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EVALUATION OF NEUTRON NUCLEAR DATA FOR SCANDIUM-45

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Yoshiaki OKA*, Tsuneo NAKAGAWA** and Yasuyuki KIKUCHI

日本原子力研究所
Japan Atomic Energy Research Institute

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Evaluation of Neutron Nuclear Data for ^{45}Sc

Yoshiaki OKA*, Tsuneo NAKAGAWA** and Yasuyuki KIKUCHI

Division of Physics, Tokai Research Establishment, JAERI

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Evaluation of neutron nuclear data for ^{45}Sc was performed in the energy range of thermal to 20 MeV. Evaluated quantities are the total, elastic and inelastic scattering, capture, (n,2n), (n,p) and (n,α) reaction cross sections, resonance parameters and angular distributions of emitted neutrons. Resonance parameters are recommended below 100 keV. Particular care was paid for the minimum value of the total cross section near 2 keV, since a mono-energetic neutron filter is now under design by using scandium metal at Fast Neutron Source Reactor YAYOI of The University of Tokyo. Optical and statistical model calculations are performed for the smooth cross sections above resonance region. The results were compiled in the ENDF/B format and they will be stored in the second version of Japanese Evaluated Nuclear Data Library JENDL-2.

Keywords: Evaluation, Scandium-45, Neutron Cross Sections, Resonance Parameters, Angular Distribution, Optical Model, Total Cross Section Minimum, Mono-energetic Filter.

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* Nuclear Engineering Research Laboratory, The University of Tokyo

** Data Bank, OECD-Nuclear Energy Agency

^{45}Scの中性子核データの評価

日本原子力研究所東海研究所物理部
岡　芳明*・中川庸雄**・菊池康之

(1982年1月27日受理)

^{45}Scの中性子核データを熱中性子領域から20 MeVにわたり評価した。評価した量は，全断面積，弾性散乱，非弾性散乱，捕獲，(n，2n)，(n，p)，(n，α) 反応断面積，共鳴パラメータおよび放出粒子の角度分布である。共鳴パラメータは100keV以下の領域で与えた。現在東京大学工学部付属原子力工学研究施設の高速中性子源炉「弥生」において金属Scを用いた単色中性子フィルターを設計しているので，2keV近傍の全断面積の極小値には特に注意を払った。共鳴領域より上の滑らかな断面積は光学および統計模型に基き評価した。今回の評価結果はENDF／Bフォーマットにまとめ，JENDL－2に格納される。

* 東京大学工学部付属原子力工学研究施設
** Data Bank, OECD-Nuclear Energy Agency

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1. Introduction

There is a deep minimum in the total neutron cross section of scandium-45 near 2 keV due to the interference between the resonance and potential scattering. As natural scandium consists of only scandium-45, a mono-energetic neutron filter can be designed with scandium metal for use in measurement of cross sections, energy calibration of neutron detectors and biomedical irradiation[1,2,3,]. However, no evaluated neutron cross sections of scandium are available at present. Only the (n,γ) cross section was evaluated and presented in the ENDF/B-IV dosimetry file. Even the minimum value near 2 keV has not been well determined.[3)]

There is a project to construct a scandium filter at Fast Neutron Source Reactor YAYOI of The University of Tokyo for biomedical irradiation. The poor knowledge of scandium cross section makes it difficult to estimate the irradiation dose. Hence a new evaluation was made on scandium cross sections. Though much effort was devoted to the evaluation of the minimum near 2 keV, the evaluation was made from 10^{-5} eV to 20 MeV so that the evaluated data should be included in Japanese Evaluated Nuclear Data Library Version 2 (JENDL-2).

The evaluation of the data in the resonance energy region is described in Chapter 2. Chapter 3 reports the result of the fast energy region. Concluding remarks are given in Chapter 4.

2. Resonance Energy Region

2.1 Total Cross Section near 2 keV

There still remains considerable uncertainty in the total cross section value at the minimum near 2 keV.

The value of 0.085 barn based on the early measurements were denied by Liou et al.[4] who reported that the minimum value of 0.71 ± 0.03 barns at 2.05 keV. On the other hand, Razbudey et al.[5] reported the value of 0.27 ± 0.07 barns from their reactor beam measurements. Recently Fujita and Yamamuro[3] reported the value of 0.25 ± 0.05 barns which obtained by using a linear accelerator at Research Reactor Institute, Kyoto University (KUR). Later Fujita informed us[6] that 0.23 ± 0.02 barns was most probable value at 2 keV and his data agreed with those by Liou et al. except in the energy range between 0.5 keV and 3 keV. The present evaluation was based on this result.

2.2 Resonance Parameters

In the present evaluation, we considered the resonance parameters deduced by Liou et al.[4] from their transmission measurements and those by Kenny et al.[7] from their capture measurements.

Liou et al. gave the Γ_n and J values for 18 s-wave resonances up to 20.78 keV including two negative ones and the $g\Gamma_n$ values for 5 p-wave resonances. Kenny et al. gave the values of the capture areas and of Γ_γ for many s- and p-wave resonance up to 100 keV.

For the s-wave resonances, we adopted the parameters of Liou et al. up to 20.78 keV assuming the Γ_γ value of 0.41 eV and those of Kenny et al. from 21 keV to 95 keV. The parameters of the two negative resonances were adjusted as will be described later. As to the p-wave

resonances, the present evaluation is based on the resonance areas reported by Kenny et al. except for the lowest 2 levels at 460 eV and 1.06 keV where the parameters of Liou et al. were adopted with the assumed Γ_γ value of 0.41 eV. Kenny et al. also reported the $g\Gamma_\gamma$ values. For most of levels, however, the values of Γ_n became negative when deduced from the reported values of the capture resonance areas and $g\Gamma_\gamma$. Hence we assumed Γ_γ value of 0.5 eV and deduced the Γ_n values.

In the present work, the resonance parameters of the two negative resonances as well as the nuclear radius were so adjusted that the calculated total cross section agreed with the data of Fujita[6] between 0.5 and 3 keV and that the calculated thermal cross sections agreed with those recommended in BNL-325, 3rd edition[8]. This adjustment was made by using Neutron Data Evaluation System NDES[9]. The finally obtained values are

$$J = 4,\ E_0 = -330\ \text{eV},\ \Gamma_n = 36.7\ \text{eV},\ \Gamma_\gamma = 0.41\ \text{eV}$$

$$J = 3,\ E_0 = -650\ \text{eV},\ \Gamma_n = 101.0\ \text{eV},\ \Gamma_\gamma = 0.41\ \text{eV}$$

$$R = 4.55\ \text{fm}$$

The resonance parameters are summarized in Table I. The total cross sections calculated from these parameters are presented in Figs. 1 ∿ 4 together with the experimental data by Liou et al.

2.3 Thermal Cross Sections

The calculated thermal cross sections are

σ_t = 51.0 barns (50.5 ± 2.3 barns),

σ_s = 25.0 barns (24.0 ± 2.0 barns),

and σ_c = 26.0 barns (26.5 ± 1.0 barns).

which agree well with the values of BNL-325[8] appeared in the parentheses.

2.4 Connection with the Smooth Cross Section

From the staircase plot of the resonance levels shown in Figs. 5 and 6, it can be concluded that some resonances are missing above 90 keV. Hence the upper limit of resonance energy region was determined to be 90 keV.

3. Fast Energy Region

The cross sections are calculated in this energy region with the optical and statistical models.

3.1 Total Cross Section and Optical Model

The optical potential parameters were determined by taking account of the following two conditions:

(1) The s-wave strength function in low energy region should be $(5.1 \pm 0.9) \times 10^{-4}$ which is recommended in BNL-325, 3rd edition.

(2) The total cross sections measured by Foster and Glasgow[10] (2.308 ∿ 14 MeV) and by Barnard et al.[11] (0.2 ∿ 1.409 MeV) should be well reproduced.

The obtained optical potential parameters are presented in Table II.

The calculated s-wave strength function is 5.1×10^{-4} at 1 keV and agrees very well with the recommended value in BNL-325. The calculated total cross section also agrees very well with the measured data as shown in Fig. 7. This implies the reliability of the present optical model. The calculated cross section was adopted in the present work.

3.2 Capture, Elastic and Inelastic Scattering Cross Section

The capture, elastic and inelastic scattering cross sections were calculated with the statistical model code CASTHY[12]. The neutron transmission coefficient was calculated with the optical potential parameters described before. The γ-ray strength function was so determined that the calculated capture cross section agreed with the measured data by Kenny et al.[7]; 32 mb at 100 keV. The level scheme was taken from Table of Isotope, 7th edition[13] and is shown in Table III.

The level density parameters were taken from the recommendation by Gilbert and Cameron[14].

The (n,p), (n,α) and (n,2n) reaction cross sections were taken into account as competing processes. The (n,p) and (n,α) cross sections were taken from the compilation by Alley and Lessler[15] and the (n,2n) cross sections were evaluated on the basis of the measurements by Holub and Cindro[16]. The adopted cross sections are given in Table IV. The presently evaluated capture cross section is shown in Fig. 8 with some measured data.

4. Concluding Remarks

Evaluation of neutron nuclear data of scandium-45 have been performed in the energy range of 10^{-5} eV to 20 MeV, and these data will be stored in JENDL-2. The presently evaluated data are shown in Table V with ENDF/B format.

The primary motive of the present evaluation is to know the total cross section near 2 keV. Hence we adopted the calculated total cross section in the fast energy region instead of following the remaining resonance structure in hundred keV region. The ignorance of the structure in this region makes ignorance of the self-shielding factor and may result in some errors in the neutron transport calculation as was pointed out[17] in the case of the iron data of JENDL-1. This problem should be investigated in future.

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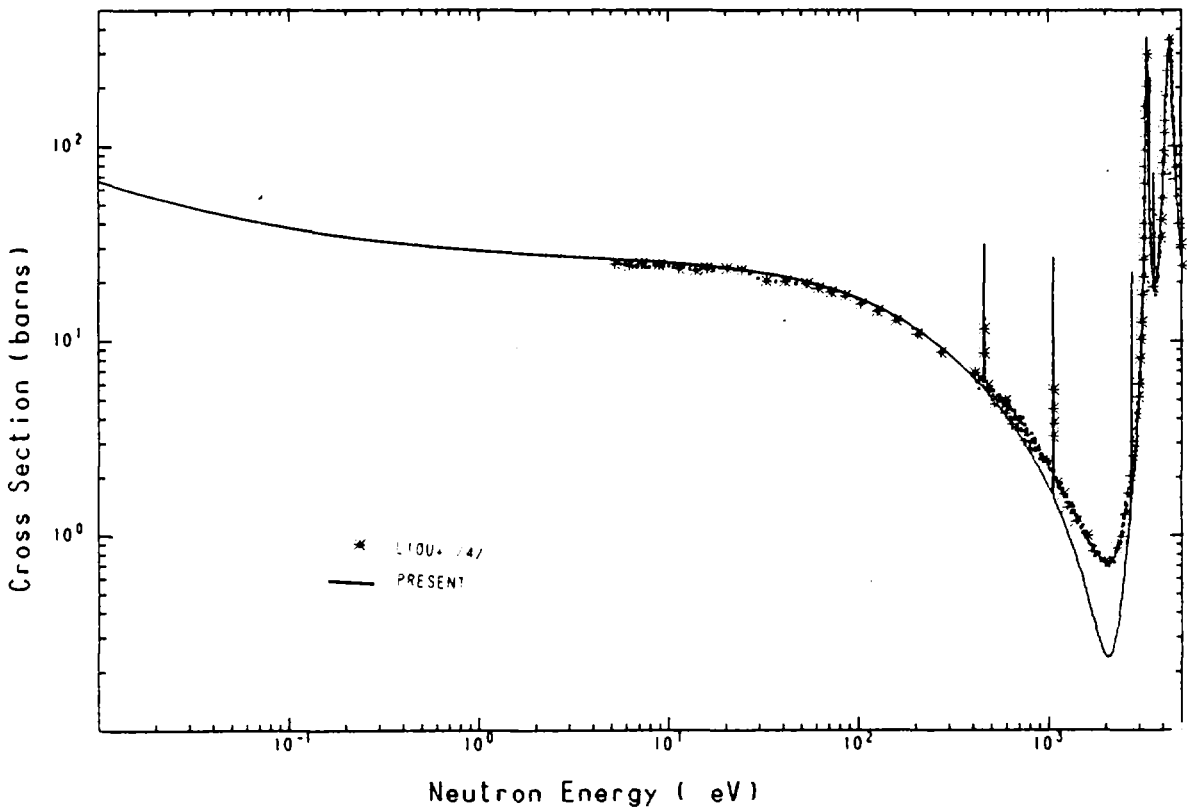

Fig. 1 The total cross section of ^{45}Sc calculated from the present resonance parameters with the measured data by Liou et al.[4] in the energy range below 5 keV.

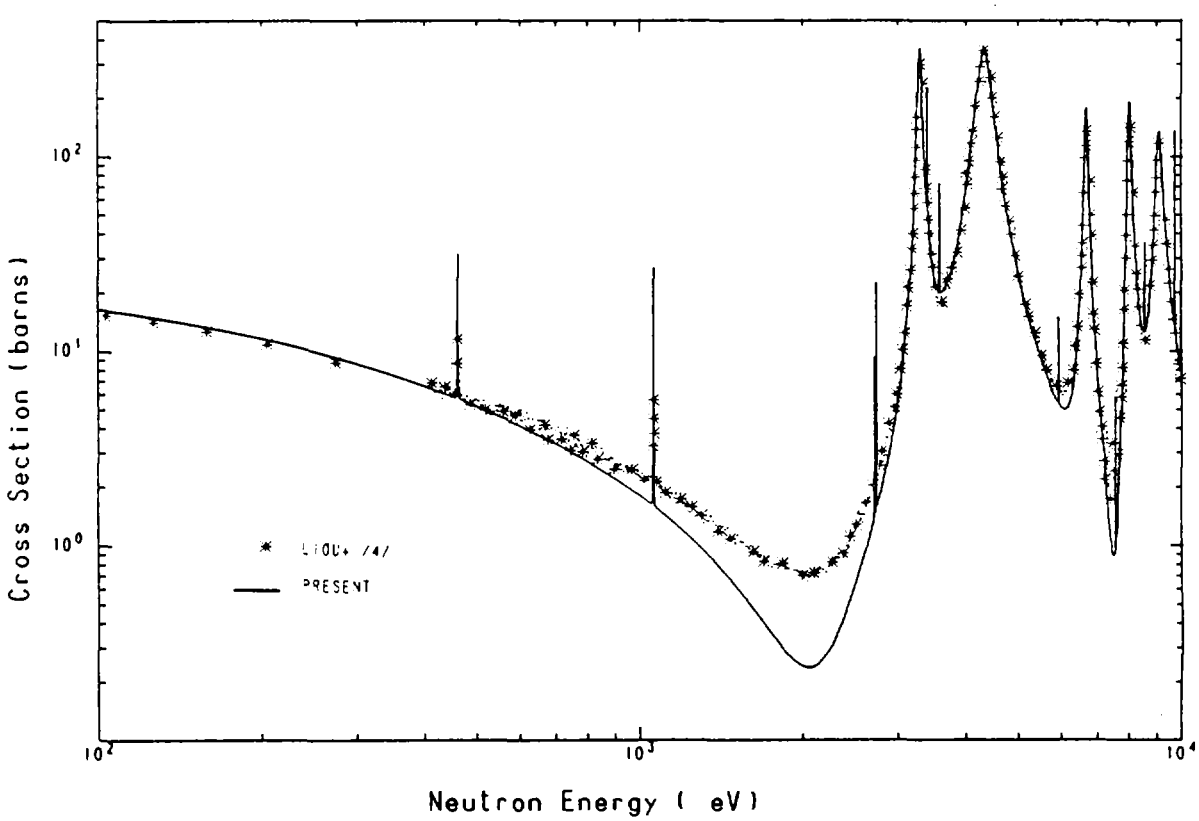

Fig. 2 The total cross section of ^{45}Sc calculated from the present resonance parameters with the measured data by Liou et al.[4] in the energy range between 100 eV and 10 keV.

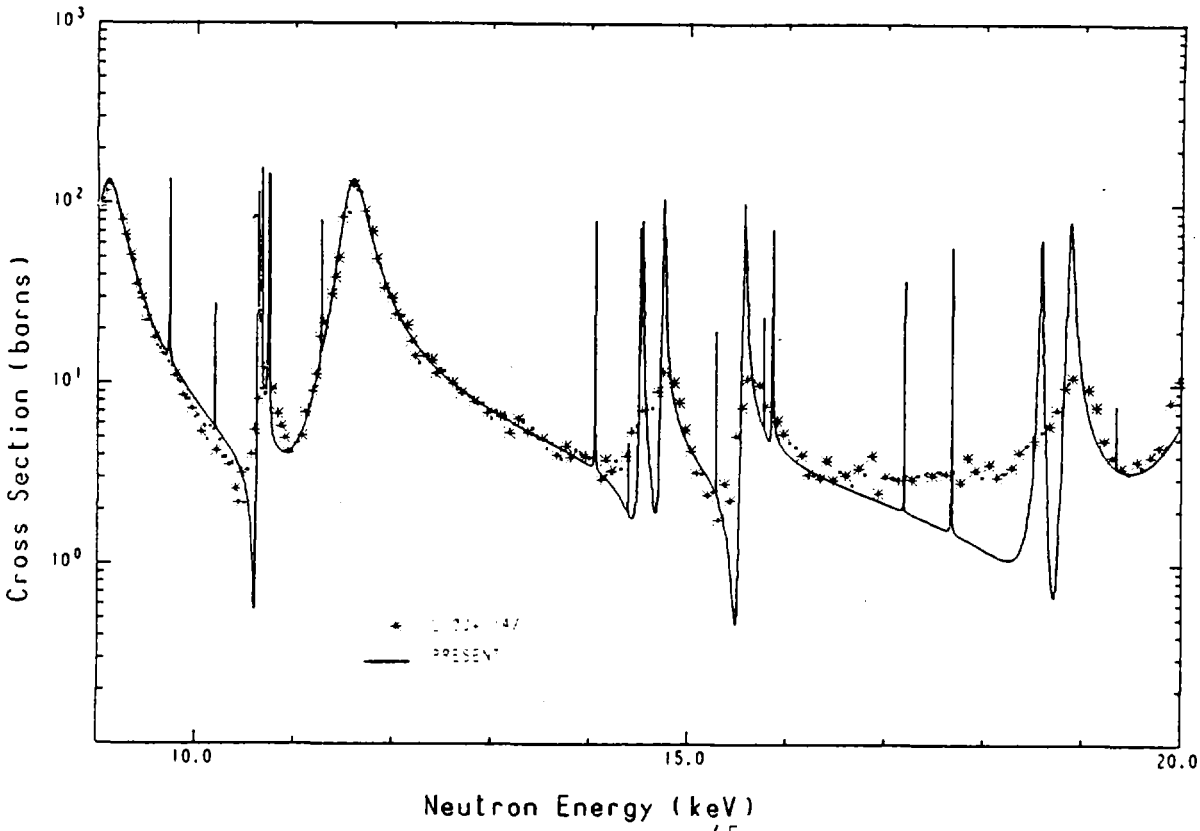

Fig. 3 The total cross section of ^{45}Sc calculated from the present resonance parameters with the measured data by Liou et al.[4] in the energy range between 9 and 20 keV.

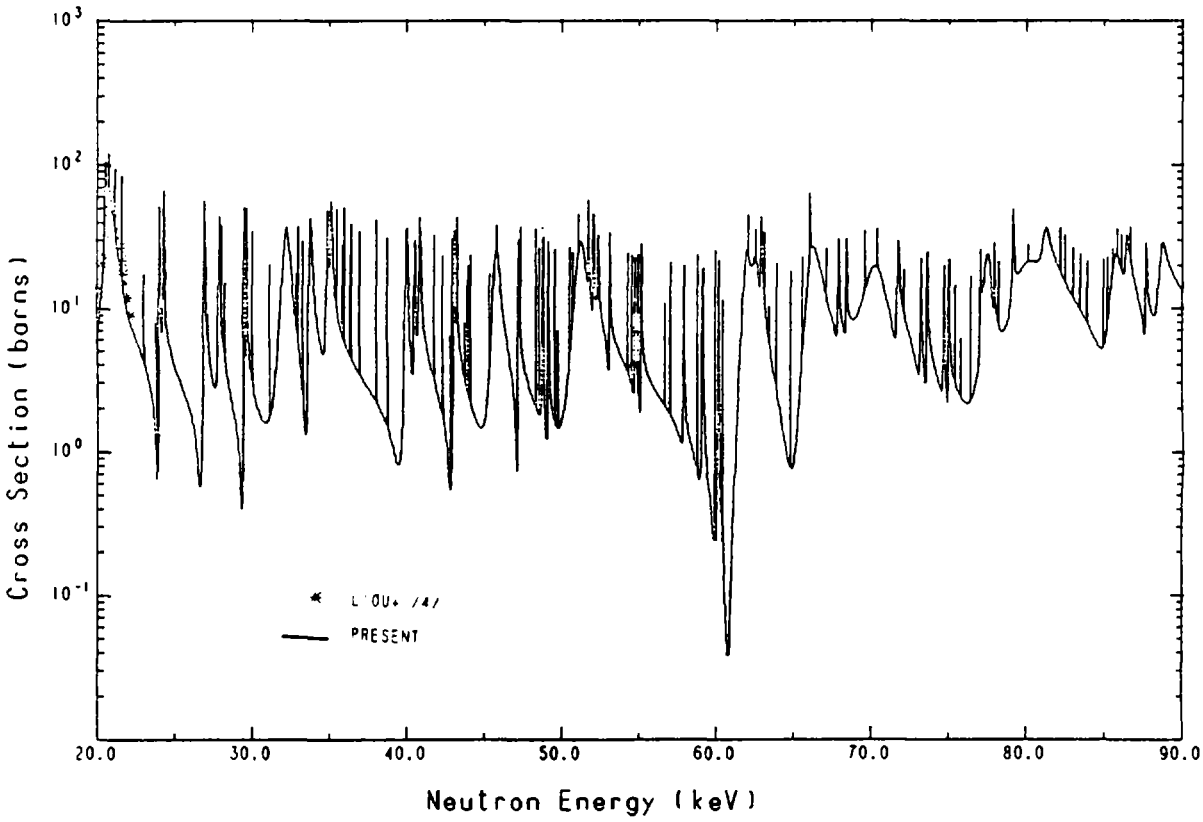

Fig. 4 The total cross section of ^{45}Sc calculated from the resonance parameters in the energy range from 20 to 90 keV.

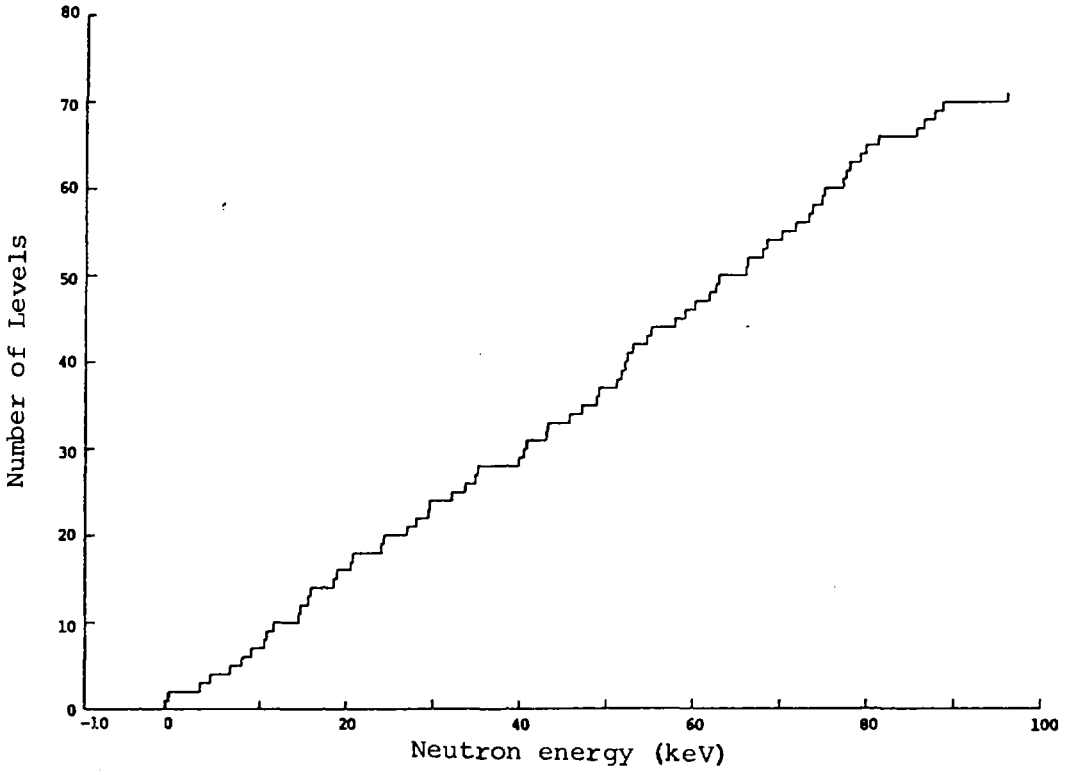

Fig. 5 Stair case plot of the s-wave resonance level sequence for ^{45}Sc.

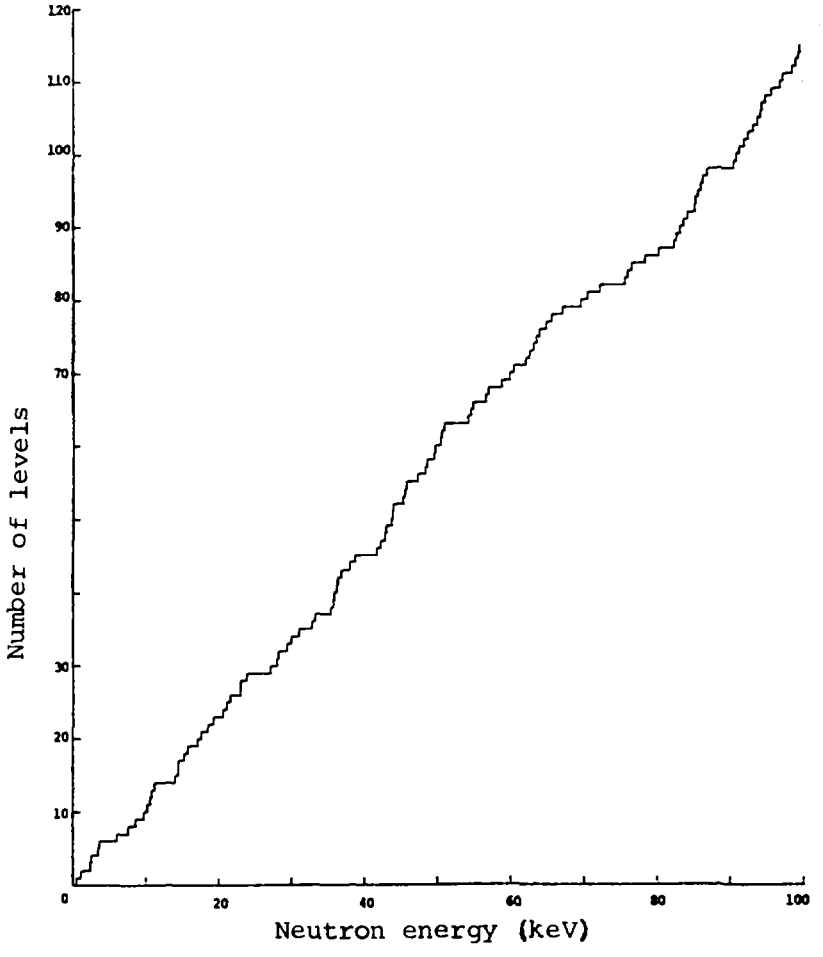

Fig. 6 Stair case plot of the p-wave resonance level sequence for ^{45}Sc.

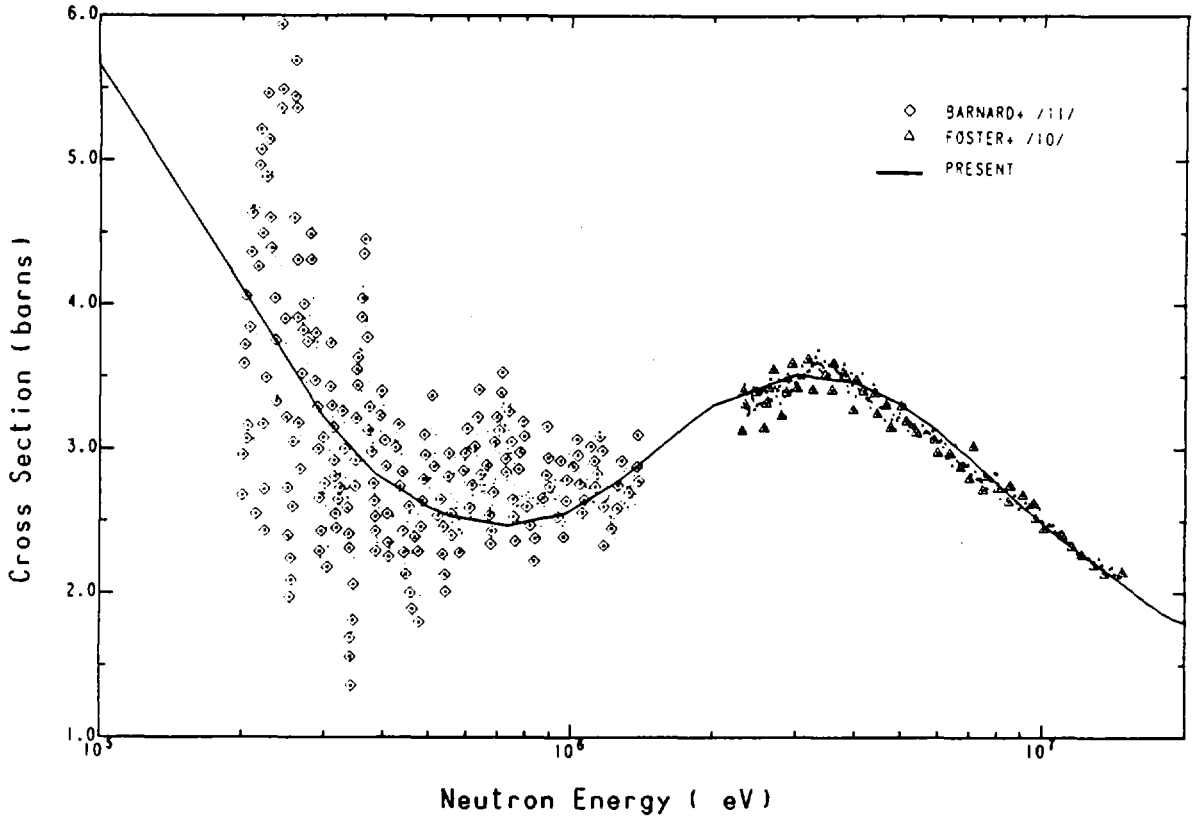

Fig. 7 The total cross section of ^{45}Sc calculated from the present optical potential parameters and the experimental values by Barnard et al.[11] (0.2 - 1.4 MeV) and by Foster and Glasgow[10] (2.5 - 1.5 MeV).

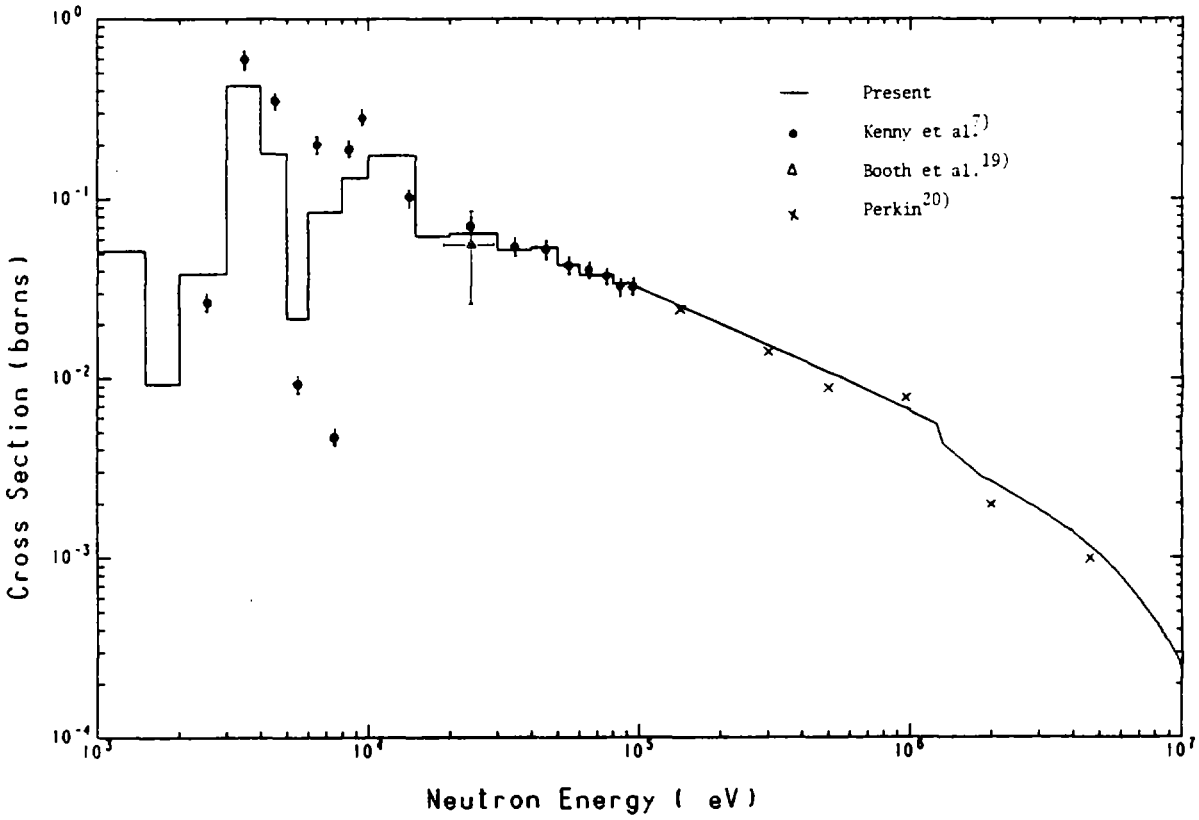

Fig. 8 The capture cross sections of ^{45}Sc. The average values are given in the resonance region.

Table I Resonance parameters of ^{45}Sc

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH* (EV)	GAMMA WIDTH* (EV)	MISCELLANEOUS**	REFERENCE ***
-0.65	0	3	101.41	101.0	0.41		JENDL-2
-0.5 ± 0.05	0	3		89 ±11		GNO= 4.0 ± 0.5	78LIOU+
-0.33	0	4	37.11	36.7	0.41		JENDL-2
-0.22 ± 0.04	0	4		9.9 ± 1.5		GNO= 0.67 ± 0.10	78LIOU+
0.4606	1	3.5	0.5044	0.0044	0.5		JENDL-2
0.4606± 0.0004	1			A 0.0044± 0.0004			78LIOU+
1.0604	1	3.5	0.51	0.01	0.5		JENDL-2
1.0604± 0.0010	1			A 0.0100± 0.0014			78LIOU+
2.715	1	3.5	0.508	0.008	0.5		JENDL-2
2.715± 0.003	1			A 0.008± 0.002		ARG= 7.1 ± 0.7	77KENNY+
2.737	1	3.5	0.522	0.022	0.5		JENDL-2
2.737± 0.003	1			A 0.022± 0.002		ARG= 19.9 ± 2.0	77KENNY+
3.295	0	3	75.41	75.0	0.41		JENDL-2
3.300± 0.015	0			80 ±10	B 0.62 ± 0.06	ARG= 396 ±40	77KENNY+
3.295± 0.012	0	3		75 ± 5			78LIOU+
3.404	1	3.5	0.871	0.371	0.5		JENDL-2
3.404± 0.003	1				B 0.186± 0.018	ARG= 133.8 ±13.4	77KENNY+
3.582	1	3.5	0.58	0.08	0.5		JENDL-2
3.582± 0.004	1			A 0.080± 0.008		ARG= 54.8 ± 5.5	77KENNY+
4.33	0	4	340.41	340.0	0.41		JENDL-2
4.326± 0.050	0			320 ±40	B 0.71 ± 0.07	ARG= 352 ±35	77KENNY+
4.330± 0.018	0	4		340 ±20			78LIOU+
5.943	1	3.5	0.522	0.022	0.5		JENDL-2
5.943± 0.006	1			A 0.022± 0.002		ARG= 9.2 ± 0.9	77KENNY+
6.684	0	3	130.41	130.0	0.41		JENDL-2
6.700± 0.020	0			125 ±25	B 0.65 ± 0.07	ARG= 207 ±21	77KENNY+
6.684± 0.020	0	3		130 ±14			78LIOU+
7.377± 0.025	1			A 0.8 ± 0.4			78LIOU+
7.56	1	3.5	0.514	0.014	0.5		JENDL-2
7.560± 0.008	1			A 0.014± 0.002		ARG= 4.8 ± 0.5	77KENNY+
7.458± 0.025	1			A 0.8 ± 0.4			78LIOU+
7.548± 0.025	1			A 0.50 ± 0.30			78LIOU+
8.023	0	4	145.41	145.0	0.41		JENDL-2
8.038± 0.030	0			140 ±30	B 0.64 ± 0.06	ARG= 168 ±17	77KENNY+
8.023± 0.025	0	4		145 ±15			78LIOU+
8.558	1	3.5	0.586	0.086	0.5		JENDL-2
8.558± 0.009	1			A 0.086± 0.008		ARG= 24.6 ± 2.5	77KENNY+
9.070± 0.009	0			40 ±10	B 0.96 ± 0.10	ARG= 217 ±22	77KENNY+
9.092	0	3	300.41	300.0	0.41		JENDL-2
9.080± 0.040	0			250 ±50	B 0.82 ± 0.12	ARG= 193 ±30	77KENNY+
9.092± 0.030	0	3		300 ±20			78LIOU+
9.725	1	3.5	3.03	2.53	0.5		JENDL-2
9.725± 0.010	1				B 0.368± 0.036	ARG= 91.8 ± 9.2	77KENNY+
10.189	1	3.5	0.598	0.098	0.5		JENDL-2
10.189± 0.010	1			A 0.098± 0.010		ARG= 23.4 ± 2.3	77KENNY+
10.625	0	3	10.41	10.0	0.41		JENDL-2
10.625± 0.035	0	3		10 ± 3			78LIOU+
10.662	1	5.0	4.63	3.83	0.8		JENDL-2
10.662± 0.011	1				B 0.800± 0.080	ARG= 182.5 ±18.3	77KENNY+
10.735	0	4	6.41	6.0	0.41		JENDL-2
10.735± 0.035	0	4		6 ± 2			78LIOU+
10.74	1	5.0	1.711	0.911	0.8		JENDL-2
10.740± 0.011	1				B 0.516± 0.052	ARG= 116.6 ±11.7	77KENNY+
11.265	1	3.5	1.093	0.593	0.5		JENDL-2
11.265± 0.011	1				B 0.240± 0.024	ARG= 51.5 ± 5.2	77KENNY+
11.575	0	4	290.41	290.0	0.41		JENDL-2

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH* (EV)	GAMMA WIDTH* (EV)	MISCELLANEOUS**	REFERENCE ***
11.580± 0.050	0			300 ±50	B 0.86 ± 0.09	ARG= 158 ±16	77KENNY+
11.575± 0.050	0	4		290 ±20			78LIOU+
14.05	1	3.5	2.15	1.65	0.5		JENDL-2
14.050± 0.014	1				B 0.338± 0.034	ARG= 58.4 ± 5.8	77KENNY+
14.39	1	3.5	0.5153	0.0153	0.5		JENDL-2
14.390± 0.014	1				B 0.012± 0.002	ARG= 2.2 ± 0.2	77KENNY+
14.5	1	5.0	1.62	0.82	0.8		JENDL-2
14.500± 0.015	1				B 0.490± 0.050	ARG= 82.1 ± 8.2	77KENNY+
14.525	0	3	20.41	20.0	0.41		JENDL-2
14.525± 0.060	0	3		20 ± 4			78LIOU+
14.74	0	4	26.41	26.0	0.41		JENDL-2
14.820± 0.015	0			35	B 0.52 ± 0.05	ARG= 75.3 ± 7.5	77KENNY+
14.740± 0.060	0	4		26 ± 5			78LIOU+
15.28	1	3.5	0.621	0.121	0.5		JENDL-2
15.280± 0.015	1			A 0.122± 0.012		ARG= 19.2 ± 1.9	77KENNY+
15.56	0	4	28.41	28.0	0.41		JENDL-2
15.623± 0.016	0			30	B 0.67 ± 0.07	ARG= 92.1 ± 9.2	77KENNY+
15.560± 0.060	0	4		28 ± 5			78LIOU+
15.763	1	3.5	0.632	0.132	0.5		JENDL-2
15.763± 0.016	1			A 0.132± 0.014		ARG= 20.5 ± 2.1	77KENNY+
15.85	0	3	5.41	5.0	0.41		JENDL-2
15.850± 0.060	0	3		5 ± 2			78LIOU+
17.192	1	3.5	0.899	0.399	0.5		JENDL-2
17.192± 0.017	1				B 0.20 ± 0.02	ARG= 27.6 ± 2.8	77KENNY+
17.677	1	3.5	1.73	1.23	0.5		JENDL-2
17.677± 0.018	1				B 0.318± 0.032	ARG= 43.0 ± 4.3	77KENNY+
18.504	1	3.5	0.51	0.01	0.5		JENDL-2
18.504± 0.019	1			A 0.010± 0.002		ARG= 13.9 ± 1.4	77KENNY+
18.58	0	3	32.41	32.0	0.41		JENDL-2
18.580± 0.080	0	3		32 ± 6			78LIOU+
18.87	0	4	62.41	62.0	0.41		JENDL-2
19.17		4		60			70CHO+
19.084± 0.019	0	(4)		(60)	0.69 ± 0.07	ARG= 86.0 ± 8.6	77KENNY+
18.870± 0.080	0	4		62 ±10			78LIOU+
19.341	1	3.5	0.532	0.032	0.5		JENDL-2
19.341± 0.019	1			A 0.032± 0.004		ARG= 4.0 ± 0.4	77KENNY+
20.5	0	4	80.41	80.0	0.41		JENDL-2
20.80		4		60			70CHO+
20.644± 0.021	0	(4)		100	0.83 ± 0.12	ARG= 86.1 ± 8.6	77KENNY+
20.500± 0.090	0	4		80 ±14			78LIOU+
20.726	1	3.5	3.4	2.9	0.5		JENDL-2
20.726± 0.021	1				B 0.374± 0.038	ARG= 44.0 ± 4.4	77KENNY+
20.78	0	3	710.41	710.0	0.41		JENDL-2
20.95		3		800			70CHO+
20.933± 0.200	0	(3)		700 ±200	0.60 ± 0.20	ARG= 49.2 ± 4.9	77KENNY+
20.780± 0.100	0	3		710 ±60			78LIOU+
21.114	1	3.5	2.74	2.24	0.5		JENDL-2
21.114± 0.021	1				B 0.360± 0.036	ARG= 41.4 ± 4.1	77KENNY+
21.58	1	5.0	2.36	1.86	0.5		JENDL-2
21.580± 0.022	1				B 0.476± 0.048	ARG= 53.7 ± 5.4	77KENNY+
23.015	1	3.5	0.644	0.144	0.5		JENDL-2
23.015± 0.023	1			A 0.144± 0.014		ARG= 15.3 ± 1.5	77KENNY+
23.065	1	3.5	0.512	0.012	0.5		JENDL-2
23.065± 0.023	1			A 0.012± 0.002		ARG= 1.4 ± 0.14	77KENNY+
23.838	1	3.5	0.572	0.072	0.5		JENDL-2
23.838± 0.024	1			A 0.072± 0.008		ARG= 7.4 ± 0.74	77KENNY+
24.01	0	3	61.087	60.0	1.087		JENDL-2

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH* (EV)	GAMMA WIDTH* (EV)	MISCELLANEOUS**	REFERENCE ***
24.18		3		60			70CHO+
24.010± 0.024	0	(3)		(60)	1.087± 0.109	ARG= 83.1 ± 8.3	77KENNY+
24.315	0	4	60.462	60.0	0.462		JENDL-2
24.48		4		60			70CHO+
24.315± 0.024	0	(4)		(60)	0.462± 0.046	ARG= 45.5 ± 4.6	77KENNY+
26.925	0	4	90.9	90.0	0.9		JENDL-2
27.12		4		90			70CHO+
26.925± 0.027	0	(4)		(90)	0.900± 0.090	ARG= 62.0 ± 6.2	77KENNY+
27.19	1	3.5	0.534	0.034	0.5		JENDL-2
27.190± 0.027	1			A 0.034± 0.004		ARG= 3.0 ± 0.3	77KENNY+
27.9	0	3	110.811	110.0	0.811		JENDL-2
28.12		3		110			70CHO+
27.900± 0.028	0	(3)		(110)	0.811± 0.081	ARG= 53.9 ± 5.4	77KENNY+
28.04	1	3.5	1.069	0.569	0.5		JENDL-2
28.040± 0.028	1				B 0.234± 0.024	ARG= 20.3 ± 2.0	77KENNY+
28.235	1	3.5	0.638	0.138	0.5		JENDL-2
28.235± 0.028	1			A 0.138± 0.014		ARG= 11.9 ± 1.2	77KENNY+
29.41	1	3.5	0.898	0.398	0.5		JENDL-2
29.410± 0.029	1				B 0.196± 0.020	ARG= 16.1 ± 1.6	77KENNY+
29.48	0	4	30.613	30.0	0.613		JENDL-2
29.480± 0.029	0	(4)		30	0.613± 0.061	ARG= 49.0 ± 4.9	77KENNY+
29.63	0	3.5	50.723	50.0	0.723		JENDL-2
29.85		4		100			70CHO+
29.630± 0.030	0			50	B 0.723± 0.072	ARG= 51.8 ± 5.2	77KENNY+
30.01	1	3.5	1.507	1.007	0.5		JENDL-2
30.010± 0.030	1				B 0.294± 0.030	ARG= 23.8 ± 2.4	77KENNY+
31.135	1	3.5	0.853	0.353	0.5		JENDL-2
31.135± 0.031	1				B 0.184± 0.018	ARG= 14.2 ± 1.4	77KENNY+
32.18	0	3	570.917	570.0	0.917		JENDL-2
32.40		3		570			70CHO+
32.180± 0.032	0	(3)		(570)	0.917± 0.092	ARG= 53.1 ± 5.3	77KENNY+
32.84	1	3.5	0.644	0.144	0.5		JENDL-2
32.840± 0.033	1			A 0.144± 0.014		ARG= 10.6 ± 1.1	77KENNY+
32.94	1	5.0	1.779	0.979	0.8		JENDL-2
32.940± 0.033	1				B 0.532± 0.054	ARG= 39.3 ± 3.9	77KENNY+
33.28	1	3.5	1.394	0.894	0.5		JENDL-2
33.280± 0.033	1				B 0.284± 0.028	ARG= 20.6 ± 2.1	77KENNY+
33.73	0	3	200.866	200.0	0.866		JENDL-2
34.0		3		190			70CHO+
33.730± 0.034	0	(3)		200	0.866± 0.087	ARG= 47.9 ± 4.8	77KENNY+
34.86	0	3.5	100.689	100.0	0.689		JENDL-2
34.860± 0.035	0			100	B 0.689± 0.070	ARG= 42.7 ± 4.3	77KENNY+
35.08	0	4	150.543	150.0	0.543		JENDL-2
35.3		4		280			70CHO+
35.080± 0.035	0	(4)		150	0.543± 0.054	ARG= 28.9 ± 2.9	77KENNY+
35.47	1	5.0	1.93	1.43	0.5		JENDL-2
35.470± 0.036	1				B 0.448± 0.044	ARG= 30.7 ± 3.1	77KENNY+
35.8	1	3.5	1.101	0.601	0.5		JENDL-2
35.800± 0.036	1				B 0.242± 0.024	ARG= 16.3 ± 1.6	77KENNY+
35.955	1	5.0	3.76	3.26	0.5		JENDL-2
35.995± 0.036	1				B 0.524± 0.052	ARG= 35.4 ± 3.5	77KENNY+
36.31	1	3.5	0.979	0.479	0.5		JENDL-2
36.310± 0.036	1				B 0.214± 0.022	ARG= 14.4 ± 1.4	77KENNY+
36.39	1	3.5	4.35	3.85	0.5		JENDL-2
36.390± 0.037	1				B 0.388± 0.038	ARG= 26.0 ± 2.6	77KENNY+
36.93	1	3.5	2.61	2.11	0.5		JENDL-2
36.930± 0.037	1				B 0.356± 0.036	ARG= 23.4 ± 2.3	77KENNY+

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH* (EV)	GAMMA WIDTH* (EV)	MISCELLANEOUS**	REFERENCE***
38.0 38.000± 0.038	1 1	5.0	2.55	2.05	0.5 B 0.486± 0.048	ARG= 31.1 ± 3.1	JENDL-2 77KENNY+
38.73 38.730± 0.039	1 1	3.5	2.65	2.15	0.5 B 0.356± 0.036	ARG= 22.4 ± 2.2	JENDL-2 77KENNY+
39.98 40.37 39.980± 0.040	0 0	4 4 (4)	181.067	180.0 130 180	1.067 1.067± 0.107	ARG= 63.9 ± 6.4	JENDL-2 70CHO+ 77KENNY+
40.5 40.77 40.500± 0.041	0 0	3 3 (3)	101.276	100.0 100 (100)	1.276 1.276± 0.128	ARG= 75.1 ± 7.5	JENDL-2 70CHO+ 77KENNY+
40.815 41.15 40.815± 0.041	0 0	4 4 (4)	110.639	110.0 110 (110)	0.639 0.639± 0.064	ARG= 29.1 ± 3.0	JENDL-2 70CHO+ 77KENNY+
41.74 41.740± 0.042	1 1	3.5	3.65	3.15	0.5 B 0.380± 0.038	ARG= 22.1 ± 2.2	JENDL-2 77KENNY+
42.3 42.300± 0.042	1 1	3.5	1.424	0.924	0.5 B 0.286± 0.028	ARG= 16.4 ± 1.6	JENDL-2 77KENNY+
42.79 42.790± 0.043	1 1	3.5	0.612	0.112 A 0.112± 0.012	0.5	ARG= 6.4 ± 0.6	JENDL-2 77KENNY+
42.9 42.900± 0.043	1 1	3.5	4.266	3.81	0.456 B 0.456± 0.046	ARG= 20.3 ± 2.0	JENDL-2 77KENNY+
43.05 43.35 43.050± 0.043	0 0	4 4 (4)	101.068	100.0 170 100	1.068 1.068± 0.107	ARG= 46.0 ± 4.6	JENDL-2 70CHO+ 77KENNY+
43.215 43.215± 0.043	0 0	3.5	31.074	30.0 30	1.074 B 1.074± 0.107	ARG= 51.8 ± 5.2	JENDL-2 77KENNY+
43.71 43.710± 0.044	1 1	3.5	0.59	0.09 A 0.090± 0.010	0.5	ARG= 5.0 ± 0.5	JENDL-2 77KENNY+
43.92 43.920± 0.044	1 1	3.5	1.102	0.602	0.5 B 0.242± 0.024	ARG= 13.3 ± 1.3	JENDL-2 77KENNY+
44.08 44.080± 0.044	1 1	3.5	1.544	1.044	0.5 B 0.298± 0.030	ARG= 16.4 ± 1.6	JENDL-2 77KENNY+
45.3 45.300± 0.045	1 1	3.5	0.915	0.415	0.5 B 0.198± 0.020	ARG= 10.7 ± 1.1	JENDL-2 77KENNY+
45.57 45.570± 0.046	1 1	3.5	0.632	0.132 A 0.132± 0.014	0.5	ARG= 7.1 ± 0.7	JENDL-2 77KENNY+
45.73 46.15 45.730± 0.046	0 0	3 3 (3)	480.521	480.0 480 (480)	0.521 0.521± 0.052	ARG= 21.3 ± 2.1	JENDL-2 70CHO+ 77KENNY+
45.78 45.780± 0.046	1 1	3.5	0.814	0.314	0.5 B 0.168± 0.016	ARG= 9.0 ± 0.9	JENDL-2 77KENNY+
47.18 47.60 47.180± 0.047	0 0	3 3 (3)	60.053	60.0 180 60	0.053 0.053± 0.054	ARG= 27.1 ± 2.7	JENDL-2 70CHO+ 77KENNY+
47.31 47.310± 0.047	1 1	5.0	1.94	1.44	0.5 B 0.450± 0.046	ARG= 23.1 ± 2.3	JENDL-2 77KENNY+
48.31 48.310± 0.048	1 1	5.0	4.57	4.07	0.5 B 0.538± 0.054	ARG= 27.1 ± 2.7	JENDL-2 77KENNY+
48.53 48.530± 0.049	1 1	5.0	2.23	1.43	0.8 B 0.622± 0.062	ARG= 31.1 ± 3.1	JENDL-2 77KENNY+
48.79 48.790± 0.049	0 0	4 (4)	40.478	40.0 40	0.478 0.478± 0.048	ARG= 23.3 ± 2.3	JENDL-2 77KENNY+
49.12 49.17 49.120± 0.049	0 0	3.5 4	40.361	40.0 160 40	0.361 B 0.361± 0.036	ARG= 17.5 ± 1.8	JENDL-2 70CHO+ 77KENNY+
49.54 49.540± 0.050	1 1	5.0	2.278	1.48	0.798 B 0.798± 0.080	ARG= 30.8 ± 3.1	JENDL-2 77KENNY+

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH * (EV)	GAMMA WIDTH * (EV)	MISCELLANEOUS **	REFERENCE ***
49.75	1	3.5	0.626	0.126	0.5		JENDL-2
49.750± 0.050	1			A 0.126± 0.012		ARG= 4.9 ± 0.5	77KENNY+
50.5	1	3.5	2.42	1.92	0.5		JENDL-2
50.500± 0.051	1			B	0.348± 0.034	ARG= 16.8 ± 1.7	77KENNY+
50.685	1	3.5	1.228	0.728	0.5		JENDL-2
50.685± 0.051	1			B	0.260± 0.026	ARG= 12.5 ± 1.3	77KENNY+
51.05	1	3.5	2.12	1.62	0.5		JENDL-2
51.050± 0.051	1			B	0.336± 0.034	ARG= 16.0 ± 1.6	77KENNY+
51.16	0	4	841.3	840.0	1.3		JENDL-2
51.16		4		840			70CHO+
51.160± 0.051	0	(4)		(840)	1.300± 0.013	ARG= 46.4 ± 4.6	77KENNY+
51.685	0	3.5	40.352	40.0	0.352		JENDL-2
51.685± 0.052	0			40	B 0.352± 0.035	ARG= 14.7 ± 1.5	77KENNY+
52.025	0	3.5	40.521	40.0	0.521		JENDL-2
52.025± 0.052	0			40	B 0.521± 0.052	ARG= 21.5 ± 2.1	77KENNY+
52.33	0	3	70.418	70.0	0.418		JENDL-2
52.18		3		100			70CHO+
52.330± 0.052	0	(3)		70	0.418± 0.04	ARG= 14.9 ± 1.5	77KENNY+
53.075	0	3.5	40.248	40.0	0.248		JENDL-2
53.075± 0.053	0			40	B 0.248± 0.25	ARG= 10.0 ± 1.0	77KENNY+
54.255	1	5.0	2.03	1.23	0.8		JENDL-2
54.255± 0.054	1			B	0.583± 0.058	ARG= 26.3 ± 2.6	77KENNY+
54.525	1	3.5	2.45	1.95	0.5		JENDL-2
54.525± 0.054	1			B	0.348± 0.034	ARG= 15.6 ± 1.6	77KENNY+
54.73	0	3	41.76	40.0	1.76		JENDL-2
54.83		3		220			70CHO+
54.730± 0.055	0	(3)		40	1.760± 0.176	ARG= 57.7 ± 5.8	77KENNY+
54.92	1	5.0	2.04	1.24	0.8		JENDL-2
54.920± 0.055	1			B	0.590± 0.060	ARG= 26.1 ± 2.6	77KENNY+
55.125	0	3.5	40.39	40.0	0.39		JENDL-2
55.125± 0.055	0			40	B 0.390± 0.039	ARG= 15.1 ± 1.5	77KENNY+
56.655	1	3.5	0.781	0.281	0.5		JENDL-2
56.655± 0.057	1			B	0.158± 0.016	ARG= 6.8 ± 0.7	77KENNY+
57.01	1	5.0	1.95	1.15	0.8		JENDL-2
57.010± 0.057	1			B	0.570± 0.058	ARG= 24.3 ± 2.4	77KENNY+
57.89	0	3	35.487	35.0	0.487		JENDL-2
57.68		3		220			70CHO+
57.890± 0.058	0	(3)		35	0.487± 0.049	ARG= 17.9 ± 1.8	77KENNY+
58.76	1	5.0	2.95	2.15	0.8		JENDL-2
58.760± 0.059	1			B	0.706± 0.070	ARG= 29.2 ± 2.9	77KENNY+
59.11	0	3	51.047	50.0	1.047		JENDL-2
58.77		3		1640			70CHO+
59.110± 0.059	0	(3)		50	1.047± 0.105	ARG= 37.3 ± 3.7	77KENNY+
59.92	1	5.0	2.7	2.2	0.5		JENDL-2
59.920± 0.060	1			B	0.492± 0.130	ARG= 20.0 ± 2.0	77KENNY+
60.14	0	3.5	40.681	40.0	0.681		JENDL-2
60.140± 0.060	0			40	B 0.681± 0.068	ARG= 24.0 ± 2.4	77KENNY+
60.42	1	3.5	0.973	0.473	0.5		JENDL-2
60.420± 0.060	1			B	0.214± 0.022	ARG= 8.6 ± 0.9	77KENNY+
61.89	0	4	520.7	520.0	0.7		JENDL-2
61.84		4		520			70CHO+
61.890± 0.062	0	(4)		(520)	0.700± 0.070	ARG= 26.9 ± 2.7	77KENNY+
62.025	1	3.5	3.174	2.84	0.334		JENDL-2
62.025± 0.062	1			B	0.334± 0.034	ARG= 10.3 ± 1.0	77KENNY+
62.49	0	3	571.0	570.0	1.0		JENDL-2
62.54		3		570			70CHO+
62.490± 0.062	0	(3)		(570)	1.000± 0.100	ARG= 29.8 ± 3.0	77KENNY+

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH* (EV)	GAMMA WIDTH* (EV)	MISCELLANEOUS**	REFERENCE ***
62.5 62.500± 0.063	1 1	3.5	1.171	0.671	0.5 B 0.254± 0.026	ARG= 9.8 ± 0.9	JENDL-2 77KENNY+
62.85 62.850± 0.063	0 0	3.5	100.548	100.0 100	0.548 B 0.548± 0.055	ARG= 18.8 ± 1.9	JENDL-2 77KENNY+
63.05 63.050± 0.063	1 1	3.5	4.602	4.11	0.492 B 0.492± 0.050	ARG= 14.9 ± 1.5	JENDL-2 77KENNY+
63.4 63.400± 0.063	1 1	3.5	0.632	0.132 A 0.132± 0.014	0.5	ARG= 5.1 ± 0.5	JENDL-2 77KENNY+
63.85 63.850± 0.064	1 1	5.0	2.05	1.25	0.8 B 0.592± 0.060	ARG= 22.5 ± 2.3	JENDL-2 77KENNY+
64.78 64.780± 0.065	1 1	5.0	2.04	1.24	0.8 B 0.588± 0.030	ARG= 22.1 ± 2.2	JENDL-2 77KENNY+
65.52 65.520± 0.066	1 1	5.0	2.28	1.48	0.8 B 0.628± 0.062	ARG= 23.3 ± 2.3	JENDL-2 77KENNY+
66.0 66.000± 0.066	0 0	3.5	40.287	40.0 40	0.287 B 0.287± 0.029	ARG= 9.3 ± 0.9	JENDL-2 77KENNY+
66.1 65.94 66.100± 0.066	0 0	4 4 (4)	1041.8	1040.0 1040 (1040)	1.8 1.800± 0.180	ARG= 50.8 ± 5.1	JENDL-2 70CHO+ 77KENNY+
67.05 67.050± 0.067	1 1	3.5	1.438	0.938	0.5 B 0.286± 0.028	ARG= 10.4 ± 1.0	JENDL-2 77KENNY+
67.85 67.850± 0.069	0 0	3.5	76.504	75.0 75	1.504 B 1.504± 0.150	ARG= 46.8 ± 4.7	JENDL-2 77KENNY+
68.375 68.375± 0.068	0 0	3.5	51.435	50.0 50	1.435 B 1.435± 0.144	ARG= 44.0 ± 4.4	JENDL-2 77KENNY+
69.555 69.555± 0.070	1 1	5.0	5.37	4.37	1.0 B 0.984± 0.098	ARG= 34.4 ± 3.4	JENDL-2 77KENNY+
70.11 70.11 70.110± 0.070	0 0	3 3 (3)	1690.6	1690.0 1690 (1690)	0.6 0.600± 0.072	ARG= 16.0 ± 1.9	JENDL-2 70CHO+ 77KENNY+
70.375 70.375± 0.071	1 1	5.0	2.28	1.48	0.8 B 0.628± 0.066	ARG= 21.7 ± 2.5	JENDL-2 77KENNY+
71.7 71.76 71.700± 0.072	0 0	4 4 (4)	151.606	150.0 410 150	1.606 1.606± 0.210	ARG= 53.3 ± 6.5	JENDL-2 70CHO+ 77KENNY+
72.115 72.115± 0.072	1 1	3.5	0.947	0.447	0.5 B 0.208± 0.022	ARG= 7.0 ± 0.9	JENDL-2 77KENNY+
73.2 73.18 73.200± 0.073	0 0	3 3 (3)	70.951	70.0 350 70	0.951 0.951± 0.140	ARG= 24.0 ± 2.9	JENDL-2 70CHO+ 77KENNY+
73.6 73.600± 0.074	0 0	3.5	60.281	60.0 60	0.281 B 0.281± 0.028	ARG= 8.2 ± 1.0	JENDL-2 77KENNY+
74.7 74.90 74.700± 0.075	0 0	3 3 (3)	61.177	60.0 150 60	1.177 1.177± 0.153	ARG= 28.9 ± 2.9	JENDL-2 70CHO+ 77KENNY+
75.0 75.000± 0.075	0 0	3.5	46.54	45.0 45	1.54 B 1.540± 0.200	ARG= 42.9 ± 4.3	JENDL-2 77KENNY+
75.43 75.430± 0.075	1 1	3.5	1.294	0.794	0.5 B 0.270± 0.210	ARG= 8.7 ± 1.2	JENDL-2 77KENNY+
75.78 75.780± 0.076	1 1	3.5	0.63	0.13 A 0.130± 0.016	0.5	ARG= 4.2 ± 0.4	JENDL-2 77KENNY+
76.42 76.420± 0.076	1 1	3.5	2.34	1.84	0.5 B 0.346± 0.038	ARG= 11.0 ± 1.4	JENDL-2 77KENNY+
77.025 77.15 77.025± 0.077	0 0	4 4 (4)	50.522	50.0 250 50	0.522 0.522± 0.068	ARG= 16.1 ± 2.1	JENDL-2 70CHO+ 77KENNY+
77.5	0	3	600.498	600.0	0.498		JENDL-2

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH * (EV)	GAMMA WIDTH * (EV)	MISCELLANEOUS **	REFERENCE ***
77.55		3		600			70CHO+
77.500± 0.078	0	(3)		(600)	0.498± 0.063	ARG= 12.0 ± 1.6	77KENNY+
77.925	0	4	40.824	40.0	0.824		JENDL-2
77.85		4		150			70CHO+
77.925± 0.078	0	(4)		40	0.824± 0.125	ARG= 24.9 ± 3.0	77KENNY+
78.215	1	5.0	1.89	1.09	0.8		JENDL-2
78.215± 0.078	1				B 0.560± 0.064	ARG= 17.4 ± 2.0	77KENNY+
79.15	0	3	100.827	100.0	0.827		JENDL-2
79.00		3		200			70CHO+
79.150± 0.079	0	(3)		100	0.827± 0.125	ARG= 24.9 ± 3.0	77KENNY+
79.8	0	3	2802.0	2800.0	2.0		JENDL-2
79.80		3		2800			70CHO+
79.800± 0.500	0	(3)		(2800)	2.0 ± 1.0	ARG= 50.6 ±25	77KENNY+
80.1	1	3.5	0.809	0.309	0.5		JENDL-2
80.100± 0.080	1				B 0.192± 0.040	ARG= 5.1 ± 1.0	77KENNY+
81.2	0	4	600.28	600.0	0.28		JENDL-2
81.10		4		600			70CHO+
81.200± 0.081	0	(4)		(600)	0.280± 0.090	ARG= 8.3 ± 2.8	77KENNY+
82.18	1	5.0	6.42	5.42	1.0		JENDL-2
82.180± 0.082	1				B 1.022± 0.114	ARG= 30.2 ± 3.8	77KENNY+
82.48	1	5.0	3.45	2.65	0.8		JENDL-2
82.480± 0.083	1				B 0.744± 0.084	ARG= 21.9 ± 2.8	77KENNY+
83.005	1	5.0	4.34	2.84	1.5		JENDL-2
83.005± 0.083	1				B 1.190± 0.132	ARG= 34.8 ± 4.0	77KENNY+
83.00		4		150			70CHO+
83.45	1	5.0	4.18	2.68	1.5		JENDL-2
83.450± 0.084	1				B 1.164± 0.130	ARG= 33.9 ± 4.0	77KENNY+
83.9	1	5.0	2.08	1.28	0.8		JENDL-2
83.900± 0.084	1				B 0.596± 0.072	ARG= 17.3 ± 2.1	77KENNY+
84.95	1	5.0	2.16	1.66	0.5		JENDL-2
84.950± 0.085	1				B 0.466± 0.058	ARG= 13.3 ± 1.6	77KENNY+
85.205	1	3.5	5.47	4.97	0.5		JENDL-2
85.205± 0.085	1				B 0.400± 0.050	ARG= 11.4 ± 1.4	77KENNY+
85.525	1	3.5	0.947	0.447	0.5		JENDL-2
85.525± 0.086	1				B 0.208± 0.026	ARG= 5.9 ± 0.8	77KENNY+
85.6	0	4	850.35	850.0	0.35		JENDL-2
85.60		4		850			70CHO+
85.600± 0.086	0	(4)		(850)	0.350± 0.052	ARG= 9.8 ± 1.5	77KENNY+
85.84	1	3.5	2.11	1.61	0.5		JENDL-2
85.840± 0.086	1				B 0.336± 0.042	ARG= 9.5 ± 1.1	77KENNY+
86.105	1	3.5	4.606	4.14	0.466		JENDL-2
86.105± 0.086	1				B 0.466± 0.058	ARG= 10.4 ± 1.2	77KENNY+
86.4	0	3	275.51	275.0	0.51		JENDL-2
86.00		3		650			70CHO+
86.400± 0.086	0	(3)		275	0.510± 0.078	ARG= 14.2 ± 2.1	77KENNY+
86.675	1	3.5	6.61	6.11	0.5		JENDL-2
86.675± 0.087	1				B 0.404± 0.052	ARG= 11.4 ± 1.3	77KENNY+
87.65	0	3.5	77.934	75.0	2.934		JENDL-2
87.650± 0.088	0			75	B 2.934± 0.440	ARG= 69.5 ± 5.0	77KENNY+
88.6	0	3	550.9	550.0	0.9		JENDL-2
88.60		3		550			70CHO+
88.600± 0.089	0	(3)		(550)	0.900± 0.140	ARG= 18.9 ± 3.0	77KENNY+
90.24	1	5.0	2.03	1.23	0.8		JENDL-2
90.240± 0.090	1				B 0.588± 0.074	ARG= 15.8 ± 1.8	77KENNY+
90.20		4		120			70CHO+
90.575	1	5.0	4.71	3.21	1.5		JENDL-2

Table I (cont.)

ENERGY (KEV)	L	J	TOTAL WIDTH (EV)	NEUTRON WIDTH * (EV)	GAMMA WIDTH * (EV)	MISCELLANEOUS **	REFERENCE ***
90.575± 0.091	1				B 1.238± 0.144	ARG= 33.2 ± 4.2	77KENNY+
90.95	1	5.0	3.93	3.13	0.8		JENDL-2
90.950± 0.091	1				B 0.770± 0.094	ARG= 20.6 ± 2.6	77KENNY+
91.6	1	5.0	3.75	2.95	0.8		JENDL-2
91.600± 0.092	1				B 0.762± 0.094	ARG= 20.2 ± 2.6	77KENNY+
91.70		3		550			70CHO+
92.25	1	3.5	0.542	0.042	0.5		JENDL-2
92.250± 0.092	1			A 0.042± 0.004		ARG= 1.1 ± 0.2	77KENNY+
92.72	1	3.5	1.59	1.09	0.5		JENDL-2
92.720± 0.093	1				B 0.300± 0.040	ARG= 7.9 ± 1.1	77KENNY+
93.39	1	5.0	2.12	1.32	0.8		JENDL-2
93.390± 0.093	1				B 0.604± 0.080	ARG= 15.7 ± 2.2	77KENNY+
93.78	1	5.0	5.63	4.13	1.5		JENDL-2
93.780± 0.094	1				B 1.330± 0.158	ARG= 34.5 ± 4.4	77KENNY+
94.02	1	5.0	6.63	5.13	1.5		JENDL-2
94.020± 0.094	1				B 1.402± 0.166	ARG= 36.3 ± 4.6	77KENNY+
94.45	1	5.0	3.37	2.57	0.8		JENDL-2
94.450± 0.094	1				B 0.740± 0.094	ARG= 19.0 ± 2.5	77KENNY+
95.25	1	3.5	3.46	2.96	0.5		JENDL-2
95.250± 0.095	1				B 0.374± 0.046	ARG= 9.6 ± 1.3	77KENNY+
95.94	0	3	80.359	80.0	0.359		JENDL-2
94.40		3		800			70CHO+
95.940± 0.096	0	(3)		80	0.359± 0.054	ARG= 8.0 ± 1.2	77KENNY+
96.44	1	5.0	2.64	1.84	0.8		JENDL-2
96.440± 0.096	1				B 0.674± 0.080	ARG= 17.0 ± 2.4	77KENNY+
96.9	1	5.0	1.8	1.0	0.8		JENDL-2
96.900± 0.097	1				B 0.540± 0.070	ARG= 13.5 ± 2.9	77KENNY+
98.26	1	5.0	2.03	1.23	0.8		JENDL-2
98.260± 0.098	1				B 0.586± 0.072	ARG= 14.5 ± 2.1	77KENNY+
98.585	1	5.0	3.77	2.97	0.8		JENDL-2
98.585± 0.099	1				B 0.764± 0.094	ARG= 18.8 ± 2.5	77KENNY+
99.08	1	5.0	5.53	4.73	0.8		JENDL-2
99.080± 0.099	1				B 0.830± 0.110	ARG= 20.3 ± 2.7	77KENNY+
99.2	1	5.0	2.52	1.72	0.8		JENDL-2
99.200± 0.099	1				B 0.662± 0.086	ARG= 16.2 ± 2.3	77KENNY+
99.80		3		2000			70CHO+
100.7		4		300			70CHO+
101.0		3		400			70CHO+
102.1		4		300			70CHO+
102.3		3		350			70CHO+
104.0		4		150			70CHO+
105.7		4		150			70CHO+

* A denotes $2g\Gamma_n$

B denotes $2g\Gamma_\gamma$

** GNO = $\Gamma_n^{(o)}$ (eV)

ARG = $2\pi\lambda\!\!\!^{-2} g\Gamma_n\Gamma_\gamma/\Gamma$ (b·eV)

*** 78 LIOU+ : Ref. (4)

77 KENNY+ : Ref. (7)

70 CHO+ : Ref. (18)

Table II Optical potential parameters (in MeV and fm)

real term	$V(En) = 56.15 - 0.2189\ En$
	$r_o = 1.16$
	$a_o = 0.677$
surface term*	$W_s(En) = 8.698$
	$r_s = 1.288$
	$b = 0.310$
spin-orbit term	$V_{so} = 6.874$
	$r_{so} = 1.185$
	$a_{so} = 0.76$

* derivative Woods-Saxon type

Table III Level scheme of ^{45}Sc

level	Energy(MeV)	Spin and Parity
1	0	7/2 -
2	0.01240	3/2 +
3	0.3764	3/2 -
4	0.5429	5/2 +
5	0.7202	5/2 -
6	0.9391	1/2 +
7	0.9745	7/2 +
8	1.2364	11/2 -
9	1.3032	3/2 +
10	1.4334	9/2 +
11	1.6615	9/2 -
12	1.8006	5/2 +

Levels above 1.9 MeV were assumed to be overlapping.

Table IV (n,p), (n,α) and (n,2n) cross sections used in the evaluation

Energy MeV	cross sections, m barn (n,p)	(n,α)	(n,2n)	(n,p)+(n,α)+(n,2n)
0.5	0.0	0.0		0.0
1.0	2.0	1.0		3.0
2.0	16.0	2.5		18.5
3.0	50.0	4.0		54.0
4.0	75.0	5.0		80.0
5.0	93.0	7.0		100.0
6.0	107.0	8.0		115.0
7.0	115.0	10.0		125.0
8.0	115.0	11.0		126.0
9.0	109.0	14.0		123.0
10.0	100.0	19.0		119.0
11.0	91.0	26.0		117.0
11.5	85.5	30.0	0.0	115.5
12.0	80.0	36.0	20.0	136.0
12.5	75.0	42.0	65.0	182.0
13.0	70.0	48.0	120.0	238.0
13.5	64.5	54.0	170.0	288.5
14.0	59.0	56.0	245.0	360.0
14.5	53.5	56.0	348.0	457.5
15.0	48.0	52.0	380.0	480.0
16.0	38.0	40.0	400.0	478.0
17.0	27.0	29.5	460.0	516.5
18.0	17.0	26.5	500.0	543.5
19.0	5.0	25.0	510.0	540.0
20.0	0.0	23.5	520.0	543.5

Table V Presently evaluated nuclear data of ^{45}Sc

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........10........20........30........40........50........60......MAT MF MT  SEQ
 2.10450+ 4 4.45697+ 1          1          0          0          362145 1451    1
 0.0    + 0 0.0    + 0          0          0          1           02145 1451    2
                                                                    2145 1451    3
                                1        451         39            2145 1451    4
                                2        151        193            2145 1451    5
                                3          1         17            2145 1451    6
                                3          2         17            2145 1451    7
                                3          4         16            2145 1451    8
                                3         16          8            2145 1451    9
                                3         51         16            2145 1451   10
                                3         52         15            2145 1451   11
                                3         53         15            2145 1451   12
                                3         54         14            2145 1451   13
                                3         55         14            2145 1451   14
                                3         56         14            2145 1451   15
                                3         57         13            2145 1451   16
                                3         58         13            2145 1451   17
                                3         59         12            2145 1451   18
                                3         60         12            2145 1451   19
                                3         61         12            2145 1451   20
                                3         91         11            2145 1451   21
                                3        102         17            2145 1451   22
                                3        103         12            2145 1451   23
                                3        107         12            2145 1451   24
                                3        251         18            2145 1451   25
                                4          2        200            2145 1451   26
                                4         16         10            2145 1451   27
                                4         51        112            2145 1451   28
                                4         52        120            2145 1451   29
                                4         53        102            2145 1451   30
                                4         54        111            2145 1451   31
                                4         55         98            2145 1451   32
                                4         56         96            2145 1451   33
                                4         57         98            2145 1451   34
                                4         58         90            2145 1451   35
                                4         59         88            2145 1451   36
                                4         60         92            2145 1451   37
                                4         61         84            2145 1451   38
                                4         91         88            2145 1451   39
                                                                    2145 1  0   40
                                                                    2145 0  0   41
 2.10450+ 4 4.45697+ 1          0          0          1           02145 2151   42
 2.10450+ 4 1.00000+ 0          0          0          1           02145 2151   43
 1.00000- 5 9.00000+ 4          1          2          0           02145 2151   44
 3.50000+ 0 4.55000- 1          0          0          2           02145 2151   45
 4.45697+ 1 0.0    + 0          0          0        426          712145 2151   46
-3.30000+ 2 4.00000+ 0 3.71100+ 1 3.67000+ 1 4.10000- 1 0.0    + 02145 2151   47
-6.50000+ 2 3.00000+ 0 1.01410+ 2 1.01000+ 2 4.10000- 1 0.0    + 02145 2151   48
 3.29500+ 3 3.00000+ 0 7.54100+ 1 7.50000+ 1 4.10000- 1 0.0    + 02145 2151   49
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........10........20........30........40........50........60......MAT MF MT   SEQ
 4.33000+ 3 4.00000+ 0 3.40410+ 2 3.40000+ 2 4.10000- 1 0.0     + 02145 2151   50
 6.68400+ 3 3.00000+ 0 1.30410+ 2 1.30000+ 2 4.10000- 1 0.0     + 02145 2151   51
 8.02300+ 3 4.00000+ 0 1.45410+ 2 1.45000+ 2 4.10000- 1 0.0     + 02145 2151   52
 9.09200+ 3 3.00000+ 0 3.00410+ 2 3.00000+ 2 4.10000- 1 0.0     + 02145 2151   53
 1.06250+ 4 3.00000+ 0 1.04100+ 1 1.00000+ 1 4.10000- 1 0.0     + 02145 2151   54
 1.07350+ 4 4.00000+ 0 6.41000+ 0 6.00000+ 0 4.10000- 1 0.0     + 02145 2151   55
 1.15750+ 4 4.00000+ 0 2.90410+ 2 2.90000+ 2 4.10000- 1 0.0     + 02145 2151   56
 1.45250+ 4 3.00000+ 0 2.04100+ 1 2.00000+ 1 4.10000- 1 0.0     + 02145 2151   57
 1.47400+ 4 4.00000+ 0 2.64100+ 1 2.60000+ 1 4.10000- 1 0.0     + 02145 2151   58
 1.55600+ 4 4.00000+ 0 2.84100+ 1 2.80000+ 1 4.10000- 1 0.0     + 02145 2151   59
 1.58500+ 4 3.00000+ 0 5.41000+ 0 5.00000+ 0 4.10000- 1 0.0     + 02145 2151   60
 1.85800+ 4 3.00000+ 0 3.24100+ 1 3.20000+ 1 4.10000- 1 0.0     + 02145 2151   61
 1.88700+ 4 4.00000+ 0 6.24100+ 1 6.20000+ 1 4.10000- 1 0.0     + 02145 2151   62
 2.05000+ 4 4.00000+ 0 8.04100+ 1 8.00000+ 1 4.10000- 1 0.0     + 02145 2151   63
 2.07800+ 4 3.00000+ 0 7.10410+ 2 7.10000+ 2 4.10000- 1 0.0     + 02145 2151   64
 2.40100+ 4 3.00000+ 0 6.10870+ 1 6.00000+ 1 1.08700+ 0 0.0     + 02145 2151   65
 2.43150+ 4 4.00000+ 0 6.04620+ 1 6.00000+ 1 4.62000- 1 0.0     + 02145 2151   66
 2.69250+ 4 4.00000+ 0 9.09000+ 1 9.00000+ 1 9.00000- 1 0.0     + 02145 2151   67
 2.79000+ 4 3.00000+ 0 1.10811+ 2 1.10000+ 2 8.11000- 1 0.0     + 02145 2151   68
 2.94800+ 4 4.00000+ 0 3.06130+ 1 3.00000+ 1 6.13000- 1 0.0     + 02145 2151   69
 2.96300+ 4 3.50000+ 0 5.07230+ 1 5.00000+ 1 7.23000- 1 0.0     + 02145 2151   70
 3.21800+ 4 3.00000+ 0 5.70917+ 2 5.70000+ 2 9.17000- 1 0.0     + 02145 2151   71
 3.37300+ 4 3.00000+ 0 2.00866+ 2 2.00000+ 2 8.66000- 1 0.0     + 02145 2151   72
 3.48600+ 4 3.50000+ 0 1.00689+ 2 1.00000+ 2 6.89000- 1 0.0     + 02145 2151   73
 3.50800+ 4 4.00000+ 0 1.50543+ 2 1.50000+ 2 5.43000- 1 0.0     + 02145 2151   74
 3.99800+ 4 4.00000+ 0 1.81067+ 2 1.80000+ 2 1.06700+ 0 0.0     + 02145 2151   75
 4.05000+ 4 3.00000+ 0 1.01276+ 2 1.00000+ 2 1.27600+ 0 0.0     + 02145 2151   76
 4.08150+ 4 4.00000+ 0 1.10639+ 2 1.10000+ 2 6.39000- 1 0.0     + 02145 2151   77
 4.30500+ 4 4.00000+ 0 1.01068+ 2 1.00000+ 2 1.06800+ 0 0.0     + 02145 2151   78
 4.32150+ 4 3.50000+ 0 3.10740+ 1 3.00000+ 1 1.07400+ 0 0.0     + 02145 2151   79
 4.57300+ 4 3.00000+ 0 4.80521+ 2 4.80000+ 2 5.21000- 1 0.0     + 02145 2151   80
 4.71800+ 4 3.00000+ 0 6.00530+ 1 6.00000+ 1 5.30000- 2 0.0     + 02145 2151   81
 4.87900+ 4 4.00000+ 0 4.04780+ 1 4.00000+ 1 4.78000- 1 0.0     + 02145 2151   82
 4.91200+ 4 3.50000+ 0 4.03610+ 1 4.00000+ 1 3.61000- 1 0.0     + 02145 2151   83
 5.11600+ 4 4.00000+ 0 8.41300+ 2 8.40000+ 2 1.30000+ 0 0.0     + 02145 2151   84
 5.16850+ 4 3.50000+ 0 4.03520+ 1 4.00000+ 1 3.52000- 1 0.0     + 02145 2151   85
 5.20250+ 4 3.50000+ 0 4.05210+ 1 4.00000+ 1 5.21000- 1 0.0     + 02145 2151   86
 5.23300+ 4 3.00000+ 0 7.04180+ 1 7.00000+ 1 4.18000- 1 0.0     + 02145 2151   87
 5.30750+ 4 3.50000+ 0 4.02480+ 1 4.00000+ 1 2.48000- 1 0.0     + 02145 2151   88
 5.47300+ 4 3.00000+ 0 4.17600+ 1 4.00000+ 1 1.76000+ 0 0.0     + 02145 2151   89
 5.51250+ 4 3.50000+ 0 4.03900+ 1 4.00000+ 1 3.90000- 1 0.0     + 02145 2151   90
 5.78900+ 4 3.00000+ 0 3.54870+ 1 3.50000+ 1 4.87000- 1 0.0     + 02145 2151   91
 5.91100+ 4 3.00000+ 0 5.10470+ 1 5.00000+ 1 1.04700+ 0 0.0     + 02145 2151   92
 6.01400+ 4 3.50000+ 0 4.06810+ 1 4.00000+ 1 6.81000- 1 0.0     + 02145 2151   93
 6.18900+ 4 4.00000+ 0 5.20700+ 2 5.20000+ 2 7.00000- 1 0.0     + 02145 2151   94
 6.24900+ 4 3.00000+ 0 5.71000+ 2 5.70000+ 2 1.00000+ 0 0.0     + 02145 2151   95
 6.28500+ 4 3.50000+ 0 1.00548+ 2 1.00000+ 2 5.48000- 1 0.0     + 02145 2151   96
 6.60000+ 4 3.50000+ 0 4.02870+ 1 4.00000+ 1 2.87000- 1 0.0     + 02145 2151   97
 6.61000+ 4 4.00000+ 0 1.04180+ 3 1.04000+ 3 1.80000+ 0 0.0     + 02145 2151   98
 6.78500+ 4 3.50000+ 0 7.65040+ 1 7.50000+ 1 1.50400+ 0 0.0     + 02145 2151   99
 6.83750+ 4 3.50000+ 0 5.14350+ 1 5.00000+ 1 1.43500+ 0 0.0     + 02145 2151  100
 7.01100+ 4 3.00000+ 0 1.69060+ 3 1.69000+ 3 6.00000- 1 0.0     + 02145 2151  101
 7.17000+ 4 4.00000+ 0 1.51606+ 2 1.50000+ 2 1.60600+ 0 0.0     + 02145 2151  102
 7.32000+ 4 3.00000+ 0 7.09510+ 1 7.00000+ 1 9.51000- 1 0.0     + 02145 2151  103
 7.36000+ 4 3.50000+ 0 6.02810+ 1 6.00000+ 1 2.81000- 1 0.0     + 02145 2151  104
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........10........20........30........40........50........60......MAT MF MT   SEQ
 7.47000+ 4 3.00000+ 0 6.11770+ 1 6.00000+ 1 1.17700+ 0 0.0     + 02145 2151  105
 7.50000+ 4 3.50000+ 0 4.65400+ 1 4.50000+ 1 1.54000+ 0 0.0     + 02145 2151  106
 7.70250+ 4 4.00000+ 0 5.05220+ 1 5.00000+ 1 5.22000- 1 0.0     + 02145 2151  107
 7.75000+ 4 3.00000+ 0 6.00498+ 2 6.00000+ 2 4.98000- 1 0.0     + 02145 2151  108
 7.79250+ 4 4.00000+ 0 4.08240+ 1 4.00000+ 1 8.24000- 1 0.0     + 02145 2151  109
 7.91500+ 4 3.00000+ 0 1.00827+ 2 1.00000+ 2 8.27000- 1 0.0     + 02145 2151  110
 7.98000+ 4 3.00000+ 0 2.80200+ 3 2.80000+ 3 2.00000+ 0 0.0     + 02145 2151  111
 8.12000+ 4 4.00000+ 0 6.00280+ 2 6.00000+ 2 2.80000- 1 0.0     + 02145 2151  112
 8.56000+ 4 4.00000+ 0 8.50350+ 2 8.50000+ 2 3.50000- 1 0.0     + 02145 2151  113
 8.64000+ 4 3.00000+ 0 2.75510+ 2 2.75000+ 2 5.10000- 1 0.0     + 02145 2151  114
 8.76500+ 4 3.50000+ 0 7.79340+ 1 7.50000+ 1 2.93400+ 0 0.0     + 02145 2151  115
 8.86000+ 4 3.00000+ 0 5.50900+ 2 5.50000+ 2 9.00000- 1 0.0     + 02145 2151  116
 9.59400+ 4 3.00000+ 0 8.03590+ 1 8.00000+ 1 3.59000- 1 0.0     + 02145 2151  117
 4.45697+ 1 0.0     + 0           1           0         696     1162145 2151  118
 4.60600+ 2 3.50000+ 0 5.04400- 1 4.40000- 3 5.00000- 1 0.0     + 02145 2151  119
 1.06040+ 3 3.50000+ 0 5.10000- 1 1.00000- 2 5.00000- 1 0.0     + 02145 2151  120
 2.71500+ 3 3.50000+ 0 5.08000- 1 8.00000- 3 5.00000- 1 0.0     + 02145 2151  121
 2.73700+ 3 3.50000+ 0 5.22000- 1 2.20000- 2 5.00000- 1 0.0     + 02145 2151  122
 3.40400+ 3 3.50000+ 0 8.71000- 1 3.71000- 1 5.00000- 1 0.0     + 02145 2151  123
 3.58200+ 3 3.50000+ 0 5.80000- 1 8.00000- 2 5.00000- 1 0.0     + 02145 2151  124
 5.94300+ 3 3.50000+ 0 5.22000- 1 2.20000- 2 5.00000- 1 0.0     + 02145 2151  125
 7.56000+ 3 3.50000+ 0 5.14000- 1 1.40000- 2 5.00000- 1 0.0     + 02145 2151  126
 8.55800+ 3 3.50000+ 0 5.86000- 1 8.60000- 2 5.00000- 1 0.0     + 02145 2151  127
 9.72500+ 3 3.50000+ 0 3.03000+ 0 2.53000+ 0 5.00000- 1 0.0     + 02145 2151  128
 1.01890+ 4 3.50000+ 0 5.98000- 1 9.80000- 2 5.00000- 1 0.0     + 02145 2151  129
 1.06620+ 4 5.00000+ 0 4.63000+ 0 3.83000+ 0 8.00000- 1 0.0     + 02145 2151  130
 1.07400+ 4 5.00000+ 0 1.71100+ 0 9.11000- 1 8.00000- 1 0.0     + 02145 2151  131
 1.12650+ 4 3.50000+ 0 1.09300+ 0 5.93000- 1 5.00000- 1 0.0     + 02145 2151  132
 1.40500+ 4 3.50000+ 0 2.15000+ 0 1.65000+ 0 5.00000- 1 0.0     + 02145 2151  133
 1.43900+ 4 3.50000+ 0 5.15300- 1 1.53000- 2 5.00000- 1 0.0     + 02145 2151  134
 1.45000+ 4 5.00000+ 0 1.62000+ 0 8.20000- 1 8.00000- 1 0.0     + 02145 2151  135
 1.52800+ 4 3.50000+ 0 6.21000- 1 1.21000- 1 5.00000- 1 0.0     + 02145 2151  136
 1.57630+ 4 3.50000+ 0 6.32000- 1 1.32000- 1 5.00000- 1 0.0     + 02145 2151  137
 1.71920+ 4 3.50000+ 0 8.99000- 1 3.99000- 1 5.00000- 1 0.0     + 02145 2151  138
 1.76770+ 4 3.50000+ 0 1.73000+ 0 1.23000+ 0 5.00000- 1 0.0     + 02145 2151  139
 1.85040+ 4 3.50000+ 0 5.10000- 1 1.00000- 2 5.00000- 1 0.0     + 02145 2151  140
 1.93410+ 4 3.50000+ 0 5.32000- 1 3.20000- 2 5.00000- 1 0.0     + 02145 2151  141
 2.07260+ 4 3.50000+ 0 3.40000+ 0 2.90000+ 0 5.00000- 1 0.0     + 02145 2151  142
 2.11140+ 4 3.50000+ 0 2.74000+ 0 2.24000+ 0 5.00000- 1 0.0     + 02145 2151  143
 2.15800+ 4 5.00000+ 0 2.36000+ 0 1.86000+ 0 5.00000- 1 0.0     + 02145 2151  144
 2.30150+ 4 3.50000+ 0 6.44000- 1 1.44000- 1 5.00000- 1 0.0     + 02145 2151  145
 2.30650+ 4 3.50000+ 0 5.12000- 1 1.20000- 2 5.00000- 1 0.0     + 02145 2151  146
 2.38380+ 4 3.50000+ 0 5.72000- 1 7.20000- 2 5.00000- 1 0.0     + 02145 2151  147
 2.71900+ 4 3.50000+ 0 5.34000- 1 3.40000- 2 5.00000- 1 0.0     + 02145 2151  148
 2.80400+ 4 3.50000+ 0 1.06900+ 0 5.69000- 1 5.00000- 1 0.0     + 02145 2151  149
 2.82350+ 4 3.50000+ 0 6.38000- 1 1.38000- 1 5.00000- 1 0.0     + 02145 2151  150
 2.94100+ 4 3.50000+ 0 8.98000- 1 3.98000- 1 5.00000- 1 0.0     + 02145 2151  151
 3.00100+ 4 3.50000+ 0 1.50700+ 0 1.00700+ 0 5.00000- 1 0.0     + 02145 2151  152
 3.11350+ 4 3.50000+ 0 8.53000- 1 3.53000- 1 5.00000- 1 0.0     + 02145 2151  153
 3.28400+ 4 3.50000+ 0 6.44000- 1 1.44000- 1 5.00000- 1 0.0     + 02145 2151  154
 3.29400+ 4 5.00000+ 0 1.77900+ 0 9.79000- 1 8.00000- 1 0.0     + 02145 2151  155
 3.32800+ 4 3.50000+ 0 1.39400+ 0 8.94000- 1 5.00000- 1 0.0     + 02145 2151  156
 3.54700+ 4 5.00000+ 0 1.93000+ 0 1.43000+ 0 5.00000- 1 0.0     + 02145 2151  157
 3.58000+ 4 3.50000+ 0 1.10100+ 0 6.01000- 1 5.00000- 1 0.0     + 02145 2151  158
 3.59550+ 4 5.00000+ 0 3.76000+ 0 3.26000+ 0 5.00000- 1 0.0     + 02145 2151  159
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
 3.63100+ 4 3.50000+ 0 9.79000- 1 4.79000- 1 5.00000- 1 0.0     + 02145 2151  160
 3.63900+ 4 3.50000+ 0 4.35000+ 0 3.85000+ 0 5.00000- 1 0.0     + 02145 2151  161
 3.69300+ 4 3.50000+ 0 2.61000+ 0 2.11000+ 0 5.00000- 1 0.0     + 02145 2151  162
 3.80000+ 4 5.00000+ 0 2.55000+ 0 2.05000+ 0 5.00000- 1 0.0     + 02145 2151  163
 3.87300+ 4 3.50000+ 0 2.65000+ 0 2.15000+ 0 5.00000- 1 0.0     + 02145 2151  164
 4.17400+ 4 3.50000+ 0 3.65000+ 0 3.15000+ 0 5.00000- 1 0.0     + 02145 2151  165
 4.23000+ 4 3.50000+ 0 1.42400+ 0 9.24000- 1 5.00000- 1 0.0     + 02145 2151  166
 4.27900+ 4 3.50000+ 0 6.12000- 1 1.12000- 1 5.00000- 1 0.0     + 02145 2151  167
 4.29000+ 4 3.50000+ 0 4.26600+ 0 3.81000+ 0 4.56000- 1 0.0     + 02145 2151  168
 4.37100+ 4 3.50000+ 0 5.90000- 1 9.00000- 2 5.00000- 1 0.0     + 02145 2151  169
 4.39200+ 4 3.50000+ 0 1.10200+ 0 6.02000- 1 5.00000- 1 0.0     + 02145 2151  170
 4.40800+ 4 3.50000+ 0 1.54400+ 0 1.04400+ 0 5.00000- 1 0.0     + 02145 2151  171
 4.53000+ 4 3.50000+ 0 9.15000- 1 4.15000- 1 5.00000- 1 0.0     + 02145 2151  172
 4.55700+ 4 3.50000+ 0 6.32000- 1 1.32000- 1 5.00000- 1 0.0     + 02145 2151  173
 4.57800+ 4 3.50000+ 0 8.14000- 1 3.14000- 1 5.00000- 1 0.0     + 02145 2151  174
 4.73100+ 4 5.00000+ 0 1.94000+ 0 1.44000+ 0 5.00000- 1 0.0     + 02145 2151  175
 4.83100+ 4 5.00000+ 0 4.57000+ 0 4.07000+ 0 5.00000- 1 0.0     + 02145 2151  176
 4.85300+ 4 5.00000+ 0 2.23000+ 0 1.43000+ 0 8.00000- 1 0.0     + 02145 2151  177
 4.95400+ 4 5.00000+ 0 2.27800+ 0 1.48000+ 0 7.98000- 1 0.0     + 02145 2151  178
 4.97500+ 4 3.50000+ 0 6.26000- 1 1.26000- 1 5.00000- 1 0.0     + 02145 2151  179
 5.05000+ 4 3.50000+ 0 2.42000+ 0 1.92000+ 0 5.00000- 1 0.0     + 02145 2151  180
 5.06850+ 4 3.50000+ 0 1.22800+ 0 7.28000- 1 5.00000- 1 0.0     + 02145 2151  181
 5.10500+ 4 3.50000+ 0 2.12000+ 0 1.62000+ 0 5.00000- 1 0.0     + 02145 2151  182
 5.42550+ 4 5.00000+ 0 2.03000+ 0 1.23000+ 0 8.00000- 1 0.0     + 02145 2151  183
 5.45250+ 4 3.50000+ 0 2.45000+ 0 1.95000+ 0 5.00000- 1 0.0     + 02145 2151  184
 5.49200+ 4 5.00000+ 0 2.04000+ 0 1.24000+ 0 8.00000- 1 0.0     + 02145 2151  185
 5.66550+ 4 3.50000+ 0 7.81000- 1 2.81000- 1 5.00000- 1 0.0     + 02145 2151  186
 5.70100+ 4 5.00000+ 0 1.95000+ 0 1.15000+ 0 8.00000- 1 0.0     + 02145 2151  187
 5.87600+ 4 5.00000+ 0 2.95000+ 0 2.15000+ 0 8.00000- 1 0.0     + 02145 2151  188
 5.99200+ 4 5.00000+ 0 2.70000+ 0 2.20000+ 0 5.00000- 1 0.0     + 02145 2151  189
 6.04200+ 4 3.50000+ 0 9.73000- 1 4.73000- 1 5.00000- 1 0.0     + 02145 2151  190
 6.20250+ 4 3.50000+ 0 3.17400+ 0 2.84000+ 0 3.34000- 1 0.0     + 02145 2151  191
 6.25000+ 4 3.50000+ 0 1.17100+ 0 6.71000- 1 5.00000- 1 0.0     + 02145 2151  192
 6.30500+ 4 3.50000+ 0 4.60200+ 0 4.11000+ 0 4.92000- 1 0.0     + 02145 2151  193
 6.34000+ 4 3.50000+ 0 6.32000- 1 1.32000- 1 5.00000- 1 0.0     + 02145 2151  194
 6.38500+ 4 5.00000+ 0 2.05000+ 0 1.25000+ 0 8.00000- 1 0.0     + 02145 2151  195
 6.47800+ 4 5.00000+ 0 2.04000+ 0 1.24000+ 0 8.00000- 1 0.0     + 02145 2151  196
 6.55200+ 4 5.00000+ 0 2.28000+ 0 1.48000+ 0 8.00000- 1 0.0     + 02145 2151  197
 6.70500+ 4 3.50000+ 0 1.43800+ 0 9.38000- 1 5.00000- 1 0.0     + 02145 2151  198
 6.95550+ 4 5.00000+ 0 5.37000+ 0 4.37000+ 0 1.00000+ 0 0.0     + 02145 2151  199
 7.03750+ 4 5.00000+ 0 2.28000+ 0 1.48000+ 0 8.00000- 1 0.0     + 02145 2151  200
 7.21150+ 4 3.50000+ 0 9.47000- 1 4.47000- 1 5.00000- 1 0.0     + 02145 2151  201
 7.54300+ 4 3.50000+ 0 1.29400+ 0 7.94000- 1 5.00000- 1 0.0     + 02145 2151  202
 7.57800+ 4 3.50000+ 0 6.30000- 1 1.30000- 1 5.00000- 1 0.0     + 02145 2151  203
 7.64200+ 4 3.50000+ 0 2.34000+ 0 1.84000+ 0 5.00000- 1 0.0     + 02145 2151  204
 7.82150+ 4 5.00000+ 0 1.89000+ 0 1.09000+ 0 8.00000- 1 0.0     + 02145 2151  205
 8.01000+ 4 3.50000+ 0 8.09000- 1 3.09000- 1 5.00000- 1 0.0     + 02145 2151  206
 8.21800+ 4 5.00000+ 0 6.42000+ 0 5.42000+ 0 1.00000+ 0 0.0     + 02145 2151  207
 8.24800+ 4 5.00000+ 0 3.45000+ 0 2.65000+ 0 8.00000- 1 0.0     + 02145 2151  208
 8.30050+ 4 5.00000+ 0 4.34000+ 0 2.84000+ 0 1.50000+ 0 0.0     + 02145 2151  209
 8.34500+ 4 5.00000+ 0 4.18000+ 0 2.68000+ 0 1.50000+ 0 0.0     + 02145 2151  210
 8.39000+ 4 5.00000+ 0 2.08000+ 0 1.28000+ 0 8.00000- 1 0.0     + 02145 2151  211
 8.49500+ 4 5.00000+ 0 2.16000+ 0 1.66000+ 0 5.00000- 1 0.0     + 02145 2151  212
 8.52050+ 4 3.50000+ 0 5.47000+ 0 4.97000+ 0 5.00000- 1 0.0     + 02145 2151  213
 8.55250+ 4 3.50000+ 0 9.47000- 1 4.47000- 1 5.00000- 1 0.0     + 02145 2151  214
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........10........20........30........40........50........60......MAT MF MT  SEQ
 8.58400+ 4 3.50000+ 0 2.11000+ 0 1.61000+ 0 5.00000- 1 0.0     + 02145 2151  215
 8.61050+ 4 3.50000+ 0 4.60600+ 0 4.14000+ 0 4.66000- 1 0.0     + 02145 2151  216
 8.66750+ 4 3.50000+ 0 6.61000+ 0 6.11000+ 0 5.00000- 1 0.0     + 02145 2151  217
 9.02400+ 4 5.00000+ 0 2.03000+ 0 1.23000+ 0 8.00000- 1 0.0     + 02145 2151  218
 9.05750+ 4 5.00000+ 0 4.71000+ 0 3.21000+ 0 1.50000+ 0 0.0     + 02145 2151  219
 9.09500+ 4 5.00000+ 0 3.93000+ 0 3.13000+ 0 8.00000- 1 0.0     + 02145 2151  220
 9.16000+ 4 5.00000+ 0 3.75000+ 0 2.95000+ 0 8.00000- 1 0.0     + 02145 2151  221
 9.22500+ 4 3.50000+ 0 5.42000- 1 4.20000- 2 5.00000- 1 0.0     + 02145 2151  222
 9.27200+ 4 3.50000+ 0 1.59000+ 0 1.09000+ 0 5.00000- 1 0.0     + 02145 2151  223
 9.33900+ 4 5.00000+ 0 2.12000+ 0 1.32000+ 0 8.00000- 1 0.0     + 02145 2151  224
 9.37800+ 4 5.00000+ 0 5.63000+ 0 4.13000+ 0 1.50000+ 0 0.0     + 02145 2151  225
 9.40200+ 4 5.00000+ 0 6.63000+ 0 5.13000+ 0 1.50000+ 0 0.0     + 02145 2151  226
 9.44500+ 4 5.00000+ 0 3.37000+ 0 2.57000+ 0 8.00000- 1 0.0     + 02145 2151  227
 9.52500+ 4 3.50000+ 0 3.46000+ 0 2.96000+ 0 5.00000- 1 0.0     + 02145 2151  228
 9.64400+ 4 5.00000+ 0 2.64000+ 0 1.84000+ 0 8.00000- 1 0.0     + 02145 2151  229
 9.69000+ 4 5.00000+ 0 1.80000+ 0 1.00000+ 0 8.00000- 1 0.0     + 02145 2151  230
 9.82600+ 4 5.00000+ 0 2.03000+ 0 1.23000+ 0 8.00000- 1 0.0     + 02145 2151  231
 9.85850+ 4 5.00000+ 0 3.77000+ 0 2.97000+ 0 8.00000- 1 0.0     + 02145 2151  232
 9.90800+ 4 5.00000+ 0 5.53000+ 0 4.73000+ 0 8.00000- 1 0.0     + 02145 2151  233
 9.92000+ 4 5.00000+ 0 2.52000+ 0 1.72000+ 0 8.00000- 1 0.0     + 02145 2151  234
                                                                   2145 2  0  235
                                                                   2145 0  0  236
 2.10450+ 4 4.45698+ 1           0          99          0           02145 3  1  237
 0.0    + 0 0.0    + 0           0           0          2          412145 3  1  238
          3          2          41           5          0           02145 3  1  239
 1.00000- 5 0.0    + 0 2.53000- 2 0.0    + 0 9.00000+ 4 0.0     + 02145 3  1  240
 9.00000+ 4 6.00501+ 0 1.00000+ 5 5.66145+ 0 3.84845+ 5 2.82686+ 02145 3  1  241
 5.00000+ 5 2.59478+ 0 5.55081+ 5 2.53344+ 0 7.36359+ 5 2.46736+ 02145 3  1  242
 9.60170+ 5 2.55005+ 0 9.96365+ 5 2.57333+ 0 1.00000+ 6 2.57576+ 02145 3  1  243
 1.26414+ 6 2.78387+ 0 1.33244+ 6 2.84215+ 0 1.46556+ 6 2.95387+ 02145 3  1  244
 1.69878+ 6 3.13047+ 0 1.84100+ 6 3.22093+ 0 1.94263+ 6 3.27676+ 02145 3  1  245
 2.00000+ 6 3.30507+ 0 3.00000+ 6 3.51727+ 0 4.00000+ 6 3.46121+ 02145 3  1  246
 5.00000+ 6 3.31488+ 0 6.00000+ 6 3.13224+ 0 7.00000+ 6 2.94413+ 02145 3  1  247
 8.00000+ 6 2.77080+ 0 9.00000+ 6 2.61927+ 0 1.00000+ 7 2.48843+ 02145 3  1  248
 1.10000+ 7 2.37701+ 0 1.15000+ 7 2.32842+ 0 1.20000+ 7 2.28414+ 02145 3  1  249
 1.25000+ 7 2.24330+ 0 1.30000+ 7 2.20484+ 0 1.35000+ 7 2.16760+ 02145 3  1  250
 1.40000+ 7 2.13076+ 0 1.45000+ 7 2.09364+ 0 1.50000+ 7 2.05631+ 02145 3  1  251
 1.60000+ 7 1.98282+ 0 1.70000+ 7 1.91557+ 0 1.80000+ 7 1.85963+ 02145 3  1  252
 1.90000+ 7 1.81793+ 0 2.00000+ 7 1.79112+ 0                       2145 3  1  253
                                                                   2145 3  0  254
 2.10450+ 4 4.45698+ 1           0           0          0           02145 3  2  255
 0.0    + 0 0.0    + 0           0           0          2          412145 3  2  256
          3          2          41           5          0           02145 3  2  257
 1.00000- 5 0.0    + 0 2.53000- 2 0.0    + 0 9.00000+ 4 0.0     + 02145 3  2  258
 9.00000+ 4 5.91177+ 0 1.00000+ 5 5.57027+ 0 3.84845+ 5 2.70630+ 02145 3  2  259
 5.00000+ 5 2.44532+ 0 5.55081+ 5 2.36887+ 0 7.36359+ 5 2.18107+ 02145 3  2  260
 9.60170+ 5 2.11489+ 0 9.96365+ 5 2.12516+ 0 1.00000+ 6 2.10718+ 02145 3  2  261
 1.26414+ 6 2.18959+ 0 1.33244+ 6 2.12926+ 0 1.46556+ 6 2.18405+ 02145 3  2  262
 1.69878+ 6 2.26016+ 0 1.84100+ 6 2.27027+ 0 1.94263+ 6 2.30312+ 02145 3  2  263
 2.00000+ 6 2.32030+ 0 3.00000+ 6 2.39523+ 0 4.00000+ 6 2.34110+ 02145 3  2  264
 5.00000+ 6 2.23282+ 0 6.00000+ 6 2.09217+ 0 7.00000+ 6 1.93597+ 02145 3  2  265
 8.00000+ 6 1.77831+ 0 9.00000+ 6 1.62772+ 0 1.00000+ 7 1.49406+ 02145 3  2  266
 1.10000+ 7 1.37741+ 0 1.15000+ 7 1.32585+ 0 1.20000+ 7 1.27879+ 02145 3  2  267
 1.25000+ 7 1.23598+ 0 1.30000+ 7 1.19706+ 0 1.35000+ 7 1.16154+ 02145 3  2  268
 1.40000+ 7 1.12889+ 0 1.45000+ 7 1.09867+ 0 1.50000+ 7 1.07060+ 02145 3  2  269
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........10........20........30........40........50........60......MAT MF MT  SEQ
 1.60000+ 7 1.02050+ 0 1.70000+ 7 9.78885- 1 1.80000+ 7 9.46847- 12145 3  2  270
 1.90000+ 7 9.25229- 1 2.00000+ 7 9.14174- 1                       2145 3  2  271
                                                                   2145 3  0  272
 2.10450+ 4 4.45698+ 1           0          99           0          02145 3  4  273
 0.0    + 0-1.24000+ 4           0           0           1         392145 3  4  274
         39          3           0           0           0          02145 3  4  275
 1.26782+ 4 0.0    + 0 3.00000+ 4 2.73587- 2 1.00000+ 5 5.88720- 22145 3  4  276
 3.84845+ 5 1.07625- 1 5.00000+ 5 1.38665- 1 5.55081+ 5 1.51097- 12145 3  4  277
 7.36359+ 5 2.63902- 1 9.60170+ 5 4.00716- 1 9.96365+ 5 4.11678- 12145 3  4  278
 1.00000+ 6 4.32041- 1 1.26414+ 6 5.61804- 1 1.33244+ 6 6.82400- 12145 3  4  279
 1.46556+ 6 7.41379- 1 1.69878+ 6 8.45187- 1 1.84100+ 6 9.27512- 12145 3  4  280
 1.94263+ 6 9.51770- 1 2.00000+ 6 9.63606- 1 3.00000+ 6 1.06619+ 02145 3  4  281
 4.00000+ 6 1.03872+ 0 5.00000+ 6 9.81005- 1 6.00000+ 6 9.24277- 12145 3  4  282
 7.00000+ 6 8.82562- 1 8.00000+ 6 8.66046- 1 9.00000+ 6 8.68212- 12145 3  4  283
 1.00000+ 7 8.75116- 1 1.10000+ 7 8.82424- 1 1.15000+ 7 8.86917- 12145 3  4  284
 1.20000+ 7 8.69212- 1 1.25000+ 7 8.25210- 1 1.30000+ 7 7.69688- 12145 3  4  285
 1.35000+ 7 7.17490- 1 1.40000+ 7 6.41824- 1 1.45000+ 7 5.37433- 12145 3  4  286
 1.50000+ 7 5.05672- 1 1.60000+ 7 4.84294- 1 1.70000+ 7 4.20163- 12145 3  4  287
 1.80000+ 7 3.69273- 1 1.90000+ 7 3.52694- 1 2.00000+ 7 3.33439- 12145 3  4  288
                                                                   2145 3  0  289
 2.10450+ 4 4.45697+ 1           0          99           0          02145 3 16  290
 0.0    + 0-1.13275+ 7           0           0           1         132145 3 16  291
         13          2           0           0           0          02145 3 16  292
 1.15816+ 7 0.0    + 0 1.20000+ 7 2.00000- 2 1.25000+ 7 6.50000- 22145 3 16  293
 1.30000+ 7 1.20000- 1 1.35000+ 7 1.70000- 1 1.40000+ 7 2.45000- 12145 3 16  294
 1.45000+ 7 3.48000- 1 1.50000+ 7 3.80000- 1 1.60000+ 7 4.00000- 12145 3 16  295
 1.70000+ 7 4.60000- 1 1.80000+ 7 5.00000- 1 1.90000+ 7 5.10000- 12145 3 16  296
 2.00000+ 7 5.20000- 1                                             2145 3 16  297
                                                                   2145 3  0  298
 2.10450+ 4 4.45698+ 1           0           1           0          02145 3 51  299
 0.0    + 0-1.24000+ 4           0           0           1         392145 3 51  300
         39          3           0           0           0          02145 3 51  301
 1.26782+ 4 0.0    + 0 3.00000+ 4 2.73587- 2 1.00000+ 5 5.88720- 22145 3 51  302
 3.84845+ 5 1.07625- 1 5.00000+ 5 1.10783- 1 5.55081+ 5 1.15146- 12145 3 51  303
 7.36359+ 5 1.10484- 1 9.60170+ 5 1.06193- 1 9.96365+ 5 1.06742- 12145 3 51  304
 1.00000+ 6 1.01360- 1 1.26414+ 6 9.66254- 2 1.33244+ 6 9.62284- 22145 3 51  305
 1.46556+ 6 9.31513- 2 1.69878+ 6 8.49348- 2 1.84100+ 6 8.08330- 22145 3 51  306
 1.94263+ 6 7.56695- 2 2.00000+ 6 7.35662- 2 3.00000+ 6 3.74249- 22145 3 51  307
 4.00000+ 6 1.84238- 2 5.00000+ 6 9.17017- 3 6.00000+ 6 4.64616- 32145 3 51  308
 7.00000+ 6 2.40882- 3 8.00000+ 6 1.28777- 3 9.00000+ 6 6.96698- 42145 3 51  309
 1.00000+ 7 3.76520- 4 1.10000+ 7 2.03325- 4 1.15000+ 7 1.49491- 42145 3 51  310
 1.20000+ 7 1.07145- 4 1.25000+ 7 7.42623- 5 1.30000+ 7 5.05028- 52145 3 51  311
 1.35000+ 7 3.43336- 5 1.40000+ 7 2.23900- 5 1.45000+ 7 1.36736- 52145 3 51  312
 1.50000+ 7 9.39441- 6 1.60000+ 7 4.83453- 6 1.70000+ 7 2.28702- 62145 3 51  313
 1.80000+ 7 1.11610- 6 1.90000+ 7 6.03403- 7 2.00000+ 7 3.28399- 72145 3 51  314
                                                                   2145 3  0  315
 2.10450+ 4 4.45698+ 1           0           2           0          02145 3 52  316
 0.0    + 0-3.76400+ 5           0           0           1         362145 3 52  317
         36          3           0           0           0          02145 3 52  318
 3.84845+ 5 0.0    + 0 5.00000+ 5 2.78814- 2 5.55081+ 5 3.59507- 22145 3 52  319
 7.36359+ 5 5.21300- 2 9.60170+ 5 6.97249- 2 9.96365+ 5 7.33019- 22145 3 52  320
 1.00000+ 6 7.27587- 2 1.26414+ 6 9.49028- 2 1.33244+ 6 1.00288- 12145 3 52  321
 1.46556+ 6 1.08589- 1 1.69878+ 6 1.18376- 1 1.84100+ 6 1.17418- 12145 3 52  322
 1.94263+ 6 1.17482- 1 2.00000+ 6 1.15262- 1 3.00000+ 6 7.40988- 22145 3 52  323
 4.00000+ 6 3.63901- 2 5.00000+ 6 1.69907- 2 6.00000+ 6 7.94897- 32145 3 52  324
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........10........20........30........40........50........60......MAT MF MT  SEQ
 7.00000+ 6 3.79080- 3 8.00000+ 6 1.87216- 3 9.00000+ 6 9.37760- 42145 3 52  325
 1.00000+ 7 4.66606- 4 1.10000+ 7 2.31886- 4 1.15000+ 7 1.64297- 42145 3 52  326
 1.20000+ 7 1.14186- 4 1.25000+ 7 7.73441- 5 1.30000+ 7 5.18209- 52145 3 52  327
 1.35000+ 7 3.49586- 5 1.40000+ 7 2.27455- 5 1.45000+ 7 1.39049- 52145 3 52  328
 1.50000+ 7 9.57970- 6 1.60000+ 7 4.95681- 6 1.70000+ 7 2.34763- 62145 3 52  329
 1.80000+ 7 1.14134- 6 1.90000+ 7 6.12558- 7 2.00000+ 7 3.30443- 72145 3 52  330
                                                                   2145 3  0  331
 2.10450+ 4 4.45698+ 1           0           3           0           02145 3 53  332
 0.0     + 0-5.42900+ 5           0           0           1          342145 3 53  333
         34           3           0           0           0           02145 3 53  334
 5.55081+ 5 0.0     + 0 7.36359+ 5 1.01287- 1 9.60170+ 5 1.20137- 12145 3 53  335
 9.96365+ 5 1.23037- 1 1.00000+ 6 1.19427- 1 1.26414+ 6 1.26876- 12145 3 53  336
 1.33244+ 6 1.28085- 1 1.46556+ 6 1.28213- 1 1.69878+ 6 1.19876- 12145 3 53  337
 1.84100+ 6 1.14665- 1 1.94263+ 6 1.09583- 1 2.00000+ 6 1.06725- 12145 3 53  338
 3.00000+ 6 5.95884- 2 4.00000+ 6 2.93155- 2 5.00000+ 6 1.42868- 22145 3 53  339
 6.00000+ 6 7.12307- 3 7.00000+ 6 3.65395- 3 8.00000+ 6 1.93701- 32145 3 53  340
 9.00000+ 6 1.03804- 3 1.00000+ 7 5.54420- 4 1.10000+ 7 2.96344- 42145 3 53  341
 1.15000+ 7 2.17143- 4 1.20000+ 7 1.55371- 4 1.25000+ 7 1.07695- 42145 3 53  342
 1.30000+ 7 7.33643- 5 1.35000+ 7 5.00253- 5 1.40000+ 7 3.27457- 52145 3 53  343
 1.45000+ 7 2.00721- 5 1.50000+ 7 1.38434- 5 1.60000+ 7 7.16536- 62145 3 53  344
 1.70000+ 7 3.39957- 6 1.80000+ 7 1.66000- 6 1.90000+ 7 8.96768- 72145 3 53  345
 2.00000+ 7 4.87449- 7                                             2145 3 53  346
                                                                   2145 3  0  347
 2.10450+ 4 4.45698+ 1           0           4           0           02145 3 54  348
 0.0     + 0-7.20200+ 5           0           0           1          332145 3 54  349
         33           3           0           0           0           02145 3 54  350
 7.36359+ 5 0.0     + 0 9.60170+ 5 1.04660- 1 9.96365+ 5 1.08162- 12145 3 54  351
 1.00000+ 6 1.06186- 1 1.26414+ 6 1.23509- 1 1.33244+ 6 1.25134- 12145 3 54  352
 1.46556+ 6 1.34150- 1 1.69878+ 6 1.47659- 1 1.84100+ 6 1.48214- 12145 3 54  353
 1.94263+ 6 1.50927- 1 2.00000+ 6 1.51088- 1 3.00000+ 6 1.12475- 12145 3 54  354
 4.00000+ 6 5.75715- 2 5.00000+ 6 2.67992- 2 6.00000+ 6 1.24242- 22145 3 54  355
 7.00000+ 6 5.89308- 3 8.00000+ 6 2.90455- 3 9.00000+ 6 1.45367- 32145 3 54  356
 1.00000+ 7 7.21558- 4 1.10000+ 7 3.57258- 4 1.15000+ 7 2.52662- 42145 3 54  357
 1.20000+ 7 1.75360- 4 1.25000+ 7 1.18703- 4 1.30000+ 7 7.95560- 52145 3 54  358
 1.35000+ 7 5.37366- 5 1.40000+ 7 3.50293- 5 1.45000+ 7 2.14565- 52145 3 54  359
 1.50000+ 7 1.48101- 5 1.60000+ 7 7.67696- 6 1.70000+ 7 3.63268- 62145 3 54  360
 1.80000+ 7 1.76116- 6 1.90000+ 7 9.41939- 7 2.00000+ 7 5.06503- 72145 3 54  361
                                                                   2145 3  0  362
 2.10450+ 4 4.45698+ 1           0           5           0           02145 3 55  363
 0.0     + 0-9.39100+ 5           0           0           1          322145 3 55  364
         32           3           0           0           0           02145 3 55  365
 9.60170+ 5 0.0     + 0 9.96365+ 5 4.35469- 4 1.00000+ 6 4.82207- 42145 3 55  366
 1.26414+ 6 4.99804- 3 1.33244+ 6 6.19032- 3 1.46556+ 6 8.17822- 32145 3 55  367
 1.69878+ 6 1.13161- 2 1.84100+ 6 1.28961- 2 1.94263+ 6 1.33105- 22145 3 55  368
 2.00000+ 6 1.36474- 2 3.00000+ 6 1.14281- 2 4.00000+ 6 6.39104- 32145 3 55  369
 5.00000+ 6 3.37193- 3 6.00000+ 6 1.79076- 3 7.00000+ 6 9.59243- 42145 3 55  370
 8.00000+ 6 5.21235- 4 9.00000+ 6 2.84415- 4 1.00000+ 7 1.55024- 42145 3 55  371
 1.10000+ 7 8.47062- 5 1.15000+ 7 6.27726- 5 1.20000+ 7 4.54239- 52145 3 55  372
 1.25000+ 7 3.18444- 5 1.30000+ 7 2.19390- 5 1.35000+ 7 1.51244- 52145 3 55  373
 1.40000+ 7 1.00037- 5 1.45000+ 7 6.19115- 6 1.50000+ 7 4.30642- 62145 3 55  374
 1.60000+ 7 2.25748- 6 1.70000+ 7 1.07924- 6 1.80000+ 7 5.29028- 72145 3 55  375
 1.90000+ 7 2.86262- 7 2.00000+ 7 1.55720- 7                       2145 3 55  376
                                                                   2145 3  0  377
 2.10450+ 4 4.45698+ 1           0           6           0           02145 3 56  378
 0.0     + 0-9.74500+ 5           0           0           1          312145 3 56  379
```

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 1.33244+ 6 1.18301- 1 1.46556+ 6 1.27347- 1 1.69878+ 6 1.26194- 12145 3 56  382
 1.84100+ 6 1.20116- 1 1.94263+ 6 1.17806- 1 2.00000+ 6 1.16867- 12145 3 56  383
 3.00000+ 6 7.43125- 2 4.00000+ 6 3.83645- 2 5.00000+ 6 1.88387- 22145 3 56  384
 6.00000+ 6 9.36936- 3 7.00000+ 6 4.81122- 3 8.00000+ 6 2.56708- 32145 3 56  385
 9.00000+ 6 1.38519- 3 1.00000+ 7 7.41184- 4 1.10000+ 7 3.95132- 42145 3 56  386
 1.15000+ 7 2.88876- 4 1.20000+ 7 2.06233- 4 1.25000+ 7 1.42631- 42145 3 56  387
 1.30000+ 7 9.69796- 5 1.35000+ 7 6.60376- 5 1.40000+ 7 4.31896- 52145 3 56  388
 1.45000+ 7 2.64597- 5 1.50000+ 7 1.82418- 5 1.60000+ 7 9.43402- 62145 3 56  389
 1.70000+ 7 4.46894- 6 1.80000+ 7 2.17712- 6 1.90000+ 7 1.17295- 62145 3 56  390
 2.00000+ 7 6.35906- 7                                            2145 3 56  391
                                                                  2145 3  0  392
 2.10450+ 4 4.45698+ 1          0          7          0          02145 3 57  393
 0.0     + 0-1.23640+ 6          0          0          1         292145 3 57  394
         29          3          0          0          0          02145 3 57  395
 1.26414+ 6 0.0     + 0 1.33244+ 6 1.08174- 1 1.46556+ 6 1.32956- 12145 3 57  396
 1.69878+ 6 1.44813- 1 1.84100+ 6 1.43044- 1 1.94263+ 6 1.47849- 12145 3 57  397
 2.00000+ 6 1.50039- 1 3.00000+ 6 1.40637- 1 4.00000+ 6 8.75361- 22145 3 57  398
 5.00000+ 6 4.63392- 2 6.00000+ 6 2.33382- 2 7.00000+ 6 1.16198- 22145 3 57  399
 8.00000+ 6 5.88012- 3 9.00000+ 6 2.96772- 3 1.00000+ 7 1.45917- 32145 3 57  400
 1.10000+ 7 7.14831- 4 1.15000+ 7 5.03321- 4 1.20000+ 7 3.48016- 42145 3 57  401
 1.25000+ 7 2.34667- 4 1.30000+ 7 1.56679- 4 1.35000+ 7 1.05456- 42145 3 57  402
 1.40000+ 7 6.85210- 5 1.45000+ 7 4.18347- 5 1.50000+ 7 2.87854- 52145 3 57  403
 1.60000+ 7 1.48311- 5 1.70000+ 7 6.97326- 6 1.80000+ 7 3.35914- 62145 3 57  404
 1.90000+ 7 1.78619- 6 2.00000+ 7 9.55912- 7                      2145 3 57  405
                                                                  2145 3  0  406
 2.10450+ 4 4.45698+ 1          0          8          0          02145 3 58  407
 0.0     + 0-1.30320+ 6          0          0          1         282145 3 58  408
         28          3          0          0          0          02145 3 58  409
 1.33244+ 6 0.0     + 0 1.46556+ 6 8.79421- 3 1.69878+ 6 1.68224- 22145 3 58  410
 1.84100+ 6 2.06654- 2 1.94263+ 6 2.24558- 2 2.00000+ 6 2.34380- 22145 3 58  411
 3.00000+ 6 2.39339- 2 4.00000+ 6 1.41983- 2 5.00000+ 6 7.29883- 32145 3 58  412
 6.00000+ 6 3.74431- 3 7.00000+ 6 1.96005- 3 8.00000+ 6 1.04920- 32145 3 58  413
 9.00000+ 6 5.66218- 4 1.00000+ 7 3.06270- 4 1.10000+ 7 1.66808- 42145 3 58  414
 1.15000+ 7 1.23590- 4 1.20000+ 7 8.94662- 5 1.25000+ 7 6.27819- 52145 3 58  415
 1.30000+ 7 4.33219- 5 1.35000+ 7 2.99291- 5 1.40000+ 7 1.98453- 52145 3 58  416
 1.45000+ 7 1.23141- 5 1.50000+ 7 8.58475- 6 1.60000+ 7 4.51785- 62145 3 58  417
 1.70000+ 7 2.16320- 6 1.80000+ 7 1.05984- 6 1.90000+ 7 5.72543- 72145 3 58  418
 2.00000+ 7 3.10884- 7                                            2145 3 58  419
                                                                  2145 3  0  420
 2.10450+ 4 4.45698+ 1          0          9          0          02145 3 59  421
 0.0     + 0-1.43340+ 6          0          0          1         272145 3 59  422
         27          3          0          0          0          02145 3 59  423
 1.46556+ 6 0.0     + 0 1.69878+ 6 7.51960- 2 1.84100+ 6 8.27542- 22145 3 59  424
 1.94263+ 6 8.77574- 2 2.00000+ 6 8.96948- 2 3.00000+ 6 7.33698- 22145 3 59  425
 4.00000+ 6 4.25977- 2 5.00000+ 6 2.20615- 2 6.00000+ 6 1.13083- 22145 3 59  426
 7.00000+ 6 5.92739- 3 8.00000+ 6 3.20486- 3 9.00000+ 6 1.74139- 32145 3 59  427
 1.00000+ 7 9.34504- 4 1.10000+ 7 5.00787- 4 1.15000+ 7 3.67302- 42145 3 59  428
 1.20000+ 7 2.62964- 4 1.25000+ 7 1.82242- 4 1.30000+ 7 1.24058- 42145 3 59  429
 1.35000+ 7 8.45102- 5 1.40000+ 7 5.52594- 5 1.45000+ 7 3.38297- 52145 3 59  430
 1.50000+ 7 2.32980- 5 1.60000+ 7 1.20218- 5 1.70000+ 7 5.67962- 62145 3 59  431
 1.80000+ 7 2.75870- 6 1.90000+ 7 1.48188- 6 2.00000+ 7 8.01276- 72145 3 59  432
                                                                  2145 3  0  433
 2.10450+ 4 4.45698+ 1          0         10          0          02145 3 60  434
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         26          3          0          0          0          02145 3 60  436
 1.69878+ 6 0.0    + 0 1.84100+ 6 8.69065- 2 1.94263+ 6 9.34970- 22145 3 60  437
 2.00000+ 6 9.56377- 2 3.00000+ 6 1.07154- 1 4.00000+ 6 7.79261- 22145 3 60  438
 5.00000+ 6 4.11294- 2 6.00000+ 6 2.00013- 2 7.00000+ 6 9.71188- 32145 3 60  439
 8.00000+ 6 4.83584- 3 9.00000+ 6 2.41770- 3 1.00000+ 7 1.19015- 32145 3 60  440
 1.10000+ 7 5.85298- 4 1.15000+ 7 4.12653- 4 1.20000+ 7 2.85602- 42145 3 60  441
 1.25000+ 7 1.92755- 4 1.30000+ 7 1.28878- 4 1.35000+ 7 8.69583- 52145 3 60  442
 1.40000+ 7 5.67158- 5 1.45000+ 7 3.48057- 5 1.50000+ 7 2.40919- 52145 3 60  443
 1.60000+ 7 1.25626- 5 1.70000+ 7 5.96112- 6 1.80000+ 7 2.88657- 62145 3 60  444
 1.90000+ 7 1.53788- 6 2.00000+ 7 8.23021- 7                       2145 3 60  445
                                                                   2145 3  0  446
 2.10450+ 4 4.45698+ 1          0         11          0          02145 3 61  447
 0.0    + 0-1.80060+ 6          0          0          1         252145 3 61  448
         25          3          0          0          0          02145 3 61  449
 1.84100+ 6 0.0    + 0 1.94263+ 6 1.54316- 2 2.00000+ 6 1.87383- 22145 3 61  450
 3.00000+ 6 3.20925- 2 4.00000+ 6 2.20265- 2 5.00000+ 6 1.16354- 22145 3 61  451
 6.00000+ 6 5.88911- 3 7.00000+ 6 3.04099- 3 8.00000+ 6 1.61438- 32145 3 61  452
 9.00000+ 6 8.63067- 4 1.00000+ 7 4.61186- 4 1.10000+ 7 2.48309- 42145 3 61  453
 1.15000+ 7 1.83040- 4 1.20000+ 7 1.32000- 4 1.25000+ 7 9.23397- 52145 3 61  454
 1.30000+ 7 6.35727- 5 1.35000+ 7 4.38660- 5 1.40000+ 7 2.90838- 52145 3 61  455
 1.45000+ 7 1.80638- 5 1.50000+ 7 1.26166- 5 1.60000+ 7 6.67298- 62145 3 61  456
 1.70000+ 7 3.20997- 6 1.80000+ 7 1.57729- 6 1.90000+ 7 8.52978- 72145 3 61  457
 2.00000+ 7 4.62999- 7                                             2145 3 61  458
                                                                   2145 3  0  459
 2.10450+ 4 4.45698+ 1          0         98          0          02145 3 91  460
 0.0    + 0-1.90000+ 6          0          0          1         242145 3 91  461
         24          3          0          0          0          02145 3 91  462
 1.94263+ 6 0.0    + 0 2.00000+ 6 8.90409- 3 3.00000+ 6 3.19679- 12145 3 91  463
 4.00000+ 6 6.07983- 1 5.00000+ 6 7.63083- 1 6.00000+ 6 8.16693- 12145 3 91  464
 7.00000+ 6 8.28785- 1 8.00000+ 6 8.38372- 1 9.00000+ 6 8.53860- 12145 3 91  465
 1.00000+ 7 8.67749- 1 1.10000+ 7 8.78639- 1 1.15000+ 7 8.84192- 12145 3 91  466
 1.20000+ 7 8.67291- 1 1.25000+ 7 8.23892- 1 1.30000+ 7 7.68797- 12145 3 91  467
 1.35000+ 7 7.16886- 1 1.40000+ 7 6.41428- 1 1.45000+ 7 5.37190- 12145 3 91  468
 1.50000+ 7 5.05504- 1 1.60000+ 7 4.84207- 1 1.70000+ 7 4.20122- 12145 3 91  469
 1.80000+ 7 3.69253- 1 1.90000+ 7 3.52683- 1 2.00000+ 7 3.33433- 12145 3 91  470
                                                                   2145 3  0  471
 2.10450+ 4 4.45698+ 1          0         99          0          02145 3102  472
 0.0    + 0 0.0    + 0          0          0          2         412145 3102  473
          3          2         41          5          0          02145 3102  474
 1.00000- 5 0.0    + 0 2.53000- 2 0.0    + 0 9.00000+ 4 0.0    + 02145 3102  475
 9.00000+ 4 3.48675- 2 1.00000+ 5 3.22904- 2 3.84845+ 5 1.29344- 22145 3102  476
 5.00000+ 5 1.07989- 2 5.55081+ 5 1.01650- 2 7.36359+ 5 8.21085- 32145 3102  477
 9.60170+ 5 6.82751- 3 9.96365+ 5 6.70833- 3 1.00000+ 6 6.53641- 32145 3102  478
 1.26414+ 6 5.51456- 3 1.33244+ 6 4.30959- 3 1.46556+ 6 3.80204- 32145 3102  479
 1.69878+ 6 3.15819- 3 1.84100+ 6 2.82279- 3 1.94263+ 6 2.71435- 32145 3102  480
 2.00000+ 6 2.66165- 3 3.00000+ 6 1.84620- 3 4.00000+ 6 1.39000- 32145 3102  481
 5.00000+ 6 1.05500- 3 6.00000+ 6 7.93315- 4 7.00000+ 6 5.95202- 42145 3102  482
 8.00000+ 6 4.50462- 4 9.00000+ 6 3.36982- 4 1.00000+ 7 2.47098- 42145 3102  483
 1.10000+ 7 1.80617- 4 1.15000+ 7 1.55115- 4 1.20000+ 7 1.30505- 42145 3102  484
 1.25000+ 7 1.06810- 4 1.30000+ 7 8.63581- 5 1.35000+ 7 7.02956- 52145 3102  485
 1.40000+ 7 5.52579- 5 1.45000+ 7 4.09028- 5 1.50000+ 7 3.42261- 52145 3102  486
 1.60000+ 7 2.63363- 5 1.70000+ 7 1.86265- 5 1.80000+ 7 1.34002- 52145 3102  487
 1.90000+ 7 1.03599- 5 2.00000+ 7 7.64765- 6                       2145 3102  488
                                                                   2145 3  0  489
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
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 0.0    + 0 5.25600- 1          0           0          1         252145 3103  491
         25          2          0           0          0          02145 3103  492
 1.00000- 5 0.0    + 0 1.00000+ 6 2.00000- 3 2.00000+ 6 1.60000- 22145 3103  493
 3.00000+ 6 5.00000- 2 4.00000+ 6 7.50000- 2 5.00000+ 6 9.30000- 22145 3103  494
 6.00000+ 6 1.07000- 1 7.00000+ 6 1.15000- 1 8.00000+ 6 1.15000- 12145 3103  495
 9.00000+ 6 1.09000- 1 1.00000+ 7 1.00000- 1 1.10000+ 7 9.10000- 22145 3103  496
 1.15000+ 7 8.55000- 2 1.20000+ 7 8.00000- 2 1.25000+ 7 7.50000- 22145 3103  497
 1.30000+ 7 7.00000- 2 1.35000+ 7 6.45000- 2 1.40000+ 7 5.90000- 22145 3103  498
 1.45000+ 7 5.35000- 2 1.50000+ 7 4.80000- 2 1.60000+ 7 3.80000- 22145 3103  499
 1.70000+ 7 2.70000- 2 1.80000+ 7 1.70000- 2 1.90000+ 7 5.00000- 32145 3103  500
 2.00000+ 7 0.0    + 0                                            2145 3103  501
                                                                  2145 3  0  502
 2.10450+ 4 4.45697+ 1          0          99          0          02145 3107  503
 0.0    + 0-3.97000- 1          0           0          1         252145 3107  504
         25          2          0           0          0          02145 3107  505
 4.05900- 1 0.0    + 0 1.00000+ 6 1.00000- 3 2.00000+ 6 2.50000- 32145 3107  506
 3.00000+ 6 4.00000- 3 4.00000+ 6 5.00000- 3 5.00000+ 6 7.00000- 32145 3107  507
 6.00000+ 6 8.00000- 3 7.00000+ 6 1.00000- 2 8.00000+ 6 1.10000- 22145 3107  508
 9.00000+ 6 1.40000- 2 1.00000+ 7 1.90000- 2 1.10000+ 7 2.60000- 22145 3107  509
 1.15000+ 7 3.00000- 2 1.20000+ 7 3.60000- 2 1.25000+ 7 4.20000- 22145 3107  510
 1.30000+ 7 4.80000- 2 1.35000+ 7 5.40000- 2 1.400Q0+ 7 5.60000- 22145 3107  511
 1.45000+ 7 5.60000- 2 1.50000+ 7 5.20000- 2 1.60000+ 7 4.00000- 22145 3107  512
 1.70000+ 7 2.95000- 2 1.80000+ 7 2.65000- 2 1.90000+ 7 2.50000- 22145 3107  513
 2.00000+ 7 2.35000- 2                                            2145 3107  514
                                                                  2145 3  0  515
 2.10450+ 4 4.45698+ 1          0           0          0          02145 3251  516
 0.0    + 0 0.0    + 0          0           0          1         432145 3251  517
         43          3          0           0          0          02145 3251  518
 1.00000- 5 1.49578- 2 1.00000+ 2 1.49578- 2 1.00000+ 3 1.49783- 22145 3251  519
 1.00000+ 4 1.55718- 2 1.26782+ 4 1.58246- 2 3.00000+ 4 1.79344- 22145 3251  520
 1.00000+ 5 3.00926- 2 3.84845+ 5 8.19564- 2 5.00000+ 5 9.77876- 22145 3251  521
 5.55081+ 5 1.04222- 1 7.36359+ 5 1.24666- 1 9.60170+ 5 1.47365- 12145 3251  522
 9.96365+ 5 1.50466- 1 1.00000+ 6 1.52019- 1 1.26414+ 6 1.81556- 12145 3251  523
 1.33244+ 6 1.98000- 1 1.46556+ 6 2.18199- 1 1.69878+ 6 2.59960- 12145 3251  524
 1.84100+ 6 2.90956- 1 1.94263+ 6 3.10121- 1 2.00000+ 6 3.20923- 12145 3251  525
 3.00000+ 6 4.99402- 1 4.00000+ 6 6.12124- 1 5.00000+ 6 6.74366- 12145 3251  526
 6.00000+ 6 7.08330- 1 7.00000+ 6 7.26025- 1 8.00000+ 6 7.32761- 12145 3251  527
 9.00000+ 6 7.31696- 1 1.00000+ 7 7.22766- 1 1.10000+ 7 7.08611- 12145 3251  528
 1.15000+ 7 7.00092- 1 1.20000+ 7 6.90963- 1 1.25000+ 7 6.81540- 12145 3251  529
 1.30000+ 7 6.72135- 1 1.35000+ 7 6.63043- 1 1.40000+ 7 6.54523- 12145 3251  530
 1.45000+ 7 6.46680- 1 1.50000+ 7 6.39615- 1 1.60000+ 7 6.27946- 12145 3251  531
 1.70000+ 7 6.19657- 1 1.80000+ 7 6.14981- 1 1.90000+ 7 6.14268- 12145 3251  532
 2.00000+ 7 6.17825- 1                                            2145 3251  533
                                                                  2145 3  0  534
                                                                  2145 0  0  535
 2.10450+ 4 4.45698+ 1          1           1          0          02145 4  2  536
 0.0    + 0 4.45698+ 1          0           2        361         182145 4  2  537
 1.00000+ 0 1.49578- 2 1.00688- 4 1.32433-19 0.0    + 0 0.0    + 02145 4  2  538
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  539
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  540
 0.0    + 0 0.0    + 0 9.99698- 1 2.69202- 2 3.45193- 4 2.15168- 62145 4  2  541
 7.24031- 9-3.98072-11 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  542
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  543
 0.0    + 0 0.0    + 0 0.0    + 0-1.49514- 2 9.99209- 1 3.84479- 22145 4  2  544
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........10........20........30........40........50........60......MAT MF MT  SEQ
 7.19027- 4 7.82312- 6 5.31586- 8 1.27987-10 0.0    + 0 0.0    + 02145 4  2  545
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  546
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 3.01903- 4-2.69030- 22145 4  2  547
 9.98457- 1 4.98210- 2 1.21986- 3 1.84260- 5 1.86283- 7 1.16185- 92145 4  2  548
-5.34922-11 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  549
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0-6.45106- 62145 4  2  550
 6.89849- 4-3.84137- 2 9.97452- 1 6.11132- 2 1.84676- 3 3.53690- 52145 4  2  551
 4.70023- 7 7.49260- 9 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  552
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  553
 1.40719- 7-1.71978- 5 1.19716- 3-4.97643- 2 9.96196- 1 7.23501- 22145 4  2  554
 2.59915- 3 6.00596- 5 9.46906- 7 1.08852- 8-1.08204- 8-2.91117- 92145 4  2  555
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  556
 0.0    + 0-3.09985- 9 4.20941- 7-3.41873- 5 1.82747- 3-6.10282- 22145 4  2  557
 9.94689- 1 8.35413- 2 3.47648- 3 9.38862- 5 1.77176- 6 2.21574- 82145 4  2  558
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 0.0    + 0 0.0    + 0 6.86587-11-1.01711- 8 9.29338- 7-5.88816- 52145 4  2  560
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 3.05758- 6 4.94095- 8 4.85198- 9 3.46784- 9 0.0    + 0 0.0    + 02145 4  2  562
 0.0    + 0 0.0    + 0 0.0    + 0-1.52580-12 2.43419-10-2.44660- 82145 4  2  563
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 5.60416- 3 1.94545- 4 4.89504- 6 9.57666- 8-1.46411- 8 3.76801- 92145 4  2  565
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 3.39822-14-5.78280-122145 4  2  566
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 1.07673- 5 2.46272- 7 1.28680- 8 2.40876- 9 0.0    + 0 0.0    + 02145 4  2  572
 1.69258-17-3.21026-15 3.97846-13-3.71749-11 2.73203- 9-1.59775- 72145 4  2  573
 7.38241- 6-2.62714- 4 6.83231- 3-1.16550- 1 9.83424- 1 1.38843- 12145 4  2  574
 9.71941- 3 4.48707- 4 1.52560- 5 4.05130- 7 6.47352- 9 0.0    + 02145 4  2  575
 0.0    + 0-3.78258-19 4.86718-17-9.83403-15 9.79026-13-7.76726-112145 4  2  576
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 5.69867-16-5.84126-14 4.35273-12-2.70730-10 1.40359- 8-6.00675- 72145 4  2  583
 2.08104- 5-5.64392- 4 1.13023- 2-1.49248- 1 9.73712- 1 1.71415- 12145 4  2  584
 1.49268- 2 8.59360- 4 3.66478- 5 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  585
 5.79832-20-9.74902-18 1.47550-15-1.23444-13 8.24787-12-4.65455-102145 4  2  586
 2.20794- 8-8.69754- 7 2.78560- 5-7.00507- 4 1.30327- 2-1.60028- 12145 4  2  587
 9.69990- 1 1.82151- 1 1.69013- 2 1.03722- 3 0.0    + 0 0.0    + 02145 4  2  588
 0.0    + 0 0.0    + 0 1.85793-19-2.42410-17 3.34337-15-2.43992-132145 4  2  589
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 4.70754- 5-1.03401- 3 1.68488- 2-1.81391- 1 9.61825- 1 2.03417- 12145 4  2  594
 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 0 0.0    + 02145 4  2  595
 1.01777-18-1.08472-16 1.36076-14-8.17151-13 4.22438-11-1.88200- 92145 4  2  596
 7.15313- 8-2.28291- 6 5.97246- 5-1.23401- 3 1.89325- 2-1.91966- 12145 4  2  597
 9.57386- 1                                                        2145 4  2  598
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 0.0     + 0 1.00000+ 2           0           0           1           02145 4  2  603
 0.0     + 0                                                           2145 4  2  604
 0.0     + 0 1.00000+ 3           0           0           2           02145 4  2  605
 2.05389- 5 5.58710- 7                                                 2145 4  2  606
 0.0     + 0 1.00000+ 4           0           0           2           02145 4  2  607
 6.15262- 4 7.48514- 5                                                 2145 4  2  608
 0.0     + 0 1.26782+ 4           0           0           2           02145 4  2  609
 8.68764- 4 1.11402- 4                                                 2145 4  2  610
 0.0     + 0 3.00000+ 4           0           0           4           02145 4  2  611
 2.98369- 3 4.16296- 4-3.51165- 7 1.73860- 7                           2145 4  2  612
 0.0     + 0 1.00000+ 5           0           0           4           02145 4  2  613
 1.51834- 2 2.94740- 3-2.34397- 5 1.38191- 5                           2145 4  2  614
 0.0     + 0 3.84845+ 5           0           0           6           02145 4  2  615
 6.75895- 2 3.81225- 2-1.71454- 3 5.08156- 4 9.43646- 7 3.03258- 82145 4  2  616
 0.0     + 0 5.00000+ 5           0           0           6           02145 4  2  617
 8.37576- 2 6.02910- 2-3.32504- 3 1.04800- 3 3.69145- 6 1.10984- 72145 4  2  618
 0.0     + 0 5.55081+ 5           0           0           6           02145 4  2  619
 9.03628- 2 7.15865- 2-4.16890- 3 1.41040- 3 6.29304- 6 1.76597- 72145 4  2  620
 0.0     + 0 7.36359+ 5           0           0           8           02145 4  2  621
 1.11418- 1 1.11922- 1-6.60252- 3 3.27683- 3 1.69598- 5 2.86809- 62145 4  2  622
 9.63442- 9 3.11890- 8                                                 2145 4  2  623
 0.0     + 0 9.60170+ 5           0           0           8           02145 4  2  624
 1.34847- 1 1.60278- 1-5.89840- 3 7.11908- 3 6.71673- 5 1.16730- 52145 4  2  625
 5.63819- 8 1.68438- 7                                                 2145 4  2  626
 0.0     + 0 9.96365+ 5           0           0           8           02145 4  2  627
 1.38045- 1 1.66815- 1-5.14256- 3 7.87785- 3 8.03816- 5 1.40449- 52145 4  2  628
 7.13944- 8 2.07709- 7                                                 2145 4  2  629
 0.0     + 0 1.00000+ 6           0           0           8           02145 4  2  630
 1.39630- 1 1.68907- 1-5.10221- 3 8.02802- 3 8.25476- 5 1.44279- 52145 4  2  631
 7.37304- 8 2.13896- 7                                                 2145 4  2  632
 0.0     + 0 1.26414+ 6           0           0           8           02145 4  2  633
 1.69842- 1 2.13651- 1 6.43234- 3 1.48189- 2 2.47342- 4 4.45184- 52145 4  2  634
 3.24839- 7 7.36541- 7                                                 2145 4  2  635
 0.0     + 0 1.33244+ 6           0           0           8           02145 4  2  636
 1.86521- 1 2.29155- 1 1.14787- 2 1.69444- 2 3.24992- 4 5.77327- 52145 4  2  637
 4.69661- 7 8.87973- 7                                                 2145 4  2  638
 0.0     + 0 1.46556+ 6           0           0           8           02145 4  2  639
 2.06996- 1 2.47433- 1 2.24076- 2 2.11735- 2 4.87924- 4 8.77190- 52145 4  2  640
 8.48037- 7 9.63272- 7                                                 2145 4  2  641
 0.0     + 0 1.69878+ 6           0           0           8           02145 4  2  642
 2.49210- 1 2.77332- 1 4.55282- 2 2.91568- 2 8.90019- 4 1.69011- 42145 4  2  643
 2.13044- 6 1.30028- 6                                                 2145 4  2  644
 0.0     + 0 1.84100+ 6           0           0           8           02145 4  2  645
 2.80510- 1 2.97371- 1 6.18097- 2 3.44244- 2 1.22895- 3 2.43160- 42145 4  2  646
 3.56809- 6 1.71216- 6                                                 2145 4  2  647
 0.0     + 0 1.94263+ 6           0           0           8           02145 4  2  648
 2.99828- 1 3.07388- 1 7.29972- 2 3.78750- 2 1.49638- 3 3.05525- 42145 4  2  649
 4.97913- 6 2.09744- 6                                                 2145 4  2  650
 0.0     + 0 2.00000+ 6           0           0           8           02145 4  2  651
 3.10711- 1 3.12721- 1 7.92943- 2 3.97966- 2 1.66140- 3 3.45403- 42145 4  2  652
 5.96580- 6 2.35844- 6                                                 2145 4  2  653
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 6.04007- 1 4.50222- 1 2.47013- 1 1.00994- 1 1.70974- 2 5.47255- 32145 4  2  658
 5.77847- 4 1.17071- 4 1.22860- 5 6.24765- 7                       2145 4  2  659
 0.0    + 0 5.00000+ 6          0          0          10          02145 4  2  660
 6.66888- 1 4.92683- 1 2.94886- 1 1.29097- 1 3.24493- 2 1.13585- 22145 4  2  661
 1.89343- 3 3.51847- 4 5.11648- 5 4.10491- 6                       2145 4  2  662
 0.0    + 0 6.00000+ 6          0          0          12          02145 4  2  663
 7.01381- 1 5.28093- 1 3.32203- 1 1.57629- 1 5.02563- 2 1.91537- 22145 4  2  664
 4.57939- 3 8.19762- 4 1.57257- 4 3.13337- 5 3.40310- 6 1.57972- 72145 4  2  665
 0.0    + 0 7.00000+ 6          0          0          12          02145 4  2  666
 7.19536- 1 5.59121- 1 3.64336- 1 1.87773- 1 7.03550- 2 3.01334- 22145 4  2  667
 9.35080- 3 1.64166- 3 4.46666- 4 1.02429- 4 1.34460- 5 6.98576- 72145 4  2  668
 0.0    + 0 8.00000+ 6          0          0          12          02145 4  2  669
 7.26674- 1 5.86480- 1 3.94282- 1 2.20829- 1 9.38561- 2 4.59987- 22145 4  2  670
 1.68321- 2 3.23555- 3 1.11681- 3 2.80133- 4 4.33628- 5 2.47472- 62145 4  2  671
 0.0    + 0 9.00000+ 6          0          0          14          02145 4  2  672
 7.25938- 1 6.09075- 1 4.22133- 1 2.56812- 1 1.20833- 1 6.73042- 22145 4  2  673
 2.76041- 2 6.27046- 3 2.52240- 3 6.41076- 4 1.35574- 4 2.27027- 52145 4  2  674
 1.91971- 6 1.22438- 7                                             2145 4  2  675
 0.0    + 0 1.00000+ 7          0          0          14          02145 4  2  676
 7.17203- 1 6.22735- 1 4.44711- 1 2.92816- 1 1.49371- 1 9.25542- 22145 4  2  677
 4.19418- 2 1.12881- 2 4.97618- 3 1.33674- 3 2.99567- 4 5.85657- 52145 4  2  678
 5.42001- 6 3.74401- 7                                             2145 4  2  679
 0.0    + 0 1.10000+ 7          0          0          14          02145 4  2  680
 7.03091- 1 6.26218- 1 4.60870- 1 3.26391- 1 1.78101- 1 1.19820- 12145 4  2  681
 6.00265- 2 1.89289- 2 9.08807- 3 2.52269- 3 5.91110- 4 1.32923- 42145 4  2  682
 1.35628- 5 1.00338- 6                                             2145 4  2  683
 0.0    + 0 1.15000+ 7          0          0          14          02145 4  2  684
 6.94535- 1 6.23953- 1 4.66287- 1 3.41360- 1 1.92182- 1 1.33492- 12145 4  2  685
 7.03480- 2 2.39173- 2 1.19804- 2 3.34589- 3 7.99445- 4 1.91589- 42145 4  2  686
 2.06350- 5 1.57425- 6                                             2145 4  2  687
 0.0    + 0 1.20000+ 7          0          0          14          02145 4  2  688
 6.85330- 1 6.19103- 1 4.69800- 1 3.54574- 1 2.05807- 1 1.46734- 12145 4  2  689
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 3.06709- 5 2.40798- 6                                             2145 4  2  691
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 6.75794- 1 6.11821- 1 4.71262- 1 3.65586- 1 2.18677- 1 1.59168- 12145 4  2  693
 9.26189- 2 3.64476- 2 1.97088- 2 5.47060- 3 1.36172- 3 3.67165- 42145 4  2  694
 4.46225- 5 3.59897- 6                                             2145 4  2  695
 0.0    + 0 1.30000+ 7          0          0          14          02145 4  2  696
 6.66245- 1 6.02334- 1 4.70532- 1 3.74019- 1 2.30438- 1 1.70446- 12145 4  2  697
 1.03987- 1 4.39473- 2 2.45057- 2 6.73902- 3 1.71951- 3 4.90293- 42145 4  2  698
 6.36498- 5 5.26546- 6                                             2145 4  2  699
 0.0    + 0 1.35000+ 7          0          0          14          02145 4  2  700
 6.56980- 1 5.90941- 1 4.67539- 1 3.79644- 1 2.40776- 1 1.80325- 12145 4  2  701
 1.15108- 1 5.21515- 2 2.98015- 2 8.10636- 3 2.13055- 3 6.41521- 42145 4  2  702
 8.91584- 5 7.55481- 6                                             2145 4  2  703
 0.0    + 0 1.40000+ 7          0          0          16          02145 4  2  704
 6.48267- 1 5.78130- 1 4.62540- 1 3.82225- 1 2.49706- 1 1.88886- 12145 4  2  705
 1.26117- 1 6.10835- 2 3.57435- 2 9.63913- 3 2.53504- 3 7.25627- 42145 4  2  706
 2.06668- 4 3.23968- 5 3.66875- 6 3.02955- 7                       2145 4  2  707
 0.0    + 0 1.45000+ 7          0          0          16          02145 4  2  708
 6.40215- 1 5.64077- 1 4.55343- 1 3.82352- 1 2.56773- 1 1.95913- 12145 4  2  709
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 0.0    + 0 1.50000+ 7          0          0          16         02145 4  2  712
 6.32929- 1 5.49263- 1 4.46443- 1 3.80214- 1 2.62269- 1 2.01742- 12145 4  2  713
 1.45672- 1 7.97707- 2 4.76653- 2 1.27014- 2 3.63845- 3 1.13844- 32145 4  2  714
 3.51877- 4 6.14338- 5 7.29378- 6 6.33956- 7                      2145 4  2  715
 0.0    + 0 1.60000+ 7          0          0          16         02145 4  2  716
 6.20807- 1 5.18803- 1 4.25129- 1 3.70991- 1 2.69436- 1 2.10900- 12145 4  2  717
 1.62780- 1 9.89729- 2 5.96006- 2 1.60623- 2 5.11090- 3 1.73381- 32145 4  2  718
 5.71201- 4 1.09857- 4 1.36378- 5 1.24115- 6                      2145 4  2  719
 0.0    + 0 1.70000+ 7          0          0          16         02145 4  2  720
 6.12081- 1 4.89325- 1 4.01791- 1 3.58116- 1 2.73186- 1 2.18390- 12145 4  2  721
 1.77905- 1 1.17859- 1 7.12444- 2 2.00374- 2 7.13061- 3 2.57975- 32145 4  2  722
 8.90037- 4 1.86196- 4 2.41413- 5 2.29004- 6                      2145 4  2  723
 0.0    + 0 1.80000+ 7          0          0          16         02145 4  2  724
 6.07015- 1 4.62916- 1 3.79119- 1 3.44259- 1 2.75107- 1 2.25443- 12145 4  2  725
 1.91365- 1 1.35826- 1 8.26805- 2 2.50529- 2 9.88552- 3 3.74323- 32145 4  2  726
 1.33324- 3 2.99960- 4 4.06329- 5 4.00183- 6                      2145 4  2  727
 0.0    + 0 1.90000+ 7          0          0          16         02145 4  2  728
 6.05984- 1 4.41251- 1 3.59063- 1 3.31044- 1 2.76058- 1 2.32389- 12145 4  2  729
 2.03155- 1 1.52376- 1 9.41064- 2 3.14862- 2 1.35144- 2 5.27168- 32145 4  2  730
 1.91958- 3 4.60260- 4 6.52517- 5 6.64990- 6                      2145 4  2  731
 0.0    + 0 2.00000+ 7          0          0          18         02145 4  2  732
 6.09315- 1 4.25748- 1 3.43448- 1 3.19107- 1 2.76109- 1 2.38981- 12145 4  2  733
 2.13354- 1 1.67382- 1 1.05887- 1 3.97175- 2 1.80872- 2 6.99161- 32145 4  2  734
 2.41907- 3 8.21708- 4 1.97038- 4 3.21239- 5 4.20612- 6 3.73605- 72145 4  2  735
                                                                  2145 4  0  736
 2.10450+ 4 4.45697+ 1          0          2          0          02145 4 16  737
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 0.0    + 0 0.0    + 0          0          0          1          22145 4 16  739
          2          2          0          0          0          02145 4 16  740
 0.0    + 0 1.15816+ 7          0          0          1          22145 4 16  741
          2          2          0          0          0          02145 4 16  742
-1.00000+ 0 5.00000- 1 1.00000+ 0 5.00000- 1                      2145 4 16  743
 0.0    + 0 2.00000+ 7          0          0          1          22145 4 16  744
          2          2          0          0          0          02145 4 16  745
-1.00000+ 0 5.00000- 1 1.00000+ 0 5.00000- 1                      2145 4 16  746
                                                                  2145 4  0  747
 2.10450+ 4 4.45698+ 1          0          1          0          02145 4 51  748
 0.0    + 0 4.45698+ 1          0          2          0          02145 4 51  749
 0.0    + 0 0.0    + 0          0          0          1         392145 4 51  750
         39          2          0          0          0          02145 4 51  751
 0.0    + 0 1.26782+ 4          0          0          2          02145 4 51  752
 0.0    + 0 0.0    + 0                                            2145 4 51  753
 0.0    + 0 3.00000+ 4          0          0          2          02145 4 51  754
 0.0    + 0-7.00949- 5                                            2145 4 51  755
 0.0    + 0 1.00000+ 5          0          0          2          02145 4 51  756
 0.0    + 0-1.85996- 3                                            2145 4 51  757
 0.0    + 0 3.84845+ 5          0          0          4          02145 4 51  758
 0.0    + 0-9.01334- 3 0.0    + 0-1.56573- 5                      2145 4 51  759
 0.0    + 0 5.00000+ 5          0          0          4          02145 4 51  760
 0.0    + 0-1.17587- 2 0.0    + 0-3.36652- 5                      2145 4 51  761
 0.0    + 0 5.55081+ 5          0          0          4          02145 4 51  762
 0.0    + 0-1.27160- 2 0.0    + 0-4.36378- 5                      2145 4 51  763
 0.0    + 0 7.36359+ 5          0          0          6          02145 4 51  764
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 0.0     + 0-1.60636- 2 0.0     + 0-1.62730- 4 0.0     + 0-2.36805- 62145 4 51  767
 0.0     + 0 9.96365+ 5           0           0           6           02145 4 51  768
 0.0     + 0-1.62719- 2 0.0     + 0-1.75372- 4 0.0     + 0-2.78082- 62145 4 51  769
 0.0     + 0 1.00000+ 6           0           0           6           02145 4 51  770
 0.0     + 0-1.58989- 2 0.0     + 0-1.76257- 4 0.0     + 0-2.97115- 62145 4 51  771
 0.0     + 0 1.26414+ 6           0           0           6           02145 4 51  772
 0.0     + 0-1.65535- 2 0.0     + 0-2.70823- 4 0.0     + 0-5.69522- 62145 4 51  773
 0.0     + 0 1.33244+ 6           0           0           6           02145 4 51  774
 0.0     + 0-1.70280- 2 0.0     + 0-2.61950- 4 0.0     + 0-3.57155- 62145 4 51  775
 0.0     + 0 1.46556+ 6           0           0           6           02145 4 51  776
 0.0     + 0-1.78651- 2 0.0     + 0-3.22968- 4 0.0     + 0-3.13514- 62145 4 51  777
 0.0     + 0 1.69878+ 6           0           0           6           02145 4 51  778
 0.0     + 0-1.84120- 2 0.0     + 0-4.22798- 4 0.0     + 0-4.23323- 62145 4 51  779
 0.0     + 0 1.84100+ 6           0           0           6           02145 4 51  780
 0.0     + 0-1.87216- 2 0.0     + 0-4.53894- 4 0.0     + 0-4.91126- 62145 4 51  781
 0.0     + 0 1.94263+ 6           0           0           6           02145 4 51  782
 0.0     + 0-1.87657- 2 0.0     + 0-5.07908- 4 0.0     + 0-5.88723- 62145 4 51  783
 0.0     + 0 2.00000+ 6           0           0           6           02145 4 51  784
 0.0     + 0-1.87942- 2 0.0     + 0-5.37322- 4 0.0     + 0-6.42954- 62145 4 51  785
 0.0     + 0 3.00000+ 6           0           0           8           02145 4 51  786
 0.0     + 0-1.77875- 2 0.0     + 0-1.12352- 3 0.0     + 0-3.55008- 52145 4 51  787
 0.0     + 0-3.60976- 8                                                 2145 4 51  788
 0.0     + 0 4.00000+ 6           0           0           8           02145 4 51  789
 0.0     + 0-1.40650- 2 0.0     + 0-1.83972- 3 0.0     + 0-1.43219- 42145 4 51  790
 0.0     + 0-2.72878- 6                                                 2145 4 51  791
 0.0     + 0 5.00000+ 6           0           0           8           02145 4 51  792
 0.0     + 0-8.71518- 3 0.0     + 0-2.71245- 3 0.0     + 0-3.53338- 42145 4 51  793
 0.0     + 0-1.23527- 5                                                 2145 4 51  794
 0.0     + 0 6.00000+ 6           0           0          10           02145 4 51  795
 0.0     + 0-2.92764- 3 0.0     + 0-3.63795- 3 0.0     + 0-6.11388- 42145 4 51  796
 0.0     + 0-3.62470- 5 0.0     + 0-4.82727- 8                         2145 4 51  797
 0.0     + 0 7.00000+ 6           0           0          10           02145 4 51  798
 0.0     + 0 2.94583- 3 0.0     + 0-4.46596- 3 0.0     + 0-8.42964- 42145 4 51  799
 0.0     + 0-7.92907- 5 0.0     + 0-2.19442- 7                         2145 4 51  800
 0.0     + 0 8.00000+ 6           0           0          10           02145 4 51  801
 0.0     + 0 9.37514- 3 0.0     + 0-5.04410- 3 0.0     + 0-1.00261- 32145 4 51  802
 0.0     + 0-1.43262- 4 0.0     + 0-8.12697- 7                         2145 4 51  803
 0.0     + 0 9.00000+ 6           0           0          12           02145 4 51  804
 0.0     + 0 1.65481- 2 0.0     + 0-5.22443- 3 0.0     + 0-1.06761- 32145 4 51  805
 0.0     + 0-2.23698- 4 0.0     + 0-2.45315- 6 0.0     + 0-1.14506-102145 4 51  806
 0.0     + 0 1.00000+ 7           0           0          12           02145 4 51  807
 0.0     + 0 2.41532- 2 0.0     + 0-5.04261- 3 0.0     + 0-1.05693- 32145 4 51  808
 0.0     + 0-3.12588- 4 0.0     + 0-6.22012- 6 0.0     + 0-1.25797- 82145 4 51  809
 0.0     + 0 1.10000+ 7           0           0          12           02145 4 51  810
 0.0     + 0 3.14665- 2 0.0     + 0-4.71104- 3 0.0     + 0-1.02296- 32145 4 51  811
 0.0     + 0-4.03630- 4 0.0     + 0-1.35811- 5 0.0     + 0-3.01989- 82145 4 51  812
 0.0     + 0 1.15000+ 7           0           0          12           02145 4 51  813
 0.0     + 0 3.47589- 2 0.0     + 0-4.55023- 3 0.0     + 0-1.01341- 32145 4 51  814
 0.0     + 0-4.47868- 4 0.0     + 0-1.91877- 5 0.0     + 0-4.52914- 82145 4 51  815
 0.0     + 0 1.20000+ 7           0           0          12           02145 4 51  816
 0.0     + 0 3.77017- 2 0.0     + 0-4.41494- 3 0.0     + 0-1.01606- 32145 4 51  817
 0.0     + 0-4.90338- 4 0.0     + 0-2.64120- 5 0.0     + 0-6.70225- 82145 4 51  818
 0.0     + 0 1.25000+ 7           0           0          12           02145 4 51  819
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 4.02073- 2 0.0     + 0-4.31621- 3 0.0     + 0-1.03383- 32145 4 51  820
 0.0     + 0-5.30059- 4 0.0     + 0-3.54508- 5 0.0     + 0-9.81046- 82145 4 51  821
 0.0     + 0 1.30000+ 7           0           0           12          02145 4 51  822
 0.0     + 0 4.22657- 2 0.0     + 0-4.25561- 3 0.0     + 0-1.06905- 32145 4 51  823
 0.0     + 0-5.66649- 4 0.0     + 0-4.64891- 5 0.0     + 0-1.42529- 72145 4 51  824
 0.0     + 0 1.35000+ 7           0           0           12          02145 4 51  825
 0.0     + 0 4.39048- 2 0.0     + 0-4.22932- 3 0.0     + 0-1.12270- 32145 4 51  826
 0.0     + 0-6.00017- 4 0.0     + 0-5.96715- 5 0.0     + 0-2.05966- 72145 4 51  827
 0.0     + 0 1.40000+ 7           0           0           14          02145 4 51  828
 0.0     + 0 4.51729- 2 0.0     + 0-4.23013- 3 0.0     + 0-1.19449- 32145 4 51  829
 0.0     + 0-6.30242- 4 0.0     + 0-7.50067- 5 0.0     + 0-2.96779- 72145 4 51  830
 0.0     + 0 2.22541-11                                                 2145 4 51  831
 0.0     + 0 1.45000+ 7           0           0           14          02145 4 51  832
 0.0     + 0 4.61653- 2 0.0     + 0-4.23935- 3 0.0     + 0-1.28019- 32145 4 51  833
 0.0     + 0-6.56946- 4 0.0     + 0-9.23502- 5 0.0     + 0-4.30004- 72145 4 51  834
 0.0     + 0-2.04480- 9                                                 2145 4 51  835
 0.0     + 0 1.50000+ 7           0           0           14          02145 4 51  836
 0.0     + 0 4.69268- 2 0.0     + 0-4.26662- 3 0.0     + 0-1.38177- 32145 4 51  837
 0.0     + 0-6.81570- 4 0.0     + 0-1.12062- 4 0.0     + 0-6.11604- 72145 4 51  838
 0.0     + 0-2.98918- 9                                                 2145 4 51  839
 0.0     + 0 1.60000+ 7           0           0           14          02145 4 51  840
 0.0     + 0 4.81908- 2 0.0     + 0-4.30984- 3 0.0     + 0-1.61696- 32145 4 51  841
 0.0     + 0-7.25494- 4 0.0     + 0-1.57586- 4 0.0     + 0-1.21037- 62145 4 51  842
 0.0     + 0-6.24714- 9                                                 2145 4 51  843
 0.0     + 0 1.70000+ 7           0           0           14          02145 4 51  844
 0.0     + 0 4.96040- 2 0.0     + 0-4.29070- 3 0.0     + 0-1.87533- 32145 4 51  845
 0.0     + 0-7.65001- 4 0.0     + 0-2.09908- 4 0.0     + 0-2.30679- 62145 4 51  846
 0.0     + 0-1.26014- 8                                                 2145 4 51  847
 0.0     + 0 1.80000+ 7           0           0           14          02145 4 51  848
 0.0     + 0 5.15659- 2 0.0     + 0-4.17563- 3 0.0     + 0-2.13521- 32145 4 51  849
 0.0     + 0-8.02170- 4 0.0     + 0-2.66698- 4 0.0     + 0-4.20230- 62145 4 51  850
 0.0     + 0-2.44391- 8                                                 2145 4 51  851
 0.0     + 0 1.90000+ 7           0           0           14          02145 4 51  852
 0.0     + 0 5.42193- 2 0.0     + 0-3.95856- 3 0.0     + 0-2.37948- 32145 4 51  853
 0.0     + 0-8.37774- 4 0.0     + 0-3.24945- 4 0.0     + 0-7.28619- 62145 4 51  854
 0.0     + 0-4.55510- 8                                                 2145 4 51  855
 0.0     + 0 2.00000+ 7           0           0           16          02145 4 51  856
 0.0     + 0 5.74788- 2 0.0     + 0-3.65598- 3 0.0     + 0-2.59702- 32145 4 51  857
 0.0     + 0-8.71978- 4 0.0     + 0-3.81287- 4 0.0     + 0-1.19816- 52145 4 51  858
 0.0     + 0-8.22792- 8 0.0     + 0 7.46326-11                          2145 4 51  859
                                                                        2145 4  0  860
2.10450+ 4 4.45698+ 1           0           1           0           02145 4 52  861
 0.0     + 0 4.45698+ 1           0           2           0           02145 4 52  862
 0.0     + 0 0.0     + 0          0           0           1          362145 4 52  863
          36          2           0           0           0           02145 4 52  864
 0.0     + 0 3.84845+ 5           0           0           2           02145 4 52  865
 0.0     + 0 0.0     + 0                                                2145 4 52  866
 0.0     + 0 5.00000+ 5           0           0           4           02145 4 52  867
 0.0     + 0-8.93789- 3 0.0     + 0-6.69561- 5                          2145 4 52  868
 0.0     + 0 5.55081+ 5           0           0           4           02145 4 52  869
 0.0     + 0-9.97876- 3 0.0     + 0-1.36727- 4                          2145 4 52  870
 0.0     + 0 7.36359+ 5           0           0           6           02145 4 52  871
 0.0     + 0-9.43809- 3 0.0     + 0-4.78758- 4 0.0     + 0 6.35498- 92145 4 52  872
 0.0     + 0 9.60170+ 5           0           0           6           02145 4 52  873
 0.0     + 0-1.12384- 2 0.0     + 0-9.04677- 4 0.0     + 0 2.26875- 82145 4 52  874
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 9.96365+ 5          0          0          6          02145 4 52  875
 0.0    + 0-1.15842- 2 0.0    + 0-9.78641- 4 0.0    + 0 2.59210- 82145 4 52  876
 0.0    + 0 1.00000+ 6          0          0          6          02145 4 52  877
 0.0    + 0-1.13606- 2 0.0    + 0-9.93811- 4 0.0    + 0 3.29090- 82145 4 52  878
 0.0    + 0 1.26414+ 6          0          0          8          02145 4 52  879
 0.0    + 0-1.36922- 2 0.0    + 0-1.44007- 3 0.0    + 0-1.13763- 72145 4 52  880
 0.0    + 0 2.77748- 8                                            2145 4 52  881
 0.0    + 0 1.33244+ 6          0          0          8          02145 4 52  882
 0.0    + 0-1.44516- 2 0.0    + 0-1.53904- 3 0.0    + 0-1.35797- 92145 4 52  883
 0.0    + 0 6.32468- 9                                            2145 4 52  884
 0.0    + 0 1.46556+ 6          0          0          8          02145 4 52  885
 0.0    + 0-1.58742- 2 0.0    + 0-1.71498- 3 0.0    + 0-4.80173- 82145 4 52  886
 0.0    + 0 1.04805- 8                                            2145 4 52  887
 0.0    + 0 1.69878+ 6          0          0          8          02145 4 52  888
 0.0    + 0-1.77976- 2 0.0    + 0-1.89957- 3 0.0    + 0-1.65480- 72145 4 52  889
 0.0    + 0 2.09193- 8                                            2145 4 52  890
 0.0    + 0 1.84100+ 6          0          0          8          02145 4 52  891
 0.0    + 0-1.85758- 2 0.0    + 0-1.90705- 3 0.0    + 0-2.84777- 72145 4 52  892
 0.0    + 0 4.15501- 8                                            2145 4 52  893
 0.0    + 0 1.94263+ 6          0          0          8          02145 4 52  894
 0.0    + 0-1.90669- 2 0.0    + 0-1.93878- 3 0.0    + 0-4.14436- 72145 4 52  895
 0.0    + 0 5.78808- 8                                            2145 4 52  896
 0.0    + 0 2.00000+ 6          0          0          8          02145 4 52  897
 0.0    + 0-1.92432- 2 0.0    + 0-1.93172- 3 0.0    + 0-5.03935- 72145 4 52  898
 0.0    + 0 6.93407- 8                                            2145 4 52  899
 0.0    + 0 3.00000+ 6          0          0          8          02145 4 52  900
 0.0    + 0-2.03256- 2 0.0    + 0-1.67740- 3 0.0    + 0-6.89750- 62145 4 52  901
 0.0    + 0 7.85686- 7                                            2145 4 52  902
 0.0    + 0 4.00000+ 6          0          0         10          02145 4 52  903
 0.0    + 0-1.65599- 2 0.0    + 0-1.29931- 3 0.0    + 0-4.86434- 52145 4 52  904
 0.0    + 0 4.92618- 6 0.0    + 0 2.05288- 9                      2145 4 52  905
 0.0    + 0 5.00000+ 6          0          0         10          02145 4 52  906
 0.0    + 0-9.78891- 3 0.0    + 0-1.28879- 3 0.0    + 0-1.78714- 42145 4 52  907
 0.0    + 0 1.56506- 5 0.0    + 0 1.68608- 8                      2145 4 52  908
 0.0    + 0 6.00000+ 6          0          0         12          02145 4 52  909
 0.0    + 0-3.05191- 3 0.0    + 0-1.83077- 3 0.0    + 0-3.95154- 42145 4 52  910
 0.0    + 0 2.79050- 5 0.0    + 0 1.03775- 7 0.0    + 0 1.51744-102145 4 52  911
 0.0    + 0 7.00000+ 6          0          0         12          02145 4 52  912
 0.0    + 0 2.13196- 3 0.0    + 0-2.78538- 3 0.0    + 0-6.44083- 42145 4 52  913
 0.0    + 0 3.33561- 5 0.0    + 0 5.06079- 7 0.0    + 0 8.62465-102145 4 52  914
 0.0    + 0 8.00000+ 6          0          0         12          02145 4 52  915
 0.0    + 0 6.21182- 3 0.0    + 0-3.88184- 3 0.0    + 0-8.75429- 42145 4 52  916
 0.0    + 0 2.80062- 5 0.0    + 0 1.99842- 6 0.0    + 0 3.75601- 92145 4 52  917
 0.0    + 0 9.00000+ 6          0          0         12          02145 4 52  918
 0.0    + 0 9.67136- 3 0.0    + 0-4.80873- 3 0.0    + 0-1.04882- 32145 4 52  919
 0.0    + 0 7.17136- 6 0.0    + 0 6.44165- 6 0.0    + 0 1.29588- 82145 4 52  920
 0.0    + 0 1.00000+ 7          0          0         14          02145 4 52  921
 0.0    + 0 1.32418- 2 0.0    + 0-5.38915- 3 0.0    + 0-1.17928- 32145 4 52  922
 0.0    + 0-3.95926- 5 0.0    + 0 1.74626- 5 0.0    + 0 3.72860- 82145 4 52  923
 0.0    + 0 1.65313-10                                            2145 4 52  924
 0.0    + 0 1.10000+ 7          0          0         14          02145 4 52  925
 0.0    + 0 1.79361- 2 0.0    + 0-5.66352- 3 0.0    + 0-1.34319- 32145 4 52  926
 0.0    + 0-1.30535- 4 0.0    + 0 4.03152- 5 0.0    + 0 9.55376- 82145 4 52  927
 0.0    + 0 4.72131-10                                            2145 4 52  928
 0.0    + 0 1.15000+ 7          0          0         14          02145 4 52  929
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 2.09003- 2 0.0    + 0-5.73933- 3 0.0    + 0-1.46360- 32145 4 52  930
 0.0    + 0-1.97717- 4 0.0    + 0 5.74564- 5 0.0    + 0 1.47726- 72145 4 52  931
 0.0    + 0 7.63268-10                                            2145 4 52  932
 0.0    + 0 1.20000+ 7          0          0          14         02145 4 52  933
 0.0    + 0 2.42593- 2 0.0    + 0-5.80674- 3 0.0    + 0-1.61653- 32145 4 52  934
 0.0    + 0-2.79724- 4 0.0    + 0 7.82444- 5 0.0    + 0 2.24110- 72145 4 52  935
 0.0    + 0 1.20536- 9                                            2145 4 52  936
 0.0    + 0 1.25000+ 7          0          0          14         02145 4 52  937
 0.0    + 0 2.78577- 2 0.0    + 0-5.88272- 3 0.0    + 0-1.79708- 32145 4 52  938
 0.0    + 0-3.73559- 4 0.0    + 0 1.01514- 4 0.0    + 0 3.33882- 72145 4 52  939
 0.0    + 0 1.86218- 9                                            2145 4 52  940
 0.0    + 0 1.30000+ 7          0          0          14         02145 4 52  941
 0.0    + 0 3.15141- 2 0.0    + 0-5.97444- 3 0.0    + 0-1.99431- 32145 4 52  942
 0.0    + 0-4.74146- 4 0.0    + 0 1.25447- 4 0.0    + 0 4.89815- 72145 4 52  943
 0.0    + 0 2.82481- 9                                            2145 4 52  944
 0.0    + 0 1.35000+ 7          0          0          14         02145 4 52  945
 0.0    + 0 3.50375- 2 0.0    + 0-6.07949- 3 0.0    + 0-2.19335- 32145 4 52  946
 0.0    + 0-5.75295- 4 0.0    + 0 1.47911- 4 0.0    + 0 7.09531- 72145 4 52  947
 0.0    + 0 4.22230- 9                                            2145 4 52  948
 0.0    + 0 1.40000+ 7          0          0          14         02145 4 52  949
 0.0    + 0 3.82597- 2 0.0    + 0-6.18899- 3 0.0    + 0-2.37889- 32145 4 52  950
 0.0    + 0-6.70992- 4 0.0    + 0 1.66899- 4 0.0    + 0 1.01412- 62145 4 52  951
 0.0    + 0 6.23361- 9                                            2145 4 52  952
 0.0    + 0 1.45000+ 7          0          0          16         02145 4 52  953
 0.0    + 0 4.10877- 2 0.0    + 0-6.29043- 3 0.0    + 0-2.53904- 32145 4 52  954
 0.0    + 0-7.56632- 4 0.0    + 0 1.81013- 4 0.0    + 0 1.43304- 62145 4 52  955
 0.0    + 0 8.99112- 9 0.0    + 0 7.38698-11                      2145 4 52  956
 0.0    + 0 1.50000+ 7          0          0          16         02145 4 52  957
 0.0    + 0 4.34869- 2 0.0    + 0-6.38112- 3 0.0    + 0-2.66983- 32145 4 52  958
 0.0    + 0-8.30068- 4 0.0    + 0 1.89587- 4 0.0    + 0 2.01781- 62145 4 52  959
 0.0    + 0 1.30222- 8 0.0    + 0 1.11264-10                      2145 4 52  960
 0.0    + 0 1.60000+ 7          0          0          16         02145 4 52  961
 0.0    + 0 4.71817- 2 0.0    + 0-6.50119- 3 0.0    + 0-2.84566- 32145 4 52  962
 0.0    + 0-9.39466- 4 0.0    + 0 1.90440- 4 0.0    + 0 3.90227- 62145 4 52  963
 0.0    + 0 2.66930- 8 0.0    + 0 2.45457-10                      2145 4 52  964
 0.0    + 0 1.70000+ 7          0          0          16         02145 4 52  965
 0.0    + 0 4.98522- 2 0.0    + 0-6.52968- 3 0.0    + 0-2.93814- 32145 4 52  966
 0.0    + 0-1.00666- 3 0.0    + 0 1.72735- 4 0.0    + 0 7.25802- 62145 4 52  967
 0.0    + 0 5.29884- 8 0.0    + 0 5.21334-10                      2145 4 52  968
 0.0    + 0 1.80000+ 7          0          0          16         02145 4 52  969
 0.0    + 0 5.20644- 2 0.0    + 0-6.46870- 3 0.0    + 0-2.99472- 32145 4 52  970
 0.0    + 0-1.04594- 3 0.0    + 0 1.40771- 4 0.0    + 0 1.28593- 52145 4 52  971
 0.0    + 0 1.01550- 7 0.0    + 0 1.06376- 9                      2145 4 52  972
 0.0    + 0 1.90000+ 7          0          0          16         02145 4 52  973
 0.0    + 0 5.42344- 2 0.0    + 0-6.32291- 3 0.0    + 0-3.05508- 32145 4 52  974
 0.0    + 0-1.07117- 3 0.0    + 0 9.73104- 5 0.0    + 0 2.15067- 52145 4 52  975
 0.0    + 0 1.87504- 7 0.0    + 0 2.08334- 9                      2145 4 52  976
 0.0    + 0 2.00000+ 7          0          0          16         02145 4 52  977
 0.0    + 0 5.65836- 2 0.0    + 0-6.09619- 3 0.0    + 0-3.14435- 32145 4 52  978
 0.0    + 0-1.09319- 3 0.0    + 0 4.36361- 5 0.0    + 0 3.37156- 52145 4 52  979
 0.0    + 0 3.31509- 7 0.0    + 0 3.91862- 9                      2145 4 52  980
                                                                   2145 4  0  981
 2.10450+ 4 4.45698+ 1          0          1           0         02145 4 53  982
 0.0    + 0 4.45698+ 1          0          2           0         02145 4 53  983
 0.0    + 0 0.0    + 0          0          0           1        342145 4 53  984
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........10........20........30........40........50........60......MAT MF MT  SEQ
         34          2          0          0          0          02145 4 53  985
 0.0    + 0 5.55081+ 5          0          0          2          02145 4 53  986
 0.0    + 0 0.0    + 0                                             2145 4 53  987
 0.0    + 0 7.36359+ 5          0          0          4          02145 4 53  988
 0.0    + 0 1.34045- 3 0.0    + 0-1.45936- 5                       2145 4 53  989
 0.0    + 0 9.60170+ 5          0          0          6          02145 4 53  990
 0.0    + 0 4.47259- 3 0.0    + 0-6.17362- 5 0.0    + 0-1.47646- 82145 4 53  991
 0.0    + 0 9.96365+ 5          0          0          6          02145 4 53  992
 0.0    + 0 5.01126- 3 0.0    + 0-7.06901- 5 0.0    + 0-2.03505- 82145 4 53  993
 0.0    + 0 1.00000+ 6          0          0          6          02145 4 53  994
 0.0    + 0 5.32639- 3 0.0    + 0-7.54118- 5 0.0    + 0-2.16589- 82145 4 53  995
 0.0    + 0 1.26414+ 6          0          0          6          02145 4 53  996
 0.0    + 0 9.44275- 3 0.0    + 0-1.53624- 4 0.0    + 0-1.26633- 72145 4 53  997
 0.0    + 0 1.33244+ 6          0          0          6          02145 4 53  998
 0.0    + 0 9.57672- 3 0.0    + 0-1.56026- 4 0.0    + 0 4.18857- 72145 4 53  999
 0.0    + 0 1.46556+ 6          0          0          6          02145 4 53 1000
 0.0    + 0 9.91654- 3 0.0    + 0-1.73095- 4 0.0    + 0 5.08092- 72145 4 53 1001
 0.0    + 0 1.69878+ 6          0          0          6          02145 4 53 1002
 0.0    + 0 8.29117- 3 0.0    + 0-1.64706- 4 0.0    + 0 9.18396- 72145 4 53 1003
 0.0    + 0 1.84100+ 6          0          0          6          02145 4 53 1004
 0.0    + 0 8.94981- 3 0.0    + 0-1.81545- 4 0.0    + 0 1.21525- 62145 4 53 1005
 0.0    + 0 1.94263+ 6          0          0          6          02145 4 53 1006
 0.0    + 0 9.30542- 3 0.0    + 0-1.96816- 4 0.0    + 0 1.51800- 62145 4 53 1007
 0.0    + 0 2.00000+ 6          0          0          6          02145 4 53 1008
 0.0    + 0 9.27810- 3 0.0    + 0-2.01832- 4 0.0    + 0 1.67857- 62145 4 53 1009
 0.0    + 0 3.00000+ 6          0          0          8          02145 4 53 1010
 0.0    + 0 1.02197- 2 0.0    + 0-2.60895- 4 0.0    + 0 6.81342- 62145 4 53 1011
 0.0    + 0-4.36214- 8                                             2145 4 53 1012
 0.0    + 0 4.00000+ 6          0          0          8          02145 4 53 1013
 0.0    + 0 1.22490- 2 0.0    + 0-4.45737- 5 0.0    + 0 2.62729- 52145 4 53 1014
 0.0    + 0 1.96523- 7                                             2145 4 53 1015
 0.0    + 0 5.00000+ 6          0          0          8          02145 4 53 1016
 0.0    + 0 1.64309- 2 0.0    + 0 4.93507- 4 0.0    + 0 6.35103- 52145 4 53 1017
 0.0    + 0 1.00553- 6                                             2145 4 53 1018
 0.0    + 0 6.00000+ 6          0          0         10          02145 4 53 1019
 0.0    + 0 2.19529- 2 0.0    + 0 1.19863- 3 0.0    + 0 9.14712- 52145 4 53 1020
 0.0    + 0 3.47306- 6 0.0    + 0 4.26326- 9                       2145 4 53 1021
 0.0    + 0 7.00000+ 6          0          0         10          02145 4 53 1022
 0.0    + 0 2.76750- 2 0.0    + 0 1.83974- 3 0.0    + 0 6.87882- 52145 4 53 1023
 0.0    + 0 8.90243- 6 0.0    + 0 2.02054- 8                       2145 4 53 1024
 0.0    + 0 8.00000+ 6          0          0         10          02145 4 53 1025
 0.0    + 0 3.31962- 2 0.0    + 0 2.34384- 3 0.0    + 0-6.60978- 62145 4 53 1026
 0.0    + 0 1.86505- 5 0.0    + 0 8.49355- 8                       2145 4 53 1027
 0.0    + 0 9.00000+ 6          0          0         12          02145 4 53 1028
 0.0    + 0 3.81284- 2 0.0    + 0 2.74951- 3 0.0    + 0-8.62007- 52145 4 53 1029
 0.0    + 0 3.31531- 5 0.0    + 0 2.83046- 7 0.0    + 0-8.67073-102145 4 53 1030
 0.0    + 0 1.00000+ 7          0          0         12          02145 4 53 1031
 0.0    + 0 4.21879- 2 0.0    + 0 3.12258- 3 0.0    + 0-1.12793- 42145 4 53 1032
 0.0    + 0 5.10858- 5 0.0    + 0 7.67261- 7 0.0    + 0 1.15751- 92145 4 53 1033
 0.0    + 0 1.10000+ 7          0          0         12          02145 4 53 1034
 0.0    + 0 4.55679- 2 0.0    + 0 3.53300- 3 0.0    + 0-6.11678- 52145 4 53 1035
 0.0    + 0 7.12191- 5 0.0    + 0 1.68650- 6 0.0    + 0 2.61257- 92145 4 53 1036
 0.0    + 0 1.15000+ 7          0          0         12          02145 4 53 1037
 0.0    + 0 4.70417- 2 0.0    + 0 3.75311- 3 0.0    + 0-1.05144- 52145 4 53 1038
 0.0    + 0 8.14812- 5 0.0    + 0 2.37068- 6 0.0    + 0 3.79298- 92145 4 53 1039
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 1.20000+ 7          0          0          12          02145 4 53 1040
 0.0    + 0 4.83873- 2 0.0    + 0 3.97787- 3 0.0    + 0 5.11811- 52145 4 53 1041
 0.0    + 0 9.14062- 5 0.0    + 0 3.24077- 6 0.0    + 0 5.45540- 92145 4 53 1042
 0.0    + 0 1.25000+ 7          0          0          12          02145 4 53 1043
 0.0    + 0 4.95699- 2 0.0    + 0 4.19761- 3 0.0    + 0 1.19042- 42145 4 53 1044
 0.0    + 0 1.00464- 4 0.0    + 0 4.31237- 6 0.0    + 0 7.78811- 92145 4 53 1045
 0.0    + 0 1.30000+ 7          0          0          12          02145 4 53 1046
 0.0    + 0 5.05990- 2 0.0    + 0 4.40746- 3 0.0    + 0 1.89413- 42145 4 53 1047
 0.0    + 0 1.08242- 4 0.0    + 0 5.60825- 6 0.0    + 0 1.10934- 82145 4 53 1048
 0.0    + 0 1.35000+ 7          0          0          12          02145 4 53 1049
 0.0    + 0 5.14914- 2 0.0    + 0 4.60393- 3 0.0    + 0 2.59665- 42145 4 53 1050
 0.0    + 0 1.14414- 4 0.0    + 0 7.15460- 6 0.0    + 0 1.58160- 82145 4 53 1051
 0.0    + 0 1.40000+ 7          0          0          14          02145 4 53 1052
 0.0    + 0 5.22605- 2 0.0    + 0 4.78362- 3 0.0    + 0 3.27567- 42145 4 53 1053
 0.0    + 0 1.18729- 4 0.0    + 0 8.95154- 6 0.0    + 0 2.12900- 82145 4 53 1054
 0.0    + 0-3.57509-10                                             2145 4 53 1055
 0.0    + 0 1.45000+ 7          0          0          14          02145 4 53 1056
 0.0    + 0 5.29211- 2 0.0    + 0 4.94548- 3 0.0    + 0 3.93212- 42145 4 53 1057
 0.0    + 0 1.21158- 4 0.0    + 0 1.10662- 5 0.0    + 0 3.03449- 82145 4 53 1058
 0.0    + 0-5.21878-10                                             2145 4 53 1059
 0.0    + 0 1.50000+ 7          0          0          14          02145 4 53 1060
 0.0    + 0 5.35400- 2 0.0    + 0 5.09623- 3 0.0    + 0 4.57246- 42145 4 53 1061
 0.0    + 0 1.22119- 4 0.0    + 0 1.35115- 5 0.0    + 0 4.60529- 82145 4 53 1062
 0.0    + 0 4.72990-11                                             2145 4 53 1063
 0.0    + 0 1.60000+ 7          0          0          14          02145 4 53 1064
 0.0    + 0 5.47302- 2 0.0    + 0 5.36167- 3 0.0    + 0 5.84357- 42145 4 53 1065
 0.0    + 0 1.20115- 4 0.0    + 0 1.94850- 5 0.0    + 0 9.30671- 82145 4 53 1066
 0.0    + 0 7.48383-11                                             2145 4 53 1067
 0.0    + 0 1.70000+ 7          0          0          14          02145 4 53 1068
 0.0    + 0 5.61066- 2 0.0    + 0 5.60689- 3 0.0    + 0 7.19410- 42145 4 53 1069
 0.0    + 0 1.15940- 4 0.0    + 0 2.68961- 5 0.0    + 0 1.84125- 72145 4 53 1070
 0.0    + 0 1.30425-10                                             2145 4 53 1071
 0.0    + 0 1.80000+ 7          0          0          14          02145 4 53 1072
 0.0    + 0 5.78459- 2 0.0    + 0 5.85023- 3 0.0    + 0 8.70104- 42145 4 53 1073
 0.0    + 0 1.12524- 4 0.0    + 0 3.54520- 5 0.0    + 0 3.51918- 72145 4 53 1074
 0.0    + 0 2.59881-10                                             2145 4 53 1075
 0.0    + 0 1.90000+ 7          0          0          14          02145 4 53 1076
 0.0    + 0 5.99972- 2 0.0    + 0 6.09762- 3 0.0    + 0 1.03777- 32145 4 53 1077
 0.0    + 0 1.11717- 4 0.0    + 0 4.44747- 5 0.0    + 0 6.43908- 72145 4 53 1078
 0.0    + 0 5.73650-10                                             2145 4 53 1079
 0.0    + 0 2.00000+ 7          0          0          16          02145 4 53 1080
 0.0    + 0 6.24826- 2 0.0    + 0 6.34356- 3 0.0    + 0 1.21673- 32145 4 53 1081
 0.0    + 0 1.14078- 4 0.0    + 0 5.29948- 5 0.0    + 0 1.10802- 62145 4 53 1082
 0.0    + 0 5.36386-10 0.0    + 0-2.34255-10                       2145 4 53 1083
                                                                   2145 4  0 1084
 2.10450+ 4 4.45698+ 1          0          1           0          02145 4 54 1085
 0.0    + 0 4.45698+ 1          0          2           0          02145 4 54 1086
 0.0    + 0 0.0    + 0          0          0           1         332145 4 54 1087
         33          2          0          0           0          02145 4 54 1088
 0.0    + 0 7.36359+ 5          0          0           2          02145 4 54 1089
 0.0    + 0 0.0    + 0                                              2145 4 54 1090
 0.0    + 0 9.60170+ 5          0          0           4          02145 4 54 1091
 0.0    + 0 2.16972- 4 0.0    + 0-2.79390- 4                       2145 4 54 1092
 0.0    + 0 9.96365+ 5          0          0           4          02145 4 54 1093
 0.0    + 0 5.50534- 4 0.0    + 0-3.71518- 4                       2145 4 54 1094
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 1.00000+ 6           0           0           4          02145 4 54 1095
 0.0     + 0 7.63519- 4 0.0     + 0-3.89563- 4                        2145 4 54 1096
 0.0     + 0 1.26414+ 6           0           0           6          02145 4 54 1097
 0.0     + 0 4.28031- 3 0.0     + 0-1.21961- 3 0.0     + 0-3.75661- 72145 4 54 1098
 0.0     + 0 1.33244+ 6           0           0           6          02145 4 54 1099
 0.0     + 0 3.37186- 3 0.0     + 0-1.08832- 3 0.0     + 0-2.69877- 72145 4 54 1100
 0.0     + 0 1.46556+ 6           0           0           6          02145 4 54 1101
 0.0     + 0 4.74375- 3 0.0     + 0-1.41874- 3 0.0     + 0-2.69923- 72145 4 54 1102
 0.0     + 0 1.69878+ 6           0           0           8          02145 4 54 1103
 0.0     + 0 6.97424- 3 0.0     + 0-1.91595- 3 0.0     + 0-8.93512- 72145 4 54 1104
 0.0     + 0-1.51248- 7                                               2145 4 54 1105
 0.0     + 0 1.84100+ 6           0           0           8          02145 4 54 1106
 0.0     + 0 7.22216- 3 0.0     + 0-2.01109- 3 0.0     + 0-1.14530- 62145 4 54 1107
 0.0     + 0-2.12302- 7                                               2145 4 54 1108
 0.0     + 0 1.94263+ 6           0           0           8          02145 4 54 1109
 0.0     + 0 7.93519- 3 0.0     + 0-2.15584- 3 0.0     + 0-1.32179- 62145 4 54 1110
 0.0     + 0-2.57784- 7                                               2145 4 54 1111
 0.0     + 0 2.00000+ 6           0           0           8          02145 4 54 1112
 0.0     + 0 8.22690- 3 0.0     + 0-2.20265- 3 0.0     + 0-1.42360- 62145 4 54 1113
 0.0     + 0-2.85573- 7                                               2145 4 54 1114
 0.0     + 0 3.00000+ 6           0           0           8          02145 4 54 1115
 0.0     + 0 1.15573- 2 0.0     + 0-2.39346- 3 0.0     + 0-6.05241- 62145 4 54 1116
 0.0     + 0-2.14015- 6                                               2145 4 54 1117
 0.0     + 0 4.00000+ 6           0           0          10          02145 4 54 1118
 0.0     + 0 1.29967- 2 0.0     + 0-1.93836- 3 0.0     + 0-3.15193- 52145 4 54 1119
 0.0     + 0-1.55318- 5 0.0     + 0-3.45960- 9                        2145 4 54 1120
 0.0     + 0 5.00000+ 6           0           0          10          02145 4 54 1121
 0.0     + 0 1.58134- 2 0.0     + 0-1.33232- 3 0.0     + 0-1.02681- 42145 4 54 1122
 0.0     + 0-5.84431- 5 0.0     + 0-2.85093- 8                        2145 4 54 1123
 0.0     + 0 6.00000+ 6           0           0          12          02145 4 54 1124
 0.0     + 0 2.02263- 2 0.0     + 0-5.80343- 4 0.0     + 0-1.91990- 42145 4 54 1125
 0.0     + 0-1.18541- 4 0.0     + 0-1.83773- 7 0.0     + 0-1.96673-102145 4 54 1126
 0.0     + 0 7.00000+ 6           0           0          12          02145 4 54 1127
 0.0     + 0 2.52569- 2 0.0     + 0 2.63648- 4 0.0     + 0-2.51643- 42145 4 54 1128
 0.0     + 0-1.59557- 4 0.0     + 0-9.31677- 7 0.0     + 0-1.16665- 92145 4 54 1129
 0.0     + 0 8.00000+ 6           0           0          12          02145 4 54 1130
 0.0     + 0 3.02467- 2 0.0     + 0 1.07502- 3 0.0     + 0-2.97515- 42145 4 54 1131
 0.0     + 0-1.72727- 4 0.0     + 0-3.79620- 6 0.0     + 0-5.26561- 92145 4 54 1132
 0.0     + 0 9.00000+ 6           0           0          12          02145 4 54 1133
 0.0     + 0 3.44338- 2 0.0     + 0 1.69458- 3 0.0     + 0-3.67076- 42145 4 54 1134
 0.0     + 0-1.73984- 4 0.0     + 0-1.25172- 5 0.0     + 0-1.85809- 82145 4 54 1135
 0.0     + 0 1.00000+ 7           0           0          14          02145 4 54 1136
 0.0     + 0 3.76062- 2 0.0     + 0 2.09406- 3 0.0     + 0-4.59287- 42145 4 54 1137
 0.0     + 0-1.89944- 4 0.0     + 0-3.43876- 5 0.0     + 0-5.49028- 82145 4 54 1138
 0.0     + 0-2.00739-10                                               2145 4 54 1139
 0.0     + 0 1.10000+ 7           0           0          14          02145 4 54 1140
 0.0     + 0 4.07152- 2 0.0     + 0 2.43460- 3 0.0     + 0-5.36342- 42145 4 54 1141
 0.0     + 0-2.47745- 4 0.0     + 0-8.03361- 5 0.0     + 0-1.41164- 72145 4 54 1142
 0.0     + 0-5.76014-10                                               2145 4 54 1143
 0.0     + 0 1.15000+ 7           0           0          14          02145 4 54 1144
 0.0     + 0 4.25817- 2 0.0     + 0 2.63640- 3 0.0     + 0-5.57542- 42145 4 54 1145
 0.0     + 0-2.97779- 4 0.0     + 0-1.15415- 4 0.0     + 0-2.18221- 72145 4 54 1146
 0.0     + 0-9.31409-10                                               2145 4 54 1147
 0.0     + 0 1.20000+ 7           0           0          14          02145 4 54 1148
 0.0     + 0 4.47545- 2 0.0     + 0 2.87317- 3 0.0     + 0-5.63692- 42145 4 54 1149
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0-3.61401- 4 0.0     + 0-1.58569- 4 0.0     + 0-3.30677- 72145 4 54 1150
 0.0     + 0-1.46975- 9                                              2145 4 54 1151
 0.0     + 0 1.25000+ 7           0           0           14        02145 4 54 1152
 0.0     + 0 4.71652- 2 0.0     + 0 3.13937- 3 0.0     + 0-5.53004- 42145 4 54 1153
 0.0     + 0-4.34458- 4 0.0     + 0-2.07749- 4 0.0     + 0-4.91525- 72145 4 54 1154
 0.0     + 0-2.26616- 9                                              2145 4 54 1155
 0.0     + 0 1.30000+ 7           0           0           14        02145 4 54 1156
 0.0     + 0 4.97046- 2 0.0     + 0 3.42389- 3 0.0     + 0-5.24951- 42145 4 54 1157
 0.0     + 0-5.10569- 4 0.0     + 0-2.59450- 4 0.0     + 0-7.18662- 72145 4 54 1158
 0.0     + 0-3.42681- 9                                              2145 4 54 1159
 0.0     + 0 1.35000+ 7           0           0           14        02145 4 54 1160
 0.0     + 0 5.22206- 2 0.0     + 0 3.71146- 3 0.0     + 0-4.80059- 42145 4 54 1161
 0.0     + 0-5.82196- 4 0.0     + 0-3.09353- 4 0.0     + 0-1.03664- 62145 4 54 1162
 0.0     + 0-5.10103- 9                                              2145 4 54 1163
 0.0     + 0 1.40000+ 7           0           0           14        02145 4 54 1164
 0.0     + 0 5.45497- 2 0.0     + 0 3.98561- 3 0.0     + 0-4.19879- 42145 4 54 1165
 0.0     + 0-6.42225- 4 0.0     + 0-3.53254- 4 0.0     + 0-1.48006- 62145 4 54 1166
 0.0     + 0-7.49491- 9                                              2145 4 54 1167
 0.0     + 0 1.45000+ 7           0           0           14        02145 4 54 1168
 0.0     + 0 5.65705- 2 0.0     + 0 4.23437- 3 0.0     + 0-3.46696- 42145 4 54 1169
 0.0     + 0-6.85962- 4 0.0     + 0-3.88176- 4 0.0     + 0-2.09175- 62145 4 54 1170
 0.0     + 0-1.08987- 8                                              2145 4 54 1171
 0.0     + 0 1.50000+ 7           0           0           16        02145 4 54 1172
 0.0     + 0 5.82494- 2 0.0     + 0 4.45423- 3 0.0     + 0-2.63848- 42145 4 54 1173
 0.0     + 0-7.11583- 4 0.0     + 0-4.12769- 4 0.0     + 0-2.92720- 62145 4 54 1174
 0.0     + 0-1.59079- 8 0.0     + 0-1.18648-10                      2145 4 54 1175
 0.0     + 0 1.60000+ 7           0           0           16        02145 4 54 1176
 0.0     + 0 6.06012- 2 0.0     + 0 4.80156- 3 0.0     + 0-8.39166- 52145 4 54 1177
 0.0     + 0-7.14210- 4 0.0     + 0-4.32865- 4 0.0     + 0-5.63282- 62145 4 54 1178
 0.0     + 0-3.24279- 8 0.0     + 0-2.60246-10                      2145 4 54 1179
 0.0     + 0 1.70000+ 7           0           0           16        02145 4 54 1180
 0.0     + 0 6.19674- 2 0.0     + 0 5.05064- 3 0.0     + 0 9.47351- 52145 4 54 1181
 0.0     + 0-6.71969- 4 0.0     + 0-4.24464- 4 0.0     + 0-1.04676- 52145 4 54 1182
 0.0     + 0-6.42047- 8 0.0     + 0-5.51132-10                      2145 4 54 1183
 0.0     + 0 1.80000+ 7           0           0           16        02145 4 54 1184
 0.0     + 0 6.28545- 2 0.0     + 0 5.24031- 3 0.0     + 0 2.55256- 42145 4 54 1185
 0.0     + 0-6.11321- 4 0.0     + 0-4.02822- 4 0.0     + 0-1.85997- 52145 4 54 1186
 0.0     + 0-1.22993- 7 0.0     + 0-1.12361- 9                      2145 4 54 1187
 0.0     + 0 1.90000+ 7           0           0           16        02145 4 54 1188
 0.0     + 0 6.36813- 2 0.0     + 0 5.40828- 3 0.0     + 0 3.90870- 42145 4 54 1189
 0.0     + 0-5.51349- 4 0.0     + 0-3.80652- 4 0.0     + 0-3.12936- 52145 4 54 1190
 0.0     + 0-2.27241- 7 0.0     + 0-2.20066- 9                      2145 4 54 1191
 0.0     + 0 2.00000+ 7           0           0           16        02145 4 54 1192
 0.0     + 0 6.47062- 2 0.0     + 0 5.58323- 3 0.0     + 0 5.02152- 42145 4 54 1193
 0.0     + 0-5.01502- 4 0.0     + 0-3.65879- 4 0.0     + 0-4.94761- 52145 4 54 1194
 0.0     + 0-4.04793- 7 0.0     + 0-4.13912- 9                      2145 4 54 1195
                                                                    2145 4  0 1196
 2.10450+ 4 4.45698+ 1           0           1            0        02145 4 55 1197
 0.0     + 0 4.45698+ 1           0           2            0        02145 4 55 1198
 0.0     + 0 0.0    + 0           0           0            1       322145 4 55 1199
          32          2           0           0            0        02145 4 55 1200
 0.0     + 0 9.60170+ 5           0           0            2        02145 4 55 1201
 0.0     + 0 0.0    + 0                                              2145 4 55 1202
 0.0     + 0 9.96365+ 5           0           0            4        02145 4 55 1203
 0.0     + 0-1.05773- 2 0.0     + 0 3.45368- 6                      2145 4 55 1204
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 1.00000+ 6          0          0          4          02145 4 55 1205
 0.0    + 0-1.09384- 2 0.0    + 0 3.46069- 6                      2145 4 55 1206
 0.0    + 0 1.26414+ 6          0          0          6          02145 4 55 1207
 0.0    + 0-1.72150- 2 0.0    + 0 6.56757- 5 0.0    + 0 1.12189- 82145 4 55 1208
 0.0    + 0 1.33244+ 6          0          0          6          02145 4 55 1209
 0.0    + 0-1.78345- 2 0.0    + 0 9.23498- 5 0.0    + 0 1.95603- 82145 4 55 1210
 0.0    + 0 1.46556+ 6          0          0          6          02145 4 55 1211
 0.0    + 0-1.95865- 2 0.0    + 0 1.58575- 4 0.0    + 0 4.84315- 82145 4 55 1212
 0.0    + 0 1.69878+ 6          0          0          6          02145 4 55 1213
 0.0    + 0-2.12420- 2 0.0    + 0 3.02140- 4 0.0    + 0 2.43156- 72145 4 55 1214
 0.0    + 0 1.84100+ 6          0          0          6          02145 4 55 1215
 0.0    + 0-2.19297- 2 0.0    + 0 4.03068- 4 0.0    + 0 4.10868- 72145 4 55 1216
 0.0    + 0 1.94263+ 6          0          0          6          02145 4 55 1217
 0.0    + 0-2.19837- 2 0.0    + 0 4.59025- 4 0.0    + 0 6.29679- 72145 4 55 1218
 0.0    + 0 2.00000+ 6          0          0          6          02145 4 55 1219
 0.0    + 0-2.21311- 2 0.0    + 0 4.97884- 4 0.0    + 0 7.78247- 72145 4 55 1220
 0.0    + 0 3.00000+ 6          0          0          8          02145 4 55 1221
 0.0    + 0-2.40001- 2 0.0    + 0 1.08792- 3 0.0    + 0 1.30811- 52145 4 55 1222
 0.0    + 0 4.67670- 8                                            2145 4 55 1223
 0.0    + 0 4.00000+ 6          0          0          8          02145 4 55 1224
 0.0    + 0-2.46812- 2 0.0    + 0 1.09602- 3 0.0    + 0 8.61503- 52145 4 55 1225
 0.0    + 0 1.54352- 6                                            2145 4 55 1226
 0.0    + 0 5.00000+ 6          0          0          8          02145 4 55 1227
 0.0    + 0-2.42901- 2 0.0    + 0 1.70831- 4 0.0    + 0 2.88248- 42145 4 55 1228
 0.0    + 0 9.82788- 6                                            2145 4 55 1229
 0.0    + 0 6.00000+ 6          0          0         10          02145 4 55 1230
 0.0    + 0-2.29631- 2 0.0    + 0-1.43089- 3 0.0    + 0 5.80808- 42145 4 55 1231
 0.0    + 0 3.49508- 5 0.0    + 0 1.24090- 8                      2145 4 55 1232
 0.0    + 0 7.00000+ 6          0          0         10          02145 4 55 1233
 0.0    + 0-2.09301- 2 0.0    + 0-3.21414- 3 0.0    + 0 8.28111- 42145 4 55 1234
 0.0    + 0 8.55742- 5 0.0    + 0 1.92192- 7                      2145 4 55 1235
 0.0    + 0 8.00000+ 6          0          0         10          02145 4 55 1236
 0.0    + 0-1.76351- 2 0.0    + 0-5.02374- 3 0.0    + 0 9.06632- 42145 4 55 1237
 0.0    + 0 1.65956- 4 0.0    + 0 7.87460- 7                      2145 4 55 1238
 0.0    + 0 9.00000+ 6          0          0         12          02145 4 55 1239
 0.0    + 0-1.24001- 2 0.0    + 0-6.86354- 3 0.0    + 0 7.24550- 42145 4 55 1240
 0.0    + 0 2.72160- 4 0.0    + 0 2.58032- 6 0.0    + 0 1.18906- 92145 4 55 1241
 0.0    + 0 1.00000+ 7          0          0         12          02145 4 55 1242
 0.0    + 0-5.00300- 3 0.0    + 0-8.76404- 3 0.0    + 0 2.65628- 42145 4 55 1243
 0.0    + 0 3.95539- 4 0.0    + 0 7.00767- 6 0.0    + 0 1.38087- 82145 4 55 1244
 0.0    + 0 1.10000+ 7          0          0         12          02145 4 55 1245
 0.0    + 0 4.00088- 3 0.0    + 0-1.06828- 2 0.0    + 0-4.04212- 42145 4 55 1246
 0.0    + 0 5.25976- 4 0.0    + 0 1.63213- 5 0.0    + 0 3.56023- 82145 4 55 1247
 0.0    + 0 1.15000+ 7          0          0         12          02145 4 55 1248
 0.0    + 0 8.76479- 3 0.0    + 0-1.15966- 2 0.0    + 0-7.78896- 42145 4 55 1249
 0.0    + 0 5.89550- 4 0.0    + 0 2.37368- 5 0.0    + 0 5.49265- 82145 4 55 1250
 0.0    + 0 1.20000+ 7          0          0         12          02145 4 55 1251
 0.0    + 0 1.34761- 2 0.0    + 0-1.24477- 2 0.0    + 0-1.15693- 32145 4 55 1252
 0.0    + 0 6.49551- 4 0.0    + 0 3.35523- 5 0.0    + 0 8.31831- 82145 4 55 1253
 0.0    + 0 1.25000+ 7          0          0         12          02145 4 55 1254
 0.0    + 0 1.79315- 2 0.0    + 0-1.32094- 2 0.0    + 0-1.51973- 32145 4 55 1255
 0.0    + 0 7.03679- 4 0.0    + 0 4.61323- 5 0.0    + 0 1.24015- 72145 4 55 1256
 0.0    + 0 1.30000+ 7          0          0         12          02145 4 55 1257
 0.0    + 0 2.19912- 2 0.0    + 0-1.38649- 2 0.0    + 0-1.85451- 32145 4 55 1258
 0.0    + 0 7.50298- 4 0.0    + 0 6.18234- 5 0.0    + 0 1.82721- 72145 4 55 1259
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 1.35000+ 7          0          0          12          02145 4 55 1260
 0.0     + 0 2.55616- 2 0.0     + 0-1.44055- 2 0.0     + 0-2.15335- 32145 4 55 1261
 0.0     + 0 7.88253- 4 0.0     + 0 8.09177- 5 0.0     + 0 2.66859- 72145 4 55 1262
 0.0     + 0 1.40000+ 7          0          0          14          02145 4 55 1263
 0.0     + 0 2.85984- 2 0.0     + 0-1.48276- 2 0.0     + 0-2.41295- 32145 4 55 1264
 0.0     + 0 8.16387- 4 0.0     + 0 1.03511- 4 0.0     + 0 3.88996- 72145 4 55 1265
 0.0     + 0 4.05171-10                                               2145 4 55 1266
 0.0     + 0 1.45000+ 7          0          0          14          02145 4 55 1267
 0.0     + 0 3.11016- 2 0.0     + 0-1.51404- 2 0.0     + 0-2.63516- 32145 4 55 1268
 0.0     + 0 8.35225- 4 0.0     + 0 1.29869- 4 0.0     + 0 5.60337- 72145 4 55 1269
 0.0     + 0 6.12128-10                                               2145 4 55 1270
 0.0     + 0 1.50000+ 7          0          0          14          02145 4 55 1271
 0.0     + 0 3.31783- 2 0.0     + 0-1.53359- 2 0.0     + 0-2.82416- 32145 4 55 1272
 0.0     + 0 8.43843- 4 0.0     + 0 1.59502- 4 0.0     + 0 8.08069- 72145 4 55 1273
 0.0     + 0 3.93458- 9                                               2145 4 55 1274
 0.0     + 0 1.60000+ 7          0          0          14          02145 4 55 1275
 0.0     + 0 3.62426- 2 0.0     + 0-1.55101- 2 0.0     + 0-3.15704- 32145 4 55 1276
 0.0     + 0 8.37254- 4 0.0     + 0 2.30576- 4 0.0     + 0 1.62404- 62145 4 55 1277
 0.0     + 0 8.40506- 9                                               2145 4 55 1278
 0.0     + 0 1.70000+ 7          0          0          14          02145 4 55 1279
 0.0     + 0 3.86402- 2 0.0     + 0-1.54395- 2 0.0     + 0-3.49725- 32145 4 55 1280
 0.0     + 0 8.01396- 4 0.0     + 0 3.14992- 4 0.0     + 0 3.15477- 62145 4 55 1281
 0.0     + 0 1.73593- 8                                               2145 4 55 1282
 0.0     + 0 1.80000+ 7          0          0          14          02145 4 55 1283
 0.0     + 0 4.11075- 2 0.0     + 0-1.52023- 2 0.0     + 0-3.92073- 32145 4 55 1284
 0.0     + 0 7.41158- 4 0.0     + 0 4.09713- 4 0.0     + 0 5.87530- 62145 4 55 1285
 0.0     + 0 3.45035- 8                                               2145 4 55 1286
 0.0     + 0 1.90000+ 7          0          0          14          02145 4 55 1287
 0.0     + 0 4.41020- 2 0.0     + 0-1.48510- 2 0.0     + 0-4.46931- 32145 4 55 1288
 0.0     + 0 6.60115- 4 0.0     + 0 5.10195- 4 0.0     + 0 1.04288- 52145 4 55 1289
 0.0     + 0 6.58601- 8                                               2145 4 55 1290
 0.0     + 0 2.00000+ 7          0          0          16          02145 4 55 1291
 0.0     + 0 4.77629- 2 0.0     + 0-1.44204- 2 0.0     + 0-5.14302- 32145 4 55 1292
 0.0     + 0 5.60894- 4 0.0     + 0 6.10628- 4 0.0     + 0 1.75681- 52145 4 55 1293
 0.0     + 0 1.22526- 7 0.0     + 0 1.69591-10                       2145 4 55 1294
                                                                     2145 4  0 1295
 2.10450+ 4 4.45698+ 1          0          1           0          02145 4 56 1296
 0.0     + 0 4.45698+ 1          0          2           0          02145 4 56 1297
 0.0     + 0 0.0    + 0          0          0           1         312145 4 56 1298
          31         2          0          0           0          02145 4 56 1299
 0.0     + 0 9.96365+ 5          0          0           2          02145 4 56 1300
 0.0     + 0 0.0    + 0                                               2145 4 56 1301
 0.0     + 0 1.00000+ 6          0          0           2          02145 4 56 1302
 0.0     + 0 8.22317- 5                                               2145 4 56 1303
 0.0     + 0 1.26414+ 6          0          0           6          02145 4 56 1304
 0.0     + 0 7.54169- 3 0.0     + 0 8.35923- 5 0.0     + 0-4.55100- 82145 4 56 1305
 0.0     + 0 1.33244+ 6          0          0           6          02145 4 56 1306
 0.0     + 0 7.21278- 3 0.0     + 0 9.49095- 5 0.0     + 0-1.06158- 72145 4 56 1307
 0.0     + 0 1.46556+ 6          0          0           6          02145 4 56 1308
 0.0     + 0 8.79510- 3 0.0     + 0 1.31975- 4 0.0     + 0-1.85137- 72145 4 56 1309
 0.0     + 0 1.69878+ 6          0          0           6          02145 4 56 1310
 0.0     + 0 1.11692- 2 0.0     + 0 2.01544- 4 0.0     + 0-3.59370- 72145 4 56 1311
 0.0     + 0 1.84100+ 6          0          0           6          02145 4 56 1312
 0.0     + 0 1.21686- 2 0.0     + 0 2.72023- 4 0.0     + 0-5.51785- 72145 4 56 1313
 0.0     + 0 1.94263+ 6          0          0           6          02145 4 56 1314
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 1.31295- 2 0.0     + 0 3.25315- 4 0.0     + 0-6.41688- 72145 4 56 1315
 0.0     + 0 2.00000+ 6           0           0           6           02145 4 56 1316
 0.0     + 0 1.35960- 2 0.0     + 0 3.54802- 4 0.0     + 0-6.76267- 72145 4 56 1317
 0.0     + 0 3.00000+ 6           0           0           8           02145 4 56 1318
 0.0     + 0 1.95919- 2 0.0     + 0 8.72226- 4 0.0     + 0-2.57533- 72145 4 56 1319
 0.0     + 0-3.50471- 8                                                 2145 4 56 1320
 0.0     + 0 4.00000+ 6           0           0           8           02145 4 56 1321
 0.0     + 0 2.31696- 2 0.0     + 0 1.26679- 3 0.0     + 0 7.54532- 62145 4 56 1322
 0.0     + 0 2.62912- 8                                                 2145 4 56 1323
 0.0     + 0 5.00000+ 6           0           0           8           02145 4 56 1324
 0.0     + 0 2.63728- 2 0.0     + 0 1.68258- 3 0.0     + 0 4.42050- 52145 4 56 1325
 0.0     + 0 6.86154- 7                                                 2145 4 56 1326
 0.0     + 0 6.00000+ 6           0           0          10           02145 4 56 1327
 0.0     + 0 3.03356- 2 0.0     + 0 2.30149- 3 0.0     + 0 1.46155- 42145 4 56 1328
 0.0     + 0 2.88178- 6 0.0     + 0 1.42624- 9                         2145 4 56 1329
 0.0     + 0 7.00000+ 6           0           0          10           02145 4 56 1330
 0.0     + 0 3.53289- 2 0.0     + 0 3.22152- 3 0.0     + 0 3.41498- 42145 4 56 1331
 0.0     + 0 7.00585- 6 0.0     + 0 1.79039- 8                         2145 4 56 1332
 0.0     + 0 8.00000+ 6           0           0          10           02145 4 56 1333
 0.0     + 0 4.10511- 2 0.0     + 0 4.38638- 3 0.0     + 0 6.14263- 42145 4 56 1334
 0.0     + 0 1.24533- 5 0.0     + 0 7.34426- 8                         2145 4 56 1335
 0.0     + 0 9.00000+ 6           0           0          12           02145 4 56 1336
 0.0     + 0 4.64141- 2 0.0     + 0 5.52637- 3 0.0     + 0 8.88312- 42145 4 56 1337
 0.0     + 0 1.86490- 5 0.0     + 0 2.36094- 7 0.0     + 0 2.23677-102145 4 56 1338
 0.0     + 0 1.00000+ 7           0           0          12           02145 4 56 1339
 0.0     + 0 5.02096- 2 0.0     + 0 6.34192- 3 0.0     + 0 1.08625- 32145 4 56 1340
 0.0     + 0 2.74782- 5 0.0     + 0 6.48895- 7 0.0     + 0 1.44553- 92145 4 56 1341
 0.0     + 0 1.10000+ 7           0           0          12           02145 4 56 1342
 0.0     + 0 5.24194- 2 0.0     + 0 6.78282- 3 0.0     + 0 1.18631- 32145 4 56 1343
 0.0     + 0 4.03926- 5 0.0     + 0 1.56107- 6 0.0     + 0 4.07901- 92145 4 56 1344
 0.0     + 0 1.15000+ 7           0           0          12           02145 4 56 1345
 0.0     + 0 5.30761- 2 0.0     + 0 6.90117- 3 0.0     + 0 1.20928- 32145 4 56 1346
 0.0     + 0 4.87805- 5 0.0     + 0 2.30769- 6 0.0     + 0 6.55294- 92145 4 56 1347
 0.0     + 0 1.20000+ 7           0           0          12           02145 4 56 1348
 0.0     + 0 5.35456- 2 0.0     + 0 6.98138- 3 0.0     + 0 1.22277- 32145 4 56 1349
 0.0     + 0 5.86224- 5 0.0     + 0 3.30695- 6 0.0     + 0 1.02710- 82145 4 56 1350
 0.0     + 0 1.25000+ 7           0           0          12           02145 4 56 1351
 0.0     + 0 5.38584- 2 0.0     + 0 7.04005- 3 0.0     + 0 1.23306- 32145 4 56 1352
 0.0     + 0 7.01074- 5 0.0     + 0 4.59971- 6 0.0     + 0 1.57720- 82145 4 56 1353
 0.0     + 0 1.30000+ 7           0           0          12           02145 4 56 1354
 0.0     + 0 5.40781- 2 0.0     + 0 7.09309- 3 0.0     + 0 1.24528- 32145 4 56 1355
 0.0     + 0 8.33111- 5 0.0     + 0 6.21798- 6 0.0     + 0 2.38097- 82145 4 56 1356
 0.0     + 0 1.35000+ 7           0           0          12           02145 4 56 1357
 0.0     + 0 5.42579- 2 0.0     + 0 7.15163- 3 0.0     + 0 1.26306- 32145 4 56 1358
 0.0     + 0 9.82692- 5 0.0     + 0 8.18226- 6 0.0     + 0 3.54411- 82145 4 56 1359
 0.0     + 0 1.40000+ 7           0           0          14           02145 4 56 1360
 0.0     + 0 5.44305- 2 0.0     + 0 7.22114- 3 0.0     + 0 1.28828- 32145 4 56 1361
 0.0     + 0 1.14932- 4 0.0     + 0 1.04804- 5 0.0     + 0 5.26891- 82145 4 56 1362
 0.0     + 0 1.50699-10                                                 2145 4 56 1363
 0.0     + 0 1.45000+ 7           0           0          14           02145 4 56 1364
 0.0     + 0 5.46091- 2 0.0     + 0 7.30370- 3 0.0     + 0 1.32200- 32145 4 56 1365
 0.0     + 0 1.33284- 4 0.0     + 0 1.31438- 5 0.0     + 0 7.66946- 82145 4 56 1366
 0.0     + 0 2.30172-10                                                 2145 4 56 1367
 0.0     + 0 1.50000+ 7           0           0          14           02145 4 56 1368
 0.0     + 0 5.48380- 2 0.0     + 0 7.40046- 3 0.0     + 0 1.36369- 32145 4 56 1369
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 1.53088- 4 0.0     + 0 1.61187- 5 0.0     + 0 1.11764- 72145 4 56 1370
 0.0     + 0 6.88518-10                                              2145 4 56 1371
 0.0     + 0 1.60000+ 7           0           0           14        02145 4 56 1372
 0.0     + 0 5.54729- 2 0.0     + 0 7.62894- 3 0.0     + 0 1.46793- 32145 4 56 1373
 0.0     + 0 1.96403- 4 0.0     + 0 2.30204- 5 0.0     + 0 2.25115- 72145 4 56 1374
 0.0     + 0 1.51560- 9                                              2145 4 56 1375
 0.0     + 0 1.70000+ 7           0           0           14        02145 4 56 1376
 0.0     + 0 5.64066- 2 0.0     + 0 7.88599- 3 0.0     + 0 1.59058- 32145 4 56 1377
 0.0     + 0 2.42978- 4 0.0     + 0 3.10008- 5 0.0     + 0 4.33332- 72145 4 56 1378
 0.0     + 0 3.17959- 9                                              2145 4 56 1379
 0.0     + 0 1.80000+ 7           0           0           14        02145 4 56 1380
 0.0     + 0 5.76505- 2 0.0     + 0 8.15085- 3 0.0     + 0 1.72130- 32145 4 56 1381
 0.0     + 0 2.91034- 4 0.0     + 0 3.99512- 5 0.0     + 0 7.93165- 72145 4 56 1382
 0.0     + 0 6.35038- 9                                              2145 4 56 1383
 0.0     + 0 1.90000+ 7           0           0           14        02145 4 56 1384
 0.0     + 0 5.91646- 2 0.0     + 0 8.40821- 3 0.0     + 0 1.85237- 32145 4 56 1385
 0.0     + 0 3.39332- 4 0.0     + 0 4.98732- 5 0.0     + 0 1.37582- 62145 4 56 1386
 0.0     + 0 1.20803- 8                                              2145 4 56 1387
 0.0     + 0 2.00000+ 7           0           0           16        02145 4 56 1388
 0.0     + 0 6.08605- 2 0.0     + 0 8.64818- 3 0.0     + 0 1.97887- 32145 4 56 1389
 0.0     + 0 3.87343- 4 0.0     + 0 6.08697- 5 0.0     + 0 2.25742- 62145 4 56 1390
 0.0     + 0 2.24097- 8 0.0     + 0 1.24725-10                       2145 4 56 1391
                                                                     2145 4  0 1392
 2.10450+ 4 4.45698+ 1           0           1           0         02145 4 57 1393
 0.0     + 0 4.45698+ 1           0           2           0         02145 4 57 1394
 0.0     + 0 0.0    + 0           0           0           1        292145 4 57 1395
          29         2           0           0           0         02145 4 57 1396
 0.0     + 0 1.26414+ 6           0           0           2         02145 4 57 1397
 0.0     + 0 0.0    + 0                                              2145 4 57 1398
 0.0     + 0 1.33244+ 6           0           0           4         02145 4 57 1399
 0.0     + 0-6.78804- 4 0.0     + 0-1.03836- 6                       2145 4 57 1400
 0.0     + 0 1.46556+ 6           0           0           4         02145 4 57 1401
 0.0     + 0-1.98310- 3 0.0     + 0-4.05405- 5                       2145 4 57 1402
 0.0     + 0 1.69878+ 6           0           0           6         02145 4 57 1403
 0.0     + 0-3.84289- 3 0.0     + 0-2.52613- 4 0.0     + 0 3.94989- 82145 4 57 1404
 0.0     + 0 1.84100+ 6           0           0           6         02145 4 57 1405
 0.0     + 0-5.62783- 3 0.0     + 0-3.67978- 4 0.0     + 0 8.15338- 82145 4 57 1406
 0.0     + 0 1.94263+ 6           0           0           6         02145 4 57 1407
 0.0     + 0-6.95002- 3 0.0     + 0-4.88070- 4 0.0     + 0 1.16601- 72145 4 57 1408
 0.0     + 0 2.00000+ 6           0           0           6         02145 4 57 1409
 0.0     + 0-7.66387- 3 0.0     + 0-5.53096- 4 0.0     + 0 1.34634- 72145 4 57 1410
 0.0     + 0 3.00000+ 6           0           0           8         02145 4 57 1411
 0.0     + 0-1.38395- 2 0.0     + 0-1.05921- 3 0.0     + 0-2.58218- 62145 4 57 1412
 0.0     + 0 5.68127- 7                                              2145 4 57 1413
 0.0     + 0 4.00000+ 6           0           0           8         02145 4 57 1414
 0.0     + 0-9.33919- 3 0.0     + 0-6.37029- 4 0.0     + 0-2.37585- 52145 4 57 1415
 0.0     + 0 3.67413- 6                                              2145 4 57 1416
 0.0     + 0 5.00000+ 6           0           0           10        02145 4 57 1417
 0.0     + 0-1.73519- 3 0.0     + 0-4.51393- 4 0.0     + 0-1.02535- 42145 4 57 1418
 0.0     + 0 1.33261- 5 0.0     + 0 9.72137- 9                       2145 4 57 1419
 0.0     + 0 6.00000+ 6           0           0           10        02145 4 57 1420
 0.0     + 0 4.64938- 3 0.0     + 0-9.13630- 4 0.0     + 0-2.48923- 42145 4 57 1421
 0.0     + 0 2.83260- 5 0.0     + 0 5.78380- 8                       2145 4 57 1422
 0.0     + 0 7.00000+ 6           0           0           12        02145 4 57 1423
 0.0     + 0 9.01001- 3 0.0     + 0-1.80700- 3 0.0     + 0-4.16121- 42145 4 57 1424
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 3.94662- 5 0.0     + 0 2.86427- 7 0.0     + 0 4.60456-102145 4 57 1425
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 0.0     + 0 1.21813- 2 0.0     + 0-2.75389- 3 0.0     + 0-5.60551- 42145 4 57 1427
 0.0     + 0 4.05839- 5 0.0     + 0 1.17495- 6 0.0     + 0 2.10576- 92145 4 57 1428
 0.0     + 0 9.00000+ 6           0           0           12          02145 4 57 1429
 0.0     + 0 1.49807- 2 0.0     + 0-3.44466- 3 0.0     + 0-6.67809- 42145 4 57 1430
 0.0     + 0 2.97657- 5 0.0     + 0 3.93196- 6 0.0     + 0 7.50991- 92145 4 57 1431
 0.0     + 0 1.00000+ 7           0           0           12          02145 4 57 1432
 0.0     + 0 1.74240- 2 0.0     + 0-3.76389- 3 0.0     + 0-7.57619- 42145 4 57 1433
 0.0     + 0 2.32054- 6 0.0     + 0 1.08350- 5 0.0     + 0 2.21423- 82145 4 57 1434
 0.0     + 0 1.10000+ 7           0           0           14          02145 4 57 1435
 0.0     + 0 2.04397- 2 0.0     + 0-3.73295- 3 0.0     + 0-8.78049- 42145 4 57 1436
 0.0     + 0-4.90309- 5 0.0     + 0 2.49860- 5 0.0     + 0 5.56506- 82145 4 57 1437
 0.0     + 0 2.64569-10                                                 2145 4 57 1438
 0.0     + 0 1.15000+ 7           0           0           14          02145 4 57 1439
 0.0     + 0 2.22294- 2 0.0     + 0-3.64721- 3 0.0     + 0-9.69327- 42145 4 57 1440
 0.0     + 0-8.67829- 5 0.0     + 0 3.56557- 5 0.0     + 0 8.48204- 82145 4 57 1441
 0.0     + 0 4.23186-10                                                 2145 4 57 1442
 0.0     + 0 1.20000+ 7           0           0           14          02145 4 57 1443
 0.0     + 0 2.41672- 2 0.0     + 0-3.55335- 3 0.0     + 0-1.08814- 32145 4 57 1444
 0.0     + 0-1.33302- 4 0.0     + 0 4.87466- 5 0.0     + 0 1.26626- 72145 4 57 1445
 0.0     + 0 6.59754-10                                                 2145 4 57 1446
 0.0     + 0 1.25000+ 7           0           0           14          02145 4 57 1447
 0.0     + 0 2.61221- 2 0.0     + 0-3.47869- 3 0.0     + 0-1.23362- 32145 4 57 1448
 0.0     + 0-1.87576- 4 0.0     + 0 6.36625- 5 0.0     + 0 1.85405- 72145 4 57 1449
 0.0     + 0 1.00454- 9                                                 2145 4 57 1450
 0.0     + 0 1.30000+ 7           0           0           14          02145 4 57 1451
 0.0     + 0 2.79896- 2 0.0     + 0-3.43705- 3 0.0     + 0-1.39924- 32145 4 57 1452
 0.0     + 0-2.47268- 4 0.0     + 0 7.94258- 5 0.0     + 0 2.67135- 72145 4 57 1453
 0.0     + 0 1.50018- 9                                                 2145 4 57 1454
 0.0     + 0 1.35000+ 7           0           0           14          02145 4 57 1455
 0.0     + 0 2.96753- 2 0.0     + 0-3.42825- 3 0.0     + 0-1.57350- 32145 4 57 1456
 0.0     + 0-3.08964- 4 0.0     + 0 9.47490- 5 0.0     + 0 3.79936- 72145 4 57 1457
 0.0     + 0 2.20596- 9                                                 2145 4 57 1458
 0.0     + 0 1.40000+ 7           0           0           14          02145 4 57 1459
 0.0     + 0 3.11109- 2 0.0     + 0-3.43853- 3 0.0     + 0-1.74182- 32145 4 57 1460
 0.0     + 0-3.68714- 4 0.0     + 0 1.08273- 4 0.0     + 0 5.36302- 72145 4 57 1461
 0.0     + 0 3.20227- 9                                                 2145 4 57 1462
 0.0     + 0 1.45000+ 7           0           0           14          02145 4 57 1463
 0.0     + 0 3.22445- 2 0.0     + 0-3.45689- 3 0.0     + 0-1.89317- 32145 4 57 1464
 0.0     + 0-4.23527- 4 0.0     + 0 1.18911- 4 0.0     + 0 7.47987- 72145 4 57 1465
 0.0     + 0 4.60265- 9                                                 2145 4 57 1466
 0.0     + 0 1.50000+ 7           0           0           14          02145 4 57 1467
 0.0     + 0 3.31068- 2 0.0     + 0-3.46540- 3 0.0     + 0-2.01910- 32145 4 57 1468
 0.0     + 0-4.71126- 4 0.0     + 0 1.26053- 4 0.0     + 0 1.03614- 62145 4 57 1469
 0.0     + 0 6.56521- 9                                                 2145 4 57 1470
 0.0     + 0 1.60000+ 7           0           0           16          02145 4 57 1471
 0.0     + 0 3.41818- 2 0.0     + 0-3.41605- 3 0.0     + 0-2.18525- 32145 4 57 1472
 0.0     + 0-5.41889- 4 0.0     + 0 1.29481- 4 0.0     + 0 1.95069- 62145 4 57 1473
 0.0     + 0 1.30445- 8 0.0     + 0 1.17444-10                          2145 4 57 1474
 0.0     + 0 1.70000+ 7           0           0           16          02145 4 57 1475
 0.0     + 0 3.47217- 2 0.0     + 0-3.26700- 3 0.0     + 0-2.25400- 32145 4 57 1476
 0.0     + 0-5.84126- 4 0.0     + 0 1.20648- 4 0.0     + 0 3.55822- 62145 4 57 1477
 0.0     + 0 2.53281- 8 0.0     + 0 2.44511-10                          2145 4 57 1478
 0.0     + 0 1.80000+ 7           0           0           16          02145 4 57 1479
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 3.50838- 2 0.0     + 0-3.04347- 3 0.0     + 0-2.26350- 32145 4 57 1480
 0.0     + 0-6.08299- 4 0.0     + 0 1.03259- 4 0.0     + 0 6.22697- 62145 4 57 1481
 0.0     + 0 4.76783- 8 0.0     + 0 4.90926-10                       2145 4 57 1482
 0.0     + 0 1.90000+ 7           0           0           16        02145 4 57 1483
 0.0     + 0 3.55051- 2 0.0     + 0-2.78182- 3 0.0     + 0-2.25013- 32145 4 57 1484
 0.0     + 0-6.25664- 4 0.0     + 0 8.02815- 5 0.0     + 0 1.03472- 52145 4 57 1485
 0.0     + 0 8.66863- 8 0.0     + 0 9.47997-10                       2145 4 57 1486
 0.0     + 0 2.00000+ 7           0           0           16        02145 4 57 1487
 0.0     + 0 3.61160- 2 0.0     + 0-2.50744- 3 0.0     + 0-2.23773- 32145 4 57 1488
 0.0     + 0-6.45027- 4 0.0     + 0 5.34413- 5 0.0     + 0 1.61877- 52145 4 57 1489
 0.0     + 0 1.51755- 7 0.0     + 0 1.75862- 9                       2145 4 57 1490
                                                                     2145 4  0 1491
 2.10450+ 4 4.45698+ 1           0           1           0         02145 4 58 1492
 0.0     + 0 4.45698+ 1           0           2           0         02145 4 58 1493
 0.0     + 0 0.0    + 0           0           0           1        282145 4 58 1494
          28          2           0           0           0         02145 4 58 1495
 0.0     + 0 1.33244+ 6           0           0           2         02145 4 58 1496
 0.0     + 0 0.0    + 0                                              2145 4 58 1497
 0.0     + 0 1.46556+ 6           0           0           4         02145 4 58 1498
 0.0     + 0-8.13786- 3 0.0     + 0-5.69581- 6                       2145 4 58 1499
 0.0     + 0 1.69878+ 6           0           0           6         02145 4 58 1500
 0.0     + 0-1.37150- 2 0.0     + 0-4.39807- 5 0.0     + 0-9.35128- 92145 4 58 1501
 0.0     + 0 1.84100+ 6           0           0           6         02145 4 58 1502
 0.0     + 0-1.53728- 2 0.0     + 0-8.10342- 5 0.0     + 0-2.41171- 82145 4 58 1503
 0.0     + 0 1.94263+ 6           0           0           6         02145 4 58 1504
 0.0     + 0-1.63331- 2 0.0     + 0-1.13892- 4 0.0     + 0-4.47627- 82145 4 58 1505
 0.0     + 0 2.00000+ 6           0           0           6         02145 4 58 1506
 0.0     + 0-1.67039- 2 0.0     + 0-1.34635- 4 0.0     + 0-6.06639- 82145 4 58 1507
 0.0     + 0 3.00000+ 6           0           0           8         02145 4 58 1508
 0.0     + 0-1.90652- 2 0.0     + 0-6.41124- 4 0.0     + 0-5.13966- 62145 4 58 1509
 0.0     + 0-4.08888- 9                                              2145 4 58 1510
 0.0     + 0 4.00000+ 6           0           0           8         02145 4 58 1511
 0.0     + 0-1.82415- 2 0.0     + 0-1.26047- 3 0.0     + 0-4.08850- 52145 4 58 1512
 0.0     + 0-1.03332- 7                                              2145 4 58 1513
 0.0     + 0 5.00000+ 6           0           0           8         02145 4 58 1514
 0.0     + 0-1.45961- 2 0.0     + 0-2.01399- 3 0.0     + 0-1.70601- 42145 4 58 1515
 0.0     + 0-3.37169- 6                                              2145 4 58 1516
 0.0     + 0 6.00000+ 6           0           0           10        02145 4 58 1517
 0.0     + 0-9.00343- 3 0.0     + 0-2.93300- 3 0.0     + 0-4.17028- 42145 4 58 1518
 0.0     + 0-1.38982- 5 0.0     + 0-1.57049- 9                       2145 4 58 1519
 0.0     + 0 7.00000+ 6           0           0           10        02145 4 58 1520
 0.0     + 0-2.87831- 3 0.0     + 0-3.90594- 3 0.0     + 0-7.00652- 42145 4 58 1521
 0.0     + 0-3.79165- 5 0.0     + 0-7.49638- 8                       2145 4 58 1522
 0.0     + 0 8.00000+ 6           0           0           10        02145 4 58 1523
 0.0     + 0 3.17235- 3 0.0     + 0-4.76816- 3 0.0     + 0-9.25608- 42145 4 58 1524
 0.0     + 0-7.93775- 5 0.0     + 0-3.31060- 7                       2145 4 58 1525
 0.0     + 0 9.00000+ 6           0           0           12        02145 4 58 1526
 0.0     + 0 9.31140- 3 0.0     + 0-5.35490- 3 0.0     + 0-1.04775- 32145 4 58 1527
 0.0     + 0-1.38196- 4 0.0     + 0-1.14536- 6 0.0     + 0-5.31991-112145 4 58 1528
 0.0     + 0 1.00000+ 7           0           0           12        02145 4 58 1529
 0.0     + 0 1.57402- 2 0.0     + 0-5.61359- 3 0.0     + 0-1.07746- 32145 4 58 1530
 0.0     + 0-2.11127- 4 0.0     + 0-3.21170- 6 0.0     + 0-2.46458-102145 4 58 1531
 0.0     + 0 1.10000+ 7           0           0           12        02145 4 58 1532
 0.0     + 0 2.25014- 2 0.0     + 0-5.60008- 3 0.0     + 0-1.05709- 32145 4 58 1533
 0.0     + 0-2.93653- 4 0.0     + 0-7.63222- 6 0.0     + 0-1.53756- 82145 4 58 1534
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 1.15000+ 7           0           0           12          02145 4 58 1535
 0.0     + 0 2.58767- 2 0.0     + 0-5.52645- 3 0.0     + 0-1.04267- 32145 4 58 1536
 0.0     + 0-3.37256- 4 0.0     + 0-1.11463- 5 0.0     + 0-2.38931- 82145 4 58 1537
 0.0     + 0 1.20000+ 7           0           0           12          02145 4 58 1538
 0.0     + 0 2.91519- 2 0.0     + 0-5.42409- 3 0.0     + 0-1.03297- 32145 4 58 1539
 0.0     + 0-3.81302- 4 0.0     + 0-1.57998- 5 0.0     + 0-3.64062- 82145 4 58 1540
 0.0     + 0 1.25000+ 7           0           0           12          02145 4 58 1541
 0.0     + 0 3.22146- 2 0.0     + 0-5.30647- 3 0.0     + 0-1.03149- 32145 4 58 1542
 0.0     + 0-4.24591- 4 0.0     + 0-2.17636- 5 0.0     + 0-5.45476- 82145 4 58 1543
 0.0     + 0 1.30000+ 7           0           0           12          02145 4 58 1544
 0.0     + 0 3.49989- 2 0.0     + 0-5.18445- 3 0.0     + 0-1.04194- 32145 4 58 1545
 0.0     + 0-4.66275- 4 0.0     + 0-2.92081- 5 0.0     + 0-8.06965- 82145 4 58 1546
 0.0     + 0 1.35000+ 7           0           0           12          02145 4 58 1547
 0.0     + 0 3.74548- 2 0.0     + 0-5.06844- 3 0.0     + 0-1.06722- 32145 4 58 1548
 0.0     + 0-5.05571- 4 0.0     + 0-3.82869- 5 0.0     + 0-1.18249- 72145 4 58 1549
 0.0     + 0 1.40000+ 7           0           0           14          02145 4 58 1550
 0.0     + 0 3.95502- 2 0.0     + 0-4.96672- 3 0.0     + 0-1.10914- 32145 4 58 1551
 0.0     + 0-5.41847- 4 0.0     + 0-4.90719- 5 0.0     + 0-1.72281- 72145 4 58 1552
 0.0     + 0 1.29005-11                                                 2145 4 58 1553
 0.0     + 0 1.45000+ 7           0           0           14          02145 4 58 1554
 0.0     + 0 4.12769- 2 0.0     + 0-4.88703- 3 0.0     + 0-1.16774- 32145 4 58 1555
 0.0     + 0-5.74569- 4 0.0     + 0-6.17342- 5 0.0     + 0-2.48760- 72145 4 58 1556
 0.0     + 0 1.03536-11                                                 2145 4 58 1557
 0.0     + 0 1.50000+ 7           0           0           14          02145 4 58 1558
 0.0     + 0 4.26791- 2 0.0     + 0-4.82996- 3 0.0     + 0-1.24308- 32145 4 58 1559
 0.0     + 0-6.03859- 4 0.0     + 0-7.63357- 5 0.0     + 0-3.57022- 72145 4 58 1560
 0.0     + 0 2.44632-12                                                 2145 4 58 1561
 0.0     + 0 1.60000+ 7           0           0           14          02145 4 58 1562
 0.0     + 0 4.47913- 2 0.0     + 0-4.75947- 3 0.0     + 0-1.43649- 32145 4 58 1563
 0.0     + 0-6.52951- 4 0.0     + 0-1.11283- 4 0.0     + 0-7.30600- 72145 4 58 1564
 0.0     + 0-3.50962- 9                                                 2145 4 58 1565
 0.0     + 0 1.70000+ 7           0           0           14          02145 4 58 1566
 0.0     + 0 4.64269- 2 0.0     + 0-4.72717- 3 0.0     + 0-1.67508- 32145 4 58 1567
 0.0     + 0-6.93640- 4 0.0     + 0-1.54152- 4 0.0     + 0-1.42981- 62145 4 58 1568
 0.0     + 0-7.30647- 9                                                 2145 4 58 1569
 0.0     + 0 1.80000+ 7           0           0           14          02145 4 58 1570
 0.0     + 0 4.81781- 2 0.0     + 0-4.66582- 3 0.0     + 0-1.93565- 32145 4 58 1571
 0.0     + 0-7.29788- 4 0.0     + 0-2.03715- 4 0.0     + 0-2.68726- 62145 4 58 1572
 0.0     + 0-1.46669- 8                                                 2145 4 58 1573
 0.0     + 0 1.90000+ 7           0           0           14          02145 4 58 1574
 0.0     + 0 5.04276- 2 0.0     + 0-4.53223- 3 0.0     + 0-2.19679- 32145 4 58 1575
 0.0     + 0-7.64365- 4 0.0     + 0-2.57903- 4 0.0     + 0-4.81807- 62145 4 58 1576
 0.0     + 0-2.83053- 8                                                 2145 4 58 1577
 0.0     + 0 2.00000+ 7           0           0           16          02145 4 58 1578
 0.0     + 0 5.33056- 2 0.0     + 0-4.30974- 3 0.0     + 0-2.44096- 32145 4 58 1579
 0.0     + 0-7.98808- 4 0.0     + 0-3.13781- 4 0.0     + 0-8.19133- 62145 4 58 1580
 0.0     + 0-5.28325- 8 0.0     + 0 4.80775-11                          2145 4 58 1581
                                                                        2145 4  0 1582
 2.10450+ 4 4.45698+ 1           0           1           0           02145 4 59 1583
 0.0     + 0 4.45698+ 1           0           2           0           02145 4 59 1584
 0.0     + 0 0.0     + 0          0           0           1          272145 4 59 1585
          27          2           0           0           0           02145 4 59 1586
 0.0     + 0 1.46556+ 6           0           0           2           02145 4 59 1587
 0.0     + 0 0.0     + 0                                                2145 4 59 1588
 0.0     + 0 1.69878+ 6           0           0           4           02145 4 59 1589
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 5.97522- 3 0.0    + 0 2.55342- 5                       2145 4 59 1590
 0.0    + 0 1.84100+ 6          0          0          6           02145 4 59 1591
 0.0    + 0 8.42538- 3 0.0    + 0 4.34654- 5 0.0    + 0 2.29749- 72145 4 59 1592
 0.0    + 0 1.94263+ 6          0          0          6           02145 4 59 1593
 0.0    + 0 9.38990- 3 0.0    + 0 5.50066- 5 0.0    + 0 4.08894- 72145 4 59 1594
 0.0    + 0 2.00000+ 6          0          0          6           02145 4 59 1595
 0.0    + 0 9.77741- 3 0.0    + 0 5.98011- 5 0.0    + 0 5.28721- 72145 4 59 1596
 0.0    + 0 3.00000+ 6          0          0          8           02145 4 59 1597
 0.0    + 0 1.22728- 2 0.0    + 0 1.43653- 4 0.0    + 0 5.07878- 62145 4 59 1598
 0.0    + 0 9.86606- 8                                             2145 4 59 1599
 0.0    + 0 4.00000+ 6          0          0          8           02145 4 59 1600
 0.0    + 0 1.49777- 2 0.0    + 0 4.15381- 4 0.0    + 0 2.24282- 52145 4 59 1601
 0.0    + 0 5.59486- 7                                             2145 4 59 1602
 0.0    + 0 5.00000+ 6          0          0          8           02145 4 59 1603
 0.0    + 0 1.91057- 2 0.0    + 0 8.83574- 4 0.0    + 0 6.29024- 52145 4 59 1604
 0.0    + 0 2.44228- 6                                             2145 4 59 1605
 0.0    + 0 6.00000+ 6          0          0         10           02145 4 59 1606
 0.0    + 0 2.43313- 2 0.0    + 0 1.50723- 3 0.0    + 0 1.18256- 42145 4 59 1607
 0.0    + 0 9.48842- 6 0.0    + 0 7.78779- 9                       2145 4 59 1608
 0.0    + 0 7.00000+ 6          0          0         10           02145 4 59 1609
 0.0    + 0 3.01292- 2 0.0    + 0 2.19720- 3 0.0    + 0 1.66331- 42145 4 59 1610
 0.0    + 0 2.61934- 5 0.0    + 0 2.30452- 8                       2145 4 59 1611
 0.0    + 0 8.00000+ 6          0          0         10           02145 4 59 1612
 0.0    + 0 3.60098- 2 0.0    + 0 2.88870- 3 0.0    + 0 2.02635- 42145 4 59 1613
 0.0    + 0 5.45213- 5 0.0    + 0 8.88334- 8                       2145 4 59 1614
 0.0    + 0 9.00000+ 6          0          0         12           02145 4 59 1615
 0.0    + 0 4.14126- 2 0.0    + 0 3.55721- 3 0.0    + 0 2.47022- 42145 4 59 1616
 0.0    + 0 9.08927- 5 0.0    + 0 2.79304- 7 0.0    + 0 9.80056-102145 4 59 1617
 0.0    + 0 1.00000+ 7          0          0         12           02145 4 59 1618
 0.0    + 0 4.54679- 2 0.0    + 0 4.11870- 3 0.0    + 0 3.09571- 42145 4 59 1619
 0.0    + 0 1.24967- 4 0.0    + 0 7.19279- 7 0.0    + 0 2.85772- 92145 4 59 1620
 0.0    + 0 1.10000+ 7          0          0         12           02145 4 59 1621
 0.0    + 0 4.83794- 2 0.0    + 0 4.60987- 3 0.0    + 0 4.01716- 42145 4 59 1622
 0.0    + 0 1.50847- 4 0.0    + 0 1.59232- 6 0.0    + 0 2.99655- 92145 4 59 1623
 0.0    + 0 1.15000+ 7          0          0         12           02145 4 59 1624
 0.0    + 0 4.94462- 2 0.0    + 0 4.82425- 3 0.0    + 0 4.54507- 42145 4 59 1625
 0.0    + 0 1.60228- 4 0.0    + 0 2.31161- 6 0.0    + 0 4.22382- 92145 4 59 1626
 0.0    + 0 1.20000+ 7          0          0         12           02145 4 59 1627
 0.0    + 0 5.02881- 2 0.0    + 0 5.01585- 3 0.0    + 0 5.08650- 42145 4 59 1628
 0.0    + 0 1.67702- 4 0.0    + 0 3.30584- 6 0.0    + 0 5.84217- 92145 4 59 1629
 0.0    + 0 1.25000+ 7          0          0         12           02145 4 59 1630
 0.0    + 0 5.08860- 2 0.0    + 0 5.17595- 3 0.0    + 0 5.59849- 42145 4 59 1631
 0.0    + 0 1.73357- 4 0.0    + 0 4.66074- 6 0.0    + 0 7.95293- 92145 4 59 1632
 0.0    + 0 1.30000+ 7          0          0         12           02145 4 59 1633
 0.0    + 0 5.12854- 2 0.0    + 0 5.30871- 3 0.0    + 0 6.07265- 42145 4 59 1634
 0.0    + 0 1.77895- 4 0.0    + 0 6.46972- 6 0.0    + 0 1.07274- 82145 4 59 1635
 0.0    + 0 1.35000+ 7          0          0         12           02145 4 59 1636
 0.0    + 0 5.15427- 2 0.0    + 0 5.42209- 3 0.0    + 0 6.51508- 42145 4 59 1637
 0.0    + 0 1.82135- 4 0.0    + 0 8.82497- 6 0.0    + 0 1.44054- 82145 4 59 1638
 0.0    + 0 1.40000+ 7          0          0         14           02145 4 59 1639
 0.0    + 0 5.17121- 2 0.0    + 0 5.52583- 3 0.0    + 0 6.94072- 42145 4 59 1640
 0.0    + 0 1.86772- 4 0.0    + 0 1.17922- 5 0.0    + 0 2.07233- 82145 4 59 1641
 0.0    + 0 3.21630-10                                             2145 4 59 1642
 0.0    + 0 1.45000+ 7          0          0         14           02145 4 59 1643
 0.0    + 0 5.18260- 2 0.0    + 0 5.62687- 3 0.0    + 0 7.36484- 42145 4 59 1644
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 1.92534- 4 0.0     + 0 1.53738- 5 0.0     + 0 2.78445- 82145 4 59 1645
 0.0     + 0 4.62939-10                                              2145 4 59 1646
 0.0     + 0 1.50000+ 7           0           0           14        02145 4 59 1647
 0.0     + 0 5.19523- 2 0.0     + 0 5.73673- 3 0.0     + 0 7.81119- 42145 4 59 1648
 0.0     + 0 1.99969- 4 0.0     + 0 1.95501- 5 0.0     + 0 3.74180- 82145 4 59 1649
 0.0     + 0 6.62356-10                                              2145 4 59 1650
 0.0     + 0 1.60000+ 7           0           0           14        02145 4 59 1651
 0.0     + 0 5.23824- 2 0.0     + 0 6.00221- 3 0.0     + 0 8.80801- 42145 4 59 1652
 0.0     + 0 2.20393- 4 0.0     + 0 2.93260- 5 0.0     + 0 6.43499- 82145 4 59 1653
 0.0     + 0 2.06470-10                                              2145 4 59 1654
 0.0     + 0 1.70000+ 7           0           0           14        02145 4 59 1655
 0.0     + 0 5.31332- 2 0.0     + 0 6.33329- 3 0.0     + 0 9.94277- 42145 4 59 1656
 0.0     + 0 2.47432- 4 0.0     + 0 4.01413- 5 0.0     + 0 1.15410- 72145 4 59 1657
 0.0     + 0 2.89303-10                                              2145 4 59 1658
 0.0     + 0 1.80000+ 7           0           0           14        02145 4 59 1659
 0.0     + 0 5.42015- 2 0.0     + 0 6.70794- 3 0.0     + 0 1.11389- 32145 4 59 1660
 0.0     + 0 2.77973- 4 0.0     + 0 5.08315- 5 0.0     + 0 2.06122- 72145 4 59 1661
 0.0     + 0 3.61397-10                                              2145 4 59 1662
 0.0     + 0 1.90000+ 7           0           0           14        02145 4 59 1663
 0.0     + 0 5.55035- 2 0.0     + 0 7.09549- 3 0.0     + 0 1.23026- 32145 4 59 1664
 0.0     + 0 3.08593- 4 0.0     + 0 6.04125- 5 0.0     + 0 3.64634- 72145 4 59 1665
 0.0     + 0 3.81063-10                                              2145 4 59 1666
 0.0     + 0 2.00000+ 7           0           0           16        02145 4 59 1667
 0.0     + 0 5.69159- 2 0.0     + 0 7.46617- 3 0.0     + 0 1.33514- 32145 4 59 1668
 0.0     + 0 3.36189- 4 0.0     + 0 6.81783- 5 0.0     + 0 6.37423- 72145 4 59 1669
 0.0     + 0 9.58417-10 0.0     + 0 1.49524-10                      2145 4 59 1670
                                                                    2145 4  0 1671
 2.10450+ 4 4.45698+ 1           0           1           0         02145 4 60 1672
 0.0     + 0 4.45698+ 1           0           2           0         02145 4 60 1673
 0.0     + 0 0.0    + 0           0           0           1        262145 4 60 1674
         26          2           0           0           0         02145 4 60 1675
 0.0     + 0 1.69878+ 6           0           0           2         02145 4 60 1676
 0.0     + 0 0.0    + 0                                              2145 4 60 1677
 0.0     + 0 1.84100+ 6           0           0           4         02145 4 60 1678
 0.0     + 0 2.77001- 4 0.0     + 0-4.41515- 5                      2145 4 60 1679
 0.0     + 0 1.94263+ 6           0           0           4         02145 4 60 1680
 0.0     + 0 7.35324- 4 0.0     + 0-1.47344- 4                      2145 4 60 1681
 0.0     + 0 2.00000+ 6           0           0           4         02145 4 60 1682
 0.0     + 0 1.07750- 3 0.0     + 0-2.32804- 4                      2145 4 60 1683
 0.0     + 0 3.00000+ 6           0           0           8         02145 4 60 1684
 0.0     + 0 9.11653- 3 0.0     + 0-2.06814- 3 0.0     + 0-1.92610- 62145 4 60 1685
 0.0     + 0-4.51332- 7                                              2145 4 60 1686
 0.0     + 0 4.00000+ 6           0           0           8         02145 4 60 1687
 0.0     + 0 1.33868- 2 0.0     + 0-1.91984- 3 0.0     + 0-1.41443- 52145 4 60 1688
 0.0     + 0-5.25229- 6                                              2145 4 60 1689
 0.0     + 0 5.00000+ 6           0           0           10        02145 4 60 1690
 0.0     + 0 1.72743- 2 0.0     + 0-1.25137- 3 0.0     + 0-6.42038- 52145 4 60 1691
 0.0     + 0-2.85960- 5 0.0     + 0-9.78308- 9                      2145 4 60 1692
 0.0     + 0 6.00000+ 6           0           0           10        02145 4 60 1693
 0.0     + 0 2.17313- 2 0.0     + 0-5.73405- 4 0.0     + 0-1.71179- 42145 4 60 1694
 0.0     + 0-8.00591- 5 0.0     + 0-7.40653- 8                      2145 4 60 1695
 0.0     + 0 7.00000+ 6           0           0           12        02145 4 60 1696
 0.0     + 0 2.65531- 2 0.0     + 0 8.93238- 5 0.0     + 0-2.92329- 42145 4 60 1697
 0.0     + 0-1.33697- 4 0.0     + 0-4.26419- 7 0.0     + 0-4.98584-102145 4 60 1698
 0.0     + 0 8.00000+ 6           0           0           12        02145 4 60 1699
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 3.12827- 2 0.0    + 0 7.39816- 4 0.0    + 0-3.78512- 42145 4 60 1700
 0.0    + 0-1.61145- 4 0.0    + 0-1.92101- 6 0.0    + 0-2.54436- 92145 4 60 1701
 0.0    + 0 9.00000+ 6          0          0          12          02145 4 60 1702
 0.0    + 0 3.53979- 2 0.0    + 0 1.32445- 3 0.0    + 0-4.32241- 42145 4 60 1703
 0.0    + 0-1.66017- 4 0.0    + 0-6.85278- 6 0.0    + 0-9.85595- 92145 4 60 1704
 0.0    + 0 1.00000+ 7          0          0          12          02145 4 60 1705
 0.0    + 0 3.83984- 2 0.0    + 0 1.78956- 3 0.0    + 0-4.74375- 42145 4 60 1706
 0.0    + 0-1.71012- 4 0.0    + 0-2.00706- 5 0.0    + 0-3.09384- 82145 4 60 1707
 0.0    + 0 1.10000+ 7          0          0          14          02145 4 60 1708
 0.0    + 0 4.09818- 2 0.0    + 0 2.20146- 3 0.0    + 0-5.22587- 42145 4 60 1709
 0.0    + 0-2.03087- 4 0.0    + 0-4.93440- 5 0.0    + 0-8.34195- 82145 4 60 1710
 0.0    + 0-3.21867-10                                             2145 4 60 1711
 0.0    + 0 1.15000+ 7          0          0          14          02145 4 60 1712
 0.0    + 0 4.23549- 2 0.0    + 0 2.42031- 3 0.0    + 0-5.49747- 42145 4 60 1713
 0.0    + 0-2.35757- 4 0.0    + 0-7.27911- 5 0.0    + 0-1.30770- 72145 4 60 1714
 0.0    + 0-5.29956-10                                             2145 4 60 1715
 0.0    + 0 1.20000+ 7          0          0          14          02145 4 60 1716
 0.0    + 0 4.38867- 2 0.0    + 0 2.66094- 3 0.0    + 0-5.79115- 42145 4 60 1717
 0.0    + 0-2.81124- 4 0.0    + 0-1.03050- 4 0.0    + 0-2.00473- 72145 4 60 1718
 0.0    + 0-8.49068-10                                             2145 4 60 1719
 0.0    + 0 1.25000+ 7          0          0          14          02145 4 60 1720
 0.0    + 0 4.55463- 2 0.0    + 0 2.92111- 3 0.0    + 0-6.09535- 42145 4 60 1721
 0.0    + 0-3.37702- 4 0.0    + 0-1.39556- 4 0.0    + 0-3.00986- 72145 4 60 1722
 0.0    + 0-1.32638- 9                                             2145 4 60 1723
 0.0    + 0 1.30000+ 7          0          0          14          02145 4 60 1724
 0.0    + 0 4.72906- 2 0.0    + 0 3.19546- 3 0.0    + 0-6.38923- 42145 4 60 1725
 0.0    + 0-4.01888- 4 0.0    + 0-1.80545- 4 0.0    + 0-4.43739- 72145 4 60 1726
 0.0    + 0-2.02769- 9                                             2145 4 60 1727
 0.0    + 0 1.35000+ 7          0          0          14          02145 4 60 1728
 0.0    + 0 4.90361- 2 0.0    + 0 3.47408- 3 0.0    + 0-6.64043- 42145 4 60 1729
 0.0    + 0-4.68420- 4 0.0    + 0-2.23255- 4 0.0    + 0-6.44091- 72145 4 60 1730
 0.0    + 0-3.04383- 9                                             2145 4 60 1731
 0.0    + 0 1.40000+ 7          0          0          14          02145 4 60 1732
 0.0    + 0 5.06674- 2 0.0    + 0 3.74480- 3 0.0    + 0-6.80228- 42145 4 60 1733
 0.0    + 0-5.30826- 4 0.0    + 0-2.64205- 4 0.0    + 0-9.19611- 72145 4 60 1734
 0.0    + 0-4.49805- 9                                             2145 4 60 1735
 0.0    + 0 1.45000+ 7          0          0          14          02145 4 60 1736
 0.0    + 0 5.20787- 2 0.0    + 0 3.99716- 3 0.0    + 0-6.83653- 42145 4 60 1737
 0.0    + 0-5.83480- 4 0.0    + 0-3.00232- 4 0.0    + 0-1.30247- 62145 4 60 1738
 0.0    + 0-6.56362- 9                                             2145 4 60 1739
 0.0    + 0 1.50000+ 7          0          0          14          02145 4 60 1740
 0.0    + 0 5.32249- 2 0.0    + 0 4.22677- 3 0.0    + 0-6.71457- 42145 4 60 1741
 0.0    + 0-6.22557- 4 0.0    + 0-3.29039- 4 0.0    + 0-1.82869- 62145 4 60 1742
 0.0    + 0-9.48505- 9                                             2145 4 60 1743
 0.0    + 0 1.60000+ 7          0          0          16          02145 4 60 1744
 0.0    + 0 5.46914- 2 0.0    + 0 4.61542- 3 0.0    + 0-5.98069- 42145 4 60 1745
 0.0    + 0-6.55377- 4 0.0    + 0-3.61561- 4 0.0    + 0-3.52965- 62145 4 60 1746
 0.0    + 0-1.96763- 8 0.0    + 0-1.50803-10                       2145 4 60 1747
 0.0    + 0 1.70000+ 7          0          0          16          02145 4 60 1748
 0.0    + 0 5.52725- 2 0.0    + 0 4.92910- 3 0.0    + 0-4.71618- 42145 4 60 1749
 0.0    + 0-6.37366- 4 0.0    + 0-3.64671- 4 0.0    + 0-6.59757- 62145 4 60 1750
 0.0    + 0-3.90985- 8 0.0    + 0-3.21316-10                       2145 4 60 1751
 0.0    + 0 1.80000+ 7          0          0          16          02145 4 60 1752
 0.0    + 0 5.53847- 2 0.0    + 0 5.19849- 3 0.0    + 0-3.17257- 42145 4 60 1753
 0.0    + 0-5.90895- 4 0.0    + 0-3.49966- 4 0.0    + 0-1.18566- 52145 4 60 1754
```

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........10........20........30........40........50........60......MAT MF MT  SEQ
0.0     + 0-7.53757- 8 0.0     + 0-6.60561-10                       2145 4 60 1755
0.0     + 0 1.90000+ 7           0           0           16        02145 4 60 1756
0.0     + 0 5.54018- 2 0.0     + 0 5.44785- 3 0.0     + 0-1.58668- 42145 4 60 1757
0.0     + 0-5.37421- 4 0.0     + 0-3.29704- 4 0.0     + 0-2.02779- 52145 4 60 1758
0.0     + 0-1.40420- 7 0.0     + 0-1.30643- 9                       2145 4 60 1759
0.0     + 0 2.00000+ 7           0           0           16        02145 4 60 1760
0.0     + 0 5.55724- 2 0.0     + 0 5.69167- 3 0.0     + 0-1.09349- 52145 4 60 1761
0.0     + 0-4.91022- 4 0.0     + 0-3.12952- 4 0.0     + 0-3.26967- 52145 4 60 1762
0.0     + 0-2.50911- 7 0.0     + 0-2.48080- 9                       2145 4 60 1763
                                                                    2145 4  0 1764
2.10450+ 4 4.45698+ 1           0           1           0         02145 4 61 1765
0.0     + 0 4.45698+ 1           0           2           0         02145 4 61 1766
0.0     + 0 0.0    + 0           0           0           1        252145 4 61 1767
         25         2           0           0           0         02145 4 61 1768
0.0     + 0 1.84100+ 6           0           0           2         02145 4 61 1769
0.0     + 0 0.0    + 0                                              2145 4 61 1770
0.0     + 0 1.94263+ 6           0           0           4         02145 4 61 1771
0.0     + 0 3.03188- 4 0.0     + 0-3.17144- 6                       2145 4 61 1772
0.0     + 0 2.00000+ 6           0           0           4         02145 4 61 1773
0.0     + 0 5.47927- 4 0.0     + 0-7.63006- 6                       2145 4 61 1774
0.0     + 0 3.00000+ 6           0           0           8         02145 4 61 1775
0.0     + 0 6.48637- 3 0.0     + 0-2.61499- 4 0.0     + 0 1.81336- 72145 4 61 1776
0.0     + 0-2.76950- 9                                              2145 4 61 1777
0.0     + 0 4.00000+ 6           0           0           8         02145 4 61 1778
0.0     + 0 9.45793- 3 0.0     + 0-4.17112- 4 0.0     + 0 2.76968- 62145 4 61 1779
0.0     + 0-6.12699- 8                                              2145 4 61 1780
0.0     + 0 5.00000+ 6           0           0           8         02145 4 61 1781
0.0     + 0 1.18685- 2 0.0     + 0-2.22122- 4 0.0     + 0 1.82688- 52145 4 61 1782
0.0     + 0-9.32975- 8                                              2145 4 61 1783
0.0     + 0 6.00000+ 6           0           0           10        02145 4 61 1784
0.0     + 0 1.62623- 2 0.0     + 0 3.42702- 4 0.0     + 0 5.26347- 52145 4 61 1785
0.0     + 0-7.06912- 7 0.0     + 0-1.90547- 9                       2145 4 61 1786
0.0     + 0 7.00000+ 6           0           0           10        02145 4 61 1787
0.0     + 0 2.21002- 2 0.0     + 0 1.08634- 3 0.0     + 0 6.90548- 52145 4 61 1788
0.0     + 0-2.32613- 6 0.0     + 0 4.32694- 9                       2145 4 61 1789
0.0     + 0 8.00000+ 6           0           0           10        02145 4 61 1790
0.0     + 0 2.79800- 2 0.0     + 0 1.70354- 3 0.0     + 0 1.44248- 52145 4 61 1791
0.0     + 0-4.04467- 6 0.0     + 0 2.52766- 8                       2145 4 61 1792
0.0     + 0 9.00000+ 6           0           0           12        02145 4 61 1793
0.0     + 0 3.30117- 2 0.0     + 0 2.08864- 3 0.0     + 0-1.02228- 42145 4 61 1794
0.0     + 0-3.39666- 6 0.0     + 0 1.04811- 7 0.0     + 0-3.78300-102145 4 61 1795
0.0     + 0 1.00000+ 7           0           0           12        02145 4 61 1796
0.0     + 0 3.69781- 2 0.0     + 0 2.32408- 3 0.0     + 0-2.16174- 42145 4 61 1797
0.0     + 0 1.76520- 6 0.0     + 0 3.19420- 7 0.0     + 0-1.20536- 92145 4 61 1798
0.0     + 0 1.10000+ 7           0           0           12        02145 4 61 1799
0.0     + 0 4.02894- 2 0.0     + 0 2.56539- 3 0.0     + 0-2.64364- 42145 4 61 1800
0.0     + 0 1.26034- 5 0.0     + 0 7.65514- 7 0.0     + 0 9.01801-102145 4 61 1801
0.0     + 0 1.15000+ 7           0           0           12        02145 4 61 1802
0.0     + 0 4.17843- 2 0.0     + 0 2.71700- 3 0.0     + 0-2.55962- 42145 4 61 1803
0.0     + 0 2.00064- 5 0.0     + 0 1.08744- 6 0.0     + 0 1.37907- 92145 4 61 1804
0.0     + 0 1.20000+ 7           0           0           12        02145 4 61 1805
0.0     + 0 4.32222- 2 0.0     + 0 2.89689- 3 0.0     + 0-2.26673- 42145 4 61 1806
0.0     + 0 2.86537- 5 0.0     + 0 1.47264- 6 0.0     + 0 2.07824- 92145 4 61 1807
0.0     + 0 1.25000+ 7           0           0           12        02145 4 61 1808
0.0     + 0 4.45667- 2 0.0     + 0 3.10010- 3 0.0     + 0-1.79480- 42145 4 61 1809
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 3.79166- 5 0.0     + 0 1.91035- 6 0.0     + 0 3.09354- 92145 4 61 1810
 0.0     + 0 1.30000+ 7           0           0           12          02145 4 61 1811
 0.0     + 0 4.58232- 2 0.0     + 0 3.32132- 3 0.0     + 0-1.18653- 42145 4 61 1812
 0.0     + 0 4.72364- 5 0.0     + 0 2.38337- 6 0.0     + 0 4.57533- 92145 4 61 1813
 0.0     + 0 1.35000+ 7           0           0           12          02145 4 61 1814
 0.0     + 0 4.69958- 2 0.0     + 0 3.55359- 3 0.0     + 0-4.84622- 52145 4 61 1815
 0.0     + 0 5.59598- 5 0.0     + 0 2.87437- 6 0.0     + 0 6.74678- 92145 4 61 1816
 0.0     + 0 1.40000+ 7           0           0           14          02145 4 61 1817
 0.0     + 0 4.80743- 2 0.0     + 0 3.78655- 3 0.0     + 0 2.61769- 52145 4 61 1818
 0.0     + 0 6.33304- 5 0.0     + 0 3.35747- 6 0.0     + 0 9.18703- 92145 4 61 1819
 0.0     + 0-2.04500-10                                                 2145 4 61 1820
 0.0     + 0 1.45000+ 7           0           0           14          02145 4 61 1821
 0.0     + 0 4.90463- 2 0.0     + 0 4.01002- 3 0.0     + 0 1.01777- 42145 4 61 1822
 0.0     + 0 6.86928- 5 0.0     + 0 3.87545- 6 0.0     + 0 1.34523- 82145 4 61 1823
 0.0     + 0-3.02696-10                                                 2145 4 61 1824
 0.0     + 0 1.50000+ 7           0           0           14          02145 4 61 1825
 0.0     + 0 4.99299- 2 0.0     + 0 4.21769- 3 0.0     + 0 1.75452- 42145 4 61 1826
 0.0     + 0 7.16489- 5 0.0     + 0 4.45854- 6 0.0     + 0 1.96616- 82145 4 61 1827
 0.0     + 0-4.43854-10                                                 2145 4 61 1828
 0.0     + 0 1.60000+ 7           0           0           14          02145 4 61 1829
 0.0     + 0 5.15181- 2 0.0     + 0 4.57531- 3 0.0     + 0 3.12819- 42145 4 61 1830
 0.0     + 0 7.03507- 5 0.0     + 0 6.09459- 6 0.0     + 0 4.45967- 82145 4 61 1831
 0.0     + 0-3.98364-11                                                 2145 4 61 1832
 0.0     + 0 1.70000+ 7           0           0           14          02145 4 61 1833
 0.0     + 0 5.30110- 2 0.0     + 0 4.85655- 3 0.0     + 0 4.40435- 42145 4 61 1834
 0.0     + 0 6.14027- 5 0.0     + 0 8.87297- 6 0.0     + 0 9.16044- 82145 4 61 1835
 0.0     + 0-8.26143-11                                                 2145 4 61 1836
 0.0     + 0 1.80000+ 7           0           0           14          02145 4 61 1837
 0.0     + 0 5.46536- 2 0.0     + 0 5.09416- 3 0.0     + 0 5.71096- 42145 4 61 1838
 0.0     + 0 4.96267- 5 0.0     + 0 1.32188- 5 0.0     + 0 1.81114- 72145 4 61 1839
 0.0     + 0-1.41003-10                                                 2145 4 61 1840
 0.0     + 0 1.90000+ 7           0           0           14          02145 4 61 1841
 0.0     + 0 5.66096- 2 0.0     + 0 5.31889- 3 0.0     + 0 7.16111- 42145 4 61 1842
 0.0     + 0 3.96036- 5 0.0     + 0 1.91203- 5 0.0     + 0 3.41237- 72145 4 61 1843
 0.0     + 0-1.83689-10                                                 2145 4 61 1844
 0.0     + 0 2.00000+ 7           0           0           16          02145 4 61 1845
 0.0     + 0 5.89159- 2 0.0     + 0 5.54727- 3 0.0     + 0 8.79178- 42145 4 61 1846
 0.0     + 0 3.42970- 5 0.0     + 0 2.60494- 5 0.0     + 0 5.99153- 72145 4 61 1847
 0.0     + 0-6.06495-10 0.0     + 0-1.50050-10                         2145 4 61 1848
                                                                       2145 4  0 1849
2.10450+ 4 4.45698+ 1           0           1           0           02145 4 91 1850
 0.0     + 0 4.45698+ 1           0           2           0           02145 4 91 1851
 0.0     + 0 0.0     + 0          0           0           1          242145 4 91 1852
         24          2            0           0           0           02145 4 91 1853
 0.0     + 0 1.94263+ 6           0           0           2           02145 4 91 1854
 0.0     + 0 0.0     + 0                                               2145 4 91 1855
 0.0     + 0 2.00000+ 6           0           0           4           02145 4 91 1856
 0.0     + 0 6.45012- 4 0.0     + 0 4.24715- 6                         2145 4 91 1857
 0.0     + 0 3.00000+ 6           0           0           8           02145 4 91 1858
 0.0     + 0 1.32184- 2 0.0     + 0 1.26664- 3 0.0     + 0 3.61011- 72145 4 91 1859
 0.0     + 0 4.32632- 8                                                 2145 4 91 1860
 0.0     + 0 4.00000+ 6           0           0           8           02145 4 91 1861
 0.0     + 0 1.96467- 2 0.0     + 0 2.25622- 3 0.0     + 0 3.93421- 62145 4 91 1862
 0.0     + 0 7.28118- 7                                                 2145 4 91 1863
 0.0     + 0 5.00000+ 6           0           0           10          02145 4 91 1864
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0     + 0 2.19079- 2 0.0     + 0 2.53387- 3 0.0     + 0 1.77182- 52145 4 91 1865
 0.0     + 0 3.85053- 6 0.0     + 0 8.19103-10                       2145 4 91 1866
 0.0     + 0 6.00000+ 6           0           0          10          02145 4 91 1867
 0.0     + 0 2.29938- 2 0.0     + 0 2.65411- 3 0.0     + 0 4.65438- 52145 4 91 1868
 0.0     + 0 1.02546- 5 0.0     + 0 5.14303- 9                       2145 4 91 1869
 0.0     + 0 7.00000+ 6           0           0          12          02145 4 91 1870
 0.0     + 0 2.37933- 2 0.0     + 0 2.76604- 3 0.0     + 0 8.49383- 52145 4 91 1871
 0.0     + 0 1.74970- 5 0.0     + 0 2.29633- 8 0.0     + 0 1.88315-112145 4 91 1872
 0.0     + 0 8.00000+ 6           0           0          12          02145 4 91 1873
 0.0     + 0 2.43782- 2 0.0     + 0 2.86167- 3 0.0     + 0 1.23565- 42145 4 91 1874
 0.0     + 0 2.29608- 5 0.0     + 0 7.72559- 8 0.0     + 0 7.44577-112145 4 91 1875
 0.0     + 0 9.00000+ 6           0           0          12          02145 4 91 1876
 0.0     + 0 2.45559- 2 0.0     + 0 2.90347- 3 0.0     + 0 1.53369- 42145 4 91 1877
 0.0     + 0 2.57852- 5 0.0     + 0 2.01606- 7 0.0     + 0 2.22623-102145 4 91 1878
 0.0     + 0 1.00000+ 7           0           0          12          02145 4 91 1879
 0.0     + 0 2.44786- 2 0.0     + 0 2.90952- 3 0.0     + 0 1.71304- 42145 4 91 1880
 0.0     + 0 2.69152- 5 0.0     + 0 4.24318- 7 0.0     + 0 5.11387-102145 4 91 1881
 0.0     + 0 1.10000+ 7           0           0          14          02145 4 91 1882
 0.0     + 0 2.42781- 2 0.0     + 0 2.89358- 3 0.0     + 0 1.82214- 42145 4 91 1883
 0.0     + 0 2.80361- 5 0.0     + 0 7.57164- 7 0.0     + 0 1.00175- 92145 4 91 1884
 0.0     + 0 2.16673-12                                              2145 4 91 1885
 0.0     + 0 1.15000+ 7           0           0          14          02145 4 91 1886
 0.0     + 0 2.41561- 2 0.0     + 0 2.88223- 3 0.0     + 0 1.86991- 42145 4 91 1887
 0.0     + 0 2.89628- 5 0.0     + 0 9.63139- 7 0.0     + 0 1.33708- 92145 4 91 1888
 0.0     + 0 2.93430-12                                              2145 4 91 1889
 0.0     + 0 1.20000+ 7           0           0          14          02145 4 91 1890
 0.0     + 0 2.40294- 2 0.0     + 0 2.87128- 3 0.0     + 0 1.91683- 42145 4 91 1891
 0.0     + 0 3.01535- 5 0.0     + 0 1.19096- 6 0.0     + 0 1.79325- 92145 4 91 1892
 0.0     + 0 4.47447-12                                              2145 4 91 1893
 0.0     + 0 1.25000+ 7           0           0          14          02145 4 91 1894
 0.0     + 0 2.39109- 2 0.0     + 0 2.86262- 3 0.0     + 0 1.96844- 42145 4 91 1895
 0.0     + 0 3.16526- 5 0.0     + 0 1.43239- 6 0.0     + 0 2.32925- 92145 4 91 1896
 0.0     + 0 5.86365-12                                              2145 4 91 1897
 0.0     + 0 1.30000+ 7           0           0          14          02145 4 91 1898
 0.0     + 0 2.38015- 2 0.0     + 0 2.85633- 3 0.0     + 0 2.02263- 42145 4 91 1899
 0.0     + 0 3.33549- 5 0.0     + 0 1.67906- 6 0.0     + 0 2.99485- 92145 4 91 1900
 0.0     + 0 7.56342-12                                              2145 4 91 1901
 0.0     + 0 1.35000+ 7           0           0          14          02145 4 91 1902
 0.0     + 0 2.37008- 2 0.0     + 0 2.85230- 3 0.0     + 0 2.08283- 42145 4 91 1903
 0.0     + 0 3.52934- 5 0.0     + 0 1.92437- 6 0.0     + 0 3.83577- 92145 4 91 1904
 0.0     + 0 1.08950-11                                              2145 4 91 1905
 0.0     + 0 1.40000+ 7           0           0          14          02145 4 91 1906
 0.0     + 0 2.36234- 2 0.0     + 0 2.85255- 3 0.0     + 0 2.14866- 42145 4 91 1907
 0.0     + 0 3.74380- 5 0.0     + 0 2.15972- 6 0.0     + 0 4.87606- 92145 4 91 1908
 0.0     + 0 1.44464-11                                              2145 4 91 1909
 0.0     + 0 1.45000+ 7           0           0          14          02145 4 91 1910
 0.0     + 0 2.35725- 2 0.0     + 0 2.85850- 3 0.0     + 0 2.22033- 42145 4 91 1911
 0.0     + 0 3.97597- 5 0.0     + 0 2.38232- 6 0.0     + 0 6.24659- 92145 4 91 1912
 0.0     + 0 1.83300-11                                              2145 4 91 1913
 0.0     + 0 1.50000+ 7           0           0          14          02145 4 91 1914
 0.0     + 0 2.35413- 2 0.0     + 0 2.86842- 3 0.0     + 0 2.29293- 42145 4 91 1915
 0.0     + 0 4.21367- 5 0.0     + 0 2.58566- 6 0.0     + 0 7.88952- 92145 4 91 1916
 0.0     + 0 2.56969-11                                              2145 4 91 1917
 0.0     + 0 1.60000+ 7           0           0          16          02145 4 91 1918
 0.0     + 0 2.35262- 2 0.0     + 0 2.89696- 3 0.0     + 0 2.43985- 42145 4 91 1919
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........10........20........30........40........50........60......MAT MF MT  SEQ
 0.0    + 0 4.70577- 5 0.0    + 0 2.93654- 6 0.0    + 0 1.23341- 82145 4 91 1920
 0.0    + 0 4.17216-11 0.0    + 0 1.38985-13                      2145 4 91 1921
 0.0    + 0 1.70000+ 7          0          0          16         02145 4 91 1922
 0.0    + 0 2.35651- 2 0.0    + 0 2.93569- 3 0.0    + 0 2.59771- 42145 4 91 1923
 0.0    + 0 5.23583- 5 0.0    + 0 3.24460- 6 0.0    + 0 1.89148- 82145 4 91 1924
 0.0    + 0 6.55140-11 0.0    + 0 2.68359-13                      2145 4 91 1925
 0.0    + 0 1.80000+ 7          0          0          16         02145 4 91 1926
 0.0    + 0 2.36309- 2 0.0    + 0 2.97908- 3 0.0    + 0 2.76375- 42145 4 91 1927
 0.0    + 0 5.80449- 5 0.0    + 0 3.52924- 6 0.0    + 0 2.83542- 82145 4 91 1928
 0.0    + 0 1.10686-10 0.0    + 0 4.10851-13                      2145 4 91 1929
 0.0    + 0 1.90000+ 7          0          0          16         02145 4 91 1930
 0.0    + 0 2.36963- 2 0.0    + 0 3.02114- 3 0.0    + 0 2.92704- 42145 4 91 1931
 0.0    + 0 6.37463- 5 0.0    + 0 3.81794- 6 0.0    + 0 4.15425- 82145 4 91 1932
 0.0    + 0 1.69668-10 0.0    + 0 7.79680-13                      2145 4 91 1933
 0.0    + 0 2.00000+ 7          0          0          16         02145 4 91 1934
 0.0    + 0 2.37638- 2 0.0    + 0 3.06088- 3 0.0    + 0 3.08186- 42145 4 91 1935
 0.0    + 0 6.92862- 5 0.0    + 0 4.12409- 6 0.0    + 0 5.85368- 82145 4 91 1936
 0.0    + 0 2.54156-10 0.0    + 0 1.23070-12                      2145 4 91 1937
                                                                  2145 4  0 1938
                                                                  2145 0  0 1939
                                                                     0 0  0 1940
                                                                    -1 0  0    0
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