E-02	-1.6393E-02
7.0	-8.4186E-02	-3.0922E-02
7.2	-7.2109E-02	-4.4035E-02
7.4	-5.8990E-02	-5.5584E-02
7.6	-4.5197E-02	-6.5460E-02
7.8	-3.1084E-02	-7.3584E-02
8.0	-1.6983E-02	-7.9916E-02
8.2	-3.1998E-03	-8.4445E-02
8.4	9.9883E-03	-8.7191E-02
8.6	2.2338E-02	-8.8205E-02
8.8	3.3639E-02	-8.7562E-02
9.0	4.3720E-02	-8.5359E-02
9.2	5.2442E-02	-8.1717E-02
9.4	5.9705E-02	-7.6771E-02
9.6	6.5442E-02	-7.0671E-02
9.8	6.9622E-02	-6.3578E-02
10.0	7.2243E-02	-5.5659E-02
10.2	7.3334E-02	-4.7086E-02
10.4	7.2952E-02	-3.8035E-02
10.6	7.1175E-02	-2.8677E-02
10.8	6.8104E-02	-1.9181E-02
11.0	6.3858E-02	-9.7087E-03
11.2	5.8569E-02	-4.1498E-04
11.4	5.2382E-02	8.5571E-03
11.6	4.5447E-02	1.7076E-02
11.8	3.7923E-02	2.5024E-02
12.0	2.9969E-02	3.2298E-02
12.2	2.1742E-02	3.8808E-02
12.4	1.3397E-02	4.4482E-02
12.6	5.0843E-03	4.9264E-02
12.8	-3.0559E-03	5.3114E-02
13.0	-1.0892E-02	5.6006E-02
13.2	-1.8303E-02	5.7933E-02
13.4	-2.1811E-02	5.8898E-02
13.6	-3.1433E-02	5.8924E-02
13.8	-3.6979E-02	5.8041E-02
14.0	-4.1754E-02	5.6297E-02
14.2	-4.5709E-02	5.3745E-02
14.4	-4.8809E-02	5.0453E-02
14.6	-5.1034E-02	4.6493E-02
14.8	-5.2379E-02	4.1946E-02
15.0	-5.2854E-02	3.6898E-02
15.2	-5.2480E-02	3.1438E-02
15.4	-5.1290E-02	2.5659E-02
15.6	-4.9331E-02	1.9653E-02
15.8	-4.6657E-02	1.3515E-02
16.0	-4.3331E-02	7.3356E-03
16.2	-3.9425E-02	1.2037E-03
16.4	-3.5015E-02	4.7953E-03
16.6	-3.0183E-02	1.0581E-02
16.8	-2.5013E-02	1.6079E-02
17.0	-1.9592E-02	2.1221E-02
17.2	-1.4006E-02	2.5945E-02
17.4	-8.3432E-03	3.0200E-02
17.6	-2.6869E-03	3.3938E-02
17.8	2.8811E-03	3.7123E-02
18.0	8.2833E-03	3.9728E-02
18.2	1.3447E-02	4.1732E-02
18.4	1.8306E-02	4.3125E-02
18.6	2.2799E-02	4.3903E-02
18.8	2.6873E-02	4.4073E-02
19.0	3.0483E-02	4.3647E-02
19.2	3.3589E-02	4.2647E-02
19.4	3.6163E-02	4.1101E-02
19.6	3.8182E-02	3.9041E-02
19.8	3.9633E-02	3.6508E-02
20.0	4.0511E-02	3.3547E-02
		F(2,2) 0.0000E-01
		6.2207E-02
		1.1724E-01
		2.6231E-02
		4.2847E-02
		6.0883E-02
		7.9626E-02
		9.8383E-02
		8.1880E-02
		9.9953E-02
		5.6033E-03
		1.6213E-02
		3.0068E-02
		4.6187E-02
		6.3718E-02
		8.1880E-02
		1.7596E-01
		1.1729E-01
		1.3331E-01
		1.4754E-01
		1.5957E-01
		1.6912E-01
		1.7596E-01
		1.7997E-01
		1.8112E-01
		1.7943E-01
		1.7501E-01
		1.6802E-01
		1.5867E-01
		1.4723E-01
		1.3397E-01
		1.1921E-01
		1.0328E-01
		8.6498E-02
		6.9205E-02
		5.1725E-02
		3.4367E-02
		6.2453E-02
		7.0603E-02
		7.7036E-02
		8.1736E-02
		8.4714E-02
		8.6010E-02
		8.5690E-02
		8.3844E-02
		8.0580E-02
		7.6025E-02
		7.0319E-02
		6.3614E-02
		5.6071E-02
		4.7854E-02
		3.9130E-02
		3.0068E-02
		2.0830E-02
		1.4824E-02
		1.2737E-02
		3.0019E-02
		3.6583E-02
		4.2352E-02
		4.7267E-02
		5.1284E-02
		5.4375E-02
		5.6525E-02
		5.7737E-02
		5.8025E-02
		5.7416E-02
		5.5952E-02
		5.3683E-02
		5.0669E-02
		4.6980E-02
		4.2692E-02
		3.7886E-02
		3.2650E-02
		2.7070E-02
		2.1240E-02
		1.5248E-02
		9.1862E-03
		3.1410E-03
		2.8028E-03
		8.5649E-03
		1.4070E-02
		1.9250E-02
		2.4043E-02
		2.8392E-02
		3.2251E-02
		3.5582E-02
		3.8352E-02
		4.0540E-02
		4.2174E-02
		4.3296E-02
		4.2131E-02
		4.3120E-02
		4.3509E-02
		4.3309E-02
		4.2536E-02
		4.1216E-02
		3.9378E-02
		3.7060E-02

Table 32a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A= 4,0	KAPPA=0.4
1.2	G(0,0)	G(0,1)
1.4	-1.6215E-01	9.7031E-02
1.6	-3.1807E-01	-1.2724E-01
1.8	-3.4257E-01	-2.3307E-01
2.0	-3.0960E-01	-2.7948E-01
2.2	-2.4934E-01	-2.8899E-01
2.4	-1.7811E-01	-2.7412E-01
2.6	-1.0566E-01	-2.4322E-01
2.8	-3.8004E-02	-2.0240E-01
3.0	2.1263E-02	-1.5627E-01
3.2	7.0190E-02	-1.0838E-01
3.4	1.0797E-01	-6.1459E-02
3.6	1.3462E-01	-1.7539E-02
3.8	1.5072E-01	2.1912E-02
4.0	1.5722E-01	5.5907E-02
4.2	1.5532E-01	8.3853E-02
4.4	1.4637E-01	1.0549E-01
4.6	1.3175E-01	1.2084E-01
4.8	1.1282E-01	1.3013E-01
5.0	9.0902E-02	1.3377E-01
5.2	6.7212E-02	1.3228E-01
5.4	4.2844E-02	1.2628E-01
5.6	1.8762E-02	1.1647E-01
5.8	-4.2172E-03	1.0353E-01
6.0	-2.5419E-02	8.8194E-02
6.2	-4.4313E-02	7.1149E-02
6.4	-6.0507E-02	5.3063E-02
6.6	-7.3736E-02	3.4555E-02
6.8	-8.3866E-02	1.6189E-02
7.0	-9.0828E-02	-1.5347E-03
7.2	-9.5630E-02	-3.3393E-02
7.4	-9.3798E-02	-4.6875E-02
7.6	-8.9467E-02	-5.8407E-02
7.8	-8.2937E-02	-6.7837E-02
8.0	-7.4534E-02	-7.5075E-02
8.2	-6.4604E-02	-8.0093E-02
8.4	-5.3500E-02	-8.2916E-02
8.6	-4.1575E-02	-8.3618E-02
8.8	-2.9173E-02	-8.2315E-02
9.0	-1.6619E-02	-7.9198E-02
9.2	-6.2212E-03	-7.4330E-02
9.4	7.7432E-03	-6.8034E-02
9.6	1.9025E-02	-6.0492E-02
9.8	2.9409E-02	-5.1937E-02
10.0	3.8714E-02	-4.2605E-02
10.2	4.6795E-02	-3.2734E-02
10.4	5.3542E-02	-2.2557E-02
10.6	5.8881E-02	-1.2300E-02
10.8	6.2770E-02	-2.1722E-03
11.0	6.5202E-02	7.6280E-03
11.2	6.6198E-02	1.6923E-02
11.4	6.5806E-02	2.5555E-02
11.6	6.4099E-02	3.3387E-02
11.8	6.1172E-02	4.0306E-02
12.0	5.7137E-02	4.6222E-02
12.2	5.2121E-02	5.1067E-02
12.4	4.6263E-02	4.7598E-02
12.6	3.9709E-02	5.7394E-02
12.8	3.2611E-02	5.8854E-02
13.0	2.5124E-02	5.9198E-02
13.2	1.7400E-02	5.8465E-02
13.4	9.5896E-03	5.6711E-02
13.6	1.8358E-03	5.4007E-02
13.8	-5.7253E-03	5.0434E-02
14.0	-1.2968E-02	4.6008E-02
14.2	-1.9776E-02	4.1072E-02
14.4	-2.6050E-02	3.5494E-02
14.6	-3.1699E-02	2.9469E-02
14.8	-3.6652E-02	2.3113E-02
15.0	-4.0847E-02	1.6541E-02
15.2	-4.4242E-02	9.8702E-03
15.4	-4.6808E-02	3.2111E-03
15.6	-4.8531E-02	-3.3288E-03
15.8	-4.9409E-02	-9.6489E-03
16.0	-4.9458E-02	-1.5656E-02
16.2	-4.8703E-02	-2.1265E-02
16.4	-4.7182E-02	-2.6401E-02
16.6	-4.4942E-02	-3.0998E-02
16.8	-4.2043E-02	-3.5003E-02
17.0	-3.8550E-02	-3.8371E-02
17.2	-3.4535E-02	-4.1071E-02
17.4	-3.0075E-02	-4.3081E-02
17.6	-2.5252E-02	-4.4392E-02
17.8	-2.0151E-02	-4.5004E-02
18.0	-1.4856E-02	-4.4928E-02
18.2	-9.4531E-03	-4.4185E-02
18.4	-4.0255E-03	-4.2804E-02
18.6	1.3452E-03	-4.0822E-02
18.8	6.5815E-03	-3.8286E-02
19.0	1.1610E-02	-3.5247E-02
19.2	1.6363E-02	-3.1761E-02
19.4	2.0779E-02	-2.7891E-02
19.6	2.4803E-02	-2.3701E-02
19.8	2.8388E-02	-1.9259E-02
20.0	3.1494E-02	-1.4634E-02
		-1.2133E-03
		2.5728E-02

Table 32b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 4.0	KAPPA=0.4
1.2	G(1.2)	G(1.3)
1.4	1.0790E 00	4.6115E 00
1.6	6.5545E-01	2.0306E 00
1.8	4.6131E-01	1.2055E 00
2.0	3.3412E-01	8.2859E-01
2.2	2.3608E-01	6.2105E-01
2.4	1.5577E-01	4.9110E-01
2.6	8.7013E-02	4.0102E-01
2.8	2.8074E-02	3.3307E-01
3.0	-2.2026E-02	2.7812E-01
3.2	-6.3801E-02	2.3120E-01
3.4	-9.7603E-02	1.8954E-01
3.6	-1.2377E-01	1.5157E-01
3.8	-1.4270E-01	1.1645E-01
4.0	-1.5485E-01	8.3740E-02
4.2	-1.6075E-01	5.3281E-02
4.4	-1.6102E-01	2.5048E-02
4.6	-1.5630E-01	-8.9628E-04
4.8	-1.4729E-01	-2.4449E-02
5.0	-1.1923E-01	-1.1645E-01
5.2	-1.0160E-01	-6.3936E-02
5.4	-8.2477E-02	-7.9687E-02
5.6	-6.2493E-02	-1.0296E-01
5.8	-4.2241E-02	-1.1049E-01
6.0	-2.2256E-02	-1.1535E-01
6.2	-3.0143E-03	-1.1764E-01
6.4	1.5073E-02	-1.1750E-01
6.6	3.1658E-02	-1.1508E-01
6.8	4.6461E-02	-1.1058E-01
7.0	5.9267E-02	-1.0422E-01
7.2	6.9923E-02	-9.6209E-02
7.4	7.8337E-02	-8.6805E-02
7.6	8.4473E-02	-7.6257E-02
7.8	8.8348E-02	-6.4820E-02
8.0	9.0025E-02	-5.2747E-02
8.2	8.9607E-02	-4.0289E-02
8.4	8.7234E-02	-2.7687E-02
8.6	8.3075E-02	-1.5170E-02
8.8	7.7325E-02	-2.9521E-03
9.0	7.0194E-02	8.7696E-03
9.2	6.1908E-02	1.9818E-02
9.4	5.2698E-02	3.0036E-02
9.6	4.2799E-02	3.9292E-02
9.8	3.2443E-02	4.7473E-02
10.0	2.1859E-02	5.4494E-02
10.2	1.1262E-02	6.0290E-02
10.4	8.5549E-04	6.4822E-02
10.6	-9.1712E-03	6.8071E-02
10.8	-1.8648E-02	7.0042E-02
11.0	-2.7426E-02	7.0759E-02
11.2	-3.5374E-02	7.0264E-02
11.4	-4.2385E-02	6.8617E-02
11.6	-4.8375E-02	6.5893E-02
11.8	-5.3281E-02	6.2180E-02
12.0	-5.7063E-02	5.7578E-02
12.2	-5.9702E-02	5.2195E-02
12.4	-6.1200E-02	4.6147E-02
12.6	-6.1577E-02	3.9554E-02
12.8	-6.0872E-02	3.2540E-02
13.0	-5.9141E-02	2.5230E-02
13.2	-5.6452E-02	1.7747E-02
13.4	-5.2887E-02	1.0212E-02
13.6	-4.8538E-02	2.7419E-03
13.8	-4.3507E-02	-4.5531E-03
14.0	-3.7901E-02	-1.1569E-02
14.2	-3.1831E-02	-1.8211E-02
14.4	-2.5411E-02	-2.4392E-02
14.6	-1.8759E-02	-3.0036E-02
14.8	-1.1984E-02	-3.5079E-02
15.0	-5.2000E-03	-3.9465E-02
15.2	1.4870E-03	-4.3153E-02
15.4	7.9762E-03	-4.6111E-02
15.6	1.4174E-02	-4.8319E-02
15.8	1.9995E-02	-4.9769E-02
16.0	2.5361E-02	-5.0464E-02
16.2	3.0207E-02	-5.0416E-02
16.4	3.4475E-02	-4.9649E-02
16.6	3.8119E-02	-4.8194E-02
16.8	4.1104E-02	-4.6092E-02
17.0	4.3405E-02	-4.3391E-02
17.2	4.5009E-02	-4.0145E-02
17.4	4.5912E-02	-3.6414E-02
17.6	4.6122E-02	-3.2263E-02
17.8	4.5655E-02	-2.7761E-02
18.0	4.4537E-02	-2.2977E-02
18.2	4.2802E-02	-1.7985E-02
18.4	4.0492E-02	-1.2856E-02
18.6	3.7655E-02	-7.6645E-03
18.8	3.4344E-02	-2.4800E-03
19.0	3.0619E-02	2.6284E-03
19.2	2.6543E-02	7.5950E-03
19.4	2.2181E-02	1.2358E-02
19.6	1.7599E-02	1.6860E-02
19.8	1.2868E-02	2.1048E-02
20.0	8.0545E-03	2.4876E-02
		1.8698E-02
		1.8698E-02
		2.2593E-02
		1.9249E-02

Table 33a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

	A = 4.0	KAPPA=1.0			
1.0	F(0,C)	F(0,1)	F(0,2)	F(0,3)	F(1,1)
1.2	1.2449E 00	1.1674E 00	4.9313E-01	5.3150E-02	0.0000E-01
1.4	7.2192E-01	8.8576E-01	5.5279E-01	9.6488E-02	5.5769E-01
1.6	3.1572E-01	6.1458E-01	5.7997E-01	1.4444E-01	6.1758E-01
1.8	1.8218E-02	3.6799E-01	5.7598E-01	1.9355E-01	5.6528E-01
2.0	-1.8225E-01	1.5565E-01	5.4394E-01	2.4042E-01	4.5784E-01
2.2	-2.9957E-01	-1.6740E-02	4.8838E-01	2.8188E-01	3.2563E-01
2.4	-3.4873E-01	-1.4689E-01	4.1474E-01	3.1523E-01	1.8844E-01
2.6	-3.4483E-01	-2.3535E-01	3.2890E-01	3.3841E-01	5.9815E-02
2.8	-3.0239E-01	-2.8491E-01	2.3678E-01	3.5002E-01	-5.1212E-02
3.0	-2.3477E-01	-3.0006E-01	1.4400E-01	3.4939E-01	-1.3916E-01
3.2	-1.5376E-01	-2.8644E-01	5.5577E-02	3.3660E-01	-2.0134E-01
3.4	-6.9319E-02	-2.5037E-01	-2.4229E-02	3.1237E-01	-2.3753E-01
3.6	1.0564E-02	-1.9837E-01	-9.2094E-02	2.7805E-01	-2.4925E-01
3.8	7.9899E-02	-1.3682E-01	-1.4569E-01	2.3544E-01	-2.3941E-01
4.0	1.3463E-01	-7.1619E-02	-1.8368E-01	1.8670E-01	-2.1186E-01
4.2	1.7248E-01	-7.9556E-03	-2.0572E-01	1.3422E-01	-1.7103E-01
4.4	1.9277E-01	4.9867E-02	-2.1235E-01	8.0469E-02	-1.2153E-01
4.6	1.9616E-01	9.8536E-02	-2.0485E-01	2.7874E-02	-6.7872E-02
4.8	1.8440E-01	1.3577E-01	-1.8516E-01	-2.1315E-02	-1.4245E-02
5.0	1.6002E-01	1.6029E-01	-1.5563E-01	-6.5120E-02	3.5715E-02
5.2	1.2607E-01	1.7178E-01	-1.1896E-01	-1.0191E-01	7.9045E-02
5.4	8.5871E-02	1.7077E-01	-7.7932E-02	-1.3049E-01	1.1354E-01
5.6	4.2759E-02	1.5848E-01	-3.5323E-02	-1.5010E-01	1.3779E-01
5.8	-1.0963E-04	1.3672E-01	6.2688E-03	-1.6044E-01	1.5115E-01
6.0	-3.9929E-02	1.0766E-01	4.4530E-02	-1.6167E-01	1.5372E-01
6.2	-7.4365E-02	7.3722E-02	7.7531E-02	-1.5437E-01	1.4624E-01
6.4	-1.0165E-01	3.7375E-02	1.0379E-01	-1.3950E-01	1.2997E-01
6.6	-1.2061E-01	1.0232E-03	1.2231E-01	-1.1830E-01	1.0657E-01
6.8	-1.3069E-01	-3.3140E-02	1.3260E-01	-9.2236E-02	7.8018E-02
7.0	-1.3191E-01	-6.3227E-02	1.3464E-01	-6.2933E-02	4.6384E-02
7.2	-1.2482E-01	-8.7773E-02	1.2886E-01	-3.2064E-02	1.3771E-02
7.4	-1.1043E-01	-1.0560E-01	1.1610E-01	-1.2777E-03	-1.7825E-02
7.6	-9.0075E-02	-1.1620E-01	9.7488E-02	2.7880E-02	-4.6620E-02
7.8	-6.5355E-02	-1.1940E-01	7.4404E-02	5.4032E-02	-7.1116E-02
8.0	-3.8005E-02	-1.1545E-01	4.8374E-02	7.6028E-02	-9.0161E-02
8.2	-9.7818E-03	-1.0500E-01	2.0983E-02	9.2985E-02	-1.0299E-01
8.4	1.7623E-02	-8.9033E-02	-6.2087E-03	1.0432E-01	-1.0923E-01
8.6	4.2675E-02	-6.8745E-02	-3.1748E-02	1.0974E-01	-1.0891E-01
8.8	6.4072E-02	-4.5511E-02	-5.4352E-02	1.0929E-01	-1.0240E-01
9.0	8.0795E-02	-2.0780E-02	-7.2964E-02	1.0328E-01	-9.0388E-02
9.2	9.2147E-02	4.0035E-03	-8.6799E-02	9.2267E-02	-7.3839E-02
9.4	9.7768E-02	2.7475E-02	-9.5357E-02	7.7046E-02	-5.3891E-02
9.6	9.2030E-02	4.8416E-02	9.8444E-02	5.8569E-02	-3.1809E-02
9.8	8.1533E-02	7.8888E-02	-8.8858E-02	3.7906E-02	-8.9000E-03
10.0	6.6944E-02	8.7142E-02	-7.7161E-02	-5.4844E-03	3.4362E-02
10.2	4.9246E-02	9.0349E-02	-6.1866E-02	-2.6015E-02	5.2480E-02
10.4	2.9537E-02	8.8561E-02	-4.3922E-02	-4.4445E-02	6.7059E-02
10.6	8.9693E-03	8.2091E-02	-2.4368E-02	-5.9948E-02	7.7477E-02
10.8	-1.1317E-02	7.1479E-02	-4.2753E-03	-7.1880E-02	8.3358E-02
11.0	-3.0250E-02	5.7456E-02	1.5302E-02	-7.9794E-02	8.4583E-02
11.2	-4.6879E-02	4.0897E-02	3.3385E-02	-8.3457E-02	8.1276E-02
11.4	-6.0417E-02	2.2768E-02	4.9111E-02	-8.2852E-02	7.3794E-02
11.6	-7.0272E-02	4.0729E-03	6.1772E-02	-7.8168E-02	6.2689E-02
11.8	-7.6072E-02	-1.4197E-02	7.0843E-02	-6.9784E-02	4.8679E-02
12.0	-7.7667E-02	-3.1116E-02	7.5999E-02	-5.8242E-02	3.2598E-02
12.2	-7.5131E-02	-4.5862E-02	7.7125E-02	-4.4218E-02	1.5353E-02
12.4	-6.8750E-02	-5.7759E-02	7.4307E-02	-2.8479E-02	-2.1272E-03
12.6	-5.8991E-02	-6.6301E-02	6.7827E-02	-1.1848E-02	-1.8940E-02
12.8	-4.6478E-02	-7.1173E-02	5.8136E-02	4.8397E-03	-3.4251E-02
13.0	-3.1949E-02	-7.2252E-02	4.5825E-02	2.0775E-02	-4.7333E-02
13.2	-1.6216E-02	-6.9615E-02	3.1594E-02	3.5213E-02	-5.7599E-02
13.4	-1.2249E-04	-6.3518E-02	1.6213E-02	4.7507E-02	-6.4624E-02
13.6	1.5502E-02	-5.4384E-02	4.7848E-04	5.7134E-02	-6.8162E-02
13.8	2.9881E-02	-4.2768E-02	-1.4821E-02	6.3715E-02	-6.8148E-02
14.0	4.2328E-02	-2.9331E-02	-2.8948E-02	6.7028E-02	-6.4696E-02
14.2	5.2278E-02	-1.4801E-02	-4.1244E-02	6.7015E-02	-5.8086E-02
14.4	5.9309E-02	6.4551E-05	5.1163E-02	6.3775E-02	-4.8750E-02
14.6	6.3160E-02	1.4518E-02	-5.8292E-02	5.7559E-02	-3.7231E-02
14.8	6.3733E-02	2.7857E-02	-6.2366E-02	4.8751E-02	-2.4167E-02
15.0	6.1098E-02	3.9454E-02	-6.3277E-02	3.7842E-02	-1.0251E-02
15.2	5.5481E-02	4.8790E-02	-6.1072E-02	2.5413E-02	3.8069E-03
15.4	4.7247E-02	5.5471E-02	-5.5946E-02	1.2094E-02	1.7310E-02
15.6	3.6876E-02	5.9245E-02	-4.8230E-02	-1.4588E-03	2.9611E-02
15.8	2.4942E-02	6.0008E-02	-3.8368E-02	-1.4598E-02	4.0141E-02
16.0	1.2073E-02	5.7807E-02	-2.6894E-02	-2.6713E-02	4.8434E-02
16.2	-1.0720E-03	5.2829E-02	-1.4404E-02	-3.7261E-02	5.4147E-02
16.4	-1.3843E-02	4.5393E-02	-1.5239E-03	-4.5786E-02	5.7071E-02
16.6	-2.5626E-02	3.5922E-02	1.1118E-02	-5.1939E-02	5.7139E-02
16.8	-3.5872E-02	2.4931E-02	2.2924E-02	-5.5492E-02	5.4423E-02
17.0	-4.4124E-02	1.2988E-02	3.3351E-02	-5.6343E-02	4.9125E-02
17.2	-5.0032E-02	6.9450E-04	4.1937E-02	-5.4521E-02	4.1568E-02
17.4	-5.3369E-02	-1.1349E-02	4.8319E-02	-5.0177E-02	3.2173E-02
17.6	-5.4039E-02	-2.2571E-02	5.2248E-02	-4.3575E-02	2.1438E-02
17.8	-5.2076E-02	-3.2453E-02	5.3599E-02	-3.5078E-02	9.9113E-03
18.0	-4.7638E-02	-4.0554E-02	5.2369E-02	-2.5127E-02	-1.8359E-03
18.2	-4.0998E-02	-4.6531E-02	4.8678E-02	-1.4219E-02	-1.3236E-02
18.4	-3.2528E-02	-5.0148E-02	4.2758E-02	-2.8855E-03	-2.3753E-02
18.6	-2.2677E-02	-5.1290E-02	3.4942E-02	8.3387E-03	-3.2907E-02
18.8	-1.1948E-02	-4.9960E-02	2.5639E-02	1.8935E-02	-4.0293E-02
19.0	-8.7243E-04	-4.6276E-02	1.5323E-02	2.8426E-02	-4.5602E-02
19.2	1.0014E-02	-4.0469E-02	4.4994E-03	3.6398E-02	-4.8628E-02
19.4	2.0197E-02	-3.2859E-02	-6.3121E-03	4.2515E-02	-4.9280E-02
19.6	2.9209E-02	-2.3846E-02	-1.6606E-02	4.6534E-02	-4.7581E-02
19.8	3.6649E-02	-1.3888E-02	-2.5912E-02	4.8317E-02	-4.3661E-02
20.0	4.2200E-02	-3.4719E-03	-3.3817E-02	4.7829E-02	-3.7754E-02

Table 33b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	F(1.2)	F(1.3)	F(2.2)	F(2.3)	F(3.3)
1.0	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01	0.0000E-01
1.2	2.9715E-01	7.0361E-02	1.4156E-01	3.9591E-02	1.9634E-02
1.4	4.0584E-01	1.2196E-01	2.5758E-01	8.6179E-02	5.5355E-02
1.6	4.6407E-01	1.7335E-01	3.4339E-01	1.3630E-01	9.9506E-02
1.8	4.8396E-01	2.2236E-01	3.9925E-01	1.8638E-01	1.4730E-01
2.0	4.7201E-01	2.6615E-01	4.2396E-01	2.3301E-01	1.9460E-01
2.2	4.3400E-01	3.0209E-01	4.2051E-01	2.7316E-01	2.3781E-01
2.4	3.7581E-01	3.2805E-01	3.9261E-01	3.0436E-01	2.7390E-01
2.6	3.0343E-01	3.4225E-01	3.4490E-01	3.2476E-01	3.0054E-01
2.8	2.2275E-01	3.4485E-01	2.8257E-01	3.3326E-01	3.1611E-01
3.0	1.3937E-01	3.3488E-01	2.1099E-01	3.2951E-01	3.1978E-01
3.2	5.8305E-02	3.1328E-01	1.3539E-01	3.1382E-01	3.1144E-01
3.4	-1.6137E-02	2.8127E-01	6.0615E-02	2.8718E-01	2.9171E-01
3.6	-8.0515E-02	2.4059E-01	9.1180E-03	2.5111E-01	2.6176E-01
3.8	-1.3232E-01	1.9336E-01	-7.0341E-02	2.0755E-01	2.2331E-01
4.0	-1.7002E-01	1.4192E-01	-1.2045E-01	1.5877E-01	1.7843E-01
4.2	-1.9298E-01	8.8739E-02	-1.5772E-01	1.0718E-01	1.2943E-01
4.4	-2.0146E-01	3.6243E-02	-1.8135E-01	5.5208E-02	7.8722E-02
4.6	-1.9647E-01	-1.3279E-02	-1.9135E-01	5.2080E-03	2.8688E-02
4.8	-1.7965E-01	-5.7797E-02	-1.8847E-01	-4.0691E-02	-1.8438E-02
5.0	-1.5311E-01	-9.5623E-02	-1.7413E-01	-8.0662E-02	-6.0679E-02
5.2	-1.1930E-01	-1.2547E-01	-1.5021E-01	-1.1326E-01	-9.6397E-02
5.4	-8.0838E-02	-1.4651E-01	-1.1896E-01	-1.3746E-01	-1.2436E-01
5.6	-4.0336E-02	-1.5836E-01	-8.2809E-02	-1.5271E-01	-1.4376E-01
5.8	-3.0136E-04	-1.6111E-01	-4.4258E-02	-1.5890E-01	-1.5426E-01
6.0	3.7007E-02	-1.5525E-01	-5.7151E-03	-1.5635E-01	-1.5596E-01
6.2	6.9666E-02	-1.4166E-01	3.0614E-02	-1.4558E-01	-1.4938E-01
6.4	9.6163E-02	-1.2155E-01	6.2821E-02	-1.2830E-01	-1.3540E-01
6.6	1.1544E-01	-9.6341E-02	8.9374E-02	-1.0517E-01	-1.1519E-01
6.8	1.2691E-01	-6.7622E-02	1.0917E-01	-7.7950E-02	-9.0176E-02
7.0	1.3044E-01	-3.7057E-02	1.2154E-01	-4.8251E-02	-6.1910E-02
7.2	1.2636E-01	-6.2975E-03	1.2628E-01	-1.7723E-02	-3.2016E-02
7.4	1.1537E-01	2.3095E-02	1.2360E-01	1.2046E-02	-2.1018E-03
7.6	9.8485E-02	4.9718E-02	1.1411E-01	3.9595E-02	2.6320E-02
7.8	7.6984E-02	7.2381E-02	9.8719E-02	6.3658E-02	5.1894E-02
8.0	5.2301E-02	9.0158E-02	7.8620E-02	8.3211E-02	7.3485E-02
8.2	2.5953E-02	1.0241E-01	5.5165E-02	9.7507E-02	9.0213E-02
8.4	-5.4754E-04	1.0882E-01	2.9805E-02	1.0610E-01	1.0149E-01
8.6	-2.5770E-02	1.0934E-01	4.0085E-03	1.0884E-01	1.0701E-01
8.8	-4.8432E-02	1.0425E-01	-2.0819E-02	1.0589E-01	1.0680E-01
9.0	-6.7455E-02	9.4070E-02	-4.3403E-02	9.7661E-02	1.0114E-01
9.2	-8.2012E-02	7.9552E-02	-6.2652E-02	8.4822E-02	9.0561E-02
9.4	-9.1550E-02	6.1619E-02	-7.7710E-02	6.8224E-02	7.5832E-02
9.6	-9.5804E-02	4.1321E-02	-8.7981E-02	4.8860E-02	5.7874E-02
9.8	-9.4795E-02	1.9772E-02	-9.3148E-02	2.7838E-02	3.7726E-02
10.0	-8.8814E-02	-1.9030E-03	-9.3171E-02	6.2528E-03	1.6486E-02
10.2	-7.8393E-02	-2.2625E-02	-8.8277E-02	-1.4792E-02	-7.7445E-03
10.4	-6.4265E-02	-4.1407E-02	-7.8935E-02	-3.4278E-02	-2.4913E-02
10.6	-4.7316E-02	-5.7402E-02	-6.5816E-02	-5.1305E-02	-4.3063E-02
10.8	-2.8537E-02	-6.9933E-02	-4.9756E-02	-6.5133E-02	-5.8382E-02
11.0	-8.9661E-03	-7.8520E-02	-3.1699E-02	-7.5205E-02	-7.0224E-02
11.2	1.0364E-02	-8.2895E-02	-1.2651E-02	-8.1174E-02	-7.8142E-02
11.4	2.8478E-02	-3.3003E-02	6.3769E-03	-8.2902E-02	-8.1897E-02
11.6	4.4501E-02	-7.8999E-02	2.4416E-02	-8.0464E-02	-8.1461E-02
11.8	5.7701E-02	-7.1229E-02	4.0589E-02	-7.4132E-02	-7.7009E-02
12.0	6.7516E-02	-6.0210E-02	5.4147E-02	-6.4357E-02	-6.8904E-02
12.2	7.3576E-02	-4.6593E-02	6.4502E-02	-5.1737E-02	-5.7672E-02
12.4	7.5710E-02	-3.1132E-02	7.1247E-02	-3.6985E-02	-4.3970E-02
12.6	7.3951E-02	-1.4639E-02	7.4173E-02	-2.0892E-02	-2.8548E-02
12.8	6.8522E-02	2.0515E-03	7.3265E-02	-4.2833E-03	-1.2213E-02
13.0	5.9818E-02	1.8125E-02	6.8700E-02	1.2021E-02	4.2131E-03
13.2	4.8383E-02	3.2827E-02	6.0828E-02	2.7243E-02	1.9934E-02
13.4	3.4874E-02	4.5492E-02	5.0150E-02	4.0684E-02	3.4212E-02
13.6	2.0026E-02	5.5576E-02	3.7285E-02	5.1752E-02	4.6407E-02
13.8	4.6153E-03	6.2676E-02	2.2940E-02	5.9992E-02	5.5997E-02
14.0	-1.0582E-02	6.6543E-02	7.8678E-03	6.5094E-02	6.2601E-02
14.2	-2.4826E-02	6.7090E-02	-7.1674E-03	6.6910E-02	6.5995E-02
14.4	-3.7448E-02	6.4392E-02	-2.1429E-02	6.5452E-02	6.6112E-02
14.6	-4.7880E-02	5.8672E-02	-3.4243E-02	6.0886E-02	6.3044E-02
14.8	-5.5678E-02	5.0292E-02	-4.5026E-02	5.3521E-02	5.7030E-02
15.0	-6.0539E-02	3.9727E-02	-5.3312E-02	4.3788E-02	4.8441E-02
15.2	-6.2312E-02	2.7541E-02	-5.8771E-02	3.2216E-02	3.7760E-02
15.4	-6.0999E-02	1.4335E-02	-6.1217E-02	1.9407E-02	2.5552E-02
15.6	-5.6752E-02	8.2874E-04	-6.0619E-02	6.0025E-03	1.2439E-02
15.8	-4.9855E-02	-1.2396E-02	-5.7088E-02	-7.3475E-03	-9.3414E-04
16.0	-4.0714E-02	-2.4699E-02	-5.0876E-02	-2.0013E-02	-1.3927E-02
16.2	-2.9831E-02	-3.5526E-02	-4.2355E-02	-3.1415E-02	-2.5937E-02
16.4	-1.7773E-02	-4.4405E-02	-3.1995E-02	-4.1049E-02	-3.6422E-02
16.6	-5.1497E-03	-5.0968E-02	-2.0342E-02	-4.8508E-02	-4.4929E-02
16.8	7.4196E-03	-5.4967E-02	-7.9882E-03	-5.3496E-02	-5.1109E-02
17.0	1.9336E-02	-5.6278E-02	-4.4580E-03	-5.5841E-02	-5.4729E-02
17.2	3.0048E-02	-5.4908E-02	1.6400E-02	-5.5501E-02	-5.5685E-02
17.4	3.9075E-02	-5.0987E-02	2.7282E-02	-5.2557E-02	-5.3996E-02
17.6	4.6031E-02	-4.4760E-02	3.6611E-02	-4.7210E-02	-4.9808E-02
17.8	5.0635E-02	-3.6574E-02	4.3984E-02	-3.9768E-02	-4.3375E-02
18.0	5.2726E-02	-2.6856E-02	4.9097E-02	-3.0629E-02	-3.5052E-02
18.2	5.2265E-02	-1.6096E-02	5.1763E-02	-2.0257E-02	-2.5270E-02
18.4	4.9335E-02	-4.8190E-03	5.1913E-02	-9.1645E-03	-1.4520E-02
18.6	4.4131E-02	6.4403E-03	4.9599E-02	2.1167E-03	-3.3237E-03
18.8	3.6951E-02	1.7159E-02	4.4987E-02	1.3059E-02	7.7890E-03
19.0	2.8177E-02	2.6855E-02	3.8347E-02	2.3162E-02	1.8304E-02
19.2	1.8258E-02	3.5096E-02	3.0036E-02	3.1976E-02	2.7748E-02
19.4	7.6843E-03	4.1539E-02	2.0481E-02	3.9124E-02	3.5708E-02
19.6	-3.0347E-03	4.5923E-02	1.0158E-02	4.4310E-02	4.1847E-02
19.8	-1.3394E-02	4.8091E-02	-4.3257E-04	4.7337E-02	4.5921E-02
20.0	-2.2918E-02	4.7990E-02	-1.0791E-02	4.8113E-02	4.7788E-02

Table 34a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 4.0	KAPPA=1.0
1,2	G(0,0) -3.1997E-01	G(0,1) 6.0303E-02
1,4	-5.3294E-01	-2.8589E-01
1,6	-5.2443E-01	-4.2803E-01
1,8	-4.2289E-01	-4.6401E-01
2,0	-2.8391E-01	-4.3443E-01
2,2	-1.3868E-01	-3.6407E-01
2,4	-5.9649E-03	-2.7083E-01
2,6	1.0328E-01	-1.6840E-01
2,8	1.8357E-01	-6.7367E-02
3,0	2.3335E-01	2.4380E-02
3,2	2.5394E-01	1.0130E-01
3,4	2.4870E-01	1.5996E-01
3,6	2.2227E-01	1.9878E-01
3,8	1.8000E-01	2.1778E-01
4,0	1.2747E-01	2.1827E-01
4,2	7.0087E-02	2.0256E-01
4,4	1.2761E-02	1.7369E-01
4,6	-4.0304E-02	1.3511E-01
4,8	-8.5770E-02	9.0477E-02
5,0	-1.2124E-01	4.3355E-02
5,2	-1.4526E-01	-2.9306E-03
5,4	-1.5731E-01	-4.5474E-02
5,6	-1.5768E-01	-8.1902E-02
5,8	-1.4737E-01	-1.1045E-01
6,0	-1.2797E-01	-1.2999E-01
6,2	-1.0146E-01	-1.4003E-01
6,4	-7.0085E-02	-1.4070E-01
6,6	-3.6171E-02	-1.3264E-01
6,8	-2.0092E-03	-1.1696E-01
7,0	3.0288E-02	-9.5121E-02
7,2	5.8888E-02	-6.8815E-02
7,4	8.2316E-02	-3.9867E-02
7,6	9.9506E-02	-1.0119E-02
7,8	1.0983E-01	1.8671E-02
8,0	1.1311E-01	4.4917E-02
8,2	1.0955E-01	6.7280E-02
8,4	9.9761E-02	8.4720E-02
8,6	8.4644E-02	9.6530E-02
8,8	6.5348E-02	1.0235E-01
9,0	4.3183E-02	1.0218E-01
9,2	1.9540E-02	9.6330E-02
9,4	-4.1891E-03	8.5396E-02
9,6	-2.6685E-02	7.0222E-02
9,8	-4.6768E-02	5.1829E-02
10,0	-6.3450E-02	3.1357E-02
10,2	-7.5979E-02	9.9965E-03
10,4	-8.3862E-02	-1.1075E-02
10,6	-8.6877E-02	-3.0751E-02
10,8	-8.5072E-02	-4.8050E-02
11,0	-7.3746E-02	-6.2162E-02
11,2	-6.8422E-02	-7.2476E-02
11,4	-5.4808E-02	-7.8607E-02
11,6	-3.8752E-02	-8.0399E-02
11,8	-2.1193E-02	-7.7928E-02
12,0	-3.1049E-03	-7.1481E-02
12,2	1.4550E-02	-6.1539E-02
12,4	3.0870E-02	-4.8738E-02
12,6	4.5063E-02	-3.3835E-02
12,8	5.6471E-02	-1.7664E-02
13,0	6.4606E-02	-1.0900E-03
13,2	6.9166E-02	1.5035E-02
13,4	7.0038E-02	2.9913E-02
13,6	6.7301E-02	4.2835E-02
13,8	6.1211E-02	5.3217E-02
14,0	5.2184E-02	6.0621E-02
14,2	4.0768E-02	6.4771E-02
14,4	2.7610E-02	6.5562E-02
14,6	1.3424E-02	6.3056E-02
14,8	-1.0525E-03	5.7477E-02
15,0	-1.5088E-02	4.9192E-02
15,2	-2.8000E-02	3.8688E-02
15,4	-3.9180E-02	2.6546E-02
15,6	-4.8126E-02	1.3407E-02
15,8	-5.4459E-02	-5.8419E-05
16,0	-5.7941E-02	-1.3183E-02
16,2	-5.8479E-02	-2.5337E-02
16,4	-5.6127E-02	-3.5955E-02
16,6	-5.1077E-02	-4.4564E-02
16,8	-4.3645E-02	-5.0800E-02
17,0	-3.4257E-02	-5.4422E-02
17,2	-2.3416E-02	-5.5322E-02
17,4	-1.1687E-02	-5.3527E-02
17,6	3.4318E-04	-4.9190E-02
17,8	1.2085E-02	-4.2581E-02
18,0	2.2982E-02	-3.4072E-02
18,2	3.2529E-02	-2.4116E-02
18,4	4.0301E-02	-1.3222E-02
18,6	4.5968E-02	-1.9295E-03
18,8	4.9308E-02	9.2138E-03
19,0	5.0215E-02	1.9683E-02
19,2	4.8703E-02	2.8997E-02
19,4	4.4896E-02	3.6742E-02
19,6	3.9028E-02	4.2586E-02
19,8	3.1422E-02	4.6295E-02
20,0	2.2476E-02	4.7742E-02
		-3.4019E-02
		-5.2874E-03

Table 34b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A = 4.0	KAPPA=1.0
1,2	G(1,2)	G(1,3)
1,4	1.3338E 00	3,6687E 00
1,6	7,9038E-01	1,7374E 00
1,8	5,0498E-01	1,0986E 00
2,0	2,9872E-01	7,8582E-01
2,2	-2,0319E-04	4,5122E-01
2,4	-1,0662E-01	3,3563E-01
2,6	-1,8646E-01	2,3460E-01
2,8	-2,4060E-01	1,4371E-01
3,0	-2,7043E-01	6,1686E-02
3,2	-2,7804E-01	-1,1246E-02
3,4	-2,6619E-01	-7,4222E-02
3,6	-2,3821E-01	-1,2624E-01
3,8	-1,9784E-01	-1,6648E-01
4,0	-1,4895E-01	-1,9441E-01
4,2	-9,5449E-02	-2,0998E-01
4,4	-4,1010E-02	-2,1357E-01
4,6	1,1041E-02	-2,0603E-01
4,8	5,7864E-02	-1,8862E-01
5,0	1,2704E-02	-1,6296E-01
5,2	1,2744E-01	-1,3092E-01
5,4	1,4761E-01	-9,4547E-02
5,6	1,5739E-01	-5,5931E-02
5,8	1,5706E-01	-7,1744E-02
6,0	1,4744E-01	1,9877E-02
6,2	1,2978E-01	5,3404E-02
6,4	1,0566E-01	8,1993E-02
6,6	7,6913E-02	1,0453E-01
6,8	4,5460E-02	1,2025E-01
7,0	1,3239E-02	1,2880E-01
7,2	-1,7911E-02	1,3017E-01
7,4	-4,6334E-02	1,2470E-01
7,6	-7,0635E-02	1,1306E-01
7,8	-8,9727E-02	9,6186E-02
8,0	-1,0287E-01	7,5205E-02
8,2	-1,0968E-01	5,1391E-02
8,4	-1,1015E-01	2,6087E-02
8,6	-1,0458E-01	6,3842E-04
8,8	-9,3576E-02	2,3671E-02
9,0	-7,8012E-02	-4,5679E-02
9,2	-5,8933E-02	-6,4395E-02
9,4	-3,7518E-02	-7,9036E-02
9,6	-1,5003E-02	-8,9058E-02
9,8	7,3806E-03	-9,4167E-02
10,0	2,8470E-02	-9,4323E-02
10,2	4,7226E-02	-8,9729E-02
10,4	6,2777E-02	-8,0812E-02
10,6	7,4457E-02	-6,8190E-02
10,8	8,1825E-02	-5,2633E-02
11,0	8,4679E-02	-3,5024E-02
11,2	8,3055E-02	-1,6308E-02
11,4	7,7211E-02	2,5563E-03
11,6	6,7608E-02	2,0639E-02
11,8	5,4873E-02	3,7085E-02
12,0	3,9768E-02	5,1151E-02
12,2	2,3139E-02	6,2238E-02
12,4	5,8774E-03	6,9910E-02
12,6	-1,1130E-02	7,3913E-02
12,8	-2,7043E-02	7,4177E-02
13,0	-4,1104E-02	7,0814E-02
13,2	-5,2679E-02	6,4106E-02
13,4	-6,1274E-02	5,4483E-02
13,6	-6,6562E-02	4,2503E-02
13,8	-6,8388E-02	2,8813E-02
14,0	-6,6771E-02	1,4124E-02
14,2	-6,1898E-02	-8,3125E-04
14,4	-5,4108E-02	-1,5329E-02
14,6	-4,3868E-02	-2,8691E-02
14,8	-3,1752E-02	-4,0313E-02
15,0	-1,8405E-02	-4,9693E-02
15,2	-4,5108E-03	-5,6449E-02
15,4	9,2413E-03	-6,0332E-02
15,6	2,2190E-02	-6,1240E-02
15,8	3,3731E-02	-5,9210E-02
16,0	4,3349E-02	-5,4417E-02
16,2	5,0630E-02	-4,7160E-02
16,4	5,5289E-02	-3,7846E-02
16,6	5,7171E-02	-2,6968E-02
16,8	5,6257E-02	-1,5075E-02
17,0	5,2664E-02	-2,7514E-03
17,2	4,6631E-02	9,4142E-03
17,4	3,8506E-02	2,0856E-02
17,6	2,8727E-02	3,1058E-02
17,8	1,7798E-02	3,9573E-02
18,0	6,2663E-03	4,6044E-02
18,2	-5,3095E-03	5,0219E-02
18,4	-1,6381E-02	5,1956E-02
18,6	-2,6438E-02	5,1230E-02
18,8	-3,5030E-02	4,8133E-02
19,0	-4,1787E-02	4,2860E-02
19,2	-4,6432E-02	3,5705E-02
19,4	-4,8795E-02	2,7039E-02
19,6	-4,8816E-02	1,7297E-02
19,8	-4,6544E-02	6,9499E-03
20,0	-4,2135E-02	-3,5110E-03
		-4,6728E-02
		5,1925E-04

Table 35a

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A = 4.0	KAPPA=4.0
1.0	2.5055E 00	2.4805E 00
1.2	-2.8201E-01	3.7913E-01
1.4	-8.3872E-01	-6.5182E-01
1.6	-3.0564E-01	-6.9542E-01
1.8	3.2382E-01	-2.0414E-01
2.0	5.2765E-01	2.9935E-01
2.2	2.8673E-01	4.8149E-01
2.4	-1.1406E-01	3.0405E-01
2.6	-3.6284E-01	-4.1867E-02
2.8	-3.2129E-01	-3.0397E-01
3.0	-6.8403E-02	-3.3076E-01
3.2	1.9542E-01	-1.4209E-01
3.4	2.9652E-01	1.1277E-01
3.6	1.9157E-01	2.6565E-01
3.8	-2.5942E-02	2.3383E-01
4.0	-2.0368E-01	5.8511E-02
4.2	-2.3297E-01	-1.3581E-01
4.4	-1.1080E-01	-2.2674E-01
4.6	7.0705E-02	1.6809E-01
4.8	1.9171E-01	-9.9891E-03
5.0	1.8168E-01	1.4118E-01
5.2	5.8100E-02	1.9280E-01
5.4	-9.2521E-02	1.2111E-01
5.6	-1.7413E-01	-2.0175E-02
5.8	-1.4110E-01	-1.3899E-01
6.0	-2.2293E-02	-1.6393E-01
6.2	1.0257E-01	-8.6177E-02
6.4	1.5566E-01	3.9682E-02
6.6	1.0878E-01	1.3333E-01
6.8	-2.7762E-03	1.3937E-01
7.0	-1.0613E-01	5.9402E-02
7.2	-1.3795E-01	-5.2532E-02
7.4	-8.2711E-02	-1.2607E-01
7.6	2.0682E-02	-1.1832E-01
7.8	1.0593E-01	-3.8415E-02
8.0	1.2152E-01	6.0992E-02
8.2	6.1423E-02	1.1811E-01
8.4	-3.3613E-02	1.0013E-01
8.6	-1.0349E-01	2.1686E-02
8.8	-1.0648E-01	-6.6430E-02
9.0	-4.3853E-02	-1.0994E-01
9.2	4.2975E-02	-8.4282E-02
9.4	9.9673E-02	-8.1845E-03
9.6	9.2782E-02	6.9717E-02
9.8	2.9224E-02	1.0180E-01
10.	-4.9702E-02	7.0372E-02
10.2	-9.5026E-02	-2.8050E-03
10.4	-8.0332E-02	-7.1433E-02
10.6	-1.6961E-02	-9.3826E-02
10.8	5.4439E-02	-5.8092E-02
11.0	8.9881E-02	1.1798E-02
11.2	6.9012E-02	7.1975E-02
11.4	6.6318E-03	8.6101E-02
11.6	-5.7644E-02	4.7198E-02
11.8	-8.4459E-02	-1.9175E-02
12.0	-5.8710E-02	-7.1625E-02
12.2	2.0953E-03	-7.8660E-02
12.4	5.9649E-02	-3.7494E-02
12.6	7.8902E-02	2.5221E-02
12.8	4.9326E-02	7.0589E-02
13.0	-9.4776E-03	7.1521E-02
13.2	-6.0702E-02	2.8827E-02
13.4	-7.3310E-02	-3.0157E-02
13.6	-4.0771E-02	-6.9020E-02
13.8	1.5718E-02	-6.4692E-02
14.0	6.0991E-02	-2.1069E-02
14.2	6.7750E-02	3.4157E-02
14.4	3.2966E-02	6.7034E-02
14.6	-2.0980E-02	5.8172E-02
14.8	-6.0661E-02	1.4116E-02
15.0	-6.2268E-02	-3.7359E-02
15.2	-2.5845E-02	-6.4722E-02
15.4	2.5396E-02	-5.1958E-02
15.6	5.9828E-02	-7.8825E-03
15.8	5.6900E-02	3.9873E-02
16.0	1.9347E-02	6.2154E-02
16.2	-2.9073E-02	4.6043E-02
16.4	-5.0584E-02	2.2958E-03
16.6	-5.1668E-02	-4.1792E-02
16.8	-1.3422E-02	-5.9388E-02
17.0	3.2102E-02	-4.0421E-02
17.2	5.7001E-02	2.7055E-03
17.4	4.6589E-02	4.3192E-02
17.6	8.0248E-03	5.6470E-02
17.8	-3.4560E-02	3.5085E-02
18.0	-5.5141E-02	-7.1738E-03
18.2	-4.1675E-02	-4.4137E-02
18.4	-3.1160E-03	-5.3439E-02
18.6	3.6511E-02	-3.0027E-02
18.8	5.3054E-02	1.1155E-02
19.0	3.6937E-02	4.4681E-02
19.2	-1.3393E-03	5.0326E-02
19.4	-3.8009E-02	2.5240E-02
19.6	-5.0785E-02	-1.4687E-02
19.8	-3.2379E-02	-4.4872E-02
20.0	5.3724E-03	-4.7159E-02
		-2.7212E-02
		4.2170E-02

Table 35b

TWO-CENTRE REGULAR COULOMB WAVEFUNCTION F(M,L)

ξ	A= 4.0	KAPPA=4.0
1.0	F(1.2)	F(1.3)
1.2	0.0000E-01	0.0000E-01
1.4	1.2490E 00	1.1211E 00
1.6	5.2936E-01	9.7454E-01
1.8	-2.5401E-01	4.0818E-01
2.0	-5.9913E-01	-1.8705E-01
2.2	-4.4684E-01	-5.1046E-01
2.4	-3.5051E-02	-4.6158E-01
2.6	3.1596E-01	-1.5177E-01
2.8	4.0012E-01	1.9117E-01
3.0	2.1516E-01	3.6364E-01
3.2	-7.8476E-02	2.9275E-01
3.4	-2.8197E-01	5.6253E-02
3.6	-2.8218E-01	-1.8347E-01
3.8	-1.0573E-01	-2.8380E-01
4.0	1.1680E-01	-2.0167E-01
4.2	2.4293E-01	-6.5822E-03
4.4	2.0543E-01	1.7277E-01
4.6	4.4135E-02	2.3044E-01
4.8	-1.2980E-01	1.4341E-01
5.0	-2.0838E-01	-2.2866E-02
5.2	-1.5176E-01	-1.6144E-01
5.4	-6.0475E-03	-1.9112E-01
5.6	1.3224E-01	-1.0266E-01
5.8	1.7894E-01	4.1521E-02
6.0	1.1226E-01	1.5028E-01
6.2	-1.8855E-02	1.6041E-01
6.4	-1.2972E-01	7.2540E-02
6.6	-1.5387E-01	-5.3735E-02
6.8	-8.2122E-02	-1.3957E-01
7.0	3.5682E-02	-1.3552E-01
7.2	1.2476E-01	-4.9426E-02
7.4	1.3237E-01	6.1804E-02
7.6	5.8495E-02	1.2939E-01
7.8	-4.7236E-02	1.1478E-01
8.0	-1.1856E-01	3.1221E-02
8.2	-1.1374E-01	-6.7057E-02
8.4	-3.9594E-02	-1.1974E-01
8.6	5.5180E-02	-9.7152E-02
8.8	1.1177E-01	-1.6611E-02
9.0	9.7453E-02	7.0316E-02
9.2	2.4247E-02	1.1062E-01
9.4	-6.0554E-02	8.1950E-02
9.6	-1.0473E-01	4.7282E-03
9.8	-8.3109E-02	-7.2116E-02
10.0	6.4044E-02	-1.0198E-01
10.2	9.7659E-02	-6.8684E-02
10.4	7.0389E-02	5.0255E-03
10.6	1.2164E-03	9.3797E-02
10.8	-6.6117E-02	5.7002E-02
11.0	-9.0664E-02	-1.3078E-02
11.2	-5.9045E-02	-7.2691E-02
11.4	7.4572E-03	-8.6034E-02
11.6	6.7106E-02	-4.6643E-02
11.8	8.3816E-02	1.9742E-02
12.0	4.8883E-02	7.1907E-02
12.2	-1.4689E-02	7.8664E-02
12.4	-6.7248E-02	3.7409E-02
12.6	-7.7157E-02	-2.5257E-02
12.8	-3.9748E-02	-7.0610E-02
13.0	2.0718E-02	-7.1661E-02
13.2	6.6723E-02	-2.9143E-02
13.4	7.0710E-02	2.9805E-02
13.6	3.1515E-02	6.8904E-02
13.8	-2.5731E-02	6.5003E-02
14.0	-6.5666E-02	2.1723E-02
14.2	-6.4489E-02	-3.3530E-02
14.4	-2.4080E-02	-6.6872E-02
14.6	2.9877E-02	-5.8671E-02
14.8	6.4183E-02	-1.5049E-02
15.0	5.8501E-02	3.6548E-02
15.2	1.7360E-02	6.4579E-02
15.4	-3.3275E-02	5.2648E-02
15.6	-6.2356E-02	9.0408E-03
15.8	-5.2750E-02	-3.8951E-02
16.0	-1.1283E-02	-6.2077E-02
16.2	3.6022E-02	-4.6920E-02
16.4	6.0252E-02	-3.6313E-03
16.6	4.7235E-02	4.0817E-02
16.8	5.7896E-03	5.9409E-02
17.0	-3.8200E-02	4.1474E-02
17.2	-5.7925E-02	-1.2361E-03
17.4	-4.1956E-02	-4.2211E-02
17.6	-8.2812E-04	-5.6612E-02
17.8	3.9877E-02	-3.6300E-02
18.0	5.5419E-02	5.6091E-03
18.2	3.6910E-02	4.3188E-02
18.4	-3.6452E-03	5.3715E-02
18.6	-4.1110E-02	3.1387E-02
18.8	-5.2773E-02	-9.5288E-03
19.0	-3.2096E-02	-4.3794E-02
19.2	7.6685E-03	-5.0743E-02
19.4	4.1948E-02	-2.6728E-02
19.6	5.0018E-02	1.3031E-02
19.8	2.7510E-02	4.4070E-02
20.0	-1.1276E-02	4.7720E-02
		-2.6161E-03
		4.9435E-02

Table 36a

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	$G(0,0)$	$G(0,1)$	$G(0,2)$	$G(0,3)$	$G(1,1)$
1, 2	-1.0654E 00	-1,1278E 00	-7,1126E-01	3,9880E-01	-8,7675E-01
1, 4	-1.2525E-03	-5,9813E-01	-9,3297E-01	-5,3595E-01	-8,4687E-01
1, 6	6,2367E-01	1,9677E-01	-4,3642E-01	-7,7429E-01	-2,5325E-01
1, 8	5,0302E-01	5,8234E-01	1,7324E-01	-5,1976E-01	3,6023E-01
2, 0	1,1941E-02	4,5076E-01	5,0604E-01	-4,8658E-02	5,3044E-01
2, 2	-3,7664E-01	4,0317E-02	4,4350E-01	3,3887E-01	2,6995E-01
2, 4	-4,1438E-01	-3,1423E-01	1,1680E-01	4,5145E-01	-1,3085E-01
2, 6	-1,5346E-01	-3,9757E-01	-2,2312E-01	2,8049E-01	-3,6891E-01
2, 8	1,7084E-01	2,0835E-01	3,6880E-01	-2,6834E-02	-3,1706E-01
3, 0	3,3127E-01	8,6968E-02	-2,6446E-01	-2,7183E-01	-6,0373E-02
3, 2	2,4847E-01	2,8581E-01	-1,1342E-02	-3,2138E-01	2,0099E-01
3, 4	1,2198E-02	2,7727E-01	2,1615E-01	-1,7315E-01	2,9719E-01
3, 6	-2,0382E-01	9,4218E-02	2,8319E-01	6,0577E-02	1,8873E-01
3, 8	-2,6328E-01	-1,2760E-01	1,6853E-01	2,3153E-01	-2,9349E-02
4, 0	-1,4667E-01	-2,4568E-01	-3,7442E-02	2,4535E-01	-2,0547E-01
4, 2	5,2300E-02	-1,9802E-01	-1,9965E-01	1,1037E-01	-2,3276E-01
4, 4	1,9893E-01	-3,1227E-02	-2,2387E-01	-7,8046E-02	-1,0951E-01
4, 6	2,0583E-01	1,3986E-01	-1,0866E-01	-2,0225E-01	7,1882E-02
4, 8	8,1799E-02	2,0910E-01	6,3095E-02	-1,9370E-01	1,9219E-01
5, 0	-8,3558E-02	1,4277E-01	1,8193E-01	-6,9001E-02	1,8160E-01
5, 2	-1,8321E-01	-6,7832E-03	1,7994E-01	8,7401E-02	5,7878E-02
5, 4	-1,6021E-01	-1,4070E-01	6,8023E-02	1,7900E-01	-9,2631E-02
5, 6	-3,8550E-02	-1,7777E-01	-7,7247E-02	1,5564E-01	-1,7420E-01
5, 8	9,8602E-02	-1,0243E-01	-1,6499E-01	3,9814E-02	-1,4135E-01
6, 0	1,6486E-01	3,0955E-02	-1,4589E-01	-9,2164E-02	-2,2732E-02
6, 2	1,2405E-01	1,3645E-01	-3,8927E-02	-1,5962E-01	1,0219E-01
6, 4	8,6818E-03	1,5116E-01	8,4970E-02	-1,2612E-01	1,5556E-01
6, 6	-1,0495E-01	7,1943E-02	1,4931E-01	-1,8308E-02	1,0935E-01
6, 8	-1,4666E-01	-4,6770E-02	1,1864E-01	9,4114E-02	-1,9494E-03
7, 0	-9,5068E-02	-1,2983E-01	1,7339E-02	1,4296E-01	-1,0557E-01
7, 2	1,2464E-02	-1,2845E-01	-8,8809E-02	1,0239E-01	-1,3808E-01
7, 4	1,0639E-01	4,8296E-02	-1,3494E-01	1,9945E-03	-8,3534E-02
7, 6	-1,2956E-01	5,7211E-02	-9,6287E-02	-9,4240E-02	1,9646E-02
7, 8	7,1544E-02	1,2214E-01	-9,2312E-04	-1,2832E-01	1,0535E-01
8, 0	-2,7668E-02	1,0891E-01	9,0167E-02	-8,2847E-02	1,2180E-01
8, 2	-1,0492E-01	2,9592E-02	1,2178E-01	1,0623E-02	6,2437E-02
8, 4	-1,1382E-01	-6,4026E-02	7,7624E-02	9,3137E-02	-3,2485E-02
8, 6	-5,2227E-02	-1,1403E-01	-1,1766E-02	1,1526E-01	-1,0296E-01
8, 8	3,8673E-02	-9,1942E-02	-8,9874E-02	6,6439E-02	-1,0691E-01
9, 0	1,0171E-01	-1,4582E-02	-1,0970E-01	-2,0502E-02	-4,5000E-02
9, 2	9,9466E-02	6,8391E-02	-6,1816E-02	-9,1181E-02	4,1831E-02
9, 4	3,6211E-02	1,0585E-01	2,1675E-02	-1,0349E-01	9,9255E-02
9, 6	-4,6622E-02	7,7106E-02	8,8449E-02	-5,2470E-02	9,3366E-02
9, 8	-9,7429E-02	2,4118E-03	9,8595E-02	2,8290E-02	-3,0454E-02
10, 0	-8,6409E-02	-7,0743E-02	4,8280E-02	8,8618E-02	-4,8592E-02
10, 2	-2,2827E-02	-9,7784E-02	-2,9450E-02	9,2770E-02	-9,4733E-02
10, 4	5,2287E-02	-6,4045E-02	-8,6231E-02	4,0448E-02	-8,1045E-02
10, 6	9,2500E-02	7,5248E-03	-8,8345E-02	-3,4437E-02	-1,8237E-02
10, 8	7,4538E-02	7,1831E-02	-3,6590E-02	-8,5621E-02	5,3396E-02
11, 0	1,1577E-02	8,9929E-02	3,5547E-02	-8,2952E-02	8,9721E-02
11, 2	-5,6210E-02	5,2485E-02	8,3450E-02	-3,0019E-02	6,9833E-02
11, 4	-8,7194E-02	-1,5669E-02	7,8861E-02	3,9269E-02	7,9217E-03
11, 6	-6,3740E-02	-7,1897E-02	2,6429E-02	8,2311E-02	-5,6688E-02
11, 8	-2,0855E-03	-8,2343E-02	-4,0301E-02	7,3909E-02	-8,4428E-02
12, 0	5,8779E-02	-4,2208E-02	-8,0266E-02	2,0915E-02	-5,9620E-02
12, 2	8,1690E-02	2,2349E-02	-7,0064E-02	-4,3030E-02	8,1505E-04
12, 4	5,3909E-02	7,1182E-02	-1,7556E-02	-7,8774E-02	5,8793E-02
12, 6	-5,9408E-03	7,5052E-02	4,3960E-02	-6,5546E-02	7,8997E-02
12, 8	-6,2821E-02	3,3040E-02	7,6794E-02	-1,2934E-02	5,0306E-02
13, 0	-7,6106E-02	-2,7816E-02	6,1888E-02	4,5904E-02	-8,2256E-03
13, 2	-4,4950E-02	-9,9863E-02	9,7820E-03	7,5077E-02	-5,9953E-02
13, 4	1,2730E-02	-6,8068E-02	-4,6713E-02	5,7786E-02	-7,3521E-02
13, 6	6,0932E-02	-2,4841E-02	-7,3121E-02	5,9178E-03	-4,1803E-02
13, 8	7,0522E-02	3,2265E-02	-5,4278E-02	-4,8034E-02	1,4510E-02
14, 0	3,6779E-02	6,8073E-02	-2,9582E-03	-7,1270E-02	6,0352E-02
14, 2	-1,8463E-02	6,1393E-02	4,8709E-02	-5,0571E-02	6,8068E-02
14, 4	-6,0895E-02	1,7498E-02	6,9308E-02	2,5993E-04	3,4035E-02
14, 6	-6,4997E-02	-3,5850E-02	4,7186E-02	4,9534E-02	-1,9826E-02
14, 8	-2,9324E-02	-6,5914E-02	-3,0356E-03	6,7392E-02	-6,0133E-02
15, 0	2,3287E-02	-5,5027E-02	-5,0067E-02	4,3848E-02	-6,2683E-02
15, 2	6,0302E-02	-1,0914E-02	-6,5407E-02	-5,7008E-03	-2,6937E-02
15, 4	5,9568E-02	3,8696E-02	-4,0572E-02	-5,0497E-02	2,4304E-02
15, 6	2,2521E-02	6,3466E-02	8,2975E-03	-6,3476E-02	5,9408E-02
15, 8	-2,7320E-02	4,8963E-02	5,0880E-02	-3,7579E-02	5,7401E-02
16, 0	-5,9253E-02	5,0124E-03	6,1456E-02	1,0488E-02	2,0450E-02
16, 2	-5,4265E-02	-4,0902E-02	3,4401E-02	5,0996E-02	-2,8051E-02
16, 4	-1,6316E-02	-6,0793E-02	-1,2909E-02	5,9545E-02	-5,8269E-02
16, 6	3,0664E-02	-4,3196E-02	-5,1227E-02	3,1728E-02	-5,2244E-02
16, 8	5,7830E-02	2,7453E-04	-5,7484E-02	-1,4691E-02	-1,4525E-02
17, 0	4,9108E-02	4,2553E-02	-2,8644E-02	-5,1094E-02	3,1155E-02
17, 2	1,0660E-02	5,7946E-02	1,6937E-02	-5,5621E-02	5,6788E-02
17, 4	-3,3399E-02	3,7718E-02	5,1172E-02	-2,6267E-02	4,7231E-02
17, 6	-5,6102E-02	-5,0032E-03	5,3517E-02	1,8369E-02	9,1190E-03
17, 8	-4,4111E-02	-4,3718E-02	2,3276E-02	5,0844E-02	-3,3690E-02
18, 0	-5,5117E-03	-5,4967E-02	-2,0441E-02	5,1721E-02	-5,5025E-02
18, 2	3,5595E-02	3,2522E-02	-5,0769E-02	2,1171E-02	-4,2375E-02
18, 4	5,4123E-02	9,2225E-03	-4,9576E-02	-2,1570E-02	-4,1926E-03
18, 6	3,9284E-02	4,4456E-02	-1,8273E-02	-5,0291E-02	5,5720E-02
18, 8	8,3370E-04	5,1891E-02	2,3469E-02	-4,7860E-02	5,3030E-02
19, 0	-3,7313E-02	2,7600E-02	5,0066E-02	-1,6418E-02	3,7684E-02
19, 2	-5,1940E-02	-1,2975E-02	4,5677E-02	2,4338E-02	-2,8754E-04
19, 4	-3,4635E-02	-4,4816E-02	1,3616E-02	4,9472E-02	-3,7299E-02
19, 6	3,4069E-03	-4,8748E-02	-2,6065E-02	4,4052E-02	-5,0846E-02
19, 8	3,8604E-02	-2,2945E-02	-4,9101E-02	1,1991E-02	-3,3164E-02
20, 0	4,9592E-02	1,6297E-02	-4,1834E-02	-2,6709E-02	4,3517E-03

Table 36b

TWO-CENTRE IRREGULAR COULOMB WAVEFUNCTION G(M,L)

ξ	A= 4.0	KAPPA=4.0
1.2	G(1,2)	G(1,3)
1.4	1.4511E-01	9.1902E-01
1.6	-7.4005E-01	-1.6835E-01
1.8	-6.9070E-01	-6.6353E-01
2.0	-1.7839E-01	-6.2454E-01
2.2	3.1456E-01	-2.4117E-01
2.4	4.8570E-01	1.9181E-01
2.6	3.0627E-01	4.2320E-01
2.8	-3.7700E-02	3.6180E-01
3.0	-3.0122E-01	9.5232E-02
3.2	-3.3423E-01	-1.8798E-01
3.4	-1.5185E-01	-3.1907E-01
3.6	1.0247E-01	-2.4150E-01
3.8	2.6208E-01	-2.7921E-02
4.0	2.4011E-01	1.7829E-01
4.2	7.0987E-02	2.5485E-01
4.4	-1.2520E-01	1.6970E-01
4.6	-2.2499E-01	-9.9001E-03
4.8	-1.7640E-01	-1.6711E-01
5.0	-2.2976E-02	-2.0945E-01
5.2	1.3188E-01	-1.2139E-01
5.4	1.9306E-01	3.3202E-02
5.6	1.3060E-01	1.5581E-01
5.8	-7.6577E-03	1.7490E-01
6.0	-1.3140E-01	8.6546E-02
6.2	-1.6591E-01	-4.8259E-02
6.4	-9.6233E-02	-1.4486E-01
6.6	2.8067E-02	-1.4736E-01
6.8	1.2745E-01	-6.0262E-02
7.0	1.4272E-01	5.8189E-02
7.2	6.9624E-02	1.3441E-01
7.4	-4.1995E-02	1.2470E-01
7.6	-1.2176E-01	3.9805E-02
7.8	-1.2273E-01	-6.4722E-02
8.0	-4.8538E-02	-1.2450E-01
8.2	5.1584E-02	-1.0562E-01
8.4	1.1521E-01	-2.3529E-02
8.6	1.0533E-01	6.8897E-02
8.8	-5.8139E-02	1.1512E-01
9.0	-1.0826E-01	8.9283E-02
9.2	-9.0061E-02	1.0371E-02
9.4	-1.7643E-02	-7.1373E-02
9.6	6.2501E-02	-7.5099E-02
9.8	1.0119E-01	3.8490E-04
10.0	7.6563E-02	7.2588E-02
10.2	6.1881E-03	9.7835E-02
10.4	-6.5234E-02	6.2663E-02
10.6	-9.4147E-02	-9.2424E-03
10.8	-6.4558E-02	-7.2849E-02
11.0	3.3182E-03	-8.9865E-02
11.2	6.6731E-02	-5.1671E-02
11.4	8.7219E-02	1.6567E-02
11.6	5.3826E-02	7.2371E-02
11.8	-1.1237E-02	8.2302E-02
12.0	-6.7270E-02	4.1896E-02
12.2	-8.0461E-02	-2.2631E-02
12.4	-4.4195E-02	-7.1315E-02
12.6	1.7841E-02	-7.5118E-02
12.8	6.7060E-02	-3.3163E-02
13.0	7.3906E-02	2.7642E-02
13.2	3.5526E-02	6.9802E-02
13.4	-2.3341E-02	6.8290E-02
13.6	-6.6254E-02	2.5334E-02
13.8	-6.7571E-02	-3.1763E-02
14.0	-2.7703E-02	-6.7924E-02
14.2	2.7905E-02	-6.1797E-02
14.4	6.4972E-02	-1.8298E-02
14.6	6.1466E-02	3.5121E-02
14.8	2.0636E-02	6.5754E-02
15.0	-3.1663E-02	5.5622E-02
15.2	-6.3308E-02	1.1966E-02
15.4	-5.5596E-02	-3.7821E-02
15.6	-1.4245E-02	-6.3351E-02
15.8	3.4725E-02	-6.9748E-02
16.0	6.1335E-02	-6.2650E-03
16.2	4.9963E-02	3.9947E-02
16.4	8.4669E-03	6.0762E-02
16.6	-3.7178E-02	4.4163E-02
16.8	-5.9113E-02	1.1330E-03
17.0	-4.4566E-02	-4.1570E-02
17.2	-3.2452E-03	-5.8025E-02
17.4	3.9098E-02	-3.8854E-02
17.6	5.6692E-02	3.4817E-03
17.8	3.9404E-02	4.2749E-02
18.0	-1.4670E-03	5.5174E-02
18.2	-4.0546E-02	3.3812E-02
18.4	-5.4112E-02	-7.6233E-03
18.6	-3.4475E-02	-4.3535E-02
18.8	5.7109E-03	-5.2237E-02
19.0	4.1575E-02	-2.9026E-02
19.2	5.1408E-02	1.1330E-02
19.4	2.9775E-02	4.3971E-02
19.6	-9.5221E-03	4.9237E-02
19.8	-4.2239E-02	2.4490E-02
20.0	-4.8609E-02	-1.4635E-02
		-4.9823E-02
		-6.8581E-03

Figure Captions

- Fig. 1 Two-centre Coulomb phaseshifts $\eta_{m\ell}$ for $m=0$, and $\ell=0$.
- Fig. 2 The same as Fig. 1 for $m=0$, and $\ell=1$.
- Fig. 3 The same as Fig. 1 for $m=0$, and $\ell=2$.
- Fig. 4 The same as Fig. 1 for $m=0$, and $\ell=3$.
- Fig. 5 The same as Fig. 1 for $m=1$, and $\ell=1$.
- Fig. 6 The same as Fig. 1 for $m=1$, and $\ell=2$.
- Fig. 7 The same as Fig. 1 for $m=1$, and $\ell=3$.
- Fig. 8 The same as Fig. 1 for $m=2$, and $\ell=2$.
- Fig. 9 The same as Fig. 1 for $m=2$, and $\ell=3$.
- Fig. 10 The same as Fig. 1 for $m=3$, and $\ell=3$.
- Fig. 11 Two-centre radial Coulomb functions for $m=0$, $\ell=0$, and $a=0.4$; solid line : regular function $F(\kappa, \xi)$, dashed line : irregular function $G(\kappa, \xi)$. Two representative cases are shown : $\kappa=0.4$ and 1.0 .
- Fig. 12 The same as Fig. 11 for $m=0$, $\ell=0$, and $a=1.0$.
- Fig. 13 The same as Fig. 11 for $m=0$, $\ell=1$, and $a=0.4$.
- Fig. 14 The same as Fig. 11 for $m=0$, $\ell=1$, and $a=1.0$.
- Fig. 15 The same as Fig. 11 for $m=0$, $\ell=2$, and $a=0.4$.
- Fig. 16 The same as Fig. 11 for $m=0$, $\ell=2$, and $a=1.0$.
- Fig. 17 The same as Fig. 11 for $m=0$, $\ell=3$, and $a=0.4$.
- Fig. 18 The same as Fig. 11 for $m=0$, $\ell=3$, and $a=1.0$.
- Fig. 19 The same as Fig. 11 for $m=1$, $\ell=2$, and $a=0.4$.
- Fig. 20 The same as Fig. 11 for $m=1$, $\ell=2$, and $a=1.0$.
- Fig. 21 The same as Fig. 11 for $m=2$, $\ell=2$, and $a=0.4$.
- Fig. 22 The same as Fig. 11 for $m=2$, $\ell=2$, and $a=1.0$.

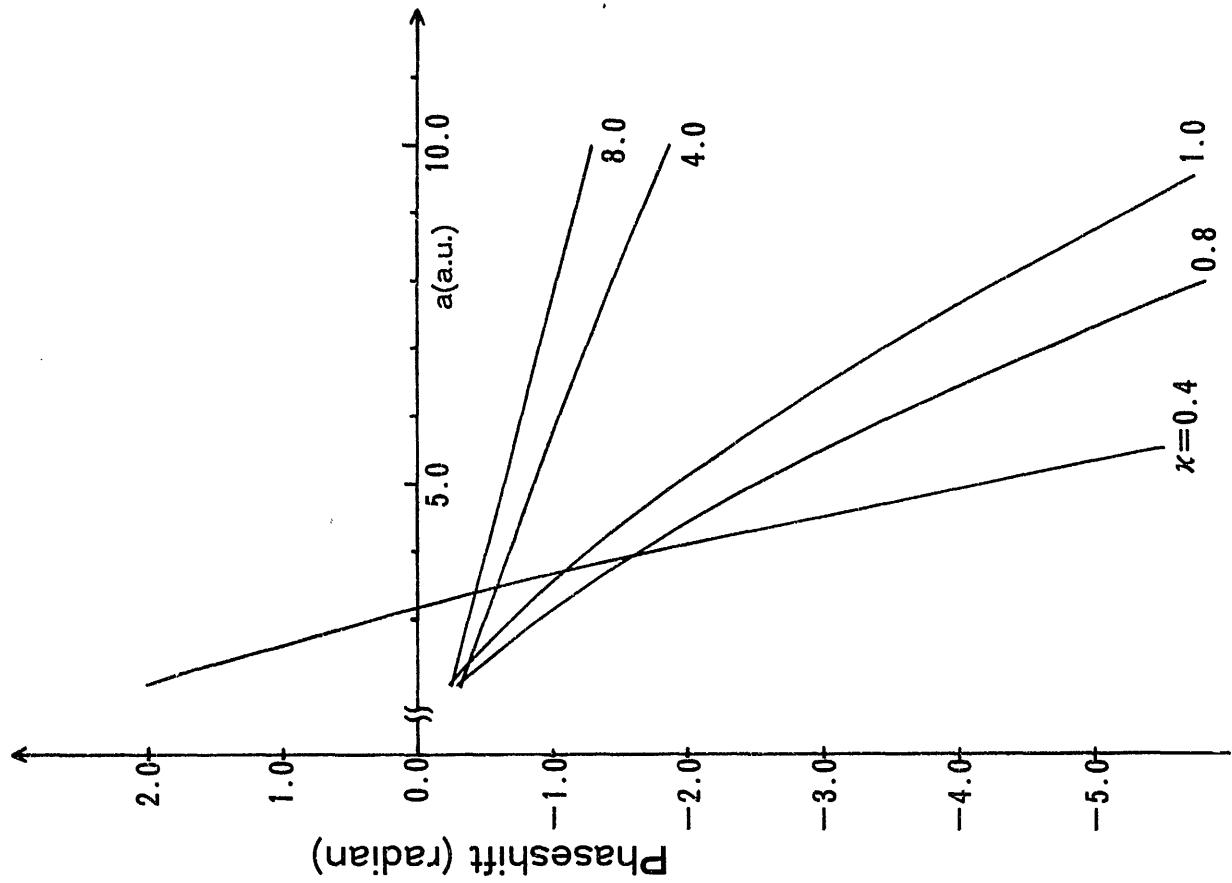
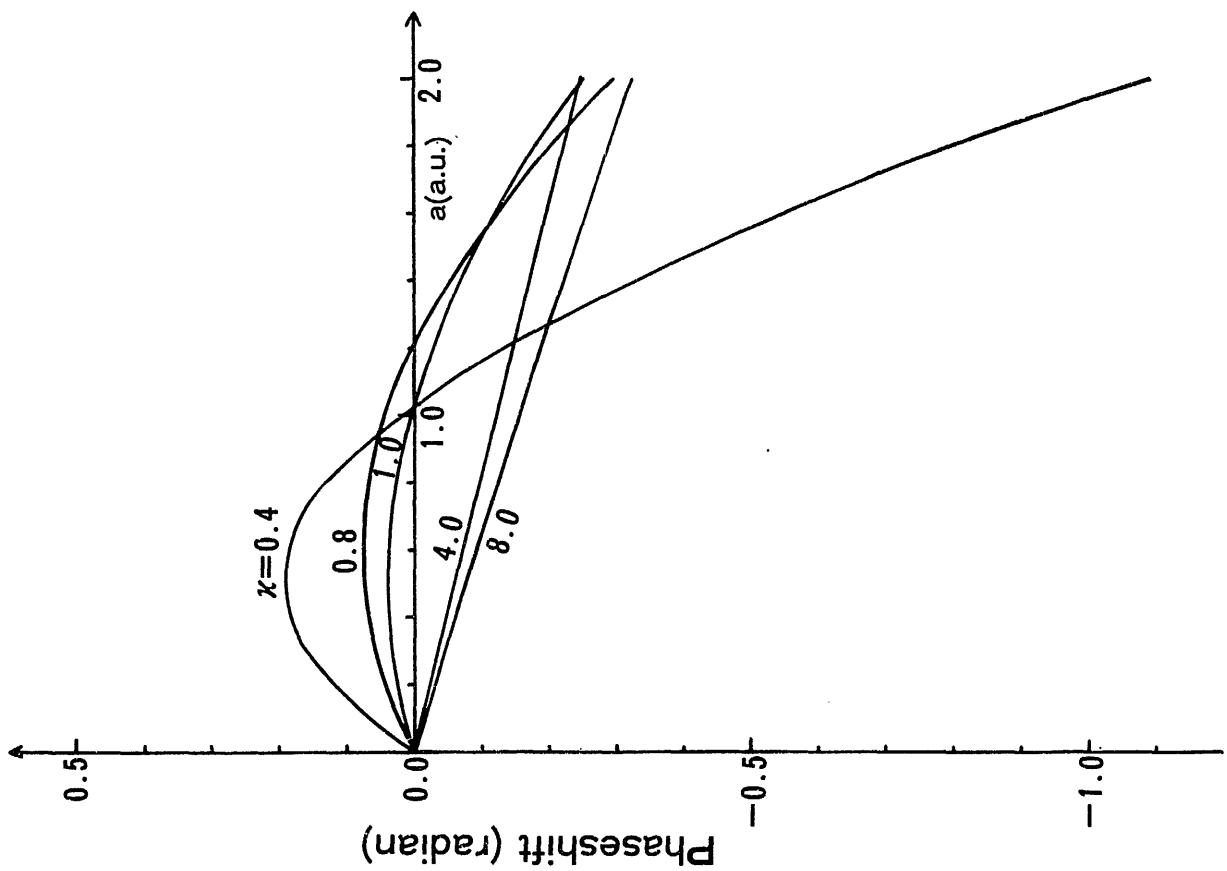


Fig.1



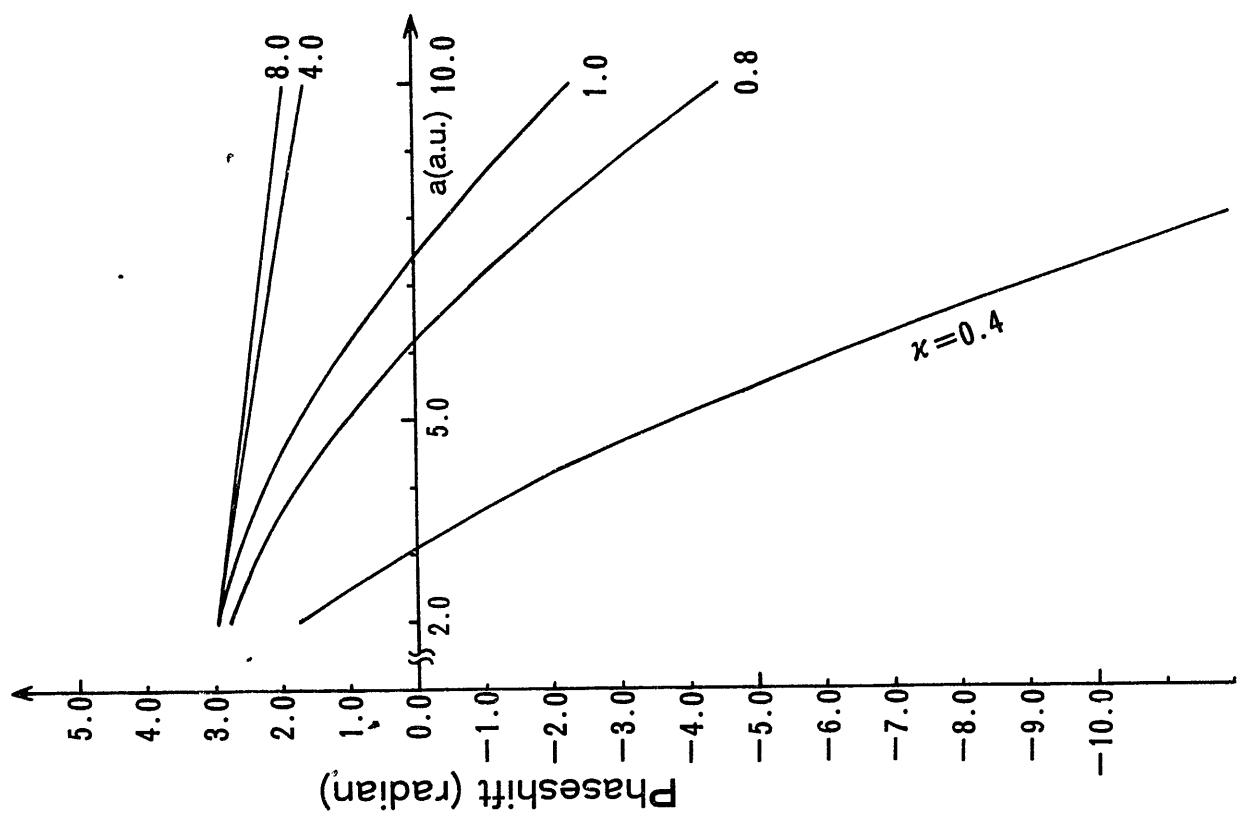
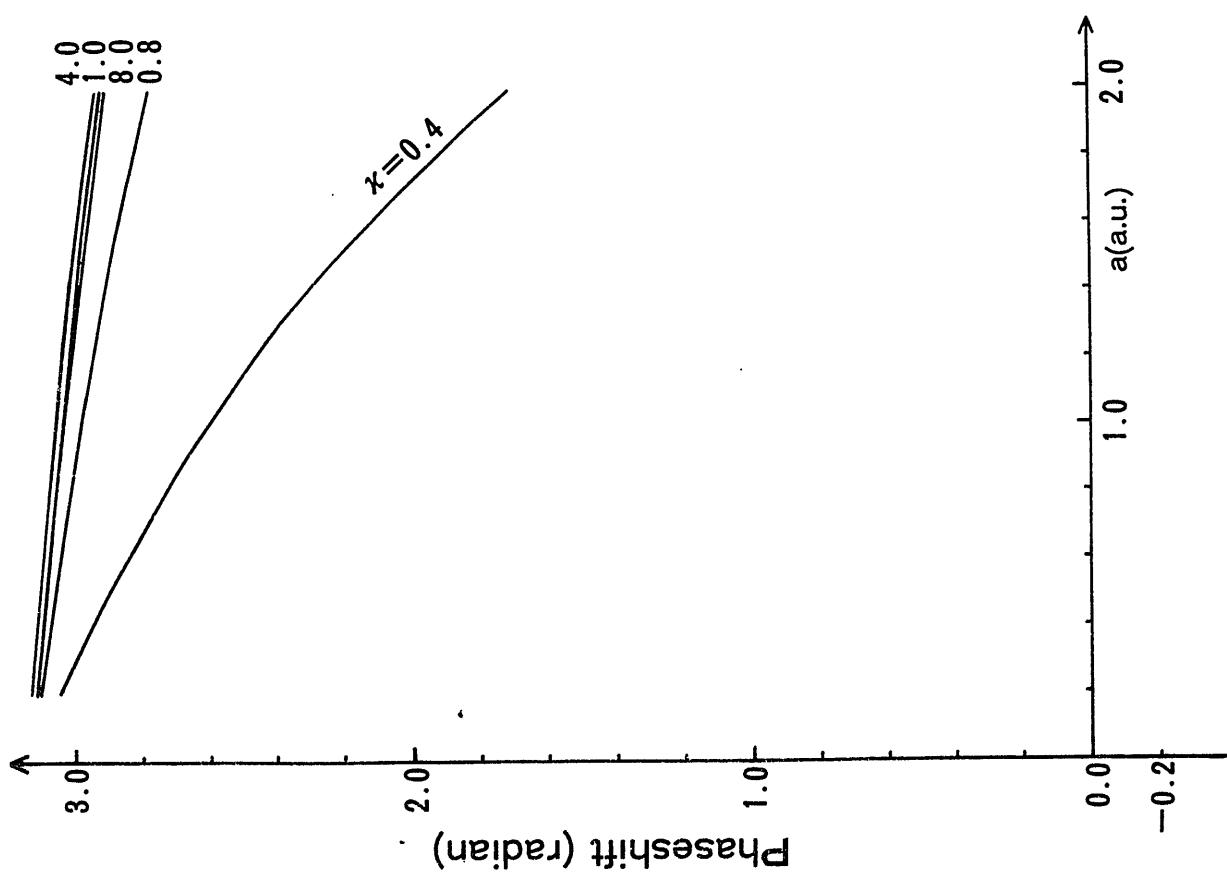


Fig.2



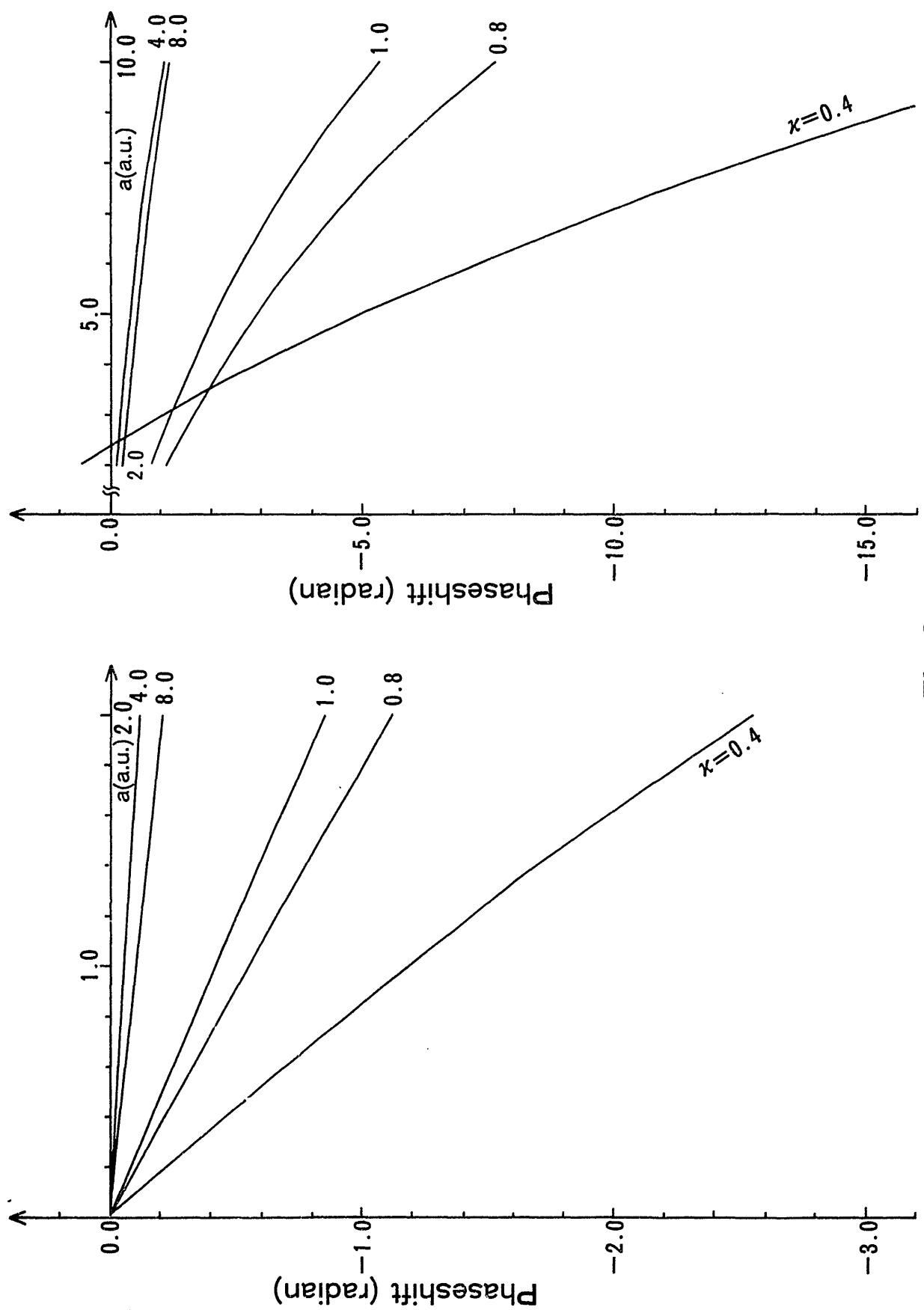


Fig.3

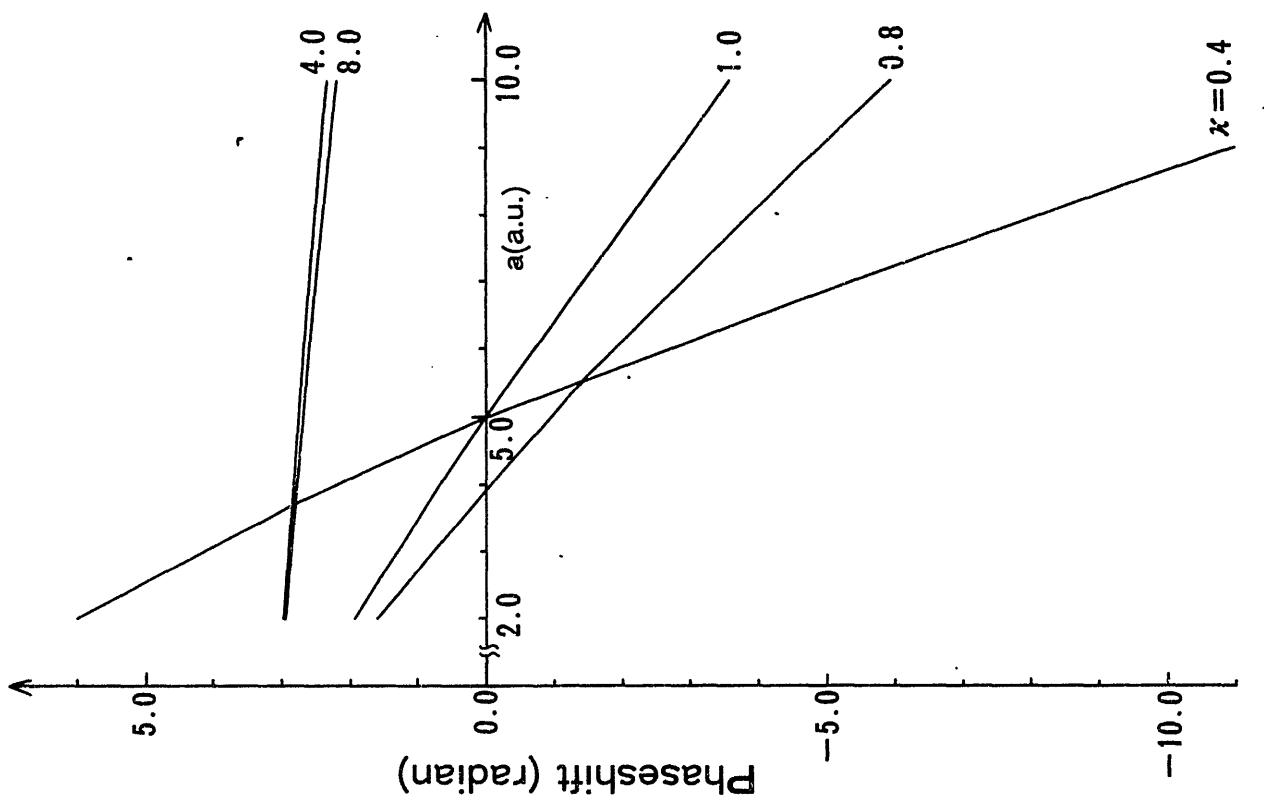
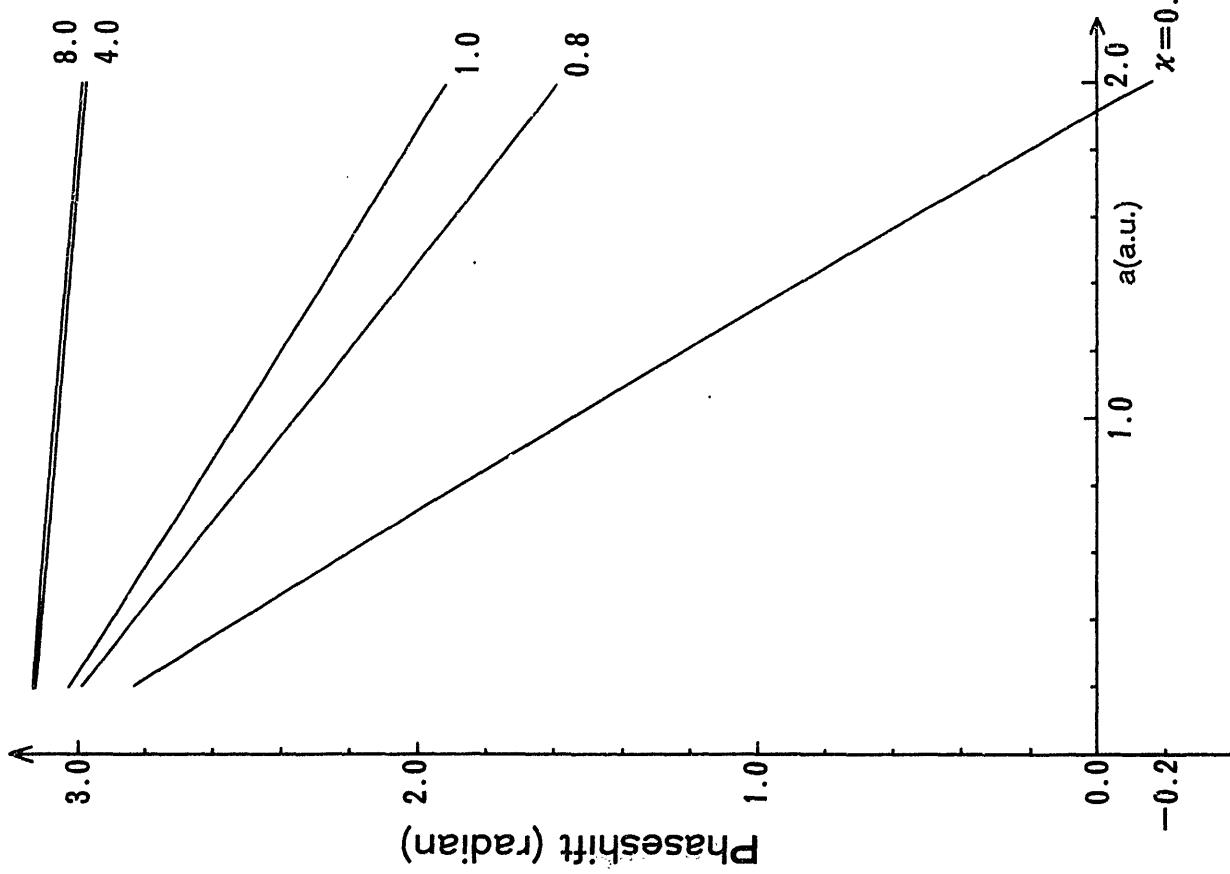


Fig.4



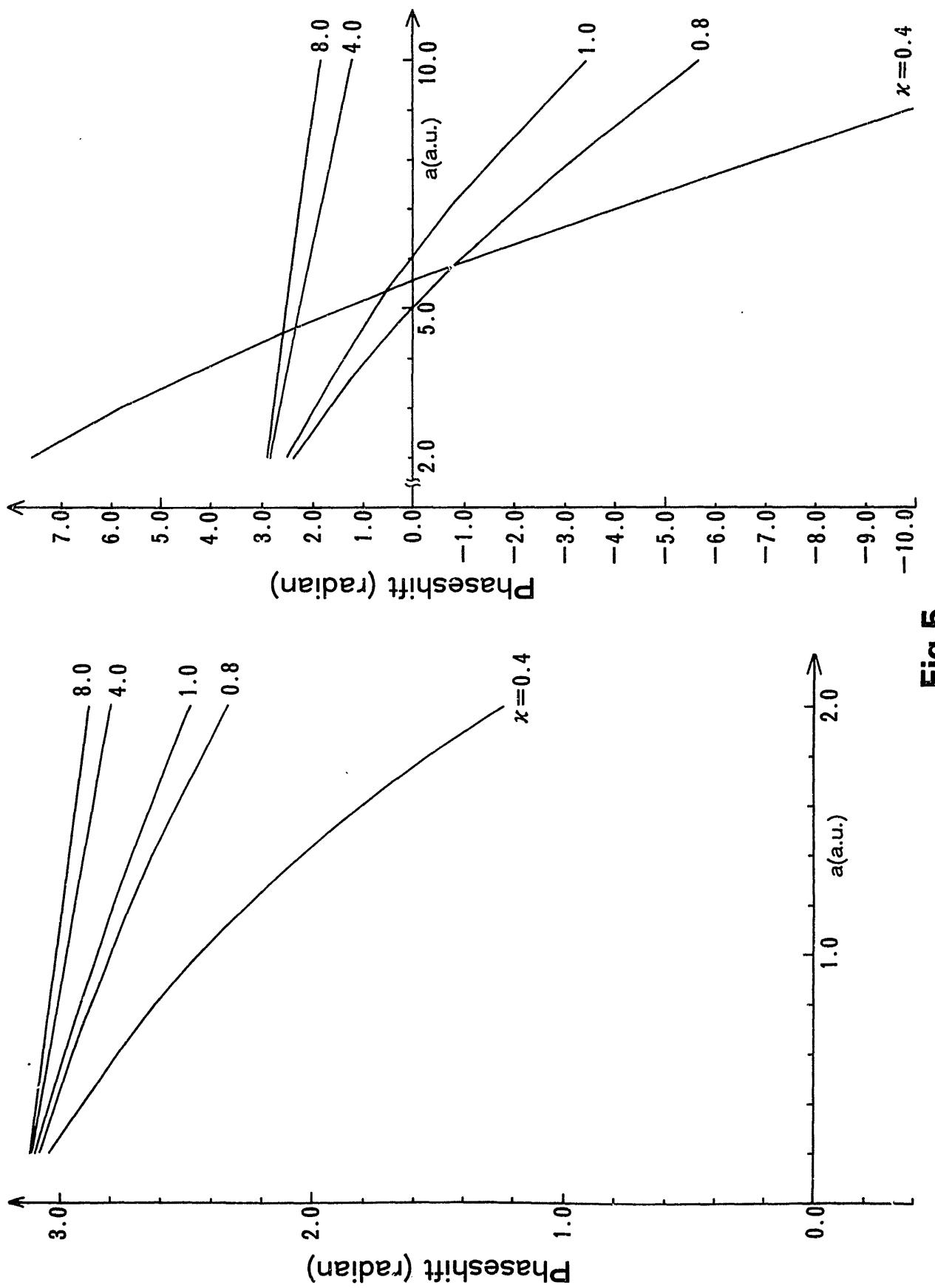


Fig.5

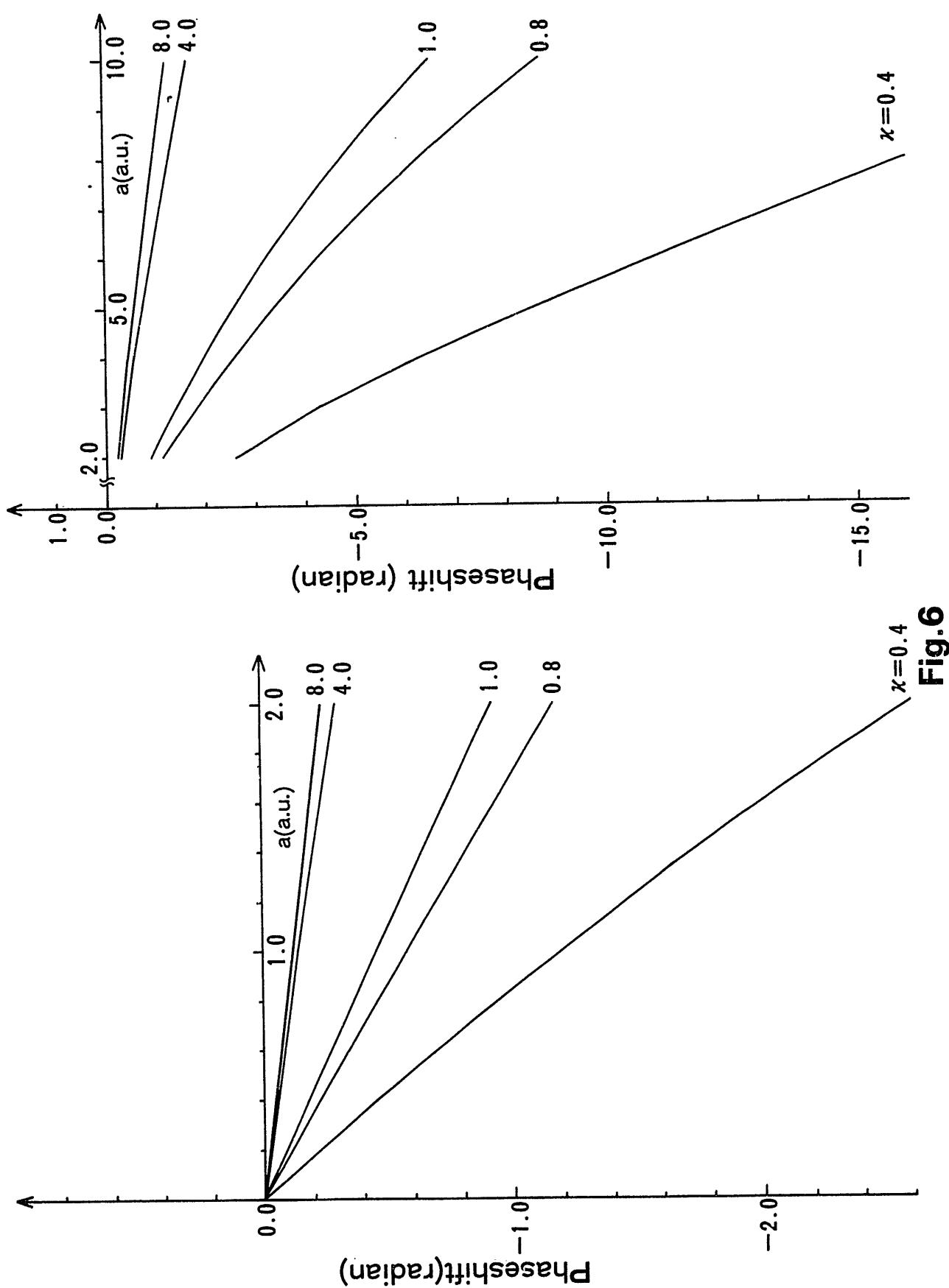


Fig.6

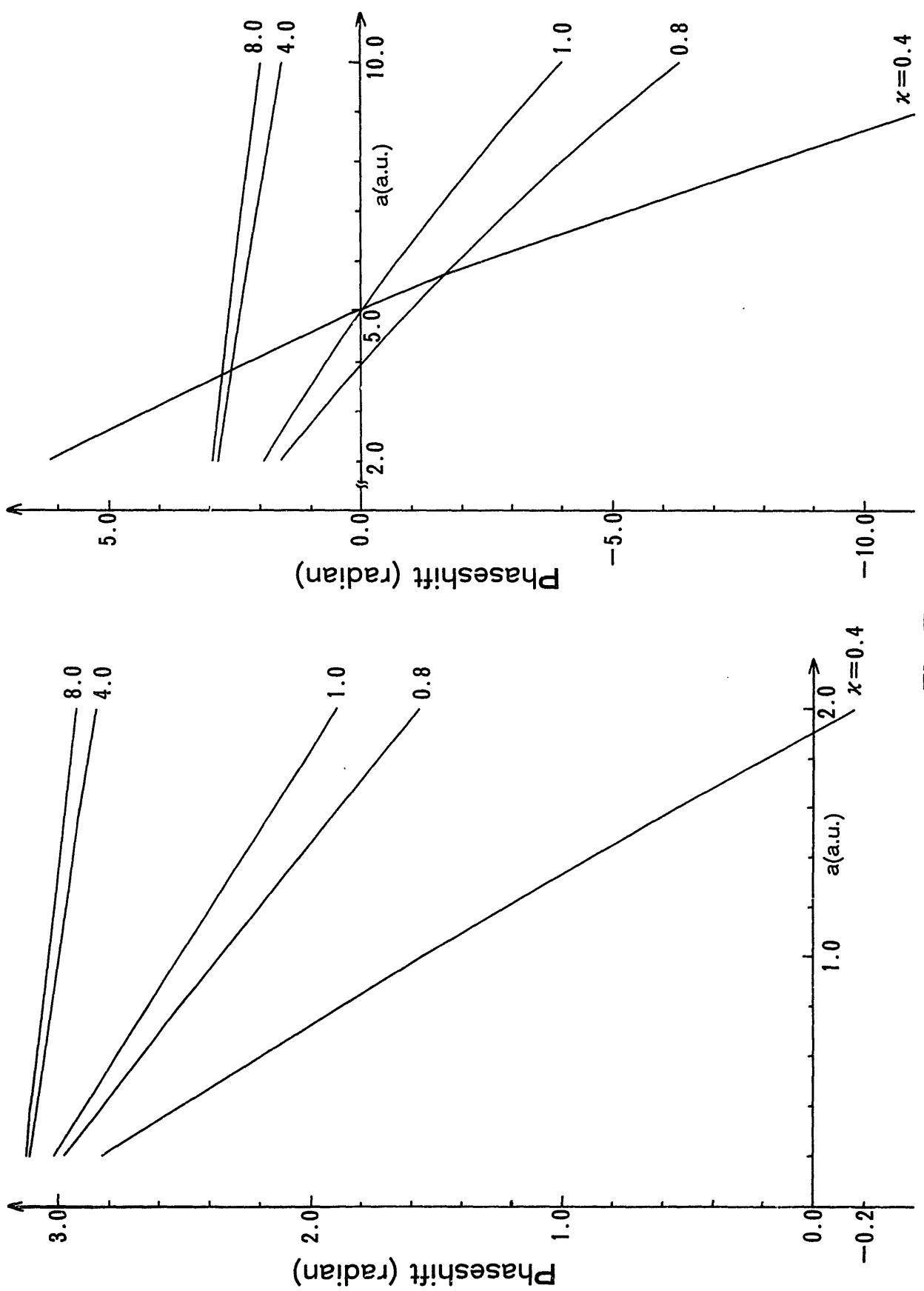
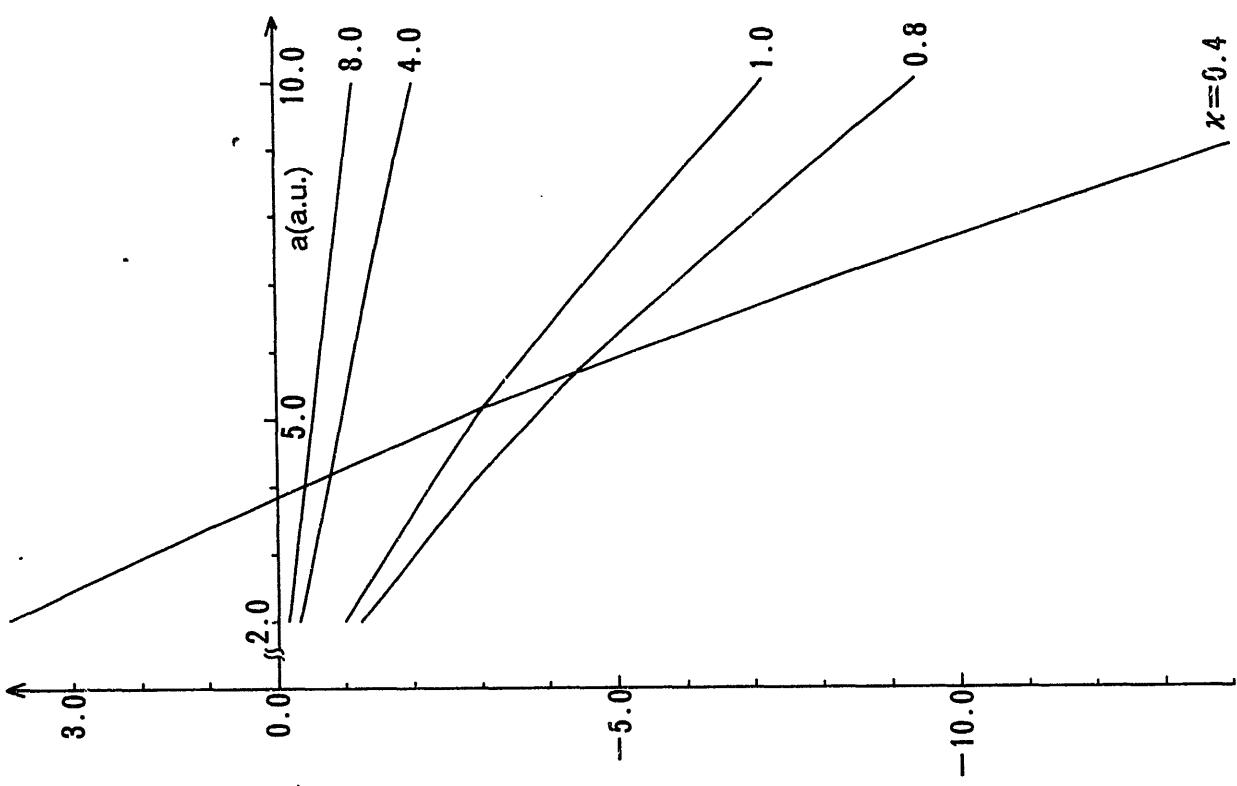
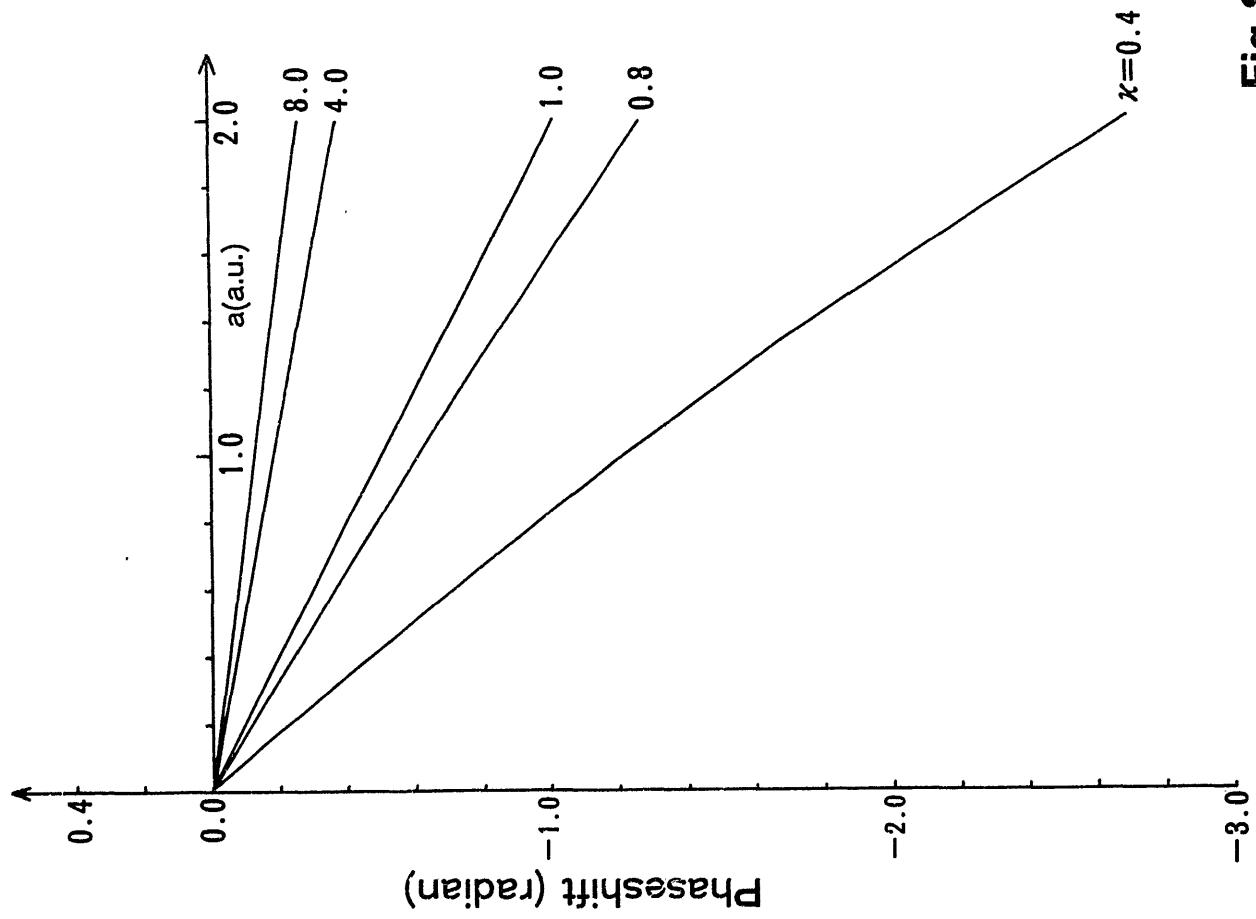


Fig. 7



Phase shift (radian)

$\kappa=0.4$



Phase shift (radian)

$\kappa=0.4$

Fig.8

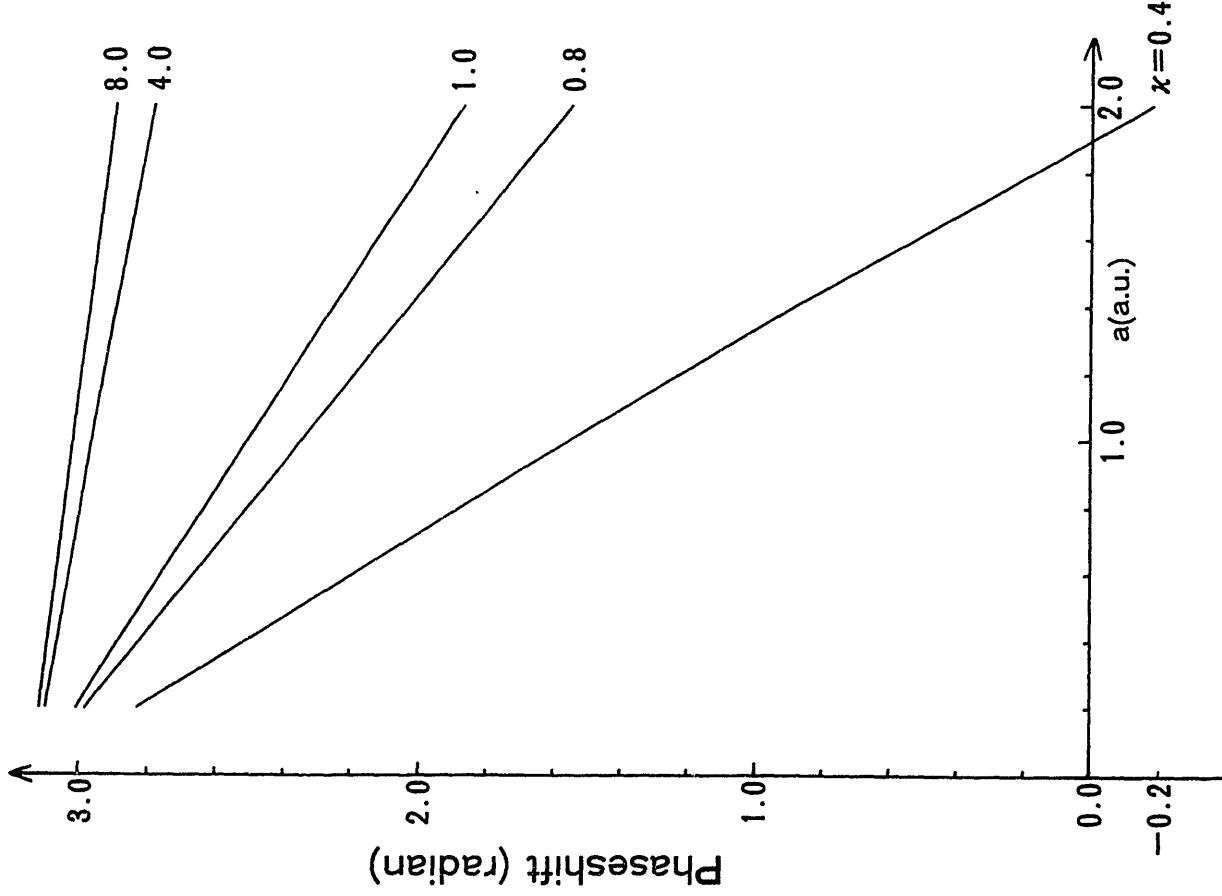
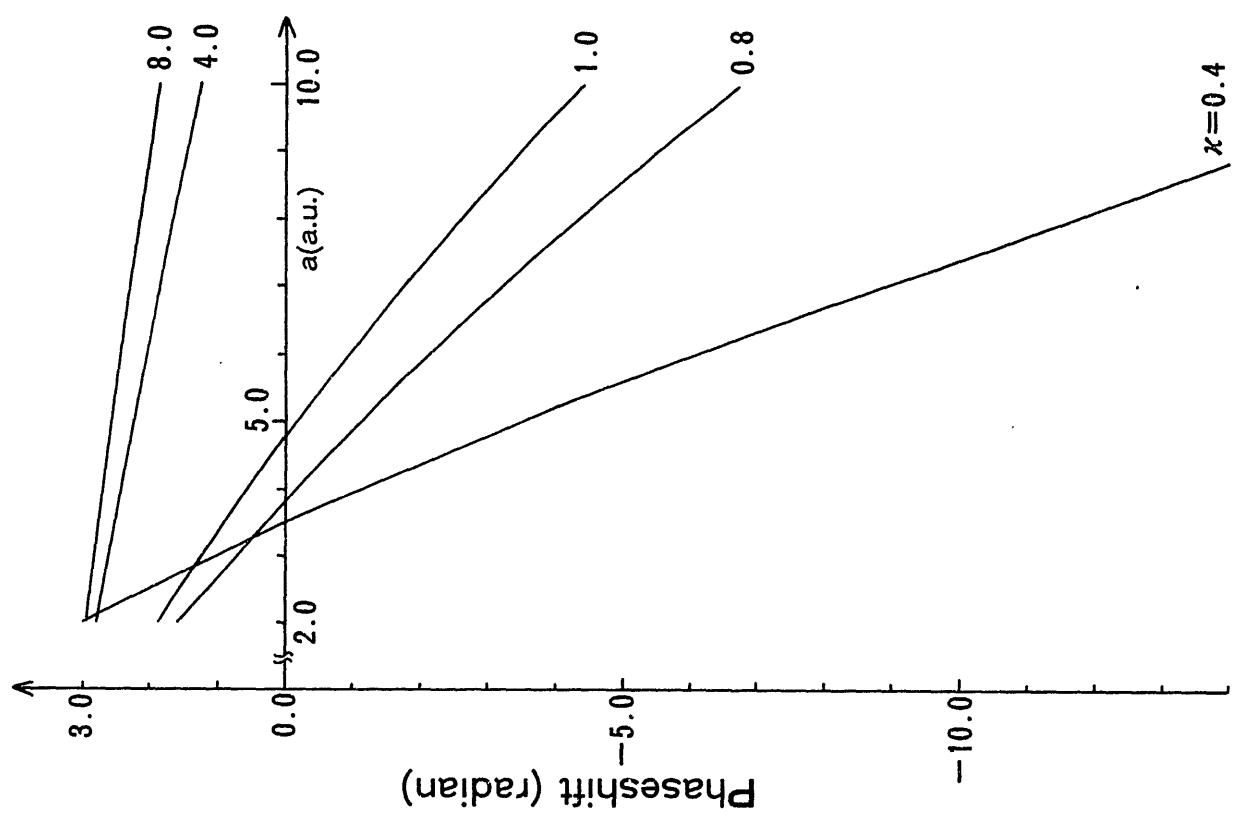


Fig.9

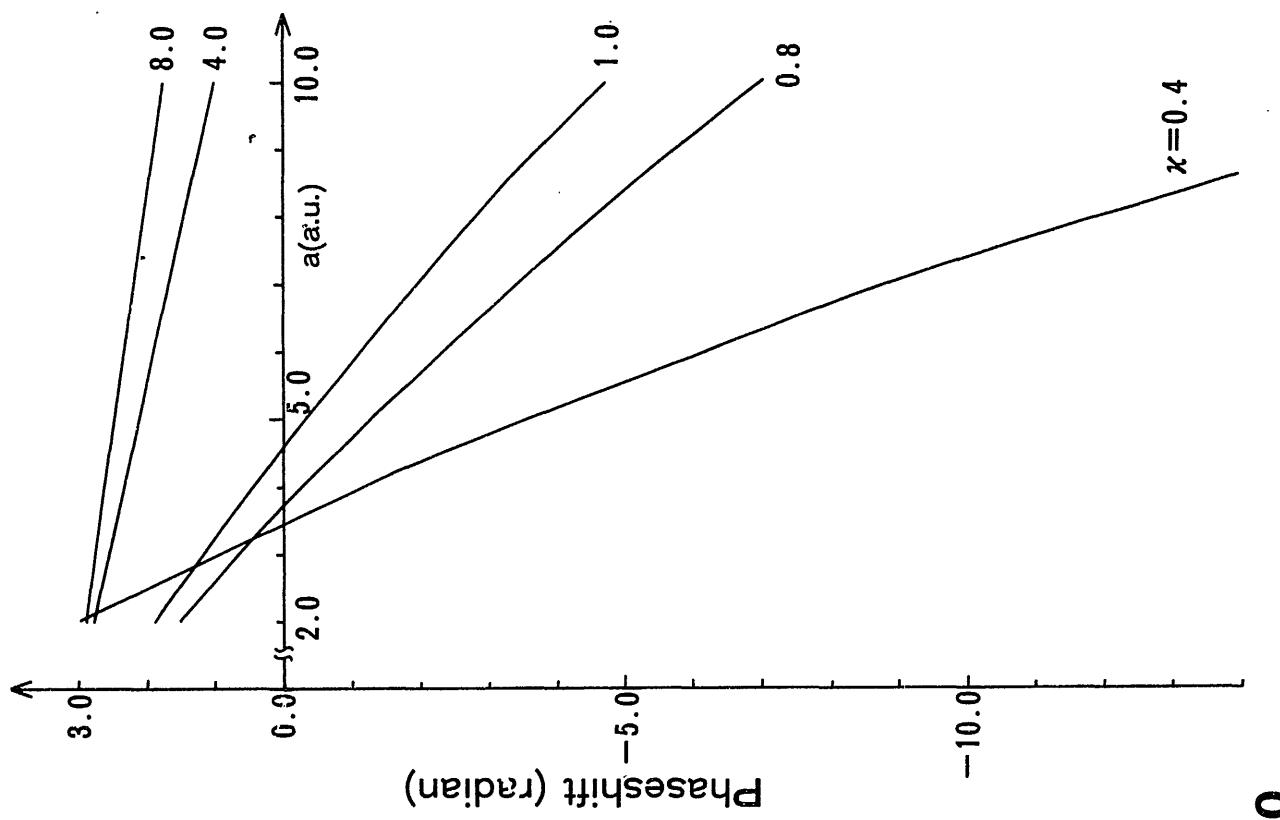


Fig. 10

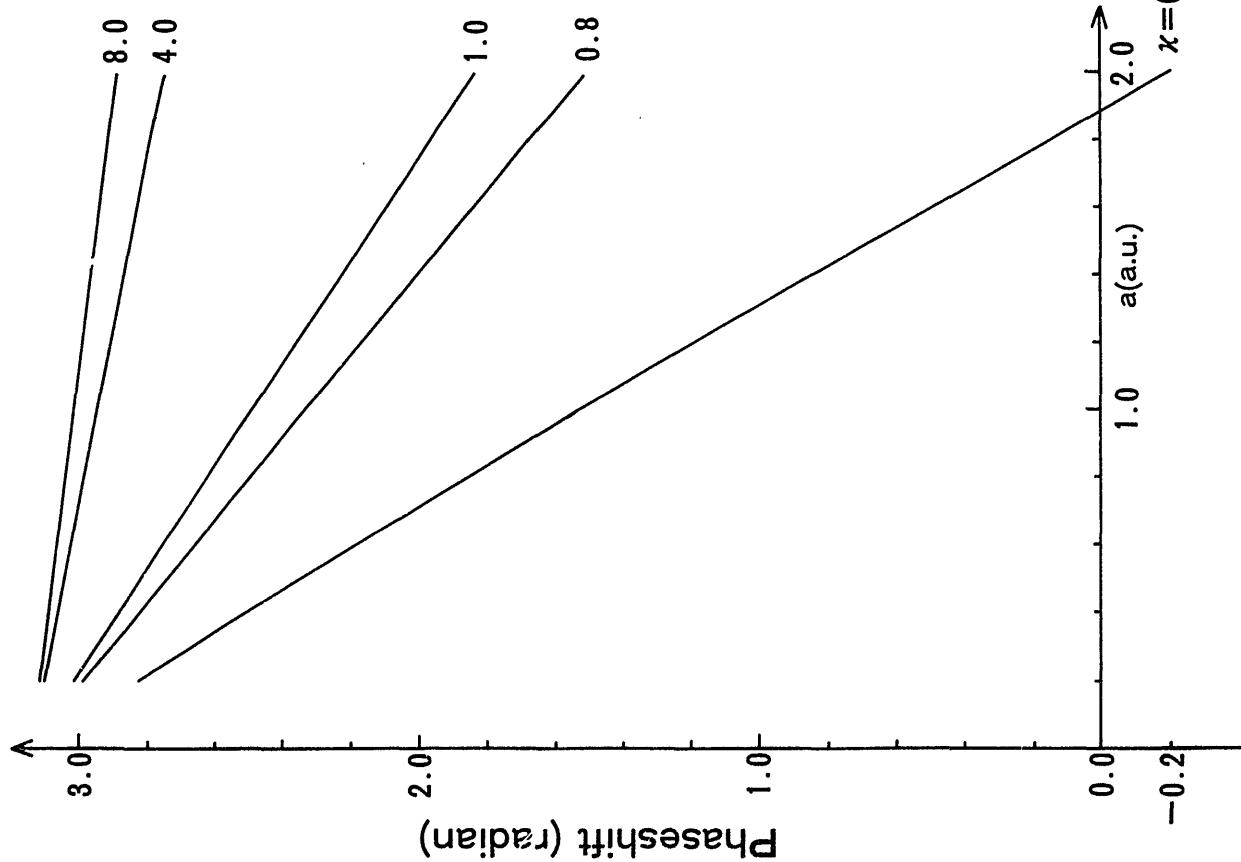


Fig. 11

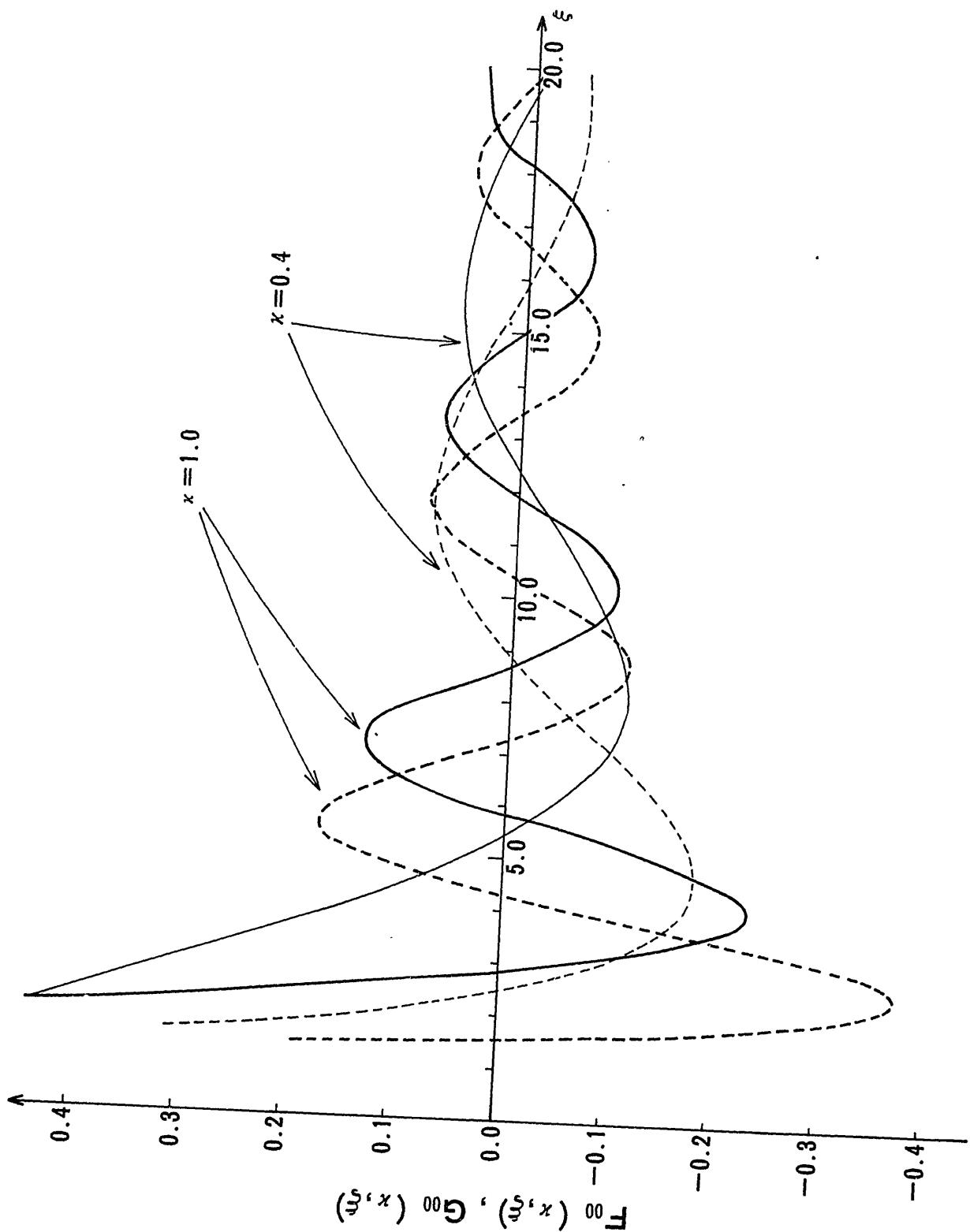


Fig.12

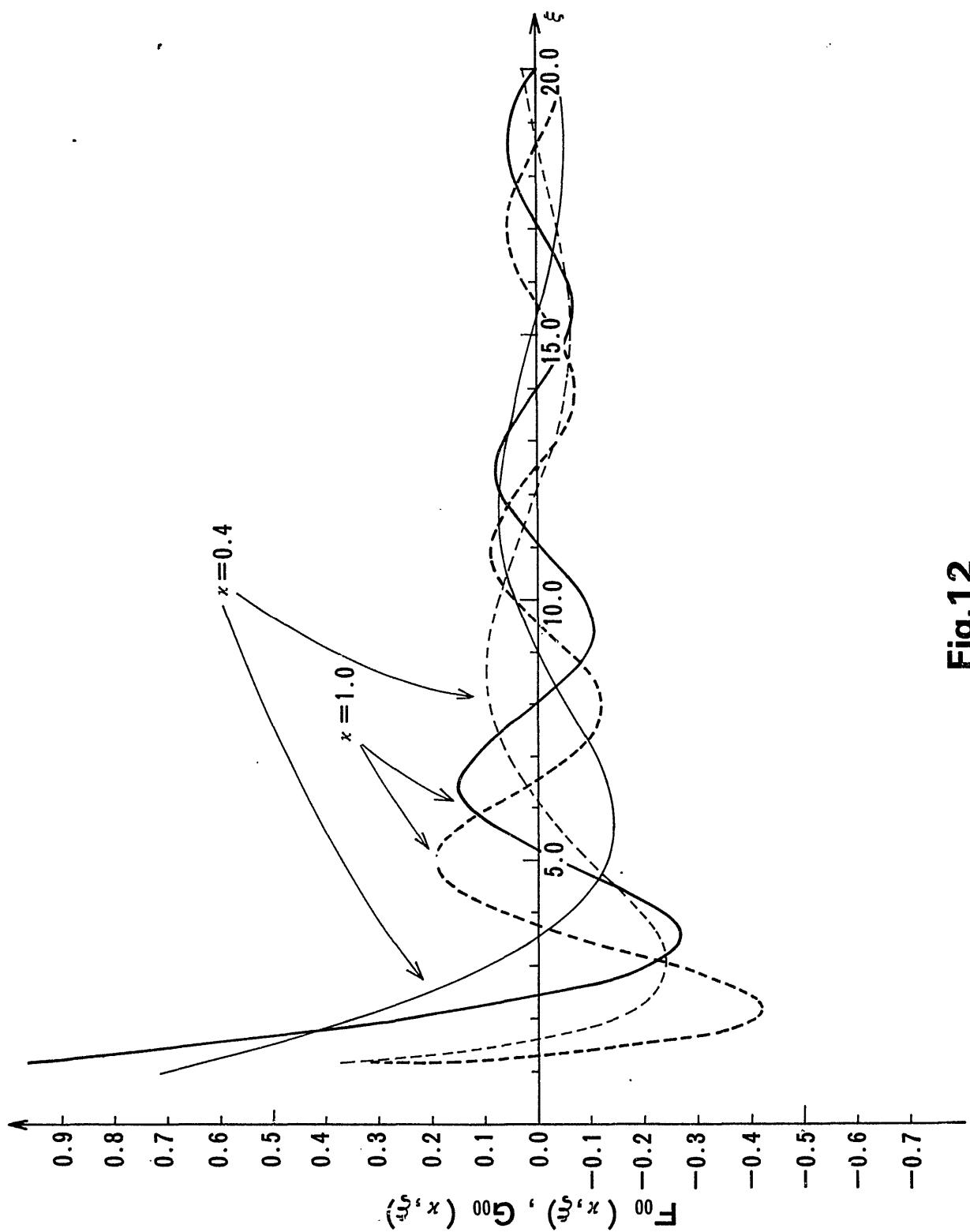


Fig. 13

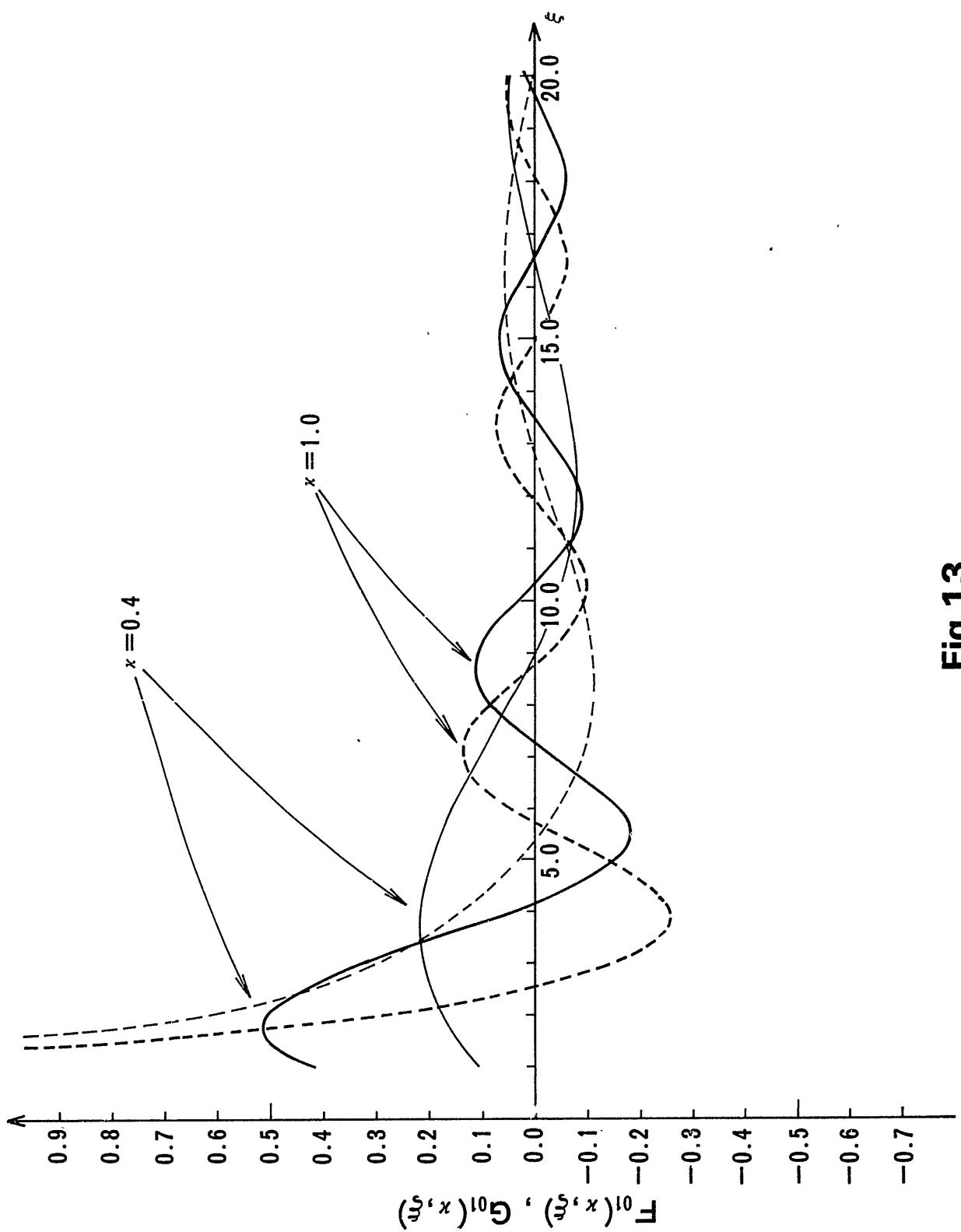


Fig. 14

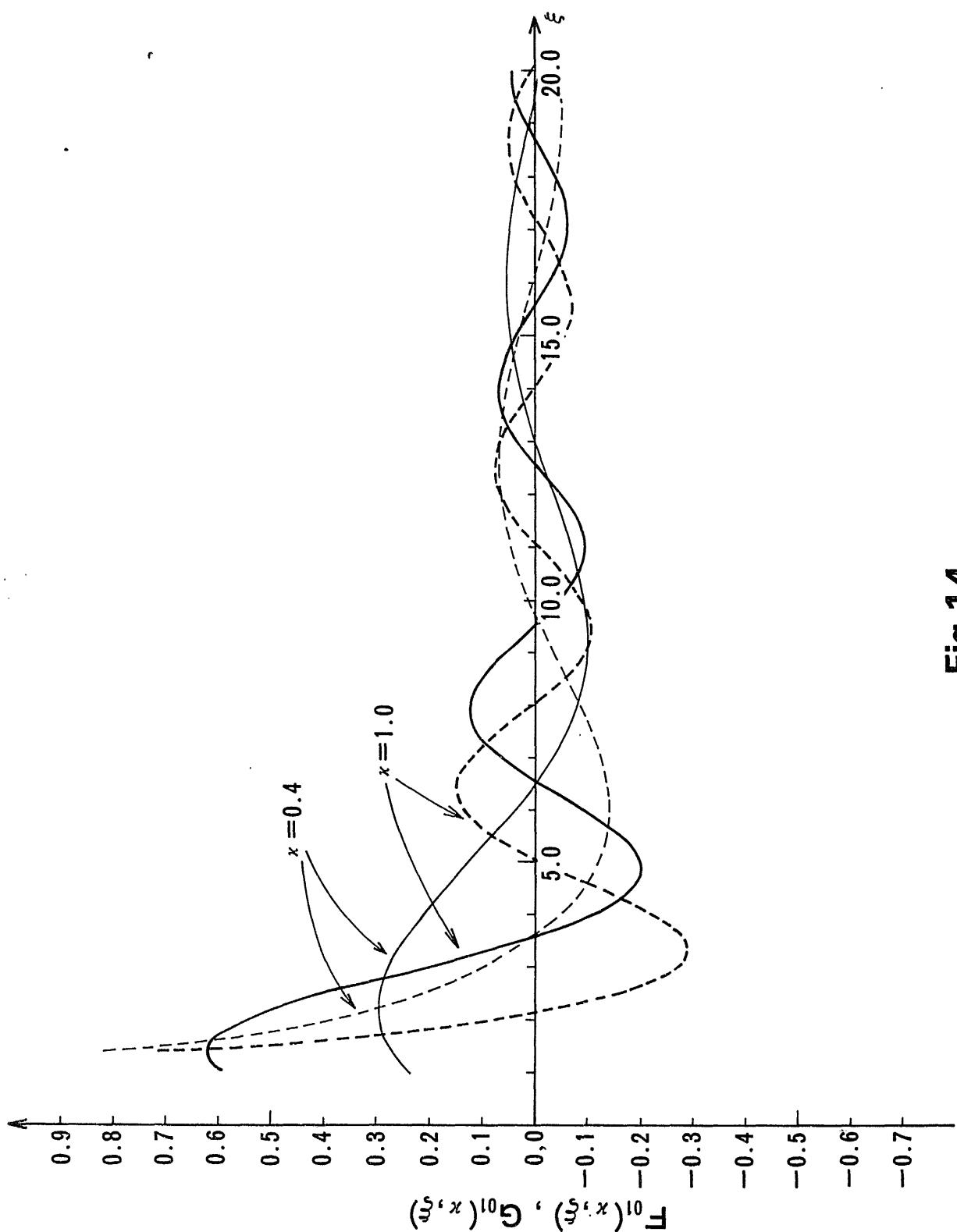


Fig. 15

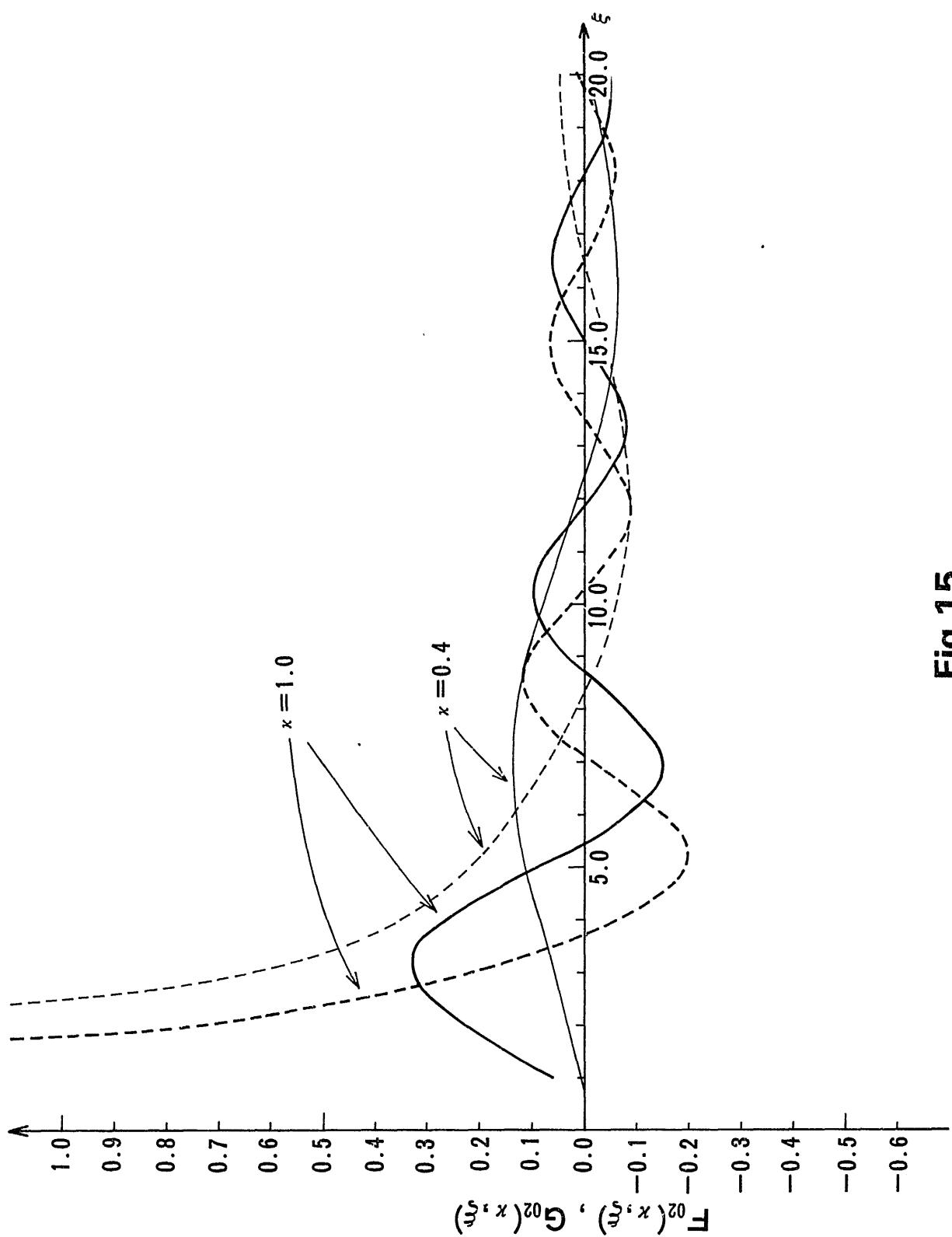


Fig.16

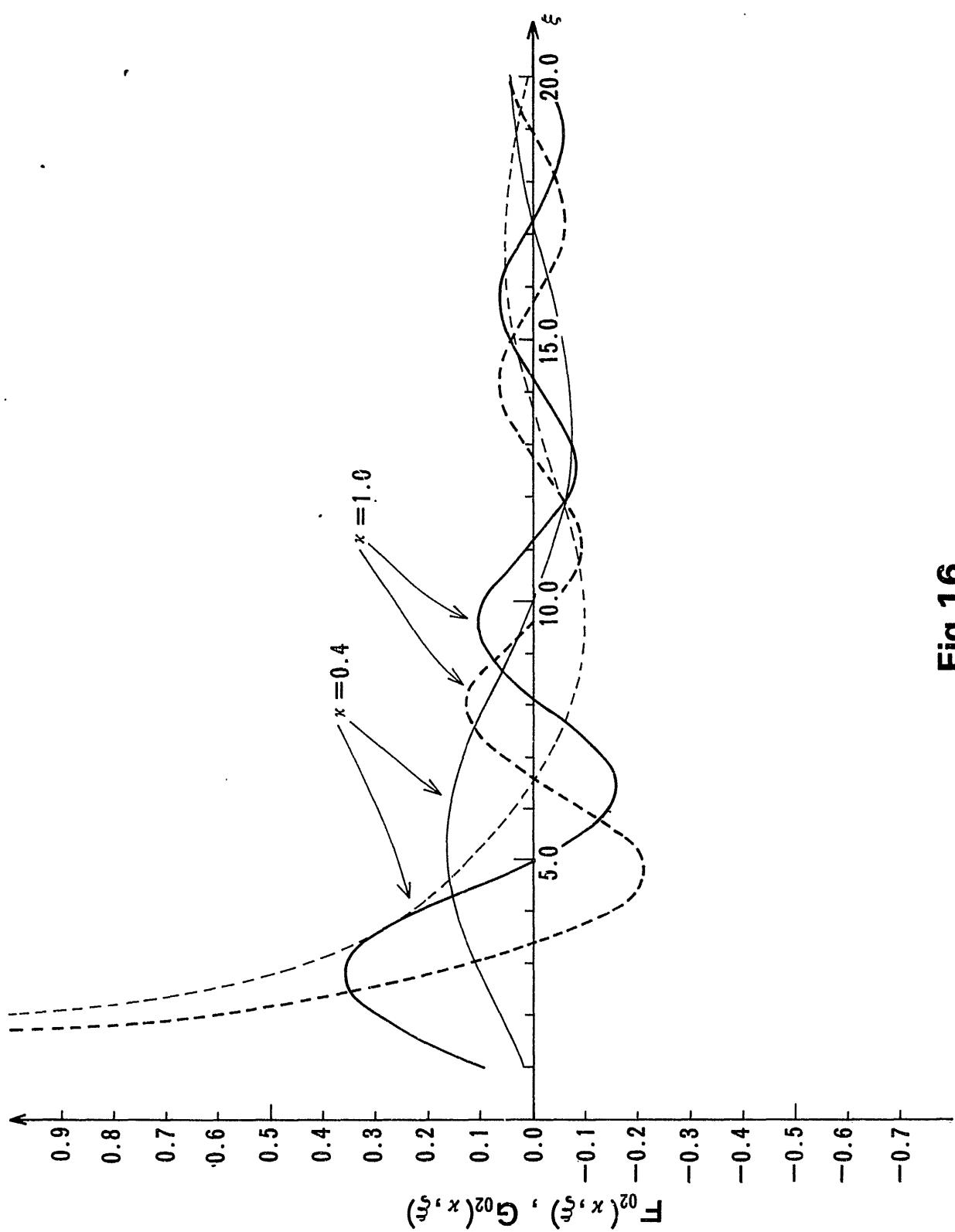


Fig. 17

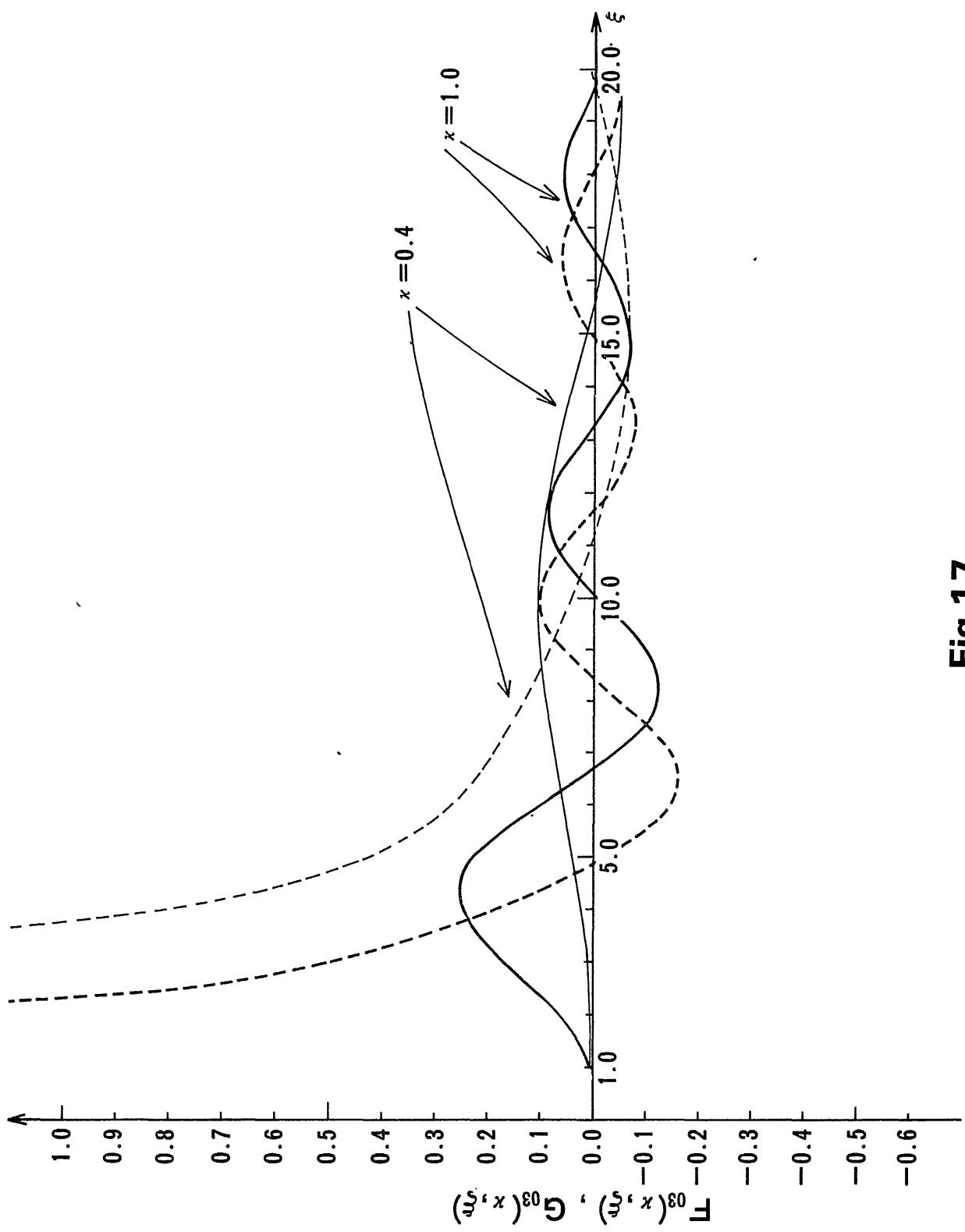


Fig.18

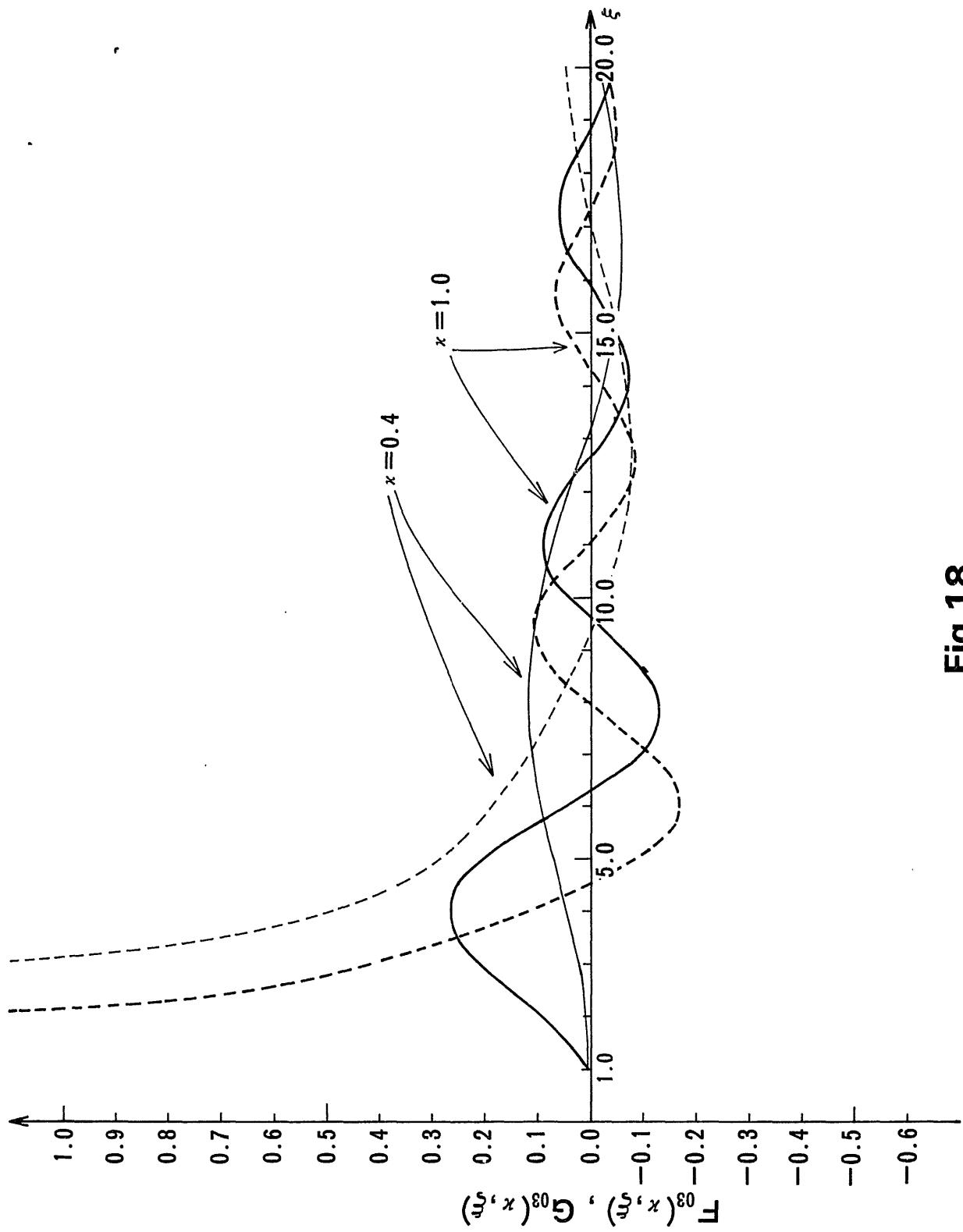


Fig. 19

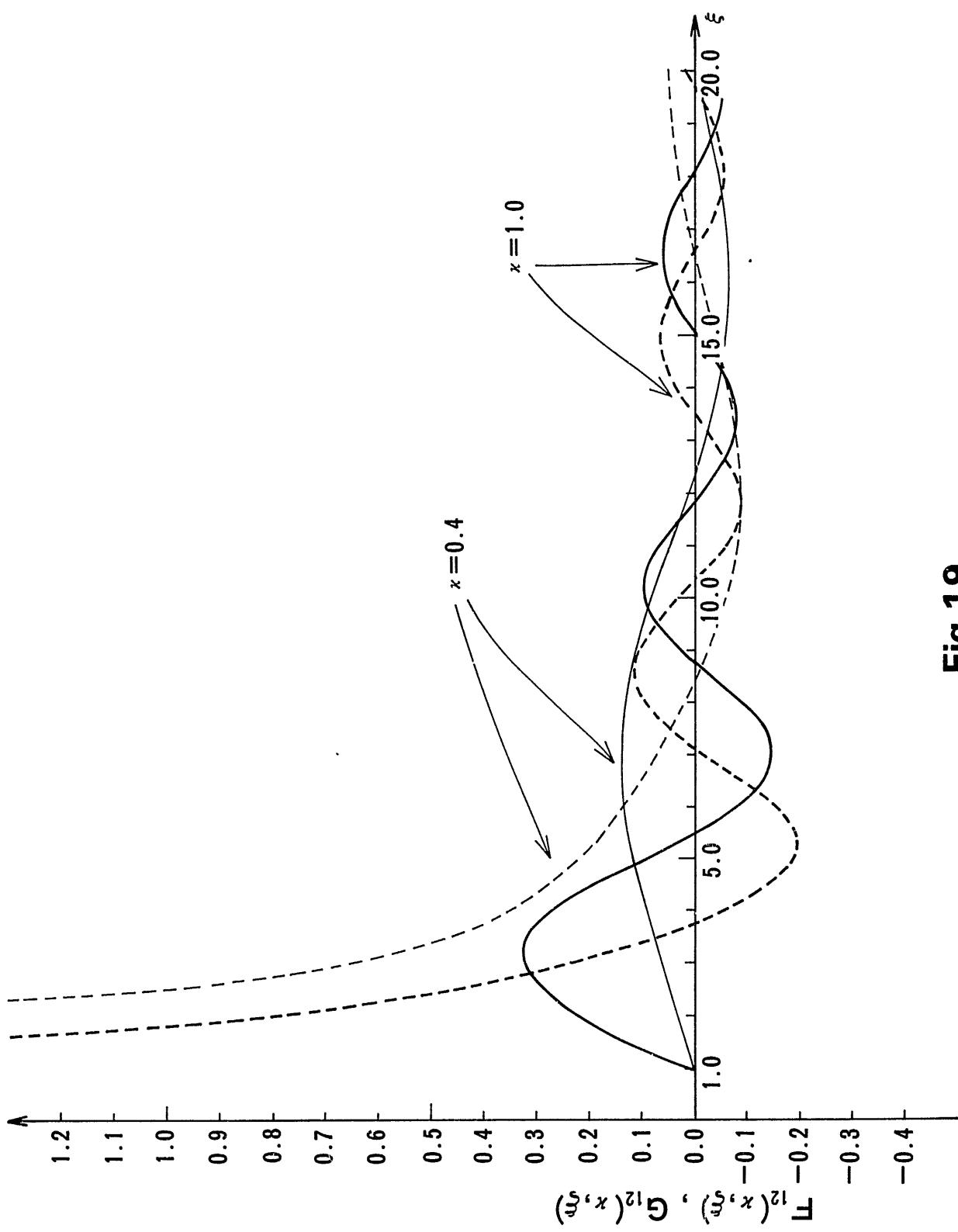


Fig.20

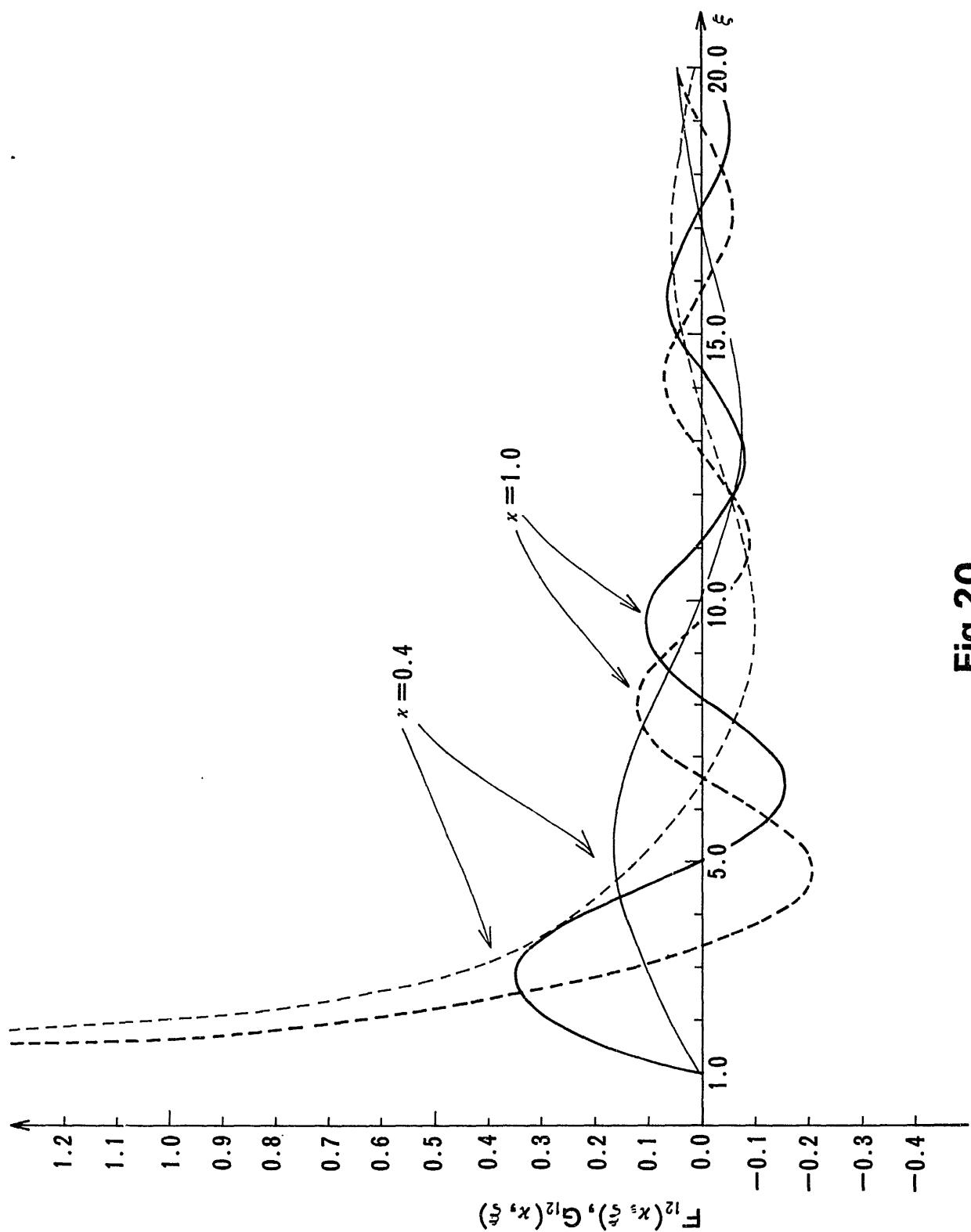


Fig.21

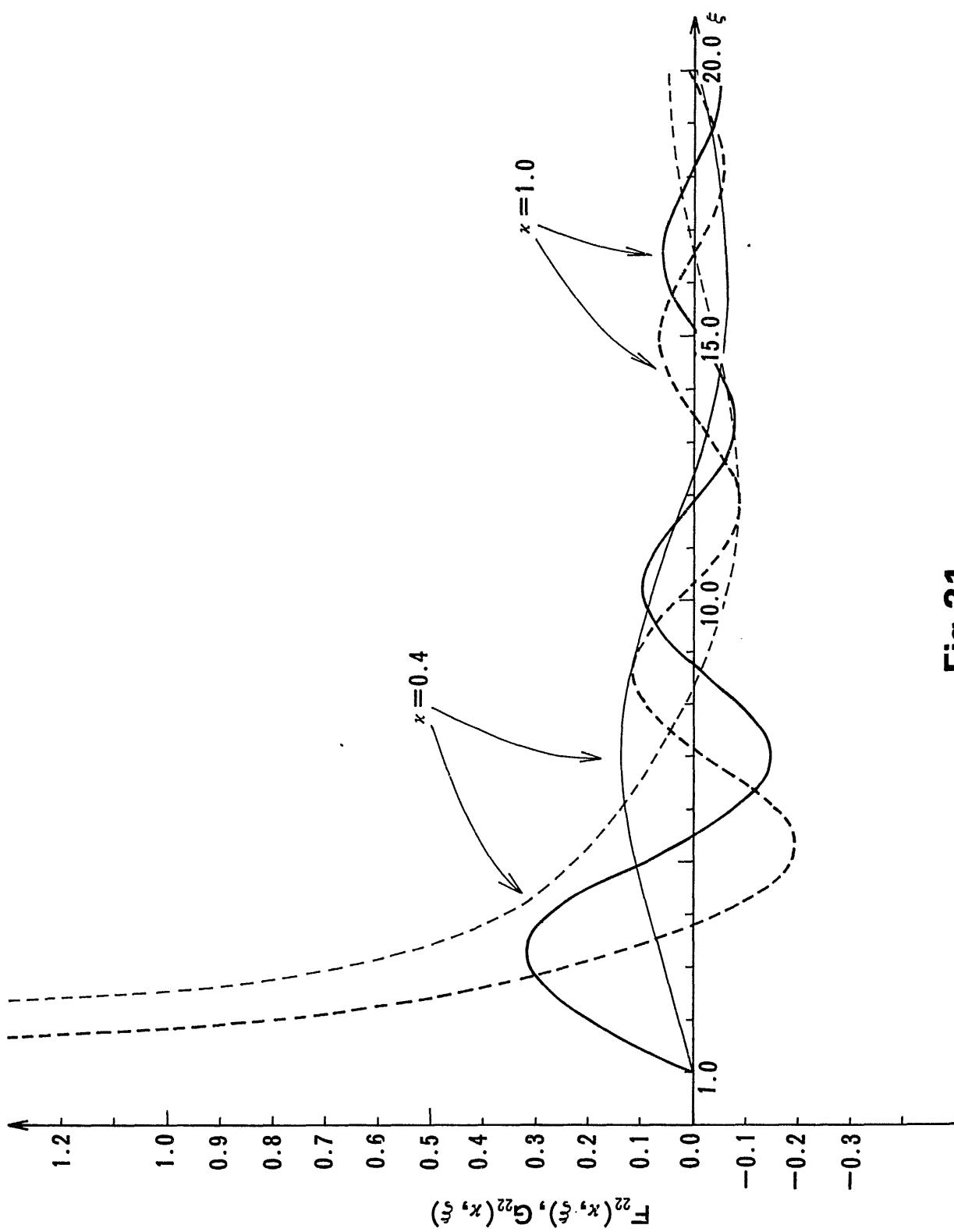


Fig. 22

