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TABLES OF THE EFFECTIVE
SHELL-MODEL INTERACTION
THROUGH SECOND ORDER
FOR THE sd SHELL

J. P. Vary

AMES LABORATORY, USERDA
IOWA STATE UNIVERSITY
AMES, IOWA

Date Transmitted: July 1976

PREPARED FOR THE U. S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
UNDER CONTRACT W-7405-eng-82

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THROUGH SECOND ORDER FOR THE sd SHELL

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ABSTRACT

Numerical tables of the effective shell-model interaction matrix elements for the s-d shell are presented as a function of the valence model space and the unoccupied space.

Distribution List

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INTRODUCTION

The purpose of this report is to present complete numerical tables of the effective shell-model interaction for the s-d shell as a function of the energy shift between the valence model space and the unoccupied space. The theoretical details can be found in Ref. 1 which is the proper reference to quote when using these tables.

The main information in the tables is also available in punched card format. For each matrix element, $\langle (n_1 l_1 j_1)(n_2 l_2 j_2)TJ | V_{\text{eff}} | (n_3 l_3 j_3)(n_4 l_4 j_4)TJ \rangle$ there is one card with the quantum numbers and the three contributions from the bare (G), core-polarization (G3PlH) and four-particle two-hole (G4P2H) diagrams respectively. The quantities are given on the cards in the sequence (INUM, SHIFT, N1, L1, J1, N2, L2, J2, N3, L3, J3, N4, L4, J4, T, J, G, G3PlH, G4P2H) where INUM is the interaction number (1 for the purposes of this report) and SHIFT is the quantity called C in Ref. 1. The format employed is (I2,F5.1, 4(I2,I2,F4.1), 2I2, 1X, 3E12.4).

The tables include two additional columns not found on the cards. GPG3 is G plus G3PlH and GSUM the total V_{eff} , i.e., G plus G3PlH plus G4P2H.

The conventions employed for the two-body states are

- 1) These are normalized and antisymmetrized two-body states
- 2) $\vec{L}$ is coupled with $\vec{S}$ to get $\vec{J}$ rather than the other way around.

EFFECTIVE INTERACTION NUMBER 1
THE ENERGY OF THE SHIFT(C) 0.0

	A1	L1	J1	L2	J2	A3	L3	J3	A4	L4	J4	T	J	G	G3P1H	G4P2H	GPC3	GSUM
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	1	-2.7921F+00	-5.2771E-02	-8.4959E-01	-2.8449E+00	-2.6945E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	0	1	4.9473F+00	-1.0237E+00	1.9571E+00	3.9236E+00	5.8807E+00
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	0	1	-1.2883E+00	6.4839E-02	-4.9961E-01	-1.2243E+00	-1.7236E+00
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	0	1	-6.2944E-01	-3.8576E-01	6.6213E-01	-1.0152E+00	-3.5308E-01
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	1	3.322CF+00	-7.6747E-01	7.4105E-02	2.5556E+00	2.6437E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	1	-9.1835E+00	2.5704E+00	-5.0743E+00	-6.6131E+00	-1.1667E+01
0	2	2.5	0	2	1.5	1	0	.5	1	0	.5	0	1	1.6281E+00	-1.3168E+00	1.6096E+00	2.3113E+00	3.5205E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	-2.5674E+00	7.1879F-01	-2.0729E+00	-1.8486E+00	-3.9215E+00
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	-1.0165E+00	1.1241E+00	-7.2210E-02	1.076CE-01	3.536EE-02
1	0	.5	1	0	.5	1	0	.5	1	0	.5	0	1	-5.5671F+00	5.9375E-01	-7.7153F-01	-4.9733E+00	-5.7448E+00
1	0	.5	1	0	.5	1	0	.5	0	2	1.5	0	1	-2.3516E-01	5.4226E-01	9.6714E-01	3.0707E-01	1.2742E+00
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	0	1	-1.0727F-01	1.7472E-01	-1.3590E-01	7.1844E-02	-6.4061E-02
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	-5.0906E+00	3.2823E-01	-1.2165E+00	-4.7524E+00	-5.9689E+00
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	1.9953F+00	-7.3355F-01	1.5159E-01	1.2618E+00	1.4134E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	-1.9272F+00	2.1617E-01	-1.0375E-01	-1.6111E+00	-1.7198E+00
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	2	-2.0712E+00	7.5350E-01	-2.5627E-02	-1.2277F+00	-1.2573E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	2	-2.6314E+00	4.7358E-01	-2.2510E-01	-2.1578E+00	-2.2835E+00
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	0	2	-3.6184E+00	-2.890CE-01	-3.6517E-02	-3.9074E+00	-3.9438E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	2	-6.4E46F+00	1.0523E+00	-1.6808E+00	-5.3924E+00	-7.0732E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	-3.2227E+00	9.4357F-01	-2.7720E-01	-2.2792F+00	-2.5564E+00
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	-3.4584F+00	1.0082E+00	-4.4518E-02	-2.4902E+00	-2.5547E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	3	-2.0994E+00	5.4252F-01	-1.5756E-01	-1.556EE+00	-1.7144E+00
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	0	2	-2.6155F+00	8.0846F-02	-1.4760E-01	-2.5351F+00	-2.6E27E+00
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	0	2	2.0228F+00	3.1280E-01	2.2305E-01	2.4117F+00	2.6349E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	3	4.5751F-01	8.7861E-01	-1.5021E-01	1.3363E+00	1.1861E+00
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	3	-5.3157E+00	-3.7192E-01	-1.3330E-01	-5.6376E+00	-5.8255E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	3	1.7525E+00	-4.5575E-01	2.0899E-01	1.2567E+00	1.4657E+00
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	0	3	8.8852F-01	1.6254E-01	-1.4078E-01	1.0511E+00	9.1028E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	3	-2.383CF+00	1.1597F+00	-3.1565F-01	-1.4233E+00	-1.7390E+00
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	2.6505E+00	2.1253E-01	2.7495E+00	2.9620E+00	2.9620E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	-4.2610E+00	4.5833E-01	-1.4301E-01	-3.8126E+00	-3.9456E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	4	-7.1454E+00	4.7553F-01	0.	-6.6699E+00	-6.6659E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	2.5	0	5	-5.2584E+00	5.4624E-01	0.	-4.7522E+00	-4.7522E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	0	-2.1031F+00	-2.0597E+00	-5.6014E-01	-4.2025E+00	-4.7620E+00
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	1	0	-9.5042E-01	-1.4234E+00	-1.4848E-01	-2.5738E+00	-2.5223E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	0	-2.4679E+00	-2.4023E+00	-4.0266E-01	-5.8702E+00	-6.2728E+00
1	0	.5	1	0	.5	1	0	.5	1	0	.5	1	0	-2.6902E+00	2.5573E-01	-8.4194E-02	-2.4305E+00	-2.5145E+00
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	1	0	-1.7602E-01	-1.0292E+00	-1.2126E-01	-1.8052E+00	-1.9265E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	0	-6.8737F-01	-8.0921E-01	-3.9574E-01	-1.4966E+00	-1.8923E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	1	-1.6019E-01	7.8078E-01	-7.0151E-03	2.0593F-02	1.2578E-02
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	-1.3903F-01	2.8939E-01	2.5033E-03	2.5037E-01	2.5327E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	-4.7737E-01	1.5574E+00	-1.3007F-03	1.4806F+00	1.478E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	2	-1.4216F+00	4.6566E-01	-8.1017E-02	-9.5618E-01	-1.0372E+00
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	1	2	-7.7896E-01	-8.8503E-01	-4.0894E-02	-1.664CE+00	-1.7045E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	2	-2.3363F-01	1.4389E-01	-5.1146E-02	-1.8974E-01	-2.3589E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	1	2	-6.5792F-01	-8.5547E-01	-2.3163E-02	-1.5574E+00	-1.5805E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	2	-6.4755F-01	-9.2593E-01	-4.9644E-02	-1.5735E+00	-1.6231E+00
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	2	-1.5565E+00	2.3872E-01	-2.0977E-02	-1.3178E+00	-1.336EE+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	2	-3.0373E-01	-5.6601E-02	-2.3759E-02	-4.0234E-01	-4.2639E-01
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	1	2	-1.5567E+00	-6.4173E-01	-9.7857E-03	-2.1584E+00	-2.20E2E+00
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	1	2	-8.5255E-01	-1.0013E-01	-2.2435E-02	-9.5308E-01	-9.7551E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	2	7.8740E-01	-3.7397E-02	8.7752E-02	4.9954E-02	4.9954E-02
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	-7.6782E-01	-4.9194E-01	-2.2764E-02	-1.2568E+00	-1.2825E+00
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-5.0808E-01	-5.1932E-01	-4.2372E-02	-1.4274E+00	-1.4693E+00
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	-9.2109E-01	1.1865E+00	-1.6950E-02	2.6551E-01	2.4856E-01
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-1.8650E-01	-5.1555E-01	-2.8478E-02	-7.0245E-01	-7.3093E-01
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-4.6376E-01	1.4141E+00	-5.0162E-02	9.5031E-01	9.0015E-01

0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	3	-4.6170E-01	1.8097E+00	0.	1.3481E+00	1.3481E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	3	-1.3149E-01	-1.3032E-01	0.	-2.6180E-01	-2.6180E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	3	-6.8525E-01	1.9021E+00	0.	1.2165E+00	1.2169E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	4	-5.9543E-01	1.4482E+00	0.	8.5279E-01	8.5279E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	4	-1.2028E+00	-5.8516E-01	0.	-2.1879E+00	-2.1879E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	4	-2.3996E+00	9.6634E-01	0.	-1.4332E+00	-1.4332E+00

Table I

DEFECTIVE INTERACTION NUMBER 1
THE ENERGY OF THE SHIFT(C) 17.5

NI	L1	J1	N2	L2	J2	N3	L3	J3	N4	L4	J4	I	J	G	G3P1F	G4P2F	GPG3	GSLM
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	1	-1.0222E+CC	-5.2277E-C1	-2.5910E-J1	-1.5620E+CC	-1.8211E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	1	3.3868E+00	-3.4339E-01	6.4294E-J1	3.0434E+CC	3.6863E+CC
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	0	1	-5.2685E-C1	-1.6278E-01	-1.1290E-01	-6.8162E-01	-7.9452E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	0	1	-1.0405E-C1	-5.1825E-01	2.6706E-J1	-6.2229E-01	-3.5524E-J1
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	1	2.2658E+CC	-8.5102E-01	-6.2672E-02	1.4187E+CC	1.3561E+CC
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	1	-5.9735E+00	1.2385E+00	-2.1266E+00	-4.6354E+00	-6.7620E+00
0	2	2.5	0	2	1.5	1	0	.5	1	0	.5	0	1	2.3627E+CC	-8.4756E-C1	5.6130E-01	1.5147E+00	2.0760E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	-1.9116E+00	2.6774E-01	-1.0970E+00	-1.6439E+CC	-2.7409E+CC
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	-4.3601E-C1	5.6814E-01	1.5938E-01	5.2213E-01	7.0151E-C1
1	0	.5	1	0	.5	1	0	.5	1	0	.5	0	1	-3.7842E+CC	5.5244E-C1	-3.5569E-01	-3.2328E+00	-3.5894E+00
1	0	.5	1	0	.5	1	0	.5	0	2	1.5	0	1	1.2066E-02	6.5739E-01	5.2583E-01	6.6545E-C1	1.1553E+CC
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	0	1	-4.6417E-C1	3.2431E-01	-1.2373E-01	-1.3986E-01	-2.6355E-C1
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	-3.3662E+CC	8.2827E-03	-8.9357E-01	-3.5480E+CC	-4.2115E+00
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	1.0309E+00	-3.0571E-01	1.3400E-01	7.2519E-C1	9.0515E-C1
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	-5.6204E-C1	3.2840E-01	-6.7499E-02	-2.3523E-01	-3.0323E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	2	-1.0744E+CC	5.6600E-01	-3.3274E-03	-5.0837E-01	-5.1169E-01
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	2	-1.6359E+CC	1.5871E-C1	-5.6281E-02	-1.4772E+CC	-1.5335E+CC
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	0	2	-1.6599E+00	-1.6516E-01	-4.0593E-03	-2.6061E+CC	-2.1025E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	2	-4.6828E+CC	6.4618E-C1	-9.4917E-01	-4.0166E+CC	-4.6658E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	-2.0036E+00	7.2214E-01	-6.8834E-02	-1.2814E+CC	-1.3503E+CC
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	-2.1509E+00	7.5347E-C1	-4.9763E-03	-1.3574E+CC	-1.4024E+CC
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	3	-1.2274E+00	3.2588E-01	-6.6265E-02	-9.0748E-01	-9.7375E-01
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	0	2	-1.2045E+CC	-3.0244E-C1	-6.6022E-02	-1.9070E+00	-1.9730E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	0	3	1.4687E+00	4.4895E-C1	1.6486E-01	1.9676E+CC	2.0725E+CC
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	3	2.6178E-C1	6.4213E-01	-8.2238E-02	9.0389E-01	8.2165E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	3	-3.5877E-C1	-7.2334E-01	-6.5781E-02	4.2511E+CC	-4.3568E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	3	1.3927E+00	-1.3168E-01	1.0448E-01	5.5172E-C1	1.0557E+CC
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	0	3	5.2113E-C1	5.9411E-02	-8.1937E-02	6.3155E-01	5.4861E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	3	-1.6615E+CC	8.7442E-01	-1.6594E-01	-7.6748E-C1	-9.5342E-J1
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	1.7719E+00	5.6077E-01	1.3014E-01	2.3327E+CC	2.4628E+CC
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	-2.8287E+CC	3.0557E-01	-1.0205E-01	-2.5201E+CC	-2.6222E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	4	-2.7532E+CC	2.8711E-C1	0.	-4.4661E+00	-4.4661E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	5	-3.7042E+CC	9.6158E-C2	0.	-3.6080E+CC	-3.6080E+CC
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	0	-1.6538E+CC	-1.0492E+00	-4.1478E-01	-2.7430E+CC	-3.1578E+CC
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	1	0	-8.0890E+CC	-7.6509E-01	-5.8440E-02	-1.5781E+CC	-1.6765E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	0	-3.5011E+CC	-1.4157E+CC	-2.7334E-01	-4.7208E+00	-4.5941E+00
1	0	.5	1	0	.5	1	0	.5	1	0	.5	1	0	-2.4113E+00	6.2829E-01	-6.3196E-02	-1.7835E+CC	-1.6467E+CC
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	1	0	-6.6053E-C1	-5.5365E-01	-8.0393E-02	-1.2142E+00	-1.2546E+CC
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	0	-3.4616E-C1	6.1581E-C2	-3.0332E-01	-2.8418E-C1	-5.8750E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	1	-6.1578E-01	5.5799E-01	-5.3371E-03	-6.1789E-C2	-6.7126E-C2
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	1.3443E-C1	3.5279E-01	2.4952E-03	2.1837E-01	2.2086E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	-4.2847E-C1	1.4533E+CC	-1.1673E-03	1.0248E+00	1.0236E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	2	-1.2358E+00	4.0772E-C1	-6.5199E-02	-8.3206E-C1	-8.5726E-C1
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	1	2	-6.7706E-C1	-5.2585E-01	-3.1331E-02	-1.2029E+CC	-1.2342E+CC
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	2	-3.4736E-01	1.4779E-C1	-4.0767E-02	-1.9557E-C1	-2.3634E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	1	2	-5.6392E-01	-6.5806E-01	-1.6279E-02	-1.2420E+CC	-1.2583E+CC
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	2	-6.1033E-C1	-7.1576E-01	-1.3031E-02	-1.3694E+00	-1.3694E+00
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	2	-1.3610E+00	1.3656E-C1	-1.5710E-02	-1.2241E+00	-1.2393E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	2	-2.3189E-01	1.6944E-01	-1.7857E-02	-6.2454E-C2	-8.0311E-02
0	2	2.5	1	1	.5	1	0	.5	0	2	1.5	1	2	-2.7221E-01	-2.7221E-01	-5.3348E-03	-1.7340E+00	-1.7340E+00
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	1	2	-7.8727E-C1	1.9513E-01	-1.5482E-02	-5.4205E-C1	-6.0757E-C1
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	2	-5.5034E-C1	6.9210E-01	-3.0081E-02	1.4176E-01	1.1168E-01
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	-3.0747E-01	-3.0747E-01	-1.6769E-02	-1.0227E+CC	-1.0395E+00
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-6.4508E-01	-3.1197E-01	-3.3021E-02	-1.1570E+00	-1.1567E+00
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	-7.6429E-01	1.1041E+00	-1.3526E-02	3.3981E-01	3.2629E-C1
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-2.8521E-C1	-2.8521E-C1	-4.0037E-02	-4.2316E-01	-4.2316E-01
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-3.6722E-C1	1.0559E+00	-4.1501E-02	7.2871E-01	6.8721E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	3	-4.0537E-C1	1.3607E+CC	0.	9.5538E-01	9.5538E-01
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	3	-1.1620E-01	-6.0959E-02	0.	-1.7716E-C1	-1.7716E-C1
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	3	-6.3823E-01	1.2676E+00	0.	6.2940E-01	6.2940E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	4	-5.0863E-C1	1.0678E+CC	0.	5.5913E-C1	5.5913E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	4	-1.1051E+00	-6.6826E-01	0.	-1.7733E+CC	-1.7733E+CC
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	4	-2.1663E+00	1.1665E+00	0.	-9.9975E-01	-9.9975E-01

Table II

EFFECTIVE INTERACTION NUMBER 1
THE ENERGY OF THE SHIFT(C) 25.0

Table III

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N1	L1	J1	N2	L2	J2	N3	L3	J3	N4	L4	J4	T	J	G	G3P1H	G4P2H	GP63	GSUM
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	1	-6.7091E-01	-5.7273E-01	-1.8959E-01	-1.2436E+00	-1.4232E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	0	1	1.0790E+00	-2.2168E-01	4.7205E-01	2.8573E+00	3.3253E+00
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	0	1	-3.7830E-01	-1.7569E-01	-7.3206E-02	-5.5445E-01	-6.2773E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	0	1	-7.6042E-03	-5.2147E-01	2.1248E-01	-5.2908E-01	-3.1660E-01
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	1	2.0689E+00	-8.6887E-01	-7.5467E-02	1.2000E+00	1.1246E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	1	-5.3726E+00	1.5334E+00	-4.1692E+00	-4.1692E+00	-5.9082E+00
0	2	2.5	0	2	1.5	1	0	.5	1	0	.5	0	1	2.1350E+00	-7.8744E-01	4.2911E-01	1.3475E+00	1.7766E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	-1.7962E+00	1.8401E-01	-9.6390E-01	-1.6122E+00	-2.5761E+00
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	-3.1676E-01	5.5573E-01	1.5846E-01	6.4297E-01	8.4143E-01
1	0	.5	1	0	.5	1	0	.5	1	0	.5	0	1	-2.3584E+00	5.5674E-01	-3.0555E-01	-2.8416E+00	-3.1472E+00
1	0	.5	1	0	.5	1	0	.5	0	2	1.5	0	1	5.4506E-02	6.8858E-01	4.6166E-01	7.4109E-01	1.2027E+00
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	0	1	-5.3358E-01	3.3469E-01	-1.1174E-01	-1.9925E-01	-3.1103E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	-3.0523E+00	-1.6732E-02	-8.0769E-01	-3.0690E+00	-3.8767E+00
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	8.5631E-01	-2.3556E-01	1.9790E-01	6.1662E-01	8.0752E-01
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	-2.7941E-01	3.6540E-01	-7.1383E-02	8.5594E-02	1.8811E-02
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	2	-8.9451E-01	5.4019E-01	-1.4881E-03	-3.5472E-01	-3.5521E-01
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	2	-1.4639E+00	1.0889E-01	-3.5218E-02	-1.3550E+00	-1.3903E+00
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	0	2	-2.4695E+00	-1.5330E-01	-1.8215E-03	-2.6232E+00	-2.6250E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	2	-4.3265E+00	5.4619E-01	-8.2832E-01	-3.7308E+00	-4.5096E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	-1.7929E+00	7.3893E-01	-4.3194E-02	-1.0840E+00	-1.1272E+00
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	-1.9033E+00	6.9621E-01	-2.2107E-03	-1.2070E+00	-1.2033E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	2	-1.0555E+00	2.5245E-01	-4.5822E-02	-7.6307E-01	-8.1285E-01
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	0	3	-1.4207E+00	-3.4574E-01	-5.2451E-02	-1.7665E+00	-1.8189E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	0	3	1.3633E+00	5.0163E-01	8.3351E-02	1.8645E+00	1.5462E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	3	2.0571E-01	5.7444E-01	-6.9530E-02	7.6416E-01	7.1453E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	3	-3.2469E+00	-7.4467E-01	-5.5217E-02	-3.5516E+00	-4.0468E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	3	5.6171E-01	-8.3039E-02	8.7745E-02	8.7967E-01	5.6641E-01
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	0	2	4.6535E-01	5.1454E-02	-7.3295E-02	5.5589E-01	4.8358E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	3	-1.4817E+00	8.2144E-01	-1.3943E-01	-6.6026E-01	-7.5555E-01
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	1.6619E+00	5.9285E-01	1.1647E-01	2.2548E+00	2.3713E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	-2.5347E+00	2.8170E-01	-5.7278E-02	-2.2530E+00	-2.3503E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	4	-4.3100E+00	2.6253E-01	0.	-4.0474E+00	-4.0474E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	5	-3.1295E+00	3.1295E-02	0.	-3.3471E+00	-3.3471E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	0	-1.5876E+00	-7.9402E-01	-3.8640E-01	-2.3816E+00	-2.7680E+00
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	1	0	-7.7519E-01	-6.5359E-01	-8.8258E-02	-1.4292E+00	-1.5174E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	0	-3.2556E+00	-1.2230E+00	-2.4731E-01	-4.4354E+00	-4.7357E+00
1	0	.5	1	0	.5	1	0	.5	1	0	.5	1	0	-2.3393E+00	7.8214E-01	-5.6350E-02	-1.5572E+00	-1.6155E+00
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	1	0	-6.3294E-01	-4.7157E-01	-7.2147E-02	-1.1045E+00	-1.1767E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	0	-2.5851E-01	2.7572E-01	-2.8551E-01	2.1212E-02	-2.6430E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	1	-5.8449E-01	5.2289E-01	-4.8813E-03	-6.1558E-02	-6.6479E-02
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	-1.3400E-01	3.5759E-01	2.3594E-03	2.2359E-01	2.2555E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	-4.1468E-01	1.3561E+00	-1.1405E-03	9.4136E-01	9.4024E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	2	-1.1978E+00	4.1782E-01	-6.1612E-02	-7.7953E-01	-8.4154E-01
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	1	2	-6.5530E-01	-4.5530E-01	-2.9479E-02	-1.1110E+00	-1.1404E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	2	-3.4374E-01	1.2980E-01	-3.0687E-02	-2.1354E-01	-2.5263E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	1	2	-5.6760E-01	-6.1511E-01	-1.5105E-02	-1.1827E+00	-1.1977E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	2	-6.8093E-01	-6.8260E-01	-3.7035E-02	-1.2645E+00	-1.3215E+00
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	2	-1.3137E+00	1.3747E-01	-1.1812E-02	-1.1812E+00	-1.1961E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	2	-2.1585E-01	2.2673E-01	-1.6793E-02	1.0866E-02	-5.9065E-03
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	1	2	-1.4430E+00	-2.1565E-01	-4.5805E-03	-1.6586E+00	-1.6632E+00
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	1	2	-7.7326E-01	2.4857E-01	-1.4163E-02	-5.2469E-01	-5.3855E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	2	-5.1624E-01	6.5855E-01	-2.8357E-02	1.8231E-01	1.5395E-01
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	-7.0481E-01	-7.7062E-01	-1.5572E-02	-9.7543E-01	-9.9100E-01
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-8.3032E-01	-2.5881E-01	-3.1618E-02	-1.0856E+00	-1.1213E+00
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	-7.2561E-01	1.1055E+00	-1.2957E-02	3.7990E-01	3.6694E-01
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-5.5771E-02	-2.4183E-01	-2.1692E-02	-3.4160E-01	-3.6325E-01
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	-3.4360E-01	1.0386E+00	-3.9512E-02	6.9478E-01	6.5526E-01

0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	2	-3.9150E-01	1.2542E+00	0.	5.0266E-01	9.0266E-01
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	3	-1.1403E-01	-3.4742E-02	0.	-1.4878E-01	-1.4878E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	3	-6.2707E-01	1.1172E+00	0.	4.9016E-01	4.9016E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	4	-4.3854E-01	5.9057E-01	0.	5.0243E-01	5.0243E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	4	-1.0839E+00	-5.9218E-01	0.	-1.6761E+00	-1.6761E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	4	-2.1145E+00	1.2270E+00	0.	-8.8751E-01	-8.8751E-01

EFFECTIVE INTERACTION NUMBER 1
THE ENERGY OF THE STATE(C) 35.0

	M1	L1	J1	N2	L2	J2	N3	L3	J3	N4	L4	J4	T	J	C	G3P1H	G4P2H	GP63	GSUM
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	1	1	-3.0564E-01	-5.9348E-01	-1.4110E-01	-9.0312E-01	-1.0442E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	0	1	1	2.7825E+00	-1.0526E-01	3.4067E-01	2.6772E+00	3.0179E+00
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	0	1	1	-2.4504E-01	-1.7694E-01	-4.9868E-02	-4.2158E-01	-4.7185E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	0	1	1	2.2351E-02	-5.0542E-01	1.7026E-01	-4.2703E-01	-2.5676E-01
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	1	1	1.8758E+00	-8.6574E-01	-8.1599E-02	9.5411E-01	9.1251E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	1	1	-4.6865E+00	9.9251E-01	-1.4395E+00	-2.6941E+00	-5.1326E+00
0	2	2.5	0	2	1.5	1	0	.5	1	0	.5	0	1	1	1.9254E+00	-7.3464E-01	3.3436E-01	1.1907E+00	1.5251E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	1	-1.5591E+00	9.6591E-02	-8.6131E-01	-1.5541E+00	-2.4554E+00
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	1	-2.6073E-01	5.6212E-01	2.2154E-01	7.6139E-01	9.8293E-01
1	0	.5	1	0	.5	1	0	.5	1	0	.5	0	1	1	-3.0079E+00	5.6543E-01	-2.7650E-01	-2.4385E+00	-2.7150E+00
1	0	.5	1	0	.5	1	0	.5	0	2	1.5	0	1	1	5.0583E-02	7.2062E-01	4.1705E-01	9.1160E-01	1.2237E+00
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	0	1	1	-6.1200E-01	3.3320E-01	-5.8975E-02	-2.6881E-01	-3.6778E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	1	1	-2.7602E+00	-2.8317E-02	-7.7717E-01	-2.7885E+00	-3.5657E+00
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	1	6.3444E-01	-1.7918E-01	2.0041E-01	5.1526E-01	7.1567E-01
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	1	1	-6.9100E-04	4.3247E-01	-8.1957E-02	4.3178E-01	3.4584E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	2	2	-7.2716E-01	5.2100E-01	-7.4142E-04	-2.0616E-01	-2.0690E-01
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	2	2	-1.3055E+00	6.1757E-02	-2.0200E-02	-1.2477E+00	-1.2679E+00
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	0	2	2	-2.3275E+00	-1.4554E-01	-9.3410E-04	-2.4681E+00	-2.4699E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	2	2	-4.0161E+00	4.3443E-01	-7.2455E-01	-3.5817E+00	-4.3062E+00
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	2	-1.6030E+00	7.0579E-01	-2.4659E-02	-8.9806E-01	-9.2271E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	0	2	2	-1.5755E+00	6.2556E-01	-1.1025E-03	-1.0454E+00	-1.0454E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	3	3	-6.7503E-01	2.5524E-01	-3.5797E-02	-6.1575E-01	-6.5555E-01
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	0	3	3	-1.2505E+00	-2.7363E-01	-4.0868E-02	-1.6247E+00	-1.6656E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	0	3	3	1.2634E+00	4.9262E-01	6.4422E-02	1.7561E+00	1.8205E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	0	3	3	1.5412E-01	4.5267E-01	-5.7953E-02	6.4678E-01	5.8203E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	0	3	3	-2.9449E+00	-7.4498E-01	-4.6719E-02	-3.0937E+00	-3.7404E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	0	3	3	6.4790E-01	-4.2951E-02	7.3576E-02	8.0495E-01	8.7862E-01
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	0	3	3	4.0774E-01	8.4254E-02	-6.6378E-02	4.9155E-01	4.2561E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	3	3	-1.3091E+00	7.6675E-01	-1.1618E-01	-5.4240E-01	-6.5355E-01
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	0	2	2	1.5616E+00	6.2042E-01	1.0471E-01	2.1820E+00	2.2867E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	0	3	3	-2.2492E+00	2.5514E-01	-5.4530E-02	-1.5942E+00	-2.0837E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	0	4	4	-3.9030E+00	2.4283E-01	0.	-3.6601E+00	-3.6601E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	0	5	5	-2.6614E+00	-2.2474E-02	0.	-3.0938E+00	-3.0938E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	0	0	-1.4723E+00	-5.0536E-01	-3.5918E-01	-1.5614E+00	-2.3406E+00
0	2	2.5	0	2	2.5	1	0	.5	1	0	.5	1	0	0	-7.3920E-01	-5.3510E-01	-7.8776E-02	-1.2782E+00	-1.3571E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	0	0	-3.2024E+00	-1.0444E+00	-2.2232E-01	-4.2466E+00	-4.4541E+00
1	0	.5	1	0	.5	1	0	.5	1	0	.5	1	0	0	-2.2592E+00	9.6498E-01	-5.3905E-02	-1.2943E+00	-1.3482E+00
1	0	.5	1	0	.5	0	2	1.5	0	2	1.5	1	0	0	-6.1356E-01	-3.9024E-01	-6.4686E-02	-9.9375E-01	-1.0565E+00
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	0	0	-1.6464E-01	5.2087E-01	-2.6911E-01	3.5623E-01	8.7121E-02
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	1	1	-5.4803E-01	4.8248E-01	-4.3436E-03	-6.5556E-02	-6.5556E-02
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	1	-1.3414E-01	3.6769E-01	2.2172E-03	2.5356E-01	2.3578E-01
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	1	1	-2.4968E-01	1.2500E+00	-1.1302E-03	8.5122E-01	8.5009E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	2	1	-1.1553E+00	4.3678E-01	-5.7920E-02	-7.1653E-01	-7.1653E-01
0	2	2.5	0	2	2.5	0	2	2.5	1	0	.5	1	2	1	-6.3452E-01	-3.8224E-01	-2.7711E-02	-1.0168E+00	-1.0445E+00
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	2	1	-3.4200E-01	1.0503E-01	-3.6521E-02	-2.3658E-01	-2.7350E-01
0	2	2.5	0	2	2.5	1	0	.5	0	2	1.5	1	2	1	-5.7077E-01	-5.7077E-01	-1.3791E-02	-1.1218E+00	-1.1356E+00
0	2	2.5	0	2	2.5	0	2	1.5	0	2	1.5	1	2	1	-5.9004E-01	-6.4547E-01	-3.4502E-02	-1.2355E+00	-1.2731E+00
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	2	1	-1.2769E+00	1.4942E-01	-1.4055E-02	-1.1275E+00	-1.1415E+00
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	2	1	-1.9558E-01	2.8497E-01	-1.5786E-02	8.5384E-02	6.5556E-02
0	2	2.5	1	0	.5	1	0	.5	0	2	1.5	1	2	1	-1.4246E+00	-1.6501E-01	-3.8901E-03	-1.5896E+00	-1.5935E+00
0	2	2.5	1	0	.5	0	2	1.5	0	2	1.5	1	2	1	-7.5926E-01	2.9510E-01	-1.2858E-02	-4.6015E-01	-4.7305E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	2	1	-4.8250E-01	7.1391E-01	-2.6625E-02	2.3141E-01	2.0479E-01
0	2	2.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	1	-6.9470E-01	-2.3234E-01	-1.4454E-02	-9.2704E-01	-9.4150E-01
0	2	2.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	1	-8.1623E-01	-2.0032E-01	-2.5594E-02	-1.0166E+00	-1.0461E+00
1	0	.5	0	2	1.5	1	0	.5	0	2	1.5	1	2	1	-6.9533E-01	1.1213E+00	-1.2514E-02	4.2594E-01	4.1343E-01
1	0	.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	1	-8.4454E-02	-1.5780E-01	-2.0703E-02	-2.8229E-01	-3.0300E-01
0	2	1.5	0	2	1.5	0	2	1.5	0	2	1.5	1	2	1	-3.1957E-01	9.8286E-01	-3.7504E-02	6.6330E-01	6.2579E-01
0	2	2.5	1	0	.5	0	2	2.5	1	0	.5	1	2	2	-3.7753E-01	1.2318E+00	0.	8.5431E-01	8.5431E-01
0	2	2.5	1	0	.5	0	2	2.5	0	2	1.5	1	3	3	-1.1282E-01	-2.3252E-03	0.	-1.1515E-01	-1.1515E-01
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	3	3	-6.1590E-01	9.5148E-01	0.	3.3558E-01	3.3558E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	2.5	1	4	4	-4.6831E-01	9.1164E-01	0.	4.4334E-01	4.4334E-01
0	2	2.5	0	2	2.5	0	2	2.5	0	2	1.5	1	4	4	-1.0626E+00	-5.0844E-01	0.	-1.5710E+00	-1.5710E+00
0	2	2.5	0	2	1.5	0	2	2.5	0	2	1.5	1	4	4	-2.0622E+00	1.2919E+00	0.	-7.7029E-01	-7.7029E-01

Table IV

REFERENCES

1. J. P. Vary and S. N. Yang, submitted to Phys. Rev. C.