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E. Gadioli, I. Iori, N. Molho and L. Zetta: (p, α) REACTIONS
ON HEAVY NUCLEI.

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INTRODUCTION. -

In this report energy spectra and angular distributions of α particles emitted in the bombardement of ^{181}Ta , ^{197}Au , ^{206}Pb , ^{207}Pb , ^{208}Pb , ^{209}Bi with protons of energy varying from ~ 20 to ~ 45 MeV, are presented.

EXPERIMENTAL APPARATUS AND RESULTS. -

The experiment has been done with the external variable energy proton beam of the AVF cyclotron of the University of Milano.

The proton beam is collimated and focused on the target at the center of a 60 cm diameter scattering chamber in a spot less than $5 \times 5 \text{ mm}^2$. The proton current on the target, varying from about 80 to 300 nA, depending on the beam energy, is collected in a Faraday cup and fed to a current integrator.

General characteristics of the targets used are reported in Tab. I.

The detector system is a telescope of two solid state surface-barrier Si detectors : a ΔE detector ($30 \pm 50 \text{ } \mu\text{m}$ thick) and a E detector ($700 \pm 1000 \text{ } \mu\text{m}$ thick). The coincident pulses from the E + ΔE and ΔE chains are fed respectively to the X and Y axes of a 4096 channel Laben Correlatron that acts as bidimensional 128×32 analyzer. The signals due to different particles (p, d, t, α) are distributed in different regions of the X-Y plane and α particles are easily recognized. We do not separate α from ^3He , but, due to the widely different Q values for (p, α) and (p, ^3He) reactions in the case of nuclei here investigated, the ^3He yield should only weakly contribute to the total measured yield.

For each spectrum the content of the analyzer memory is recorded into a magnetic tape. The tape is analyzed with the Univac 1106 computer of the University of Milano.

TABLE I

Target	Chemical purity	Isotopic composition	Thickness	Mass accuracy	Uniformity
^{181}Ta	99.9 %	181 99.988 % 180 0.012 %	7.6 mg/cm ²	5 %	5 - 10 %
^{197}Au	99.9 %		14.0 mg/cm ²	5 %	5 - 10 %
$^{206}\text{Pb}^*$		204 0.04 % 206 94.92 % 207 3.02 % 208 2.02 %	15.0 mg/cm ²	2 %	5 - 10 %
$^{207}\text{Pb}^*$		204 0.01 % 206 0.94 % 207 95.12 % 208 3.94 %	15.0 mg/cm ²	2 %	5 - 10 %
$^{208}\text{Pb}^*$		204 0.01 % 206 0.59 % 207 0.19 % 208 99.22 %	15.0 mg/cm ²	2 %	5 - 10 %
^{209}Bi	99.99 %		21.8 mg/cm ²	5 %	5 - 10 %

All the targets are self-supporting

* Supplied by AERE - Harwell

The tri-dimensional 128 x 32 x (channel content) matrix, is transformed in a bi-dimensional matrix in which each element is represented by an alphanumeric symbol related to the channel content.

The region of interest in the X-Y plane is selected and only the channels contained in this region, i. e. only those which contribute to the α particles yield, are considered and summed up along the ΔE axis for each value of the α energy.

In this way the alpha spectrum is obtained and printed out after some normalization and kinematical transformation.

The energy scale is obtained analyzing the yield of particles emitted in the reaction $^{27}\text{Al}(p, \alpha)^{24}\text{Mg}$, measured at each proton energy at a forward angle, which shows many well resolved peaks of known energy, and measuring the α particles emitted by a thin ^{241}Am calibration source.

The solid angle subtended by the detector is of the order of 10^{-4} steradians. The α particle spectra are detected from $\sim 30^\circ$ to $\sim 170^\circ$ at intervals of roughly 30° . The limit at forward angles is imposed by the background which does not permit a good separation of the region covered by α particles in the two-dimensional spectrum. At large angles the limit

is imposed by the geometry, that is dimensions of the detector system and beam collimating system.

The incident proton energy ranges from ~ 20 to ~ 45 MeV; the beam energy is deduced from the radius of the stripping orbit inside the cyclotron. This method, usually employed for simplicity, has been checked with the cross-over technique.

The absolute value of the proton beam energy, E_p , is determined within ± 200 keV the energy spread ΔE_p is of the order of 150 keV; the overall resolution of the experimental apparatus is about 300 - 400 keV, mainly due to the limited number of channels in the X axis of the analyzer and to the target thickness.

The accuracy in the cross-section absolute value is estimated to be of the order of 12 % mainly due to the beam monitoring system and to the target thickness uncertainty.

In the tables are reported the α particle spectra for the following reactions and energies :

- $^{181}\text{Ta}(p, \alpha)$ at $E_p = 19.6, 24.8, 29.7$ MeV ;
- $^{197}\text{Au}(p, \alpha)$ at $E_p = 20.0, 23.7, 26.7, 30.2, 33.8, 36.8, 39.8, 41.2$ MeV ;
- $^{206}\text{Pb}(p, \alpha)$ at $E_p = 19.9, 24.8, 29.8, 34.3, 38.4, 43.7$ MeV ;
- $^{207}\text{Pb}(p, \alpha)$ at $E_p = 29.8, 34.3, 38.4, 43.7$ MeV ;
- $^{208}\text{Pb}(p, \alpha)$ at $E_p = 30.0, 35.0, 40.0, 44.5$ MeV ;
- $^{209}\text{Bi}(p, \alpha)$ at $E_p = 19.8, 30.0, 35.0, 40.0, 44.5$ MeV.

The angles reported in the tables are those measured in the Laboratory System (their values differ only by tenths of degree from the corresponding values in the C. M. system); the energy is the channel energy which one would expect if the measured α would be the only or the first particle emitted in the reaction. The cross-section values are, in the same approximation given in the C. M. system, the quoted errors are the statistical ones.

In Figs. 1 to 10 are reported the angle integrated spectra : energy and cross-section are given in the L. S. and error bars are purely statistical.

In Figs. 11 to 16 are reported the angular distributions of the energy integrated α spectra at different energies for the various elements. The error bars are the absolute errors and the lines connecting the experimental points are drawn only to guide the eye.

In Fig. 17 are reported the cross-sections of the angle and energy integrated spectra for various elements at different incident proton energies.

DISCUSSION. -

The data here reported have been only partially analyzed.

The analysis of backward angle spectra, in the case of ^{197}Au , Pb isotopes, ^{209}Bi , permitted to deduce the statistical contribution to the reactions⁽¹⁻³⁾. Such contribution is only a small part of the total α particle yield.

The analysis of the angle integrated spectra, which is in progress, seems to indicate that most of the α emission could be accounted for in terms of the pre-equilibrium exciton model.

However, in some cases, at forward angles in the measured spectra appears a contribution of high energy α particles feeding a group of levels of the residual nucleus which does not seem one could attribute to the above mentioned process.

REFERENCES. -

- (1) - E. Gadioli, I. Iori, N. Molho and L. Zetta, Phys. Rev. C4, 1412 (1971).
- (2) - E. Gadioli, I. Iori, N. Molho and L. Zetta, Lett. Nuovo Cimento 3, 677 (1972).
- (3) - E. Gadioli, I. Iori, N. Molho and L. Zetta, Nuclear Phys., to be published.

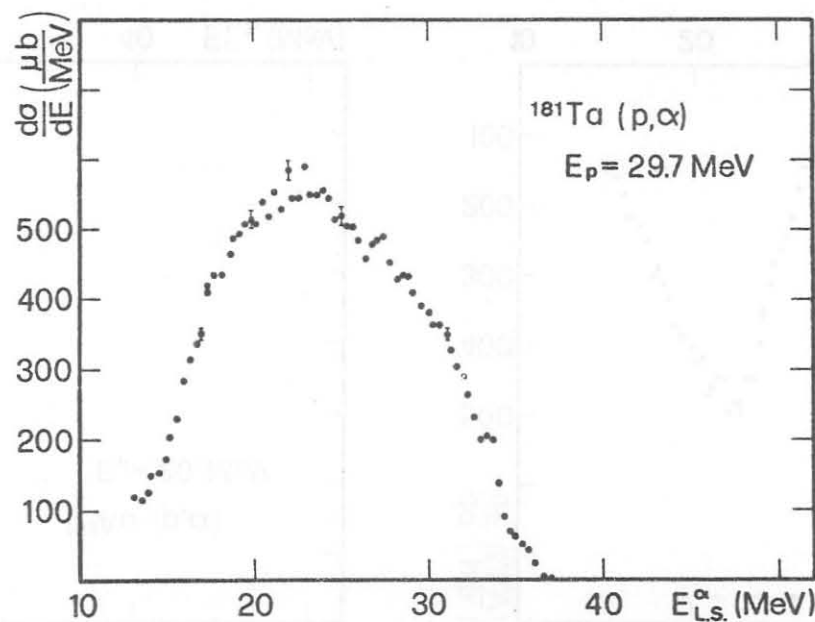
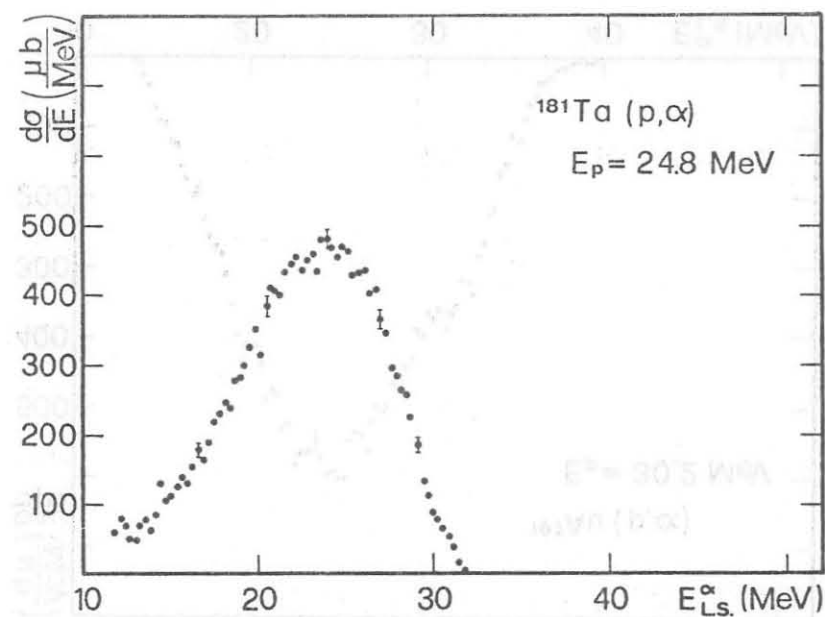
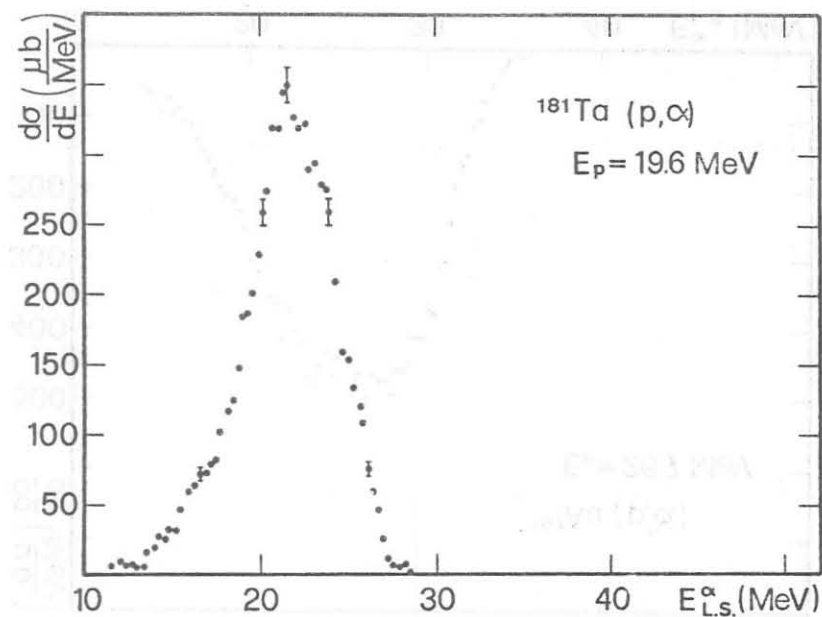


FIG. 1

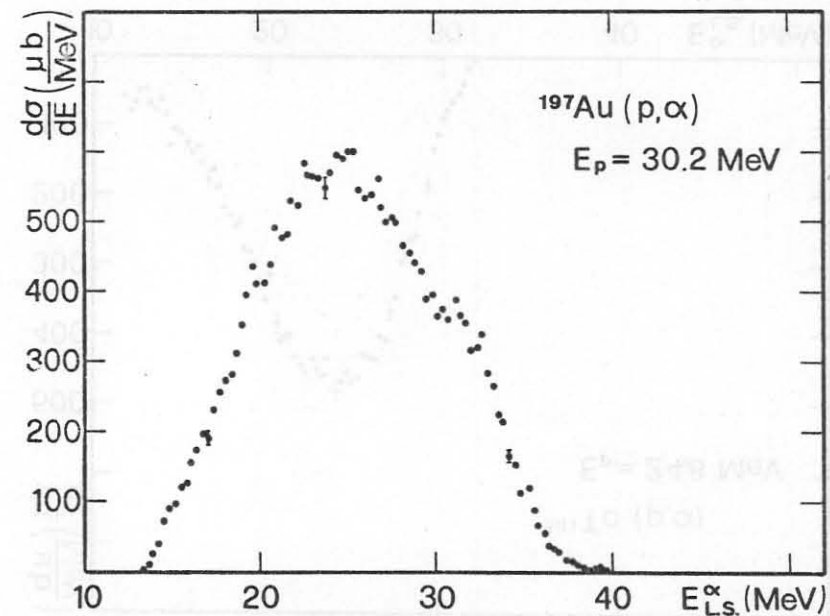
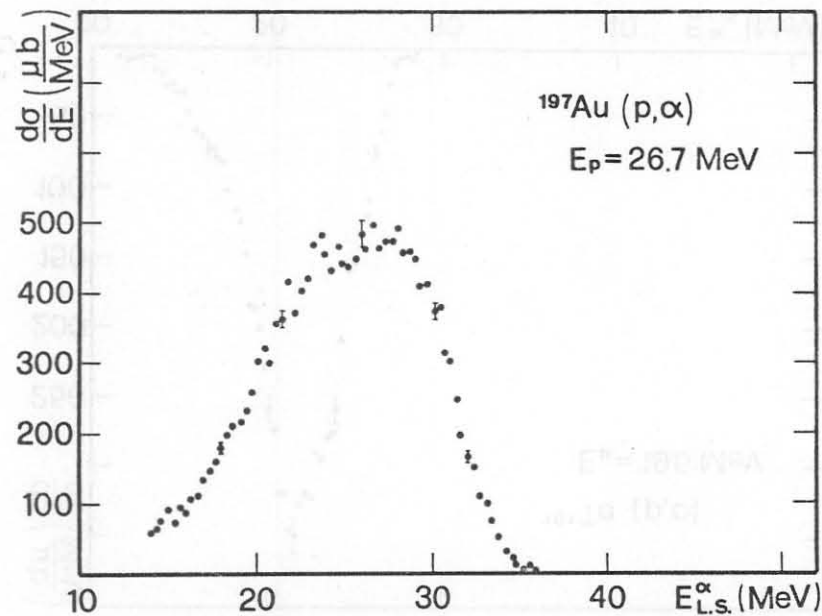
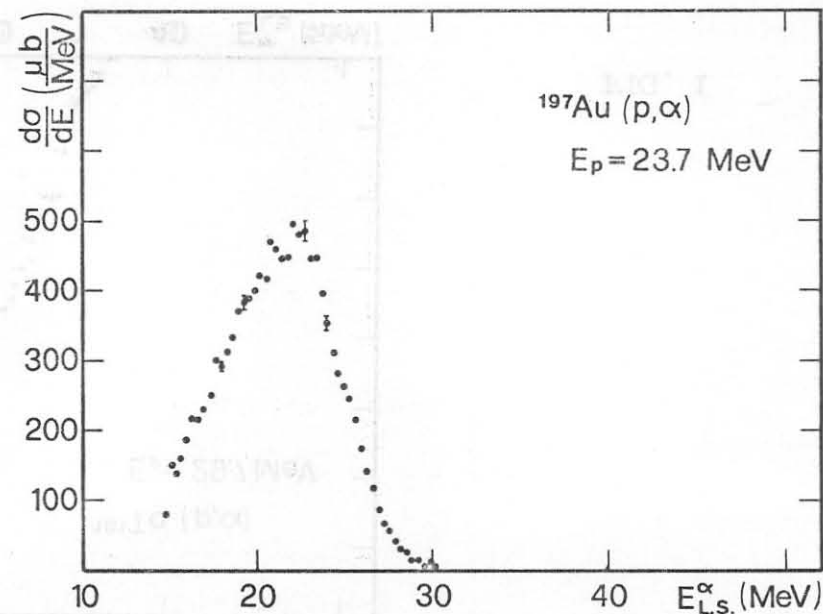
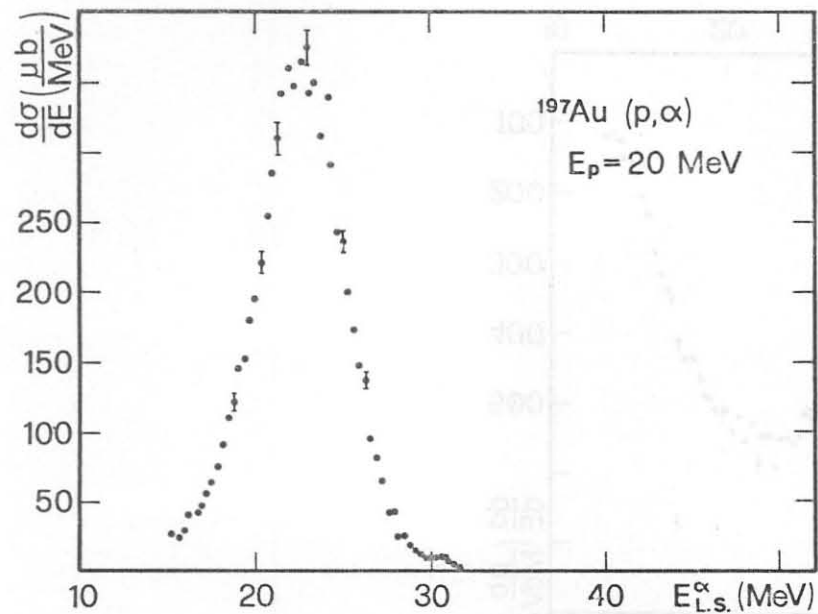


FIG. 2

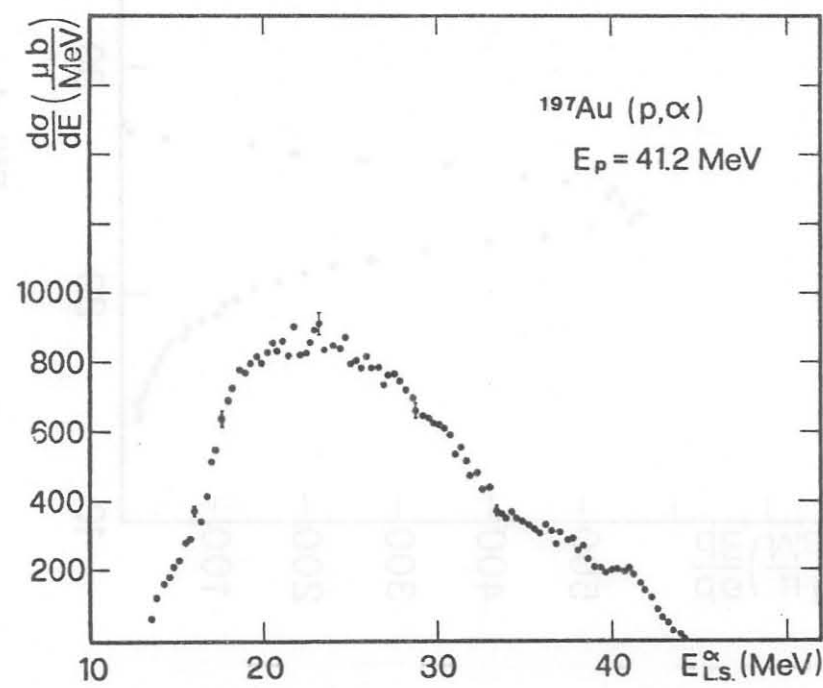
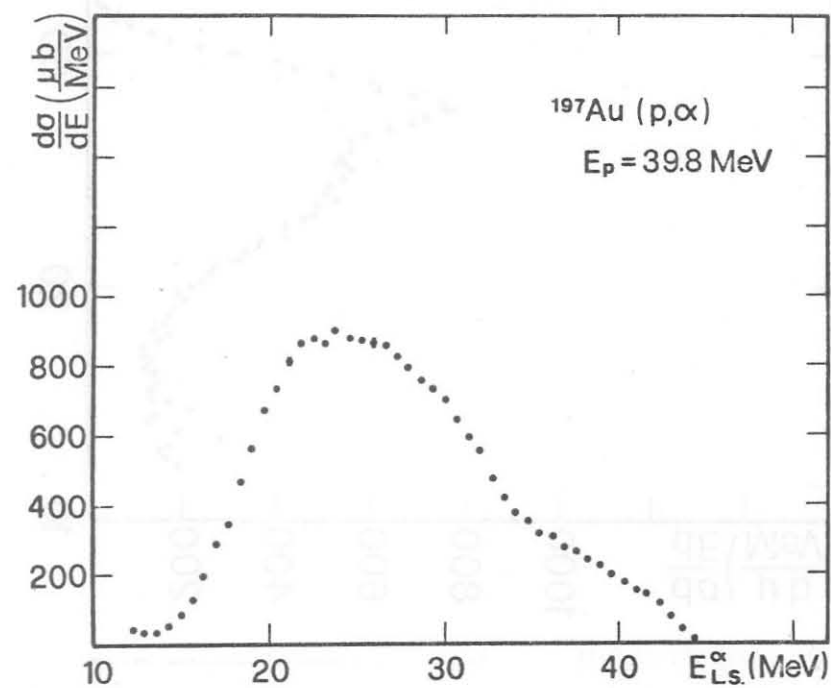
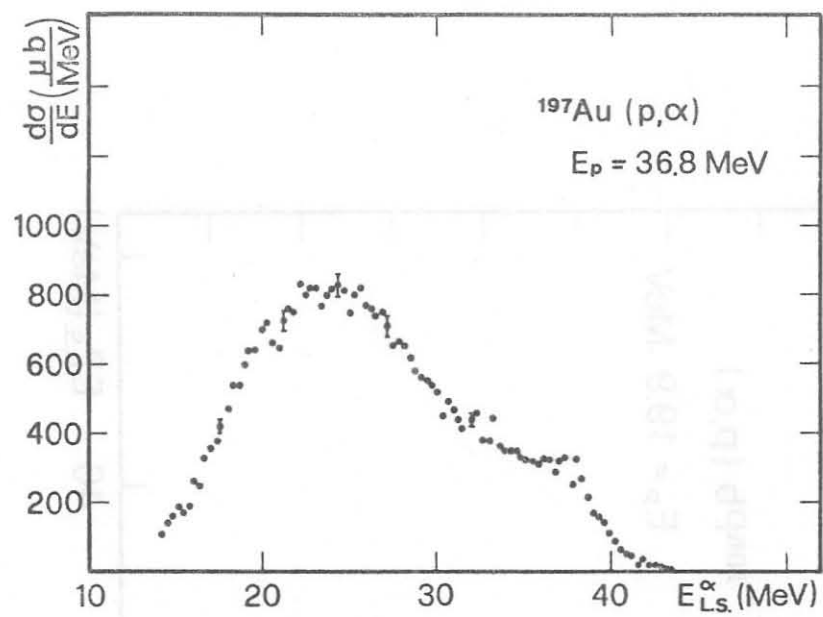
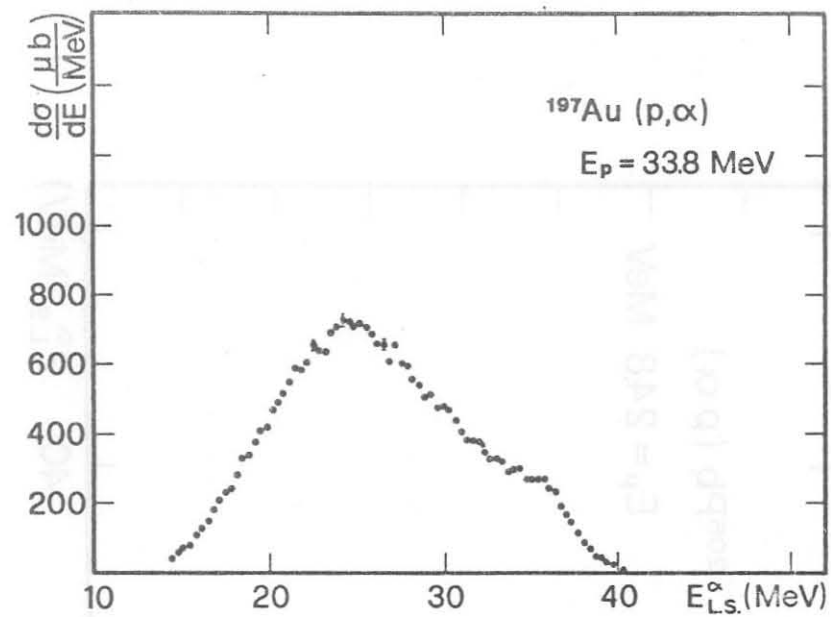


FIG. 3

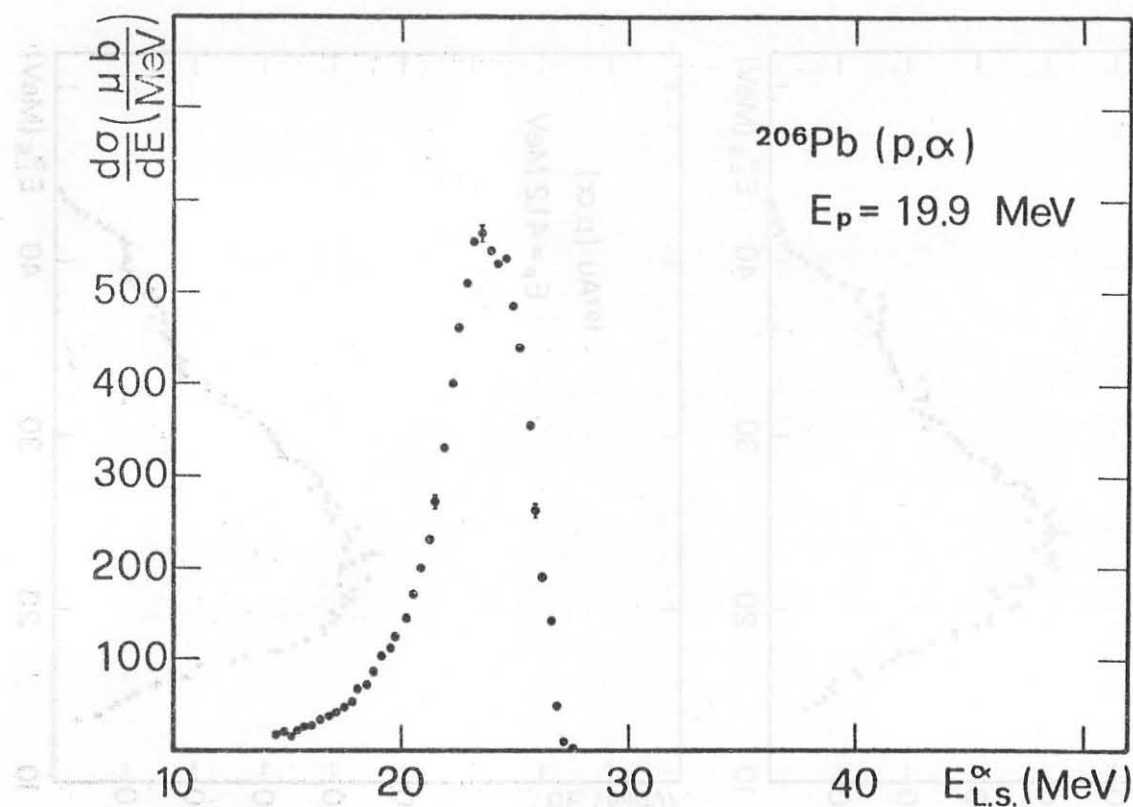


FIG. 4

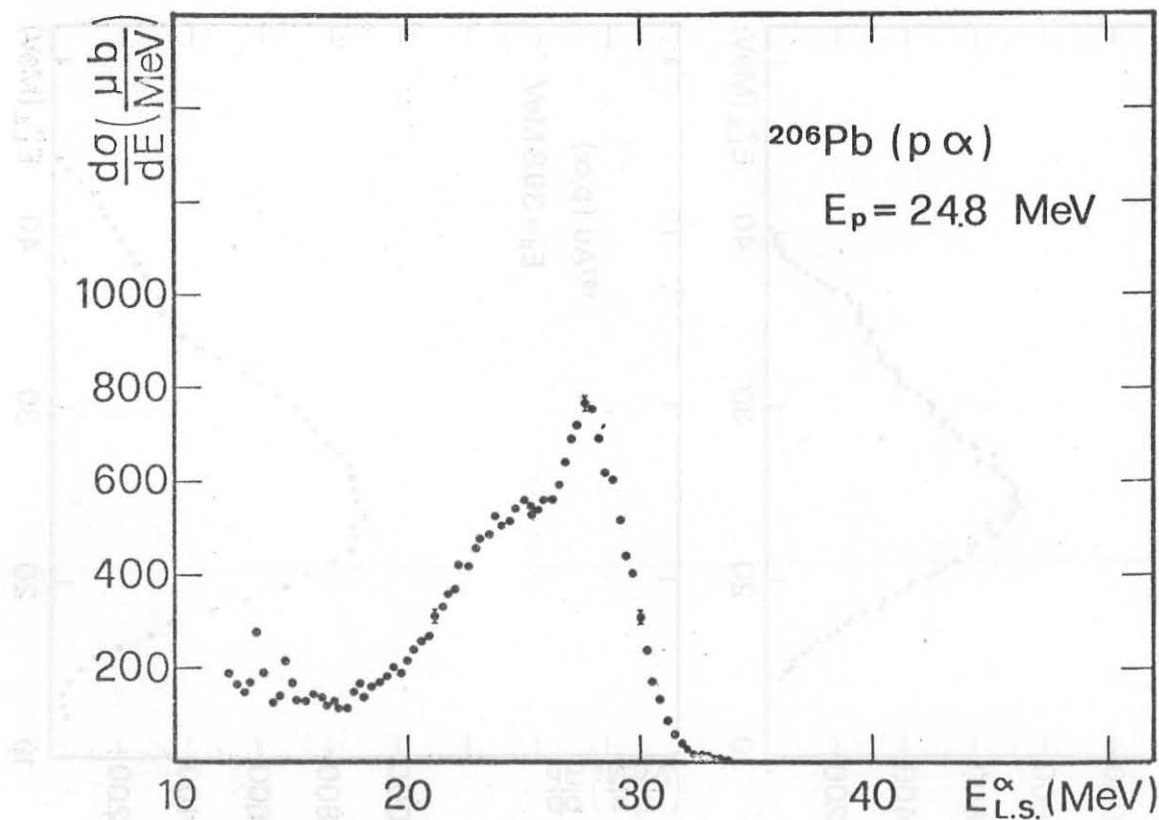


FIG. 5

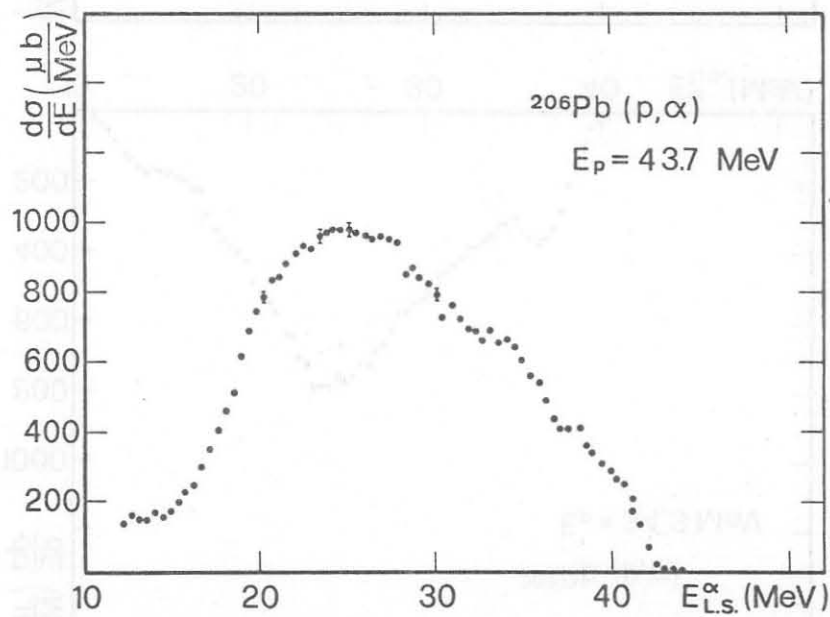
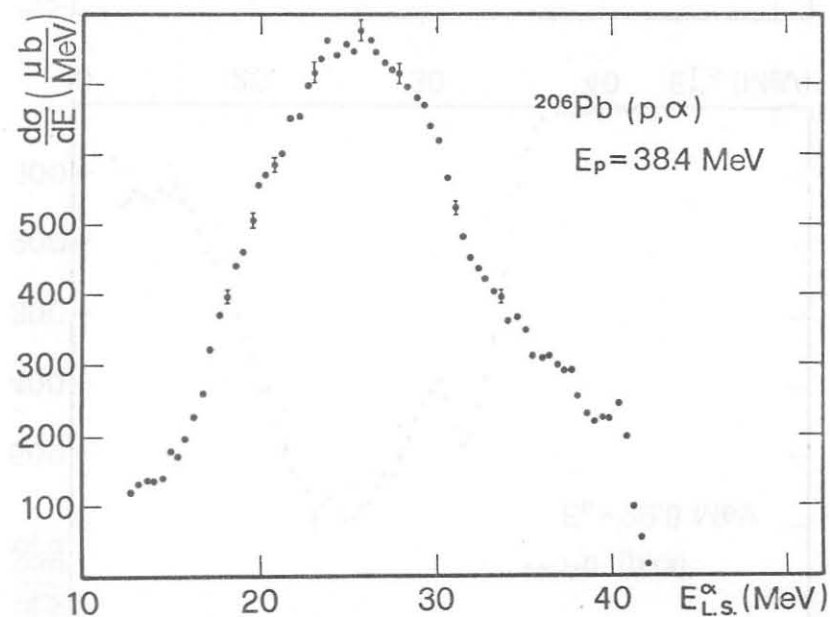
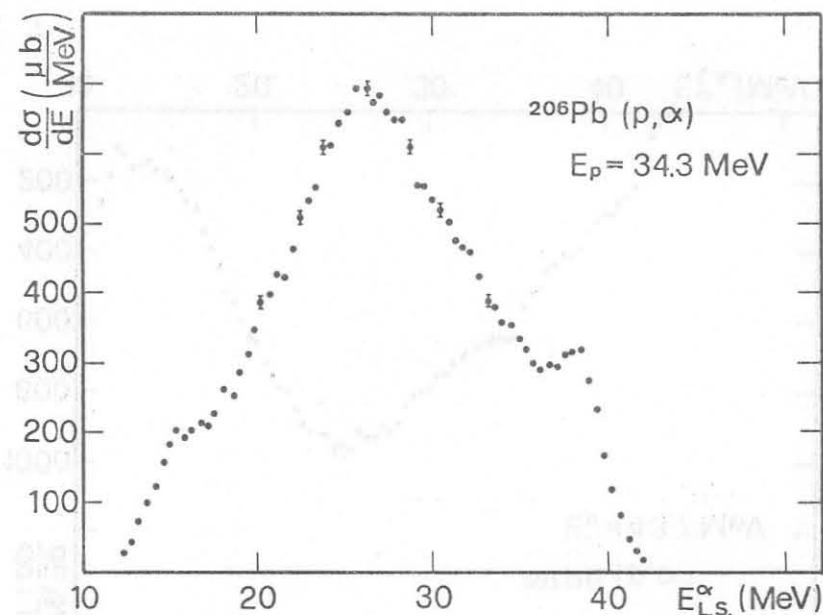
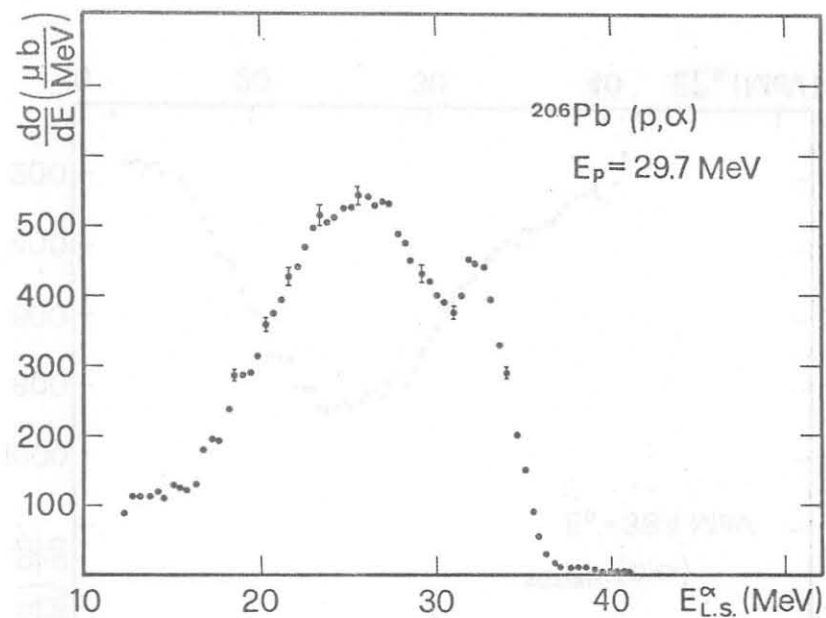


FIG. 6

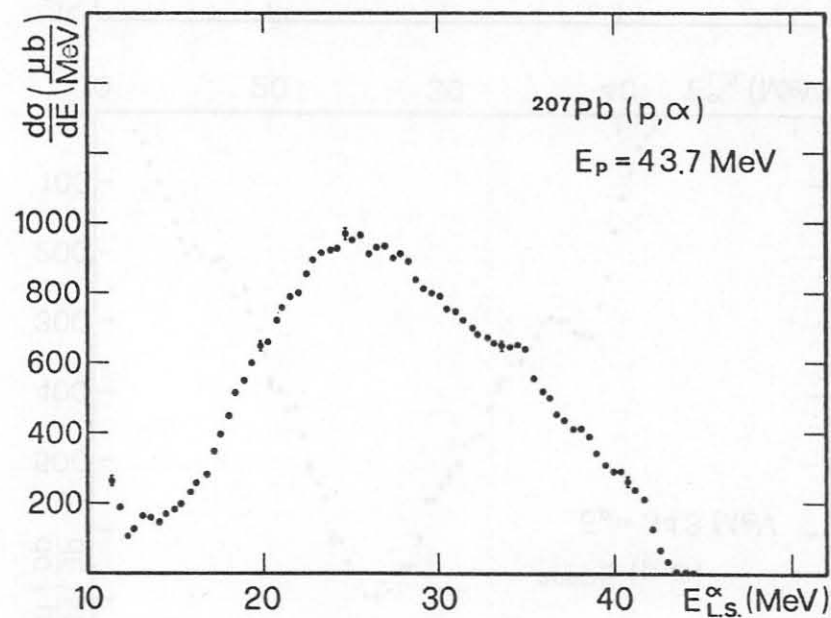
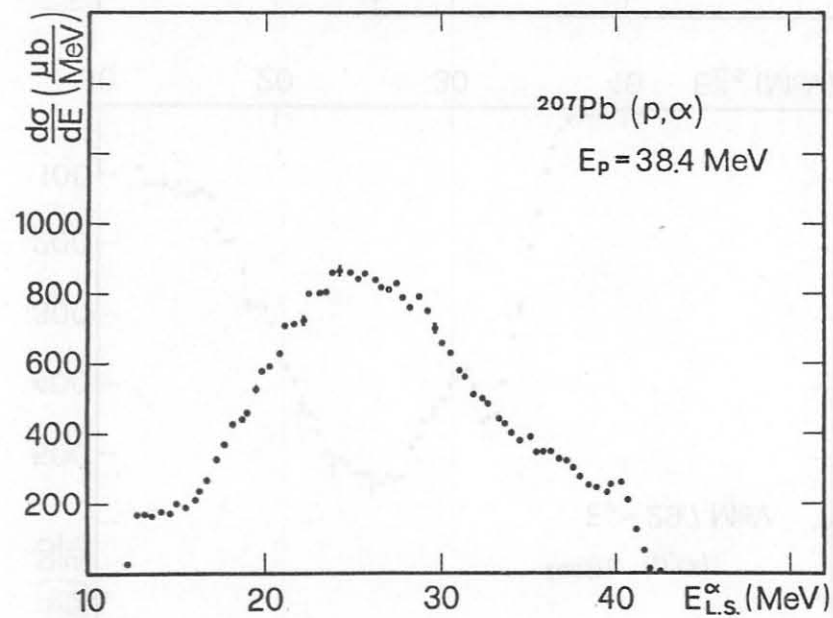
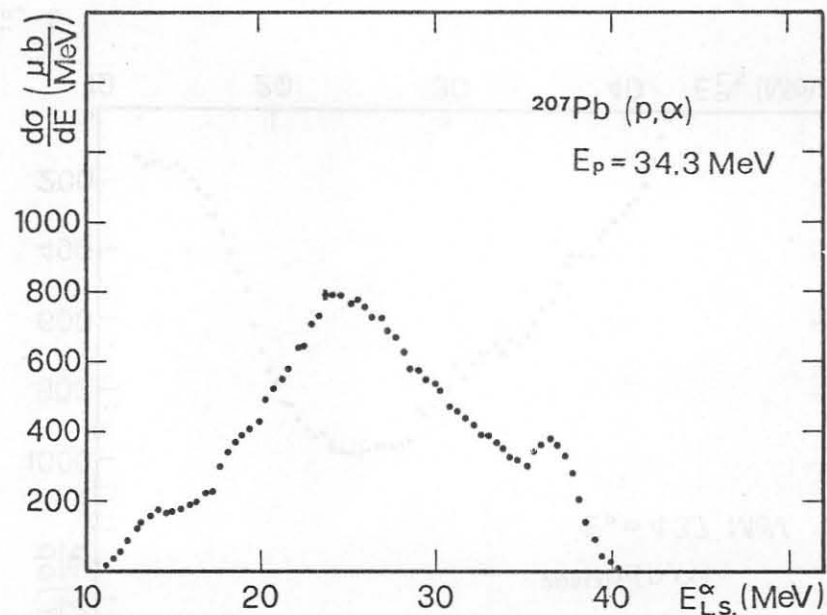
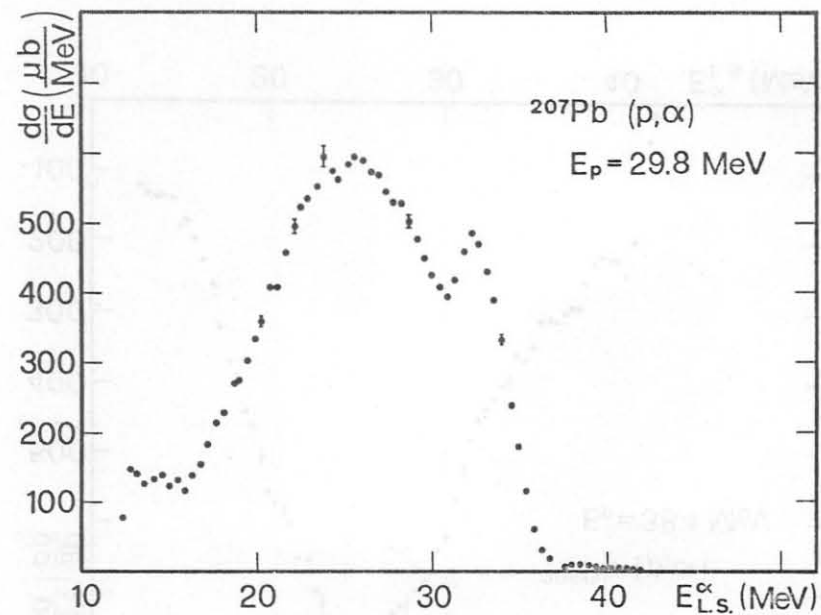


FIG. 7

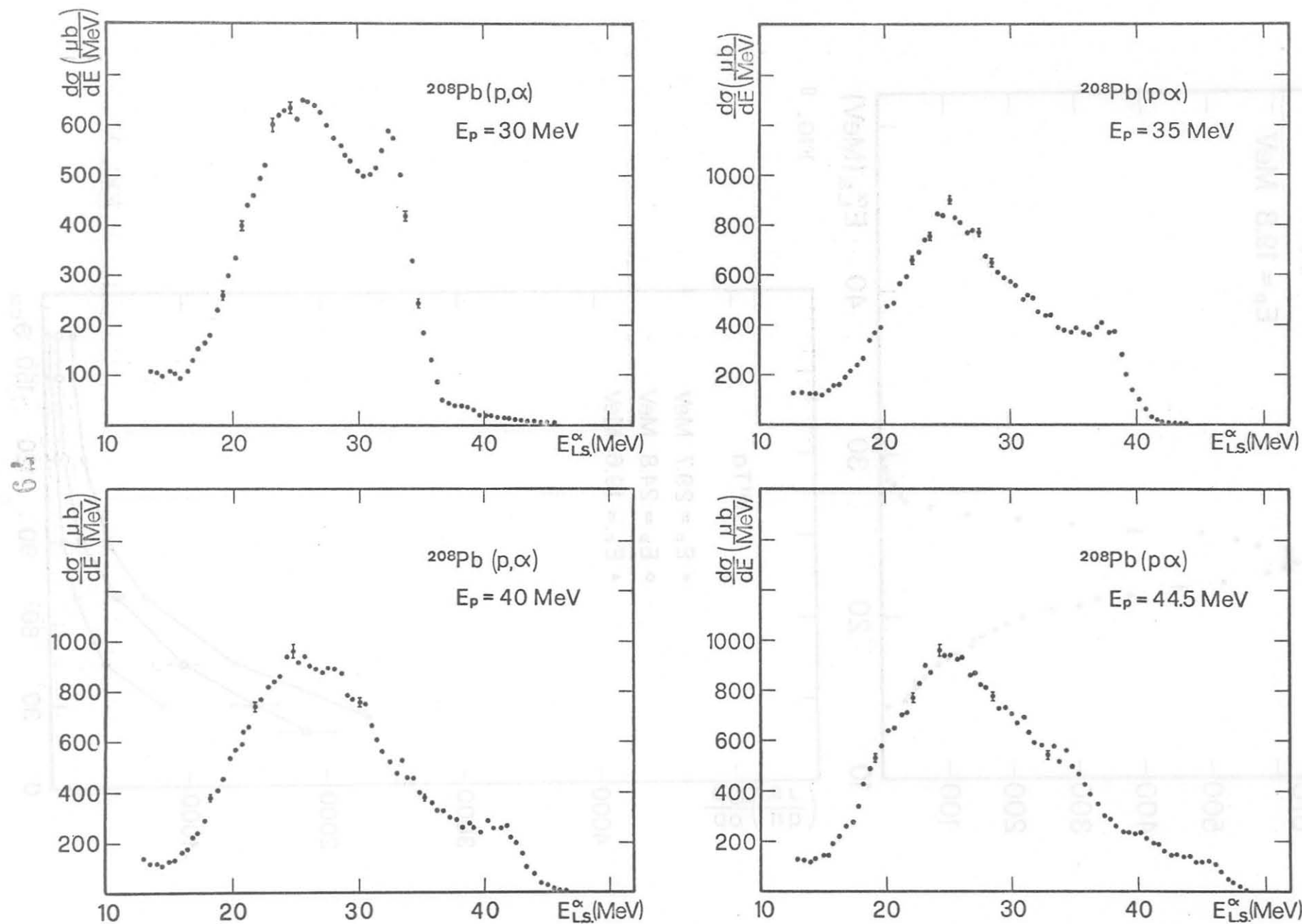


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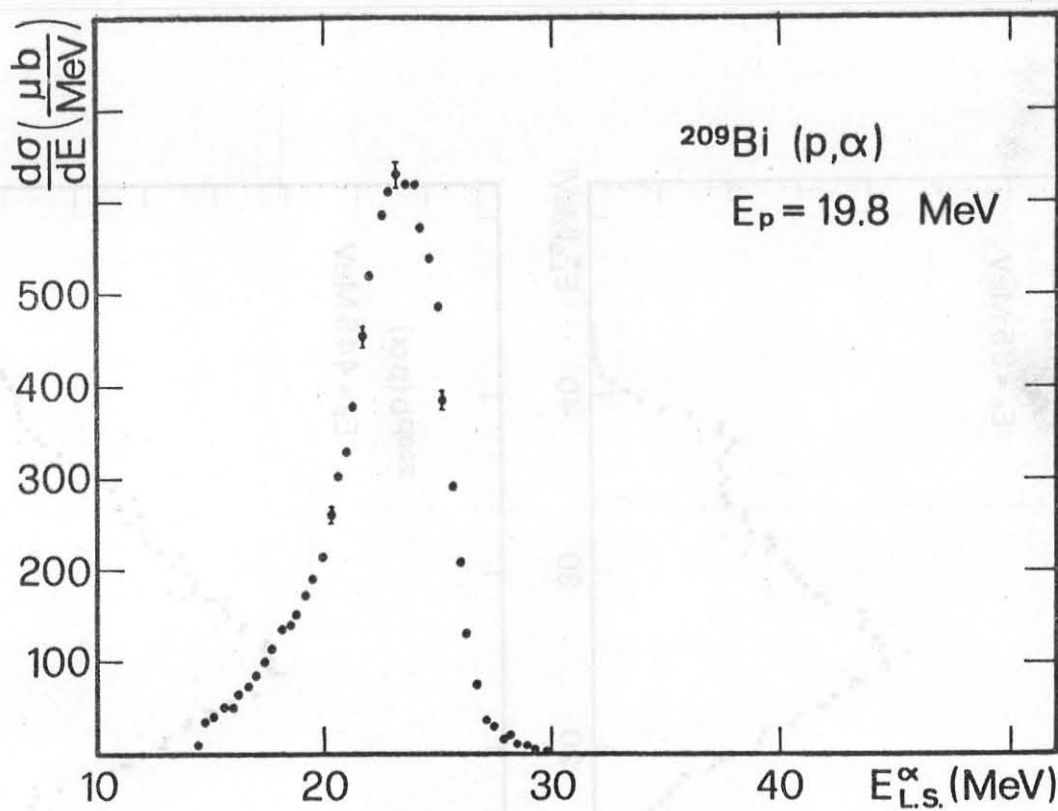


FIG. 9

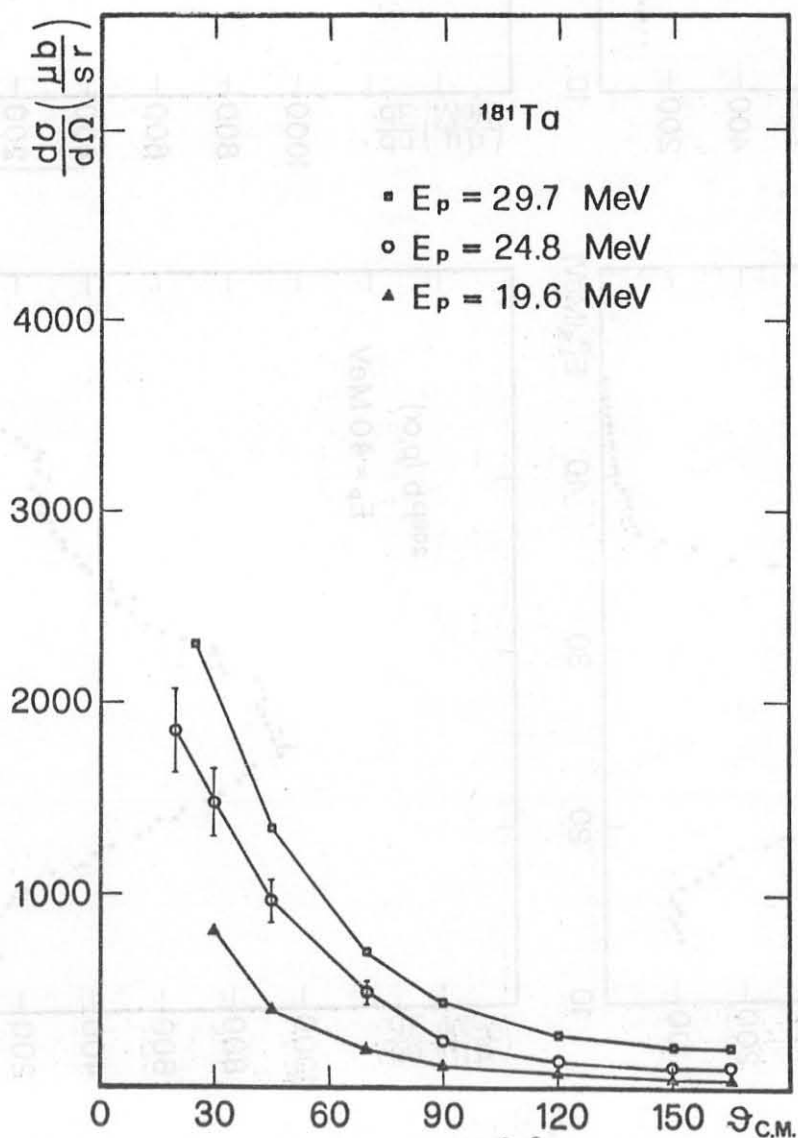


FIG. 11

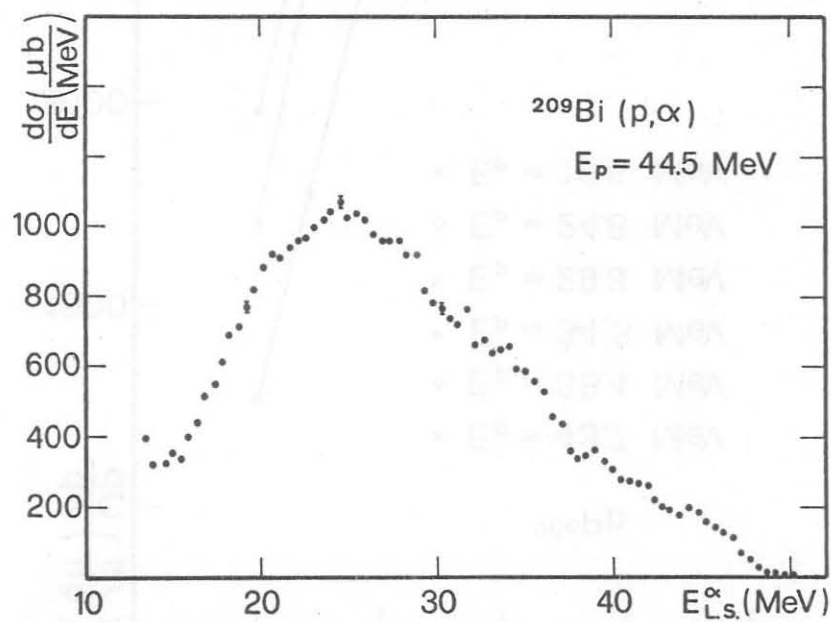
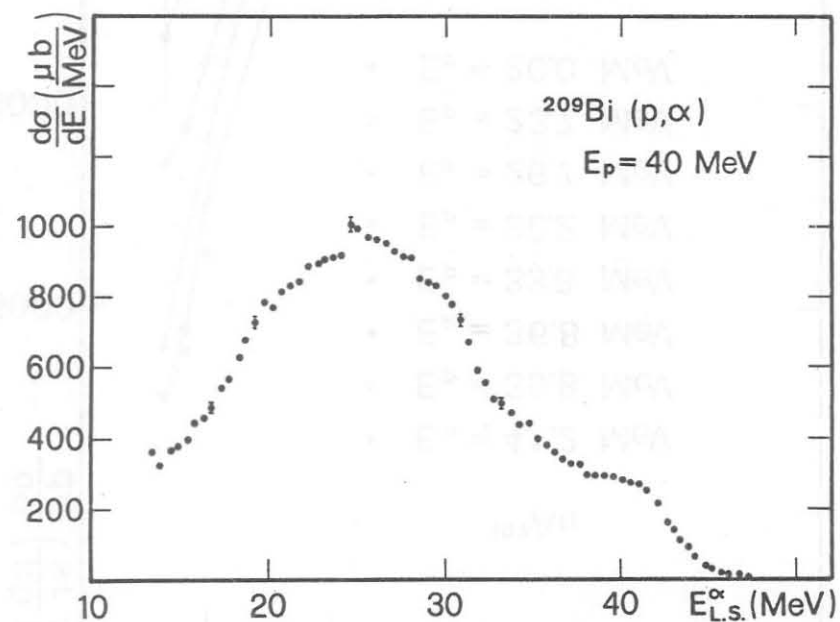
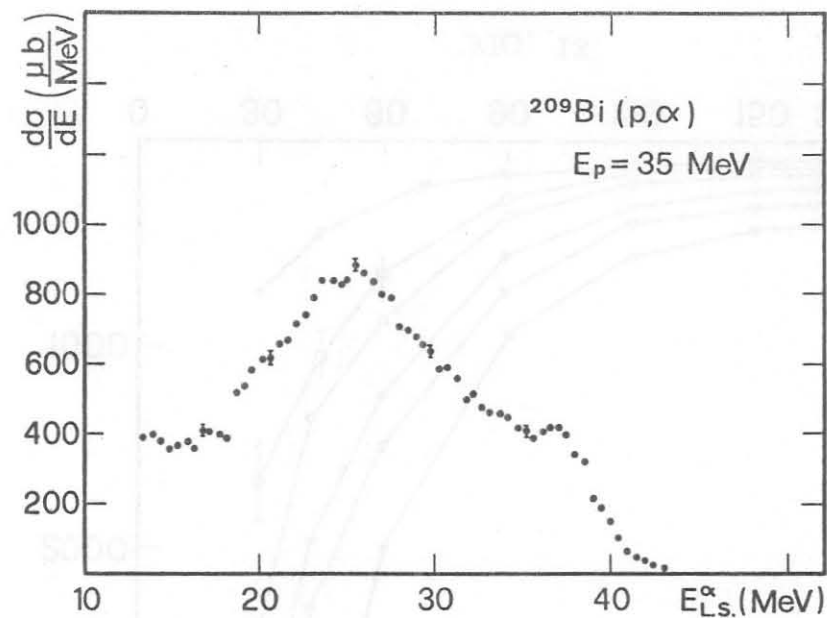
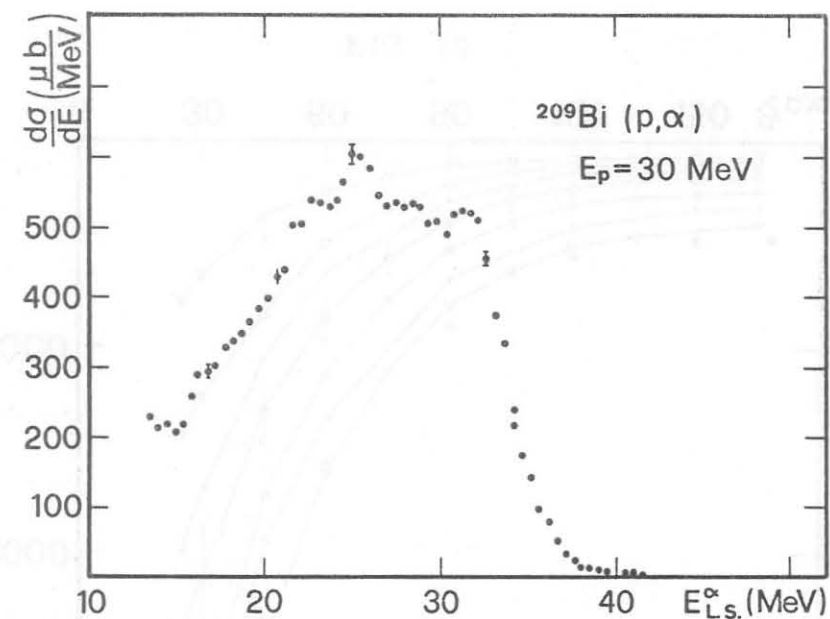


FIG. 10

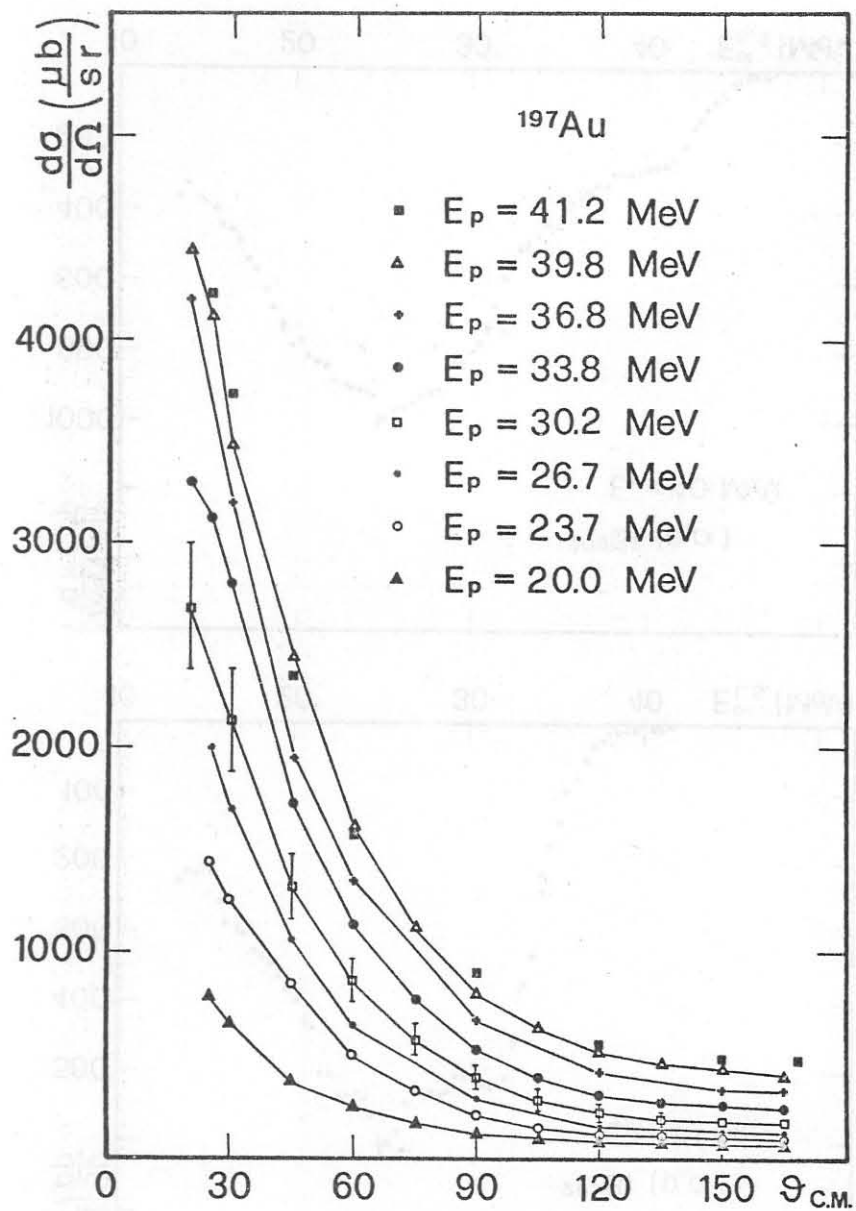


FIG. 12

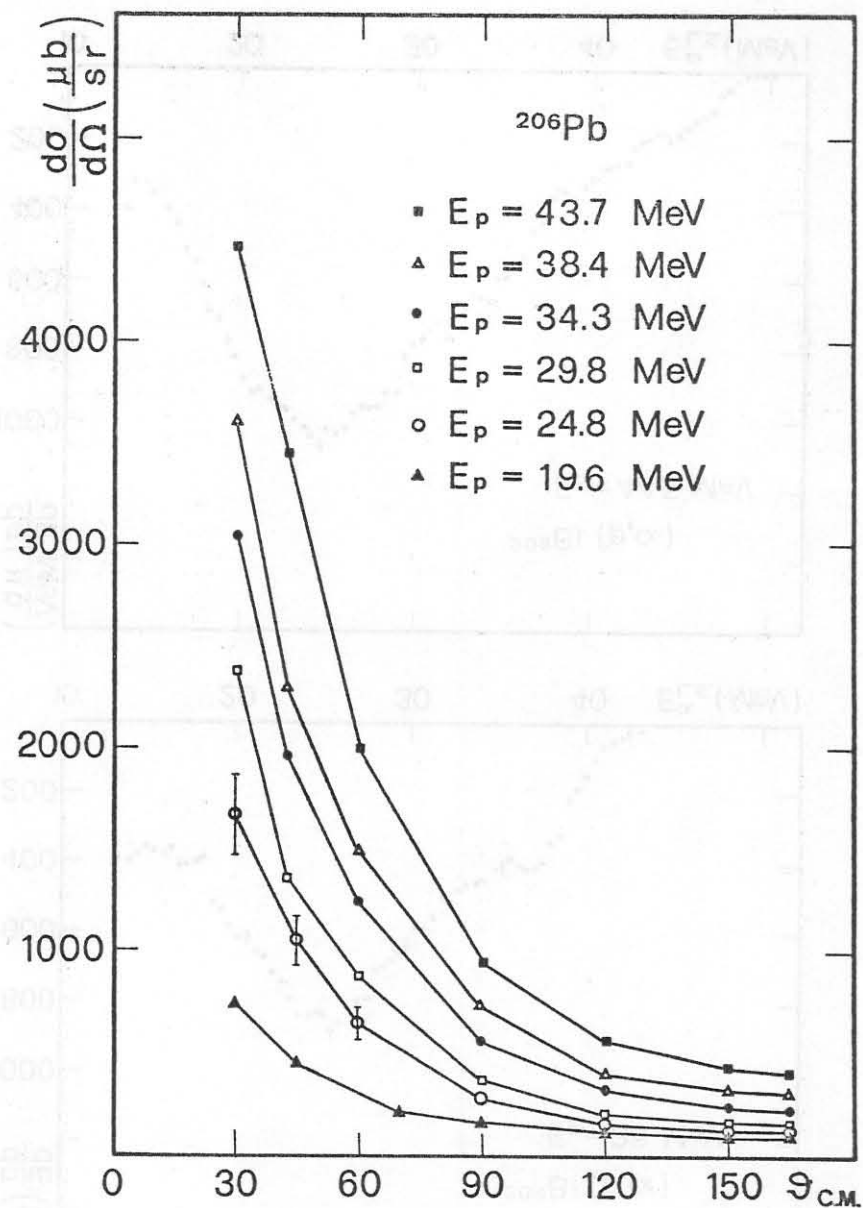


FIG. 13

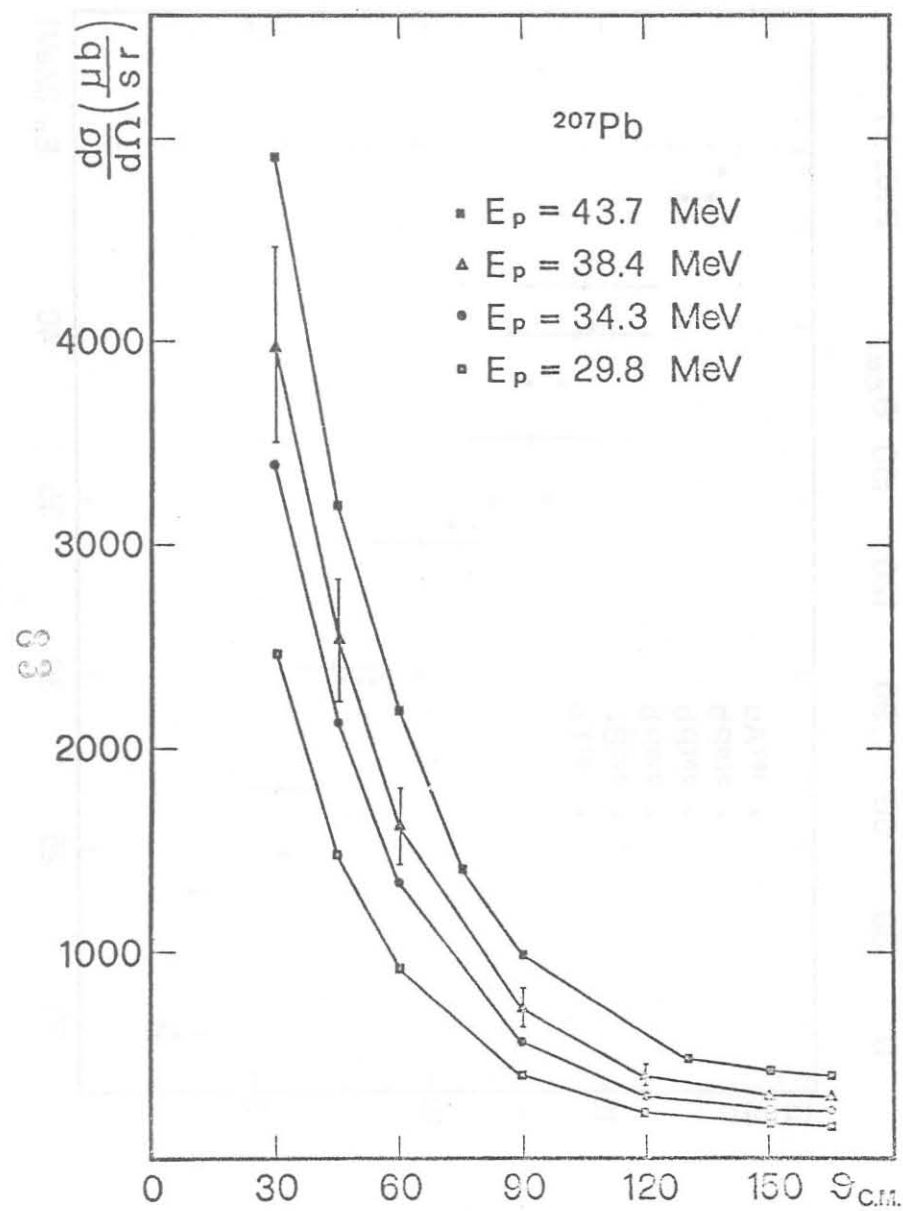


FIG. 14

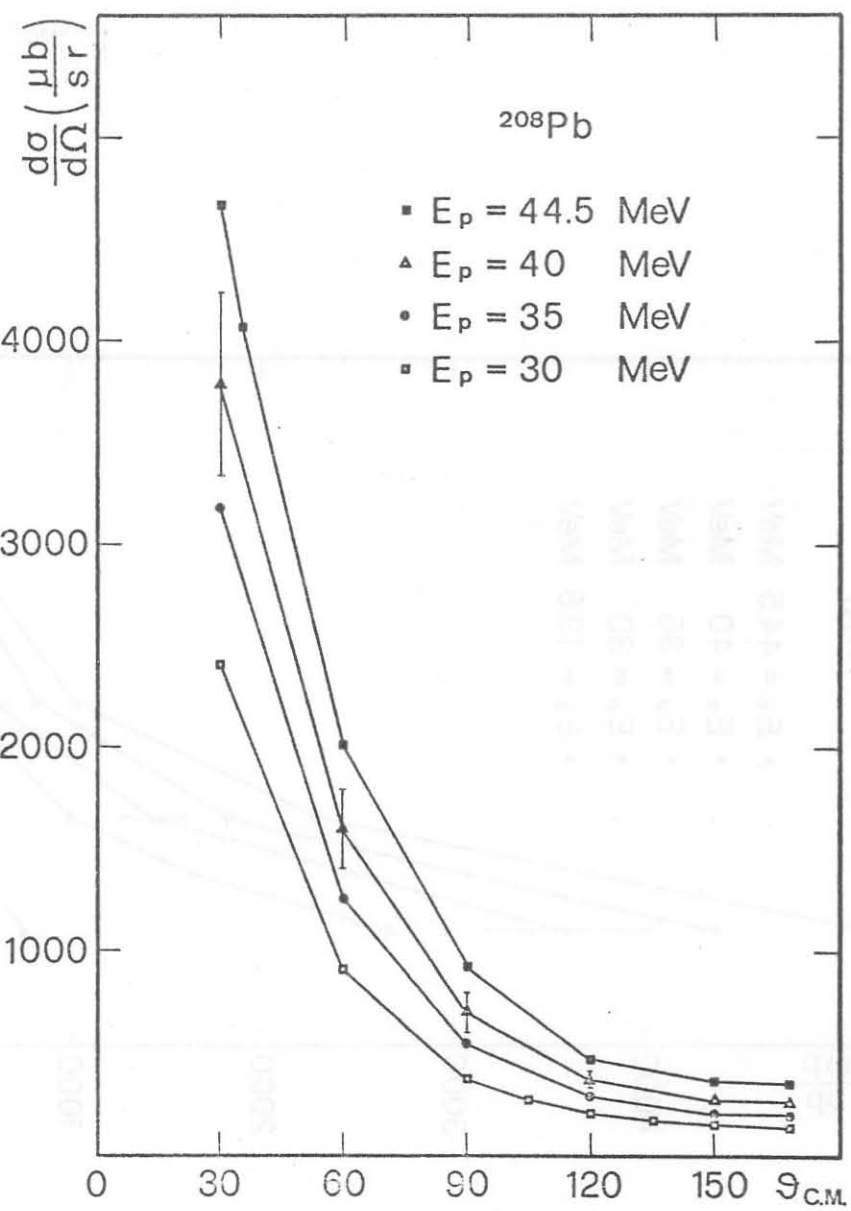


FIG. 15

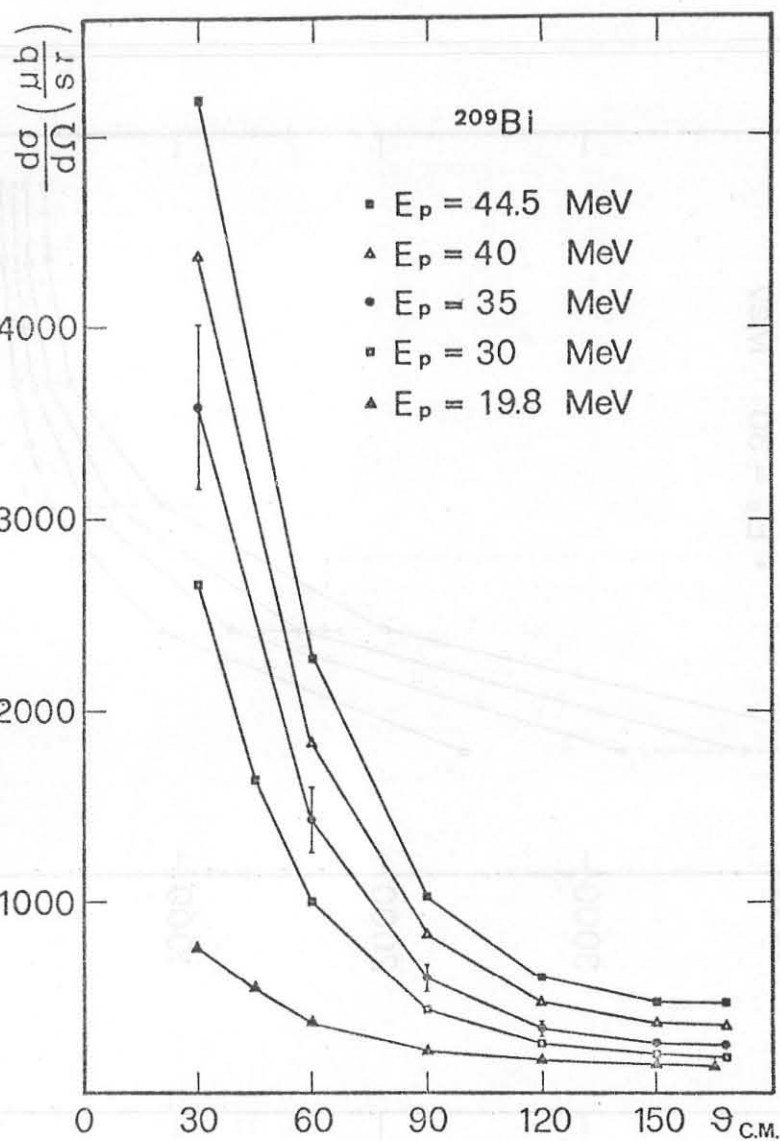
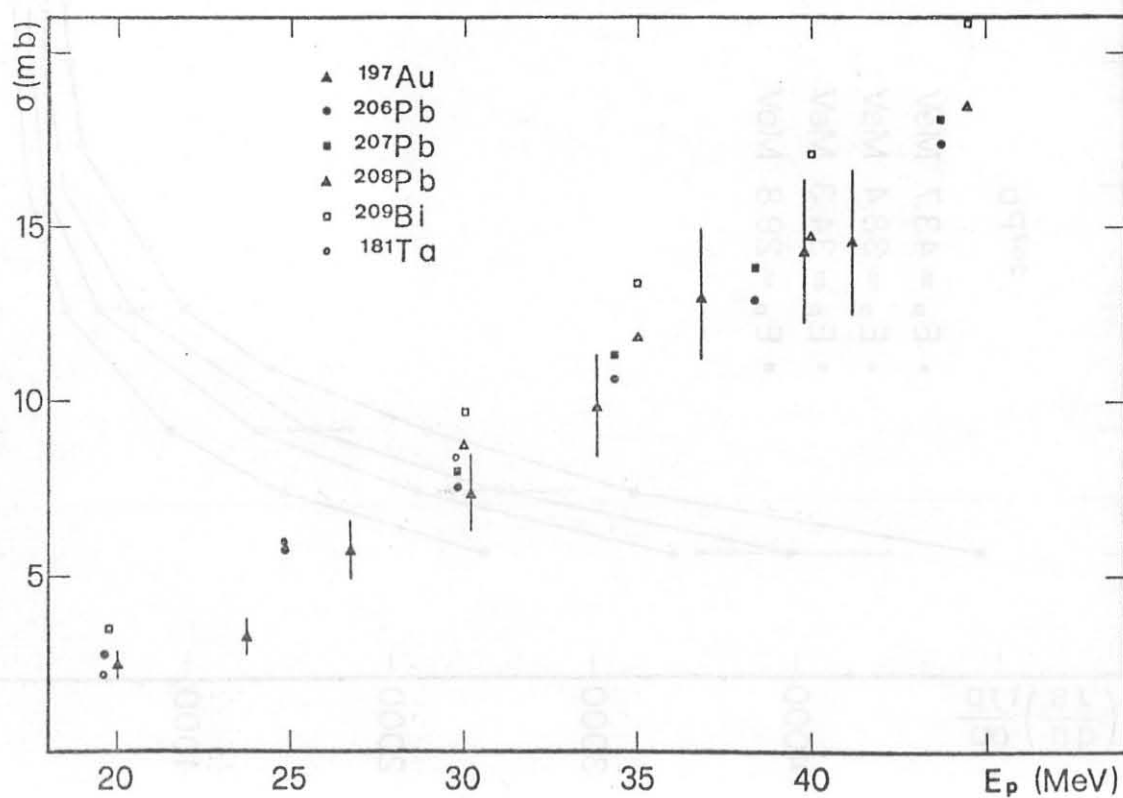


FIG. 16

FIG. 17



691 181TA(P+ALPHA) 19.6 MEV 30 DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
8.8	.0	.0	9.1	.0	.0	9.4	.0	.0
9.7	.0	.0	10.1	.0	.0	10.3	.0	.0
10.6	.0	.0	10.9	.0	.0	11.2	.0	.0
11.5	.0	.0	11.8	.0	.0	12.1	.0	.0
12.4	.0	.0	12.7	.0	.0	13.0	.0	.0
13.3	.0	.0	13.6	.0	.0	13.9	7.2	1.4
14.2	7.4	1.4	14.5	6.6	1.3	14.8	5.2	1.2
15.1	4.1	1.1	15.4	3.9	1.0	15.7	4.1	1.1
16.0	6.6	1.3	16.3	6.0	1.5	16.6	9.1	1.6
16.9	9.4	1.6	17.2	14.3	2.0	17.5	13.8	1.9
17.8	16.0	2.1	18.1	20.6	2.4	18.4	21.7	2.4
18.7	30.5	2.9	19.1	35.5	3.1	19.3	44.3	3.5
19.6	47.3	3.6	19.9	52.9	3.9	20.2	61.9	4.1
20.5	67.4	4.3	20.9	67.1	4.3	21.2	72.7	4.5
21.5	82.0	4.8	21.8	85.3	4.9	22.1	83.4	4.8
22.4	83.7	4.8	22.7	93.0	5.1	23.1	86.7	4.9
23.3	86.7	4.9	23.6	71.3	4.4	23.9	87.5	4.9
24.2	88.1	4.9	24.5	83.1	4.8	24.8	63.0	4.2
25.1	55.9	3.9	25.4	54.5	3.9	25.7	40.5	3.3
26.0	47.6	3.6	26.3	37.2	3.2	26.6	33.6	3.1
26.9	31.4	2.9	27.2	20.1	2.4	27.5	10.7	1.7
27.8	5.2	1.2	28.1	4.1	1.1	28.4	3.9	1.1
28.7	3.0	.9	29.0	.8	.5	29.3	1.1	.6
29.6	1.4	.6	29.9	.6	.4	30.2	1.7	.7
30.5	.6	.4	30.8	.6	.4	31.1	.0	.0
31.4	.0	.0	31.7	.1	.0	32.1	.0	.0
32.3	.0	.0	32.6	.0	.0	32.9	.0	.0
33.2	.0	.0	33.5	.1	.0	33.8	.0	.0
34.1	.0	.0	34.4	.0	.0	34.7	.0	.0
35.0	.0	.0	35.3	.1	.0	35.6	.0	.0
35.9	.0	.0	36.2	.0	.0	36.5	.0	.0
36.8	.0	.0	37.1	.1	.0	37.4	.0	.0

693 181TA(P+ALPHA) 19.6 MEV 45 DEG. 8/5/73

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9.7	.0	.0	10.1	.0	.0	10.3	.0	.0
10.6	.0	.0	10.9	.0	.0	11.2	.0	.0
11.5	.0	.0	11.8	.0	.0	12.1	.0	.0
12.4	.0	.0	12.7	.0	.0	13.0	.0	.0
13.3	.0	.0	13.6	.0	.0	13.9	2.0	.7
14.2	2.6	.8	14.5	3.1	.8	14.8	2.0	.7
15.1	4.4	1.0	15.4	3.5	.9	15.7	4.4	1.0
16.0	4.4	1.0	16.3	6.6	1.2	16.6	8.2	1.3
16.9	10.4	1.5	17.2	7.5	1.2	17.5	8.2	1.3
17.8	15.7	1.9	18.1	14.3	2.0	18.4	20.3	2.1
18.7	21.0	2.2	19.0	31.9	2.6	19.3	32.7	2.7
19.6	31.9	2.6	19.9	41.3	3.1	20.2	43.1	3.1
20.5	46.8	3.2	20.9	45.7	3.2	21.2	59.0	3.6
21.5	62.3	3.7	21.8	65.4	3.7	22.1	57.9	3.6
22.4	66.0	3.8	22.7	55.2	3.5	23.0	56.1	3.5
23.3	55.6	3.5	23.6	56.9	3.5	23.9	42.9	3.3
24.2	52.8	3.4	24.5	46.4	3.2	24.8	32.9	2.7
25.1	33.8	2.7	25.4	24.3	2.3	25.7	31.8	2.6
26.0	25.4	2.4	26.3	19.0	2.0	26.6	16.1	1.9
26.9	11.5	1.6	27.2	5.5	1.1	27.5	1.3	.5
27.8	1.3	.5	28.1	1.1	.5	28.4	2.2	.7
28.7	.2	.2	29.0	.2	.2	29.3	.0	.0
29.6	.2	.2	29.9	.0	.0	30.2	.0	.0
30.5	.0	.0	30.8	.1	.0	31.1	.0	.0
31.4	.0	.0	31.7	.0	.0	32.0	.0	.0
32.3	.0	.0	32.6	.1	.0	32.9	.0	.0
33.2	.0	.0	33.5	.0	.0	33.8	.0	.0
34.1	.0	.0	34.4	.0	.0	34.7	.0	.0
35.0	.0	.0	35.3	.0	.0	35.6	.0	.0
35.9	.0	.0	36.2	.1	.0	36.5	.0	.0
36.8	.0	.0	37.1	.0	.0	37.4	.0	.0

689 181TA(P+ALPHA) 19.6 MEV 70 DEG. 8/5/73

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MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
8.8	.0	.0	9.1	.0	.0	9.4	.0	.0
9.7	.0	.0	10.1	.0	.0	10.3	.0	.0
10.6	.0	.0	10.9	.0	.0	11.2	.0	.0
11.5	.0	.0	11.8	.0	.0	12.1	.0	.0
12.4	.4	.3	12.7	.9	.4	13.0	.9	.4
13.3	1.1	.5	13.6	1.1	.5	13.9	1.8	.6
14.2	.9	.4	14.5	2.2	.7	14.8	3.5	.9
15.1	.7	.4	15.4	1.1	.8	15.7	4.1	.9
16.0	6.0	1.2	16.3	4.2	1.0	16.6	5.5	1.1
17.1	5.8	1.1	17.4	7.3	1.3	17.7	6.2	1.2
18.0	9.5	1.5	18.3	10.0	1.5	18.6	8.4	1.4
19.9	12.6	1.7	19.2	15.5	1.9	19.5	15.1	1.8
20.8	17.5	2.0	20.1	18.6	2.0	20.4	25.7	2.4
21.7	23.7	2.3	21.1	31.3	2.6	21.4	31.3	2.6
22.6	33.5	2.7	21.9	31.5	2.6	22.2	35.0	2.8
23.5	26.6	2.4	22.8	24.2	2.5	23.1	26.8	2.4
24.4	25.9	2.4	23.7	27.5	2.5	24.0	24.4	2.3
25.3	23.9	2.3	24.6	14.6	1.8	24.9	12.9	1.7
26.2	12.4	1.7	25.5	11.5	1.6	25.8	8.9	1.4
27.1	5.5	1.1	26.5	3.1	.8	26.8	3.5	.9
28.0	1.1	.5	27.4	.2	.2	27.7	.4	.3
28.9	.2	.2	28.3	.4	.3	28.6	.0	.1
29.8	.0	.0	29.2	.0	.0	29.5	.0	.0
30.7	.0	.0	30.1	.1	.0	30.4	.0	.0
31.6	.0	.0	31.0	.0	.0	31.3	.0	.0
32.5	.0	.0	31.9	.1	.0	32.2	.0	.0
33.4	.0	.0	32.8	.0	.0	33.1	.0	.0
34.3	.0	.0	33.7	.1	.0	34.0	.0	.0
35.2	.0	.0	34.6	.0	.0	34.9	.0	.0
36.1	.0	.0	35.5	.1	.0	36.4	.0	.0
37.0	.0	.0	36.4	.0	.0	37.3	.0	.0

683 181TA(P+ALPHA) 19.6 MEV 91 DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
8.8	.0	.0	9.1	.0	.0	9.4	.0	.0
9.7	.0	.0	10.1	.0	.0	10.3	.0	.0
10.6	.0	.0	10.9	.0	.0	11.2	.0	.0
11.5	.0	.0	11.8	.0	.0	12.1	.0	.0
12.4	.0	.0	12.7	.0	.0	13.0	.0	.0
13.3	.0	.0	13.6	.0	.0	13.9	.0	.0
14.2	.0	.0	14.5	.0	.0	14.8	.0	.0
15.1	.0	.0	15.4	.0	.0	15.7	.0	.0
16.0	.0	.0	16.3	.0	.0	16.6	.0	.0
16.9	.0	.0	17.2	.0	.0	17.5	.0	.0
17.8	.0	.0	18.1	.0	.0	18.4	.0	.0
18.7	.0	.0	19.0	.0	.0	19.3	.0	.0
19.6	.0	.0	19.9	.0	.0	20.2	.0	.0
20.5	.0	.0	20.9	.0	.0	21.2	.0	.0
21.5	.0	.0	21.8	.0	.0	22.1	.0	.0
22.4	.0	.0	22.7	.0	.0	23.0	.0	.0
23.3	.0	.0	23.6	.0	.0	23.9	.0	.0
24.2	.0	.0	24.5	.0	.0	24.8	.0	.0
25.1	.0	.0	25.4	.0	.0	25.7	.0	.0
26.0	.0	.0	26.3	.0	.0	26.6	.0	.0
26.9	.0	.0	27.2	.0	.0	27.5	.0	.0
27.8	.0	.0	28.1	.0	.0	28.4	.0	.0
28.7	.0	.0	29.0	.0	.0	29.3	.0	.0
29.6	.0	.0	29.9	.0	.0	30.2	.0	.0
30.5	.0	.0	30.8	.0	.0	31.1	.0	.0
31.4	.0	.0	31.7	.0	.0	32.0	.0	.0
32.3	.0	.0	32.6	.0	.0	32.9	.0	.0
33.2	.0	.0	33.5	.0	.0	33.8	.0	.0
34.1	.0	.0	34.4	.0	.0	34.7	.0	.0
35.0	.0	.0	35.3	.0	.0	35.6	.0	.0
35.9	.0	.0	36.2	.0	.0	36.5	.0	.0
36.8	.0	.0	37.1	.0	.0	37.4	.0	.0

700 18:TA(P+ALPHA) 19.6 MEV 120 DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.3	.0	.0	9.6	.0	.0	9.9	.0	.0
10.2	.0	.0	10.5	.0	.0	10.8	.0	.0
11.1	.2	.2	11.4	.2	.2	11.7	.2	.2
12.0	1.0	.4	12.3	.8	.4	12.6	.6	.3
12.9	1.0	.4	13.2	1.4	.5	13.6	.4	.2
13.9	1.0	.4	14.2	2.0	.6	14.5	1.6	.6
14.8	2.0	.6	15.1	1.0	.4	15.4	1.2	.5
15.7	2.1	.6	16.0	3.5	.8	16.3	3.5	.8
16.6	3.3	.8	16.9	4.5	1.0	17.2	4.7	1.0
17.5	3.9	.9	17.8	5.3	1.1	18.1	6.4	1.1
18.4	4.7	1.0	18.7	6.4	1.1	19.0	6.6	1.1
19.3	6.2	1.1	19.7	4.4	1.3	20.0	8.0	1.3
20.3	6.4	1.1	20.6	8.2	1.3	20.9	11.5	1.5
21.2	10.4	1.4	21.5	14.6	1.7	21.8	9.4	1.4
22.1	8.0	1.3	22.4	12.2	1.6	22.7	8.6	1.3
23.0	9.4	1.4	23.3	11.0	1.4	23.6	8.8	1.3
23.9	8.0	1.3	24.2	7.0	1.2	24.5	5.7	1.1
24.8	5.1	1.0	25.1	2.9	.8	25.4	2.9	.8
25.8	3.1	.8	26.1	2.1	.6	26.4	1.2	.5
26.7	1.4	.5	27.0	1.1	.4	27.3	.0	.0
27.6	.0	.0	27.9	.0	.0	28.2	.0	.0
28.5	.0	.0	28.8	.0	.0	29.1	.0	.0
29.4	.0	.0	29.7	.0	.0	30.0	.0	.0
30.3	.0	.0	30.6	.0	.0	30.9	.0	.0
31.2	.0	.0	31.5	.0	.0	31.8	.0	.0
32.1	.0	.0	32.4	.0	.0	32.7	.0	.0
33.0	.0	.0	33.3	.0	.0	33.6	.0	.0
34.0	.0	.0	34.3	.0	.0	34.6	.0	.0
34.9	.0	.0	35.2	.0	.0	35.5	.0	.0
35.8	.0	.0	36.1	.0	.0	36.4	.0	.0
36.7	.0	.0	37.0	.0	.0	37.3	.0	.0
37.6	.0	.0	38.0	.0	.0	38.3	.0	.0

701 18:TA(P+ALPHA) 19.6 MEV 150 DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.5	.0	.0	9.8	.0	.0	10.1	.0	.0
10.4	.0	.0	10.7	.0	.0	11.0	.0	.0
11.3	.0	.0	11.6	.1	.1	11.9	.4	.2
12.2	.1	.1	12.5	.3	.2	12.8	.4	.2
13.1	.8	.3	13.4	1.1	.3	13.8	.6	.2
14.1	.5	.2	14.4	1.0	.3	14.7	.6	.2
15.0	2.5	.5	15.3	1.9	.4	15.6	2.2	.5
15.9	2.4	.5	16.2	3.7	.6	16.5	3.6	.6
16.8	5.1	.7	17.1	4.3	.6	17.4	4.8	.7
17.7	4.7	.7	18.0	4.6	.7	18.4	5.2	.7
19.7	5.3	.7	19.0	5.4	.7	19.3	5.7	.7
19.6	7.1	.8	19.9	7.5	.9	20.2	6.0	.8
20.5	7.3	.8	20.8	8.1	.9	21.1	6.9	.8
21.4	7.7	.9	21.7	6.8	.8	22.0	7.6	.8
22.3	7.1	.8	22.7	6.4	.8	23.1	5.6	.7
23.3	6.6	.8	23.6	6.9	.8	23.9	4.0	.6
24.2	5.1	.7	24.5	5.3	.7	24.8	3.3	.6
25.1	2.8	.5	25.4	2.0	.4	25.7	1.4	.4
26.0	1.0	.3	26.3	1.2	.3	26.6	.9	.3
27.0	.4	.2	27.3	.5	.2	27.6	.1	.1
27.9	.0	.0	28.2	.0	.0	28.5	.1	.1
28.8	.0	.0	29.1	.0	.0	29.4	.0	.0
29.7	.0	.0	30.0	.0	.0	30.3	.0	.0
30.6	.0	.0	30.9	.0	.0	31.2	.0	.0
31.6	.0	.0	31.9	.0	.0	32.2	.0	.0
32.5	.0	.0	32.8	.0	.0	33.1	.0	.0
33.4	.0	.0	33.7	.0	.0	34.0	.0	.0
34.3	.0	.0	34.6	.0	.0	34.9	.0	.0
35.2	.0	.0	35.5	.0	.0	35.8	.0	.0
36.2	.0	.0	36.5	.0	.0	36.8	.0	.0
37.1	.0	.0	37.4	.0	.0	37.7	.0	.0
38.0	.0	.0	38.3	.0	.0	38.6	.0	.0

702 18:TA(P+ALPHA) 19.6 MEV 165 DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.5	.0	.0	9.8	.0	.0	10.1	.0	.0
10.4	.0	.0	10.7	.0	.0	11.0	.0	.0
11.3	.1	.1	11.6	.2	.2	11.9	.3	.2
12.2	.4	.2	12.5	.1	.1	12.8	.2	.1
13.1	.4	.2	13.4	.8	.3	13.8	.7	.3
14.1	1.0	.3	14.4	1.1	.3	14.7	1.1	.3
15.0	1.1	.3	15.3	1.9	.4	15.6	3.3	.6
15.9	2.5	.5	16.2	3.1	.5	16.5	3.8	.6
16.8	4.0	.6	17.1	4.2	.6	17.4	5.3	.7
17.7	4.8	.7	18.0	5.3	.8	18.4	5.3	.7
19.7	5.9	.8	19.0	5.7	.7	19.3	5.7	.7
19.6	5.3	.7	19.9	5.1	.8	20.2	8.0	.9
20.5	7.3	.8	20.8	7.4	.9	21.1	6.9	.8
21.4	8.6	.9	21.7	7.9	.9	22.0	9.7	.9
22.3	6.5	.8	22.7	6.7	.8	23.0	7.2	.8
23.3	5.3	.7	23.6	5.8	.8	23.9	5.0	.7
24.2	5.1	.7	24.5	2.6	.6	24.8	2.7	.5
25.1	2.0	.4	25.4	2.3	.5	25.7	1.7	.4
26.0	1.3	.4	26.3	.9	.2	26.6	.3	.2
27.0	.5	.2	27.3	.3	.2	27.6	.0	.0
27.9	.0	.0	28.2	.0	.0	28.5	.2	.1
28.8	.0	.0	29.1	.0	.0	29.4	.0	.0
29.7	.0	.0	30.0	.0	.0	30.3	.0	.0
30.6	.0	.0	30.9	.0	.0	31.2	.0	.0
31.6	.0	.0	31.9	.0	.0	32.2	.0	.0
32.5	.0	.0	32.8	.0	.0	33.1	.0	.0
33.4	.0	.0	33.7	.0	.0	34.0	.0	.0
34.3	.0	.0	34.6	.0	.0	34.9	.0	.0
35.2	.0	.0	35.5	.0	.0	35.8	.0	.0
36.2	.0	.0	36.5	.0	.0	36.8	.0	.0
37.1	.0	.0	37.4	.0	.0	37.7	.0	.0
38.0	.0	.0	38.3	.0	.0	38.6	.0	.0

657 18:TA(P+ALPHA) 24.8 MEV 50 DEG. 9/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.8	.8	.5	9.1	.4	.4	9.4	.8	.5
9.7	.8	.5	10.0	1.5	.8	10.3	1.5	.8
10.6	9.2	1.9	10.9	15.9	2.5	11.2	26.1	3.2
11.5	26.5	3.2	11.8	20.7	2.8	12.1	23.0	3.0
12.4	29.9	3.4	12.7	2.7	2.8	13.0	13.1	2.2
13.3	14.2	2.3	13.6	18.8	2.7	13.9	19.2	2.7
14.2	21.3	2.8	14.5	41.8	4.1	14.8	38.8	3.9
15.1	33.4	3.6	15.4	22.6	2.5	15.7	56.8	4.7
16.0	31.3	3.4	16.3	21.1	2.8	16.6	19.6	2.7
16.9	27.3	3.2	17.2	27.3	3.2	17.5	37.2	3.8
17.8	33.4	3.6	18.1	46.4	4.2	18.4	44.5	4.1
18.7	49.1	4.3	19.0	51.4	4.4	19.3	65.6	5.0
19.6	71.0	5.2	19.9	75.3	5.5	20.2	82.1	5.6
20.5	93.7	6.0	20.8	101.0	6.2	21.1	110.9	6.5
21.4	94.4	6.0	21.7	113.6	6.6	22.0	115.2	6.6
22.3	116.3	6.7	22.7	117.5	6.7	23.0	123.6	6.9
23.3	129.4	7.1	23.6	127.4	7.1	23.9	138.6	7.3
24.2	135.1	7.2	24.5	141.2	7.4	24.8	132.6	7.1
25.1	142.4	7.4	25.4	147.4	7.5	25.7	134.4	7.2
26.0	130.5	7.1	26.3	147.0	7.5	26.6	124.0	6.9
26.9	134.7	7.2	27.2	121.7	6.8	27.5	118.6	6.7
27.8	111.7	6.5	28.1	100.3	6.4	28.4	97.9	6.1
28.7	105.2	6.4	29.0	117.5	6.4	29.3	89.8	5.9
29.6	74.1	5.3	29.9	53.7	4.5	30.2	50.7	4.4
30.5	36.1	3.7	30.8	39.2	3.9	31.1	31.9	3.5
31.4	32.6	3.5	31.7	12.7	2.2	32.0	5.8	1.5
32.3	2.7	1.1	32.6	3.5	1.2	32.9	1.2	.7
33.2	1.2	.7	33.5	.8	.4	33.8	.4	.4
34.1	.0	.0	34.4	.0	.0	34.7	.0	.0
35.0	.0	.0	35.3	.0	.0	35.6	.0	.0
35.9	.0	.0	36.2	.0	.0	36.5	.0	.0
36.8	.0	.0	37.1	.0	.0	37.4	.0	.0

669 18:TA(P+ALPHA) 24.8 MEV 45 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
8.8	.0	.0	.0	9.1	1.0	.6	.6	9.4	.7	.5	.5
9.7	.1	.0	.0	10.1	.7	.5	.5	10.3	.3	.3	.3
10.6	3.6	1.1	1.1	16.9	17.2	2.0	2.0	11.2	13.2	2.1	2.1
11.5	13.9	2.1	2.1	11.8	8.9	1.7	1.7	12.1	6.3	1.4	1.4
12.4	9.9	1.8	1.8	12.7	8.6	1.7	1.7	13.0	10.9	1.9	1.9
13.3	26.4	3.0	3.0	13.6	22.1	2.7	2.7	13.9	7.6	1.6	1.6
14.2	14.8	2.2	2.2	14.5	20.2	3.2	3.2	14.8	13.5	2.1	2.1
15.1	12.2	2.0	2.0	15.4	11.5	2.0	2.0	15.7	14.2	2.2	2.2
16.0	8.2	1.6	1.6	16.3	11.5	2.1	2.1	16.6	25.1	2.5	2.5
16.9	17.2	2.4	2.4	17.2	22.4	2.7	2.7	17.5	31.3	3.2	3.2
17.8	29.7	3.1	3.1	18.1	38.9	3.6	3.6	18.4	33.6	3.3	3.3
18.7	43.2	3.8	3.8	19.0	42.9	3.8	3.8	19.3	45.9	3.9	3.9
19.6	52.1	4.1	4.1	19.9	64.0	4.6	4.6	20.2	51.1	4.1	4.1
20.5	63.3	4.6	4.6	20.9	74.6	5.0	5.0	21.2	71.9	4.9	4.9
21.5	73.2	4.9	4.9	21.8	84.1	5.2	5.2	22.1	93.0	5.5	5.5
22.4	88.7	5.4	5.4	22.7	91.1	5.5	5.5	23.1	93.7	5.6	5.6
23.3	97.3	5.7	5.7	23.6	81.8	5.2	5.2	23.9	93.0	5.5	5.5
24.2	95.0	5.6	5.6	24.5	93.4	5.5	5.5	24.8	93.7	5.6	5.6
25.1	99.0	5.7	5.7	25.4	97.0	5.7	5.7	25.7	83.1	5.2	5.2
26.0	96.7	5.6	5.6	26.3	91.7	5.5	5.5	26.6	95.0	5.6	5.6
26.9	92.0	5.5	5.5	27.2	84.4	5.2	5.2	27.5	76.5	5.0	5.0
27.8	65.3	4.6	4.6	28.1	61.4	4.5	4.5	28.4	65.1	4.6	4.6
28.7	68.0	4.7	4.7	29.0	50.5	4.1	4.1	29.3	42.2	3.7	3.7
29.6	28.0	3.0	3.0	29.9	23.1	2.8	2.8	30.2	21.1	2.6	2.6
30.5	22.4	2.7	2.7	30.8	12.2	2.0	2.0	31.1	14.2	2.2	2.2
31.4	7.6	1.6	1.6	31.7	3.6	1.1	1.1	32.1	1.3	.7	.7
32.3	1.6	.7	.7	32.6	.2	.2	.2	32.9	1.0	.6	.6
33.2	.0	.0	.0	33.5	.1	.1	.1	33.8	.1	.1	.1
34.1	.3	.3	.3	34.4	.0	.0	.0	34.7	.0	.0	.0
35.0	.3	.3	.3	35.3	.0	.0	.0	35.6	.0	.0	.0
35.9	.0	.0	.0	36.2	.0	.0	.0	36.5	.0	.0	.0
36.8	.0	.0	.0	37.1	.1	.1	.1	37.4	.0	.0	.0

670 18:TA(P+ALPHA) 24.8 MEV 73 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
9.1	.0	.0	.0	9.4	.1	.0	.0	9.7	.0	.0	.0
10.0	.0	.0	.0	10.3	.3	.3	.3	10.6	.7	.5	.5
10.9	4.3	1.2	1.2	11.2	5.6	1.4	1.4	11.5	9.3	1.8	1.8
11.8	3.6	1.1	1.1	12.1	7.6	1.6	1.6	12.4	19.2	2.5	2.5
12.7	9.6	1.8	1.8	13.1	4.0	1.1	1.1	13.3	1.7	.7	.7
13.6	3.0	1.0	1.0	13.9	2.2	.9	.9	14.2	3.0	1.0	1.0
14.5	4.0	1.1	1.1	14.8	4.3	1.2	1.2	15.1	6.0	1.4	1.4
15.4	4.6	1.2	1.2	15.7	12.6	2.0	2.0	16.0	10.3	1.6	1.6
16.3	11.3	1.9	1.9	16.6	14.9	2.2	2.2	16.9	18.2	2.5	2.5
17.2	15.6	2.3	2.3	17.5	17.2	2.4	2.4	17.8	17.9	2.4	2.4
18.1	18.2	2.5	2.5	18.4	21.5	2.7	2.7	18.7	22.2	2.7	2.7
19.0	24.8	2.9	2.9	19.3	27.5	3.0	3.0	19.6	29.2	3.1	3.1
19.9	31.5	3.2	3.2	20.2	33.1	3.6	3.6	20.5	28.8	3.1	3.1
20.8	36.8	3.5	3.5	21.1	35.1	3.6	3.6	21.5	34.5	3.4	3.4
21.8	43.1	3.8	3.8	22.1	37.1	3.5	3.5	22.4	40.1	3.6	3.6
22.7	48.7	3.8	3.8	23.0	37.1	3.5	3.5	23.3	44.4	3.8	3.8
23.6	39.8	3.6	3.6	23.9	42.4	3.7	3.7	24.2	49.0	4.0	4.0
24.5	52.0	4.2	4.2	24.8	41.4	3.7	3.7	25.1	41.7	3.7	3.7
25.4	46.4	3.9	3.9	25.7	42.1	3.7	3.7	26.1	39.4	3.6	3.6
26.3	39.4	3.6	3.6	26.6	38.8	3.6	3.6	26.9	35.1	3.4	3.4
27.2	35.4	3.4	3.4	27.5	34.1	3.4	3.4	27.8	28.8	3.1	3.1
28.1	21.9	2.7	2.7	28.4	22.5	2.7	2.7	28.7	20.5	2.6	2.6
29.0	17.6	2.4	2.4	29.3	18.6	2.5	2.5	29.6	11.9	2.0	2.0
29.9	8.3	1.7	1.7	30.2	6.9	1.7	1.7	30.5	4.6	1.2	1.2
30.8	4.3	1.2	1.2	31.1	2.3	.9	.9	31.4	3.3	1.0	1.0
31.7	.7	.5	.5	32.0	.3	.3	.3	32.3	.0	.0	.0
32.6	.3	.3	.3	32.9	.1	.1	.1	33.2	.0	.0	.0
33.5	.0	.0	.0	33.8	.0	.0	.0	34.1	.0	.0	.0
34.4	.1	.1	.1	34.7	.1	.1	.1	35.0	.0	.0	.0
35.3	.0	.0	.0	35.6	.0	.0	.0	35.9	.0	.0	.0
36.2	.0	.0	.0	36.5	.1	.1	.1	36.8	.0	.0	.0
37.2	.0	.0	.0	37.5	.0	.0	.0	37.8	.0	.0	.0

671 18:TA(P+ALPHA) 24.8 MEV 50 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
9.1	.0	.0	.0	9.4	.0	.0	.0	9.7	.2	.2	.2
10.0	.1	.0	.0	10.3	.1	.1	.1	10.6	.0	.0	.0
11.0	1.3	.6	.6	11.3	.3	.3	.3	11.7	.6	.3	.3
11.9	1.8	.7	.7	12.2	2.1	.7	.7	12.6	.6	.3	.3
12.8	1.3	.6	.6	13.1	1.3	.6	.6	13.6	2.3	.7	.7
13.7	1.8	.7	.7	14.1	3.1	.9	.9	14.5	2.6	.7	.7
14.6	5.4	1.2	1.2	14.9	6.0	1.2	1.2	15.4	4.9	1.0	1.0
15.5	8.8	1.5	1.5	15.8	7.8	1.4	1.4	16.2	10.4	1.4	1.4
16.4	8.8	1.5	1.5	16.7	10.4	1.6	1.6	17.2	9.5	1.3	1.3
17.3	9.8	1.6	1.6	17.6	14.8	2.1	2.1	18.1	11.5	1.5	1.5
18.2	18.6	2.2	2.2	18.6	14.8	2.0	2.0	19.1	12.1	1.5	1.5
19.2	17.9	2.2	2.2	19.5	17.9	2.2	2.2	20.0	12.2	1.5	1.5
20.1	17.9	2.2	2.2	20.4	17.2	2.1	2.1	20.9	12.2	1.5	1.5
21.0	22.1	2.4	2.4	21.3	21.5	2.4	2.4	21.8	14.9	1.7	1.7
21.9	19.4	2.2	2.2	22.2	21.6	2.5	2.5	22.7	10.9	1.4	1.4
22.8	23.1	2.4	2.4	23.1	22.1	2.4	2.4	23.6	6.7	1.3	1.3
23.7	21.2	2.3	2.3	24.0	15.2	2.2	2.2	24.5	9.6	1.3	1.3
24.6	20.2	2.3	2.3	24.9	24.3	2.5	2.5	25.4	10.2	1.4	1.4
25.5	16.6	2.1	2.1	25.8	16.6	2.2	2.2	26.4	10.0	1.4	1.4
26.5	17.3	2.1	2.1	26.9	13.9	2.2	2.2	27.3	7.2	1.2	1.2
27.4	15.8	2.0	2.0	27.7	5.6	1.6	1.6	28.2	4.5	.9	.9
28.3	4.8	1.5	1.5	28.6	11.4	1.6	1.6	29.1	2.8	.7	.7
29.2	5.7	1.2	1.2	29.5	2.1	.9	.9	30.1	.4	.3	.3
30.1	1.6	.6	.6	30.4	2.8	.9	.9	30.5	.0	.0	.0
31.0	.5	.4	.4	31.3	1.3	.6	.6	31.9	.0	.0	.0
31.9	.0	.0	.0	32.2	.1	.1	.1	32.8	.0	.0	.0
32.8	.0	.0	.0	33.1	.0	.0	.0	33.7	.0	.0	.0
33.8	.0	.0	.0	34.1	.1	.1	.1	34.6	.0	.0	.0
34.7	.0	.0	.0	35.0	.0	.0	.0	35.5	.0	.0	.0
35.6	.1	.1	.1	35.9	.1	.1	.1	36.4	.0	.0	.0
36.5	.0	.0	.0	36.8	.0	.0	.0	37.3	.0	.0	.0
37.4	.0	.0	.0	37.7	.1	.1	.1	38.2	.0	.0	.0

674 18:TA(P+ALPHA) 24.8 MEV 121 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
9.3	.0	.0	.0	9.6	.1	.1	.1	9.9	.2	.2	.2
10.2	.0	.0	.0	10.5	.0	.0	.0	10.8	.0	.0	.0
11.1	.0	.0	.0	11.4	.4	.3	.3	11.7	.6	.3	.3
12.0	.6	.3	.3	12.3	.6	.3	.3	12.6	.6	.3	.3
12.9	.4	.3	.3	13.2	.6	.3	.3	13.6	2.3	.7	.7
13.9	1.1	.5	.5	14.2	2.4	.7	.7	14.5	2.6	.7	.7
14.8	4.3	.9	.9	15.1	3.6	.8	.8	15.4	4.9	1.0	1.0
15.7	6.2	1.1	1.1	16.0	7.7	1.2	1.2	16.2	10.4	1.4	1.4
16.6	9.2	1.3	1.3	16.9	11.3	1.5	1.5	17.2	9.5	1.3	1.3
17.5	10.0	1.4	1.4	17.8	9.0	1.2	1.2	18.1	11.5	1.5	1.5
18.4	13.9	1.6	1.6	18.7	11.7	1.4	1.4	19.1	12.1	1.5	1.5
19.3	13.4	1.6	1.6	19.6	12.0	1.6	1.6	20.0	12.2	1.5	1.5
20.3	13.9	1.6	1.6	20.6	11.4	1.4	1.4	20.9	12.2	1.5	1.5
21.2	13.2	1.6	1.6	21.5	14.1	1.6	1.6	21.8	14.9	1.7	1.7
22.1	11.9	1.5	1.5	22.4	12.4	1.5	1.5	22.7	10.9	1.4	1.4
23.0	11.9	1.5	1.5	23.3	11.1	1.4	1.4	23.6	6.7	1.3	1.3
23.9	11.9	1.4	1.4	24.2	10.2	1.4	1.4	24.5	9.6	1.3	1.3
24.8	8.7	1.3	1.3	25.1	8.1	1.2	1.2	25.4	10.2	1.4	1.4
25.8	8.7	1.3	1.3	26.1	3.9	1.3	1.3	26.4	10.0	1.4	1.4
26.7	7.5	1.2	1.2	27.0	4.8	1.0	1.0	27.3	7.2	1.2	1.2
27.6	5.1	1.0	1.0	27.9	5.1	1.1	1.1	28.2	4.5	.9	.9
28.5	5.1	1.0	1.0	28.8	3.8	.8	.8	29.1	2.8	.7	.7
29.4	1.5	.5	.5	29.7	.9	.4	.4	30.1	.4	.3	.3
30.3	.6	.3	.3	30.6	.4	.2	.2	30.6	.0	.0	.0
31.2	.2	.2	.2	31.5	.4	.4	.4	31.9	.0	.0	.0
32.2	.0	.0	.0	32.5	.0	.0	.0	32.8	.0	.0	.0
33.1	.1	.1	.1	33.4	.1	.1	.1	33.7	.0	.0	.0
34.0	.0	.0	.0	34.3	.0	.0	.0	34.6	.0	.0	.0
34.9	.1	.1	.1	35.2	.1	.1	.1	35.5	.0	.0	.0
35.8	.0	.0	.0	36.1	.0	.0	.0	36.4	.0	.0	.0
36.7	.1	.1	.1	37.1	.1	.0	.0	37.3	.0	.0	.0
37.6	.0	.0	.0	38.0	.0	.0	.0	38.3	.0	.0	.0

675 18:TA(P+ALPHA) 24.8 MEV 150 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.5	.0	.0	.0	9.8	.0	.0	.0	10.1	.0	.0	.0
10.4	.0	.0	.0	10.7	.0	.0	.0	11.1	.2	.1	.1
11.3	.4	.2	.2	11.6	.4	.2	.2	11.5	.6	.2	.2
12.2	.8	.3	.3	12.5	1.3	.4	.4	12.8	.7	.2	.2
13.1	.8	.3	.3	13.4	1.3	.4	.4	13.8	1.3	.4	.4
14.1	1.9	.4	.4	14.4	2.2	.5	.5	14.7	3.3	.6	.6
15.0	4.8	.7	.7	15.3	4.2	.6	.6	15.6	6.1	.6	.6
15.9	6.8	.8	.8	16.2	3.5	.9	.9	16.5	8.0	.9	.9
16.8	11.3	1.0	1.0	17.1	10.7	1.0	1.0	17.4	11.5	1.0	1.0
17.7	11.6	1.0	1.0	18.0	13.7	1.1	1.1	18.4	12.9	1.1	1.1
18.7	13.1	1.1	1.1	19.0	12.3	1.1	1.1	19.3	12.4	1.1	1.1
19.6	11.5	1.0	1.0	19.9	10.6	1.0	1.0	20.2	10.6	1.0	1.0
20.5	10.5	1.0	1.0	20.8	5.8	1.0	1.0	21.1	10.7	1.0	1.0
21.4	9.3	.9	.9	21.7	9.4	.9	.9	22.1	9.3	.9	.9
22.3	8.3	.9	.9	22.7	7.6	.8	.8	23.0	7.2	.8	.8
23.3	7.2	.8	.8	23.6	6.9	.8	.8	23.9	7.3	.8	.8
24.2	6.7	.8	.8	24.5	5.1	.7	.7	24.8	6.5	.8	.8
25.1	6.2	.8	.8	25.4	6.7	.8	.8	25.7	5.6	.7	.7
26.0	5.8	.7	.7	26.3	5.1	.7	.7	26.6	4.3	.6	.6
27.0	4.1	.6	.6	27.3	2.8	.5	.5	27.6	3.0	.5	.5
27.9	2.4	.5	.5	28.2	2.2	.5	.5	28.5	3.0	.5	.5
28.8	2.5	.5	.5	29.1	1.8	.4	.4	29.4	1.5	.4	.4
29.7	1.0	.3	.3	30.0	.8	.2	.2	30.3	.9	.2	.2
31.6	.6	.2	.2	31.9	.1	.1	.1	31.2	.1	.1	.1
31.6	.5	.2	.2	31.9	.1	.1	.1	32.2	.0	.0	.0
32.5	.3	.0	.0	32.8	.0	.0	.0	33.1	.0	.0	.0
33.4	.0	.0	.0	33.7	.0	.0	.0	34.0	.0	.0	.0
34.3	.0	.0	.0	34.6	.0	.0	.0	34.9	.0	.0	.0
35.2	.0	.0	.0	35.5	.0	.0	.0	35.8	.0	.0	.0
36.2	.0	.0	.0	36.5	.0	.0	.0	36.8	.0	.0	.0
37.1	.0	.0	.0	37.4	.0	.0	.0	37.7	.0	.0	.0
38.0	.0	.0	.0	38.3	.0	.0	.0	38.6	.0	.0	.0

676 18:TA(P+ALPHA) 24.8 MEV 165 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.5	.0	.0	.0	9.8	.1	.1	.1	10.1	.1	.1	.1
10.4	.0	.0	.0	10.7	.1	.1	.1	11.1	.1	.1	.1
11.3	.2	.1	.1	11.6	.3	.2	.2	11.9	1.3	.4	.4
12.2	1.6	.4	.4	12.5	1.3	.4	.4	12.8	1.2	.3	.3
13.1	.9	.3	.3	13.4	2.1	.4	.4	13.8	2.0	.4	.4
14.1	2.1	.4	.4	14.4	2.6	.5	.5	14.7	3.3	.6	.6
15.0	5.0	.7	.7	15.3	5.5	.7	.7	15.6	5.8	.7	.7
15.9	7.9	.9	.9	16.2	10.8	1.0	1.0	16.5	10.1	1.0	1.0
16.8	12.2	1.1	1.1	17.1	12.0	1.1	1.1	17.4	12.3	1.1	1.1
17.7	12.1	1.1	1.1	18.0	13.1	1.1	1.1	18.4	12.7	1.1	1.1
18.7	13.0	1.1	1.1	19.0	12.9	1.1	1.1	19.3	12.0	1.1	1.1
19.6	12.5	1.1	1.1	19.9	11.2	1.0	1.0	20.2	11.0	1.0	1.0
20.5	11.5	1.0	1.0	20.8	7.5	.8	.8	21.1	10.7	1.0	1.0
21.4	10.2	1.0	1.0	21.7	6.2	.9	.9	22.1	8.6	.9	.9
22.3	7.5	.8	.8	22.7	7.5	.8	.8	23.0	7.0	.8	.8
23.3	7.5	.8	.8	23.6	7.2	.8	.8	23.9	7.0	.8	.8
24.2	6.5	.8	.8	24.5	6.9	.8	.8	24.8	5.4	.7	.7
25.1	5.4	.7	.7	25.4	5.8	.7	.7	25.7	5.2	.7	.7
25.0	4.5	.7	.7	26.3	3.4	.6	.6	26.6	2.9	.5	.5
27.0	3.5	.6	.6	27.3	2.8	.5	.5	27.6	3.0	.5	.5
27.9	2.3	.5	.5	28.2	2.1	.4	.4	28.5	1.4	.4	.4
28.8	2.2	.5	.5	29.1	.8	.2	.2	29.4	1.1	.3	.3
29.7	.4	.2	.2	30.0	.1	.1	.1	30.3	.4	.2	.2
31.6	.2	.1	.1	31.9	.2	.1	.1	31.2	.1	.1	.1
31.6	.1	.1	.1	31.9	.1	.0	.0	32.2	.0	.0	.0
32.5	.0	.0	.0	32.8	.0	.0	.0	33.1	.0	.0	.0
33.4	.0	.0	.0	33.7	.0	.0	.0	34.0	.0	.0	.0
34.3	.0	.0	.0	34.6	.0	.0	.0	34.9	.0	.0	.0
35.2	.0	.0	.0	35.5	.0	.0	.0	35.8	.0	.0	.0
36.2	.0	.0	.0	36.5	.0	.0	.0	36.8	.0	.0	.0
37.1	.0	.0	.0	37.4	.0	.0	.0	37.7	.0	.0	.0
38.0	.0	.0	.0	38.3	.0	.0	.0	38.6	.0	.0	.0

705 18:TA(P+ALPHA) 29.7 MEV 25 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.7	38.5	2.7	2.7	10.0	37.0	2.7	2.7	10.4	40.2	2.8	2.8
10.7	50.1	4.3	4.3	11.1	41.6	3.8	3.8	11.4	43.2	4.0	4.0
11.8	41.0	3.9	3.9	12.1	35.6	3.6	3.6	12.5	32.7	3.4	3.4
12.8	35.6	3.6	3.6	13.2	34.1	3.5	3.5	13.5	28.7	3.2	3.2
13.9	32.3	3.4	3.4	14.2	25.0	3.0	3.0	14.6	27.2	3.1	3.1
14.9	30.8	3.3	3.3	15.3	32.3	3.4	3.4	15.6	33.4	3.5	3.5
16.0	36.7	3.6	3.6	16.3	40.2	3.8	3.8	16.7	42.1	3.9	3.9
17.0	46.1	4.1	4.1	17.4	58.5	4.5	4.5	17.7	58.1	4.6	4.6
18.1	62.1	4.7	4.7	18.4	70.0	5.0	5.0	18.8	73.7	5.2	5.2
19.1	91.5	5.8	5.8	19.5	115.8	6.5	6.5	19.8	106.0	6.2	6.2
20.2	123.4	6.7	6.7	20.5	120.1	6.6	6.6	20.9	102.0	6.1	6.1
21.2	117.6	6.5	6.5	21.6	115.1	6.5	6.5	21.9	133.5	7.0	7.0
22.3	123.4	6.7	6.7	22.6	144.8	7.2	7.2	23.0	141.5	7.2	7.2
23.3	144.1	7.2	7.2	23.7	133.9	7.0	7.0	24.1	144.8	7.2	7.2
24.4	144.1	7.2	7.2	24.7	142.3	7.2	7.2	25.1	144.8	7.2	7.2
25.4	136.1	7.0	7.0	25.8	131.7	6.9	6.9	26.1	138.6	7.1	7.1
26.5	143.3	7.2	7.2	26.8	133.9	7.1	7.1	27.2	153.1	7.5	7.5
27.5	148.4	7.3	7.3	27.9	137.9	7.1	7.1	28.2	136.5	7.1	7.1
28.6	134.6	7.0	7.0	28.9	147.7	7.3	7.3	29.3	133.5	7.0	7.0
29.6	139.1	7.1	7.1	30.1	141.5	7.2	7.2	30.3	131.4	6.9	6.9
30.7	145.2	7.3	7.3	31.0	132.1	6.9	6.9	31.4	120.8	6.6	6.6
31.7	135.7	7.0	7.0	32.1	117.6	6.5	6.5	32.4	113.2	6.4	6.4
32.8	103.4	6.1	6.1	32.1	85.3	5.7	5.7	32.5	89.6	5.7	5.7
33.8	106.3	6.2	6.2	34.2	71.6	5.1	5.1	34.5	58.8	4.5	4.5
34.9	40.6	2.8	2.8	35.2	42.1	3.9	3.9	35.6	23.0	3.5	3.5
35.9	30.8	3.3	3.3	36.3	19.6	2.7	2.7	36.6	4.0	1.2	1.2
37.0	1.8	.8	.8	37.3	1.1	.6	.6	37.7	1.1	.6	.6
38.0	1.1	.6	.6	38.4	.7	.5	.5	38.7	.0	.0	.0
39.1	.4	.4	.4	39.4	.0	.0	.0	39.6	.0	.0	.0
40.1	.0	.0	.0	40.5	.0	.0	.0	40.8	.0	.0	.0
41.2	.0	.0	.0	41.5	.0	.0	.0	41.9	.0	.0	.0
42.2	.0	.0	.0	42.6	.0	.0	.0	42.7	.0	.0	.0

706 18:TA(P+ALPHA) 29.7 MEV 45 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.7	21.2	2.1		11.1	29.1	2.6		10.4	27.0	2.5	
10.7	22.7	2.3		11.1	29.1	2.6		11.4	21.8	2.2	
11.8	26.1	2.4		12.1	25.2	2.4		12.5	19.8	2.1	
12.8	16.8	2.0		13.2	18.0	2.0		13.5	17.7	2.0	
13.9	14.8	1.8		14.2	15.9	2.0		14.6	16.4	1.9	
14.9	14.3	1.8		15.3	19.1	2.1		15.6	19.1	2.1	
16.0	29.2	2.5		16.3	29.5	2.6		16.7	31.6	2.7	
17.0	29.1	2.6		17.4	44.8	3.2		17.7	50.0	3.4	
18.1	48.0	3.3		18.4	61.4	3.7		18.8	62.5	3.8	
19.1	57.7	3.6		19.5	62.3	3.8		19.8	72.0	4.0	
20.2	85.2	3.9		20.5	75.7	4.1		20.9	78.6	4.2	
21.2	85.0	4.4		21.6	85.9	4.4		21.9	96.1	4.7	
22.3	89.8	4.5		22.6	90.1	4.5		23.0	94.8	4.6	
23.3	86.1	4.4		23.7	95.5	4.7		24.0	94.3	4.6	
24.4	92.7	4.6		24.7	98.6	4.5		25.1	92.0	4.6	
25.4	88.4	4.5		25.8	85.5	4.4		26.1	84.3	4.4	
26.5	75.2	4.1		26.8	91.9	4.5		27.2	87.0	4.4	
27.5	87.7	4.5		27.9	82.5	4.2		28.2	80.9	4.3	
28.6	84.3	4.4		28.9	81.4	4.3		29.3	80.0	4.3	
29.6	72.5	4.1		30.0	67.3	3.9		30.3	72.7	4.1	
30.7	63.4	3.8		31.1	60.1	3.9		31.4	68.0	3.9	
31.7	54.5	3.5		32.0	56.6	3.6		32.4	50.9	3.4	
32.8	45.2	3.2		33.1	42.5	3.1		33.5	44.3	3.2	
33.6	38.6	2.9		34.2	29.3	2.6		34.5	16.1	1.9	
34.9	11.9	1.6		35.2	9.3	1.5		35.6	7.5	1.3	
35.9	6.1	1.2		36.3	3.6	.9		36.6	.2	.2	
37.0	.2	.2		37.3	.5	.3		37.7	.0	.0	
38.0	.0	.0		38.4	.0	.0		38.7	.0	.0	
39.1	.0	.0		39.4	.0	.0		39.8	.0	.0	
40.1	.0	.0		40.5	.0	.0		40.8	.0	.0	
41.2	.0	.0		41.5	.0	.0		41.9	.0	.0	
42.2	.0	.0		42.6	.0	.0		42.9	.0	.0	

717 181TA(P+ALPHA) 29.7 MEV 70 DEG. 5/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.8	8.4	1.2		11.2	9.5	1.3		10.5	12.4	1.5	
10.9	9.2	1.2		11.2	9.5	1.3		11.6	8.9	1.3	
12.0	10.4	1.4		12.3	7.7	1.2		12.7	6.6	1.1	
13.0	7.7	1.2		13.4	8.2	1.2		13.7	8.0	1.2	
14.1	7.8	1.2		14.4	13.9	1.6		14.8	11.3	1.4	
15.1	11.7	1.5		15.5	15.2	1.7		15.8	23.7	2.1	
16.2	16.6	1.7		16.5	25.0	2.1		16.9	22.6	2.0	
17.2	25.7	2.2		17.6	32.1	2.4		17.9	35.4	2.5	
18.3	34.8	2.5		18.6	31.9	2.4		19.1	37.9	2.6	
19.3	45.4	2.9		19.7	39.8	2.7		20.1	41.9	2.3	
20.4	40.1	2.7		20.8	46.9	2.9		21.1	42.3	2.6	
21.5	48.5	3.0		21.8	45.4	2.8		22.2	51.1	3.1	
22.5	42.5	2.8		22.9	44.2	2.6		23.2	52.0	3.1	
23.6	52.5	3.1		23.9	51.5	3.0		24.3	48.7	3.1	
24.6	48.3	3.0		25.0	45.2	2.9		25.2	45.2	2.9	
25.7	43.9	2.8		26.3	49.4	3.0		26.4	43.8	2.8	
26.7	39.0	2.7		27.1	42.7	2.8		27.4	39.2	2.7	
27.8	43.2	2.8		28.1	38.1	2.6		28.5	34.3	2.5	
28.8	36.5	2.6		29.2	33.6	2.5		29.6	29.9	2.3	
29.9	24.6	2.1		31.3	33.1	2.6		31.6	25.5	2.2	
31.0	25.2	2.1		31.3	22.8	2.0		31.7	24.4	2.1	
32.0	19.7	1.9		32.4	19.1	1.9		32.7	15.5	1.7	
33.1	13.1	1.5		33.4	8.6	1.2		33.8	12.0	1.5	
34.1	10.4	1.4		34.5	4.1	.9		34.8	3.1	.8	
35.2	3.8	.8		35.5	2.6	.7		35.9	2.2	.6	
36.2	1.6	.5		36.6	.4	.3		36.9	.9	.3	
37.3	.0	.0		37.6	.0	.0		38.0	.0	.0	
38.4	.0	.0		38.7	.0	.0		39.1	.0	.0	
39.4	.0	.0		39.8	.0	.0		40.1	.0	.0	
40.5	.0	.0		40.8	.0	.0		41.2	.0	.0	
41.5	.0	.0		41.9	.0	.0		42.2	.0	.0	
42.6	.0	.0		42.9	.0	.0		43.3	.0	.0	

718 181TA(P+ALPHA) 29.7 MEV 71 DEG. 9/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.0	4.7	.7		11.4	5.7	.7		10.7	3.9	.6	
11.1	3.5	.6		11.4	5.7	.7		11.8	8.5	.9	
12.2	3.7	.6		12.5	2.9	.5		12.9	3.7	.5	
13.2	4.9	.7		13.6	6.5	.8		13.9	6.4	.8	
14.3	7.5	.8		14.6	9.8	.9		15.1	10.4	1.0	
15.3	13.5	1.1		15.7	12.9	1.1		16.1	18.4	1.3	
16.4	23.4	1.5		16.8	22.6	1.4		17.1	26.4	1.6	
17.5	26.4	1.6		17.8	25.5	1.6		18.2	29.9	1.7	
18.5	29.9	1.7		18.9	27.9	1.7		19.2	32.8	1.7	
19.6	32.5	1.7		19.9	32.6	1.8		20.3	32.5	1.7	
21.7	29.9	1.7		21.1	32.7	1.7		21.4	33.7	1.8	
21.7	33.1	1.7		22.1	31.9	1.7		22.4	29.9	1.7	
22.8	33.9	1.7		23.1	27.2	1.6		23.5	31.8	1.7	
23.8	26.0	1.5		24.2	27.5	1.6		24.5	27.8	1.6	
24.9	25.0	1.5		25.3	24.2	1.5		25.6	22.8	1.4	
26.0	23.8	1.5		26.3	24.6	1.5		26.7	22.4	1.4	
27.0	21.2	1.4		27.4	19.8	1.3		27.7	21.6	1.4	
28.1	19.2	1.3		28.4	15.6	1.3		28.8	18.4	1.3	
29.1	15.7	1.2		29.5	15.9	1.2		29.9	14.8	1.2	
30.2	14.6	1.2		30.8	11.6	1.0		31.5	10.7	1.0	
31.3	12.1	1.1		31.6	11.9	1.0		32.1	8.4	.9	
32.3	7.4	.8		32.7	7.2	.8		33.0	6.7	.8	
33.4	5.3	.7		33.8	5.2	.7		34.1	4.5	.6	
34.5	3.1	.5		34.8	2.0	.4		35.2	1.6	.2	
35.5	1.4	.4		35.9	1.1	.3		36.2	.3	.2	
36.6	.2	.1		36.9	.1	.1		37.3	.1	.1	
37.6	.0	.0		38.1	.0	.0		38.4	.0	.0	
38.7	.0	.0		39.1	.0	.0		39.4	.0	.0	
39.8	.0	.0		40.1	.0	.0		40.5	.0	.0	
40.8	.0	.0		41.2	.0	.0		41.5	.0	.0	
41.9	.0	.0		42.2	.0	.0		42.6	.0	.0	
43.0	.0	.0		43.3	.0	.0		43.7	.0	.0	

719 181TA(P+ALPHA) 29.7 MEV 72 DEG. 5/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
10.2	1.7	.4		10.6	2.7	.5		10.9	4.6	.6	
11.3	1.8	.4		11.6	1.1	.3		12.1	2.1	.4	
12.3	1.6	.4		12.7	2.4	.5		13.1	1.8	.4	
13.4	1.9	.4		13.8	3.1	.5		14.1	4.3	.6	
14.5	6.5	.8		14.8	7.7	.8		15.2	10.1	.9	
15.6	10.6	1.0		15.9	14.5	1.1		16.3	17.9	1.2	
16.6	19.6	1.3		17.0	22.0	1.4		17.2	25.1	1.5	
17.7	27.1	1.5		18.1	29.4	1.6		18.4	27.6	1.5	
18.8	27.3	1.5		19.1	26.8	1.5		19.5	25.4	1.5	
19.8	24.6	1.5		20.2	21.5	1.4		20.5	21.7	1.4	
20.9	23.1	1.4		21.2	20.5	1.3		21.6	21.7	1.4	
22.0	19.1	1.3		22.3	13.4	1.3		22.7	20.1	1.3	
23.0	18.0	1.3		23.4	15.6	1.2		23.7	18.0	1.3	
24.1	15.1	1.1		24.5	13.6	1.1		24.8	13.7	1.1	
25.2	15.5	1.2		25.5	11.2	1.0		25.9	12.1	1.0	
26.2	12.8	1.1		26.6	11.1	1.0		26.9	8.8	.9	
27.3	10.2	.9		27.7	8.6	.9		28.0	8.0	.8	
28.4	9.1	.9		28.7	7.9	.8		29.1	6.4	.7	
29.4	7.1	.8		29.8	6.7	.8		30.1	7.5	.8	
30.5	7.0	.8		30.9	5.3	.7		31.2	5.0	.7	
31.6	4.3	.6		31.9	2.7	.6		32.2	3.4	.5	
32.6	3.5	.6		33.1	2.8	.5		33.4	2.9	.5	
33.7	2.2	.4		34.1	1.4	.2		34.4	1.1	.3	
34.8	.5	.2		35.1	.8	.3		35.5	.3	.2	
35.8	.0	.0		36.2	.0	.0		36.6	.1	.1	
36.9	.0	.0		37.3	.0	.0		37.6	.0	.0	
38.0	.0	.0		38.3	.0	.0		38.7	.0	.0	
39.0	.0	.0		39.4	.0	.0		39.7	.0	.0	
40.1	.0	.0		40.5	.0	.0		40.8	.0	.0	
41.2	.0	.0		41.5	.0	.0		41.9	.0	.0	
42.3	.0	.0		42.6	.0	.0		43.1	.0	.0	
43.3	.0	.0		43.7	.0	.0		44.1	.0	.0	

712 181TA(P+ALPHA) 29.7 MEV 73 DEG. 9/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
11.4	.7	.2	11.7	1.1	.3	11.1	1.9	.4
11.5	2.1	.4	11.8	1.0	.2	12.2	1.2	.3
12.5	1.7	.4	12.9	1.5	.4	13.2	2.5	.5
13.6	2.4	.5	14.0	4.0	.6	14.2	4.4	.6
14.7	6.3	.7	15.1	5.4	.9	15.4	12.0	1.1
15.7	13.2	1.1	16.1	11.0	1.1	16.5	18.5	1.3
16.8	22.2	1.4	17.2	23.2	1.4	17.5	24.1	1.4
17.9	26.8	1.5	18.3	26.7	1.5	18.6	26.6	1.5
19.0	26.9	1.5	19.3	24.5	1.5	19.7	24.8	1.5
20.0	20.5	1.3	20.4	21.6	1.4	20.8	20.4	1.3
21.1	13.5	1.3	21.5	19.5	1.1	21.9	16.0	1.2
22.2	15.5	1.2	22.6	14.5	1.1	22.9	11.8	1.0
23.3	12.0	1.0	23.6	11.4	1.0	24.1	11.2	1.0
24.3	9.3	.9	24.7	4.8	.5	25.1	8.9	.9
25.4	7.3	.8	25.8	5.4	.7	26.1	8.3	.8
26.5	6.1	.7	26.8	5.1	.7	27.2	6.5	.6
27.6	5.4	.7	27.9	4.8	.6	28.3	5.2	.7
28.6	3.9	.6	29.0	3.5	.6	29.4	3.5	.6
29.7	3.1	.5	30.1	3.1	.5	30.4	3.0	.5
30.8	3.2	.5	31.1	2.5	.5	31.5	2.0	.4
31.9	2.7	.5	32.2	1.7	.4	32.6	2.0	.4
32.9	.8	.3	33.3	1.4	.3	33.6	1.7	.4
34.1	.7	.2	34.4	.3	.2	34.7	.3	.2
35.1	.2	.1	35.4	.2	.1	35.8	.1	.1
36.2	.1	.1	36.5	.0	.0	36.9	.0	.0
37.2	.0	.0	37.6	.0	.0	37.9	.0	.0
38.3	.0	.0	38.7	.0	.0	39.1	.0	.0
39.4	.0	.0	39.7	.0	.0	40.1	.0	.0
40.5	.0	.0	40.8	.0	.0	41.2	.0	.0
41.5	.0	.0	41.9	.0	.0	42.2	.0	.0
42.6	.0	.0	43.1	.0	.0	43.3	.0	.0
43.7	.0	.0	44.0	.0	.0	44.8	.0	.0

711 18:TA(P+ALPHA) 25.7 MEV 165 DEG. 5/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
10.4	.9	.2		10.7	1.5	.2		11.1	1.2	.2	
11.5	1.3	.3		11.8	2.5	.4		12.2	1.9	.3	
12.5	2.0	.3		12.9	2.2	.4		13.2	3.3	.4	
13.6	4.8	.5		14.0	4.3	.5		14.3	5.7	.6	
14.7	7.7	.7		15.0	9.4	.7		15.4	12.3	.8	
15.7	13.2	.9		16.1	16.6	1.0		16.5	21.6	1.1	
16.8	20.4	1.1		17.2	22.6	1.1		17.5	25.5	1.2	
17.9	28.2	1.3		18.3	25.8	1.2		18.6	27.1	1.3	
19.0	24.9	1.2		19.3	24.0	1.2		19.7	24.5	1.2	
20.0	22.1	1.1		20.4	21.1	1.1		20.8	17.1	1.0	
21.1	16.4	1.0		21.5	15.8	1.0		21.8	15.2	.9	
22.2	13.7	.9		22.6	12.3	.8		22.9	11.4	.8	
23.3	9.3	.7		23.6	11.8	.8		24.0	9.8	.8	
24.3	9.3	.7		24.7	8.8	.7		25.1	8.0	.7	
25.4	8.8	.7		25.8	7.9	.7		26.1	5.9	.6	
26.5	5.5	.6		26.8	5.4	.6		27.2	4.6	.5	
27.6	4.8	.5		27.9	3.7	.5		28.3	4.2	.5	
28.6	4.0	.5		29.0	3.2	.4		29.4	3.4	.4	
29.7	3.3	.4		30.1	2.6	.4		30.4	2.3	.4	
30.8	1.9	.3		31.1	2.3	.4		31.5	2.0	.3	
31.9	1.7	.3		32.2	2.0	.2		32.6	1.5	.2	
32.9	1.3	.3		33.3	.5	.2		33.6	.5	.2	
34.0	.7	.2		34.4	.2	.1		34.7	.2	.1	
35.1	.2	.1		35.4	.3	.1		35.8	.2	.1	
36.2	.2	.1		36.5	.0	.0		36.9	.0	.0	
37.2	.0	.0		37.6	.1	.1		37.9	.0	.0	
38.3	.0	.0		38.7	.0	.0		39.0	.0	.0	
39.4	.0	.0		39.7	.1	.1		40.1	.0	.0	
40.5	.0	.0		40.8	.0	.0		41.2	.0	.0	
41.5	.0	.0		41.9	.1	.1		42.2	.0	.0	
42.6	.0	.0		42.0	.0	.0		43.3	.0	.0	
43.7	.0	.0		44.1	.1	.1		44.4	.1	.1	

141 19:AU(P+ALPHA) 21.0 MEV 61 DEG. 22/1/74

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
14.7	2.1	.3		15.0	1.4	.2		15.3	2.2	.3	
15.7	2.3	.3		16.0	2.0	.3		16.3	2.2	.2	
16.6	1.9	.3		16.9	2.6	.3		17.2	3.7	.4	
17.6	4.6	.4		17.9	5.0	.5		18.2	4.6	.4	
18.5	6.0	.5		18.8	7.1	.6		19.2	8.1	.6	
19.5	9.6	.6		19.8	12.4	.7		20.1	14.1	.8	
20.4	17.1	.9		20.8	21.1	.9		21.1	23.2	1.0	
21.4	29.8	1.1		21.7	32.0	1.2		22.0	36.6	1.2	
22.4	40.5	1.3		22.7	40.9	1.4		23.1	49.3	1.4	
23.3	46.9	1.4		23.6	50.7	1.5		23.9	45.9	1.4	
24.3	40.7	1.3		24.6	39.3	1.3		24.9	34.1	1.2	
25.2	25.5	1.0		25.5	24.6	1.0		25.9	20.1	.9	
26.2	14.9	.8		26.5	8.7	.6		26.8	7.2	.6	
27.1	4.6	.4		27.5	3.5	.4		27.8	2.2	.3	
28.1	1.7	.3		28.4	1.2	.2		28.7	1.2	.2	
29.0	.7	.2		29.4	.7	.2		29.7	.6	.2	
30.0	.8	.2		30.3	.2	.1		30.6	.2	.1	
31.0	.1	.1		31.2	.1	.1		31.6	.2	.1	
31.9	.1	.1		32.2	.0	.0		32.5	.0	.0	
32.9	.0	.0		33.2	.0	.0		33.5	.0	.0	
33.8	.0	.0		34.2	.1	.1		34.5	.0	.0	
34.8	.0	.0		35.1	.0	.0		35.4	.0	.0	
35.7	.0	.0		36.1	.0	.0		36.4	.0	.0	
36.7	.0	.0		37.0	.0	.0		37.3	.0	.0	
37.7	.0	.0		38.1	.0	.0		38.3	.0	.0	
38.6	.0	.0		38.9	.0	.0		39.3	.0	.0	
39.6	.0	.0		39.9	.1	.1		40.2	.0	.0	
40.5	.0	.0		40.9	.0	.0		41.2	.0	.0	
41.5	.0	.0		41.8	.0	.0		42.1	.0	.0	
42.4	.0	.0		42.8	.0	.0		43.1	.0	.0	
43.4	.0	.0		43.7	.0	.0		44.1	.0	.0	
44.4	.0	.0		44.7	.0	.0		45.0	.0	.0	

276 19:AU(P+ALPHA) 20.00 MEV 75 DEG. 21/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
12.9	1.3	.6		14.2	.5	.4		14.5	1.5	.6	
14.8	1.3	.6		15.1	2.3	.8		15.4	2.5	.8	
15.8	.3	.3		16.1	1.8	.7		16.4	1.2	.6	
16.7	2.1	.7		17.0	2.5	.8		17.4	2.0	.7	
17.7	3.3	.9		18.0	3.2	.9		18.2	2.5	.8	
18.6	4.3	1.0		18.9	5.8	1.2		19.3	5.8	1.2	
19.6	5.5	1.2		19.9	7.8	1.4		20.2	7.0	1.3	
20.5	9.8	1.6		20.8	13.6	1.8		21.2	17.6	2.1	
21.5	16.6	2.0		21.8	21.4	2.3		22.1	25.7	2.5	
22.4	25.2	2.5		22.7	27.4	2.6		23.1	31.7	2.8	
23.4	27.9	2.7		23.7	31.2	2.8		24.0	31.2	2.8	
24.3	36.1	3.0		24.6	24.4	2.7		25.1	25.7	2.5	
25.3	24.9	2.5		25.6	20.1	2.2		25.9	20.4	2.2	
26.2	13.6	1.8		26.5	11.8	1.7		26.9	6.3	1.3	
27.2	4.3	1.0		27.5	3.2	.9		27.8	1.2	.6	
28.1	.5	.4		28.4	.3	.3		28.8	.5	.4	
29.1	.0	.0		29.4	.0	.0		29.7	.0	.0	
30.1	.0	.0		30.3	.1	.1		30.7	.0	.0	
31.0	.0	.0		31.3	.0	.0		31.6	.0	.0	
31.9	.0	.0		32.2	.1	.1		32.5	.0	.0	
32.9	.0	.0		33.2	.0	.0		33.5	.0	.0	
33.8	.0	.0		34.2	.1	.1		34.5	.0	.0	
34.8	.0	.0		35.1	.0	.0		35.4	.0	.0	
35.7	.0	.0		36.1	.1	.1		36.4	.0	.0	
36.7	.0	.0		37.0	.0	.0		37.3	.0	.0	
37.7	.0	.0		38.1	.1	.1		38.3	.0	.0	
38.6	.0	.0		39.3	.0	.0		39.6	.0	.0	
39.6	.0	.0		40.2	.0	.0		40.5	.0	.0	
40.5	.0	.0		41.2	.0	.0		41.5	.0	.0	
41.5	.0	.0		42.1	.0	.0		42.4	.0	.0	
42.4	.0	.0		43.1	.0	.0		43.4	.0	.0	
43.4	.0	.0		44.1	.0	.0		44.4	.0	.0	

271 197AU(P+ALPHA) 20.00 MEV 93 DEG. 31/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
15.6	1.1	.5		16.1	2.2	.7		16.3	1.7	.6	
16.6	1.7	.6		16.9	2.4	.8		17.2	2.7	.8	
17.6	2.9	.8		17.9	1.9	.7		18.2	3.7	.9	
18.5	2.9	.8		18.8	4.6	1.1		19.1	4.1	1.0	
19.5	4.6	1.1		19.8	5.1	1.1		20.1	5.8	1.2	
20.4	10.7	1.6		20.7	11.2	1.6		21.1	13.9	1.6	
21.4	13.9	1.8		21.7	12.9	1.8		22.1	16.3	2.0	
22.3	18.7	2.1		22.7	20.2	2.2		23.0	17.0	2.0	
23.3	26.3	2.5		23.6	23.1	2.4		23.9	24.1	2.4	
24.2	25.3	2.5		24.6	19.7	2.2		24.9	20.2	2.2	
25.2	15.6	1.9		25.5	15.1	2.0		25.8	11.0	1.6	
26.2	11.2	1.7		26.5	8.0	1.4		26.8	3.4	.5	
27.1	3.9	1.0		27.4	3.4	.9		27.8	.7	.4	
28.1	.2	.2		28.4	.7	.4		28.7	.5	.3	
29.0	.5	.3		29.4	.2	.2		29.7	.0	.0	
30.0	.0	.0		30.3	.0	.0		30.6	.0	.0	
31.9	.0	.0		31.3	.1	.0		31.6	.0	.0	
31.9	.0	.0		32.2	.0	.0		32.5	.0	.0	
32.9	.0	.0		32.2	.1	.0		33.5	.0	.0	
33.8	.0	.0		34.1	.0	.0		34.5	.0	.0	
34.8	.0	.0		35.1	.1	.0		35.4	.0	.0	
35.7	.0	.0		36.1	.0	.0		36.4	.0	.0	
36.7	.9	.0		37.1	.1	.0		37.5	.1	.0	
37.6	.0	.0		38.0	.0	.0		38.2	.0	.0	
38.6	.0	.0		38.9	.1	.0		39.2	.0	.0	
39.6	.0	.0		39.9	.0	.0		40.2	.0	.0	
40.5	.3	.0		41.8	.1	.0		41.2	.0	.0	
41.5	.0	.0		41.8	.0	.0		42.1	.0	.0	
42.4	.0	.0		42.3	.1	.0		43.1	.0	.0	
43.4	.0	.0		43.7	.0	.0		44.0	.0	.0	
44.3	.0	.0		44.7	.1	.0		45.1	.0	.0	
45.3	.0	.0		45.6	.0	.0		45.6	.0	.0	

270 197AU(P+ALPHA) 20.00 MEV 105 DEG. 30/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
15.6	1.7	.6		16.0	2.0	.7		16.3	2.4	.8	
16.6	1.2	.5		16.9	.5	.3		17.2	2.0	.7	
17.6	2.2	.7		17.9	2.4	.8		18.2	2.7	.8	
18.5	2.7	.8		18.8	2.4	.8		19.1	4.2	1.1	
19.5	4.9	1.1		19.8	6.6	1.3		20.1	5.9	1.2	
20.4	7.1	1.3		20.7	7.5	1.3		21.1	11.7	1.7	
21.4	11.3	1.7		21.7	11.7	1.7		22.1	13.7	1.8	
22.3	11.7	1.8		22.7	19.8	2.2		23.0	18.8	2.1	
23.3	20.5	2.2		23.6	22.2	2.3		23.9	22.0	2.3	
24.2	16.6	2.0		24.6	21.1	2.2		24.9	18.1	2.1	
25.2	13.5	1.8		25.5	11.2	1.5		25.8	9.8	1.5	
26.2	10.5	1.6		26.5	5.9	1.2		26.8	3.2	.9	
27.1	3.7	.9		27.4	1.0	.5		27.8	.7	.4	
28.1	2.0	.7		28.4	.5	.3		28.7	.0	.0	
29.0	.0	.0		29.4	.0	.0		29.7	.0	.0	
30.0	.0	.0		30.3	.1	.0		30.6	.0	.0	
31.9	.0	.0		31.3	.0	.0		31.6	.0	.0	
31.9	.0	.0		32.2	.1	.0		32.5	.0	.0	
32.9	.0	.0		32.2	.0	.0		33.5	.0	.0	
33.8	.0	.0		34.1	.1	.0		34.5	.0	.0	
34.8	.0	.0		35.1	.0	.0		35.4	.0	.0	
35.7	.0	.0		36.1	.1	.0		36.4	.0	.0	
36.7	.9	.0		37.1	.0	.0		37.5	.0	.0	
37.6	.0	.0		38.0	.1	.0		38.2	.0	.0	
38.6	.0	.0		38.9	.0	.0		39.2	.0	.0	
39.6	.0	.0		39.9	.1	.0		40.2	.0	.0	
40.5	.3	.0		41.8	.0	.0		41.2	.0	.0	
41.5	.0	.0		41.8	.0	.0		42.1	.0	.0	
42.4	.0	.0		42.3	.1	.0		43.1	.0	.0	
43.4	.0	.0		43.7	.0	.0		44.0	.0	.0	
44.3	.0	.0		44.7	.1	.0		45.1	.0	.0	
45.3	.0	.0		45.6	.1	.0		45.6	.0	.0	

144 197AU(P+ALPHA) 20.00 MEV 121 DEG. 23/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
15.0	.6	.2		15.3	1.1	.3		15.7	1.0	.3	
16.0	1.4	.3		16.3	1.2	.3		16.6	1.5	.4	
17.0	1.3	.3		17.3	1.8	.4		17.6	2.1	.4	
17.9	3.6	.6		18.2	3.2	.5		18.6	3.0	.5	
18.9	2.8	.5		19.2	4.5	.6		19.5	3.7	.6	
19.8	4.5	.6		20.2	7.0	.8		20.5	8.5	.9	
20.8	8.2	.8		21.1	9.1	.9		21.5	8.9	.9	
21.8	14.7	1.1		22.1	12.8	1.1		22.4	14.6	1.1	
22.7	15.6	1.2		23.1	16.8	1.2		23.4	17.2	1.2	
23.7	13.6	1.1		24.0	13.4	1.1		24.4	14.4	1.1	
24.7	12.5	1.0		25.1	11.2	.9		25.3	9.6	.9	
25.6	7.3	.8		26.0	4.8	.6		26.3	2.6	.5	
26.6	2.4	.5		26.9	1.5	.4		27.3	.9	.3	
27.6	.8	.0		27.9	.5	.2		28.2	.1	.1	
28.5	.1	.0		28.9	.1	.0		29.2	.0	.0	
29.5	.0	.0		29.8	.0	.0		30.2	.0	.0	
30.5	.0	.0		30.8	.1	.0		31.1	.0	.0	
31.4	.0	.0		31.8	.0	.0		32.1	.0	.0	
32.4	.0	.0		32.7	.0	.0		33.1	.0	.0	
33.4	.0	.0		33.7	.0	.0		34.0	.0	.0	
34.3	.0	.0		34.7	.1	.0		35.1	.1	.0	
35.3	.0	.0		35.6	.0	.0		35.9	.0	.0	
36.3	.0	.0		36.6	.1	.0		36.9	.0	.0	
37.2	.0	.0		37.6	.0	.0		37.9	.0	.0	
38.2	.1	.0		38.5	.1	.0		38.8	.0	.0	
39.2	.0	.0		39.5	.0	.0		39.8	.0	.0	
40.1	.0	.0		40.5	.1	.0		40.8	.0	.0	
41.1	.0	.0		41.4	.0	.0		41.7	.0	.0	
42.1	.0	.0		42.4	.1	.0		42.7	.1	.0	
43.0	.0	.0		43.4	.0	.0		43.7	.0	.0	
44.0	.0	.0		44.3	.1	.0		44.6	.1	.0	
45.0	.0	.0		45.3	.0	.0		45.6	.0	.0	

272 197AU(P+ALPHA) 20.00 MEV 125 DEG. 30/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
15.8	1.0	.5		16.1	2.0	.7		16.5	1.0	.5	
16.8	2.9	.8		17.1	1.5	.6		17.4	2.5	.8	
17.8	2.9	.8		18.1	1.9	.8		18.4	3.4	.9	
18.7	3.4	.9		19.1	3.7	.8		19.4	4.4	1.1	
19.7	4.2	1.0		20.7	6.5	1.1		20.2	8.6	1.4	
20.6	8.8	1.5		21.1	9.1	1.5		21.3	8.3	1.4	
21.6	11.3	1.7		21.9	10.5	1.9		22.2	12.2	1.7	
22.6	12.3	1.7		22.9	12.3	1.7		23.2	18.4	2.1	
23.5	14.9	1.9		23.8	17.4	2.1		24.2	17.2	2.0	
24.5	14.2	1.9		24.8	11.5	1.7		25.1	13.0	1.8	
25.5	10.8	1.6		25.8	6.6	1.4		26.1	8.3	1.4	
26.4	3.9	1.0		26.7	3.7	.9		27.1	1.7	.6	
27.4	2.5	.8		27.7	1.5	.6		28.0	.5	.3	
28.3	.5	.3		28.7	.7	.4		29.1	.0	.0	
29.3	.0	.0		29.6	.0	.0		29.9	.0	.0	
30.3	.1	.0		30.6	.1	.0		30.9	.0	.0	
31.2	.0	.0		31.6	.0	.0		31.9	.0	.0	
32.2	.0	.0		32.5	.1	.0		32.8	.0	.0	
33.2	.0	.0		33.5	.0	.0		33.8	.0	.0	
34.1	.1	.0		34.4	.1	.0		34.8	.0	.0	
35.1	.0	.0		35.4	.0	.0		35.7	.0	.0	
36.1	.0	.0		36.4	.1	.0		36.7	.0	.0	
37.0	.0	.0		37.2	.0	.0		37.7	.0	.0	
38.1	.1	.0		38.3	.1	.0		38.6	.0	.0	
39.9	.0	.0		39.2	.0	.0		39.6	.0	.0	
40.9	.0	.0		40.2	.0	.0		40.5	.0	.0	
41.8	.1	.0		41.0	.0	.0		41.5	.0	.0	
42.8	.0	.0		42.1	.1	.0		42.5	.0	.0	
43.8	.0	.0		43.1	.0	.0		43.4	.0	.0	
44.7	.0	.0		44.1	.1	.0		44.8	.0	.0	
45.7	.0	.0		45.3	.0	.0		45.4	.0	.0	
46.7	.1	.0		46.1	.1	.0		46.3	.0	.0	

145 197AU(P,ALPHA) 23.0 MEV 151 DEG. 22/1/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
15.2	1.5	.4		15.5	1.1	.3		15.8	1.1	.3	
16.2	1.6	.4		16.5	1.1	.3		16.8	2.0	.4	
17.1	1.3	.3		17.5	1.6	.4		17.3	2.4	.5	
18.1	2.7	.5		18.4	2.2	.5		18.7	3.5	.6	
19.1	3.2	.5		19.4	3.6	.6		19.7	6.1	.7	
20.0	4.9	.6		20.4	5.4	.7		20.7	7.5	.8	
21.0	9.2	.7		21.3	5.9	.9		21.7	11.8	1.1	
22.0	10.9	1.0		22.3	14.5	1.1		22.6	14.2	1.1	
23.0	13.9	1.1		23.3	13.5	1.1		23.6	14.4	1.1	
23.9	11.7	1.0		24.3	11.0	.9		24.6	8.1	.8	
24.9	8.7	.9		25.2	7.7	.8		25.6	4.8	.6	
25.9	4.5	.6		26.2	5.8	.5		26.5	2.2	.4	
26.8	1.1	.3		27.2	.9	.3		27.5	.4	.2	
27.8	.2	.1		28.1	.1	.1		28.5	.0	.0	
28.8	.0	.0		29.1	.0	.0		29.4	.0	.0	
29.8	.0	.0		30.1	.0	.0		30.4	.0	.0	
31.7	.0	.0		31.1	.0	.0		31.4	.0	.0	
31.7	.0	.0		32.0	.0	.0		32.4	.0	.0	
32.7	.0	.0		33.1	.0	.0		33.3	.0	.0	
33.7	.0	.0		34.0	.0	.0		34.2	.0	.0	
34.6	.0	.0		34.9	.0	.0		35.3	.0	.0	
35.6	.0	.0		35.0	.0	.0		36.2	.0	.0	
36.6	.0	.0		36.9	.0	.0		37.2	.0	.0	
37.5	.0	.0		37.9	.0	.0		38.2	.0	.0	
38.5	.0	.0		38.8	.0	.0		39.2	.0	.0	
39.5	.0	.0		39.8	.0	.0		40.1	.0	.0	
41.5	.0	.0		41.8	.0	.0		41.1	.0	.0	
41.4	.0	.0		41.9	.0	.0		42.1	.0	.0	
42.4	.0	.0		42.7	.0	.0		43.1	.0	.0	
43.4	.0	.0		43.7	.0	.0		44.1	.0	.0	
44.3	.0	.0		44.7	.0	.0		45.1	.0	.0	
45.3	.0	.0		45.6	.0	.0		46.1	.0	.0	

212 197AL(P,ALPHA) 20.0 MEV 145 DEG. 31/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
14.3	.0	.0		14.6	.0	.0		14.5	.0	.0	
15.3	.0	.0		15.6	.0	.0		15.7	.0	.0	
16.2	.2	.2		16.6	.5	.2		16.5	.7	.4	
17.2	2.1	.7		17.5	2.2	.7		17.8	2.2	.7	
18.2	1.7	.6		18.5	2.7	.8		18.6	4.4	1.0	
19.1	4.4	1.1		19.8	4.7	1.1		19.8	4.4	1.1	
20.1	5.9	1.2		20.4	5.2	1.1		20.7	10.1	1.6	
21.1	10.6	1.6		21.4	2.6	1.5		21.7	13.5	1.8	
22.0	16.2	2.0		22.3	11.4	2.1		22.7	14.7	1.9	
23.1	16.1	2.0		23.3	12.3	1.7		23.6	11.3	1.7	
24.0	11.5	1.7		24.3	11.0	1.6		24.6	10.6	1.6	
24.9	7.9	1.4		25.2	7.1	1.3		25.6	6.9	1.3	
25.9	5.9	1.2		26.2	4.2	1.0		26.5	3.9	1.0	
26.9	2.9	.9		27.2	1.1	.5		27.5	1.5	.6	
27.8	.5	.3		28.1	.0	.0		28.5	.0	.0	
28.8	.0	.0		29.1	.0	.0		29.4	.0	.0	
29.8	.0	.0		30.1	.0	.0		30.4	.0	.0	
31.7	.0	.0		31.1	.0	.0		31.4	.0	.0	
31.7	.0	.0		32.0	.0	.0		32.4	.0	.0	
32.7	.0	.0		33.1	.0	.0		33.3	.0	.0	
33.7	.0	.0		34.0	.0	.0		34.2	.0	.0	
34.6	.0	.0		34.9	.0	.0		35.3	.0	.0	
35.6	.0	.0		35.0	.0	.0		36.2	.0	.0	
36.6	.0	.0		36.9	.0	.0		37.2	.0	.0	
37.5	.0	.0		37.9	.0	.0		38.2	.0	.0	
38.5	.0	.0		38.8	.0	.0		39.2	.0	.0	
39.5	.0	.0		39.8	.0	.0		40.1	.0	.0	
41.5	.0	.0		41.8	.0	.0		41.1	.0	.0	
41.4	.0	.0		41.9	.0	.0		42.1	.0	.0	
42.4	.0	.0		42.7	.0	.0		43.1	.0	.0	
43.4	.0	.0		43.7	.0	.0		44.1	.0	.0	
44.3	.0	.0		44.7	.0	.0		45.1	.0	.0	
45.3	.0	.0		45.6	.0	.0		46.1	.0	.0	

265 197AU(P,ALPHA) 23.7 MEV 151 DEG. 31/1/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
14.8	4.7	1.1		15.1	4.2	1.0		15.4	7.1	1.5	
15.7	12.5	1.8		16.1	15.7	1.9		16.4	11.5	1.7	
16.7	16.2	2.0		17.1	16.2	2.0		17.4	18.5	2.1	
17.7	20.2	2.2		18.0	26.0	2.5		18.3	29.2	2.7	
18.7	31.5	2.8		19.1	31.7	2.8		19.3	47.0	3.4	
19.6	46.0	3.4		20.0	52.7	3.6		20.3	56.1	3.7	
21.6	67.2	4.1		21.9	74.7	4.3		21.3	76.2	4.4	
21.6	83.2	4.6		21.9	85.4	4.7		22.2	94.7	4.9	
22.6	95.9	4.9		22.9	97.9	5.0		23.2	112.4	5.3	
23.5	122.7	5.5		23.8	121.4	5.5		24.2	127.9	5.7	
24.5	131.4	5.7		24.8	137.4	5.7		25.1	132.7	5.8	
25.5	141.9	6.0		25.9	142.6	6.0		26.1	138.4	5.8	
26.4	143.4	6.0		26.4	141.9	5.9		27.1	138.6	5.9	
27.4	127.7	5.6		27.7	112.4	5.3		28.1	114.9	5.1	
28.4	111.9	5.0		28.7	95.9	4.8		29.1	83.7	4.7	
29.4	74.7	4.3		29.7	62.5	3.9		30.4	53.1	3.6	
31.3	41.1	3.2		31.7	33.2	2.9		31.1	23.5	2.7	
31.3	18.7	2.2		31.6	14.7	1.9		31.9	12.7	1.6	
32.3	7.5	1.4		32.6	9.5	1.5		32.9	3.1	.9	
33.2	7.5	1.4		33.6	3.2	.9		33.5	4.7	1.1	
34.2	1.7	.7		34.5	2.5	.8		34.9	.5	.4	
35.2	.7	.4		35.5	.7	.4		35.9	.5	.4	
36.2	.2	.2		36.5	.2	.2		36.9	.2	.2	
37.1	.2	.2		37.5	.2	.2		37.8	.0	.0	
38.1	.0	.0		38.4	.0	.0		38.9	.2	.2	
39.1	.0	.0		39.8	.0	.0		39.7	.0	.0	
41.0	.0	.0		41.4	.0	.0		41.7	.0	.0	
41.0	.0	.0		41.3	.0	.0		41.7	.0	.0	
42.0	.0	.0		42.3	.0	.0		42.6	.0	.0	
43.0	.0	.0		42.7	.0	.0		43.6	.0	.0	
43.9	.0	.0		44.3	.0	.0		44.6	.0	.0	
44.9	.0	.0		45.2	.0	.0		45.6	.0	.0	

145 197AU(P,ALPHA) 23.70 MEV 145 DEG. 31/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
14.1	1.5	.3		14.4	1.5	.4		14.7	2.7	.5	
14.9	2.9	.5		14.4	2.2	.4		14.7	3.4	.5	
15.0	3.8	.6		15.3	4.6	.6		15.6	4.9	.6	
15.9	5.4	.7		16.3	5.4	.7		16.5	6.4	.7	
16.9	7.2	.8		17.2	7.6	.8		17.5	7.7	.8	
17.9	9.1	.8		18.2	9.1	.9		18.5	9.6	.9	
18.8	11.2	1.0		18.1	12.2	1.0		18.5	14.0	1.1	
19.8	17.5	1.2		20.1	19.4	1.3		20.4	21.0	1.3	
20.7	25.9	1.6		21.0	27.3	1.5		21.4	31.5	1.6	
21.7	33.1	1.6		22.1	35.1	1.3		22.3	46.7	1.9	
22.6	43.7	1.9		23.0	47.7	2.0		23.3	44.8	1.9	
23.6	56.4	2.1		23.9	61.1	2.2		24.2	63.6	2.3	
24.6	65.2	1.3		24.5	65.8	2.4		25.2	70.0	2.4	
25.5	68.7	2.4		25.8	67.9	2.3		26.2	66.6	2.3	
26.5	65.0	2.3		26.8	67.7	2.6		27.1	57.7	2.2	
27.4	52.7	2.1		27.7	43.1	1.9		28.1	35.2	1.7	
28.4	31.9	1.6		28.7	23.6	1.4		29.0	24.5	1.3	
29.3	16.2	1.1		29.7	14.4	1.1		30.1	9.4	.9	
30.3	7.4	.8		30.6	6.1	.7		30.9	3.6	.5	
31.3	2.7	.5		31.5	3.9	.5		31.9	1.4	.3	
32.2	0.1	.4		32.5	.5	.3		32.9	1.1	.3	
33.2	1.3	.3		33.5	1.1	.3		33.8	1.0	.3	
34.1	.6	.2		34.4	.5	.2		34.8	.3	.2	
35.1	.0	.0		35.4	.1	.0		35.7	.1	.0	
36.0	.0	.0		36.4	.0	.0		36.7	.0	.0	
37.1	.0	.0		37.4	.0	.0		37.6	.0	.0	
38.1	.0	.0		38.3	.0	.0		38.6	.0	.0	
39.1	.0	.0		39.2	.0	.0		39.5	.0	.0	
41.0	.0	.0		41.2	.0	.0		41.5	.0	.0	
42.0	.0	.0		42.3	.0	.0		42.6	.0	.0	
43.0	.0	.0		43.1	.0	.0		43.4	.0	.0	
43.9	.0	.0		44.1	.0	.0		44.4	.0	.0	
44.9	.0	.0		45.1	.0	.0		45.4	.0	.0	

264 19'AU(P+ALPHA) 23.70 MEV 75 DEG. 3/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.9	3.0	.9		15.2	2.8	.8		15.6	3.0	.9	
15.9	4.0	1.0		16.2	3.0	.9		16.5	3.8	1.0	
16.9	5.5	1.2		17.2	4.8	1.1		17.5	8.8	1.5	
17.8	8.8	1.5		18.2	5.6	1.6		18.5	12.4	1.8	
18.8	8.8	1.5		19.1	11.3	1.7		19.5	12.4	1.8	
19.8	16.9	2.1		20.1	16.4	2.0		20.4	18.2	2.1	
21.8	17.1	2.1		21.1	21.4	2.3		21.4	24.7	2.5	
21.7	22.4	2.4		22.1	27.7	2.6		22.4	31.0	2.8	
22.7	32.1	2.8		23.1	35.1	3.0		23.4	30.3	2.8	
23.7	33.8	2.9		24.0	34.0	2.9		24.3	40.6	3.2	
24.7	37.3	3.1		25.0	49.2	3.5		25.3	33.3	2.9	
25.6	43.9	3.3		26.0	42.1	3.3		26.3	49.4	3.5	
26.6	34.5	3.0		26.9	35.3	3.1		27.3	29.2	2.7	
27.6	25.0	2.5		27.9	22.2	2.4		28.2	20.2	2.3	
28.6	15.6	2.0		28.9	18.9	2.2		29.2	12.1	1.7	
29.5	9.8	1.6		29.9	7.3	1.4		30.2	5.8	1.2	
30.5	3.5	.9		30.8	1.5	.6		31.2	1.8	.7	
31.5	.8	.4		31.8	.5	.4		32.1	.5	.4	
32.5	.3	.3		32.8	.1	.1		33.1	.1	.1	
33.4	.0	.0		33.8	.0	.0		34.1	.0	.0	
34.4	.0	.0		34.7	.1	.1		35.1	.0	.0	
35.4	.0	.0		35.7	.0	.0		36.0	.0	.0	
36.4	.0	.0		36.7	.1	.1		37.0	.0	.0	
37.3	.0	.0		37.7	.0	.0		38.0	.0	.0	
38.3	.0	.0		38.6	.1	.1		39.1	.0	.1	
39.3	.0	.0		39.6	.0	.0		39.9	.0	.0	
40.3	.1	.0		40.6	.1	.1		40.9	.0	.1	
41.2	.0	.0		41.6	.0	.0		41.9	.0	.0	
42.2	.0	.0		42.5	.1	.1		42.9	.0	.1	
43.2	.0	.0		43.5	.0	.0		43.8	.0	.0	
44.2	.0	.0		44.5	.1	.1		44.8	.1	.1	
45.1	.0	.0		45.5	.0	.0		45.8	.0	.0	

263 19'AU(P+ALPHA) 23.70 MEV 50 DEG. 3/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
15.1	3.3	.9		15.4	2.3	.8		15.7	3.0	.9	
16.1	3.8	1.0		16.4	5.1	1.2		16.7	4.0	1.0	
17.0	5.1	1.1		17.4	6.1	1.2		17.7	5.3	1.2	
18.0	8.6	1.5		18.3	11.1	1.7		18.7	19.9	1.7	
19.0	9.1	1.5		19.3	14.1	1.6		19.6	18.9	1.7	
21.0	13.4	1.8		21.3	12.4	1.8		21.6	11.9	1.7	
21.9	17.4	2.1		21.3	15.9	2.0		21.6	15.9	2.0	
21.9	21.1	2.3		22.2	16.7	2.1		22.6	18.9	2.2	
22.9	22.7	2.4		23.2	19.7	2.2		23.6	20.0	2.2	
23.9	26.8	2.6		24.2	23.5	2.4		24.5	25.3	2.5	
24.9	31.3	2.8		25.2	21.2	2.3		25.5	22.2	2.4	
25.8	23.5	2.4		26.2	21.7	2.3		26.5	18.2	2.1	
26.8	24.8	2.5		27.1	25.3	2.7		27.5	15.2	2.0	
27.8	13.4	1.8		28.1	12.4	1.8		28.4	10.9	1.7	
28.8	8.8	1.5		29.1	7.6	1.4		29.4	5.3	1.2	
29.7	5.3	1.2		30.1	1.5	.6		30.4	1.8	.7	
30.7	1.8	.7		31.0	.5	.4		31.4	.3	.3	
31.7	.5	.4		32.1	.5	.4		32.4	.3	.3	
32.7	.0	.0		33.0	.0	.0		33.3	.0	.0	
33.7	.0	.0		34.1	.1	.1		34.3	.0	.0	
34.6	.0	.0		35.0	.0	.0		35.3	.0	.0	
35.6	.0	.0		35.9	.1	.1		36.3	.0	.0	
36.6	.0	.0		36.9	.0	.0		37.2	.0	.0	
37.6	.0	.0		37.9	.1	.1		38.2	.0	.0	
38.5	.0	.0		38.9	.0	.0		39.2	.0	.0	
39.5	.0	.0		39.9	.1	.1		40.2	.0	.0	
40.5	.0	.0		40.9	.0	.0		41.2	.0	.0	
41.5	.0	.0		41.9	.1	.1		42.1	.0	.0	
42.5	.0	.0		42.8	.0	.0		42.1	.0	.0	
43.4	.0	.0		43.8	.1	.1		44.1	.0	.0	
44.4	.0	.0		44.7	.0	.0		45.1	.0	.0	
45.4	.0	.0		45.7	.1	.1		46.1	.0	.0	

270 19'AU(P+ALPHA) 23.71 MEV 115 DEG. 3/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
15.1	.2	.2		15.4	.9	.5		15.7	1.4	.6	
16.1	1.4	.6		16.4	4.4	1.0		16.7	4.7	1.0	
17.0	4.7	1.0		17.4	4.2	1.0		17.7	5.6	1.1	
18.0	4.2	1.0		18.3	5.8	1.2		18.7	6.8	1.2	
19.0	10.7	1.5		19.3	9.3	1.5		19.6	8.9	1.4	
20.0	10.3	1.5		20.3	14.7	1.6		20.6	11.2	1.6	
21.9	11.9	1.7		21.3	15.6	1.9		21.6	9.3	1.5	
21.9	10.7	1.6		22.2	15.2	1.9		22.6	16.3	2.0	
22.9	17.5	2.0		23.2	17.1	2.0		23.6	18.7	2.1	
23.9	14.7	1.9		24.2	11.2	1.6		24.5	18.2	2.1	
24.9	16.6	2.0		25.2	18.1	2.0		25.5	20.8	2.2	
25.8	16.8	2.0		26.2	18.0	2.0		26.5	14.5	1.5	
26.8	14.9	1.9		27.1	11.2	1.6		27.5	11.2	1.6	
27.8	10.0	1.5		28.1	7.7	1.3		28.4	6.5	1.2	
28.8	7.0	1.3		29.1	2.8	.8		29.4	4.2	1.1	
29.7	2.8	.8		30.1	.9	.5		30.4	.9	.5	
30.7	.5	.3		31.1	.9	.5		31.4	.2	.2	
31.7	.5	.3		32.0	.0	.0		32.4	.0	.0	
32.7	.0	.0		33.0	.1	.1		33.3	.0	.0	
33.7	.0	.0		34.0	.0	.0		34.3	.0	.0	
34.6	.0	.0		35.0	.1	.1		35.3	.0	.0	
35.6	.0	.0		35.9	.0	.0		36.3	.0	.0	
36.6	.0	.0		36.9	.1	.1		37.2	.0	.0	
37.6	.0	.0		37.9	.0	.0		38.2	.0	.0	
38.5	.0	.0		38.9	.1	.1		39.1	.0	.0	
39.5	.0	.0		39.9	.0	.0		40.2	.0	.0	
40.5	.0	.0		41.9	.1	.1		42.1	.0	.0	
41.5	.0	.0		41.8	.0	.0		42.9	.0	.0	
42.5	.0	.0		42.8	.1	.1		43.1	.0	.0	
43.4	.0	.0		43.8	.0	.0		44.1	.0	.0	
44.4	.0	.0		44.7	.1	.1		45.1	.0	.0	
45.4	.0	.0		45.7	.0	.0		46.1	.0	.0	

114 19'AU(P+ALPHA) 23.70 MEV 120 DEG. 2/2/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.4	.4	.2		13.7	.2	.2		14.0	.2	.1	
14.3	.7	.2		14.6	.9	.3		15.1	1.4	.3	
15.3	1.5	.3		15.6	1.7	.4		15.9	2.4	.4	
16.2	3.1	.5		16.6	2.7	.5		16.9	3.0	.5	
17.2	4.3	.6		17.5	5.2	.7		17.8	5.1	.6	
18.2	4.8	.6		18.5	7.1	.8		18.8	7.1	.8	
19.1	7.7	.8		19.4	7.4	.8		19.8	9.8	.9	
20.1	8.6	.8		20.4	8.4	.8		20.7	9.3	.9	
21.0	11.5	1.0		21.4	13.4	1.0		21.7	11.2	1.0	
22.0	11.2	1.0		22.3	13.4	1.0		22.6	11.9	1.0	
23.0	12.6	1.0		23.3	15.9	1.0		23.6	14.9	1.1	
23.9	15.2	1.1		24.2	15.1	1.1		24.6	14.6	1.1	
24.9	15.3	1.1		25.2	13.2	1.0		25.5	14.3	1.1	
25.8	13.6	1.1		26.2	13.1	1.0		26.5	11.5	1.0	
26.8	8.4	.8		27.1	6.6	.7		27.4	6.6	.7	
27.8	4.8	.6		28.1	5.6	.7		28.4	4.7	.6	
28.7	3.4	.5		29.0	2.0	.4		29.4	1.3	.3	
29.7	.6	.2		30.1	.0	.0		30.3	.0	.0	
30.6	.0	.0		31.0	.0	.0		31.3	.0	.0	
31.6	.0	.0		31.9	.1	.1		32.2	.0	.0	
32.6	.0	.0		32.8	.0	.0		33.2	.0	.0	
33.5	.0	.0		34.3	.1	.1		34.2	.0	.0	
34.5	.0	.0		35.8	.0	.0		35.1	.0	.0	
35.4	.0	.0		36.8	.1	.1		36.1	.0	.0	
36.4	.0	.0		37.7	.0	.0		37.0	.0	.0	
37.4	.0	.0		38.6	.0	.0		38.1	.0	.0	
38.3	.0	.0		39.6	.0	.0		39.0	.0	.0	
39.3	.0	.0		40.6	.1	.1		40.0	.0	.0	
40.3	.0	.0		41.5	.0	.0		41.8	.0	.0	
41.2	.0	.0		42.5	.0	.0		42.8	.0	.0	
42.2	.0	.0		43.5	.0	.0		43.8	.0	.0	
43.2	.0	.0		44.5	.0	.0		44.8	.0	.0	
44.2	.0	.0		45.5	.0	.0		45.8	.0	.0	
45.1	.0	.0		46.5	.0	.0		46.8	.0	.0	

155 197AU(P+ALPHA) 23.73 MEV 151 DEG. 22/1/77

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.6	.1	.1	13.9	.2	.1	14.3	.7	.2
14.6	.6	.2	14.9	1.2	.3	15.2	.3	.2
15.6	1.1	.3	15.9	2.4	.4	16.2	2.4	.4
16.5	2.0	.4	16.9	2.5	.5	17.2	4.2	.6
17.5	2.8	.5	17.8	5.1	.6	18.1	6.0	.7
18.5	4.2	.6	18.8	6.4	.7	19.1	7.1	.8
19.4	7.6	.8	19.8	8.7	.8	20.1	9.4	.9
20.4	8.8	.8	20.7	5.6	.9	21.1	8.7	.8
21.4	9.5	.9	21.7	11.8	.9	22.1	10.8	.9
22.4	9.6	.9	22.7	10.0	.9	23.0	9.1	.9
23.3	11.7	.9	23.7	10.1	.9	24.1	10.4	.9
24.3	12.2	1.0	24.6	10.4	.9	25.0	9.9	.9
25.3	11.8	.9	25.6	11.1	.9	25.9	11.9	1.1
26.2	9.2	.9	26.6	10.0	.9	26.9	8.0	.8
27.2	6.9	.8	27.5	6.1	.7	27.9	4.3	.6
28.2	3.9	.6	28.5	2.8	.5	28.8	2.4	.4
29.2	1.9	.4	29.5	1.2	.3	29.8	1.0	.3
30.1	.7	.2	30.5	.6	.2	30.8	.2	.1
31.1	.1	.1	31.4	.1	.0	31.8	.0	.1
32.1	.0	.0	32.4	.0	.0	32.7	.0	.0
33.1	.0	.0	33.4	.1	.0	33.7	.0	.0
34.0	.0	.0	34.3	.0	.0	34.7	.0	.0
35.0	.0	.0	35.3	.0	.0	35.6	.0	.0
36.0	.0	.0	36.3	.0	.0	36.6	.0	.0
36.9	.0	.0	37.3	.1	.1	37.6	.0	.0
37.9	.0	.0	38.2	.0	.0	38.6	.0	.0
38.9	.0	.0	39.2	.0	.0	39.5	.0	.0
39.9	.0	.0	40.2	.0	.0	40.5	.0	.0
40.8	.0	.0	41.2	.0	.0	41.5	.0	.0
41.8	.0	.0	42.1	.0	.0	42.4	.0	.0
42.8	.0	.0	43.1	.0	.0	43.4	.0	.0
43.7	.0	.0	44.1	.0	.0	44.4	.0	.0

26P 197AU(P+ALPHA) 23.70 MEV 165 DEG. 30/1/70

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.2	.0	.0	12.5	1.4	.6	12.8	1.2	.5
13.2	2.1	.7	13.5	1.9	.7	13.8	1.6	.6
14.2	2.6	.8	14.5	2.6	.8	14.8	3.7	.9
15.1	2.3	.7	15.5	2.1	.7	15.8	3.0	.8
16.1	4.4	1.0	16.5	2.6	.8	16.8	2.8	.8
17.1	5.2	1.1	17.5	3.5	.9	17.8	6.3	1.2
18.1	4.7	1.0	18.4	7.7	1.2	18.6	6.8	1.2
19.1	7.1	1.3	19.4	8.4	1.4	19.8	10.1	1.5
20.1	8.0	1.4	20.4	5.1	1.5	20.6	10.5	1.6
21.1	11.5	1.6	21.4	11.1	1.6	21.7	10.1	1.5
22.1	7.0	1.3	22.4	8.9	1.4	22.7	11.2	1.6
23.1	11.2	1.6	23.4	3.2	1.4	23.7	11.2	1.6
24.1	7.7	1.3	24.4	9.8	1.5	24.7	9.8	1.5
25.1	8.7	1.4	25.4	7.7	1.3	25.7	6.6	1.2
26.0	5.6	1.1	26.4	7.3	1.2	26.7	6.3	1.2
27.0	6.1	1.2	27.4	5.9	1.2	27.7	3.7	.9
28.0	1.9	.7	28.3	1.9	.7	28.7	2.3	.7
29.0	2.8	.8	29.3	1.6	.6	29.7	1.4	.6
30.0	.7	.4	30.3	1.2	.5	30.7	.2	.2
31.0	.2	.2	31.3	.7	.4	31.6	.0	.0
32.0	.0	.0	32.3	.0	.0	32.6	.0	.0
33.0	.0	.0	33.3	.1	.0	33.6	.0	.0
34.0	.0	.0	34.3	.0	.0	34.6	.0	.0
34.9	.1	.1	35.3	.1	.1	35.6	.0	.0
35.9	.0	.0	36.3	.0	.0	36.6	.0	.0
36.9	.0	.1	37.3	.1	.1	37.6	.0	.0
37.9	.0	.0	38.2	.0	.0	38.6	.0	.0
38.9	.0	.0	39.2	.0	.0	39.5	.0	.0
39.9	.0	.0	40.2	.0	.0	40.5	.0	.0
40.8	.0	.0	41.2	.0	.0	41.5	.0	.0
41.8	.0	.0	42.1	.0	.0	42.4	.0	.0
42.8	.0	.0	43.1	.0	.0	43.4	.0	.0
43.7	.0	.0	44.1	.0	.0	44.4	.0	.0

259 197AU(P+ALPHA) 26.73 MEV 25 DEG. 31/1/77

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.6	6.4	2.4	12.9	10.1	3.1	13.2	11.1	3.1
13.6	16.5	5.9	13.9	20.1	4.3	14.2	17.4	4.0
14.6	12.8	3.4	15.1	18.3	4.1	15.3	31.2	5.3
15.7	28.4	5.9	16.0	41.2	6.1	16.4	33.8	5.6
16.7	45.7	6.5	17.1	56.7	7.2	17.4	58.5	7.3
17.7	55.8	7.1	18.1	50.3	6.8	18.4	57.6	7.2
19.8	64.0	7.7	19.1	59.4	7.4	19.5	73.2	8.2
19.8	77.7	8.4	20.2	64.0	7.7	20.5	76.8	8.0
21.8	86.0	8.9	21.2	98.8	9.5	21.5	112.5	10.1
21.9	109.7	10.0	22.2	110.7	10.1	22.6	124.4	10.7
22.9	108.8	10.0	23.3	145.4	11.5	23.6	119.7	10.1
23.9	121.6	10.5	24.3	134.4	11.1	24.6	125.3	10.7
25.0	131.8	10.9	25.3	129.9	10.9	25.7	153.6	11.9
26.0	141.7	11.4	26.4	143.6	11.5	26.7	156.4	12.0
27.0	128.0	11.8	27.4	135.3	11.1	27.7	139.0	11.3
28.1	124.4	10.7	28.4	161.5	12.2	28.8	124.4	10.7
29.1	139.0	11.3	29.5	134.4	11.1	29.8	141.8	11.3
30.2	145.4	11.5	30.5	128.0	10.8	30.8	132.6	11.0
31.2	118.0	10.4	31.5	124.4	10.7	31.9	119.7	10.1
32.2	107.9	9.9	32.6	95.1	9.2	32.9	88.1	8.8
33.3	59.4	7.4	33.6	49.4	6.7	33.9	47.6	6.6
34.3	36.6	5.8	34.6	18.3	4.1	35.0	22.9	4.6
35.3	11.9	3.3	35.7	3.2	2.7	36.1	6.4	2.4
36.4	6.4	2.4	36.7	3.7	1.8	37.1	1.6	1.3
37.4	3.7	1.8	37.7	.9	.9	38.1	1.8	1.3
38.4	.0	.0	38.8	.5	.5	39.1	.0	.0
39.5	.0	.0	39.8	.1	.1	40.2	.0	.0
40.5	.0	.0	40.8	.0	.0	41.2	.0	.0
41.5	.0	.0	41.9	.1	.1	42.2	.1	.1
42.6	.0	.0	42.9	.0	.0	43.3	.0	.0
43.6	.0	.0	44.1	.1	.1	44.3	.0	.1
44.6	.0	.0	45.0	.0	.0	45.2	.0	.0

25E 197AU(P+ALPHA) 26.70 MEV 30 DEG. 30/1/70

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.6	5.9	2.0	12.9	2.6	1.2	13.2	8.5	2.4
13.6	17.7	3.4	13.9	11.1	2.7	14.3	8.5	2.4
14.6	11.1	2.7	15.0	14.4	3.1	15.2	15.0	3.1
15.7	22.9	3.9	16.0	16.3	3.3	16.4	18.3	3.5
16.7	22.9	3.9	17.0	28.1	4.3	17.4	29.4	4.4
17.7	27.5	4.2	18.1	28.1	4.3	18.4	38.6	5.1
18.8	37.3	4.0	19.1	31.3	4.8	19.5	39.2	5.1
19.8	47.1	5.5	20.2	55.2	6.2	20.5	71.9	6.9
20.8	58.8	6.2	21.2	71.0	6.8	21.5	62.4	7.2
21.9	99.4	8.1	22.2	99.4	8.1	22.6	119.9	8.5
22.9	111.8	8.6	23.3	121.0	8.9	23.6	122.1	9.3
23.9	112.5	8.6	24.3	116.4	8.8	24.6	117.7	8.8
25.0	123.6	9.1	25.3	124.7	9.4	25.7	132.1	9.3
26.0	133.6	9.3	26.4	126.2	9.2	26.7	121.6	8.9
27.0	137.4	9.5	27.4	137.1	9.6	27.7	147.1	9.8
28.1	137.3	9.5	28.4	131.4	9.3	28.8	154.3	10.1
29.1	143.2	9.7	29.5	141.6	9.8	29.8	140.6	9.6
30.2	136.1	9.4	30.5	141.2	9.6	30.8	117.9	8.4
31.2	116.4	8.7	31.5	98.7	8.0	31.9	83.7	7.4
32.2	87.1	7.5	32.6	62.3	6.4	32.9	53.0	5.9
33.3	51.0	5.8	33.6	36.6	4.9	33.9	27.5	4.2
34.3	11.1	2.7	34.6	12.4	2.9	35.1	3.9	1.6
35.3	7.2	1.5	35.7	7.2	2.2	36.0	2.6	1.3
36.4	1.3	.9	36.7	.7	.7	37.1	2.6	1.3
37.4	.7	.7	37.7	.7	.7	38.1	.0	.0
38.4	.1	.1	38.8	.1	.1	39.1	2.0	1.1
39.5	.0	.0	39.8	.7	.7	40.2	.7	.7
40.5	.1	.1	40.8	.1	.1	41.2	.0	.0
41.5	.0	.0	41.9	.0	.0	42.2	.0	.0
42.6	.1	.1	42.9	.1	.1	43.3	.0	.1
43.6	.0	.0	44.0	.0	.0	44.3	.0	.0
44.6	.0	.0	45.1	.1	.1	45.3	.0	.1

260 197AU(P,ALPHA) 25.73 MEV 45 DEG. 31/1/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
12.6	1.4	.6		12.9	2.5	.8		13.2	5.5	1.1	
12.6	9.4	1.5		13.9	7.6	1.2		14.3	11.2	1.6	
14.6	11.0	1.6		15.1	12.4	1.7		15.3	9.2	1.5	
15.7	12.9	1.7		16.0	11.2	1.6		16.4	11.5	1.6	
15.7	9.6	1.5		17.0	12.9	1.7		17.4	17.2	2.1	
17.7	19.1	2.1		18.1	21.6	2.2		18.4	20.7	2.2	
18.8	28.0	2.5		19.1	27.1	2.5		19.5	30.3	2.6	
19.8	35.1	2.8		20.2	45.5	3.2		20.5	42.5	3.1	
21.8	51.6	3.4		21.2	57.2	3.6		21.5	56.0	3.6	
21.9	68.2	4.0		22.2	66.4	3.7		22.6	65.2	3.5	
22.9	80.8	4.3		23.3	79.4	4.3		23.6	85.2	4.4	
23.9	85.9	4.4		24.3	82.6	4.4		24.6	92.1	4.6	
25.0	81.1	4.3		25.3	78.3	4.2		25.7	93.7	4.6	
26.0	89.3	4.5		26.4	84.5	4.4		26.7	95.2	4.7	
27.0	85.9	4.4		27.4	87.1	4.5		27.7	85.2	4.4	
28.1	93.2	4.6		28.4	92.0	4.6		28.8	79.7	4.2	
29.1	88.4	4.5		29.5	84.5	4.4		29.8	90.4	4.6	
30.2	80.8	4.3		30.5	75.1	4.2		30.8	67.3	3.5	
31.2	67.7	3.9		31.5	53.9	3.5		31.9	42.0	3.1	
32.2	30.5	2.6		32.6	33.1	2.8		32.9	22.0	2.2	
33.3	21.8	2.2		33.6	14.7	1.8		33.9	11.2	1.6	
34.3	9.0	1.4		34.6	3.7	.9		35.0	3.7	.5	
35.3	2.1	.7		35.7	1.4	.6		36.1	.2	.2	
36.4	1.1	.5		36.7	.2	.2		37.1	.6	.0	
37.4	.2	.2		37.7	.1	.0		38.1	.7	.4	
38.4	.0	.0		38.8	.0	.0		39.1	.0	.0	
39.5	.0	.0		39.8	.1	.0		40.2	.0	.0	
40.5	.0	.0		40.8	.0	.0		41.2	.0	.0	
41.5	.0	.0		41.9	.1	.0		42.2	.0	.0	
42.6	.0	.0		42.9	.0	.0		43.3	.0	.0	
43.6	.0	.0		44.1	.1	.1		44.3	.0	.1	
44.6	.0	.0		45.0	.0	.0		45.3	.1	.0	

126 197AU(P,ALPHA) 26.70 MEV 60 DEG. 21/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
11.6	.0	.0		12.0	1.4	.5		12.2	1.8	.6	
12.6	2.4	.7		12.9	2.2	.7		13.3	2.2	.7	
13.6	4.1	.9		13.9	3.3	.8		14.2	3.9	.9	
14.6	8.2	1.3		14.9	6.9	1.2		15.2	7.3	1.2	
15.6	8.0	1.3		15.9	6.7	1.1		16.2	5.5	1.0	
16.5	7.3	1.2		16.9	6.1	1.1		17.2	6.9	1.2	
17.5	7.8	1.2		17.8	9.2	1.3		18.2	11.4	1.5	
18.5	9.4	1.4		18.8	9.6	1.4		19.1	13.5	1.6	
19.5	17.3	1.8		19.8	22.0	2.1		20.1	21.2	2.0	
20.4	24.5	2.2		20.8	25.3	2.3		21.1	25.5	2.2	
21.4	34.9	2.6		21.7	36.1	2.7		22.1	40.6	2.8	
22.4	49.1	3.1		22.7	48.9	3.1		23.1	45.7	3.1	
23.4	53.8	3.2		23.7	55.6	3.4		24.0	61.4	3.5	
24.4	58.1	3.4		24.7	66.1	3.6		25.1	62.0	3.5	
25.3	61.4	3.5		25.7	62.2	3.5		26.1	56.9	3.3	
26.3	62.1	3.5		26.6	63.8	3.5		27.1	56.3	3.3	
27.3	59.4	3.4		27.6	58.7	3.4		27.5	67.3	3.6	
28.3	67.3	3.6		28.6	57.7	3.4		28.9	58.9	3.4	
29.2	55.7	3.3		29.6	55.9	3.2		29.5	55.1	3.2	
30.2	43.8	2.9		30.5	34.7	2.6		30.9	29.6	2.4	
31.2	18.8	1.9		31.5	17.9	1.4		31.9	18.4	1.9	
32.2	12.6	1.6		32.5	4.3	1.3		32.8	6.7	1.1	
33.2	6.7	1.1		33.5	4.7	1.0		33.8	2.6	.7	
34.1	2.6	.7		34.5	1.2	.5		34.8	.2	.2	
35.1	.0	.0		35.4	.0	.0		35.8	.0	.0	
36.1	.0	.0		36.4	.1	.1		36.7	.0	.0	
37.1	.0	.0		37.4	.0	.0		37.7	.0	.0	
38.1	.1	.0		38.4	.1	.0		38.7	.0	.0	
39.0	.0	.0		39.2	.0	.0		39.7	.0	.0	
40.1	.1	.0		40.3	.1	.1		40.7	.0	.1	
41.0	.0	.0		41.3	.0	.0		41.6	.0	.0	
42.1	.1	.1		42.3	.1	.1		42.6	.0	.1	

254 197AU(P,ALPHA) 25.71 MEV 71 DEG. 31/1/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μICR/SR*MEV		MEV		μICR/SR*MEV		MEV		μICR/SR*MEV	
12.9	.0	.0		13.3	.7	.4		13.6	1.3	.5	
12.9	4.0	.9		14.3	6.4	1.0		14.6	4.6	.9	
15.0	5.3	1.1		15.3	6.4	1.2		15.7	4.2	1.1	
16.0	5.5	1.1		16.4	5.5	1.1		16.7	7.7	1.2	
17.1	7.9	1.3		17.4	11.1	1.5		17.8	8.8	1.4	
18.1	10.3	1.5		18.5	13.0	1.7		18.8	13.6	1.7	
19.2	14.1	1.8		19.5	14.9	1.8		19.9	16.0	1.9	
20.2	18.5	2.0		20.6	18.9	2.0		20.5	21.8	2.2	
21.3	16.3	1.9		21.6	23.5	2.3		22.1	22.2	2.2	
22.3	23.3	2.3		22.6	19.8	2.1		23.0	21.5	2.2	
23.3	22.9	2.2		23.7	25.9	2.4		24.1	23.5	2.3	
24.4	22.0	2.2		24.7	27.7	2.5		25.1	21.2	2.2	
25.4	21.5	2.2		25.0	19.9	2.0		26.1	25.3	2.4	
26.5	24.8	2.3		26.8	27.6	2.2		27.2	24.8	2.2	
27.5	21.8	2.2		27.9	21.1	2.1		28.2	22.6	2.2	
28.6	23.3	2.3		28.9	19.8	2.1		29.3	20.7	2.1	
29.6	18.0	2.0		30.1	12.7	1.7		30.3	12.3	1.6	
30.7	9.7	1.5		31.0	12.7	1.7		31.3	9.6	1.4	
31.7	5.9	1.1		32.1	8.3	1.1		32.4	4.1	.9	
32.7	2.4	.7		33.1	1.6	.6		33.4	1.8	.6	
33.8	1.1	.5		34.1	1.5	.5		34.5	.2	.2	
34.8	.0	.0		35.2	.2	.2		35.5	.2	.2	
35.9	.0	.0		36.3	.1	.1		36.6	.1	.1	
36.9	.0	.0		37.3	.0	.0		37.6	.0	.0	
38.0	.0	.0		38.3	.1	.1		38.7	.0	.1	
39.0	.0	.0		39.4	.0	.0		39.7	.0	.0	
40.0	.0	.0		40.4	.1	.0		40.7	.0	.0	
41.1	.0	.0		41.4	.0	.0		41.8	.1	.0	
42.1	.0	.0		42.5	.1	.1		42.8	.1	.1	
43.2	.0	.0		43.5	.0	.0		43.9	.0	.0	
44.2	.0	.0		44.6	.1	.1		44.9	.1	.1	
45.3	.0	.0		45.6	.0	.0		46.0	.1	.0	

112 197AU(P,ALPHA) 26.71 MEV 120 DEG. 21/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		μ ICR/SR*MEV		MEV		μ ICR/SR*MEV		MEV		μ ICR/SR*MEV	
12.0	.2	.1		12.3	.1	.1		12.7	.3	.1	
13.0	.6	.2		13.3	.8	.2		13.7	.8	.2	
14.0	1.1	.3		14.3	1.4	.2		14.6	2.2	.4	
15.0	3.1	.8		15.3	3.4	.8		15.6	3.6	.5	
16.0	3.6	.5		16.3	4.5	.5		16.6	4.4	.5	
17.0	5.4	.6		17.3	5.4	.6		17.6	6.9	.6	
17.9	7.0	.6		18.3	7.0	.7		18.6	7.7	.7	
18.9	11.2	.8		19.3	6.9	.8		19.6	11.7	.8	
19.9	13.8	.9		20.2	12.5	.9		20.6	12.6	.9	
20.9	13.1	.9		21.2	12.6	.9		21.6	12.4	.9	
21.9	14.2	.9		22.6	15.4	1.0		22.5	14.6	.9	
22.9	15.7	1.0		23.2	15.1	1.0		23.5	13.7	.9	
23.9	16.6	1.0		24.2	14.0	.9		24.5	13.4	.9	
24.8	13.9	.9		25.2	11.5	.8		25.5	13.1	.9	
25.8	12.1	.8		26.2	11.0	.8		26.5	11.1	.8	
26.8	11.7	.8		27.1	11.1	.8		27.5	8.1	.7	
27.8	8.7	.7		28.1	5.2	.7		28.5	8.9	.7	
28.8	8.3	.7		29.1	7.1	.6		29.5	6.7	.6	
29.8	5.5	.6		30.1	4.0	.5		30.4	4.6	.5	
30.8	3.1	.4		31.1	1.3	.3		31.4	2.6	.4	
31.8	1.7	.3		32.1	.8	.2		32.4	1.6	.2	
32.7	.0	.2		33.1	.2	.1		33.4	.2	.1	
33.7	.1	.1		34.1	.1	.1		34.4	.1	.1	
34.7	.1	.1		35.1	.1	.1		35.4	.1	.1	
35.7	.0	.0		36.1	.0	.0		36.4	.0	.0	
36.7	.1	.1		37.1	.1	.1		37.3	.0	.1	
37.7	.0	.0		38.1	.0	.0		38.3	.0	.0	
38.7	.1	.1		39.1	.1	.1		39.3	.0	.1	
39.7	.0	.0		40.1	.0	.0		40.3	.0	.0	
40.7	.0	.0		41.1	.0	.0		41.3	.1	.1	
41.7	.0	.0		42.1	.0	.0		42.3	.1	.1	
42.7	.0	.0		43.1	.0	.0		43.3	.1	.1	

256 19/AU(P+ALPHA) 26.70 MEV 150 DEG. 31/4/77

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
13.3	2.2	2.2	13.3	2.2	2.2	13.3	2.2	2.2
14.4	2.0	1.7	14.4	2.0	1.7	14.4	2.0	1.7
15.4	2.2	1.7	15.4	2.2	1.7	15.4	2.2	1.7
16.5	5.6	1.1	16.5	5.6	1.1	16.5	5.6	1.1
17.5	7.4	1.3	17.5	7.4	1.3	17.5	7.4	1.3
18.6	11.0	1.6	18.6	11.0	1.6	18.6	11.0	1.6
19.6	10.6	1.5	19.6	10.6	1.5	19.6	10.6	1.5
20.7	9.9	1.5	20.7	9.9	1.5	20.7	9.9	1.5
21.7	12.8	1.7	21.7	12.8	1.7	21.7	12.8	1.7
22.8	11.9	1.6	22.8	11.9	1.6	22.8	11.9	1.6
23.9	7.9	1.3	23.9	7.9	1.3	23.9	7.9	1.3
24.9	10.1	1.5	24.9	10.1	1.5	24.9	10.1	1.5
26.0	9.9	1.5	26.0	9.9	1.5	26.0	9.9	1.5
27.0	8.8	1.4	27.0	8.8	1.4	27.0	8.8	1.4
28.1	5.8	1.1	28.1	5.8	1.1	28.1	5.8	1.1
29.1	5.2	1.1	29.1	5.2	1.1	29.1	5.2	1.1
30.2	4.0	1.0	30.2	4.0	1.0	30.2	4.0	1.0
31.2	2.7	0.8	31.2	2.7	0.8	31.2	2.7	0.8
32.3	1.1	0.5	32.3	1.1	0.5	32.3	1.1	0.5
33.4	1.1	0.5	33.4	1.1	0.5	33.4	1.1	0.5
34.4	0.0	0.0	34.4	0.0	0.0	34.4	0.0	0.0
35.5	0.0	0.0	35.5	0.0	0.0	35.5	0.0	0.0
36.5	0.0	0.0	36.5	0.0	0.0	36.5	0.0	0.0
37.6	0.0	0.0	37.6	0.0	0.0	37.6	0.0	0.0
38.6	0.0	0.0	38.6	0.0	0.0	38.6	0.0	0.0
39.7	0.0	0.0	39.7	0.0	0.0	39.7	0.0	0.0
40.8	0.0	0.0	40.8	0.0	0.0	40.8	0.0	0.0
41.8	0.0	0.0	41.8	0.0	0.0	41.8	0.0	0.0
42.9	0.0	0.0	42.9	0.0	0.0	42.9	0.0	0.0
43.9	0.0	0.0	43.9	0.0	0.0	43.9	0.0	0.0
45.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0	0.0
46.0	0.0	0.0	46.0	0.0	0.0	46.0	0.0	0.0

255 19/AU(P+ALPHA) 26.70 MEV 145 DEG. 30/4/77

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
13.3	2.4	2.3	13.3	2.4	2.3	13.3	2.4	2.3
14.4	3.1	1.8	14.4	3.1	1.8	14.4	3.1	1.8
15.4	3.1	1.8	15.4	3.1	1.8	15.4	3.1	1.8
16.5	6.1	1.2	16.5	6.1	1.2	16.5	6.1	1.2
17.5	8.3	1.4	17.5	8.3	1.4	17.5	8.3	1.4
18.6	13.3	1.7	18.6	13.3	1.7	18.6	13.3	1.7
19.6	10.8	1.6	19.6	10.8	1.6	19.6	10.8	1.6
20.7	11.8	1.6	20.7	11.8	1.6	20.7	11.8	1.6
21.7	8.5	1.4	21.7	8.5	1.4	21.7	8.5	1.4
22.8	9.4	1.5	22.8	9.4	1.5	22.8	9.4	1.5
23.9	11.7	1.6	23.9	11.7	1.6	23.9	11.7	1.6
24.9	7.9	1.3	24.9	7.9	1.3	24.9	7.9	1.3
26.0	5.4	1.1	26.0	5.4	1.1	26.0	5.4	1.1
27.0	4.3	1.1	27.0	4.3	1.1	27.0	4.3	1.1
28.1	6.3	1.2	28.1	6.3	1.2	28.1	6.3	1.2
29.1	5.4	1.1	29.1	5.4	1.1	29.1	5.4	1.1
30.2	2.5	0.7	30.2	2.5	0.7	30.2	2.5	0.7
31.2	2.5	0.7	31.2	2.5	0.7	31.2	2.5	0.7
32.3	0.9	0.4	32.3	0.9	0.4	32.3	0.9	0.4
33.4	1.1	0.5	33.4	1.1	0.5	33.4	1.1	0.5
34.4	0.0	0.0	34.4	0.0	0.0	34.4	0.0	0.0
35.5	0.0	0.0	35.5	0.0	0.0	35.5	0.0	0.0
36.5	0.0	0.0	36.5	0.0	0.0	36.5	0.0	0.0
37.6	0.0	0.0	37.6	0.0	0.0	37.6	0.0	0.0
38.6	0.0	0.0	38.6	0.0	0.0	38.6	0.0	0.0
39.7	0.0	0.0	39.7	0.0	0.0	39.7	0.0	0.0
40.8	0.0	0.0	40.8	0.0	0.0	40.8	0.0	0.0
41.8	0.0	0.0	41.8	0.0	0.0	41.8	0.0	0.0
42.9	0.0	0.0	42.9	0.0	0.0	42.9	0.0	0.0
43.9	0.0	0.0	43.9	0.0	0.0	43.9	0.0	0.0
45.0	0.0	0.0	45.0	0.0	0.0	45.0	0.0	0.0
46.0	0.0	0.0	46.0	0.0	0.0	46.0	0.0	0.0

246 19/AU(P+ALPHA) 33.15 MEV 31 DEG. 31/4/77

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
12.8	0.0	0.0	12.8	0.0	0.0	12.8	0.0	0.0
13.8	2.5	1.4	13.8	2.5	1.4	13.8	2.5	1.4
14.8	16.7	3.7	14.8	16.7	3.7	14.8	16.7	3.7
15.7	19.1	4.0	15.7	19.1	4.0	15.7	19.1	4.0
16.7	27.5	4.8	16.7	27.5	4.8	16.7	27.5	4.8
17.7	24.1	4.5	17.7	24.1	4.5	17.7	24.1	4.5
18.6	50.8	6.5	18.6	50.8	6.5	18.6	50.8	6.5
19.6	65.8	7.4	19.6	65.8	7.4	19.6	65.8	7.4
20.5	66.6	7.4	20.5	66.6	7.4	20.5	66.6	7.4
21.5	88.2	8.6	21.5	88.2	8.6	21.5	88.2	8.6
22.5	105.7	9.4	22.5	105.7	9.4	22.5	105.7	9.4
23.4	119.9	10.0	23.4	119.9	10.0	23.4	119.9	10.0
24.4	125.7	11.2	24.4	125.7	11.2	24.4	125.7	11.2
25.4	150.7	11.2	25.4	150.7	11.2	25.4	150.7	11.2
26.3	140.7	11.8	26.3	140.7	11.8	26.3	140.7	11.8
27.3	128.2	10.3	27.3	128.2	10.3	27.3	128.2	10.3
28.3	136.5	11.7	28.3	136.5	11.7	28.3	136.5	11.7
29.2	126.5	10.2	29.2	126.5	10.2	29.2	126.5	10.2
30.2	126.5	10.3	30.2	126.5	10.3	30.2	126.5	10.3
31.2	123.2	10.1	31.2	123.2	10.1	31.2	123.2	10.1
32.1	137.7	11.4	32.1	137.7	11.4	32.1	137.7	11.4
33.1	139.9	10.6	33.1	139.9	10.6	33.1	139.9	10.6
34.1	97.2	7.8	34.1	97.2	7.8	34.1	97.2	7.8
35.0	84.9	6.4	35.0	84.9	6.4	35.0	84.9	6.4
36.1	47.5	6.3	36.1	47.5	6.3	36.1	47.5	6.3
37.0	26.6	4.7	37.0	26.6	4.7	37.0	26.6	4.7
37.9	9.2	2.8	37.9	9.2	2.8	37.9	9.2	2.8
38.9	5.0	2.0	38.9	5.0	2.0	38.9	5.0	2.0
39.9	3.3	1.7	39.9	3.3	1.7	39.9	3.3	1.7
40.8	1.7	1.2	40.8	1.7	1.2	40.8	1.7	1.2
41.8	0.0	0.0	41.8	0.0	0.0	41.8	0.0	0.0
42.8	0.0	0.0	42.8	0.0	0.0	42.8	0.0	0.0

245 19/AU(P+ALPHA) 33.15 MEV 45 DEG. 30/4/77

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
12.8	0.0	0.0	12.8	0.0	0.0	12.8	0.0	0.0
13.8	2.5	1.4	13.8	2.5	1.4	13.8	2.5	1.4
14.8	16.7	3.7	14.8	16.7	3.7	14.8	16.7	3.7
15.7	19.1	4.0	15.7	19.1	4.0	15.7	19.1	4.0
16.7	27.5	4.8	16.7	27.5	4.8	16.7	27.5	4.8
17.7	24.1	4.5	17.7	24.1	4.5	17.7	24.1	4.5
18.6	50.8	6.5	18.6	50.8	6.5	18.6	50.8	6.5
19.6	65.8	7.4	19.6	65.8	7.4	19.6	65.8	7.4
20.5	66.6	7.4	20.5	66.6	7.4	20.5	66.6	7.4
21.5	88.2	8.6	21.5	88.2	8.6	21.5	88.2	8.6
22.5	105.7	9.4	22.5	105.7	9.4	22.5	105.7	9.4
23.4	119.9	10.0	23.4	119.9	10.0	23.4	119.9	10.0
24.4	125.7	11.2	24.4	125.7	11.2	24.4	125.7	11.2
25.4	150.7	11.2	25.4	150.7	11.2	25.4	150.7	11.2
26.3	140.7	11.8	26.3	140.7	11.8	26.3	140.7	11.8
27.3	128.2	10.3	27.3	128.2	10.3	27.3	128.2	10.3
28.3	136.5	11.7	28.3	136.5	11.7	28.3	136.5	11.7
29.2	126.5	10.2	29.2	126.5	10.2	29.2	126.5	10.2
30.2	126.5	10.3	30.2	126.5	10.3	30.2	126.5	10.3
31.2	123.2	10.1	31.2	123.2	10.1	31.2	123.2	10.1
32.1	137.7	11.4	32.1	137.7	11.4	32.1	137.7	11.4
33.1	139.9	10.6	33.1	139.9	10.6	33.1	139.9	10.6
34.1	97.2	7.8	34.1	97.2	7.8	34.1	97.2	7.8
35.0	84.9	6.4	35.0	84.9	6.4	35.0	84.9	6.4
36.1	47.5	6.3	36.1	47.5	6.3	36.1	47.5	6.3
37.0	26.6	4.7	37.0	26.6	4.7	37.0	26.6	4.7
37.9	9.2	2.8	37.9	9.2	2.8	37.9	9.2	2.8
38.9	5.0	2.0	38.9	5.0	2.0	38.9	5.0	2.0
39.9	3.3	1.7	39.9	3.3	1.7	39.9	3.3	1.7
40.8	1.7	1.2	40.8	1.7	1.2	40.8	1.7	1.2
41.8	0.0	0.0	41.8	0.0	0.0	41.8	0.0	0.0
42.8	0.0	0.0	42.8	0.0	0.0	42.8	0.0	0.0

244 197AU(P,ALPHA) 33.15 MEV 51 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.0	0.0	0.0	0.0	13.3	0.1	0.1	0.1	13.6	0.0	0.1	0.1
13.9	0.1	0.0	0.0	14.3	0.0	0.0	0.0	14.6	0.8	0.4	0.4
14.9	1.5	0.6	0.6	15.2	1.1	1.0	1.0	15.6	6.1	1.2	1.2
15.9	7.5	1.4	1.4	16.2	11.2	1.7	1.7	16.5	12.1	1.7	1.7
16.9	11.1	1.7	1.7	17.2	12.3	1.8	1.8	17.5	14.8	1.9	1.9
17.8	16.9	2.1	2.1	18.1	17.5	2.1	2.1	18.5	18.4	2.1	2.1
18.8	21.4	2.3	2.3	19.1	27.4	2.6	2.6	19.4	27.7	2.6	2.6
19.8	31.7	2.6	2.6	20.3	33.0	2.9	2.9	20.4	34.7	3.0	3.0
21.7	31.5	2.8	2.8	21.1	34.0	3.0	3.0	21.4	51.3	3.6	3.6
21.7	51.6	3.6	3.6	22.0	45.8	3.4	3.4	22.3	50.3	3.6	3.6
22.7	51.3	3.6	3.6	23.0	57.1	3.8	3.8	23.3	62.6	4.0	4.0
22.6	62.4	4.0	4.0	24.0	68.7	4.1	4.1	24.3	61.9	3.9	3.9
24.6	62.4	4.0	4.0	24.9	69.9	4.2	4.2	25.3	61.9	3.9	3.9
25.6	69.4	4.2	4.2	25.9	74.5	4.3	4.3	26.2	67.6	4.1	4.1
26.5	61.9	3.9	3.9	26.9	67.2	4.1	4.1	27.2	63.7	4.0	4.0
27.5	60.6	3.9	3.9	27.8	70.4	4.2	4.2	28.2	58.6	3.8	3.8
28.5	64.7	4.1	4.1	28.8	56.4	3.8	3.8	29.1	52.6	3.6	3.6
29.4	47.8	3.5	3.5	29.8	55.6	3.6	3.6	30.1	46.5	3.4	3.4
31.4	48.1	3.5	3.5	31.7	45.1	3.4	3.4	31.1	41.3	3.2	3.2
31.4	42.3	3.3	3.3	31.7	41.0	3.2	3.2	32.0	46.0	3.4	3.4
32.4	46.1	3.4	3.4	32.7	37.7	3.1	3.1	33.1	42.3	3.3	3.3
33.3	46.5	3.4	3.4	33.6	32.0	2.8	2.8	34.0	25.7	2.5	2.5
34.3	25.4	2.5	2.5	34.6	21.4	2.3	2.3	34.9	19.1	2.2	2.2
35.3	14.8	1.9	1.9	35.6	9.6	1.6	1.6	35.9	8.1	1.4	1.4
36.2	6.7	1.2	1.2	36.6	5.3	1.2	1.2	36.9	3.8	1.0	1.0
37.2	2.0	0.7	0.7	37.5	2.2	0.7	0.7	37.8	2.3	0.8	0.8
38.2	1.0	0.5	0.5	38.5	0.3	0.3	0.3	38.8	0.3	0.3	0.3
39.1	0.3	0.3	0.3	39.5	0.0	0.0	0.0	39.8	0.2	0.2	0.2
40.1	0.0	0.0	0.0	40.4	0.0	0.0	0.0	40.8	0.1	0.1	0.1
41.1	0.0	0.0	0.0	41.4	0.0	0.0	0.0	41.7	0.0	0.0	0.0
42.0	0.0	0.0	0.0	42.4	0.0	0.0	0.0	42.7	0.1	0.1	0.1
43.0	0.0	0.0	0.0	43.3	0.0	0.0	0.0	43.7	0.0	0.0	0.0

243 197AU(P,ALPHA) 33.15 MEV 75 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0	13.6	0.5	0.4	0.4
13.9	1.3	0.6	0.6	14.3	1.3	0.7	0.7	14.6	4.8	1.1	1.1
14.9	0.1	1.4	1.4	15.2	7.8	1.4	1.4	15.6	8.6	1.5	1.5
15.9	11.3	1.7	1.7	16.2	9.6	1.6	1.6	16.5	12.6	1.8	1.8
16.9	9.6	1.6	1.6	17.2	13.9	1.7	1.7	17.5	11.6	1.7	1.7
17.8	13.6	1.9	1.9	18.1	13.9	1.9	1.9	18.5	19.2	2.2	2.2
18.8	16.6	2.0	2.0	19.1	16.1	2.1	2.1	19.4	21.4	2.3	2.3
19.8	26.0	2.6	2.6	20.3	33.5	2.9	2.9	20.4	31.8	2.8	2.8
21.7	26.2	2.6	2.6	21.1	30.5	2.8	2.8	21.4	33.0	2.9	2.9
21.7	32.3	2.9	2.9	22.0	39.3	3.1	3.1	22.3	39.6	3.2	3.2
22.7	36.3	3.0	3.0	23.0	40.3	3.3	3.3	23.3	43.3	3.3	3.3
23.6	46.6	3.4	3.4	24.0	43.3	3.3	3.3	24.3	39.3	3.1	3.1
24.6	48.9	3.6	3.6	24.9	41.1	3.2	3.2	25.3	46.6	3.4	3.4
25.6	46.9	3.4	3.4	25.9	45.9	3.4	3.4	26.2	43.9	3.3	3.3
26.5	37.0	3.1	3.1	26.9	37.6	3.1	3.1	27.2	36.3	3.0	3.0
27.5	37.3	3.1	3.1	27.8	34.5	2.9	2.9	28.2	39.6	3.2	3.2
28.5	36.8	3.0	3.0	28.8	32.5	2.9	2.9	29.1	37.6	3.1	3.1
29.4	34.3	3.0	3.0	29.8	30.3	3.0	3.0	30.1	27.7	2.6	2.6
31.4	21.7	2.3	2.3	31.7	21.7	2.3	2.3	31.1	27.7	2.6	2.6
31.4	23.7	2.4	2.4	31.7	20.1	2.2	2.2	32.0	24.4	2.5	2.5
32.4	21.2	2.4	2.4	32.7	22.2	2.4	2.4	33.1	20.2	2.3	2.3
33.3	21.2	2.3	2.3	33.6	17.4	2.1	2.1	34.0	13.6	1.9	1.9
34.3	11.6	1.7	1.7	34.6	11.3	1.6	1.6	34.9	8.2	1.4	1.4
35.3	6.1	1.2	1.2	35.6	5.3	1.2	1.2	35.9	3.8	1.0	1.0
36.2	3.5	0.9	0.9	36.6	2.3	0.8	0.8	36.9	2.0	0.7	0.7
37.2	0.5	0.4	0.4	37.5	1.1	0.5	0.5	37.8	0.0	0.0	0.0
38.2	0.0	0.0	0.0	38.5	0.0	0.0	0.0	38.8	0.0	0.0	0.0
39.1	0.0	0.0	0.0	39.5	0.1	0.1	0.1	39.8	0.0	0.0	0.0
40.1	0.0	0.0	0.0	40.4	0.0	0.0	0.0	40.8	0.0	0.0	0.0
41.1	0.0	0.0	0.0	41.4	0.0	0.0	0.0	41.7	0.0	0.0	0.0
42.0	0.0	0.0	0.0	42.4	0.0	0.0	0.0	42.7	0.0	0.0	0.0
43.0	0.0	0.0	0.0	43.3	0.0	0.0	0.0	43.7	0.0	0.0	0.0

242 197AU(P,ALPHA) 33.15 MEV 91 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.0	0.0	0.0	0.0	13.3	0.0	0.0	0.0	13.6	0.0	0.0	0.0
14.2	0.3	0.2	0.2	14.5	2.0	0.7	0.7	14.8	3.0	0.9	0.9
15.1	5.3	1.2	1.2	15.5	6.6	1.3	1.3	15.8	4.5	1.1	1.1
16.1	7.8	1.4	1.4	16.4	6.1	1.4	1.4	16.8	7.8	1.4	1.4
17.1	11.6	1.7	1.7	17.4	10.1	1.9	1.9	17.7	12.1	1.7	1.7
18.1	14.9	1.9	1.9	18.4	18.1	2.1	2.1	18.7	18.9	2.2	2.2
19.0	19.9	2.2	2.2	19.4	19.4	2.0	2.0	19.7	21.9	2.4	2.4
20.0	23.2	2.4	2.4	20.3	31.7	2.6	2.6	20.7	25.5	2.5	2.5
21.0	24.7	2.5	2.5	21.3	22.2	2.4	2.4	21.6	31.5	2.8	2.8
22.0	32.8	2.9	2.9	22.2	27.5	2.6	2.6	22.6	33.8	2.9	2.9
22.9	24.7	2.7	2.7	23.3	37.5	2.9	2.9	23.6	33.3	2.9	2.9
23.9	32.0	2.8	2.8	24.2	32.8	2.9	2.9	24.6	25.7	2.5	2.5
24.9	31.1	2.8	2.8	25.2	27.2	2.6	2.6	25.5	29.7	2.7	2.7
25.9	27.7	2.6	2.6	26.2	24.7	2.7	2.7	26.5	23.9	2.5	2.5
26.8	28.2	2.7	2.7	27.2	24.7	2.5	2.5	27.5	24.9	2.5	2.5
27.8	22.9	2.4	2.4	28.1	17.9	2.1	2.1	28.5	21.6	2.4	2.4
28.8	22.4	2.4	2.4	29.1	15.6	2.0	2.0	29.4	19.4	2.2	2.2
29.8	17.6	2.1	2.1	30.1	16.6	2.0	2.0	30.4	15.6	2.0	2.0
31.7	12.6	1.8	1.8	31.1	17.4	2.1	2.1	31.4	12.6	1.8	1.8
31.7	10.8	1.7	1.7	32.0	14.6	1.9	1.9	32.4	12.4	1.8	1.8
32.7	13.1	1.8	1.8	33.1	6.1	1.4	1.4	33.3	1.1	1.6	1.6
33.7	13.4	1.8	1.8	34.0	6.8	1.6	1.6	34.3	5.3	1.2	1.2
34.6	4.1	1.0	1.0	35.1	5.3	1.2	1.2	35.3	3.1	0.9	0.9
35.6	4.5	1.1	1.1	35.9	2.0	0.7	0.7	36.3	2.3	0.8	0.8
36.6	1.5	0.6	0.6	36.9	0.8	0.4	0.4	37.3	0.1	0.1	0.1
37.6	0.3	0.3	0.3	37.0	0.0	0.0	0.0	38.2	0.0	0.0	0.0
38.5	0.0	0.0	0.0	38.9	0.1	0.1	0.1	39.2	0.0	0.0	0.0
39.5	0.0	0.0	0.0	39.8	0.0	0.0	0.0	40.2	0.0	0.0	0.0
40.5	0.0	0.0	0.0	40.8	0.0	0.0	0.0	41.1	0.0	0.0	0.0
41.5	0.0	0.0	0.0	41.4	0.0	0.0	0.0	42.1	0.0	0.0	0.0
42.4	0.0	0.0	0.0	42.4	0.0	0.0	0.0	43.1	0.0	0.0	0.0
43.4	0.0	0.0	0.0	43.7	0.0	0.0	0.0	44.1	0.0	0.0	0.0

245 197AU(P,ALPHA) 33.15 MEV 111 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.2	0.0	0.0	0.0	13.5	0.0	0.0	0.0	13.8	0.7	0.4	0.4
14.2	0.7	0.4	0.4	14.5	2.4	0.7	0.7	14.8	4.9	0.9	0.9
15.1	4.2	1.0	1.0	15.5	4.2	1.1	1.1	15.8	4.5	1.0	1.0
16.1	4.5	1.0	1.0	16.4	3.3	0.9	0.9	16.8	7.8	1.4	1.4
17.1	8.2	1.4	1.4	17.4	10.4	1.6	1.6	17.7	11.1	1.6	1.6
18.1	14.1	1.8	1.8	18.4	13.7	1.8	1.8	18.7	12.3	1.7	1.7
19.0	15.3	1.9	1.9	19.4	17.0	2.1	2.1	19.7	20.0	2.2	2.2
20.0	23.1	2.3	2.3	20.3	21.5	2.2	2.2	20.7	21.2	2.2	2.2
21.0	17.9	2.1	2.1	21.3	21.9	2.3	2.3	21.6	22.9	2.3	2.3
22.0	21.1	2.2	2.2	22.2	22.6	2.3	2.3	22.6	22.4	2.3	2.3
22.9	21.0	2.2	2.2	23.3	21.7	2.3	2.3	23.6	23.8	2.4	2.4
23.9	21.3	2.2	2.2	24.2	22.9	2.3	2.3	24.6	21.2	2.2	2.2
24.9	21.2	2.2	2.2	25.2	22.2	2.3	2.3	25.5	19.1	2.1	2.1
25.9	17.9	2.1	2.1	26.2	19.6	2.1	2.1	26.5	19.6	2.1	2.1
26.8	16.3	2.0	2.0	27.2	18.1	2.1	2.1	27.5	19.8	2.2	2.2
27.8	17.9	2.1	2.1	28.1	18.3	1.9	1.9	28.5	16.0	1.9	1.9
28.8	11.2	1.4	1.4	29.1	13.2	1.8	1.8	29.4	9.7	1.5	1.5
29.8	9.7	1.4	1.4	30.1	9.7	1.5	1.5	30.4	7.3	1.3	1.3
30.7	17.9	1.6	1.6	31.1	7.5	1.3	1.3	31.4	7.6	1.4	1.4
31.7	9.7	1.5	1.5	32.1	7.2	1.5	1.5	32.4	7.1	1.3	1.3
32.7	6.4	1.2	1.2	33.1	6.1	1.2	1.2	33.3	5.9	1.2	1.2
33.7	5.4	1.1	1.1	34.1	4.5	1.0	1.0	34.3	4.7	1.1	1.1
34.6	2.1	0.7	0.7	35.0	4.4	1.0	1.0	35.2	2.8	0.8	0.8
35.6	1.4	0.6	0.6	35.9	4.2	0.9	0.9	36.3	1.4	0.6	0.6
36.6	0.9	0.6	0.6	36.9	4.2	0.9	0.9	37.2	0.6	0.3	0.3
37.6	0.1	0.2	0.2	37.9	4.2	0.9	0.9	38.2	0.1	0.1	0.1
38.5	0.1	0.2	0.2	38.9	4.2	0.9	0.9	39.2	0.1	0.1	0.1
39.5	0.1	0.2	0.2	39.3	4.1	0.9	0.9	40.2	0.1	0.1	0.1
40.5	0.1	0.2	0.2	40.8	4.1	0.9	0.9	41.1	0.1	0.1	0.1
41.5	0.1	0.2	0.2	41.8	4.1	0.9	0.9	42.1	0.1	0.1	0.1
42.4	0.1	0.2	0.2	42.9	4.0	0.9	0.9	43.1	0.1	0.1	0.1
43.4	0.1	0.2	0.2	43.7	4.1	0.9	0.9	44.1	0.1	0.1	0.1

250 197AU(P+ALPHA) 33.15 MEV 121 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.4	0.0	0.0		13.7	0.1	0.1		14.1	0.1	0.1	
14.4	0.5	0.3		14.7	0.7	0.4		15.0	1.4	0.6	
15.4	1.2	0.5		15.7	3.8	0.9		16.1	5.2	1.1	
16.4	6.6	1.2		16.7	6.8	1.2		17.0	10.1	1.5	
17.3	9.2	1.5		17.7	9.9	1.5		18.1	12.0	1.7	
18.3	15.6	1.9		18.6	14.8	1.9		19.0	15.6	1.9	
19.3	14.4	1.8		19.6	15.6	1.9		19.9	20.3	2.2	
20.3	17.4	2.0		20.6	19.6	2.1		20.5	22.6	2.3	
21.3	25.2	2.4		21.6	22.1	2.3		21.9	22.1	2.3	
22.2	17.7	2.0		22.6	16.3	2.1		22.5	19.3	2.1	
23.2	17.9	2.1		23.5	22.4	2.3		23.9	13.7	1.8	
24.2	14.4	1.8		24.5	14.8	1.9		24.9	12.0	1.7	
25.2	13.7	1.8		25.5	14.1	1.8		25.8	16.5	2.1	
26.2	16.3	2.0		26.5	14.6	1.9		26.8	13.4	1.6	
27.1	12.7	1.7		27.5	11.8	1.7		27.8	12.7	1.7	
28.1	10.4	1.6		28.5	8.5	1.4		28.8	11.8	1.7	
29.1	9.7	1.5		29.4	8.7	1.4		29.8	8.0	1.4	
30.1	7.1	1.3		30.4	6.6	1.2		30.7	6.1	1.2	
31.1	7.3	1.3		31.4	6.4	1.2		31.7	3.8	0.9	
32.0	4.9	1.1		32.4	6.6	1.2		32.7	6.1	1.2	
33.0	3.1	0.8		33.4	2.3	0.8		33.7	3.5	0.9	
34.0	2.1	0.7		34.3	3.8	0.9		34.7	2.4	0.7	
35.1	1.6	0.6		35.3	1.6	0.6		35.6	0.9	0.5	
36.0	0.7	0.4		36.3	0.5	0.2		36.6	0.5	0.3	
37.0	0.2	0.2		37.3	0.2	0.2		37.6	0.0	0.1	
37.9	0.0	0.0		38.3	0.2	0.2		38.6	0.0	0.0	
38.9	0.0	0.0		39.2	0.1	0.1		39.6	0.0	0.0	
39.9	0.0	0.0		40.2	0.0	0.0		40.6	0.0	0.0	
40.9	0.0	0.0		41.2	0.0	0.0		41.5	0.0	0.0	
41.9	0.0	0.0		42.2	0.0	0.0		42.5	0.0	0.0	
42.8	0.0	0.0		43.2	0.1	0.1		43.5	0.0	0.0	
43.8	0.0	0.0		44.1	0.0	0.0		44.5	0.0	0.0	

251 197AU(P+ALPHA) 33.15 MEV 135 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.4	0.0	0.0		13.7	0.0	0.0		14.1	0.0	0.0	
14.4	0.2	0.2		14.7	1.4	0.6		15.0	2.1	0.7	
15.4	5.2	1.1		15.7	6.9	1.2		16.0	2.4	0.7	
16.4	5.7	1.2		16.7	5.9	1.2		17.1	9.2	1.5	
17.3	9.7	1.5		17.7	8.5	1.4		18.0	12.1	1.7	
18.3	14.7	1.9		18.6	11.8	1.7		19.1	15.2	1.9	
19.3	14.2	1.8		19.6	17.5	2.0		19.9	15.6	1.9	
20.3	21.1	2.2		20.6	21.8	2.2		20.9	21.3	2.2	
21.3	22.5	2.3		21.6	18.2	2.1		21.9	18.0	2.1	
22.2	17.3	2.0		22.6	16.3	2.0		22.9	13.7	1.8	
23.2	14.4	1.8		23.5	17.3	2.0		23.9	12.1	1.7	
24.2	12.8	1.7		24.5	11.9	1.7		24.9	12.8	1.7	
25.2	10.4	1.6		25.5	5.9	1.5		25.8	11.6	1.7	
26.2	9.9	1.5		26.5	12.3	1.7		26.8	8.1	1.4	
27.1	6.6	1.3		27.5	5.9	1.5		27.8	8.8	1.4	
28.1	11.2	1.6		28.5	8.3	1.4		28.8	9.0	1.5	
29.1	5.0	1.1		29.4	5.4	1.1		29.8	5.9	1.2	
30.1	7.6	1.3		30.4	6.6	1.3		30.7	3.3	0.9	
31.1	5.2	1.1		31.4	2.4	0.7		31.7	3.1	0.9	
32.0	3.8	0.9		32.4	3.8	0.9		32.7	2.1	0.7	
33.0	3.8	0.9		33.4	1.7	0.6		33.7	1.2	0.5	
34.0	1.7	0.6		34.3	1.7	0.6		34.7	0.5	0.3	
35.0	1.2	0.5		35.3	0.9	0.5		35.6	1.4	0.6	
36.1	0.9	0.5		36.3	0.5	0.3		36.6	0.5	0.3	
37.0	0.2	0.2		37.3	0.0	0.0		37.6	0.2	0.2	
37.9	0.0	0.0		38.3	0.1	0.1		38.6	0.0	0.0	
38.9	0.0	0.0		39.2	0.0	0.0		39.6	0.0	0.0	
39.9	0.0	0.0		40.2	0.1	0.1		40.6	0.0	0.0	
40.9	0.0	0.0		41.2	0.0	0.0		41.5	0.0	0.0	
41.9	0.0	0.0		42.2	0.1	0.1		42.5	0.0	0.0	
42.8	0.0	0.0		43.2	0.0	0.0		43.5	0.0	0.0	
43.8	0.0	0.0		44.1	0.1	0.1		44.5	0.0	0.0	

252 197AU(P+ALPHA) 33.15 MEV 151 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.6	0.0	0.0		13.9	0.1	0.1		14.2	0.1	0.1	
14.6	0.2	0.2		14.9	1.4	0.6		15.2	2.6	0.8	
15.5	4.3	1.0		15.9	4.5	1.0		16.2	6.4	1.2	
16.5	5.9	1.2		16.9	6.1	1.4		17.2	5.7	1.2	
17.5	9.2	1.5		17.8	9.7	1.5		18.2	11.2	1.6	
18.5	12.1	1.7		18.8	13.7	1.8		19.2	17.5	2.0	
19.5	17.1	2.0		19.8	18.2	2.1		20.1	16.8	2.1	
20.5	18.7	2.1		20.8	21.1	2.2		21.1	19.4	2.1	
21.5	20.9	2.2		21.8	21.6	2.2		22.1	18.2	2.1	
22.4	17.1	2.0		22.8	15.2	1.9		23.1	16.4	2.0	
23.4	14.2	1.8		23.7	11.1	1.6		24.1	13.7	1.8	
24.4	14.2	1.8		24.7	5.2	1.5		25.1	11.4	1.6	
25.4	9.5	1.5		25.7	9.5	1.5		26.1	9.0	1.5	
26.4	8.3	1.4		26.7	13.0	1.8		27.4	6.9	1.3	
27.4	7.3	1.3		27.7	4.3	1.0		28.1	8.3	1.4	
28.3	6.2	1.2		28.7	7.2	1.3		29.0	5.9	1.2	
29.3	5.5	1.1		29.7	4.7	1.1		30.1	3.8	0.9	
30.3	4.7	1.1		30.6	2.8	0.9		31.0	3.1	0.9	
31.3	1.7	0.6		31.6	3.3	0.9		31.9	3.1	0.9	
32.3	2.4	0.7		32.6	1.7	0.6		32.5	2.4	0.7	
33.3	0.7	0.4		33.6	1.4	0.6		33.9	1.2	0.5	
34.2	0.9	0.5		34.6	1.4	0.6		34.9	0.5	0.3	
35.2	0.5	0.3		35.6	0.9	0.5		35.9	0.2	0.2	
36.2	0.5	0.3		36.5	0.0	0.0		36.9	0.0	0.0	
37.2	0.0	0.0		37.5	0.1	0.1		37.9	0.1	0.1	
38.2	0.0	0.0		38.5	0.0	0.0		38.8	0.0	0.0	
39.2	0.0	0.0		39.5	0.1	0.1		39.9	0.0	0.0	
40.1	0.0	0.0		40.5	0.0	0.0		40.8	0.0	0.0	
41.1	0.0	0.0		41.5	0.1	0.1		41.8	0.0	0.0	
42.1	0.0	0.0		42.4	0.0	0.0		42.8	0.0	0.0	
43.1	0.1	0.1		43.4	0.1	0.1		43.8	0.0	0.0	
44.1	0.0	0.0		44.4	0.0	0.0		44.7	0.0	0.0	

253 197AU(P+ALPHA) 33.15 MEV 165 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		*ICR/SR*MEV		MEV		*ICR/SR*MEV		MEV		*ICR/SR*MEV	
13.3	1.7	0.6		13.6	2.6	0.9		13.9	3.3	0.9	
14.2	3.1	0.9		14.6	5.7	1.2		14.9	3.8	0.9	
15.2	3.8	0.9		15.5	5.2	1.1		15.9	5.9	1.2	
16.2	7.4	1.3		16.5	7.1	1.3		16.9	7.4	1.3	
17.2	10.2	1.6		17.5	10.9	1.6		17.8	10.7	1.6	
18.2	11.2	1.6		18.5	13.5	1.8		18.9	15.4	1.9	
19.2	16.4	2.0		19.5	18.0	2.1		19.8	19.0	2.1	
20.1	19.0	2.1		20.5	18.8	2.1		20.8	19.0	2.1	
21.1	18.8	2.1		21.5	17.3	2.0		21.8	22.3	2.3	
22.1	17.3	2.0		22.4	18.4	1.9		22.8	15.0	1.9	
23.1	14.5	1.9		23.4	12.8	1.7		23.7	15.7	1.9	
24.1	12.1	1.7		24.4	14.5	1.9		24.7	11.4	1.6	
25.1	9.0	1.5		25.4	7.8	1.4		25.7	8.1	1.4	
26.1	5.9	1.2		26.4	7.4	1.3		26.7	7.1	1.3	
27.0	7.1	1.3		27.4	7.4	1.3		27.7	6.6	1.2	
28.0	7.4	1.3		28.3	4.7	1.1		28.7	5.5	1.1	
29.0	4.7	1.1		29.3	4.5	1.0		29.7	3.8	0.9	
30.0	3.3	0.9		30.3	2.4	0.8		30.6	4.3	1.1	
31.0	4.0	1.0		31.3	2.6	0.8		31.6	2.4	0.8	
32.0	2.8	0.8		32.3	3.3	0.9		32.6	1.7	0.6	
32.9	1.4	0.6		33.2	1.2	0.5		33.6	1.4	0.6	
33.9	1.2	0.5		34.2	0.9	0.5		34.6	0.5	0.3	
34.9	1.2	0.5		35.2	0.2	0.2		35.6	0.5	0.3	
35.9	0.2	0.2		36.2	0.2	0.2		36.5	0.1	0.1	
36.9	0.2	0.2		37.2	0.0	0.0		37.5	0.0	0.0	
37.9	0.1	0.1		38.2	0.0	0.0		38.5	0.0	0.0	
38.8	0.0	0.0		39.2	0.0	0.0		39.5	0.0	0.0	
39.8	0.0	0.0		40.1	0.0	0.0		40.5	0.0	0.0	
40.8	0.0	0.0		41.1	0.0	0.0		41.5	0.0	0.0	
41.8	0.0	0.0		42.1	0.0	0.0		42.4	0.0	0.0	
42.8	0.0	0.0		43.1	0.0	0.0		43.4	0.0	0.0	
43.8	0.0	0.0		44.1	0.0	0.0		44.4	0.0	0.0	

153 19*AU(P,ALPHA) 33.81 MEV 51 DEG. 2/1/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.7	1	14.1	1	14.4	3.1	14.4	3.1	14.4	3.1	14.4	3.1
14.7	5.6	15.0	8.2	15.4	11.1	15.4	11.1	15.4	11.1	15.4	11.1
15.7	14.5	16.1	17.6	16.4	21.3	16.4	21.3	16.4	21.3	16.4	21.3
16.7	24.8	17.1	27.9	17.4	32.1	17.4	32.1	17.4	32.1	17.4	32.1
17.8	36.2	18.1	41.4	18.4	45.1	18.4	45.1	18.4	45.1	18.4	45.1
18.8	49.7	19.1	53.8	19.5	57.4	19.5	57.4	19.5	57.4	19.5	57.4
19.8	63.1	20.1	71.1	20.5	83.6	20.5	83.6	20.5	83.6	20.5	83.6
20.8	91.2	21.2	105.9	21.5	105.6	21.5	105.6	21.5	105.6	21.5	105.6
21.8	123.1	22.2	124.1	22.5	131.8	22.5	131.8	22.5	131.8	22.5	131.8
22.9	141.9	23.2	152.1	23.5	169.9	23.5	169.9	23.5	169.9	23.5	169.9
23.9	176.1	24.2	171.9	24.6	176.5	24.6	176.5	24.6	176.5	24.6	176.5
24.9	175.5	25.2	175.2	25.6	170.7	25.6	170.7	25.6	170.7	25.6	170.7
25.9	191.6	26.3	174.6	26.6	185.4	26.6	185.4	26.6	185.4	26.6	185.4
26.9	173.0	27.2	181.0	27.6	170.5	27.6	170.5	27.6	170.5	27.6	170.5
28.0	177.5	28.3	171.9	28.6	163.4	28.6	163.4	28.6	163.4	28.6	163.4
29.0	163.3	29.2	151.2	29.7	147.5	29.7	147.5	29.7	147.5	29.7	147.5
30.0	159.5	29.3	147.3	30.7	149.2	30.7	149.2	30.7	149.2	30.7	149.2
31.0	140.9	30.4	131.8	31.7	139.0	31.7	139.0	31.7	139.0	31.7	139.0
32.0	144.1	32.4	132.6	32.7	126.8	32.7	126.8	32.7	126.8	32.7	126.8
33.1	132.0	33.4	131.0	33.7	122.5	33.7	122.5	33.7	122.5	33.7	122.5
34.1	124.4	34.4	121.1	34.8	121.3	34.8	121.3	34.8	121.3	34.8	121.3
35.1	114.2	35.4	122.9	35.8	112.4	35.8	112.4	35.8	112.4	35.8	112.4
36.1	115.2	36.5	115.5	36.8	114.8	36.8	114.8	36.8	114.8	36.8	114.8
37.1	97.9	37.5	85.4	37.8	72.6	37.8	72.6	37.8	72.6	37.8	72.6
38.2	56.9	38.5	47.6	38.8	39.5	38.8	39.5	38.8	39.5	38.8	39.5
39.2	37.5	39.5	24.8	39.9	19.4	39.9	19.4	39.9	19.4	39.9	19.4
40.2	13.4	40.5	7.2	40.9	8.5	40.9	8.5	40.9	8.5	40.9	8.5
41.2	5.4	41.6	4.1	41.9	3.9	41.9	3.9	41.9	3.9	41.9	3.9
42.2	0	42.6	0	42.9	0	42.9	0	42.9	0	42.9	0
43.3	0	43.6	0	43.9	0	43.9	0	43.9	0	43.9	0
44.3	0	44.6	0	44.9	0	44.9	0	44.9	0	44.9	0
45.3	0	45.6	0	46.0	0	46.0	0	46.0	0	46.0	0

154 19*AU(P,ALPHA) 33.80 MEV 45 DEG. 2/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.7	1	14.0	1	14.4	3.5	14.4	3.5	14.4	3.5	14.4	3.5
14.7	7.1	15.1	8.7	15.4	11.1	15.4	11.1	15.4	11.1	15.4	11.1
15.7	13.5	16.1	15.8	16.4	21.3	16.4	21.3	16.4	21.3	16.4	21.3
16.7	19.3	17.1	23.7	17.4	32.0	17.4	32.0	17.4	32.0	17.4	32.0
17.8	29.3	18.1	32.0	18.4	45.1	18.4	45.1	18.4	45.1	18.4	45.1
18.8	37.2	19.1	41.9	19.5	57.4	19.5	57.4	19.5	57.4	19.5	57.4
19.8	51.3	20.1	57.7	20.5	83.6	20.5	83.6	20.5	83.6	20.5	83.6
20.8	61.1	21.2	69.9	21.5	105.6	21.5	105.6	21.5	105.6	21.5	105.6
21.8	81.1	22.2	94.0	22.5	131.8	22.5	131.8	22.5	131.8	22.5	131.8
22.9	112.2	23.2	104.8	23.5	169.9	23.5	169.9	23.5	169.9	23.5	169.9
23.9	123.7	24.2	135.3	24.6	176.5	24.6	176.5	24.6	176.5	24.6	176.5
24.9	127.3	25.2	129.5	25.6	170.7	25.6	170.7	25.6	170.7	25.6	170.7
25.9	123.3	26.3	132.4	26.6	185.4	26.6	185.4	26.6	185.4	26.6	185.4
26.9	115.6	27.2	125.6	27.6	170.5	27.6	170.5	27.6	170.5	27.6	170.5
28.0	112.9	28.3	103.4	28.6	163.4	28.6	163.4	28.6	163.4	28.6	163.4
29.0	113.9	29.2	113.6	29.7	147.5	29.7	147.5	29.7	147.5	29.7	147.5
30.0	100.5	29.3	92.8	30.7	149.2	30.7	149.2	30.7	149.2	30.7	149.2
31.0	84.9	30.4	85.3	31.7	139.0	31.7	139.0	31.7	139.0	31.7	139.0
32.0	77.2	32.4	74.7	32.7	126.8	32.7	126.8	32.7	126.8	32.7	126.8
33.1	73.9	33.4	65.1	33.7	122.5	33.7	122.5	33.7	122.5	33.7	122.5
34.1	64.5	34.4	71.6	34.8	121.3	34.8	121.3	34.8	121.3	34.8	121.3
35.1	61.8	35.4	62.7	35.8	112.4	35.8	112.4	35.8	112.4	35.8	112.4
36.1	56.0	36.5	55.9	36.8	114.8	36.8	114.8	36.8	114.8	36.8	114.8
37.1	36.1	37.5	27.3	37.8	72.6	37.8	72.6	37.8	72.6	37.8	72.6
38.2	17.0	38.5	17.5	38.8	39.5	38.8	39.5	38.8	39.5	38.8	39.5
39.2	6.4	39.5	3.1	39.9	19.4	39.9	19.4	39.9	19.4	39.9	19.4
40.2	1.2	40.5	1.0	40.9	8.5	40.9	8.5	40.9	8.5	40.9	8.5
41.2	0	41.6	0	41.9	3.9	41.9	3.9	41.9	3.9	41.9	3.9
42.2	0	42.6	0	42.9	0	42.9	0	42.9	0	42.9	0
43.3	0	43.6	0	43.9	0	43.9	0	43.9	0	43.9	0
44.3	0	44.6	0	44.9	0	44.9	0	44.9	0	44.9	0
45.3	0	45.6	0	46.0	0	46.0	0	46.0	0	46.0	0

155 19*AU(P,ALPHA) 33.81 MEV 51 DEG. 2/1/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.9	1	14.2	2.3	14.6	3.3	14.6	3.3	14.6	3.3	14.6	3.3
14.9	4.1	15.2	5.6	15.6	6.8	15.6	6.8	15.6	6.8	15.6	6.8
15.9	9.1	16.3	11.6	16.6	12.4	16.6	12.4	16.6	12.4	16.6	12.4
16.9	15.5	17.2	17.8	17.6	19.9	17.6	19.9	17.6	19.9	17.6	19.9
18.0	22.8	18.3	25.3	18.7	33.6	18.7	33.6	18.7	33.6	18.7	33.6
19.0	29.4	19.3	32.4	19.7	38.5	19.7	38.5	19.7	38.5	19.7	38.5
20.0	39.4	20.4	41.4	20.7	48.3	20.7	48.3	20.7	48.3	20.7	48.3
21.1	61.7	21.4	56.6	21.7	65.3	21.7	65.3	21.7	65.3	21.7	65.3
22.1	67.5	22.4	65.1	22.8	76.7	22.8	76.7	22.8	76.7	22.8	76.7
23.1	71.9	23.4	73.8	23.8	79.6	23.8	79.6	23.8	79.6	23.8	79.6
24.1	82.7	24.5	86.2	24.8	86.4	24.8	86.4	24.8	86.4	24.8	86.4
25.2	89.7	25.5	88.5	25.8	87.0	25.8	87.0	25.8	87.0	25.8	87.0
26.2	82.2	26.5	84.9	26.9	86.2	26.9	86.2	26.9	86.2	26.9	86.2
27.2	76.9	27.5	81.8	27.9	82.5	27.9	82.5	27.9	82.5	27.9	82.5
28.2	77.5	28.6	71.1	28.9	61.7	28.9	61.7	28.9	61.7	28.9	61.7
29.3	59.7	29.6	62.2	29.9	61.7	29.9	61.7	29.9	61.7	29.9	61.7
30.3	61.9	30.6	62.4	30.9	57.4	30.9	57.4	30.9	57.4	30.9	57.4
31.3	48.5	31.7	48.5	32.0	47.4	32.0	47.4	32.0	47.4	32.0	47.4
32.3	43.3	32.7	35.3	33.1	36.9	33.1	36.9	33.1	36.9	33.1	36.9
33.4	36.7	33.7	35.4	34.1	36.9	34.1	36.9	34.1	36.9	34.1	36.9
34.4	35.8	34.7	33.4	35.1	23.6	35.1	23.6	35.1	23.6	35.1	23.6
35.4	33.1	35.0	31.3	36.1	25.5	36.1	25.5	36.1	25.5	36.1	25.5
36.4	24.1	36.3	28.2	37.1	15.8	37.1	15.8	37.1	15.8	37.1	15.8
37.5	12.4	37.8	12.1	38.2	8.2	38.2	8.2	38.2	8.2	38.2	8.2
38.5	7.5	38.0	6.1	39.2	3.5	39.2	3.5	39.2	3.5	39.2	3.5
39.5	3.1	39.0	2.2	40.2	1.5	40.2	1.5	40.2	1.5	40.2	1.5
40.5	0	40.0	0	41.2	0	41.2	0	41.2	0	41.2	0
41.6	0	41.0	0	42.3	0	42.3	0	42.3	0	42.3	0
42.6	0	42.0	0	43.3	0	43.3	0	43.3	0	43.3	0
43.6	0	43.0	0	44.3	0	44.3	0	44.3	0	44.3	0
44.6	0	44.0	0	45.3	0	45.3	0	45.3	0	45.3	0
45.7	0	45.0	0	46.0	0	46.0	0	46.0	0	46.0	0

156 19*AU(P,ALPHA) 33.81 MEV 45 DEG. 2/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.9	1.0	14.2	1.7	14.6	2.5	14.6	2.5	14.6	2.5	14.6	2.5
14.9	3.3	15.2	5.1	15.6	6.7	15.6	6.7	15.6	6.7	15.6	6.7
15.9	8.4	16.3	11.0	16.6	12.5	16.6	12.5	16.6	12.5	16.6	12.5
16.9	16.5	17.3	15.5	17.6	19.8	17.6	19.8	17.6	19.8	17.6	19.8
18.0	29.0	18.3	26.2	18.7	34.0	18.7	34.0	18.7	34.0	18.7	34.0
19.0	35.7	19.3	29.1	19.7	34.7	19.7	34.7	19.7	34.7	19.7	34.7
20.0	29.7	20.5	21.4	20.7	33.6	20.7	33.6	20.7	33.6	20.7	33.6
21.1	41.7	20.9	21.4	21.7	32.6	21.7	32.6	21.7	32.6	21.7	32.6
22.1	52.2	21.3	22.4	22.6	29.2	22.6	29.2	22.6	29.2	22.6	29.2
23.1	55.3	21.4	23.4	23.7	30.4	23.7	30.4	23.7	30.4	23.7	30.4
24.1	62.2	21.6	24.5	24.1	30.5	24.1	30.5	24.1	30.5	24.1	30.5
25.2	58.1	21.5	25.6	25.4	30.6	25.4	30.6	25.4	30.6	25.4	30.6
26.2	61.6	21.6	26.5	26.5	30.3	26.5	30.3	26.5	30.3	26.5	30.3
27.2	51.1	21.3	27.5	27.1	30.3	27.1	30.3	27.1	30.3	27.1	30.3
28.2	57.7	21.3	28.6	28.3	30.1	28.3	30.1	28.3	30.1	28.3	30.1
29.3	41.9	20.9	29.6	29.3	29.9	29.9	29.9	29.9	29.9	29.9	29.9
30.3	33.4	20.6	30.6	30.2	29.8	30.2	29.8	30.2	29.8	30.2	29.8
31.3	31.3	20.5	31.7	31.4	29.4	31.4	29.4	31.4	29.4	31.4	29.4
32.3	27.8	20.4	32.7	32.0	29.2	32.0	29.2	32.0	29.2	32.0	29.2
33.4	18.2	19.9	33.7	18.1	29.1	33.3	17.1	17.1	1.9	1.9	1.9
34.4	15.2	19.8	34.7	17.6	1.9	35.1	14.6	14.6	1.7	1.7	1.7
35.4	15.1	19.8	35.4	12.9	1.6	36.1	15.9	15.9	1.8	1.8	1.8
36.4	13.4	1.7	36.8	11.7	1.5	37.1	7.2	7.2	1.2	1.2	1.2
37.5	7.3	1.2	37.8	9.2	1.1	38.2	5.2	5.2	1.1	1.1	1.1
38.6	3.1	0.9	38.8	7.5	0.7	39.2	1.7	1.7	0.6	0.6	0.6
39.6	0.5	0.4	39.9	0.5	0.4	40.2	0.1	0.1	0.1	0.1	0.1
40.6	0.1	0.1	40.9	0.1	0.1	41.2	0.0	0.0	0.0	0.0	0.0
41.6	0.1	0.1	41.9	0.1	0.1	42.3	0.0	0.0	0.0	0.0	0.0
42.6	0.1	0.1	42.9	0.0	0.0	43.2	0.0	0.0	0.0	0.0	0.0
43.6	0.1	0.1	43.1	0.1	0.1	44.3	0.0	0.0	0.0	0.0	0.0
44.6	0.1	0.1	44.6	0.1	0.1	45.2	0.0	0.0	0.0	0.0	0.0
45.7	0.1	0.1	45.3	0.1	0.1	46.4	0.0	0.0	0.0	0.0	0.0

238 197AU(P,ALPHA) 33.80 MEV 93 DEG. 22/77C

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.8	.6	.3		14.2	1.2	.5		14.5	2.1	.6	
14.8	3.0	.9		15.1	4.0	.9		15.5	6.0	1.1	
15.8	7.2	1.2		15.1	7.0	1.2		16.4	10.8	1.5	
16.8	11.6	1.6		17.0	11.8	1.5		17.4	18.7	1.9	
17.7	18.5	1.9		18.1	13.5	1.9		18.4	22.1	2.1	
18.7	23.9	2.2		19.0	27.7	2.3		19.4	29.5	2.4	
19.7	29.1	2.4		20.1	25.3	2.3		20.3	32.7	2.6	
20.7	35.5	2.7		21.0	35.2	2.7		21.3	37.3	2.7	
21.6	35.5	2.7		22.0	39.1	2.8		22.3	41.7	2.9	
22.6	38.3	2.8		22.9	43.2	2.9		23.3	36.3	2.7	
23.6	38.7	2.8		23.9	37.9	2.7		24.2	39.9	2.8	
24.6	43.4	2.9		24.9	32.1	2.5		25.2	37.7	2.7	
25.5	42.2	2.9		25.9	36.1	2.7		26.2	34.3	2.6	
26.5	31.1	2.5		26.8	31.7	2.5		27.2	27.7	2.3	
27.5	27.9	2.4		27.8	25.9	2.3		28.1	26.3	2.3	
28.5	23.1	2.1		28.8	22.5	2.2		29.1	21.1	2.1	
29.4	20.1	2.0		29.8	18.9	1.9		30.1	24.1	2.2	
30.4	22.9	2.1		30.7	20.2	2.0		31.1	15.7	1.6	
31.4	13.0	1.6		31.7	15.1	1.7		32.0	14.5	1.7	
32.4	14.3	1.7		32.7	12.6	1.6		32.6	11.2	1.5	
33.3	13.4	1.6		33.7	12.4	1.6		34.1	9.2	1.3	
34.3	9.6	1.4		34.6	7.8	1.2		35.0	11.8	1.5	
35.3	8.2	1.3		35.6	7.2	1.2		35.9	7.2	1.2	
36.3	3.8	.9		36.6	6.2	1.1		36.9	6.0	1.1	
37.2	5.0	1.0		37.6	4.3	1.1		37.9	3.4	.8	
38.2	2.6	.7		38.5	2.6	.7		38.9	.4	.2	
39.2	2.6	.7		39.5	.6	.3		39.8	.4	.3	
40.2	.2	.2		40.5	.2	.2		40.8	.0	.0	
41.1	.0	.0		41.5	.2	.2		41.8	.0	.0	
42.1	.0	.0		42.4	.0	.0		42.8	.0	.0	
43.1	.0	.0		43.4	.0	.0		43.7	.0	.0	
44.1	.0	.0		44.8	.0	.0		44.7	.0	.0	

149 197AU(P,ALPHA) 33.80 MEV 105 DEG. 22/77C

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.1	.0	.0		14.4	.0	.0		14.8	.9	.4	
15.1	1.5	.5		15.5	2.7	.7		15.3	3.7	.8	
16.2	5.5	1.0		16.5	8.2	1.2		16.8	10.1	1.4	
17.2	13.7	1.6		17.5	18.1	1.7		17.9	17.8	1.8	
18.2	15.8	1.7		18.6	24.9	2.0		18.9	21.7	1.9	
19.2	21.7	1.9		19.6	24.7	2.1		19.9	25.5	2.2	
20.3	29.9	2.3		20.6	31.3	2.4		21.0	33.7	2.5	
21.3	29.1	2.3		21.7	32.8	2.5		22.1	31.1	2.4	
22.3	31.7	2.4		22.7	31.4	2.4		23.0	33.2	2.5	
23.4	31.9	2.4		23.7	28.9	2.3		24.1	33.3	2.5	
24.4	29.7	2.3		24.8	33.5	2.4		25.1	21.5	2.4	
25.4	29.9	2.3		25.8	31.2	2.4		26.1	28.2	2.3	
26.5	25.5	2.2		26.8	18.3	1.8		27.2	25.7	2.2	
27.5	22.2	2.0		27.8	23.1	2.1		28.2	17.0	1.8	
28.5	15.4	1.7		28.9	18.3	1.8		29.2	18.2	1.8	
29.6	12.1	1.5		29.9	15.9	1.8		30.3	13.6	1.6	
30.6	13.8	1.5		30.5	11.8	1.0		31.2	11.4	1.4	
31.6	9.1	1.3		32.1	8.1	1.2		32.3	9.0	1.3	
32.7	9.7	1.3		32.0	7.7	1.2		32.4	7.3	1.2	
33.7	6.1	1.1		34.1	5.3	1.0		34.4	5.9	1.0	
34.7	6.6	1.1		35.1	5.5	1.0		35.4	5.1	1.0	
35.8	4.9	1.0		36.1	3.8	.8		36.4	3.8	.8	
36.8	2.9	.7		37.1	2.4	.7		37.5	1.5	.5	
37.8	1.3	.5		38.2	1.1	.4		38.5	.4	.3	
38.9	.4	.3		39.2	.0	.0		39.5	.0	.0	
39.9	.1	.0		40.2	.1	.0		40.6	.0	.0	
40.9	.1	.0		41.3	.0	.0		41.6	.0	.0	
42.1	.1	.0		42.3	.1	.0		42.6	.0	.0	
43.0	.1	.0		43.2	.0	.0		43.7	.0	.0	
44.0	.1	.0		44.4	.1	.0		44.7	.0	.0	
45.0	.0	.0		45.4	.0	.0		45.7	.0	.0	
45.1	.0	.0		46.8	.1	.0		46.8	.0	.0	

170 197AU(P,ALPHA) 33.80 MEV 121 DEG. 22/77C

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.3	.1	.0		14.7	.1	.0		15.1	.9	.4	
15.3	1.8	.6		15.7	3.3	.8		16.0	4.6	.9	
16.4	6.8	1.1		16.7	9.3	1.3		17.1	9.7	1.3	
17.4	12.1	1.5		17.8	12.1	1.5		18.1	13.4	1.6	
18.5	15.4	1.7		18.9	18.1	1.8		19.2	21.4	2.0	
19.5	23.6	2.1		19.8	25.8	2.2		20.2	26.8	2.2	
20.5	29.0	2.3		20.9	26.6	2.2		21.2	33.4	2.5	
21.6	27.5	2.2		21.9	29.1	2.3		22.2	27.1	2.2	
22.6	25.5	2.2		23.1	25.7	2.2		23.3	27.3	2.2	
23.7	20.9	2.0		24.0	25.1	2.1		24.3	24.4	2.1	
24.7	23.5	2.1		25.1	22.4	2.1		25.4	18.9	1.9	
25.7	19.6	1.9		26.1	20.7	1.9		26.4	17.4	1.8	
26.8	21.3	2.0		27.1	15.9	1.8		27.5	14.3	1.6	
27.8	14.3	1.6		28.2	15.4	1.7		28.5	12.6	1.5	
28.8	13.9	1.6		29.2	11.3	1.4		29.5	11.7	1.5	
29.9	11.4	1.4		30.2	9.7	1.2		30.6	8.1	1.2	
30.9	9.3	1.3		31.3	8.2	1.2		31.6	8.1	1.2	
32.0	6.8	1.1		32.3	4.8	.9		32.6	7.1	1.1	
33.0	4.3	.9		33.3	5.3	1.0		33.7	5.1	1.0	
34.0	6.6	1.1		34.4	3.1	.8		34.7	3.7	.8	
35.1	4.2	.9		35.4	2.6	.7		35.8	4.0	.9	
36.1	1.3	.5		36.5	2.7	.7		36.8	2.9	.7	
37.1	1.5	.5		37.5	.4	.3		37.8	.9	.4	
38.2	.5	.3		38.5	.2	.2		38.9	.7	.4	
39.2	.5	.3		39.6	.1	.1		39.7	.3	.1	
40.3	.0	.0		40.6	.0	.0		41.0	.0	.0	
41.3	.1	.0		41.6	.1	.0		42.1	.0	.0	
42.3	.0	.0		42.7	.0	.0		43.1	.0	.0	
43.4	.1	.0		43.7	.1	.0		44.1	.1	.0	
44.4	.0	.0		44.8	.0	.0		45.1	.0	.0	
45.5	.1	.0		45.8	.1	.0		46.1	.1	.0	
46.5	.0	.0		46.8	.0	.0		47.2	.1	.0	

171 197AU(P,ALPHA) 33.80 MEV 135 DEG. 22/77C

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.3	.0	.0		14.7	.0	.0		15.1	.9	.4	
15.3	1.8	.6		15.7	2.3	.7		16.1	3.7	.8	
16.4	5.2	1.0		16.7	7.0	1.1		17.1	9.4	1.2	
17.4	11.5	1.4		17.8	12.2	1.5		18.1	14.6	1.6	
18.5	19.5	1.9		18.9	16.6	1.7		19.2	22.7	2.0	
19.5	23.0	2.1		19.8	24.5	2.1		20.2	29.1	2.3	
20.5	29.1	2.3		20.9	31.0	2.4		21.2	27.8	2.3	
21.6	31.1	2.4		21.9	31.9	2.4		22.3	24.5	2.1	
22.6	27.6	2.1		23.0	26.9	2.3		23.3	22.5	2.0	
23.7	18.6	1.9		24.0	19.4	1.9		24.3	21.1	1.9	
24.7	15.9	1.7		25.0	20.1	1.9		25.4	21.0	2.0	
25.7	21.3	1.9		26.1	17.5	1.8		26.4	16.6	1.7	
26.8	13.3	1.6		27.1	13.1	1.6		27.5	11.4	1.5	
27.8	11.4	1.5		28.2	11.3	1.4		28.5	11.0	1.4	
28.8	9.4	1.3		29.2	11.8	1.5		29.5	7.6	1.2	
29.9	8.3	1.2		30.2	4.6	1.3		30.6	9.3	1.2	
30.9	5.7	1.0		31.3	6.6	1.1		31.6	3.9	.8	
32.0	6.1	1.1		32.3	3.3	.8		32.6	4.1	.9	
33.0	3.5	.6		33.3	3.9	.8		33.7	2.9	.7	
34.0	2.6	.7		34.4	.1	.0		34.7	3.3	.8	
35.1	2.4	.7		35.4	.0	.0		35.8	1.3	.5	
36.1	1.5	.5		36.5	1.1	.5		36.8	.7	.4	
37.1	1.1	.5		37.5	.7	.4		37.8	.6	.3	
38.2	.1	.0		38.5	.1	.0		38.9	.0	.0	
39.2	.0	.0		39.6	.0	.0		39.7	.0	.0	
40.3	.1	.0		40.6	.1	.0		41.0	.0	.0	
41.3	.1	.0		41.6	.0	.0		42.1	.0	.0	
42.3	.1	.0		42.7	.1	.0		43.1	.0	.0	
43.4	.1	.0		43.7	.0	.0		44.1	.0	.0	
44.4	.1	.0		44.8	.1	.0		45.1	.0	.0	
45.5	.0	.0		45.8	.0	.0		46.1	.0	.0	
46.3	.0	.0		46.3	.0	.0		47.2	.0	.0	

236 197AU(P,ALPHA) 33.80 MEV 151 DEG. 22/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.3	1.6	.6		13.6	4.5	1.3		13.9	5.6	1.2	
14.2	5.2	1.1		14.6	6.1	1.7		14.9	8.3	.9	
15.2	6.6	1.2		15.6	5.6	1.2		15.9	6.8	1.3	
16.2	7.5	1.3		16.5	6.8	1.4		16.9	31.2	1.6	
17.2	16.1	1.0		17.5	11.3	1.6		17.9	14.8	1.9	
18.2	14.1	1.8		18.5	12.8	2.1		18.8	25.2	2.4	
19.2	24.9	2.4		19.5	25.9	2.5		19.8	32.0	2.7	
20.2	25.2	2.4		21.5	26.8	2.5		21.8	31.1	2.7	
21.1	24.9	2.6		21.5	31.1	2.7		21.8	26.1	2.5	
22.1	24.7	2.4		22.4	19.2	2.1		22.8	11.2	2.2	
23.1	19.1	2.1		23.4	13.5	2.1		23.8	21.5	2.2	
24.1	19.3	2.1		24.4	14.8	1.9		24.7	16.5	2.0	
25.1	13.4	1.8		25.4	15.9	2.1		25.7	12.5	1.7	
26.1	13.4	1.8		26.4	14.2	1.9		26.7	11.5	1.6	
27.0	9.4	1.5		27.4	7.2	1.5		27.7	11.6	1.6	
28.0	8.5	1.4		28.4	5.4	1.5		28.7	8.7	1.4	
29.0	7.5	1.3		29.3	6.6	1.2		29.7	8.5	1.4	
30.0	5.9	1.2		31.3	5.2	1.1		31.6	4.0	1.0	
31.0	4.7	1.1		31.3	5.2	1.1		31.6	5.2	1.1	
32.0	7.3	.9		32.3	6.1	1.2		32.6	4.0	1.0	
32.9	2.6	.8		33.3	4.8	.8		33.6	2.4	.7	
33.9	1.4	.6		34.3	3.2	.5		34.6	1.5	.7	
34.9	.9	.5		35.2	1.4	.6		35.6	1.2	.5	
35.9	.5	.3		36.2	1.4	.6		36.6	.5	.2	
36.9	1.6	.6		37.2	.9	.5		37.5	.7	.4	
37.9	.2	.2		38.2	.2	.2		38.5	.5	.3	
38.8	.5	.3		39.2	.2	.2		39.5	.1	.1	
39.8	.2	.2		40.2	.2	.2		40.5	.5	.3	
40.8	.2	.2		41.1	.1	.1		41.5	.0	.1	
41.8	.0	.0		42.1	.0	.0		42.5	.0	.0	
42.8	.1	.0		43.1	.1	.1		43.4	.0	.0	
43.8	.0	.0		44.1	.0	.0		44.6	.0	.0	

237 197AU(P,ALPHA) 33.80 MEV 145 DEG. 22/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.3	1.7	.6		13.6	4.7	1.0		13.9	5.4	1.1	
14.2	4.5	1.0		14.6	4.5	1.0		14.9	8.0	1.4	
15.2	4.7	1.1		15.6	5.4	1.2		15.9	6.6	1.2	
16.2	8.5	1.4		16.5	4.1	1.4		16.9	11.1	1.5	
17.2	9.3	1.4		17.5	16.2	2.1		17.9	14.2	1.6	
18.2	21.2	2.2		18.5	21.2	2.2		18.8	22.4	2.3	
19.2	27.8	2.6		19.5	21.5	2.2		19.8	30.4	2.7	
20.2	35.2	2.9		21.5	31.1	2.8		21.8	26.9	2.5	
21.1	29.7	2.6		21.5	27.6	2.6		21.8	25.0	2.4	
22.1	21.7	2.3		22.4	21.7	2.3		22.8	21.2	2.2	
23.1	27.1	2.5		23.4	18.2	2.1		23.8	17.9	2.1	
24.1	19.3	2.1		24.4	14.6	1.9		24.7	14.2	1.8	
25.1	17.9	2.1		25.4	14.4	1.8		25.7	13.7	1.8	
26.1	12.5	1.7		26.4	11.4	1.8		26.7	10.1	1.5	
27.0	9.7	1.5		27.4	6.8	1.2		27.7	6.6	1.2	
28.0	5.7	1.2		28.4	5.9	1.2		28.7	8.3	1.4	
29.0	9.5	1.4		29.3	6.0	1.2		29.7	4.5	1.0	
30.0	4.5	1.0		31.3	3.3	.9		31.6	5.0	1.1	
31.0	3.1	.9		31.3	3.5	.9		31.6	3.3	.9	
32.0	1.9	.7		32.3	3.3	.9		32.6	2.6	.8	
32.9	1.4	.6		33.3	3.3	.9		33.6	1.2	.5	
33.9	1.4	.6		34.3	3.1	.9		34.6	1.9	.7	
34.9	1.7	.6		35.2	1.2	.5		35.6	1.2	.5	
35.9	1.2	.5		36.2	1.1	.5		36.6	.2	.2	
36.9	.2	.2		37.2	.0	.0		37.5	.5	.2	
37.9	.2	.2		38.2	.7	.4		38.5	.0	.1	
38.8	.2	.2		39.2	.0	.0		39.5	.5	.3	
39.8	.1	.1		40.2	.1	.1		40.5	.0	.1	
40.8	.0	.0		41.1	.0	.0		41.5	.0	.0	
41.8	.1	.1		42.1	.1	.1		42.5	.0	.1	
42.8	.0	.0		43.1	.0	.0		43.4	.0	.0	
43.8	.0	.0		44.1	.1	.1		44.6	.1	.1	

229 197AU(P,ALPHA) 35.80 MEV 21 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.8	4.6	2.7		13.1	6.1	3.1		13.4	7.7	3.4	
13.8	10.7	4.1		14.1	12.2	4.3		14.4	27.6	6.5	
14.7	23.1	5.9		15.1	29.1	6.7		15.4	13.4	5.3	
15.7	35.3	7.4		16.0	27.6	6.5		16.3	35.2	7.4	
16.6	52.1	4.9		17.1	71.1	14.7		17.3	62.9	9.3	
17.6	56.7	5.3		17.9	61.2	9.7		18.3	62.9	9.8	
18.6	65.9	10.1		18.9	82.4	11.3		19.2	82.8	11.3	
19.5	108.9	12.9		19.9	122.7	13.7		20.2	122.7	13.7	
21.5	134.9	14.4		21.8	128.4	14.1		22.1	115.0	13.3	
21.5	134.9	14.4		21.8	144.1	14.5		22.1	167.1	16.0	
22.4	162.5	15.8		22.7	196.3	17.3		23.1	213.1	18.1	
23.4	177.9	16.5		23.7	217.7	18.3		24.0	220.8	18.4	
24.4	216.2	18.2		24.7	196.3	17.3		25.1	213.1	18.1	
25.3	180.9	16.7		25.6	214.7	18.1		26.0	230.0	18.6	
26.3	211.1	17.9		26.6	239.2	19.2		26.9	237.7	19.1	
27.2	213.1	18.1		27.6	236.1	19.0		27.9	219.2	18.2	
28.2	185.5	16.9		28.5	220.3	18.5		28.8	219.3	18.3	
29.2	184.0	16.8		29.5	217.7	18.2		29.8	222.2	18.5	
30.1	231.9	17.5		31.5	215.5	17.7		30.8	196.3	17.3	
31.1	194.7	17.3		31.4	187.1	16.9		31.7	166.6	17.0	
32.1	156.4	15.5		32.4	184.6	17.0		32.7	176.3	16.4	
33.0	162.5	15.8		33.2	131.0	14.5		33.7	151.3	15.2	
34.0	131.3	14.1		34.3	161.1	15.7		34.5	157.9	15.6	
34.9	173.3	16.3		35.2	161.0	15.7		35.6	159.5	15.6	
35.9	168.7	16.1		36.2	173.3	16.3		36.6	156.4	15.5	
36.9	168.7	16.1		37.2	134.5	14.4		37.5	144.1	14.5	
37.8	171.2	16.2		38.2	141.1	14.7		38.5	148.7	15.1	
38.8	139.5	14.6		39.1	136.5	14.5		39.4	122.7	13.7	
39.8	156.4	15.5		40.1	134.9	14.4		40.4	111.2	12.5	
40.7	107.3	12.8		41.0	75.1	10.7		41.4	76.7	10.6	
41.7	65.9	11.1		42.1	44.5	8.3		42.3	62.9	9.3	
42.6	38.3	7.7		42.0	42.9	8.1		42.3	39.9	7.8	

220 197AU(P,ALPHA) 36.80 MEV 30 DEG. 31/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.1	2.3	1.3		14.4	3.1	1.5		14.7	6.1	2.2	
15.0	7.7	2.4		15.4	12.3	3.1		15.7	19.2	3.3	
16.0	27.6	4.6		16.3	26.1	4.5		16.6	33.6	5.1	
17.0	27.6	4.6		17.3	37.6	5.4		17.6	44.5	5.8	
17.9	45.3	5.9		18.2	54.5	6.5		18.6	63.7	7.0	
18.9	62.2	6.9		19.2	63.7	7.0		19.5	79.8	7.8	
19.9	81.3	7.9		20.2	84.4	8.0		20.5	99.8	8.8	
21.8	101.5	9.8		21.1	119.1	9.6		21.5	121.3	9.6	
21.8	120.5	9.6		22.1	136.6	10.2		22.4	132.8	10.1	
22.7	145.1	10.6		23.1	166.5	11.3		23.4	164.2	11.2	
23.7	170.0	11.7		24.0	185.7	11.5		24.4	185.0	11.5	
24.7	196.5	12.3		25.1	181.3	11.8		25.3	191.3	12.1	
25.6	108.0	12.6		26.0	221.0	13.0		26.3	213.4	12.5	
26.6	171.4	11.4		26.9	181.9	11.8		27.2	198.0	12.3	
27.6	192.6	12.2		27.9	182.7	11.8		28.2	188.0	12.0	
28.5	174.8	11.7		28.8	184.4	12.0		29.2	158.1	11.1	
29.5	188.0	12.0		29.8	152.5	10.9		30.1	158.9	11.0	
30.5	156.6	11.0		30.8	137.4	10.3		31.1	138.1	10.3	
31.4	147.5	10.5		31.7	128.2	9.9		32.1	129.7	10.0	
32.4	132.1	10.1		32.7	133.5	10.1		33.0	124.3	9.8	
33.3	115.1	9.4		33.7	116.7	9.5		34.0	135.8	10.2	
34.3	115.1	9.4		34.6	122.1	9.7		34.9	142.0	10.4	
35.3	115.9	9.4		35.6	102.8	8.9		35.9	146.7	9.0	
36.2	113.6	9.3		36.6	112.1	9.3		36.9	103.6	8.9	
37.2	86.7	8.2		37.5	92.9	8.4		37.8	108.2	9.1	
38.2	111.3	8.8		38.5	94.4	8.5		38.8	113.6	9.3	
39.1	113.6	9.3		39.4	82.1	7.9		39.6	113.6	9.3	
40.1	89.8	8.3		40.4	68.3	7.2		40.7	53.7	6.2	
41.0	42.2	5.7		41.4	39.5	5.5		41.7	32.2	5.0	
42.3	21.1	3.9		42.3	11.3	2.8		42.6	8.4	2.5	
43.0	8.4	2.5		43.3	1.5	1.1		43.6	4.6	1.5	
43.9	.8	.8		44.3	.3	.8		44.6	.0	.3	

136 197AU(P+ALPHA) 35.83 MEV 45 DEG. 22/1/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICR/SR*MEV		MEV		PICR/SR*MEV		MEV		PICR/SR*MEV	
11.5	0.0	0.0		11.8	3.5	0.5		12.2	4.2	0.6	
12.5	4.3	0.6		12.8	3.9	0.6		13.2	5.5	0.7	
13.5	7.8	0.8		13.9	8.5	0.9		14.2	9.5	0.9	
14.5	12.0	1.0		14.9	14.4	1.1		15.2	15.0	1.1	
15.6	18.0	1.2		15.9	20.2	1.3		16.2	17.6	1.2	
16.6	23.0	1.4		16.9	22.6	1.4		17.2	24.5	1.4	
17.6	27.9	1.5		17.9	29.0	1.6		18.3	34.0	1.7	
18.6	35.7	1.7		19.0	36.8	1.8		19.3	41.6	1.9	
19.6	42.1	1.9		20.0	47.3	2.0		20.3	52.2	2.1	
20.7	58.0	2.2		21.0	62.8	2.3		21.3	67.4	2.4	
21.7	69.3	2.4		22.1	76.3	2.5		22.4	80.3	2.6	
22.7	85.3	2.7		23.0	95.2	2.8		23.4	101.9	2.9	
23.7	102.4	3.0		24.1	112.7	3.1		24.4	111.3	3.1	
24.7	114.2	3.1		25.1	121.6	3.2		25.4	116.3	3.1	
25.8	128.6	3.3		26.1	131.5	3.3		26.4	126.6	3.3	
26.8	122.2	3.2		27.1	132.7	3.4		27.5	120.2	3.2	
27.8	130.0	3.3		28.1	130.9	3.3		28.5	116.2	3.1	
28.8	121.7	3.2		29.2	120.2	3.2		29.5	123.6	3.2	
29.8	112.5	3.1		30.2	113.9	3.1		30.5	107.9	3.0	
30.9	101.5	2.9		31.2	92.9	2.8		31.5	89.6	2.8	
31.9	93.1	2.8		32.2	88.5	2.7		32.6	84.7	2.7	
32.9	84.0	2.7		33.2	82.2	2.7		33.6	76.9	2.6	
33.9	74.0	2.5		34.3	75.5	2.5		34.6	68.5	2.4	
34.9	70.5	2.5		35.3	64.2	2.3		35.6	66.6	2.4	
36.0	60.7	2.3		36.3	57.5	2.2		36.6	55.2	2.2	
37.0	53.9	2.1		37.3	51.8	2.1		37.7	52.3	2.1	
38.0	48.1	2.0		38.3	48.7	2.0		38.7	48.1	2.0	
39.0	46.2	2.0		39.4	41.2	1.9		39.7	43.6	1.9	
40.0	36.9	1.8		40.4	35.5	1.7		40.7	33.6	1.6	
41.1	29.2	1.6		41.4	24.1	1.4		41.7	19.9	1.3	
42.1	14.1	1.1		42.4	12.7	1.0		42.8	10.6	0.9	
43.1	7.8	0.8		43.4	7.4	0.8		43.8	6.9	0.8	

135 197AU(P+ALPHA) 36.80 MEV 40 DEG. 22/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICR/SR*MEV		MEV		PICR/SR*MEV		MEV		PICR/SR*MEV	
11.5	0.5	0.2		11.8	1.0	0.3		12.2	1.0	0.3	
12.5	2.2	0.4		12.8	2.1	0.4		13.2	2.9	0.5	
13.5	3.6	0.6		13.9	4.0	0.6		14.2	5.5	0.7	
14.5	6.3	0.7		14.9	8.3	0.8		15.2	8.1	0.8	
15.6	13.4	1.1		15.9	11.5	1.0		16.2	13.3	1.1	
16.6	13.4	1.1		16.9	16.9	1.2		17.3	19.9	1.3	
17.6	20.5	1.3		17.9	21.4	1.4		18.3	23.5	1.4	
18.6	25.8	1.5		19.3	33.1	1.6		19.3	31.9	1.7	
19.6	36.7	1.8		20.0	37.6	1.8		20.3	46.5	2.0	
20.7	52.1	2.1		21.0	53.2	2.1		21.3	55.4	2.2	
21.7	60.2	2.3		22.0	68.0	2.4		22.4	66.7	2.4	
22.7	68.5	2.4		23.1	75.3	2.5		23.4	76.8	2.6	
23.7	82.1	2.6		24.1	84.7	2.7		24.4	85.0	2.7	
24.7	88.8	2.8		25.1	89.8	2.8		25.4	85.4	2.7	
25.8	95.2	2.9		26.1	92.5	2.8		26.4	91.5	2.8	
26.8	91.0	2.8		27.1	92.1	2.8		27.5	91.6	2.8	
27.8	95.1	2.9		28.1	91.0	2.8		28.5	94.3	2.8	
28.8	90.4	2.8		29.2	91.5	2.8		29.5	83.5	2.7	
29.8	81.1	2.6		30.2	65.8	2.4		30.5	70.0	2.4	
30.9	66.5	2.4		31.2	59.6	2.3		31.5	61.3	2.3	
31.9	59.2	2.3		32.2	54.1	2.2		32.6	52.3	2.1	
32.9	54.3	2.2		33.2	55.2	2.2		33.6	47.2	2.0	
33.9	44.2	1.9		34.3	38.0	1.8		34.6	41.4	1.9	
34.9	39.5	1.8		35.3	36.9	1.8		35.6	36.0	1.8	
36.0	33.1	1.7		36.3	31.9	1.6		36.6	30.7	1.6	
37.0	28.6	1.6		37.3	27.4	1.5		37.7	26.2	1.5	
38.0	23.1	1.4		38.3	23.6	1.4		38.7	24.6	1.4	
39.0	24.8	1.5		39.4	22.2	1.4		39.7	24.1	1.4	
40.0	19.5	1.3		40.4	17.5	1.2		40.7	14.2	1.1	
41.1	11.6	1.0		41.4	9.5	0.9		41.7	7.4	0.8	
42.1	5.0	0.7		42.4	4.0	0.6		42.8	3.5	0.5	
43.1	0.0	0.0		43.4	0.0	0.0		43.8	0.0	0.0	

228 197AU(P+ALPHA) 35.83 MEV 93 DEG. 31/1/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICR/SR*MEV		MEV		PICR/SR*MEV		MEV		PICR/SR*MEV	
12.9	1.5	0.6		13.2	3.1	0.9		13.5	3.9	1.1	
13.8	4.6	1.1		14.2	6.2	1.3		14.5	7.7	1.4	
14.8	8.3	1.5		15.1	11.9	1.7		15.5	13.4	1.9	
15.8	12.4	1.8		16.1	11.6	1.7		16.4	18.6	2.2	
16.8	15.2	2.0		17.1	22.9	2.4		17.4	22.2	2.4	
17.7	26.8	2.6		18.1	31.2	2.8		18.4	33.0	2.9	
18.7	39.7	3.2		19.0	39.7	3.2		19.4	40.0	3.2	
19.7	44.9	3.4		20.0	39.2	3.2		20.3	47.2	3.5	
20.7	50.5	3.6		21.0	39.4	3.1		21.3	37.6	3.1	
21.6	46.4	3.5		22.0	46.1	3.4		22.3	42.5	3.3	
22.6	53.1	3.7		22.9	44.6	3.4		23.3	47.2	3.5	
23.6	47.2	3.5		23.9	42.0	3.3		24.2	43.3	3.3	
24.6	42.3	3.3		24.9	41.3	3.3		25.2	43.3	3.3	
25.5	45.6	3.4		25.5	46.0	3.5		26.2	45.6	3.4	
26.5	41.3	3.3		26.8	40.7	3.2		27.2	36.6	3.1	
27.5	42.0	3.3		27.8	35.7	2.9		28.1	34.5	3.0	
28.5	29.6	2.8		28.8	35.6	3.1		29.1	30.2	2.8	
29.4	27.3	2.7		29.8	27.3	2.7		30.1	25.6	2.6	
30.4	24.5	2.5		30.7	24.5	2.5		31.1	16.2	2.1	
31.4	22.4	2.4		31.7	17.8	2.1		32.0	17.3	2.1	
32.4	17.0	2.1		32.7	18.3	2.2		33.1	16.8	2.1	
33.3	11.9	1.7		33.7	11.6	1.7		34.0	14.7	1.9	
34.3	12.1	1.8		34.6	11.6	1.7		35.1	10.8	1.7	
35.3	8.3	1.5		35.6	5.9	1.2		35.5	6.3	1.5	
36.3	10.3	1.6		36.6	9.1	1.5		36.9	7.5	1.4	
37.2	7.2	1.4		37.6	6.7	1.3		37.5	5.9	1.2	
38.2	5.7	1.2		38.5	4.9	1.1		38.9	6.2	1.3	
39.2	5.2	1.2		39.5	2.9	1.0		39.8	3.6	1.0	
40.2	2.6	0.8		40.5	1.5	0.6		40.8	1.8	0.7	
41.1	0.8	0.4		41.5	2.1	0.7		41.8	0.8	0.4	
42.1	0.8	0.4		42.4	0.5	0.3		42.8	0.5	0.3	
43.1	0.5	0.4		43.4	0.2	0.2		43.7	0.2	0.2	

135 197AU(P+ALPHA) 36.80 MEV 120 DEG. 22/1/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICR/SR*MEV		MEV		PICR/SR*MEV		MEV		PICR/SR*MEV	
11.9	0.0	0.0		12.3	0.0	0.0		12.6	0.0	0.0	
12.9	0.0	0.0		13.3	0.1	0.3		13.6	0.0	0.0	
14.0	0.4	0.2		14.3	1.2	0.3		14.7	1.2	0.3	
15.0	1.6	0.3		15.4	2.1	0.4		15.7	5.3	0.6	
16.0	6.1	0.7		16.4	8.5	0.8		16.7	9.9	0.8	
17.1	9.6	0.8		17.4	12.1	0.9		17.8	14.2	1.0	
18.1	16.6	1.1		18.4	21.3	1.2		18.8	25.1	1.3	
19.1	27.3	1.4		19.5	31.5	1.5		19.9	32.2	1.5	
20.2	36.0	1.6		20.5	38.7	1.6		20.9	37.3	1.6	
21.2	38.8	1.6		21.5	35.9	1.6		21.9	39.3	1.7	
22.2	39.1	1.6		22.6	35.3	1.6		22.9	36.1	1.6	
23.3	36.4	1.6		23.6	35.9	1.6		24.1	31.4	1.5	
24.3	28.0	1.4		24.6	27.9	1.4		25.0	25.2	1.3	
25.3	26.8	1.4		25.7	25.4	1.3		26.1	26.8	1.4	
26.4	23.1	1.3		26.7	26.4	1.4		27.0	23.7	1.3	
27.4	22.3	1.2		27.7	21.4	1.2		28.1	21.3	1.2	
28.4	20.7	1.2		28.8	19.0	1.1		29.1	15.6	1.0	
29.5	17.1	1.1		29.8	15.5	1.0		30.1	11.5	0.9	
30.5	11.7	0.9		30.8	12.7	0.9		31.2	9.2	0.8	
31.5	11.8	0.9		31.9	9.3	0.8		32.2	9.4	0.8	
32.6	8.6	0.8		32.9	8.1	0.8		33.2	7.8	0.7	
33.6	9.3	0.8		33.9	5.3	0.6		34.3	5.7	0.6	
34.6	4.6	0.6		35.0	5.0	0.6		35.3	5.1	0.6	
35.6	4.5	0.6		35.1	3.4	0.5		35.3	4.0	0.5	
36.7	2.9	0.4		37.0	2.7	0.5		37.4	2.8	0.4	
37.7	0.0	0.0		38.1	0.0	0.0		38.4	0.0	0.0	
38.7	0.0	0.0		39.1	0.0	0.0		39.4	0.0	0.0	
39.8	0.0	0.0		40.1	0.0	0.0		40.5	0.0	0.0	
40.8	0.0	0.0		41.2	0.0	0.0		41.5	0.0	0.0	
41.8	0.0	0.0		42.2	0.0	0.0		42.5	0.0	0.0	
42.9	0.0	0.0		43.2	0.0	0.0		43.6	0.0	0.0	
43.9	0.0	0.0		44.2	0.0	0.0		44.6	0.0	0.0	

233 197AU(P+ALPHA) 36.80 MEV 151 DEG. 3/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		NICR/SR*MEV		MEV		NICR/SR*MEV		MEV		NICR/SR*MEV	
13.3	.7	.4		13.6	1.2	.5		14.3	2.3	.7	
14.3	2.8	.6		14.6	3.5	.9		14.9	4.6	1.0	
15.3	7.8	1.3		15.6	7.1	1.3		15.9	9.2	1.5	
16.3	8.3	1.4		16.6	10.8	1.6		16.9	12.7	1.7	
17.3	15.9	1.9		17.6	15.9	1.9		17.9	22.8	2.3	
18.3	22.3	2.3		18.6	25.1	2.4		18.9	25.3	2.4	
19.3	35.3	2.8		19.6	31.5	2.7		19.9	39.6	3.0	
20.2	39.1	3.0		20.6	38.0	3.0		20.9	37.3	2.9	
21.2	33.6	2.8		21.6	32.5	2.7		21.9	36.4	2.9	
22.2	29.0	2.6		22.6	25.6	2.4		22.9	29.7	2.6	
23.2	24.4	2.4		23.6	23.5	2.3		23.9	27.8	2.3	
24.2	17.7	2.0		24.6	15.8	2.1		24.9	19.8	2.1	
25.2	14.7	1.8		25.6	18.4	2.1		25.9	15.0	1.9	
26.2	13.6	1.8		26.5	17.0	2.0		26.9	14.5	1.8	
27.2	14.5	1.8		27.5	12.9	1.7		27.9	12.9	1.7	
28.2	12.4	1.7		28.6	8.7	1.4		28.9	9.7	1.5	
29.2	9.4	1.5		29.6	8.1	1.4		29.9	6.7	1.2	
30.2	7.6	1.3		30.6	8.3	1.4		30.9	8.1	1.4	
31.2	4.6	1.0		31.6	5.3	1.1		31.9	5.5	1.1	
32.2	3.5	.9		32.6	4.8	1.1		32.9	1.6	.7	
33.2	4.4	1.0		33.6	4.4	1.0		33.9	3.2	.9	
34.1	3.5	.9		34.6	3.7	.9		34.9	3.0	.8	
35.1	1.2	.5		35.6	2.3	.7		35.9	2.3	.7	
36.1	1.8	.7		36.6	2.5	.8		36.9	.9	.5	
37.1	2.1	.7		37.6	.9	.5		37.9	1.4	.6	
38.1	1.2	.5		38.4	1.4	.6		38.9	.9	.5	
39.1	1.4	.6		39.4	.7	.4		39.9	.7	.4	
40.1	.5	.3		40.4	.7	.4		40.9	.0	.0	
41.1	.2	.2		41.4	1.2	.5		41.9	.9	.7	
42.1	.2	.2		42.4	.2	.2		42.9	.0	.0	
43.1	.3	.7		43.4	.1	.1		43.9	.9	.7	
44.1	.0	.0		44.4	.0	.0		44.9	.0	.0	

234 197AU(P+ALPHA) 36.80 MEV 165 DEG. 3/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		NICR/SR*MEV		MEV		NICR/SR*MEV		MEV		NICR/SR*MEV	
13.3	.0	.0		13.6	.0	.0		14.3	.0	.0	
14.3	.2	.2		14.6	.7	.4		14.9	1.9	.7	
15.3	4.9	1.1		15.6	6.2	1.4		15.9	8.2	1.4	
16.3	8.6	1.4		16.6	9.5	1.5		16.9	17.6	2.3	
17.3	19.0	2.1		17.6	17.8	2.0		17.9	17.6	2.0	
18.3	25.7	2.4		18.6	32.2	2.7		18.9	28.2	2.6	
19.3	30.8	2.7		19.6	36.1	2.9		19.9	37.9	3.0	
20.2	35.6	2.9		20.6	39.6	3.0		20.9	40.3	3.1	
21.2	36.3	2.9		21.6	40.9	3.1		21.9	31.2	2.7	
22.2	31.5	2.7		22.6	31.5	2.7		22.9	29.8	2.6	
23.2	27.1	2.3		23.6	27.4	2.3		23.9	20.4	2.2	
24.2	21.1	2.2		24.6	15.7	2.1		24.9	19.2	2.1	
25.2	19.0	2.1		25.6	12.4	1.8		25.9	16.2	1.9	
26.2	11.6	1.6		26.6	11.9	1.6		26.9	11.9	1.6	
27.2	11.6	1.6		27.5	15.0	1.9		27.9	12.0	1.7	
28.2	13.6	1.8		28.6	9.9	1.5		28.9	8.1	1.4	
29.2	9.0	1.4		29.6	8.7	1.2		29.9	6.0	1.2	
30.2	7.9	1.3		30.6	4.4	1.1		30.9	6.0	1.2	
31.2	4.6	1.0		31.6	4.4	1.0		31.9	1.9	.7	
32.2	3.9	1.0		32.6	3.7	.9		32.9	3.2	.9	
33.2	1.6	.6		33.6	3.0	.8		33.9	2.6	.8	
34.1	2.1	.7		34.6	2.3	.7		34.9	1.2	.5	
35.1	3.7	.9		35.6	1.6	.6		35.9	1.9	.7	
36.1	1.6	.6		36.6	1.6	.6		36.9	1.2	.5	
37.1	.7	.4		37.6	2.2	.7		37.9	.5	.3	
38.1	1.4	.6		38.4	1.2	.5		38.9	.9	.5	
39.1	.2	.2		39.4	.2	.2		39.9	.9	.5	
40.1	.9	.5		40.4	.2	.2		40.9	.2	.2	
41.1	.0	.0		41.4	.5	.3		41.9	.0	.0	
42.1	.2	.2		42.4	.2	.2		42.9	.2	.2	
43.1	.0	.0		43.4	.0	.0		43.9	.0	.0	
44.1	.0	.0		44.4	.0	.0		44.9	.0	.0	

191 197AU(P+ALPHA) 39.80 MEV 31 DEG. 2/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		NICR/SR*MEV		MEV		NICR/SR*MEV		MEV		NICR/SR*MEV	
12.1	.0	.0		12.8	.1	.1		13.5	1.1	.5	
14.2	4.9	.7		14.8	10.7	1.0		15.5	17.5	1.2	
16.2	24.4	1.5		16.9	32.1	1.8		17.6	44.3	2.1	
18.2	59.9	2.4		19.0	64.0	2.5		19.7	81.2	2.8	
20.4	94.3	3.0		21.1	111.1	3.3		21.7	131.2	3.6	
22.4	140.8	3.7		22.1	151.2	3.9		22.8	176.8	4.2	
24.5	177.2	4.2		23.2	195.6	4.4		23.9	187.6	4.3	
26.6	104.4	4.5		24.2	199.4	4.4		24.9	199.0	4.4	
28.6	199.3	4.4		25.3	191.8	4.3		26.1	191.1	4.3	
30.7	185.7	4.3		31.4	175.9	4.1		32.1	172.7	4.1	
32.8	161.1	4.0		31.4	141.1	3.7		34.1	129.9	3.6	
34.8	126.3	3.5		35.5	114.7	3.4		36.7	114.2	3.2	
36.9	111.6	3.3		37.6	119.5	3.3		38.3	102.7	3.2	
39.0	63.7	3.0		39.7	91.2	3.0		40.3	83.2	2.6	
41.0	72.7	2.7		41.7	72.4	2.7		42.4	65.1	2.5	
43.1	48.7	2.2		43.8	34.6	1.8		44.5	20.2	1.4	
45.2	10.2	1.0		45.9	7.3	.8		46.5	4.0	.6	
47.2	1.8	.4		47.9	2.4	.5		48.6	1.5	.4	
49.3	1.0	.3		50.1	.7	.3		50.7	.5	.2	
51.4	.0	.0		52.1	.2	.2		52.7	.0	.0	
53.4	.0	.0		54.1	.1	.1		54.9	.1	.1	
55.5	.0	.0		56.2	.0	.0		56.9	.0	.0	
57.6	.0	.0		58.3	.1	.1		58.9	.1	.1	
59.6	.0	.0		61.3	.0	.0		61.0	.0	.0	
61.7	.0	.0		62.4	.1	.1		63.1	.0	.0	
62.8	.0	.0		64.5	.0	.0		65.1	.0	.0	
65.8	.0	.0		66.5	.1	.1		67.1	.0	.0	
67.9	.0	.0		68.6	.0	.0		69.2	.0	.0	
70.0	.0	.0		70.7	.1	.1		71.3	.0	.0	
72.0	.0	.0		72.7	.0	.0		73.8	.0	.0	
74.1	.0	.0		74.8	.1	.1		75.5	.0	.0	
76.2	.0	.0		76.9	.0	.0		77.5	.0	.0	

197 197AU(P+ALPHA) 39.80 MEV 45 DEG. 2/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		NICR/SP*MEV		MEV		NICR/SP*MEV		MEV		NICR/SP*MEV	
12.1	.0	.0		12.8	.0	.0		13.5	.0	.0	
14.2	3.4	.6		14.8	7.3	.9		15.5	12.7	1.1	
16.2	18.2	1.3		16.9	26.4	1.7		17.6	32.1	1.8	
18.2	44.8	2.1		19.0	55.2	2.3		19.7	63.2	2.5	
20.4	76.0	2.7		21.1	82.0	2.8		21.7	107.7	3.2	
22.4	119.1	3.4		22.1	129.4	3.6		22.8	141.9	3.7	
24.5	148.8	3.8		23.2	148.8	3.8		23.9	150.8	3.8	
26.6	153.8	3.9		24.2	147.8	3.8		24.9	144.1	3.8	
28.6	136.4	3.7		25.3	139.2	3.7		26.1	129.4	3.6	
30.7	126.3	3.5		31.4	119.9	3.4		32.1	115.1	3.4	
32.8	96.2	3.1		31.4	86.4	3.0		34.1	80.5	2.8	
34.8	77.7	2.9		35.5	65.5	2.5		36.7	66.5	2.6	
36.9	67.4	2.8		37.6	61.5	2.4		38.3	53.4	2.2	
39.0	51.9	2.3		39.7	44.2	2.1		40.3	59.8	2.1	
41.0	37.2	1.9		41.7	31.5	1.7		42.4	29.4	1.7	
43.1	17.6	1.3		43.8	11.9	.9		44.5	3.5	.6	
45.2	.6	.3		45.9	3.1	.3		46.5	.0	.0	
47.2	.1	.1		47.9	.1	.1		48.6	.0	.0	
49.3	.0	.0		50.1	.0	.0		50.7	.0	.0	
51.4	.1	.1		52.1	.0	.0		52.7	.0	.0	
53.4	.0	.0		54.1	.0	.0		54.9	.0	.0	
55.5	.1	.1		56.2	.1	.1		56.9	.0	.0	
57.6	.1	.1		58.3	.1	.1		58.9	.0	.0	
59.6	.1	.1		61.3	.1	.1		61.0	.1	.1	
61.7	.0	.0		62.4	.0	.0		63.1	.0	.0	
62.8	.1	.1		64.5	.1	.1		65.1	.0	.0	
65.8	.0	.0		66.5	.1	.1		67.1	.0	.0	
67.9	.1	.1		68.6	.1	.1		69.2	.0	.0	
70.0	.1	.1		70.7	.1	.1		71.3	.0	.0	
72.0	.1	.1		72.7	.1	.1		73.8	.0	.0	
74.1	.0	.0		74.8	.0	.0		75.5	.0	.0	
76.2	.1	.1		76.9	.1	.1		77.5	.0	.0	

189 197AU(P,ALPHA) 39.81 MEV 51 DEG. 2/4/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	.0	.0	.0	13.5	2.7	.5		14.3	.0	.0	.0
14.3	5.5	.7	.0	15.7	11.1	1.0		16.4	15.9	1.3	.0
16.4	15.2	1.2	.0	17.1	24.7	1.6		18.5	34.1	1.8	.0
18.5	36.0	1.9	.0	19.9	48.1	2.2		20.6	57.5	2.4	.0
20.6	65.9	2.5	.0	21.3	79.5	2.8		22.6	73.6	2.7	.0
22.6	96.2	3.1	.0	23.3	96.7	3.1		24.7	72.5	2.7	.0
24.7	104.9	3.2	.0	25.4	115.3	3.2		26.8	77.2	2.7	.0
26.8	102.5	3.2	.0	27.5	102.6	3.2		28.9	65.4	2.5	.0
28.9	94.4	3.0	.0	29.6	92.4	3.1		30.9	51.3	2.2	.0
30.9	76.1	2.7	.0	31.6	72.0	2.7		33.0	31.4	1.8	.0
33.0	58.8	2.4	.0	33.7	47.1	2.1		35.1	24.2	1.6	.0
35.1	39.1	2.0	.0	35.8	34.7	1.6		37.2	17.0	1.2	.0
37.2	29.2	1.7	.0	37.9	29.3	1.7		38.3	12.5	1.1	.0
38.3	26.7	1.6	.0	39.9	15.2	1.4		41.3	5.9	.8	.0
41.3	17.5	1.3	.0	42.1	15.2	1.2		43.4	3.4	.6	.0
43.4	6.3	.8	.0	44.1	2.2	.5		44.5	.2	.1	.0
44.5	.3	.2	.0	46.2	.0	.0		47.6	.2	.1	.0
47.6	.0	.0	.0	48.6	.0	.0		49.6	.0	.0	.0
49.6	.0	.0	.0	51.1	.0	.0		51.7	.0	.0	.0
51.7	.0	.0	.0	53.1	.0	.0		53.8	.0	.0	.0
53.8	.0	.0	.0	55.2	.0	.0		55.9	.0	.0	.0
55.9	.0	.0	.0	57.2	.0	.0		57.9	.0	.0	.0
57.9	.0	.0	.0	59.3	.0	.0		60.0	.0	.0	.0
60.0	.0	.0	.0	61.4	.0	.0		62.1	.0	.0	.0
62.1	.0	.0	.0	63.5	.0	.0		64.2	.0	.0	.0
64.2	.0	.0	.0	65.5	.0	.0		66.2	.0	.0	.0
66.2	.0	.0	.0	67.6	.0	.0		68.3	.0	.0	.0
68.3	.0	.0	.0	69.7	.0	.0		70.4	.0	.0	.0
70.4	.0	.0	.0	71.8	.0	.0		72.5	.0	.0	.0
72.5	.0	.0	.0	73.6	.0	.0		74.5	.0	.0	.0
74.5	.0	.0	.0	75.2	.0	.0		76.6	.0	.0	.0
76.6	.0	.0	.0	76.6	.0	.0					

189 197AU(P,ALPHA) 39.81 MEV 51 DEG. 2/4/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	.0	.0	.0	13.6	2.0	.4		14.3	.0	.0	.0
14.3	3.7	.6	.0	15.7	8.9	.9		16.4	15.9	1.3	.0
16.4	15.9	1.3	.0	17.1	22.2	1.5		18.5	34.1	1.8	.0
18.5	34.1	1.8	.0	19.2	41.7	2.1		20.6	57.5	2.4	.0
20.6	57.5	2.4	.0	21.2	71.6	2.7		22.6	73.6	2.7	.0
22.6	73.6	2.7	.0	23.3	74.9	2.7		24.7	72.5	2.7	.0
24.7	72.5	2.7	.0	25.4	71.6	2.6		26.8	77.2	2.7	.0
26.8	77.2	2.7	.0	27.5	68.5	2.6		28.9	65.4	2.5	.0
28.9	65.4	2.5	.0	29.6	58.5	2.4		30.9	51.3	2.2	.0
30.9	51.3	2.2	.0	31.6	44.1	2.2		33.0	31.4	1.8	.0
33.0	31.4	1.8	.0	33.7	31.2	1.7		35.1	24.2	1.6	.0
35.1	24.2	1.6	.0	35.8	21.1	1.4		37.2	17.0	1.2	.0
37.2	17.0	1.2	.0	37.9	13.9	1.2		38.3	12.5	1.1	.0
38.3	12.5	1.1	.0	39.9	11.2	1.1		41.3	5.9	.8	.0
41.3	5.9	.8	.0	42.1	7.7	.6		43.4	3.4	.6	.0
43.4	3.4	.6	.0	44.1	1.9	.4		44.5	.2	.1	.0
44.5	.2	.1	.0	46.2	.0	.0		47.6	.2	.1	.0
47.6	.2	.1	.0	48.6	.0	.0		49.6	.0	.0	.0
49.6	.0	.0	.0	51.1	.0	.0		51.7	.0	.0	.0
51.7	.0	.0	.0	53.1	.0	.0		53.8	.0	.0	.0
53.8	.0	.0	.0	55.2	.0	.0		55.9	.0	.0	.0
55.9	.0	.0	.0	57.2	.0	.0		57.9	.0	.0	.0
57.9	.0	.0	.0	59.3	.0	.0		60.0	.0	.0	.0
60.0	.0	.0	.0	61.4	.0	.0		62.1	.0	.0	.0
62.1	.0	.0	.0	63.5	.0	.0		64.2	.0	.0	.0
64.2	.0	.0	.0	65.5	.0	.0		66.2	.0	.0	.0
66.2	.0	.0	.0	67.6	.0	.0		68.3	.0	.0	.0
68.3	.0	.0	.0	69.7	.0	.0		70.4	.0	.0	.0
70.4	.0	.0	.0	71.8	.0	.0		72.5	.0	.0	.0
72.5	.0	.0	.0	73.6	.0	.0		74.5	.0	.0	.0
74.5	.0	.0	.0	75.2	.0	.0		76.6	.0	.0	.0
76.6	.0	.0	.0	76.6	.0	.0					

224 197AU(P,ALPHA) 39.81 MEV 51 DEG. 2/4/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.8	.1	.0	.0	14.2	.7	.4		14.5	3.5	.9	.0
14.8	5.3	1.1	.0	15.1	13.5	1.6		15.6	12.1	1.7	.0
15.8	12.3	1.7	.0	16.1	14.4	1.8		16.4	20.7	2.2	.0
16.8	20.4	2.2	.0	17.1	25.5	2.4		17.4	29.5	2.6	.0
17.7	31.1	2.7	.0	18.1	38.1	3.1		18.4	39.5	3.1	.0
18.7	40.6	3.1	.0	19.0	41.1	3.1		19.4	49.7	3.4	.0
19.7	52.1	3.5	.0	20.1	47.5	3.3		20.5	51.3	3.5	.0
20.7	57.6	3.7	.0	21.0	56.4	3.6		21.3	58.5	3.7	.0
21.6	58.5	3.7	.0	22.1	55.1	3.5		22.3	51.6	3.4	.0
22.6	52.5	3.5	.0	22.9	57.2	3.5		23.2	51.8	3.5	.0
23.6	45.3	3.2	.0	23.0	52.9	3.5		24.2	53.4	3.5	.0
24.6	40.0	3.4	.0	24.0	55.5	3.5		25.2	53.4	3.5	.0
25.5	46.2	3.3	.0	25.0	45.3	3.3		26.2	42.1	3.1	.0
26.5	47.3	3.3	.0	26.0	34.6	3.1		27.2	40.6	3.1	.0
27.5	38.5	3.0	.0	27.0	41.5	3.1		28.1	43.4	3.2	.0
28.5	41.3	3.1	.0	28.0	31.8	3.1		29.1	44.3	3.2	.0
29.4	43.9	3.2	.0	29.5	34.3	2.3		30.1	36.9	2.9	.0
30.4	33.9	2.8	.0	30.7	30.6	2.7		31.3	28.6	2.6	.0
31.4	30.9	2.7	.0	31.7	25.2	2.5		32.0	26.7	2.5	.0
32.4	24.6	2.4	.0	32.7	22.4	2.2		33.0	11.8	2.3	.0
33.3	16.9	2.1	.0	33.7	15.3	1.9		34.0	15.5	1.9	.0
34.3	15.1	1.9	.0	34.6	14.6	1.8		35.0	16.2	1.9	.0
35.3	11.4	1.6	.0	35.5	11.2	1.6		35.9	9.3	1.5	.0
36.3	11.1	1.6	.0	36.6	7.7	1.2		36.6	7.4	1.2	.0
37.2	11.1	1.6	.0	37.5	7.1	1.4		37.7	7.4	1.3	.0
38.2	6.3	1.2	.0	38.5	6.2	1.2		38.9	5.6	1.1	.0
39.2	7.2	1.3	.0	39.5	5.5	1.1		39.8	5.3	1.1	.0
40.2	4.6	1.0	.0	40.5	5.6	1.2		40.8	6.5	1.2	.0
41.1	3.7	.9	.0	41.5	5.1	.8		41.8	3.1	.8	.0
42.1	3.9	1.0	.0	42.0	2.3	.7		42.6	2.1	.7	.0
43.1	.9	.5	.0	43.4	.7	.4		43.7	.8	.2	.0
44.1	.0	.0	.0	44.4	.0	.0		44.9	.0	.0	.0

189 197AU(P,ALPHA) 39.81 MEV 51 DEG. 2/4/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV	MEV	MEV	MICR/SR*MEV	MEV	MEV	MICR/SR*MEV	MEV
12.5	.0	.0	13.2	.0	.0	13.5	.0	.0
14.5	2.1	.4	15.3	3.4	.5	16.1	5.7	.7
16.7	9.9	.9	17.4	23.5	1.4	18.1	25.4	1.5
18.8	36.6	1.7	19.5	40.2	1.8	20.2	47.4	2.1
20.8	50.6	2.1	21.4	51.6	2.2	22.2	52.3	2.1
22.9	40.6	2.1	23.6	45.7	2.1	24.3	45.7	2.1
25.0	30.9	1.9	25.7	31.5	1.8	26.4	35.1	1.7
27.1	36.7	1.7	27.0	32.7	1.6	28.5	27.9	1.5
29.2	24.0	1.4	29.9	21.2	1.4	30.6	24.2	1.4
31.3	21.1	1.3	32.1	17.5	1.2	32.7	14.2	1.1
33.4	11.9	1.0	34.1	10.7	.9	34.8	9.9	.9
35.5	9.1	.9	35.0	6.7	.7	36.9	7.1	.8
37.6	6.7	.7	38.2	5.5	.7	38.5	3.8	.6
39.6	4.3	.6	40.3	3.2	.4	41.1	2.4	.4
41.7	2.0	.4	42.0	2.2	.3	43.1	.9	.3
43.8	.7	.2	43.5	.1	.1	45.2	.1	.1
45.9	.0	.0	46.4	.0	.0	47.3	.0	.0
48.1	.0	.0	48.7	.0	.0	49.8	.0	.0
50.1	.0	.0	50.9	.0	.0	51.5	.0	.0
52.2	.0	.0	52.9	.0	.0	53.6	.0	.0
54.3	.0	.0	55.1	.0	.0	55.7	.0	.0
55.3	.0	.0	56.1	.0	.0	57.7	.0	.0
58.4	.0	.0	59.1	.0	.0	59.5	.0	.0
60.5	.0	.0	61.3	.0	.0	61.9	.0	.0
62.6	.0	.0	63.3	.0	.0	64.1	.0	.0
64.7	.0	.0	65.1	.0	.0	66.1	.0	.0
66.8	.0	.0	67.5	.0	.0	68.2	.0	.0
68.9	.0	.0	69.6	.0	.0	70.3	.0	.0
71.0	.0	.0	71.7	.0	.0	72.4	.0	.0
73.1	.0	.0	73.7	.0	.0	74.1	.0	.0
75.1	.0	.0	74.6	.0	.0	76.5	.0	.0
77.2	.0	.0	77.0	.0	.0	78.6	.0	.0

195 19'AUIP+ALPHA1 39.80 MEV 123 DEG. 2/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.7	.0	.0	.0	13.4	.0	.0	.0	14.1	1.3	.3	.3
14.8	2.3	.4	.4	15.5	4.0	.6	.6	16.2	6.0	.7	.7
15.9	12.7	1.1	1.1	17.4	20.5	1.3	1.3	18.3	23.0	1.4	1.4
19.0	29.8	1.6	1.6	19.7	40.7	1.6	1.6	21.4	46.7	2.0	2.0
21.1	51.7	2.1	2.1	21.8	52.7	2.1	2.1	22.5	47.0	2.1	2.1
23.2	44.1	1.9	1.9	23.9	37.5	1.8	1.8	24.6	33.7	1.7	1.7
25.3	33.3	1.7	1.7	26.1	23.3	1.5	1.5	26.7	24.4	1.4	1.4
27.4	26.6	1.5	1.5	27.1	21.4	1.2	1.2	28.0	22.6	1.4	1.4
29.5	16.1	1.2	1.2	30.2	18.7	1.2	1.2	30.9	16.9	1.2	1.2
31.6	12.1	1.0	1.0	32.3	14.9	1.0	1.0	33.4	9.7	.9	.9
33.7	9.1	.9	.9	34.4	8.1	.8	.8	35.1	6.7	.7	.7
35.6	4.3	.6	.6	36.5	4.8	.6	.6	37.2	3.5	.5	.5
37.9	3.8	.6	.6	38.5	2.8	.5	.5	39.3	2.8	.5	.5
40.0	1.5	.4	.4	40.7	2.0	.5	.5	41.4	1.6	.4	.4
42.1	1.1	.3	.3	42.8	.7	.2	.2	43.5	.3	.2	.2
44.2	.1	.1	.1	44.9	.0	.0	.0	45.6	.1	.1	.1
46.3	.0	.0	.0	47.1	.0	.0	.0	47.7	.0	.0	.0
48.4	.0	.0	.0	49.1	.0	.0	.0	49.8	.0	.0	.0
51.5	.0	.0	.0	51.2	.0	.0	.0	51.9	.0	.0	.0
52.6	.0	.0	.0	53.3	.0	.0	.0	54.0	.0	.0	.0
54.7	.0	.0	.0	55.8	.0	.0	.0	56.1	.0	.0	.0
56.8	.0	.0	.0	57.5	.0	.0	.0	58.2	.0	.0	.0
58.9	.0	.0	.0	59.6	.0	.0	.0	60.3	.0	.0	.0
61.0	.0	.0	.0	61.7	.0	.0	.0	62.4	.0	.0	.0
63.1	.0	.0	.0	63.8	.0	.0	.0	64.5	.0	.0	.0
65.2	.0	.0	.0	65.9	.0	.0	.0	66.6	.0	.0	.0
67.3	.0	.0	.0	68.1	.0	.0	.0	68.7	.0	.0	.0
69.4	.0	.0	.0	70.1	.0	.0	.0	71.8	.0	.0	.0
71.5	.0	.0	.0	72.2	.0	.0	.0	72.9	.0	.0	.0
73.6	.0	.0	.0	74.3	.0	.0	.0	75.1	.0	.0	.0
75.7	.0	.0	.0	76.4	.0	.0	.0	77.1	.0	.0	.0
77.8	.0	.0	.0	78.5	.0	.0	.0	79.2	.0	.0	.0

196 19'AUIP+ALPHA1 35.80 MEV 135 DEG. 2/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.7	.0	.0	.0	13.4	.0	.0	.0	14.1	.0	.0	.0
14.8	1.3	.3	.3	15.5	3.4	.5	.5	16.2	5.4	.7	.7
15.9	15.1	1.1	1.1	17.4	16.4	1.2	1.2	18.3	22.2	1.4	1.4
19.0	32.9	1.7	1.7	19.7	41.5	1.8	1.8	21.4	50.2	2.1	2.1
21.1	52.0	2.1	2.1	21.8	49.4	2.0	2.0	22.5	44.9	1.9	1.9
23.2	39.2	1.8	1.8	23.9	34.2	1.7	1.7	24.6	31.3	1.6	1.6
25.3	25.6	1.5	1.5	26.1	27.9	1.4	1.4	26.7	22.9	1.4	1.4
27.4	17.1	1.2	1.2	27.1	17.4	1.2	1.2	28.0	17.2	1.2	1.2
29.5	15.6	1.1	1.1	30.2	14.5	1.0	1.0	30.9	11.5	1.0	1.0
31.6	11.9	1.0	1.0	32.3	8.5	.8	.8	33.4	8.3	.8	.8
33.7	6.0	.7	.7	34.4	5.0	.6	.6	35.1	5.4	.7	.7
35.6	3.1	.5	.5	36.5	2.5	.5	.5	37.2	2.3	.4	.4
37.9	2.4	.5	.5	38.5	1.6	.4	.4	39.3	1.6	.3	.3
40.0	1.2	.3	.3	40.7	1.3	.3	.3	41.4	.9	.3	.3
42.1	.3	.2	.2	42.8	.3	.2	.2	43.5	.2	.1	.1
44.2	.1	.1	.1	44.9	.1	.1	.1	45.6	.1	.1	.1
46.3	.0	.0	.0	47.1	.0	.0	.0	47.7	.0	.0	.0
48.4	.0	.0	.0	49.1	.0	.0	.0	49.8	.0	.0	.0
51.5	.0	.0	.0	51.2	.0	.0	.0	51.9	.0	.0	.0
52.6	.0	.0	.0	53.3	.0	.0	.0	54.0	.0	.0	.0
54.7	.0	.0	.0	55.8	.0	.0	.0	56.1	.0	.0	.0
56.8	.0	.0	.0	57.5	.0	.0	.0	58.2	.0	.0	.0
58.9	.0	.0	.0	59.6	.0	.0	.0	60.3	.0	.0	.0
61.0	.0	.0	.0	61.7	.0	.0	.0	62.4	.0	.0	.0
63.1	.0	.0	.0	63.8	.0	.0	.0	64.5	.0	.0	.0
65.2	.0	.0	.0	65.9	.0	.0	.0	66.6	.0	.0	.0
67.3	.0	.0	.0	68.1	.0	.0	.0	68.7	.0	.0	.0
69.4	.0	.0	.0	70.1	.0	.0	.0	71.8	.0	.0	.0
71.5	.0	.0	.0	72.2	.0	.0	.0	72.9	.0	.0	.0
73.6	.0	.0	.0	74.3	.0	.0	.0	75.1	.0	.0	.0
75.7	.0	.0	.0	76.4	.0	.0	.0	77.1	.0	.0	.0
77.8	.0	.0	.0	78.5	.0	.0	.0	79.2	.0	.0	.0

197 19'AUIP+ALPHA1 39.81 MEV 151 DEG. 2/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.9	.0	.0	.0	13.6	.0	.0	.0	14.3	.0	.0	.0
15.1	1.3	.3	.3	15.5	2.9	.5	.5	16.5	6.7	.7	.7
17.2	13.4	1.1	1.1	17.9	19.1	1.3	1.3	18.6	25.7	1.5	1.5
19.3	39.0	1.8	1.8	20.0	35.7	1.8	1.8	20.7	51.7	2.1	2.1
21.4	48.1	2.0	2.0	22.1	47.4	2.0	2.0	22.8	46.9	2.0	2.0
23.5	39.2	1.8	1.8	24.2	35.7	1.7	1.7	24.9	27.4	1.5	1.5
25.6	22.3	1.4	1.4	26.3	14.6	1.2	1.2	27.1	13.0	1.2	1.2
27.7	17.1	1.2	1.2	28.4	11.7	1.0	1.0	29.1	12.7	1.0	1.0
29.8	13.7	1.1	1.1	31.5	11.5	.9	.9	31.2	9.1	.9	.9
32.0	7.3	.8	.8	32.7	6.5	.7	.7	33.4	5.4	.6	.6
34.1	3.9	.6	.6	34.3	4.6	.6	.6	35.5	3.9	.6	.6
36.2	2.9	.5	.5	36.9	2.2	.4	.4	37.6	1.6	.4	.4
38.3	1.4	.3	.3	39.1	.4	.3	.3	39.7	.9	.3	.3
40.4	1.2	.3	.3	41.1	.5	.2	.2	41.8	.2	.2	.2
42.5	.4	.2	.2	43.2	.2	.1	.1	43.9	.0	.0	.0
44.6	.0	.0	.0	45.3	.1	.1	.1	46.0	.0	.0	.0
46.7	.0	.0	.0	47.4	.0	.0	.0	48.1	.0	.0	.0
48.8	.0	.0	.0	49.6	.0	.0	.0	50.3	.0	.0	.0
51.0	.0	.0	.0	51.7	.0	.0	.0	52.4	.0	.0	.0
53.1	.0	.0	.0	53.8	.0	.0	.0	54.5	.0	.0	.0
55.2	.0	.0	.0	55.9	.0	.0	.0	56.5	.0	.0	.0
57.3	.0	.0	.0	59.6	.0	.0	.0	58.7	.0	.0	.0
59.4	.0	.0	.0	61.1	.0	.0	.0	61.8	.0	.0	.0
61.5	.0	.0	.0	62.2	.0	.0	.0	62.9	.0	.0	.0
63.6	.0	.0	.0	64.3	.0	.0	.0	65.1	.0	.0	.0
65.7	.0	.0	.0	66.4	.0	.0	.0	67.1	.0	.0	.0
67.9	.0	.0	.0	68.6	.0	.0	.0	69.3	.0	.0	.0
70.0	.0	.0	.0	71.7	.0	.0	.0	71.4	.0	.0	.0
72.1	.0	.0	.0	72.8	.0	.0	.0	73.5	.0	.0	.0
74.2	.0	.0	.0	74.9	.0	.0	.0	75.6	.0	.0	.0
76.3	.0	.0	.0	77.1	.0	.0	.0	77.7	.0	.0	.0
78.4	.0	.0	.0	79.1	.0	.0	.0	79.8	.0	.0	.0

222 19'AUIP+ALPHA1 35.80 MEV 162.5 DEG. 2/4/70

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	.0	.0	.0	13.6	.0	.0	.0	14.3	.0	.0	.0
14.3	.1	.1	.1	14.6	.3	.3	.3	14.9	2.1	.7	.7
15.3	4.0	1.0	1.0	15.6	11.1	1.6	1.6	15.9	13.2	1.8	1.8
16.3	13.2	1.8	1.8	16.6	17.1	2.0	2.0	16.9	19.9	2.2	2.2
17.2	22.9	2.3	2.3	17.6	24.1	2.4	2.4	17.9	24.8	2.5	2.5
18.2	32.9	2.8	2.8	18.6	37.1	3.0	3.0	18.9	42.8	3.2	3.2
19.2	45.6	3.3	3.3	19.5	43.7	3.2	3.2	19.8	51.3	3.5	3.5
20.2	51.8	3.5	3.5	20.5	52.7	3.5	3.5	20.8	49.9	3.4	3.4
21.2	47.7	3.2	3.2	21.5	41.8	3.1	3.1	21.8	46.1	3.3	3.3
22.2	37.4	3.0	3.0	22.5	34.3	2.8	2.8	22.8	33.6	2.8	2.8
23.1	27.9	2.7	2.7	23.5	32.6	2.8	2.8	23.8	22.5	2.3	2.3
24.1	25.5	2.5	2.5	24.5	27.1	2.5	2.5	24.8	19.6	2.2	2.2
25.1	14.4	2.1	2.1	25.4	17.2	2.0	2.0	25.8	20.3	2.2	2.2
26.1	18.2	2.1	2.1	26.4	13.3	2.0	2.0	26.8	18.2	2.1	2.1
27.1	16.5	2.0	2.0	27.4	14.1	1.7	1.7	27.7	13.2	1.8	1.8
28.1	13.7	1.8	1.8	28.4	11.6	1.6	1.6	28.7	11.1	1.6	1.6
29.0	10.4	1.6	1.6	29.4	7.6	1.2	1.2	29.7	9.5	1.5	1.5
30.0	8.1	1.4	1.4	30.4	6.1	1.2	1.2	30.7	6.6	1.3	1.3
31.0	5.7	1.2	1.2	31.7	7.2	1.2	1.2	31.7	4.7	1.1	1.1
32.0	7.6	1.3	1.3	32.3	6.9	1.1	1.1	32.7	4.7	1.1	1.1
33.0	4.7	1.1	1.1	33.3	4.0	.8	.8	33.6	2.8	.8	.8
34.0	2.8	.8	.8	34.5	4.7	1.1	1.1	34.6	2.8	.8	.8
35.0	5.4	1.1	1.1	35.3	2.1	.7	.7	35.6	1.9	.7	.7
36.0	2.6	.8	.8	36.3	3.1	.9	.9	36.6	2.4	.7	.7
37.0	1.7	.5	.5	37.2	2.5	.5	.5	37.6	1.2	.5	.5
38.0	1.4	.6	.6	38.2	1.4	.6	.6	38.6	.7	.4	.4
39.0	.9	.5	.5	38.7	1.7	.6	.6	39.5	.9	.4	.4
39.9	.5	.3	.3	40.2	1.4	.6	.6	40.5	.7	.4	.4
40.9	.9	.5	.5	40.5	.5	.3	.3	41.5	.5	.3	.3
41.8	.2	.2	.2	40.7	.3	.2	.2	42.5	.3	.3	.3
42.8	.7	.4	.4	42.5	.5	.3	.3	42.1	.4	.3	.3
43.8	.1	.1	.1	44.1	.3	.3	.3	44.5	.9	.4	.4

156 197AU(P+ALPHA) 41.15 KEV 45 DEG. 23/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICT/SR*MEV		MEV		PICT/SR*MEV		MEV		PICT/SR*MEV	
11.5	5.4	1.8		11.3	6.7	1.9		12.2	8.6	1.1	
12.5	9.5	1.1		12.8	9.5	1.1		13.1	13.0	1.3	
13.4	12.7	1.3		13.7	13.9	1.4		14.1	15.5	1.4	
14.4	18.5	1.6		14.7	20.9	1.8		15.0	21.6	1.7	
15.3	23.2	1.8		15.7	27.5	1.9		16.3	32.2	2.1	
16.3	35.4	2.2		16.6	42.1	2.4		16.9	44.6	2.4	
17.2	51.1	2.6		17.6	55.7	2.7		17.9	61.6	2.8	
18.2	66.3	3.0		18.5	67.8	3.0		18.8	79.2	3.3	
19.1	84.3	3.4		19.5	91.5	3.5		19.9	111.5	3.7	
20.1	104.2	3.7		20.8	111.9	3.6		20.7	119.9	4.0	
21.0	117.4	4.0		21.4	121.1	4.1		21.7	129.2	4.1	
22.0	130.1	4.2		22.2	131.4	4.3		22.6	140.7	4.3	
22.9	139.2	4.3		23.3	141.1	4.3		23.6	136.6	4.3	
23.9	155.8	4.6		24.2	145.1	4.5		24.5	142.2	4.4	
24.8	154.6	4.6		25.2	149.1	4.4		25.5	139.7	4.3	
25.8	153.3	4.5		26.1	144.1	4.4		26.4	145.0	4.4	
26.7	142.1	4.4		27.1	135.6	4.3		27.4	137.0	4.3	
27.7	140.4	4.3		28.0	132.8	4.2		28.3	130.5	4.2	
28.6	133.6	4.2		29.1	115.9	3.9		29.3	119.5	4.1	
29.6	123.8	4.1		29.9	114.4	3.9		30.2	114.5	3.9	
30.5	111.4	3.9		30.8	97.1	3.6		31.2	98.3	3.6	
31.5	100.6	3.7		31.8	88.2	3.5		32.1	84.3	3.4	
32.5	89.5	3.5		32.8	81.6	3.3		33.1	76.9	3.2	
33.4	72.7	3.1		33.7	79.5	3.2		34.0	62.6	2.9	
34.4	64.3	2.9		34.7	69.4	3.1		35.1	61.6	2.9	
35.3	56.7	2.8		35.6	58.8	2.8		35.9	53.9	2.7	
36.3	51.1	2.6		36.6	49.7	2.6		36.9	51.8	2.6	
37.2	46.4	2.5		37.5	43.2	2.4		37.8	44.2	2.4	
38.2	35.1	2.2		38.5	34.6	2.2		38.9	37.1	2.2	
39.1	34.3	2.1		39.4	27.3	1.9		39.7	30.5	2.0	
40.1	25.2	1.8		40.4	24.3	1.8		40.7	18.2	1.6	
41.0	17.0	1.5		41.2	16.1	1.5		41.6	12.1	1.2	

157 197AU(P+ALPHA) 41.15 KEV 60 DEG. 23/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICT/SR*MEV		MEV		PICT/SR*MEV		MEV		PICT/SR*MEV	
11.7	1.0	1.1		12.1	1.2	1.3		12.4	2.6	1.5	
12.7	3.8	1.6		13.1	3.4	1.6		13.5	7.9	1.9	
13.7	9.3	1.0		14.0	11.0	1.1		14.3	11.2	1.1	
14.6	16.1	1.3		14.9	17.9	1.3		15.2	18.3	1.4	
15.6	19.8	1.4		15.9	27.4	1.5		16.2	28.1	1.7	
15.6	23.1	1.7		16.3	31.6	1.8		17.2	36.2	1.9	
17.5	38.7	2.0		17.8	41.5	2.1		18.1	50.8	2.3	
18.4	52.9	2.3		18.9	59.8	2.4		19.1	66.1	2.6	
19.4	66.7	2.6		19.7	72.8	2.7		20.0	75.4	2.8	
20.3	79.2	2.8		20.7	79.9	2.8		21.1	84.9	2.9	
21.3	86.4	2.9		21.6	91.4	3.1		21.5	100.8	3.2	
22.3	99.3	3.2		22.6	113.6	3.2		22.9	116.4	3.3	
23.2	113.2	3.4		23.5	115.6	3.3		23.5	108.1	3.2	
24.2	110.7	3.3		24.5	110.3	3.2		24.4	99.9	3.2	
25.1	104.7	3.2		25.5	105.8	3.2		25.8	108.8	3.2	
26.1	116.3	3.3		26.4	98.7	3.1		26.7	93.1	3.1	
27.0	96.4	3.1		27.4	91.2	3.1		27.7	91.2	3.0	
28.0	91.6	3.0		28.3	88.3	3.1		28.6	78.2	2.8	
29.0	78.0	2.8		29.3	87.2	2.9		29.6	61.8	2.5	
29.9	77.2	2.8		30.2	68.4	2.6		30.6	71.9	2.7	
30.9	65.6	2.6		31.2	64.2	2.5		31.5	62.1	2.5	
31.8	57.3	2.4		32.2	51.3	2.2		32.5	52.6	2.3	
32.8	46.1	2.1		33.1	45.5	2.1		33.4	41.4	2.0	
33.7	37.7	1.9		34.1	41.9	2.1		34.8	38.9	2.0	
34.7	34.2	1.9		35.0	35.2	1.9		35.3	33.2	1.8	
35.7	31.7	1.8		36.1	31.4	1.8		36.3	27.6	1.7	
36.6	24.3	1.6		36.9	26.4	1.6		37.2	22.9	1.5	
37.6	19.4	1.4		37.9	21.3	1.4		38.2	17.3	1.3	
38.5	17.1	1.3		38.9	16.8	1.3		39.2	14.6	1.2	
39.5	17.1	1.3		39.8	19.1	1.2		40.1	13.0	1.1	
40.4	11.6	1.1		40.8	7.1	1.1		41.1	8.1	1.0	
41.4	6.9	1.0		41.7	4.3	1.0		42.1	3.6	1.0	

221 197AU(P+ALPHA) 41.15 KEV 93 DEG. 29/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICT/SR*MEV		MEV		PICT/SR*MEV		MEV		PICT/SR*MEV	
13.8	1.1	1.1		14.2	1.5	1.3		14.5	2.6	1.3	
14.8	4.5	1.0		15.1	1.9	1.6		15.5	14.0	1.8	
15.3	15.4	1.9		16.1	19.2	2.1		16.4	21.2	2.2	
16.8	25.1	2.4		17.1	24.7	2.4		17.4	35.3	2.5	
17.7	28.4	2.6		18.1	35.1	2.9		18.4	46.0	3.3	
18.7	48.6	3.4		19.0	55.6	3.7		19.4	61.2	3.8	
19.7	61.9	3.8		20.0	65.9	4.0		20.3	63.8	3.9	
20.7	63.8	3.9		21.0	63.8	3.9		21.3	59.5	3.8	
21.6	61.2	3.8		22.0	68.1	3.9		22.3	59.7	3.8	
22.6	62.8	3.9		22.9	52.1	3.5		23.2	64.0	3.9	
23.6	53.3	3.6		23.9	54.5	3.6		24.2	54.1	3.6	
24.6	60.5	3.8		24.9	55.7	3.8		25.2	52.2	3.5	
25.5	53.1	3.5		25.9	44.3	3.4		26.2	54.5	3.6	
26.5	47.9	3.4		26.8	46.7	3.3		27.2	45.8	3.2	
27.5	46.2	3.3		27.9	43.4	3.2		28.1	42.9	3.2	
28.5	36.9	3.0		28.8	41.2	3.2		29.1	42.4	3.2	
29.4	41.3	3.1		29.9	35.5	2.9		30.1	36.5	2.9	
30.4	31.8	2.7		30.7	34.1	2.7		31.1	29.9	2.7	
31.4	28.4	2.6		31.7	32.1	2.8		32.0	27.5	2.6	
32.4	27.9	2.5		32.7	23.5	2.4		33.0	23.7	2.4	
33.3	22.5	2.3		33.7	19.2	2.1		34.1	19.4	2.1	
34.3	17.3	2.0		34.6	14.0	1.6		35.0	13.0	1.8	
35.3	13.5	1.8		35.6	12.8	1.7		35.9	11.4	1.6	
36.3	11.4	1.6		36.6	11.6	1.7		36.9	10.0	1.5	
37.2	9.5	1.5		37.6	9.9	1.5		37.9	11.2	1.6	
38.2	10.4	1.6		38.5	6.6	1.2		38.9	11.4	1.6	
39.2	7.1	1.3		39.5	7.5	1.3		39.8	4.1	1.1	
40.2	8.5	1.4		40.5	1.5	1.2		41.1	3.2	1.0	
41.1	3.9	1.0		41.5	2.4	1.0		41.8	3.3	1.0	
42.1	4.0	1.0		42.4	3.6	1.0		42.8	4.0	1.0	
43.1	2.1	1.0		43.4	1.7	1.0		43.7	3.3	1.0	
44.1	1.7	1.0		44.4	1.2	1.0		44.7	1.0	1.0	

159 197AU(P+ALPHA) 41.15 KEV 120 DEG. 22/1/77

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		PICT/SR*MEV		MEV		PICT/SR*MEV		MEV		PICT/SR*MEV	
12.2	1.0	1.0		12.1	1.1	1.1		12.5	1.1	1.0	
13.2	1.4	1.2		13.5	1.4	1.3		13.3	2.2	1.5	
14.1	3.1	1.6		14.1	3.1	1.6		14.0	4.8	1.7	
15.1	6.7	1.8		15.4	6.9	1.8		15.8	9.4	1.9	
16.1	11.1	1.1		16.4	11.6	1.2		16.7	17.7	1.2	
17.0	21.3	1.4		17.9	21.3	1.6		17.7	27.7	1.7	
18.0	29.2	1.7		18.2	28.7	2.0		18.7	44.5	2.1	
19.1	49.1	2.2		19.3	51.1	2.3		19.6	51.1	2.3	
19.9	54.4	2.4		20.3	51.6	2.4		20.6	59.0	2.4	
21.9	59.4	2.5		21.2	60.6	2.5		21.5	59.5	2.5	
21.9	67.3	2.4		22.2	54.0	2.2		22.5	52.0	2.3	
22.8	41.1	2.0		23.2	42.4	2.1		23.5	42.5	2.1	
23.8	39.6	2.0		24.1	36.7	1.9		24.4	39.2	2.0	
24.8	36.9	1.9		25.1	31.3	1.8		25.4	31.7	1.8	
25.7	35.6	1.8		26.1	29.0	1.7		26.4	28.6	1.7	
26.7	25.2	1.6		27.1	22.7	1.5		27.3	24.4	1.6	
27.7	21.7	1.5		28.1	21.8	1.5		28.3	20.3	1.4	
28.6	19.9	1.4		29.1	21.7	1.5		29.3	18.1	1.4	
29.6	17.5	1.3		29.9	16.9	1.2		30.2	15.6	1.3	
30.6	14.2	1.2		31.9	14.6	1.1		31.2	13.8	1.2	
31.5	9.9	1.0		31.9	11.9	1.0		32.2	9.5	1.0	
32.5	11.4	1.1		32.8	11.1	1.0		33.1	6.7	1.0	
33.5	7.4	1.0		33.8	11.2	1.0		34.1	6.7	1.0	
34.4	5.3	1.0		34.3	10.9	1.0		35.1	1.0	1.0	
35.4	1.0	1.0		35.7	1.0	1.0		36.0	1.0	1.0	
36.4	1.0	1.0		36.7	1.0	1.0		37.1	1.0	1.0	
37.3	1.0	1.0		37.6	1.0	1.0		38.1	1.0	1.0	
38.3	1.0	1.0		38.6	1.0	1.0		38.9	1.0	1.0	
39.2	1.0	1.0		39.6	1.0	1.0		39.5	1.0	1.0	
40.2	1.0	1.0		40.5	1.0	1.0		40.9	1.0	1.0	
41.2	1.0	1.0		41.5	1.0	1.0		41.8	1.0	1.0	
42.2	1.0	1.0		42.5	1.0	1.0		42.8	1.0	1.0	

150 19*AU(P+ALPHA) 41.15 MEV 151 DEG. 23/1/73

CH EN SIGMA ERR	CH EN SIGMA ERR	CH EN SIGMA ERR
MEV MICR/SR*MEV	MEV MICR/SR*MEV	MEV MICR/SR*MEV
12.4 .5 .2	13.3 1.6 .3	13.1 1.9 .4
12.4 .5 .2	13.7 2.3 .4	14.1 3.7 .5
13.4 2.5 .6	14.7 6.7 .7	15.1 7.3 .7
15.4 16.4 .8	15.7 12.9 .9	16.5 15.2 1.0
16.3 16.6 1.1	16.7 21.9 1.2	17.1 24.1 1.3
17.3 28.7 1.3	17.6 32.9 1.5	18.0 33.9 1.5
18.3 39.1 1.6	18.6 43.9 1.7	18.9 46.4 1.8
19.2 49.2 1.8	19.6 50.0 1.8	19.5 46.5 1.8
20.2 48.6 1.8	20.5 54.9 1.9	20.9 44.9 1.8
21.2 52.3 1.9	21.5 51.8 1.9	21.8 46.9 1.8
22.2 47.1 1.8	22.5 43.7 1.7	22.8 40.9 1.7
23.1 32.2 1.5	23.5 31.2 1.5	23.8 32.5 1.5
24.1 31.8 1.4	24.4 27.4 1.4	24.8 26.2 1.3
25.1 27.4 1.4	25.4 22.0 1.2	25.7 21.8 1.2
26.1 19.7 1.2	26.4 18.5 1.1	26.7 17.8 1.1
27.0 17.6 1.1	27.3 17.1 1.1	27.7 16.1 1.0
28.0 14.4 1.0	28.3 14.1 1.0	28.5 12.2 .9
29.0 12.5 .9	29.2 12.0 .9	29.6 10.5 .8
29.9 8.6 .8	30.3 9.6 .8	30.6 11.9 .9
30.9 9.6 .8	31.2 7.4 .7	31.6 6.9 .7
31.9 5.5 .6	32.2 8.4 .8	32.5 6.1 .6
32.9 5.1 .6	33.2 4.6 .6	33.5 4.2 .6
33.8 3.5 .5	34.2 3.3 .5	34.5 3.0 .5
34.8 3.1 .5	35.1 2.9 .4	35.4 3.1 .5
35.8 2.5 .4	36.1 1.9 .4	36.4 1.9 .4
36.7 1.8 .4	37.1 2.2 .4	37.4 2.1 .4
37.7 1.6 .3	38.1 1.3 .3	38.4 1.4 .3
38.7 .0 .0	39.1 .0 .0	39.2 .0 .0
39.7 .0 .0	40.1 .0 .0	40.3 .0 .0
40.6 .0 .0	41.2 .0 .0	41.3 .0 .0
41.6 .0 .0	42.2 .0 .0	42.3 .0 .0
42.6 .0 .0	43.2 .0 .0	43.2 .0 .0

222 19*AU(P+ALPHA) 41.15 MEV 166.5 DEG. 27/4/70

CH EN SIGMA ERR	CH EN SIGMA ERR	CH EN SIGMA ERR	CH EN SIGMA ERR
MEV MICR/SR*MEV	MEV MICR/SR*MEV	MEV MICR/SR*MEV	MEV MICR/SR*MEV
12.3 .0 .0	13.7 .0 .0	14.0 .0 .0	14.0 .0 .0
13.3 .2 .2	14.7 2.2 .7	15.1 4.8 1.1	15.1 4.8 1.1
15.3 6.0 1.2	15.6 7.2 1.2	16.0 10.9 1.6	16.0 10.9 1.6
15.3 16.2 2.0	16.6 21.3 2.2	17.1 19.1 2.1	17.1 19.1 2.1
17.3 25.6 2.5	17.6 29.2 2.7	17.5 35.0 2.5	17.5 35.0 2.5
18.3 36.5 3.0	18.6 31.4 3.1	18.9 48.3 3.4	18.9 48.3 3.4
19.2 48.8 3.4	19.6 57.0 3.7	19.9 54.1 3.6	19.9 54.1 3.6
20.2 57.7 3.7	20.6 58.9 3.8	20.9 57.2 3.7	20.9 57.2 3.7
21.2 56.5 3.7	21.6 46.1 3.4	21.5 47.2 3.4	21.5 47.2 3.4
22.2 45.2 3.3	22.5 42.5 3.2	22.9 40.3 3.1	22.9 40.3 3.1
23.2 35.0 2.9	23.5 31.7 2.7	23.8 26.8 2.5	23.8 26.8 2.5
24.2 29.9 2.7	24.5 29.3 2.5	24.8 23.2 2.4	24.8 23.2 2.4
25.2 20.3 2.2	25.6 24.9 2.5	25.8 17.6 2.1	25.8 17.6 2.1
26.1 22.1 2.3	26.5 19.1 2.1	26.8 17.4 2.1	26.8 17.4 2.1
27.1 17.4 2.0	27.4 11.7 1.5	27.8 12.2 1.7	27.8 12.2 1.7
28.1 13.1 1.8	28.4 15.1 1.8	28.3 9.4 1.5	28.3 9.4 1.5
29.1 9.4 1.5	29.6 7.7 1.4	29.7 11.1 1.6	29.7 11.1 1.6
30.1 12.3 1.7	30.8 9.4 1.5	30.7 8.5 1.4	30.7 8.5 1.4
31.1 7.7 1.2	31.4 7.2 1.2	31.7 8.5 1.4	31.7 8.5 1.4
32.1 5.8 1.2	32.4 8.5 1.5	32.7 5.6 1.2	32.7 5.6 1.2
33.0 4.1 1.0	33.3 4.6 1.1	33.7 4.6 1.1	33.7 4.6 1.1
34.1 3.6 .9	34.3 4.6 1.1	34.7 3.4 .9	34.7 3.4 .9
35.0 5.3 1.1	35.2 3.4 .6	35.6 3.6 .6	35.6 3.6 .6
36.0 2.2 .7	36.3 1.2 .5	36.6 1.9 .7	36.6 1.9 .7
37.0 1.7 .6	37.2 1.7 .6	37.6 1.4 .6	37.6 1.4 .6
37.9 1.7 .6	38.3 1.1 .5	38.6 1.2 .5	38.6 1.2 .5
38.9 .7 .4	39.2 1.7 .6	39.6 1.4 .6	39.6 1.4 .6
39.9 .5 .3	40.2 .0 .0	40.6 .2 .2	40.6 .2 .2
40.9 .7 .4	40.2 1.4 .6	41.6 .5 .2	41.6 .5 .2
41.9 .5 .3	42.2 1.2 .5	42.5 1.1 .5	42.5 1.1 .5
42.9 .7 .4	43.2 .0 .0	43.5 .5 .3	43.5 .5 .3
43.8 .2 .2	44.2 .2 .2	44.5 .0 .1	44.5 .0 .1

959 20*PP(P+ALPHA) 19.9 MEV 31 DEG.

CH EN SIGMA ERR	CH EN SIGMA ERR	CH EN SIGMA ERR
MEV MICR/SR*MEV	MEV MICR/SR*MEV	MEV MICR/SR*MEV
12.7 1.1 1.9	13.1 5.5 1.7	13.4 11.7 2.0
13.8 23.9 2.9	14.1 45.3 4.2	14.4 7.9 1.7
14.8 5.1 1.3	15.1 3.9 1.2	15.8 3.2 1.1
15.6 3.9 1.2	16.1 2.5 .9	16.5 4.3 1.2
16.9 2.9 1.0	17.2 .6 .3	17.5 6.1 1.5
17.8 6.1 1.5	18.2 5.7 1.4	18.5 10.0 1.6
18.9 11.8 2.1	19.2 14.2 2.5	19.5 21.4 2.3
19.9 25.0 3.0	20.2 32.1 3.4	20.6 22.6 3.4
20.9 41.8 3.9	21.2 51.4 4.3	21.6 59.3 4.9
21.9 71.8 5.1	22.3 82.5 5.4	22.6 112.1 6.3
22.9 132.1 6.9	23.3 130.4 7.3	23.6 143.9 7.2
24.0 139.2 7.1	24.3 126.5 6.7	24.6 112.1 7.4
25.0 131.4 6.8	25.3 131.7 6.8	25.7 117.1 6.5
26.0 90.7 5.7	26.2 83.2 5.4	26.7 57.8 4.5
27.1 36.4 3.6	27.4 7.5 1.6	27.7 1.8 .3
28.0 1.8 .3	28.6 .7 .5	28.7 .1 .0
29.1 .0 .0	29.4 .0 .0	29.7 .7 .5
30.1 .0 .0	30.4 .0 .0	30.8 .4 .4
31.1 .0 .0	31.5 .0 .0	31.8 .0 .0
32.1 .4 .4	32.5 .0 .0	32.8 .0 .0
33.1 .0 .0	33.5 .0 .0	33.8 .0 .0
34.2 .0 .0	34.5 .0 .0	34.8 .0 .0
35.2 .0 .0	35.5 .0 .0	35.9 .0 .0
36.2 .0 .0	36.5 .0 .0	36.9 .0 .0
37.2 .0 .0	37.6 .0 .0	37.9 .0 .0
38.2 .0 .0	38.6 .0 .0	38.9 .0 .0
39.3 .0 .0	39.6 .0 .0	39.9 .0 .0
40.3 .0 .0	40.6 .0 .0	41.0 .0 .0
41.3 .0 .0	41.6 .0 .0	42.1 .0 .0
42.3 .0 .0	42.7 .0 .0	43.0 .0 .0
43.3 .0 .0	43.7 .0 .0	44.1 .0 .0
44.4 .0 .0	44.7 .0 .0	45.0 .0 .0

948 20*PP(P+ALPHA) 19.9 MEV 45 DEG.

CH EN SIGMA ERR	CH EN SIGMA ERR	CH EN SIGMA ERR	CH EN SIGMA ERR
MEV MICR/SR*MEV	MEV MICR/SR*MEV	MEV MICR/SR*MEV	MEV MICR/SR*MEV
12.7 2.5 .9	13.1 13.6 .9	13.4 43.3 4.8	13.4 43.3 4.8
13.8 11.4 2.1	14.1 2.1 .9	14.4 1.8 .3	14.4 1.8 .3
14.8 2.9 1.0	15.1 2.1 .9	15.5 1.4 .7	15.5 1.4 .7
15.8 2.5 .9	16.1 4.7 1.3	16.5 5.9 1.5	16.5 5.9 1.5
16.8 2.1 .9	17.2 2.9 1.0	17.5 5.1 1.2	17.5 5.1 1.2
17.8 5.4 1.4	18.2 6.4 1.5	18.5 9.6 1.8	18.5 9.6 1.8
18.9 9.7 1.9	19.2 11.7 2.1	19.5 35.7 2.4	19.5 35.7 2.4
19.9 15.1 2.3	20.2 17.6 2.6	20.6 25.1 3.1	20.6 25.1 3.1
20.9 22.2 3.4	21.2 31.6 3.2	21.6 42.2 3.5	21.6 42.2 3.5
21.9 51.8 4.3	22.3 64.1 4.8	22.6 71.5 5.3	22.6 71.5 5.3
22.9 88.4 5.6	23.3 96.4 5.9	23.6 100.2 6.0	23.6 100.2 6.0
23.9 96.6 5.9	24.3 93.7 5.8	24.6 99.7 5.9	24.6 99.7 5.9
25.0 96.7 5.9	25.3 81.2 5.4	25.7 71.9 5.1	25.7 71.9 5.1
26.0 42.2 3.9	26.3 25.3 3.1	26.7 21.4 2.7	26.7 21.4 2.7
27.0 3.9 1.2	27.4 .7 .5	27.7 .1 .0	27.7 .1 .0
28.0 .0 .0	28.4 .4 .4	28.7 .4 .4	28.7 .4 .4
29.1 .0 .0	29.4 .0 .0	29.7 .0 .0	29.7 .0 .0
30.1 .0 .0	30.4 .0 .0	30.8 .0 .0	30.8 .0 .0
31.1 .0 .0	31.4 .0 .0	31.8 .0 .0	31.8 .0 .0
32.1 .0 .0	32.5 .0 .0	32.8 .0 .0	32.8 .0 .0
33.1 .0 .0	33.5 .0 .0	33.8 .0 .0	33.8 .0 .0
34.2 .0 .0	34.5 .0 .0	34.8 .0 .0	34.8 .0 .0
35.2 .0 .0	35.5 .0 .0	35.9 .0 .0	35.9 .0 .0
36.2 .0 .0	36.5 .0 .0	36.9 .0 .0	36.9 .0 .0
37.2 .0 .0	37.6 .0 .0	37.9 .0 .0	37.9 .0 .0
38.2 .0 .0	38.6 .0 .0	38.9 .0 .0	38.9 .0 .0
39.3 .0 .0	39.6 .0 .0	39.9 .0 .0	39.9 .0 .0
40.3 .0 .0	40.6 .0 .0	41.0 .0 .0	41.0 .0 .0
41.3 .0 .0	41.6 .0 .0	42.1 .0 .0	42.1 .0 .0
42.3 .0 .0	42.7 .0 .0	43.0 .0 .0	43.0 .0 .0
43.3 .0 .0	43.7 .0 .0	44.1 .0 .0	44.1 .0 .0
44.4 .0 .0	44.7 .0 .0	45.0 .0 .0	45.0 .0 .0

957 20(PB(P*ALPHA) 19.9 KEV 50 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.9	11.9	1.3		13.2	1.1	.4		13.6	1.2	.5	
13.9	1.1	.4		14.2	.5	.3		14.6	.5	.3	
14.9	1.6	.5		15.3	.4	.3		15.6	2.0	.6	
15.9	1.4	.5		16.3	2.1	.6		16.6	3.6	.8	
17.1	3.2	.8		17.3	3.2	.8		17.7	4.1	.9	
18.0	4.5	.9		18.3	4.6	.9		18.7	5.5	1.0	
19.1	7.7	1.2		19.4	9.1	1.3		19.7	9.5	1.3	
20.0	12.3	1.5		20.4	13.4	1.5		20.7	16.1	1.7	
21.1	15.7	1.7		21.6	23.2	2.0		21.8	24.3	2.1	
22.1	33.0	2.4		22.4	43.6	2.7		22.6	53.4	3.1	
23.1	55.5	3.1		23.5	58.2	3.2		23.8	65.5	3.4	
24.2	52.0	3.0		24.5	61.3	3.3		24.6	63.4	3.4	
25.2	52.5	3.1		25.5	51.7	3.0		25.9	38.7	2.6	
26.2	30.4	2.3		26.5	21.2	1.9		26.9	17.5	1.6	
27.2	0.6	.9		27.4	.2	.2		27.9	.0	.0	
28.3	.0	.0		28.6	.2	.2		28.9	.0	.0	
29.3	.0	.0		29.6	.1	.1		30.1	.0	.0	
30.3	.0	.0		30.7	.0	.0		31.0	.0	.0	
31.3	.0	.0		31.7	.0	.0		32.1	.2	.2	
32.4	.0	.0		32.7	.0	.0		32.0	.0	.0	
33.4	.1	.0		33.7	.0	.0		34.1	.0	.0	
34.4	.0	.0		34.8	.0	.0		35.1	.0	.0	
35.4	.0	.0		35.8	.0	.0		36.1	.0	.0	
36.5	.0	.0		36.8	.0	.0		37.1	.0	.0	
37.5	.0	.0		37.8	.0	.0		38.2	.0	.0	
38.5	.0	.0		38.9	.0	.0		39.2	.0	.0	
39.5	.0	.0		39.9	.0	.0		40.2	.0	.0	
40.6	.0	.0		40.9	.0	.0		41.2	.0	.0	
41.6	.0	.0		41.9	.0	.0		42.3	.0	.0	
42.6	.0	.0		42.0	.0	.0		43.3	.0	.0	
43.6	.0	.0		44.1	.0	.0		44.3	.0	.0	
44.7	.0	.0		45.0	.0	.0		45.4	.0	.0	

958 20(PB(P*ALPHA) 19.9 KEV 90 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.0	1.3	.5		12.4	1.3	.5		12.7	.5	.2	
14.1	1.1	.4		14.4	1.4	.5		14.7	1.4	.5	
15.1	1.4	.5		15.4	1.4	.5		15.8	1.4	.5	
16.1	2.3	.6		16.5	1.4	.5		16.8	1.6	.5	
17.2	2.5	.7		17.5	2.9	.7		17.8	2.9	.7	
18.2	3.9	.8		18.5	6.1	1.0		18.9	5.5	1.0	
19.2	6.4	1.1		19.6	8.6	1.2		19.9	8.1	1.2	
20.3	6.4	1.1		20.6	9.7	1.3		20.9	10.7	1.4	
21.3	11.8	1.5		21.6	14.7	1.6		22.0	17.0	1.7	
22.3	21.2	1.9		22.7	24.1	2.1		23.1	25.2	2.1	
23.3	26.3	2.2		23.7	31.9	2.4		24.0	28.5	2.3	
24.4	34.9	2.5		24.7	31.1	2.3		25.1	25.8	2.1	
25.4	23.4	2.0		25.9	21.6	1.9		26.1	17.0	1.7	
26.4	13.2	1.5		26.8	8.2	1.2		27.1	5.5	1.0	
27.5	.9	.4		27.8	.0	.0		28.2	.0	.0	
28.5	.0	.0		28.9	.0	.0		29.2	.0	.0	
29.5	.0	.0		29.9	.0	.0		30.2	.0	.0	
30.6	.0	.0		30.9	.0	.0		31.3	.0	.0	
31.6	.0	.0		31.9	.0	.0		32.3	.0	.0	
32.6	.0	.0		33.3	.0	.0		33.5	.0	.0	
33.7	.0	.0		34.0	.0	.0		34.4	.0	.0	
34.7	.0	.0		35.0	.0	.0		35.4	.0	.0	
35.7	.0	.0		36.1	.0	.0		36.8	.0	.0	
36.9	.0	.0		37.1	.0	.0		37.5	.0	.0	
37.8	.0	.0		38.1	.0	.0		38.5	.0	.0	
38.8	.0	.0		39.2	.0	.0		39.5	.0	.0	
39.9	.0	.0		40.2	.0	.0		40.5	.0	.0	
40.9	.0	.0		41.2	.0	.0		41.6	.0	.0	
41.9	.0	.0		42.3	.0	.0		42.6	.0	.0	
43.3	.0	.0		43.3	.0	.0		43.6	.0	.0	
44.0	.0	.0		44.3	.0	.0		44.7	.0	.0	
45.1	.0	.0		45.4	.0	.0		45.7	.0	.0	

961 20(PB(P*ALPHA) 19.9 KEV 120 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.2	.7	.3		13.5	.5	.2		13.8	.6	.2	
14.2	.6	.2		14.5	.4	.2		14.9	.6	.3	
15.2	.9	.3		15.6	1.0	.3		15.9	1.6	.4	
16.3	1.3	.4		16.6	2.0	.5		17.0	2.1	.5	
17.3	3.7	.6		17.6	2.9	.6		18.1	3.4	.6	
18.3	4.6	.7		18.7	4.9	.7		19.0	3.6	.6	
19.4	5.3	.8		19.7	4.9	.7		20.1	5.1	.8	
20.4	7.5	.9		20.7	7.9	.9		21.1	8.2	1.0	
21.4	11.3	1.1		21.8	11.7	1.1		22.1	12.9	1.2	
22.5	15.0	1.3		22.8	10.9	1.0		23.2	17.9	1.4	
23.5	19.4	1.5		23.9	18.5	1.4		24.2	20.2	1.5	
24.5	19.6	1.5		24.9	16.4	1.5		25.2	16.5	1.4	
25.6	16.5	1.4		25.9	15.4	1.2		26.3	7.5	.9	
26.6	6.8	.9		27.0	4.4	.7		27.3	3.4	.6	
27.6	.1	.1		28.1	.0	.0		28.3	.0	.0	
28.7	.0	.0		28.0	.0	.0		29.4	.0	.0	
29.7	.0	.0		30.1	.0	.0		30.4	.0	.0	
30.8	.0	.0		31.1	.0	.0		31.4	.0	.0	
31.8	.0	.0		32.1	.0	.0		32.5	.0	.0	
32.8	.0	.0		33.2	.0	.0		33.6	.0	.0	
33.9	.0	.0		34.2	.0	.0		34.5	.0	.0	
34.9	.0	.0		35.2	.0	.0		35.6	.0	.0	
35.9	.0	.0		36.3	.0	.0		36.6	.0	.0	
37.0	.0	.0		37.3	.0	.0		37.7	.0	.0	
38.1	.0	.0		38.3	.0	.0		38.7	.0	.0	
39.0	.0	.0		39.4	.0	.0		39.7	.0	.0	
40.1	.0	.0		40.4	.0	.0		40.8	.0	.0	
41.1	.0	.0		41.4	.0	.0		41.6	.0	.0	
42.1	.0	.0		42.5	.0	.0		42.8	.0	.0	
43.2	.0	.0		43.5	.0	.0		43.9	.0	.0	
44.2	.0	.0		44.6	.0	.0		44.9	.0	.0	
45.2	.0	.0		45.6	.0	.0		45.9	.0	.0	

962 20(PB(P*ALPHA) 19.9 KEV 150 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	.3	.2		12.7	.4	.2		14.0	.1	.1	
14.3	.2	.2		14.7	.4	.2		15.1	1.0	.3	
15.4	.4	.2		15.7	1.1	.4		16.1	1.7	.4	
16.4	1.7	.4		16.8	1.4	.4		17.1	2.4	.5	
17.5	3.1	.6		17.8	3.4	.7		18.2	3.0	.6	
18.5	3.7	.6		18.9	4.9	.7		19.2	6.2	.8	
19.5	6.1	.8		19.9	1.1	.9		20.2	5.9	.8	
20.6	8.7	1.0		20.9	7.5	.9		21.3	9.8	1.0	
21.6	12.8	1.2		22.0	13.8	1.2		22.2	15.4	1.3	
22.7	14.8	1.3		23.1	13.3	1.4		23.4	19.5	1.5	
23.7	19.2	1.5		24.1	16.6	1.4		24.4	16.5	1.4	
24.8	16.8	1.4		25.1	14.2	1.3		25.4	11.9	1.1	
25.8	9.5	1.0		26.1	7.8	.9		26.5	4.8	.7	
26.8	3.7	.6		27.2	3.0	.6		27.5	1.0	.3	
27.9	.0	.0		28.2	.0	.0		28.6	.0	.0	
28.9	.0	.0		29.3	.0	.0		29.6	.0	.0	
30.0	.0	.0		30.3	.0	.0		30.7	.0	.0	
31.1	.0	.0		31.3	.0	.0		31.7	.0	.0	
32.0	.0	.0		32.4	.0	.0		32.7	.0	.0	
33.1	.0	.0		33.4	.0	.0		33.8	.0	.0	
34.1	.0	.0		34.5	.0	.0		34.8	.0	.0	
35.2	.0	.0		35.5	.0	.0		35.9	.0	.0	
36.2	.0	.0		36.6	.0	.0		36.9	.0	.0	
37.2	.0	.0		37.6	.0	.0		37.9	.0	.0	
38.3	.0	.0		38.6	.0	.0		39.0	.0	.0	
39.3	.0	.0		39.7	.0	.0		40.1	.0	.0	
40.4	.0	.0		40.7	.0	.0		41.1	.0	.0	
41.4	.0	.0		41.8	.0	.0		42.1	.0	.0	
42.5	.0	.0		42.8	.0	.0		43.1	.0	.0	
43.5	.0	.0		43.8	.0	.0		44.2	.0	.0	
44.5	.0	.0		44.9	.0	.0		45.2	.0	.0	
45.6	.0	.0		45.9	.0	.0		46.3	.0	.0	

954 20PB(P+ALPHA) 19.9 MEV 165 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.3	.2	.2		13.7	.4	.2		14.1	.7	.3	
14.3	.4	.2		14.7	.3	.2		15.6	.9	.3	
15.4	.4	.2		15.7	1.1	.3		16.1	1.6	.4	
16.4	2.2	.5		16.8	3.4	.6		17.1	2.4	.5	
17.5	4.6	.7		17.8	3.4	.6		18.2	4.7	.7	
18.5	4.0	.7		18.9	7.2	.9		19.2	5.3	.8	
19.5	6.8	.9		19.9	6.7	.9		20.2	9.9	1.1	
20.6	9.2	1.0		20.9	8.1	1.0		21.3	10.0	1.1	
21.6	10.6	1.1		22.0	12.8	1.2		22.3	13.3	1.2	
22.7	17.4	1.4		22.6	18.4	1.4		23.4	16.5	1.4	
23.7	15.1	1.3		24.1	18.6	1.4		24.4	16.2	1.3	
24.8	17.9	1.2		25.1	12.5	1.2		25.4	9.7	1.0	
25.8	3.6	1.1		26.1	4.9	.9		26.5	2.7	.5	
26.8	2.2	.5		27.2	1.6	.4		27.5	.2	.2	
27.9	.1	.1		28.2	.1	.0		28.5	.0	.0	
28.9	.0	.0		29.3	.0	.0		29.6	.0	.0	
30.0	.0	.0		30.3	.1	.0		30.7	.0	.0	
31.0	.0	.0		31.3	.0	.0		31.7	.0	.0	
32.1	.1	.0		32.4	.1	.0		32.7	.0	.0	
33.1	.0	.0		33.4	.0	.0		33.8	.0	.0	
34.1	.1	.0		34.5	.1	.0		34.8	.0	.0	
35.2	.0	.0		35.5	.0	.0		35.9	.0	.0	
36.2	.1	.0		36.6	.1	.1		36.9	.0	.0	
37.2	.0	.0		37.6	.0	.0		37.9	.0	.0	
38.3	.1	.1		38.6	.1	.0		39.1	.0	.0	
39.3	.0	.0		39.7	.0	.0		40.6	.0	.0	
40.4	.1	.0		40.7	.1	.1		41.1	.0	.0	
41.4	.0	.0		41.8	.0	.0		42.1	.0	.0	
42.5	.1	.0		42.8	.1	.0		43.1	.0	.0	
43.5	.0	.0		43.8	.0	.0		44.2	.0	.0	
44.5	.1	.0		44.9	.1	.1		45.2	.0	.0	
45.6	.0	.0		45.9	.0	.0		46.3	.0	.0	

668 20(PB(P+ALPHA) 24.8 MEV 20 DEG. 8/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.4	11.9	2.7		9.7	24.5	3.9		10.0	27.0	4.1		10.3	32.0	4.5	
11.3	24.5	3.9		11.6	21.7	3.6		11.9	29.0	4.5		12.2	32.0	4.5	
11.2	21.4	3.7		11.4	22.2	4.2		11.7	29.0	4.5		12.5	32.0	4.5	
12.0	49.0	5.5		12.3	61.5	6.2		12.6	59.7	6.1		12.8	57.8	6.0	
12.9	47.8	5.5		13.2	54.0	5.8		13.5	57.8	6.0		13.8	59.1	6.1	
13.8	59.1	6.1		14.1	48.4	5.5		14.4	59.1	6.1		14.8	59.1	6.1	
14.7	60.9	6.2		15.0	55.3	5.9		15.3	49.6	5.6		15.6	52.8	5.8	
15.6	57.8	6.0		15.9	42.7	5.2		16.2	52.8	5.8		16.5	45.9	5.4	
16.5	56.9	5.7		16.8	55.3	5.9		17.1	45.9	5.4		17.4	42.7	5.2	
17.4	49.6	5.6		17.7	41.5	5.1		18.0	37.7	4.9		18.3	37.7	4.9	
18.3	43.4	5.2		18.6	32.0	4.5		18.9	26.4	4.1		19.2	26.4	4.1	
19.2	41.2	5.0		19.5	39.1	4.9		19.8	37.7	4.9		20.1	41.5	5.1	
20.1	41.5	5.1		20.4	42.1	5.1		20.7	45.2	5.3		21.0	52.2	5.7	
21.0	37.7	4.9		21.3	51.5	5.6		21.6	52.2	5.7		21.9	79.8	7.1	
21.8	54.7	5.9		22.1	56.6	6.0		22.4	87.3	7.4		22.7	87.3	7.4	
22.7	75.4	6.9		23.0	69.1	6.6		23.3	87.3	7.4		23.6	84.2	7.3	
23.6	78.5	7.0		23.9	54.5	5.7		24.2	84.2	7.3		24.5	115.6	8.5	
24.5	115.6	8.5		24.8	117.4	8.2		25.1	115.6	8.5		25.4	116.1	8.6	
25.4	115.6	8.5		25.7	103.7	8.1		26.0	129.0	8.9		26.3	129.0	8.9	
26.3	123.8	8.9		26.6	115.0	8.5		26.9	137.6	9.3		27.2	137.6	9.3	
27.2	133.9	9.2		27.5	121.3	8.7		27.8	151.4	9.8		28.1	151.4	9.8	
28.1	147.1	9.6		28.4	143.9	9.5		28.7	168.4	10.3		29.0	168.4	10.3	
29.0	175.9	10.5		29.3	165.2	10.2		29.6	139.5	9.4		29.9	139.5	9.4	
29.9	164.6	10.2		30.2	172.2	10.4		30.5	139.5	9.4		30.8	139.5	9.4	
30.8	148.9	9.7		31.1	132.2	9.3		31.4	139.5	9.4		31.7	139.5	9.4	
31.6	93.1	7.6		31.9	74.8	6.9		32.2	51.5	5.7		32.5	51.5	5.7	
32.5	40.2	5.0		32.8	40.2	5.0		33.1	35.2	4.7		33.4	35.2	4.7	
33.4	24.5	3.9		33.7	24.5	3.9		34.0	8.2	2.3		34.3	8.2	2.3	
34.3	17.0	3.3		34.6	16.7	3.2		34.9	3.1	1.4		35.2	3.1	1.4	
35.2	4.4	1.7		35.5	5.7	1.9		35.8	4.4	1.7		36.1	4.4	1.7	
36.1	3.8	1.5		36.4	.6	.6		36.7	.6	.6		37.0	.6	.6	
37.0	1.3	.9		37.3	1.9	1.1		37.6	.6	.6					

662 20PB(P+ALPHA) 24.8 MEV 14 DEG. 7/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.4	6.7	1.7		9.7	6.3	1.6		10.0	5.0	1.5	
10.3	3.5	1.3		10.6	7.1	1.7		10.9	11.7	2.2	
11.2	31.1	2.9		11.4	41.1	4.2		11.7	71.7	5.5	
12.0	80.9	5.8		12.3	75.5	5.6		12.6	62.9	5.1	
12.9	67.9	5.3		13.2	79.7	5.8		13.5	79.8	5.7	
13.8	68.5	6.1		14.1	86.8	6.4		14.4	61.2	5.1	
14.7	55.8	4.8		15.0	35.2	4.1		15.3	72.5	5.5	
15.6	81.8	5.9		15.9	106.1	6.7		16.2	89.7	6.1	
16.5	69.2	5.4		16.8	47.0	4.4		17.1	39.0	4.0	
17.4	30.2	3.6		17.7	18.5	2.8		18.0	20.5	2.9	
18.3	13.9	2.8		18.6	49.1	4.5		18.9	41.3	4.1	
19.2	34.4	3.6		19.5	31.5	3.8		19.8	33.5	3.8	
20.1	39.1	4.1		20.4	37.7	4.0		20.7	39.8	4.1	
21.0	49.9	4.6		21.3	63.7	5.2		21.6	68.3	5.4	
21.8	69.5	5.4		22.1	77.6	5.7		22.4	94.8	6.3	
22.7	93.5	6.3		23.0	114.6	7.0		23.3	111.5	6.8	
23.6	118.7	7.1		23.9	131.7	7.4		24.2	114.5	6.9	
24.5	126.6	7.3		24.8	131.2	7.4		25.1	135.1	7.5	
25.4	143.4	7.8		25.7	127.1	7.3		26.0	136.3	7.6	
26.3	138.4	7.6		26.6	145.2	7.9		26.9	145.1	7.8	
27.2	174.9	9.6		27.5	184.7	8.9		27.8	207.1	9.3	
28.1	168.4	9.3		28.4	212.6	9.4		28.7	209.7	9.4	
29.0	216.7	9.3		29.3	212.5	9.2		29.6	173.2	8.6	
29.9	179.5	8.7		30.2	161.6	8.2		30.5	119.9	7.1	
30.8	76.7	5.7		31.1	65.7	5.3		31.4	46.5	4.4	
31.6	25.6	3.3		31.9	15.2	2.8		32.2	3.1	2.1	
32.5	7.1	1.7		32.8	5.3	1.6		33.1	3.8	1.3	
33.4	2.5	1.0		33.7	3.8	1.2		34.0	.8	.6	
34.3	2.1	.9		34.6	.4	.4		34.9	1.7	.8	
35.2	.8	.6		35.5	.4	.4		35.8	.4	.4	
36.1	.1	.0		36.4	.1	.1		36.7	.1	.1	
37.0	.0	.0		37.3	.0	.0		37.6	.0	.0	

663 20(PB(P+ALPHA) 24.8 MEV 45 DEG. 8/5/73

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.4	.5	.4		9.7	.5	.4		10.0	.0	.0		10.3	.0	.0	
10.3	1.3	.6		10.6	3.3	.9		10.9	5.3	1.2		11.2	29.0	2.7	
11.2	16.2	2.0		11.4	22.5	2.4		11.7	29.0	2.7		12.0	56.3	3.8	
12.0	37.9	3.1		12.3	40.4	3.4		12.6	56.3	3.8		12.9	56.3	3.8	
12.9	51.2	3.6		13.2	33.3	2.9		13.5	18.2	2.1		13.8	18.2	2.1	
13.8	12.6	1.8		14.1	13.6	1.9		14.4	24.7	2.5		14.7	24.7	2.5	
14.7	106.7	5.2		15.0	84.5	4.6		15.3	26.8	2.6		15.6	26.8	2.6	
15.6	22.0	2.4		15.9	21.9	2.3		16.2	14.6	1.9		16.5	14.6	1.9	
16.5	9.8	1.6		16.8	12.5	1.8		17.1	7.8	1.4		17.4	7.8	1.4	
17.4	8.3	1.4		17.7	37.1	3.1		18.0	36.6	3.1		18.3	36.6	3.1	
18.3	16.9	2.1		18.6	17.9	1.8		18.9	22.2	2.4		19.2	22.2	2.4	
19.2	14.4	2.2		19.5	21.7	2.3		19.8	21.7	2.3		20.1	21.7	2.3	
20.1	25.0	2.5		20.4	26.8	2.6		20.7	36.1	3.0		21.0	36.1	3.0	
21.0	39.6	3.1		21.2	47.7	3.5		21.5	53.2	3.7		21.8	53.2	3.7	
21.8	55.3	3.7		22.1	57.5	3.8		22.4	76.5	4.4		22.7	76.5	4.4	
22.7	71.4	4.2		23.0	77.7	4.4		23.3	83.1	4.6		23.6	83.1	4.6	
23.6	86.1	4.7		23.9	87.6	4.7		24.2	93.6	4.9		24.5	93.6	4.9	
24.5	86.8	4.7		24.8	98.9	5.1		25.1	94.4	4.9		25.4	94.4	4.9	
25.4	87.8	4.7		25.7	107.3	5.2		26.0	113.7	5.3		26.3	113.7	5.3	
26.3	115.5	5.2		26.6	112.3	5.3		26.9	131.0	5.7		27.2	131.0	5.7	
27.2	137.5	5.9		27.5	152.7	6.2		27.8	146.4	6.1		28.1	146.4	6.1	
28.1	156.1	6.3		28.4	152.7	6.2		28.7	139.3	5.9		29.0	139.3	5.9	
29.0	121.9	5.5		29.3	161.2	6.5		29.6	81.0	4.4		29.9	81.0	4.4	
29.9	76.7	4.4		30.2	50.7	3.6		30.5	37.6	3.1		30.8	37.6	3.1	
30.8	24.0	2.5		31.0	11.4	1.7		31.3	7.1	1.3		31.6	7.1	1.3	
31.6	3.1	.9		31.9	1.1	.5		32.2	2.0	.7		32.5	2.0	.7	
32.5	.8	.4		32.8	.8	.4		33.1	.3	.3		33.4	.3	.3	
33.4	.3	.3		33.7	.1	.0		34.0	.3	.3		34.3	.3	.3	
34.3	.3	.3		34.6	.0	.0		34.9	.0	.0		35.2	.0	.0	
35.2	.0	.0		35.5	.0	.0		35.8	.0	.0		36.1	.0	.0	
36.1	.3	.3		36.4	.0	.0		36.7	.0	.0		37.0	.0	.0	
37.0	.0	.0		37.3	.1	.0		37.6	.0	.0		37.9	.0	.0	

665 20(PB(P+ALPHA) 24.8 MEV 6J DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.5	.3	.3	9.8	.3	.3	10.1	.5	.4
10.4	.3	.3	10.7	1.0	.5	11.0	1.5	.6
11.3	8.8	1.5	11.6	25.2	2.5	11.8	25.2	2.5
12.1	12.4	1.8	12.4	11.4	1.7	12.7	9.1	1.5
13.0	6.6	1.3	13.3	18.7	2.2	13.6	83.3	4.6
13.9	37.3	3.1	14.2	4.8	1.1	14.5	4.8	1.1
14.8	5.6	1.2	15.1	2.8	.8	15.4	3.5	.9
15.7	1.8	.7	16.0	3.3	.9	16.3	3.0	.9
16.6	4.5	1.1	16.9	9.1	1.5	17.2	5.6	1.2
17.5	7.1	1.3	17.8	8.3	1.4	18.1	9.6	1.6
18.4	8.8	1.5	18.7	11.4	1.7	19.0	10.3	1.6
19.3	16.9	2.1	19.6	18.2	2.1	19.9	17.4	2.1
20.2	22.5	2.4	20.5	23.0	2.4	20.8	26.5	2.6
21.1	29.3	2.7	21.4	31.5	2.8	21.7	35.3	3.0
22.0	41.9	3.3	22.3	43.6	3.2	22.6	48.4	3.5
22.9	47.9	3.5	23.2	53.5	3.7	23.5	55.2	3.7
23.8	58.0	3.8	24.1	63.3	4.0	24.4	60.0	3.9
24.7	62.8	4.0	25.0	67.1	4.1	25.3	65.6	4.1
25.6	66.1	4.1	25.9	69.1	4.1	26.2	69.1	4.2
26.5	60.5	3.9	26.7	72.4	4.3	27.0	75.2	4.4
27.3	87.8	4.7	27.6	92.3	4.8	27.9	93.8	4.9
28.2	84.8	4.6	28.5	88.3	4.7	28.8	69.9	4.2
29.1	71.6	4.3	29.4	51.7	3.6	29.7	40.4	3.2
30.0	36.3	3.0	30.3	20.4	2.3	30.6	17.2	2.1
30.9	9.8	1.6	31.2	6.1	1.2	31.5	1.5	.6
31.8	.5	.4	32.1	.0	.0	32.4	.0	.0
32.7	.0	.0	33.0	.0	.0	33.3	.0	.0
33.6	.0	.0	33.9	.0	.0	34.2	.0	.0
34.5	.0	.0	34.8	.0	.0	35.1	.0	.0
35.4	.0	.0	35.7	.0	.0	36.0	.0	.0
36.3	.0	.0	36.6	.0	.0	36.9	.0	.0
37.2	.0	.0	37.5	.0	.0	37.8	.0	.0

666 20(PB(P+ALPHA) 24.8 MEV 9C DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.6	.1	.1	9.9	.0	.0	10.2	.1	.1
10.5	.1	.1	10.8	.7	.3	11.1	.3	.2
11.4	4.1	.8	11.7	14.2	1.4	12.0	4.6	.8
12.3	3.1	.7	12.6	8.6	1.1	12.9	2.2	.6
13.2	1.1	.4	13.5	1.7	.5	13.8	.4	.2
14.1	1.3	.4	14.4	5.9	.9	14.7	7.9	1.1
15.0	2.8	.6	15.3	2.4	.6	15.6	3.5	.7
15.9	3.1	.7	16.2	2.3	.6	16.5	4.2	.8
16.8	5.3	.9	17.1	4.8	.8	17.4	6.3	.9
17.7	6.5	1.0	18.0	5.6	.9	18.3	9.1	1.1
18.6	9.3	1.1	18.9	10.4	1.2	19.2	11.2	1.3
19.5	11.5	1.3	19.8	13.2	1.4	20.1	11.9	1.3
20.4	14.6	1.4	20.7	17.4	1.6	21.0	17.8	1.6
21.3	18.0	1.6	21.6	18.1	1.6	21.9	19.8	1.7
22.2	22.1	1.8	22.5	22.8	1.8	22.8	21.2	1.7
23.1	23.9	1.8	23.4	25.8	1.9	23.7	25.1	1.9
24.0	27.0	1.9	24.3	27.3	2.0	24.6	27.1	2.0
24.9	27.5	2.0	25.2	28.1	2.0	25.5	30.3	2.1
25.8	27.7	1.8	26.1	24.6	1.9	26.4	28.9	2.0
26.7	32.2	2.1	27.0	28.5	2.0	27.3	34.6	2.2
27.6	32.3	2.1	27.9	30.3	2.1	28.2	28.2	2.0
28.5	25.7	1.9	28.8	22.8	1.8	29.1	18.4	1.6
29.4	18.7	1.6	29.7	15.0	1.5	30.0	14.6	1.4
30.3	7.1	1.0	30.6	3.1	.7	30.9	2.8	.6
31.2	2.0	.5	31.5	.8	.3	31.8	.0	.0
32.1	.0	.0	32.4	.0	.0	32.7	.0	.0
33.0	.0	.0	33.3	.0	.0	33.6	.0	.0
33.9	.0	.0	34.2	.0	.0	34.5	.0	.0
34.8	.0	.0	35.1	.0	.0	35.4	.0	.0
35.7	.0	.0	36.0	.0	.0	36.3	.0	.0
36.6	.0	.0	36.9	.0	.0	37.2	.0	.0
37.5	.0	.0	37.8	.0	.0	38.1	.0	.0

679 20(PB(P+ALPHA) 24.8 MEV 12J DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.9	.0	.0	10.2	.0	.0	10.5	.0	.0
10.8	.1	.1	11.1	.2	.2	11.4	.3	.1
11.7	.3	.2	12.0	1.6	.4	12.3	2.0	.5
12.6	1.4	.4	12.9	2.0	.5	13.2	1.4	.4
13.5	1.2	.4	13.8	.8	.3	14.1	1.3	.4
14.4	.8	.3	14.7	1.0	.3	15.0	1.2	.4
15.3	.8	.3	15.6	1.6	.4	15.9	1.9	.5
16.2	1.7	.5	16.5	3.1	.6	16.8	3.1	.6
17.1	3.1	.6	17.4	5.7	.8	17.7	6.6	.9
18.0	5.1	.8	18.3	8.3	1.0	18.6	8.0	1.0
19.9	8.1	1.0	19.2	9.3	1.1	19.5	10.3	1.1
19.8	10.3	1.1	20.1	11.5	1.2	20.4	10.6	1.1
20.7	10.5	1.1	21.0	12.2	1.2	21.3	12.6	1.2
21.6	11.0	1.1	21.9	14.1	1.3	22.2	12.1	1.2
22.5	14.1	1.3	22.8	14.3	1.3	23.1	12.9	1.2
23.4	12.4	1.2	23.7	15.6	1.3	24.0	14.8	1.3
24.3	11.6	1.2	24.6	14.3	1.3	24.9	14.5	1.3
25.2	13.6	1.3	25.5	12.9	1.2	25.8	15.0	1.3
26.1	14.5	1.3	26.4	12.1	1.2	26.7	12.7	1.2
27.0	12.3	1.2	27.3	14.1	1.3	27.6	13.6	1.3
27.9	13.2	1.2	28.2	13.4	1.2	28.5	13.0	1.2
28.8	12.8	1.2	29.1	5.8	1.1	29.4	9.8	1.1
29.7	7.1	.9	30.0	5.5	.8	30.3	4.9	.8
30.6	3.6	.6	30.9	3.0	.6	31.2	1.5	.4
31.5	1.2	.4	31.8	.0	.0	32.1	.0	.0
32.4	.0	.0	32.7	.0	.0	33.0	.0	.0
33.3	.0	.0	33.6	.0	.0	33.9	.0	.0
34.2	.0	.0	34.5	.0	.0	34.8	.0	.0
35.1	.0	.0	35.4	.0	.0	35.7	.0	.0
36.0	.0	.0	36.3	.0	.0	36.6	.0	.0
36.9	.0	.0	37.2	.0	.0	37.5	.0	.0
37.8	.0	.0	38.1	.0	.0	38.4	.0	.0

678 20(PB(P+ALPHA) 24.8 MEV 15C DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.9	.0	.0	10.2	.1	.1	10.5	.1	.1
10.8	.0	.0	11.1	.2	.1	11.4	.5	.2
11.7	.8	.2	12.0	1.6	.4	12.3	1.5	.3
12.6	2.9	.5	12.9	1.4	.3	13.2	1.0	.3
13.5	1.3	.3	13.8	1.2	.3	14.1	.9	.3
14.4	1.2	.3	14.7	1.5	.3	15.0	1.4	.3
15.3	2.0	.4	15.6	1.2	.3	15.9	2.6	.4
16.2	2.5	.4	16.5	3.5	.5	16.8	3.6	.5
17.1	4.3	.6	17.4	6.0	.7	17.7	5.1	.6
18.0	8.4	.8	18.3	7.7	.8	18.6	9.4	.9
19.0	10.5	.9	19.3	10.4	.9	19.6	10.3	.9
19.9	13.4	.9	20.2	12.3	1.0	20.5	13.2	1.0
20.8	11.2	.9	21.1	12.8	1.0	21.4	10.4	.9
21.7	12.2	1.0	22.0	11.9	1.0	22.3	10.1	.9
22.6	11.0	.9	22.9	10.5	.9	23.2	11.5	.9
23.5	11.1	.9	23.8	9.6	.9	24.1	9.5	.9
24.4	11.0	.9	24.7	10.5	.9	25.0	10.3	.9
25.3	9.7	.9	25.6	9.1	.8	25.9	8.4	.8
26.2	9.6	.9	26.5	10.2	.9	26.8	7.9	.8
27.1	7.5	.8	27.4	8.5	.8	27.7	8.4	.8
28.0	8.0	.8	28.3	6.5	.8	28.6	7.4	.8
29.0	5.8	.7	29.3	5.5	.7	29.6	3.9	.5
29.9	3.3	.5	30.2	2.6	.5	30.5	2.7	.5
30.8	1.8	.4	31.1	.7	.2	31.4	1.2	.3
31.7	.2	.1	32.0	.0	.0	32.3	.0	.0
32.6	.0	.0	32.9	.0	.0	33.2	.0	.0
33.5	.0	.0	33.8	.0	.0	34.1	.0	.0
34.4	.0	.0	34.7	.0	.0	35.0	.0	.0
35.3	.0	.0	35.6	.0	.0	35.9	.0	.0
36.2	.0	.0	36.5	.0	.0	36.8	.0	.0
37.1	.0	.0	37.4	.0	.0	37.7	.0	.0
38.0	.0	.0	38.3	.0	.0	38.6	.0	.0

677 20(PB(P+ALPHA) 29.8 MEV 165 DEG. 8/5/73

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
9.9	.0	.0	10.2	.0	.0	10.5	.0	.0
10.8	.0	.0	11.1	.2	.1	11.4	.2	.1
11.7	.4	.2	12.0	1.0	.2	12.3	1.9	.3
12.6	2.6	.4	12.9	1.7	.2	13.2	1.5	.3
13.5	1.0	.2	13.8	.9	.2	14.1	1.4	.3
14.4	1.4	.3	14.7	1.5	.2	15.0	1.7	.3
15.3	1.5	.3	15.6	2.3	.4	15.9	2.4	.4
16.2	3.6	.5	16.5	4.0	.5	16.8	4.9	.5
17.1	6.6	.6	17.4	6.3	.6	17.7	5.8	.6
18.0	6.9	.6	18.4	8.7	.7	18.7	10.6	.8
19.0	9.1	.7	19.3	11.5	.8	19.6	11.1	.8
19.9	12.9	.9	20.2	12.2	.8	20.5	12.4	.8
20.8	12.5	.9	21.1	11.8	.8	21.4	11.7	.8
21.7	11.7	.8	22.0	12.5	.9	22.3	11.9	.8
22.6	11.6	.8	22.9	11.8	.8	23.2	11.6	.8
23.5	11.9	.8	23.8	11.9	.8	24.1	11.4	.8
24.4	10.9	.8	24.7	9.0	.7	25.0	9.8	.8
25.3	8.0	.7	25.6	11.1	.8	25.9	7.9	.7
26.2	8.9	.7	26.5	8.3	.7	26.8	7.6	.7
27.1	8.1	.7	27.4	8.2	.7	27.7	7.2	.6
28.0	7.3	.7	28.4	7.4	.7	28.7	5.8	.6
29.0	5.6	.6	29.2	4.6	.5	29.6	3.8	.5
29.9	3.4	.4	30.2	3.1	.4	30.5	1.0	.2
30.8	.9	.2	31.1	1.5	.3	31.4	.4	.2
31.7	.1	.1	32.0	.0	.0	32.3	.0	.0
32.6	.0	.0	32.9	.0	.0	33.2	.0	.0
33.5	.0	.0	33.8	.0	.0	34.1	.0	.0
34.4	.0	.0	34.7	.0	.0	35.0	.0	.0
35.3	.0	.0	35.6	.1	.1	35.9	.0	.0
36.2	.0	.0	36.5	.0	.0	36.8	.0	.0
37.1	.0	.0	37.4	.0	.0	37.7	.0	.0
38.0	.0	.0	38.4	.0	.0	38.7	.0	.0

526 20(PB(P+ALPHA) 29.75 MEV 20 DEG. 11/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.3	79.3	4.1	12.7	50.0	3.2	13.2	46.5	3.1
13.6	41.2	2.9	14.1	51.4	3.2	14.5	48.1	3.2
14.9	37.3	2.8	15.4	32.7	2.6	15.8	39.6	2.9
16.3	38.3	2.8	16.7	37.0	2.8	17.2	37.3	2.8
17.6	37.9	2.8	18.1	58.8	3.5	18.5	69.7	3.8
19.0	54.0	3.4	19.4	53.0	3.3	19.9	70.7	3.8
20.3	77.9	4.0	20.8	76.4	4.0	21.2	94.4	4.4
21.7	92.9	4.4	22.1	104.6	4.8	22.6	118.7	5.0
23.0	124.5	5.1	23.5	125.4	5.1	23.9	127.7	5.2
24.3	130.2	5.2	24.8	141.5	5.4	25.2	150.7	5.6
25.7	145.9	5.5	26.1	149.9	5.6	26.6	149.2	5.6
27.0	151.5	5.6	27.5	143.6	5.6	27.9	144.8	5.5
28.4	149.0	5.6	28.8	152.4	5.6	29.2	142.3	5.5
29.7	141.9	5.5	30.2	139.2	5.4	30.6	131.0	5.2
31.1	126.4	5.1	31.5	135.2	5.4	32.0	163.5	5.8
32.4	168.3	5.9	32.9	183.6	6.2	33.3	167.2	5.9
33.7	176.7	6.1	34.2	164.1	5.9	34.6	116.8	4.9
35.1	96.7	4.5	35.5	58.0	3.5	36.0	33.3	2.6
36.4	22.8	2.2	36.9	15.9	1.8	37.2	10.2	1.5
37.8	9.1	1.4	38.2	4.3	1.4	38.7	9.2	1.4
39.1	7.3	1.2	39.6	4.1	1.1	40.0	6.7	1.2
40.5	6.1	1.1	40.9	3.1	.8	41.4	4.6	1.0
41.8	3.1	.8	42.2	4.0	.9	42.7	1.5	.6
43.1	1.5	.6	43.6	.6	.4	44.0	1.3	.5
44.5	.8	.4	44.9	.4	.2	45.4	.2	.2
45.8	.2	.2	46.3	.0	.0	46.7	.0	.0
47.2	.2	.2	47.6	.2	.2	48.1	.0	.0
48.5	.0	.0	49.0	.0	.0	49.4	.0	.0
49.9	.0	.0	50.3	.0	.0	50.8	.0	.0
51.2	.0	.0	51.7	.0	.0	52.1	.0	.0
52.5	.0	.0	53.0	.0	.0	53.4	.0	.0
53.9	.0	.0	54.3	.0	.0	54.8	.0	.0

525 20(PB(P+ALPHA) 29.75 MEV 45 DEG. 11/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.3	5.2	1.0	12.7	24.8	2.3	13.2	25.6	2.3
13.6	28.3	2.4	14.1	24.4	2.3	14.5	17.8	1.9
14.9	17.2	1.9	15.4	17.8	1.9	15.8	12.0	1.6
16.3	19.7	2.0	16.7	34.6	2.7	17.2	36.5	2.8
17.6	16.3	1.9	18.1	29.1	2.4	18.5	34.6	2.7
19.0	40.1	2.9	19.4	27.7	2.4	19.9	34.9	2.7
20.3	52.3	3.3	20.8	49.1	3.2	21.2	60.3	3.6
21.7	71.6	3.9	22.1	75.8	4.0	22.6	82.3	4.2
23.0	82.7	4.2	23.5	91.5	4.4	23.9	94.9	4.5
24.3	95.9	4.5	24.8	92.0	4.4	25.2	101.0	4.6
25.7	96.2	4.5	26.1	94.9	4.6	26.6	107.1	4.7
27.0	106.0	4.7	27.5	104.8	4.7	27.9	98.3	4.5
28.4	93.4	4.4	28.8	87.1	4.3	29.3	88.0	4.3
29.7	86.1	4.3	30.2	75.6	4.0	30.6	76.0	4.0
31.1	79.8	4.1	31.5	85.4	4.2	32.0	101.8	4.6
32.4	111.9	4.8	32.9	100.6	4.6	33.3	96.2	4.5
33.7	67.8	3.8	34.2	59.0	3.5	34.6	38.6	2.8
35.1	27.7	2.4	35.5	16.1	1.9	36.0	9.7	1.4
36.4	5.2	1.0	36.9	.3	.4	37.3	1.5	.6
37.8	.8	.4	38.2	1.7	.6	38.7	1.5	.6
39.1	.4	.3	39.6	.4	.3	40.0	.2	.2
40.5	1.0	.5	40.9	.6	.4	41.4	.6	.4
41.8	.2	.2	42.3	.4	.3	42.7	.2	.2
43.1	.0	.0	43.6	.0	.0	44.0	.0	.0
44.5	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.7	.0	.0
47.2	.0	.0	47.6	.0	.0	48.1	.0	.0
48.5	.0	.0	49.0	.0	.0	49.4	.0	.0
49.9	.0	.0	50.3	.0	.0	50.8	.0	.0
51.2	.0	.0	51.7	.0	.0	52.1	.0	.0
52.5	.0	.0	53.0	.0	.0	53.4	.0	.0
53.9	.0	.0	54.3	.0	.0	54.8	.0	.0

524 20(PB(P+ALPHA) 29.75 MEV 60 DEG. 11/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.4	2.1	.7	12.9	12.6	1.6	13.3	12.8	1.6
13.8	11.1	1.5	14.2	14.5	1.7	14.7	12.4	1.6
15.1	17.6	1.9	15.6	16.8	1.9	16.0	12.4	1.6
16.5	9.6	1.4	16.9	13.4	1.7	17.4	17.2	1.9
17.8	17.2	1.9	18.3	15.7	2.0	18.7	22.4	2.2
19.2	26.4	2.4	19.6	27.5	2.4	20.1	28.9	2.5
20.5	33.3	2.6	21.0	42.4	3.0	21.4	42.2	3.0
21.8	51.6	3.3	22.3	44.7	3.1	22.7	55.4	3.4
23.2	59.1	3.5	23.6	61.0	3.6	24.1	63.3	3.6
24.5	64.8	3.7	25.1	71.7	3.9	25.4	61.8	3.6
25.9	73.4	3.9	26.3	69.4	3.8	26.8	62.9	3.6
27.2	66.9	3.7	27.7	72.2	3.9	28.1	60.0	3.5
28.6	60.2	3.6	29.0	55.4	3.4	29.5	52.2	3.3
29.9	53.3	3.3	30.4	50.8	3.3	30.8	52.6	3.3
31.3	45.7	3.1	31.7	44.1	3.2	32.2	55.6	3.4
32.6	51.6	3.3	33.1	53.1	3.3	33.5	45.5	3.1
34.0	31.0	2.6	34.4	28.1	2.4	34.9	17.2	1.9
35.3	12.2	1.6	35.8	7.1	1.2	36.2	5.7	1.1
36.7	1.3	.5	37.1	.4	.2	37.6	.0	.0
38.0	.4	.3	38.5	.2	.2	38.9	.0	.0
39.4	.2	.2	39.8	.2	.2	40.2	.0	.0
40.7	.0	.0	41.2	.0	.0	41.6	.2	.2
42.1	.0	.0	42.5	.0	.0	42.9	.0	.0
43.4	.0	.0	43.9	.0	.0	44.3	.0	.0
44.8	.0	.0	45.2	.0	.0	45.7	.0	.0
46.1	.0	.0	46.6	.0	.0	47.0	.0	.0
47.5	.0	.0	47.9	.0	.0	48.4	.0	.0
48.8	.0	.0	49.3	.0	.0	49.7	.0	.0
50.2	.0	.0	50.6	.0	.0	51.1	.0	.0
51.5	.0	.0	52.0	.0	.0	52.4	.0	.0
52.9	.0	.0	53.3	.0	.0	53.8	.0	.0
54.2	.0	.0	54.7	.0	.0	55.1	.0	.0

522 20 (PB(P+ALPHA) 29.75 MEV 50 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.6	.5	.2	13.1	2.5	.5	13.5	3.2	.5
14.0	4.4	.6	14.4	2.5	.5	14.9	3.5	.6
15.3	7.1	.8	15.8	5.2	.7	16.2	6.4	.8
16.7	6.2	.8	17.1	11.8	1.1	17.6	11.7	1.1
18.0	13.9	1.1	18.5	14.5	1.2	18.9	18.4	1.3
19.4	17.1	1.3	19.8	21.1	1.4	20.3	21.4	1.4
20.7	24.2	1.5	21.2	24.3	1.5	21.6	23.8	1.5
22.1	23.4	1.5	22.6	27.3	1.6	23.0	26.1	1.6
23.5	29.6	1.7	23.9	31.3	1.7	24.4	26.7	1.6
24.8	27.0	1.6	25.3	26.5	1.6	25.7	27.3	1.6
26.2	30.0	1.7	26.6	28.3	1.6	27.1	27.8	1.6
27.5	26.2	1.6	28.0	23.4	1.5	28.4	24.1	1.5
28.9	21.6	1.4	29.3	19.3	1.3	29.8	18.8	1.3
31.2	17.9	1.3	31.7	17.6	1.3	31.2	14.6	1.2
31.6	16.6	1.2	32.1	16.1	1.2	32.5	15.3	1.2
33.0	13.2	1.1	33.4	11.6	1.0	33.9	8.8	.9
34.3	8.1	.9	34.8	5.1	.7	35.2	3.9	.6
35.7	2.8	.5	36.1	1.5	.4	36.6	1.1	.3
37.0	.6	.2	37.5	.1	.1	37.9	.0	.0
38.4	.0	.0	38.8	.0	.0	39.3	.0	.0
39.7	.0	.0	40.2	.0	.0	40.7	.0	.0
41.1	.0	.0	41.6	.0	.0	42.1	.0	.0
42.5	.0	.0	42.9	.0	.0	43.4	.0	.0
43.8	.0	.0	44.3	.0	.0	44.7	.0	.0
45.2	.0	.0	45.6	.0	.0	46.1	.0	.0
46.5	.0	.0	47.1	.0	.0	47.4	.0	.0
47.9	.0	.0	48.3	.0	.0	48.8	.0	.0
49.3	.0	.0	49.7	.0	.0	50.2	.0	.0
50.6	.0	.0	51.1	.0	.0	51.5	.0	.0
52.0	.0	.0	52.4	.0	.0	52.9	.0	.0
53.3	.0	.0	53.8	.0	.0	54.2	.0	.0
54.7	.0	.0	55.1	.0	.0	55.6	.0	.0

521 20 (PB(P+ALPHA) 29.75 MEV 120 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.8	.6	.2	13.2	1.5	.3	13.7	1.1	.2
14.2	1.4	.3	14.6	1.8	.3	15.1	2.4	.4
15.5	3.0	.4	16.0	3.8	.5	16.4	4.8	.5
16.9	6.6	.6	17.3	8.0	.7	17.8	9.5	.7
18.3	11.7	.8	18.7	13.8	.9	19.2	15.6	.9
19.6	16.2	1.0	20.1	18.4	1.0	20.5	16.6	1.0
21.0	17.7	1.0	21.4	17.6	1.0	21.9	16.8	1.0
22.3	17.2	1.0	22.8	16.3	1.0	23.3	16.7	1.0
23.7	14.5	.9	24.2	15.9	1.0	24.6	14.3	.9
25.1	14.5	.9	25.5	12.7	.9	26.0	13.9	.9
26.4	12.1	.8	26.9	13.6	.9	27.4	11.9	.8
27.8	12.3	.8	28.3	11.2	.8	28.7	9.7	.7
29.2	9.4	.7	29.6	8.9	.7	30.1	7.5	.7
30.5	6.3	.6	31.0	7.5	.7	31.4	5.2	.5
31.9	5.6	.6	32.4	6.2	.6	32.8	5.8	.6
33.3	4.5	.5	33.7	1.4	.4	34.2	2.7	.4
34.6	2.9	.4	35.1	1.7	.3	35.5	1.9	.3
36.0	.8	.2	36.5	.5	.2	36.9	.3	.1
37.4	.1	.1	37.8	.0	.0	38.3	.0	.0
38.7	.0	.0	39.2	.0	.0	39.6	.0	.0
40.1	.0	.0	40.6	.0	.0	41.0	.0	.0
41.5	.0	.0	41.9	.0	.0	42.4	.0	.0
42.8	.0	.0	43.3	.0	.0	43.7	.0	.0
44.2	.0	.0	44.6	.0	.0	45.1	.0	.0
45.6	.0	.0	46.1	.0	.0	46.5	.0	.0
46.9	.0	.0	47.4	.0	.0	47.8	.0	.0
48.3	.0	.0	48.7	.0	.0	49.2	.0	.0
49.7	.0	.0	50.1	.0	.0	50.6	.0	.0
51.0	.0	.0	51.5	.0	.0	51.9	.0	.0
52.4	.0	.0	52.8	.0	.0	53.3	.0	.0
53.7	.0	.0	54.2	.0	.0	54.7	.0	.0
55.1	.0	.0	55.6	.0	.0	56.0	.0	.0

520 20 (PB(P+ALPHA) 29.75 MEV 150 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	1.3	.2	13.4	.6	.1	13.8	1.1	.2
14.3	1.4	.2	14.8	1.3	.2	15.2	2.2	.3
15.7	3.0	.3	16.1	4.7	.4	16.6	5.0	.4
17.0	7.8	.5	17.5	11.4	.5	18.0	11.4	.5
18.4	13.3	.6	18.9	15.0	.7	19.2	15.6	.7
19.8	16.7	.7	20.2	16.2	.7	20.7	16.9	.7
21.2	16.7	.7	21.6	15.3	.7	22.1	15.3	.7
22.5	13.0	.6	23.0	13.1	.6	23.4	11.7	.6
23.9	11.0	.6	24.4	9.5	.5	24.8	10.2	.5
25.3	9.1	.5	25.7	4.5	.5	26.2	9.0	.5
26.6	8.2	.5	27.1	7.4	.5	27.6	7.3	.5
28.0	6.4	.4	28.5	6.3	.4	28.9	5.4	.4
29.4	4.4	.4	29.8	4.3	.4	30.3	4.3	.3
31.8	3.8	.3	31.2	3.1	.3	31.7	3.0	.3
32.1	3.0	.3	32.6	2.6	.3	33.0	2.3	.3
33.5	2.2	.3	34.1	1.6	.2	34.4	1.1	.2
34.9	1.0	.2	35.3	.7	.1	35.8	.4	.1
36.2	.1	.1	36.7	.1	.1	37.2	.0	.0
37.6	.0	.0	38.1	.0	.0	38.5	.0	.0
39.0	.0	.0	39.4	.0	.0	39.9	.0	.0
40.4	.0	.0	40.8	.0	.0	41.3	.0	.0
41.7	.0	.0	42.2	.0	.0	42.6	.0	.0
43.1	.0	.0	43.6	.0	.0	44.0	.0	.0
44.5	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.0	.0	47.7	.0	.0	48.1	.0	.0
48.6	.0	.0	49.0	.0	.0	49.5	.0	.0
50.0	.0	.0	50.4	.0	.0	50.9	.0	.0
51.3	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.6	.0	.0
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0

519 20 (PB(P+ALPHA) 29.75 MEV 165 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	1.0	.2	13.4	1.8	.2	13.8	2.6	.3
14.3	1.3	.2	14.8	2.2	.3	15.2	2.5	.3
15.7	4.0	.3	16.1	5.3	.4	16.6	7.2	.5
17.0	8.8	.5	17.5	9.2	.5	18.0	12.4	.6
18.4	13.6	.6	18.9	15.1	.7	19.2	16.7	.7
19.8	17.4	.7	20.2	16.2	.7	20.7	16.4	.7
21.2	16.6	.7	21.6	14.5	.6	22.1	12.9	.6
22.5	13.6	.6	23.0	12.5	.6	23.4	10.8	.6
23.9	11.0	.6	24.4	9.8	.5	24.8	9.9	.5
25.3	8.6	.5	25.7	7.6	.5	26.2	7.8	.5
26.6	8.0	.5	27.1	5.7	.4	27.6	5.7	.4
28.0	5.4	.4	28.5	5.4	.4	28.9	4.2	.3
29.4	3.9	.3	29.8	3.8	.3	30.3	3.4	.3
31.8	2.9	.3	31.2	2.8	.3	31.7	2.5	.3
32.1	1.6	.2	32.6	2.2	.3	33.0	1.7	.2
33.5	1.3	.2	34.0	1.1	.2	34.4	1.3	.2
34.9	.5	.1	35.3	.6	.1	35.8	.3	.1
36.2	.2	.1	36.7	.1	.0	37.2	.0	.0
37.6	.0	.0	38.1	.0	.0	38.5	.0	.0
39.0	.0	.0	39.4	.0	.0	39.9	.0	.0
40.4	.0	.0	40.8	.0	.0	41.3	.0	.0
41.7	.0	.0	42.2	.0	.0	42.6	.0	.0
43.1	.0	.0	43.6	.0	.0	44.0	.0	.0
44.5	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.0	.0	47.7	.0	.0	48.1	.0	.0
48.6	.0	.0	49.0	.0	.0	49.5	.0	.0
50.0	.0	.0	50.4	.0	.0	50.9	.0	.0
51.3	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.6	.0	.0
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0

23 P3 206 30.25 MEV 91 GRAZI

551 20 (P+ALPHA) 34.30 MEV 30 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR		
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV			
****	.0	.0	****	.0	.0	****	.0	.0	.0	.0	****	.0	.0	****	.0	12.3	16.6	1.6	12.7	21.9	1.8	13.2	36.5	2.4	
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	13.6	46.7	2.7	14.1	49.9	2.8	14.5	54.2	2.9
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	14.9	63.5	3.1	15.4	65.9	3.2	15.8	61.1	3.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	15.3	58.6	3.0	16.7	57.7	3.0	17.2	52.7	2.8
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	17.6	55.3	2.9	18.1	55.9	2.9	18.5	54.4	2.9
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	19.0	57.7	3.0	19.4	53.3	2.8	19.9	58.9	3.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	20.3	66.5	3.2	20.8	62.6	3.1	21.2	86.3	3.6
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	21.7	90.1	3.7	22.1	99.9	3.9	22.6	106.3	4.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	23.0	117.7	4.2	23.5	131.2	4.5	23.9	163.7	5.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	24.3	153.5	4.8	24.8	161.2	5.0	25.2	169.0	5.1
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	25.7	176.9	5.2	26.1	162.5	5.0	26.6	167.5	5.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	27.0	170.4	5.1	27.5	167.3	5.0	27.9	163.2	5.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	28.4	167.0	5.0	28.8	162.7	5.0	29.3	147.5	4.7
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	29.7	156.4	4.9	30.2	146.9	4.7	30.6	146.3	4.7
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	31.1	153.9	4.8	31.5	146.3	4.7	32.0	152.7	4.8
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	32.4	145.1	4.7	32.9	133.8	4.5	33.3	133.2	4.5
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	33.7	135.7	4.5	34.2	132.6	4.5	34.6	120.3	4.3
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	35.1	125.0	4.4	35.5	119.1	4.3	36.0	116.6	4.2
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	36.4	116.6	4.2	36.9	129.7	4.4	37.3	133.6	4.5
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	37.8	139.4	4.6	38.2	151.9	4.8	38.7	150.9	4.8
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	39.1	132.0	4.5	39.6	102.1	4.1	40.0	81.0	3.5
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	40.5	65.0	3.1	40.9	43.7	2.6	41.4	28.3	2.1
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	41.8	18.7	1.7	42.3	13.5	1.5	42.7	12.5	1.4
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	43.1	10.7	1.3	43.6	4.8	1.2	44.0	7.3	1.1
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	44.5	6.5	1.0	44.9	4.7	.8	45.4	4.7	.8
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	45.8	2.4	.6	46.3	3.2	.7	46.7	1.8	.5
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	47.2	1.4	.5	47.6	1.1	.4	48.1	1.5	.5
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	48.5	.2	.2	49.0	.6	.3	49.4	.2	.2
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	49.9	.6	.3	50.3	.5	.3	50.8	.3	.2
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	51.2	.0	.0	51.7	.2	.2	52.1	.0	.1
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	52.5	.0	.0	53.0	.0	.0	53.4	.0	.0
****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	.0	****	.0	53.9	.0	.0	54.3	.1	.0	54.8	.0	.0

550 20 (P+ALPHA) 34.30 MEV 45 DEG. 01/15/72

549 20 (P+ALPHA) 34.30 MEV 60 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	5.2	.9	12.7	6.6	1.0	13.2	10.8	1.3	12.4	.7	.2	12.9	1.6	.3	13.3				13.3				
13.6	16.3	1.6	14.1	24.0	1.9	14.5	31.5	2.2	13.8	4.3	.6	14.2	9.0	.8	14.7				14.7				
14.9	39.2	2.4	15.4	41.4	2.5	15.8	38.6	2.4	15.1	16.9	1.1	15.6	21.7	1.3	16.0				16.0				
16.3	36.5	2.4	16.7	36.2	2.4	17.2	39.1	2.4	16.5	23.6	1.3	16.9	19.3	1.2	17.4				17.4				
17.6	38.2	2.4	18.1	35.5	2.4	18.5	23.9	2.1	17.8	23.3	1.3	18.3	26.3	1.4	18.7				18.7				
19.0	37.9	2.4	19.4	46.9	2.7	19.9	41.5	2.5	19.2	21.4	1.3	19.6	23.6	1.3	20.1				20.1				
21.3	43.5	2.6	21.9	44.4	2.7	21.2	51.9	2.8	20.5	39.9	1.7	21.0	35.6	1.7	21.4				21.4				
21.7	57.4	3.0	22.1	64.9	3.1	22.6	85.4	3.6	21.8	39.8	1.7	22.3	46.3	1.9	22.7				22.7				
23.0	86.7	3.6	23.5	91.6	3.7	23.9	99.4	3.9	23.2	54.4	2.0	23.6	55.9	2.1	24.1				24.1				
24.3	106.0	4.0	24.8	111.3	4.1	25.2	109.8	4.1	24.5	67.7	2.3	25.0	72.9	2.4	25.4				25.4				
25.7	124.9	4.4	26.1	123.1	4.4	26.6	121.9	4.3	25.9	80.6	2.5	26.3	83.0	2.5	26.8				26.8				
27.0	123.4	4.3	27.5	116.1	4.2	27.9	127.5	4.4	27.2	86.0	2.6	27.7	89.9	2.6	28.1				28.1				
28.4	121.6	4.3	28.8	113.4	4.3	29.3	111.3	4.1	28.6	90.6	2.6	29.0	81.2	2.5	29.5				29.5				
29.7	113.9	4.2	30.2	108.7	4.1	30.6	107.5	4.1	29.9	73.4	2.4	30.4	69.5	2.3	30.9				30.9				
31.1	105.7	4.0	31.5	97.3	3.9	32.0	98.5	3.9	31.3	64.5	2.2	31.7	66.5	2.1	32.2				32.2				
32.4	97.9	3.9	32.9	94.5	3.8	33.3	85.7	3.6	32.6	61.6	2.2	33.1	54.5	2.0	33.5				33.5				
33.7	82.3	3.5	34.2	75.4	3.4	34.6	78.0	3.5	34.0	45.2	1.9	34.4	45.2	1.9	34.8				34.8				
35.1	76.7	3.4	35.5	64.9	3.1	36.0	68.0	3.2	35.3	38.2	1.7	35.8	42.3	1.8	36.2				36.2				
36.4	66.6	3.2	36.9	66.0	3.2	37.3	62.2	3.1	36.7	35.2	1.6	37.1	34.0	1.6	37.6				37.6				
37.8	77.3	3.4	38.2	62.6	3.2	38.7	75.4	3.4	38.0	31.7	1.5	38.5	32.3	1.6	38.9				38.9				
39.1	67.7	3.2	39.6	57.7	3.0	40.0	40.2	2.5	39.4	32.5	1.6	39.8	26.2	1.4	40.3				40.3				
40.5	27.5	2.0	40.9	18.0	1.7	41.4	9.5	1.2	40.7	13.0	1.0	41.2	9.4	.8	41.6				41.6				
41.8	5.0	.9	42.3	2.7	.6	42.7	1.8	.5	42.1	3.7	.5	42.5	1.5	.3	43.0				43.0				
43.1	1.5	.5	43.6	.9	.4	44.0	.8	.3	43.4	.1	.1	43.9	.3	.0	44.3				44.3				
44.5	1.8	.5	44.9	.6	.3	45.4	.0	.0	44.8	.0	.0	45.2	.0	.0	45.7				45.7				
45.8	.5	.3	46.3	.2	.2	46.7	.0	.0	46.1	.0	.0	46.6	.1	.1	47.1				47.1				
47.2	.0	.0	47.6	.3	.2	48.1	.2	.2	47.5	.1	.1	47.9	.0	.0	48.4				48.4				
48.5	.0	.0	49.0	.0	.0	49.4	.0	.0	48.8	.0	.0	49.3	.0	.0	49.7				49.7				
49.9	.0	.0	50.3	.1	.0	50.8	.0	.0	50.2	.0	.0	50.6	.0	.0	51.1				51.1				
51.2	.0	.0	51.7	.0	.0	52.1	.0	.0	51.5	.0	.0	52.0	.0	.0	52.4				52.4				
52.5	.0	.0	53.0	.1	.0	53.4	.0	.0	52.9	.0	.0	53.3	.0	.0	53.8				53.8				
53.9	.0	.0	54.3	.0	.0	54.8	.0	.0	54.2	.0	.0	54.7	.0	.0	55.1				55.1				

552 205PB(P+ALPHA) 34.33 MEV 91 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.6	.6	.2		13.1	1.4	.3		13.5	3.3	.5	
14.0	5.4	.6		14.4	5.5	.6		14.9	7.0	.7	
15.3	9.0	.8		15.8	8.9	.8		16.2	7.8	.7	
16.7	9.0	.6		17.1	12.0	.9		17.6	8.7	.8	
19.0	9.5	.8		18.5	14.9	1.0		18.9	13.6	1.1	
19.4	16.6	1.1		19.8	20.3	1.2		20.2	24.1	1.3	
21.7	29.0	1.4		21.2	29.2	1.4		21.6	29.7	1.5	
22.1	30.4	1.5		22.6	30.8	1.5		23.0	33.1	1.5	
23.5	34.8	1.6		23.9	35.2	1.6		24.4	34.8	1.6	
24.8	38.2	1.6		25.3	27.0	1.6		25.7	41.4	1.7	
25.2	43.4	1.7		26.6	41.3	1.7		27.1	37.9	1.6	
27.5	39.4	1.7		28.0	31.7	1.6		28.4	36.2	1.6	
28.9	33.9	1.6		29.3	31.7	1.5		29.8	28.1	1.4	
30.2	25.2	1.3		30.7	27.6	1.4		31.2	24.0	1.3	
31.6	22.2	1.3		32.1	22.2	1.3		32.5	21.8	1.2	
33.0	18.1	1.1		33.4	17.2	1.1		33.9	14.2	1.0	
34.3	14.9	1.0		34.8	12.4	1.0		35.2	13.0	1.1	
35.7	11.5	.9		36.1	11.9	.9		36.6	9.0	.8	
37.0	8.6	.8		37.5	9.3	.8		37.9	9.6	.8	
38.4	8.6	.8		38.8	8.8	.8		39.3	5.8	.6	
39.7	3.5	.5		40.2	4.1	.5		40.7	2.8	.4	
41.1	1.6	.3		41.6	3.1	.3		42.0	.3	.1	
42.5	.2	.1		42.9	.0	.0		43.4	.0	.0	
43.8	.1	.1		43.3	.1	.1		44.7	.0	.0	
45.2	.0	.0		45.6	.0	.0		46.1	.0	.0	
46.5	.0	.0		47.0	.0	.0		47.4	.0	.0	
47.9	.0	.0		48.3	.0	.0		48.8	.0	.0	
49.3	.0	.0		49.7	.0	.0		50.2	.0	.0	
50.6	.0	.0		51.1	.0	.0		51.5	.0	.0	
52.0	.0	.0		52.4	.0	.0		52.9	.0	.0	
53.3	.0	.0		53.8	.0	.0		54.2	.0	.0	
54.7	.0	.0		55.1	.0	.0		55.6	.0	.0	

553 20 (PR(P+ALPHA) 34.30 MEV 120 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.9	.1	.1		12.3	.6	.2		12.8	1.9	.4	
13.2	3.0	.5		13.7	3.2	.5		14.1	5.6	.6	
14.6	3.8	.5		15.1	3.3	.5		15.5	3.7	.5	
15.0	4.5	.6		16.4	5.5	.7		16.9	8.2	.8	
17.3	9.9	.8		17.8	11.1	.9		18.3	14.2	1.0	
18.7	18.3	1.1		19.2	19.7	1.2		19.6	23.2	1.3	
20.1	24.3	1.3		20.5	23.6	1.3		21.0	24.5	1.3	
21.4	22.1	1.3		21.9	24.3	1.3		22.4	24.2	1.3	
22.8	22.6	1.3		23.3	21.4	1.2		23.7	22.7	1.3	
24.2	23.6	1.2		24.6	23.9	1.3		25.1	21.9	1.2	
25.6	22.5	1.3		26.0	22.6	1.2		26.5	20.9	1.2	
26.9	20.5	1.2		27.4	16.3	1.1		27.8	15.3	1.0	
28.3	15.0	1.0		28.8	13.5	1.0		29.2	12.6	1.0	
29.7	12.3	.9		30.1	11.3	.9		30.6	12.0	.9	
31.0	10.2	.9		31.5	8.0	.8		32.0	7.6	.7	
32.4	7.5	.7		32.9	5.9	.6		33.3	5.8	.6	
33.8	6.3	.7		34.2	5.9	.6		34.7	4.8	.6	
35.2	4.1	.5		35.6	3.9	.5		36.1	3.3	.5	
36.5	2.8	.4		37.0	2.2	.4		37.4	2.5	.4	
37.9	2.7	.4		38.4	2.1	.4		38.8	1.6	.3	
39.3	1.0	.3		39.7	.9	.2		40.2	.6	.2	
40.6	.3	.1		41.1	.3	.1		41.6	.0	.0	
42.0	.0	.0		42.5	.0	.0		42.9	.0	.0	
43.4	.0	.0		43.8	.0	.0		44.3	.0	.0	
44.8	.0	.0		45.2	.0	.0		45.7	.0	.0	
46.1	.0	.0		46.6	.0	.0		47.3	.0	.0	
47.5	.0	.0		48.0	.0	.0		48.4	.0	.0	
48.9	.0	.0		49.3	.0	.0		49.8	.0	.0	
50.2	.0	.0		50.7	.0	.0		51.2	.0	.0	
51.6	.0	.0		52.1	.0	.0		52.5	.0	.0	
53.0	.0	.0		53.4	.0	.0		53.9	.0	.0	
54.4	.0	.0		54.8	.0	.0		55.3	.0	.0	

554 205PB(P+ALPHA) 34.33 MEV 151 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.9	1.5	.3		13.4	3.7	.4		13.8	3.3	.4	
14.3	3.6	.4		14.8	3.6	.4		15.2	4.2	.4	
15.7	5.1	.5		16.1	5.9	.5		16.6	7.6	.6	
17.0	9.6	.7		17.5	12.1	.8		18.0	15.4	.9	
18.4	16.4	.9		18.9	19.7	1.0		19.3	23.3	1.1	
19.8	23.0	1.0		20.2	22.2	1.0		20.7	22.2	1.0	
21.2	22.0	1.0		21.6	22.2	1.0		22.1	19.8	1.0	
22.5	17.8	.9		23.0	17.3	.9		23.4	18.6	.9	
23.9	18.0	.9		24.4	15.6	.9		24.8	16.8	.9	
25.3	14.5	.8		25.7	14.9	.8		26.2	13.0	.8	
25.6	12.3	.8		27.1	13.3	.7		27.6	10.3	.7	
28.0	9.4	.7		28.5	8.2	.6		28.9	7.8	.6	
29.4	7.9	.6		29.8	7.1	.6		30.3	6.3	.5	
30.8	4.9	.5		31.2	5.1	.5		31.7	4.4	.5	
32.1	3.6	.4		32.6	3.9	.4		33.1	2.9	.4	
33.5	2.8	.4		34.0	2.4	.3		34.4	2.4	.3	
34.9	2.2	.3		35.3	1.9	.3		35.8	1.7	.3	
36.2	1.6	.3		36.7	1.4	.3		37.2	1.2	.2	
37.6	1.2	.2		38.1	.7	.2		38.5	1.1	.2	
39.0	.4	.1		39.4	.2	.1		39.9	.3	.1	
40.4	.3	.1		40.8	.1	.1		41.3	.1	.1	
41.7	.0	.0		42.2	.0	.0		42.6	.0	.0	
43.1	.0	.0		43.6	.0	.0		44.1	.0	.0	
44.5	.0	.0		44.9	.0	.0		45.4	.0	.0	
45.8	.0	.0		46.3	.0	.0		46.8	.0	.0	
47.2	.0	.0		47.7	.0	.0		48.1	.0	.0	
48.6	.0	.0		49.1	.0	.0		49.5	.0	.0	
50.0	.0	.0		50.4	.0	.0		50.9	.0	.0	
51.3	.0	.0		51.8	.0	.0		52.2	.0	.0	
52.7	.0	.0		53.2	.0	.0		53.6	.0	.0	
54.1	.0	.0		54.5	.0	.0		55.0	.0	.0	
55.4	.0	.0		55.9	.0	.0		56.4	.0	.0	

555 20 (PR(P+ALPHA) 34.30 MEV 165 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.9	3.6	.5		13.4	4.0	.5		13.8	5.9	.6	
14.3	5.1	.6		14.8	4.2	.5		15.2	6.8	.7	
15.7	6.2	.7		16.1	8.4	.8		16.6	8.9	.8	
17.0	13.3	1.0		17.5	14.3	1.0		18.0	18.0	1.1	
18.4	18.6	1.2		18.9	23.2	1.3		19.3	22.1	1.3	
19.8	23.7	1.3		20.2	22.3	1.3		20.7	21.1	1.2	
21.2	20.3	1.2		21.6	21.3	1.2		22.1	16.5	1.1	
22.5	17.5	1.1		23.1	15.6	1.1		23.4	15.7	1.1	
23.9	16.0	1.1		24.4	14.2	1.0		24.8	13.8	1.0	
25.3	12.7	1.0		25.7	13.5	1.0		26.2	13.9	.9	
26.6	11.0	.9		27.1	9.1	.8		27.6	7.1	.7	
28.1	9.2	.8		28.5	6.1	.7		28.9	7.1	.7	
29.4	5.2	.6		29.8	5.9	.6		30.3	4.7	.6	
30.8	3.7	.5		31.2	4.1	.5		31.7	3.4	.5	
32.1	3.1	.5		32.6	3.6	.4		33.1	1.8	.4	
33.5	2.2	.4		34.1	2.3	.4		34.4	1.9	.4	
34.9	1.7	.4		35.3	1.1	.3		35.8	1.4	.3	
36.2	1.3	.3		36.7	1.0	.3		37.2	1.1	.3	
37.6	.6	.2		38.1	.9	.2		38.5	.7	.2	
39.0	.4	.2		39.4	.4	.2		39.9	.1	.1	
40.4	.2	.1		40.8	.1	.1		41.3	.0	.0	
41.7	.0	.0		42.2	.0	.0		42.6	.0	.0	
43.1	.0	.0		43.6	.0	.0		44.1	.0	.0	
44.5	.0	.0		44.9	.0	.0		45.4	.0	.0	
45.8	.0	.0		46.3	.0	.0		46.8	.0	.0	
47.2	.0	.0		47.7	.0	.0		48.1	.0	.0	
48.6	.0	.0		49.1	.0	.0		49.5	.0	.0	
50.0	.0	.0		50.4	.0	.0		50.9	.0	.0	
51.3	.0	.0		51.8	.0	.0		52.2	.0	.0	
52.7	.0	.0		53.2	.0	.0		53.6	.0	.0	
54.1	.0	.0		54.5	.0	.0		55.0	.0	.0	
55.4	.0	.0		55.9	.0	.0		56.4	.0	.0	

506 20(PB(P+ALPHA) 38.40 MEV 30 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	7.3	1.2		12.7	39.4	2.7		13.2	42.1	2.9	
13.6	35.0	2.7		14.1	38.4	2.8		14.5	37.4	2.6	
14.9	34.2	2.6		15.4	33.2	2.6		15.8	38.4	2.8	
16.3	37.6	2.8		16.7	42.1	2.9		17.2	51.8	3.2	
17.6	57.5	3.4		18.1	58.1	3.4		18.5	75.9	3.9	
19.0	73.7	3.9		19.4	81.9	4.1		19.9	88.4	4.2	
20.3	96.3	4.4		20.8	111.1	4.7		21.2	126.9	5.1	
21.7	135.4	5.2		22.1	144.1	5.4		22.6	158.6	5.7	
23.0	149.9	5.5		23.5	161.9	5.7		23.9	177.0	6.0	
24.3	161.3	6.1		24.8	187.4	6.2		25.2	192.6	6.2	
25.7	203.1	6.4		26.1	209.9	6.5		26.6	194.4	6.3	
27.0	193.4	6.3		27.5	194.7	6.3		27.9	194.0	6.3	
28.4	188.6	6.2		28.8	182.1	6.1		29.3	182.7	6.1	
29.7	186.4	6.1		30.2	171.8	5.9		30.6	174.8	5.9	
31.1	167.9	5.7		31.5	147.7	5.5		32.0	150.1	5.5	
32.4	152.2	5.5		32.9	142.0	5.4		33.2	145.7	5.4	
33.7	145.3	5.4		34.2	139.4	5.3		34.6	139.4	5.3	
35.1	134.4	5.2		35.5	121.2	5.0		36.0	127.7	5.1	
36.4	131.9	5.2		36.9	137.1	5.3		37.3	127.1	5.1	
37.8	122.0	5.0		38.2	113.1	4.8		38.7	117.8	4.7	
39.1	112.1	4.8		39.6	116.3	4.9		40.0	117.0	4.9	
40.5	123.9	5.2		40.9	102.2	4.5		41.4	63.9	3.6	
41.8	33.4	2.6		42.3	9.7	1.4		42.7	7.7	1.2	
43.1	6.1	1.1		43.6	5.5	1.1		44.0	1.8	.6	
44.5	1.8	.6		44.9	.6	.4		45.4	.6	.4	
45.8	.6	.4		46.3	.4	.3		46.7	.0	.0	
47.2	.2	.2		47.6	.1	.1		48.1	.0	.1	
48.5	.0	.0		49.0	.0	.0		49.4	.0	.0	
49.9	.0	.0		50.3	.0	.0		50.8	.0	.1	
51.2	.0	.0		51.7	.0	.0		52.1	.0	.0	
52.5	.0	.0		53.1	.0	.0		53.4	.0	.1	
53.9	.0	.0		54.3	.0	.0		54.8	.0	.0	

505 20(PB(P+ALPHA) 38.40 MEV 45 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	5.1	1.0		12.7	23.7	2.2		13.2	23.1	2.2	
13.6	26.4	2.3		14.1	23.5	2.2		14.5	21.3	2.1	
14.9	26.8	2.3		15.4	23.3	2.2		15.8	24.4	2.2	
16.3	28.4	2.4		16.7	33.2	2.5		17.2	33.3	2.6	
17.6	39.4	2.8		18.1	40.4	2.9		18.5	51.6	3.2	
19.0	54.2	3.3		19.4	54.2	3.3		19.9	63.9	3.6	
20.3	76.1	3.9		20.8	80.6	4.0		21.2	83.0	4.1	
21.7	97.6	4.5		22.1	105.8	4.7		22.6	112.0	4.8	
23.0	116.9	4.9		23.5	130.3	5.1		23.9	130.1	5.1	
24.3	121.8	5.0		24.8	137.8	5.3		25.2	126.2	5.1	
25.7	136.8	5.3		26.1	143.7	5.4		26.6	133.1	5.2	
27.0	134.6	5.2		27.5	134.6	5.2		27.9	132.9	5.2	
28.4	130.5	5.1		28.8	128.9	5.1		29.3	129.3	5.1	
29.7	121.6	5.0		30.2	123.1	5.0		30.6	111.2	4.8	
31.1	111.4	4.8		31.5	101.1	4.5		32.0	91.7	4.3	
32.4	89.1	4.3		32.9	91.1	4.3		33.3	84.0	4.1	
33.7	81.2	4.1		34.2	76.9	4.0		34.6	76.9	4.0	
35.1	75.1	3.9		35.5	72.1	3.8		36.0	74.7	3.9	
36.4	69.0	3.7		36.9	66.6	3.7		37.3	64.5	3.6	
37.8	61.3	3.5		38.2	54.6	3.3		38.7	49.5	3.2	
39.1	48.3	3.1		39.6	49.5	3.2		40.0	47.7	3.1	
40.5	59.7	3.5		40.9	45.9	3.1		41.4	21.3	2.1	
41.8	11.6	1.5		42.3	4.1	.6		42.7	1.8	.6	
43.1	2.1	.6		43.6	1.1	.5		44.0	.2	.2	
44.5	.2	.2		44.9	.2	.2		45.4	.2	.2	
45.8	.6	.4		46.3	.2	.2		46.7	.4	.3	
47.2	.0	.0		47.6	.0	.0		48.1	.0	.0	
48.5	.0	.0		49.0	.0	.0		49.4	.0	.0	
49.9	.0	.0		50.3	.0	.0		50.8	.0	.0	
51.2	.0	.0		51.7	.0	.0		52.1	.0	.0	
52.5	.0	.0		53.1	.0	.0		53.4	.0	.0	
53.9	.0	.0		54.3	.0	.0		54.8	.0	.0	

504 20(PB(P+ALPHA) 38.40 MEV 60 DEG. 01/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.4	4.3	.9		12.9	14.6	1.7		13.3	15.8	1.8	
13.8	14.6	1.7		14.2	14.2	1.7		14.7	13.0	1.6	
15.1	19.7	2.0		15.6	16.8	1.8		16.1	18.2	1.9	
16.5	21.5	2.1		16.9	24.1	2.2		17.4	28.0	2.4	
17.8	33.3	2.6		18.3	37.9	2.8		18.7	40.6	2.9	
19.2	38.7	2.8		19.6	51.1	3.2		20.1	61.6	3.5	
20.5	53.7	3.3		20.1	64.7	3.6		21.4	65.5	3.6	
21.8	74.4	3.9		22.3	71.4	3.6		22.7	79.1	4.0	
23.2	87.2	4.2		23.6	89.4	4.3		24.1	94.9	4.4	
24.5	94.5	4.4		25.0	88.6	4.2		25.4	91.6	4.3	
25.9	97.3	4.4		26.3	94.7	4.4		26.8	89.2	4.3	
27.2	89.6	4.3		27.7	90.6	4.2		28.1	91.0	4.3	
28.6	82.1	4.1		29.1	87.3	4.2		29.5	81.7	4.1	
29.9	80.1	4.0		30.4	85.6	4.2		30.8	75.2	3.9	
31.3	61.4	3.5		31.7	61.6	3.5		32.2	57.8	3.4	
32.6	52.1	3.3		33.1	50.3	3.2		33.5	46.7	3.1	
34.0	46.6	3.1		34.4	39.1	2.8		34.9	43.4	3.0	
35.3	42.2	2.9		35.8	34.5	2.6		36.2	31.0	2.5	
36.7	35.1	2.7		37.1	32.1	2.5		37.6	28.8	2.4	
38.0	32.0	2.5		38.5	27.6	2.4		38.9	26.0	2.3	
39.4	20.7	2.0		39.8	21.9	2.1		40.3	20.3	2.1	
40.7	19.1	2.0		41.2	17.0	1.9		41.6	6.7	1.2	
42.1	3.2	.8		42.5	1.2	.5		43.1	.8	.4	
43.4	.2	.2		43.9	.0	.0		44.2	.0	.0	
44.8	.1	.1		45.2	.1	.1		45.7	.0	.1	
46.1	.0	.0		46.6	.0	.0		47.0	.0	.0	
47.5	.1	.1		47.9	.1	.1		48.4	.0	.1	
48.8	.0	.0		49.3	.0	.0		49.7	.0	.0	
50.2	.1	.1		51.6	.1	.1		51.1	.0	.0	
51.5	.0	.0		52.0	.0	.0		52.4	.0	.0	
52.9	.0	.0		53.3	.1	.1		53.8	.0	.1	
54.2	.0	.0		54.7	.0	.0		55.1	.0	.0	

503 20(PB(P+ALPHA) 38.40 MEV 90 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.6	.4	.2	13.1	4.7	.7	12.5	5.2	.7
14.0	7.4	.9	14.4	8.3	.9	14.9	10.1	1.0
15.3	12.8	1.1	15.8	11.4	1.1	16.2	13.2	1.2
16.7	14.7	1.2	17.1	17.5	1.4	17.6	23.9	1.6
18.0	27.0	1.7	18.5	25.3	1.7	18.9	28.1	1.7
19.4	33.1	1.8	19.8	35.4	1.9	20.3	37.4	1.9
20.7	41.5	2.1	21.2	37.5	2.0	21.6	38.4	2.0
22.1	42.6	2.1	22.6	42.1	2.1	23.1	43.3	2.1
23.5	43.1	2.1	23.9	42.6	2.1	24.4	42.4	2.1
24.8	42.1	2.1	25.3	43.5	2.1	25.7	43.5	2.1
26.2	42.1	2.1	26.6	39.0	2.0	27.1	41.8	2.1
27.5	39.1	2.0	28.1	36.1	1.9	28.4	38.5	2.0
28.9	38.4	2.0	29.3	35.2	1.9	29.8	37.2	1.9
30.2	33.7	1.9	30.7	27.2	1.7	31.2	24.0	1.6
31.6	25.0	1.6	32.1	20.1	1.4	32.5	17.1	1.3
33.0	17.9	1.3	33.4	18.4	1.3	33.9	14.5	1.2
34.3	16.4	1.3	34.8	17.2	1.2	35.2	13.2	1.2
35.7	11.2	1.1	36.1	9.2	1.0	36.6	9.2	1.1
37.0	8.1	.9	37.5	7.1	.8	37.9	7.3	.8
38.4	3.1	.9	38.8	7.2	.9	39.3	5.1	.7
39.7	4.6	.7	40.2	4.6	.7	40.7	5.5	.7
41.1	4.6	.7	41.6	5.3	.6	42.1	.6	.2
42.5	.8	.3	42.9	.0	.0	43.4	.0	.0
43.8	.1	.1	44.3	.1	.1	44.7	.1	.1
45.2	.0	.0	45.6	.0	.0	46.1	.0	.0
45.5	.1	.1	47.1	.1	.1	47.4	.0	.1
47.9	.0	.0	48.3	.0	.0	48.8	.0	.0
49.3	.1	.1	49.7	.1	.1	50.2	.0	.1
50.6	.0	.0	51.1	.0	.0	51.5	.0	.0
52.1	.1	.1	52.4	.1	.1	52.9	.0	.1
53.3	.0	.0	53.8	.0	.0	54.2	.0	.0
54.7	.1	.1	55.1	.1	.1	55.6	.1	.1

518 20PR(P+ALPHA) 38.40 MEV 120 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.8	.4	.2	13.3	4.3	.5	13.7	5.0	.6
14.2	3.5	.5	14.6	2.7	.4	15.1	3.9	.5
15.5	7.2	.7	16.1	7.7	.7	16.5	9.4	.8
16.9	13.7	.9	17.4	15.2	1.0	17.8	20.9	1.2
18.3	23.6	1.2	18.7	25.1	1.3	19.2	28.4	1.3
19.6	32.6	1.4	20.1	32.2	1.4	20.6	32.6	1.4
21.0	32.3	1.4	21.5	29.4	1.4	21.9	27.8	1.3
22.4	27.0	1.3	22.8	25.9	1.3	23.3	27.2	1.3
23.7	28.2	1.3	24.2	26.1	1.3	24.7	26.7	1.3
25.1	23.7	1.2	25.6	23.3	1.2	26.0	21.3	1.2
26.5	22.8	1.2	26.9	21.5	1.2	27.4	23.6	1.2
27.8	19.6	1.1	28.3	21.0	1.1	28.8	17.3	1.0
29.2	19.6	1.1	29.7	15.9	1.0	30.1	16.0	1.0
30.6	13.8	.9	31.0	13.5	.9	31.5	10.2	.8
31.9	8.4	.7	32.4	9.9	.8	32.9	8.0	.7
33.3	7.0	.7	33.8	7.1	.7	34.2	6.5	.6
34.7	5.9	.6	35.1	5.1	.6	35.6	4.8	.5
36.1	4.0	.5	36.5	4.8	.5	37.0	4.0	.5
37.4	3.9	.5	37.9	2.6	.4	38.3	2.7	.4
38.8	2.7	.4	39.2	2.4	.4	39.7	1.7	.3
40.2	1.9	.3	40.6	1.4	.3	41.1	1.5	.3
41.5	1.8	.3	42.0	1.0	.3	42.4	.8	.2
42.9	.4	.2	43.3	.1	.1	43.8	.1	.1
44.3	.0	.0	44.7	.0	.0	45.2	.0	.0
45.6	.0	.0	46.1	.0	.0	46.5	.0	.0
47.0	.0	.0	47.4	.0	.0	47.9	.0	.0
48.4	.0	.0	48.8	.0	.0	49.3	.0	.0
49.7	.0	.0	50.2	.0	.0	50.6	.0	.0
51.1	.0	.0	51.5	.0	.0	52.0	.0	.0
52.5	.0	.0	52.9	.0	.0	53.4	.0	.0
53.8	.0	.0	54.3	.0	.0	54.7	.0	.0
55.2	.0	.0	55.6	.0	.0	56.1	.0	.0

509 20PR(P+ALPHA) 38.40 MEV 150 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	.3	.1	13.4	1.5	.3	13.8	3.4	.4
14.3	3.7	.5	14.9	3.2	.4	15.2	5.6	.6
15.7	6.2	.6	16.1	8.7	.7	16.6	13.6	.8
17.0	13.9	.9	17.5	17.4	1.0	18.0	21.1	1.1
18.4	24.6	1.2	18.9	26.0	1.2	19.3	29.6	1.2
19.8	30.9	1.3	20.2	31.4	1.3	20.7	39.1	1.3
21.2	28.1	1.3	21.6	25.8	1.2	22.1	25.9	1.2
22.5	22.7	1.1	23.0	21.5	1.1	23.4	21.9	1.1
23.9	20.0	1.1	24.4	19.6	1.1	24.8	17.3	1.0
25.3	17.2	1.0	25.7	16.2	1.0	26.2	15.2	.9
26.6	12.8	.9	27.1	17.4	.8	27.6	12.1	.8
28.0	13.7	.9	28.5	11.4	.8	28.9	10.7	.8
29.4	11.2	.8	29.8	9.5	.8	30.3	8.3	.7
30.8	6.7	.6	31.2	6.4	.6	31.7	6.1	.6
32.1	5.0	.5	32.6	4.8	.5	33.0	3.4	.4
33.5	5.5	.6	34.0	3.5	.4	34.4	2.8	.4
34.9	4.3	.4	35.3	2.5	.4	35.8	2.5	.4
36.2	2.5	.4	36.7	2.1	.3	37.2	2.1	.3
37.6	1.9	.3	38.1	1.2	.2	38.5	1.1	.3
39.0	1.1	.3	39.4	1.1	.3	39.9	.6	.2
40.4	1.0	.2	40.8	1.2	.3	41.3	1.0	.2
41.7	.5	.2	42.2	.4	.2	42.6	.0	.1
43.1	.1	.1	43.6	.0	.0	44.0	.0	.0
44.5	.1	.0	44.9	.1	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.0	.0	47.7	.0	.0	48.1	.0	.0
48.6	.0	.0	49.0	.0	.0	49.5	.0	.0
50.1	.0	.0	50.4	.0	.0	50.9	.0	.0
51.3	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.6	.0	.0
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0

510 20PR(P+ALPHA) 38.40 MEV 155 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	.7	.2	13.4	3.9	.5	13.8	3.0	.4
14.3	2.9	.4	14.8	3.7	.5	15.2	6.0	.6
15.7	7.1	.6	16.1	11.6	.8	16.6	12.2	.8
17.0	15.9	1.0	17.5	24.1	1.1	18.0	24.7	1.2
18.4	26.0	1.2	18.9	29.1	1.3	19.3	31.1	1.3
19.8	30.3	1.3	20.2	25.4	1.2	20.7	29.7	1.3
21.2	27.8	1.3	21.6	25.1	1.2	22.1	23.0	1.2
22.5	21.9	1.1	23.0	21.9	1.1	23.4	19.3	1.1
23.9	17.4	1.0	24.4	15.3	.9	24.8	15.7	.9
25.3	15.2	.9	25.7	15.1	.9	26.2	14.8	.9
26.6	13.1	.9	27.1	12.5	.8	27.6	11.4	.8
28.0	11.4	.8	28.5	9.7	.7	28.9	11.3	.8
29.4	8.6	.7	29.8	9.4	.7	30.3	7.0	.6
30.8	6.8	.6	31.2	6.4	.6	31.7	4.8	.5
32.1	4.9	.5	32.6	4.1	.5	33.0	3.3	.4
33.5	3.3	.4	34.0	3.3	.4	34.4	3.4	.4
34.9	2.0	.3	35.3	2.9	.4	35.8	2.3	.4
36.2	1.7	.3	36.7	1.8	.2	37.2	1.1	.2
37.6	1.1	.3	38.1	1.6	.3	38.5	1.0	.2
39.0	.9	.2	39.4	.7	.2	39.9	.6	.2
40.4	.9	.2	40.8	.4	.2	41.3	.4	.2
41.7	.5	.2	42.2	.2	.1	42.6	.2	.1
43.1	.1	.1	43.6	.0	.0	44.0	.0	.0
44.5	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.0	.0	47.7	.0	.0	48.1	.0	.0
48.6	.0	.0	49.0	.0	.0	49.5	.0	.0
50.1	.0	.0	50.4	.0	.0	50.9	.0	.0
51.3	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.6	.0	.0
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0

477 20PR(P+ALPHA) 43.70 MEV 30 DEG. 01/15/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
11.3	93.3	4.4	11.8	55.2	3.4	12.2	41.5	2.9
12.7	47.8	3.1	13.1	45.1	3.1	13.6	42.0	3.0
14.0	44.7	3.0	14.5	37.6	2.8	14.9	41.7	2.9
15.4	35.9	2.7	15.8	42.6	3.1	16.3	44.1	3.1
16.7	50.9	3.3	17.2	55.9	3.4	17.6	57.7	3.5
18.1	68.3	3.8	18.5	71.4	3.9	19.1	85.4	4.2
19.4	90.3	4.3	19.9	111.5	4.8	20.3	115.1	4.9
21.8	129.6	5.2	21.3	147.1	5.5	21.7	151.4	5.6
22.1	174.0	6.0	22.6	184.4	6.2	23.0	196.1	6.4
23.5	216.2	6.5	23.9	203.7	6.6	24.4	214.3	6.7
24.8	214.7	6.7	25.3	214.1	6.7	25.7	229.9	6.9
26.2	210.8	6.6	26.6	211.1	6.6	27.1	228.5	6.9
27.5	251.7	7.2	28.0	237.4	7.0	28.4	216.4	6.7
28.9	214.3	6.7	29.3	215.2	6.7	29.8	215.4	6.7
30.2	204.2	6.5	30.7	216.5	6.6	31.1	221.2	6.8
31.6	216.1	6.5	32.1	218.2	6.7	32.5	219.7	6.8
32.9	217.9	6.7	33.4	201.2	6.5	33.8	204.2	6.5
34.3	223.1	6.8	34.7	211.3	6.6	35.2	218.7	6.7
35.6	193.6	6.3	36.1	195.4	6.4	36.5	180.5	6.1
37.0	172.1	6.0	37.4	161.7	5.8	37.9	157.2	5.7
38.3	164.5	5.8	38.8	148.2	5.5	39.2	126.5	5.1
39.6	124.8	5.1	40.1	129.1	5.2	40.5	111.5	4.8
41.0	107.0	4.7	41.4	89.1	4.3	41.9	59.2	3.5
42.3	28.1	2.4	42.8	12.1	1.6	43.2	4.4	1.1
43.7	7.3	.8	44.1	6.3	.7	44.6	3.3	.8
45.3	2.9	.8	45.5	1.5	.5	45.9	1.2	.5
46.4	1.5	.5	46.8	.8	.5	47.3	.6	.4
47.7	.0	.0	48.2	.2	.2	48.6	.7	.3
49.1	.0	.0	49.5	.0	.0	50.0	.0	.0
50.4	.0	.0	50.9	.0	.0	51.3	.0	.0
51.8	.0	.0	52.2	.0	.0	52.7	.0	.0
53.1	.0	.0	53.6	.0	.0	54.1	.0	.0

478 205PB(P+ALPHA) 43.70 MEV 45 DEG. 11/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.3	64.5	3.7		11.8	36.0	2.7		12.2	22.9	2.2	
12.7	26.4	2.3		13.1	31.8	2.6		13.6	29.3	2.5	
14.0	30.4	2.5		14.5	26.6	2.4		14.9	29.6	2.5	
15.4	32.7	2.6		15.8	28.5	2.4		16.3	31.8	2.6	
16.7	31.0	2.5		17.2	41.1	2.9		17.6	47.0	3.1	
18.1	52.9	3.3		18.5	61.9	3.6		19.0	62.6	3.6	
19.4	80.5	4.1		19.9	79.9	4.1		20.3	98.2	4.5	
20.8	109.7	4.8		21.2	111.8	4.8		21.7	128.4	5.2	
22.1	139.8	5.4		22.6	135.7	5.3		23.1	133.2	5.3	
23.5	148.8	5.6		23.9	156.7	5.7		24.4	153.2	5.6	
24.8	158.8	5.7		25.3	157.5	5.7		25.7	169.2	5.9	
26.2	165.0	5.9		26.6	167.9	5.9		27.1	166.7	5.9	
27.5	168.2	5.9		28.0	147.3	5.5		28.4	149.6	5.6	
28.9	148.6	5.6		29.3	164.0	5.8		29.8	147.8	5.5	
30.2	151.7	5.6		30.7	137.8	5.4		31.1	135.3	5.3	
31.6	133.0	5.3		32.0	131.9	5.2		32.5	130.7	5.2	
32.9	116.7	4.9		33.4	141.7	5.4		33.8	134.9	5.3	
34.3	133.4	5.3		34.7	125.2	5.2		35.2	119.9	5.0	
35.6	119.9	5.0		36.1	102.8	4.6		36.5	104.3	4.7	
37.0	90.5	4.3		37.4	87.7	4.2		37.9	87.0	4.3	
38.3	78.7	4.0		38.8	79.2	4.0		39.2	76.2	4.0	
39.6	65.3	3.7		40.1	61.8	3.6		40.5	60.4	3.5	
41.0	53.7	3.3		41.4	43.9	3.0		41.9	29.1	2.5	
42.3	33.5	1.7		42.8	2.5	.7		43.2	1.2	.5	
43.7	.4	.3		44.1	.2	.2		44.6	.4	.3	
45.0	.4	.3		45.5	.0	.0		45.9	.0	.0	
46.4	.0	.0		46.8	.0	.0		47.3	.0	.0	
47.7	.0	.0		48.2	.0	.0		48.6	.0	.0	
49.1	.0	.0		49.5	.0	.0		50.0	.0	.0	
50.4	.0	.0		50.9	.0	.0		51.3	.0	.0	
51.8	.0	.0		52.2	.0	.0		52.7	.0	.0	
53.1	.0	.0		53.6	.0	.0		54.0	.0	.0	

479 205PB(P+ALPHA) 42.70 MEV 40 DEG. 11/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.5	40.0	2.9		11.9	27.5	2.4		12.4	9.8	1.4	
12.8	16.0	1.8		13.3	21.5	2.1		13.7	18.1	1.9	
14.2	15.2	1.8		14.6	16.2	2.0		15.1	15.8	1.8	
15.5	21.0	2.1		16.0	24.1	2.2		16.4	25.0	2.3	
16.9	28.5	2.4		17.3	31.2	2.5		17.8	33.7	2.6	
18.2	42.5	3.0		18.7	44.1	3.0		19.1	52.9	3.3	
19.6	60.8	3.6		20.0	69.1	3.8		20.5	78.0	4.0	
20.9	77.4	4.0		21.4	81.3	4.1		21.9	84.7	4.2	
22.2	94.3	4.4		22.8	97.8	4.5		23.2	104.3	4.7	
23.7	106.1	4.7		24.1	109.8	4.8		24.6	113.4	4.9	
25.0	112.2	4.8		25.5	111.2	4.8		25.9	119.0	5.0	
26.4	115.7	4.9		26.8	111.3	4.8		27.3	117.2	4.9	
27.7	115.5	4.9		28.2	114.5	5.0		28.6	104.5	4.7	
29.1	108.0	4.7		29.5	102.6	4.6		30.0	100.9	4.6	
30.4	94.1	4.4		30.9	85.5	4.2		31.3	93.0	4.4	
31.8	83.7	4.2		32.2	81.4	4.1		32.7	81.2	4.1	
33.1	80.3	4.1		33.6	80.1	4.1		34.0	73.3	3.9	
34.5	81.2	4.1		34.9	78.5	4.0		35.4	74.7	3.9	
35.8	67.4	3.7		36.3	66.5	3.8		36.7	54.9	3.4	
37.2	51.2	3.2		37.6	47.7	3.1		38.1	45.4	3.1	
38.5	47.9	3.2		39.0	38.7	2.8		39.4	40.4	2.9	
39.9	34.8	2.7		40.4	29.6	2.5		40.8	26.8	2.4	
41.3	31.6	2.6		41.7	27.1	2.4		42.2	18.5	2.0	
42.6	11.0	1.5		43.1	.4	.9		43.5	1.7	.6	
44.0	.2	.2		44.4	.0	.0		44.9	.0	.0	
45.3	.0	.0		45.8	.0	.0		46.2	.0	.0	
46.7	.0	.0		47.1	.0	.0		47.6	.0	.0	
48.0	.0	.0		48.5	.0	.0		48.9	.0	.0	
49.4	.0	.0		49.8	.0	.0		50.2	.0	.0	
50.7	.0	.0		51.2	.0	.0		51.6	.0	.0	
52.1	.0	.0		52.5	.0	.0		53.0	.0	.0	
53.4	.0	.0		53.9	.0	.0		54.3	.0	.0	

480 205PB(P+ALPHA) 43.70 MEV 90 DEG. 11/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.7	18.6	1.4		12.1	11.2	1.1		12.6	4.4	.7	
13.0	6.7	.8		13.5	5.5	.8		13.9	6.7	.8	
14.4	11.0	1.1		14.8	10.3	1.0		15.3	12.2	1.1	
15.8	14.2	1.2		16.2	17.5	1.4		16.7	19.0	1.4	
17.1	26.8	1.7		17.6	27.8	1.7		18.0	34.1	1.9	
18.5	34.7	1.9		18.9	37.2	2.0		19.4	44.6	2.2	
19.8	50.7	2.3		20.3	53.9	2.4		20.7	51.8	2.3	
21.2	55.7	2.4		21.7	53.5	2.4		22.1	56.0	2.4	
22.6	53.5	2.4		23.1	55.8	2.4		23.5	51.4	2.3	
23.9	53.9	2.4		24.4	54.5	2.4		24.8	55.5	2.4	
25.3	55.1	2.4		25.7	57.3	2.4		26.2	50.8	2.3	
26.7	53.1	2.4		27.1	53.2	2.4		27.6	50.3	2.3	
28.0	46.3	2.2		28.5	48.5	2.2		28.9	41.5	2.1	
29.4	43.8	2.1		29.8	38.9	2.0		30.3	40.5	2.1	
30.7	39.5	2.0		31.2	33.5	1.9		31.7	36.5	2.0	
32.1	33.8	1.9		32.6	28.2	1.7		33.0	27.7	1.7	
33.5	26.9	1.7		33.9	29.3	1.8		34.4	28.1	1.7	
34.8	25.0	1.6		35.3	25.2	1.6		35.7	18.7	1.4	
36.2	19.7	1.4		36.6	19.0	1.4		37.1	15.4	1.3	
37.6	14.1	1.2		38.0	12.8	1.2		38.5	13.1	1.2	
38.9	13.1	1.2		39.4	11.3	1.1		39.9	9.8	1.0	
40.3	8.8	1.0		40.7	.0	.0		41.2	6.8	.8	
41.6	4.4	.7		42.1	2.2	.5		42.6	1.1	.3	
43.0	.2	.1		43.5	.1	.1		43.9	.0	.0	
44.4	.0	.0		44.8	.0	.0		45.3	.0	.0	
45.7	.0	.0		46.2	.0	.0		46.6	.0	.0	
47.1	.0	.0		47.6	.0	.0		48.1	.0	.0	
48.5	.0	.0		48.9	.0	.0		49.4	.0	.0	
49.8	.0	.0		50.3	.0	.0		50.7	.0	.0	
51.2	.0	.0		51.6	.0	.0		52.1	.0	.0	
52.6	.0	.0		53.1	.0	.0		53.5	.0	.0	
53.9	.0	.0		54.4	.0	.0		54.8	.0	.0	

481 205PB(P+ALPHA) 42.70 MEV 150 DEG. 11/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.0	10.7	1.0		12.4	17.1	1.2		12.8	12.4	1.1	
13.4	6.4	.8		13.8	1.3	.3		14.3	1.9	.4	
14.7	1.6	.4		15.2	2.6	.5		15.6	2.2	.5	
15.1	4.7	.6		15.6	5.1	.7		16.0	7.0	.8	
17.5	9.0	.9		17.9	14.0	1.1		18.4	16.7	1.2	
18.9	21.9	1.4		19.3	27.2	1.6		19.8	34.0	1.9	
20.2	39.1	1.9		20.7	38.8	1.9		21.2	42.2	2.0	
21.6	42.1	2.0		22.1	40.7	2.0		22.6	41.0	1.9	
23.0	35.8	1.8		23.5	31.0	1.8		23.9	32.3	1.7	
24.4	31.0	1.7		24.8	29.1	1.6		25.3	25.4	1.5	
25.7	25.0	1.5		26.2	24.3	1.5		26.7	19.0	1.3	
27.1	21.9	1.4		27.6	19.7	1.4		28.0	19.5	1.3	
28.5	17.1	1.2		29.0	17.7	1.2		29.4	15.8	1.2	
29.9	16.4	1.2		30.3	12.7	1.1		30.8	13.3	1.1	
31.3	10.2	1.0		31.7	9.6	.9		32.2	8.7	.9	
32.6	10.3	1.0		33.1	8.7	.9		33.6	8.4	.9	
34.0	6.9	.8		34.5	7.7	.8		34.9	5.5	.7	
35.4	4.6	.7		35.8	5.7	.7		36.3	4.3	.6	
36.8	3.7	.6		37.2	3.9	.6		37.7	4.0	.6	
38.1	3.0	.5		38.6	2.6	.5		39.1	3.0	.5	
39.5	2.3	.5		40.0	2.2	.5		40.4	2.6	.5	
40.9	1.9	.4		41.4	2.1	.4		41.8	1.9	.4	
42.3	1.4	.4		42.7	1.6	.4		43.2	.8	.3	
43.6	1.1	.3		44.1	.6	.2		44.6	.6	.2	
45.0	.2	.1		45.5	.2	.1		45.9	.0	.0	
45.4	.0	.0		46.9	.0	.0		47.3	.0	.0	
47.8	.0	.0		48.2	.0	.0		48.7	.0	.0	
47.2	.0	.0		49.6	.0	.0		50.1	.0	.0	
50.5	.0	.0		51.0	.0	.0		51.5	.0	.0	
51.9	.0	.0		52.4	.0	.0		52.8	.0	.0	
53.3	.0	.0		53.7	.0	.0		54.2	.0	.0	
54.7	.0	.0		55.1	.0	.0		55.6	.0	.0	

483 20°PR(P,ALPHA) 43.7° MEV 12° DEG. 11/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
9.9	.0	.0		10.3	.1	.0		10.8	17.0	1.3	
11.3	13.7	1.1		13.7	16.1	1.0		12.2	5.2	.7	
12.6	2.4	.5		13.1	3.9	.6		13.5	4.6	.7	
14.0	3.5	.6		14.5	2.8	.6		14.9	4.6	.7	
15.4	7.0	.8		15.8	6.1	.7		16.3	9.3	.9	
16.8	13.5	1.1		17.2	16.1	1.2		17.7	22.4	1.4	
18.1	26.4	1.6		18.6	31.5	1.7		19.1	36.5	1.8	
19.5	38.0	1.9		20.0	43.7	2.0		20.4	45.9	2.1	
21.9	41.5	2.1		21.4	39.5	1.9		21.8	41.4	2.0	
23.3	40.4	1.9		22.7	38.8	1.9		23.2	34.0	1.8	
23.6	35.4	1.8		24.1	34.5	1.8		24.6	33.8	1.8	
25.0	32.1	1.7		25.5	31.0	1.7		25.9	29.9	1.7	
25.4	28.8	1.6		26.9	26.9	1.6		27.3	25.1	1.5	
27.8	27.0	1.6		28.2	24.5	1.5		28.7	23.0	1.5	
29.2	19.2	1.3		29.6	21.2	1.4		30.1	17.8	1.3	
30.5	17.9	1.3		31.0	15.8	1.2		31.4	18.3	1.3	
31.9	12.6	1.1		32.4	14.7	1.2		32.9	12.7	1.1	
33.3	11.5	1.0		33.7	12.0	1.0		34.2	9.7	.9	
34.7	11.7	1.0		35.1	11.5	1.0		35.6	9.5	.9	
36.0	6.1	.7		36.5	6.8	.8		37.0	5.3	.7	
37.4	4.5	.6		37.9	4.7	.7		38.3	5.6	.7	
38.8	4.6	.7		39.3	4.3	.6		39.7	4.8	.7	
40.2	3.4	.6		40.6	2.5	.5		41.1	2.2	.5	
41.5	2.9	.5		42.0	2.1	.4		42.5	2.6	.5	
42.9	1.6	.4		43.4	1.1	.3		43.8	.6	.2	
44.3	.3	.2		44.8	.0	.0		45.2	.0	.0	
45.7	.0	.0		46.1	.0	.0		46.6	.0	.0	
47.1	.0	.0		47.5	.0	.0		48.0	.0	.0	
48.4	.0	.0		48.9	.0	.0		49.4	.0	.0	
49.8	.0	.0		50.2	.0	.0		50.7	.0	.0	
51.2	.0	.0		51.6	.0	.0		52.1	.0	.0	
52.6	.0	.0		53.0	.0	.0		53.5	.0	.0	

485 20°PR(P,ALPHA) 43.7° MEV 165° DEG. 11/15/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
10.4	.0	.0		10.9	.0	.0		11.3	7.8	.6	
11.8	18.3	.8		12.3	11.1	.7		12.7	5.5	.5	
13.2	.9	.2		13.6	1.5	.2		14.1	2.1	.2	
14.5	2.5	.3		15.1	3.8	.4		15.5	6.0	.5	
15.9	6.6	.6		16.4	8.1	.6		16.8	10.2	.7	
17.3	12.6	.8		17.7	19.7	1.0		18.2	22.3	1.0	
18.6	27.1	1.1		19.1	32.8	1.2		19.6	35.4	1.3	
20.0	37.6	1.3		20.5	41.4	1.4		20.9	39.8	1.4	
21.4	41.1	1.4		21.8	39.7	1.4		22.3	36.5	1.3	
22.8	33.8	1.3		23.2	33.6	1.3		23.7	30.7	1.2	
24.1	26.2	1.1		24.6	22.9	1.1		25.0	23.3	1.0	
25.5	23.3	1.0		26.0	19.3	.9		26.4	21.3	1.0	
26.9	16.5	.9		27.3	16.8	.9		27.8	16.6	.9	
28.2	14.3	.8		28.7	13.5	.8		29.2	12.2	.8	
29.6	12.2	.8		30.1	11.6	.7		30.5	10.8	.7	
31.0	9.8	.7		31.4	8.5	.6		31.9	7.5	.6	
32.4	7.3	.6		32.8	6.9	.6		33.3	7.2	.6	
33.7	6.1	.5		34.2	5.8	.5		34.6	4.9	.5	
35.1	4.5	.5		35.6	4.2	.4		36.0	3.0	.4	
36.5	3.5	.4		36.9	2.6	.3		37.4	3.1	.4	
37.8	2.4	.3		38.3	1.4	.2		38.8	2.0	.2	
39.2	1.5	.3		39.7	1.2	.2		40.1	.8	.2	
40.6	1.2	.2		41.0	1.3	.2		41.5	1.1	.2	
42.0	1.1	.2		42.4	.8	.1		42.9	.6	.2	
43.3	.3	.1		43.8	.2	.1		44.2	.0	.0	
44.7	.0	.0		45.1	.1	.1		45.6	.0	.0	
46.1	.0	.0		46.5	.0	.0		47.0	.0	.0	
47.4	.0	.0		47.9	.0	.0		48.3	.0	.0	
48.8	.0	.0		49.3	.0	.0		49.7	.0	.0	
50.2	.0	.0		50.6	.0	.0		51.1	.0	.0	
51.5	.0	.0		52.0	.0	.0		52.5	.0	.0	
52.9	.0	.0		53.4	.0	.0		53.8	.0	.0	

527 20°PR(P,ALPHA) 29.75° MEV 31° DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	84.8	4.1		12.7	55.1	3.3		13.2	55.9	3.4	
13.6	58.8	3.4		14.1	56.7	3.4		14.5	48.1	3.1	
14.9	45.4	3.0		15.4	39.2	2.8		15.8	45.2	3.0	
16.3	41.8	2.9		16.7	46.8	2.9		17.2	40.4	2.6	
17.6	51.9	3.2		18.1	61.4	3.5		18.5	56.7	3.4	
19.0	52.9	3.3		19.4	66.4	3.7		19.9	68.7	4.2	
20.3	97.7	4.4		20.8	93.9	4.4		21.2	97.5	4.4	
21.7	105.0	4.6		22.1	120.6	4.9		22.6	125.0	5.0	
23.0	153.1	5.5		23.5	136.5	5.3		23.9	150.9	5.5	
24.3	145.4	5.4		24.8	151.9	5.5		25.2	153.9	5.6	
25.7	163.2	5.7		26.1	158.3	5.7		26.6	159.7	5.7	
27.0	165.4	5.8		27.5	156.7	5.6		27.9	155.5	5.6	
28.4	161.4	5.7		28.8	156.3	5.6		29.3	160.8	5.7	
29.7	146.6	5.4		30.2	144.8	5.4		30.6	135.3	5.2	
31.1	151.5	5.5		31.5	154.7	5.7		32.0	173.3	5.9	
32.4	178.5	6.0		32.9	186.8	6.1		33.3	176.7	6.0	
33.7	178.1	6.0		34.2	161.6	5.7		34.6	129.5	5.1	
35.1	92.5	4.3		35.5	61.0	3.5		36.0	39.6	2.8	
36.4	21.2	2.1		36.9	19.3	1.9		37.3	14.9	1.7	
37.8	8.3	1.3		38.2	9.3	1.4		38.7	9.1	1.4	
39.1	7.5	1.2		39.6	9.1	1.4		40.1	3.8	.9	
40.5	7.3	1.2		40.9	8.2	1.2		41.4	4.8	1.0	
41.8	3.1	.8		42.3	4.1	.9		42.7	3.2	.8	
43.1	3.2	.8		43.6	1.8	.6		44.0	.4	.2	
44.5	.8	.4		44.9	.4	.3		45.4	.8	.4	
45.8	.6	.3		46.3	.4	.2		46.7	.2	.2	
47.2	.2	.2		47.6	.1	.1		48.1	.0	.0	
48.5	.2	.2		49.0	.0	.0		49.4	.2	.2	
49.9	.1	.1		50.3	.0	.0		50.8	.0	.0	
51.2	.0	.0		51.7	.0	.0		52.1	.0	.0	
52.5	.1	.1		53.1	.0	.0		53.4	.0	.0	
53.9	.0	.0		54.3	.0	.0		54.8	.0	.0	

528 20°PR(P,ALPHA) 29.75° MEV 45° DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.3	1.8	.6		12.7	22.9	2.6		13.2	29.1	2.4	
13.6	26.3	2.3		14.1	24.3	2.2		14.5	24.2	2.2	
14.9	14.9	1.7		15.4	17.8	1.9		15.8	15.6	1.8	
16.3	21.4	2.1		16.7	32.5	2.6		17.2	26.7	2.3	
17.6	19.6	2.0		18.1	24.4	2.2		18.5	48.9	3.1	
19.0	42.4	2.9		19.4	34.2	2.3		19.9	43.0	2.9	
20.3	44.6	3.0		20.8	57.8	3.4		21.2	61.6	3.5	
21.7	78.3	4.0		22.1	91.1	4.3		22.6	87.9	4.2	
23.0	86.6	4.2		23.5	103.4	4.5		23.9	110.9	4.7	
24.3	120.1	4.9		24.8	108.1	4.6		25.2	107.6	4.7	
25.7	122.2	5.0		26.1	112.9	4.8		26.6	108.9	4.7	
27.0	115.4	4.6		27.5	116.7	4.9		27.9	111.0	4.5	
28.4	108.7	4.7		28.8	101.6	4.5		29.3	110.8	4.5	
29.7	93.9	4.4		30.2	84.2	4.1		30.6	90.9	4.3	
31.1	77.1	3.9		31.5	85.4	4.2		32.0	99.2	4.5	
32.4	114.9	4.8		32.9	117.2	4.7		33.3	113.2	4.6	
33.7	94.1	4.4		34.2	74.1	3.9		34.6	51.7	3.2	
35.1	39.4	2.8		35.5	22.3	2.1		36.0	13.1	1.4	
36.4	6.9	1.2		36.9	2.2	.7		37.3	1.4	.5	
37.8	1.1	.5		38.2	1.2	.5		38.7	1.8	.6	
39.1	1.0	.5		39.6	1.0	.5		40.1	1.2	.5	
40.5	.6	.3		40.9	.6	.3		41.4	.2	.2	
41.8	.8	.4		42.3	.6	.4		42.7	.0	.0	
43.1	.2	.2		43.6	.1	.1		44.0	.0	.0	
44.5	.0	.0		44.9	.0	.0		45.4	.0	.0	
45.8	.0	.0		46.3	.1	.1		46.7	.0	.0	
47.2	.0	.0		47.6	.0	.0		48.1	.0	.0	
48.5	.0	.0		49.0	.1	.1		49.4	.0	.0	
49.9	.0	.0		50.3	.0	.0		50.8	.0	.0	
51.2	.0	.0		51.7	.1	.1		52.1	.0	.0	
52.5	.0	.0		53.0	.0	.0		53.4	.0	.0	
53.9	.0	.0		54.3	.1	.1		54.8	.0	.0	

529 207PR(P+ALPHA) 29.75 MEV 51 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.4	1.2	.5	12.9	19.6	2.3	13.3	18.4	1.9
13.8	11.7	1.5	14.2	16.2	1.8	14.7	20.0	2.0
15.1	13.2	1.6	15.6	17.6	1.9	16.1	7.3	1.2
16.5	10.7	1.5	16.9	10.1	1.4	17.4	19.4	2.0
17.8	22.3	2.1	18.3	15.2	1.8	18.7	18.8	2.1
19.2	22.1	2.1	19.6	23.9	2.2	20.1	32.0	2.5
21.5	34.4	2.6	21.9	46.1	3.1	21.4	45.9	3.1
21.8	51.4	3.2	22.3	51.6	3.2	22.7	62.7	3.6
23.2	61.7	3.6	23.6	66.2	3.7	24.1	76.1	3.9
24.5	65.8	3.6	25.0	71.4	3.8	25.4	72.9	3.8
25.9	71.6	3.8	26.3	76.5	3.9	26.8	79.3	4.1
27.2	73.1	3.8	27.7	71.6	3.8	28.1	72.2	3.8
28.6	72.2	3.8	29.0	63.3	3.6	29.5	55.2	3.3
29.9	55.0	3.3	31.4	56.9	3.4	30.8	49.8	3.2
31.3	46.5	3.1	31.7	49.3	3.2	32.2	54.2	3.3
32.6	55.9	3.4	33.1	58.1	3.4	33.5	48.8	3.1
34.0	41.7	2.9	34.4	35.2	2.7	34.9	20.8	2.1
35.3	18.0	1.9	35.8	12.5	1.6	36.2	4.9	1.0
35.7	2.1	.6	37.1	1.1	.5	37.6	.0	.1
38.0	.2	.2	38.5	.2	.2	38.9	.0	.0
39.4	.1	.0	39.8	.1	.0	40.3	.0	.1
40.7	.0	.0	41.2	.0	.0	41.6	.0	.0
42.1	.1	.0	42.5	.1	.0	43.1	.0	.0
43.4	.0	.0	43.9	.0	.0	44.2	.0	.0
44.8	.0	.0	45.2	.1	.0	45.7	.0	.1
46.1	.0	.0	46.6	.0	.0	47.0	.0	.0
47.5	.0	.0	47.9	.1	.1	48.4	.0	.1
48.8	.0	.0	49.3	.0	.0	49.7	.0	.0
51.2	.0	.0	51.6	.1	.1	51.1	.0	.1
51.5	.0	.0	52.0	.0	.0	52.4	.0	.0
52.9	.1	.0	53.3	.1	.0	53.8	.0	.1
54.2	.0	.0	54.7	.0	.0	55.1	.0	.0

530 207PR(P+ALPHA) 29.75 MEV 50 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.6	.5	.2	13.1	2.5	.5	13.5	3.2	.6
14.0	4.4	.7	14.4	4.3	.7	14.9	5.0	.7
15.3	7.4	.9	15.8	6.6	.8	16.2	4.9	.7
16.7	8.5	.9	17.1	7.1	.8	17.6	9.1	1.0
18.0	13.6	1.2	18.5	14.7	1.2	18.9	16.5	1.2
19.4	18.3	1.4	19.9	21.3	1.5	20.3	27.1	1.4
20.7	22.3	1.5	21.2	25.2	1.6	21.6	23.6	1.5
22.1	26.5	1.6	22.6	29.4	1.7	23.1	31.1	1.8
23.5	27.2	1.7	23.9	32.2	1.8	24.4	30.0	1.7
24.8	30.7	1.8	25.3	27.5	1.7	25.7	32.7	1.8
26.2	29.6	1.7	26.6	31.4	1.8	27.1	26.6	1.6
27.5	29.3	1.7	28.1	24.4	1.6	28.4	23.2	1.5
28.9	21.6	1.5	29.2	28.0	1.6	29.8	20.6	1.4
31.2	21.9	1.5	31.7	17.1	1.3	31.2	15.8	1.3
31.6	19.3	1.2	32.1	16.5	1.2	32.5	19.5	1.2
33.0	16.5	1.3	33.4	12.9	1.1	33.9	12.0	1.1
34.3	8.4	.9	34.8	6.4	.8	35.2	5.9	.8
35.7	3.8	.6	36.1	2.6	.5	36.6	1.1	.3
37.0	.1	.1	37.5	.2	.1	37.9	.0	.0
38.4	.1	.0	38.9	.1	.0	39.3	.1	.1
39.7	.0	.0	40.2	.0	.0	40.7	.0	.0
41.1	.1	.0	41.6	.1	.0	42.1	.0	.0
42.5	.0	.0	42.9	.0	.0	43.4	.0	.0
43.8	.1	.1	44.3	.1	.1	44.7	.0	.0
45.2	.0	.0	45.6	.0	.0	46.1	.0	.0
45.5	.1	.0	47.0	.1	.1	47.4	.0	.0
47.9	.0	.0	48.3	.0	.0	48.8	.0	.0
47.3	.1	.0	49.7	.1	.1	50.2	.1	.1
50.6	.0	.0	51.1	.0	.0	51.5	.0	.0
52.0	.0	.0	52.4	.1	.1	52.9	.0	.1
53.3	.0	.0	53.8	.0	.0	54.2	.0	.0
54.7	.1	.0	55.1	.1	.1	55.6	.0	.0

516 207PR(P+ALPHA) 29.75 MEV 121 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.8	.4	.1	13.2	3.3	.4	13.7	1.8	.3
14.2	1.2	.3	14.6	1.2	.3	15.1	2.5	.4
15.5	3.4	.5	16.1	3.4	.4	16.4	5.4	.6
16.9	5.7	.6	17.2	7.5	.7	17.8	9.2	.7
18.3	11.8	.8	18.7	10.3	.9	19.2	15.0	.9
19.6	14.4	.9	20.1	17.0	1.0	20.5	16.1	1.0
21.0	15.8	1.0	21.4	17.1	1.0	21.9	17.2	1.0
22.3	18.4	1.0	22.8	18.1	1.0	23.3	17.4	1.0
23.7	19.2	1.1	24.2	19.6	1.0	24.6	16.6	1.1
25.1	15.0	.9	25.5	16.9	1.0	26.0	14.8	.9
25.4	14.6	.9	26.0	14.2	.9	27.4	11.9	.8
27.8	12.0	.8	28.3	11.0	.8	28.7	10.9	.8
29.2	11.6	.8	29.6	8.5	.7	30.1	8.5	.7
30.5	7.3	.7	31.0	6.4	.6	31.4	7.7	.7
31.9	5.9	.6	32.4	6.5	.6	32.8	5.9	.6
33.3	5.3	.6	33.7	4.7	.5	34.2	4.0	.5
34.6	2.6	.4	35.1	2.4	.4	35.5	1.7	.3
36.0	.8	.2	36.5	.7	.2	36.9	.2	.1
37.4	.1	.1	37.8	.1	.1	38.3	.0	.1
38.7	.0	.0	39.2	.0	.0	39.6	.0	.0
41.1	.0	.0	41.6	.0	.0	41.1	.0	.1
41.5	.0	.0	41.9	.0	.0	42.4	.0	.0
42.8	.0	.0	43.3	.1	.0	43.7	.0	.0
44.2	.0	.0	44.6	.0	.0	45.1	.0	.0
45.6	.0	.0	46.0	.1	.1	46.5	.0	.0
46.9	.0	.0	47.4	.0	.0	47.8	.0	.0
48.3	.0	.0	48.7	.0	.0	49.2	.1	.1
49.7	.0	.0	50.1	.0	.0	50.6	.0	.0
51.0	.0	.0	51.5	.1	.1	51.9	.0	.1
52.4	.0	.0	52.8	.0	.0	53.2	.0	.0
53.7	.1	.0	54.2	.1	.1	54.7	.1	.1
55.1	.0	.0	55.6	.0	.0	56.0	.0	.0

517 207PR(P+ALPHA) 29.75 MEV 150 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	.3	.1	13.4	.5	.2	13.8	1.3	.2
14.3	1.6	.2	14.8	1.4	.2	15.2	2.5	.3
15.7	3.8	.4	16.1	4.5	.4	16.6	5.5	.5
17.0	7.2	.5	17.5	9.5	.6	18.1	11.4	.6
18.4	12.0	.7	18.9	14.5	.7	19.3	14.8	.7
19.8	16.9	.8	20.2	15.7	.8	21.7	16.9	.8
21.2	15.8	.8	21.6	14.4	.8	22.1	14.6	.7
22.5	14.3	.7	23.1	14.4	.7	23.4	12.4	.7
23.9	12.2	.7	24.4	11.6	.7	24.8	11.2	.6
25.3	11.7	.6	25.7	9.7	.6	26.2	9.1	.6
26.6	8.2	.6	27.1	8.0	.5	27.6	8.5	.6
28.0	7.1	.5	28.5	6.1	.5	28.9	5.8	.5
29.4	5.0	.4	29.8	4.9	.4	30.2	3.8	.4
31.8	3.6	.4	31.2	3.1	.3	31.7	2.5	.3
32.1	2.8	.3	32.6	2.5	.2	33.0	2.7	.3
33.5	2.1	.3	34.1	1.9	.3	34.4	1.8	.3
34.9	1.0	.2	35.2	.7	.2	35.8	.4	.1
35.2	.1	.1	36.7	.1	.1	37.2	.0	.1
37.6	.0	.0	38.1	.0	.0	38.5	.0	.0
39.0	.0	.1	39.4	.1	.1	39.9	.1	.1
40.4	.0	.0	40.8	.0	.0	41.2	.0	.0
41.7	.1	.1	42.2	.1	.1	42.6	.0	.1
43.1	.0	.1	43.6	.0	.0	44.0	.0	.0
44.5	.1	.1	44.9	.1	.1	45.4	.0	.1
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.1	.1	47.7	.1	.1	48.1	.0	.1
48.6	.0	.0	49.0	.0	.0	49.5	.0	.0
51.1	.1	.1	51.4	.1	.1	51.9	.0	.1
51.2	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.1	.1	53.2	.1	.1	53.6	.0	.1
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.1	.0	55.9	.1	.1	56.4	.0	.0

518 20°PR(P,ALPHA) 29.75 MEV 165 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.9	.1	.1		13.4	2.5	.3		13.8	.9	.2	
14.3	1.9	.2		14.8	2.4	.3		15.2	2.7	.3	
15.7	4.1	.3		16.1	5.1	.4		16.6	6.1	.4	
17.0	8.2	.5		17.5	5.8	.5		18.0	11.6	.6	
18.4	13.4	.6		18.9	15.4	.7		19.3	16.3	.7	
19.8	16.3	.7		20.2	16.9	.7		20.7	15.6	.7	
21.2	15.5	.7		21.6	15.2	.7		22.1	13.8	.6	
22.5	12.7	.6		23.0	12.5	.6		23.4	13.0	.6	
23.9	11.4	.6		24.4	9.8	.5		24.3	10.4	.6	
25.3	10.4	.6		25.7	8.6	.5		26.2	8.2	.5	
25.6	7.8	.5		27.1	6.8	.4		27.6	6.3	.4	
28.0	5.8	.4		28.5	4.7	.4		28.5	5.2	.4	
29.4	3.8	.3		29.8	4.1	.3		30.3	3.8	.3	
30.8	3.4	.3		31.2	3.1	.3		31.7	2.8	.3	
32.1	2.0	.2		32.6	2.2	.3		33.3	1.8	.2	
33.5	1.9	.2		34.0	1.4	.2		34.4	1.0	.2	
34.9	.9	.2		35.3	.7	.1		35.8	.2	.1	
36.2	.1	.0		36.7	.1	.0		37.2	.0	.0	
37.6	.0	.0		38.1	.0	.0		38.5	.0	.0	
39.0	.0	.0		39.4	.0	.0		39.9	.0	.0	
40.4	.0	.0		40.8	.0	.0		41.3	.0	.0	
41.7	.0	.0		42.2	.0	.0		42.6	.0	.0	
43.1	.0	.0		43.6	.0	.0		44.1	.0	.0	
44.5	.0	.0		44.9	.0	.0		45.4	.0	.0	
45.8	.0	.0		46.3	.0	.0		46.8	.0	.0	
47.2	.0	.0		47.7	.0	.0		48.1	.0	.0	
48.6	.0	.0		49.1	.0	.0		49.5	.0	.0	
50.0	.0	.0		50.4	.0	.0		50.9	.0	.0	
51.3	.0	.0		51.8	.0	.0		52.2	.0	.0	
52.7	.0	.0		53.2	.0	.0		53.6	.0	.0	
54.1	.0	.0		54.5	.0	.0		55.1	.0	.0	
55.4	.0	.0		55.9	.0	.0		56.4	.0	.0	

539 20°PR(P,ALPHA) 34.30 MEV 30 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.1	8.8	1.2		11.5	14.3	1.5		12.0	21.4	1.8	
12.4	27.9	2.1		12.8	36.8	2.4		13.3	41.0	2.6	
13.7	49.1	2.8		14.2	52.3	2.9		14.6	50.5	2.8	
15.1	42.7	2.6		15.5	46.9	2.7		15.9	43.4	2.6	
16.4	40.9	2.8		16.8	44.4	2.8		17.3	45.3	2.7	
17.7	51.3	2.9		18.1	52.3	2.9		18.6	58.3	3.0	
19.0	74.4	3.4		19.5	72.1	3.4		19.9	77.5	3.5	
20.3	89.3	3.8		20.8	109.9	4.2		21.2	111.1	4.2	
21.7	74.3	4.5		22.1	150.2	4.9		22.5	159.7	5.6	
23.0	165.3	5.1		23.4	175.7	5.3		23.9	208.5	5.8	
24.3	203.1	5.7		24.8	192.8	5.6		25.2	186.5	5.5	
25.6	201.2	5.7		26.1	198.3	5.6		26.5	200.2	5.6	
27.0	199.4	5.6		27.4	191.8	5.5		27.8	196.2	5.6	
28.3	190.7	5.5		28.7	180.8	5.4		29.2	177.6	5.3	
29.6	172.2	5.2		30.0	186.2	5.4		30.5	162.3	5.1	
30.9	161.3	5.1		31.4	166.7	5.1		31.8	155.9	5.3	
32.2	153.8	5.0		32.7	151.0	4.9		33.1	142.8	4.8	
33.6	136.3	4.7		34.1	140.5	4.8		34.5	126.1	4.5	
34.9	132.9	4.6		35.3	124.5	4.5		35.8	147.5	4.8	
36.2	173.6	5.3		36.7	183.8	5.4		37.1	182.4	5.4	
37.5	179.0	5.3		38.0	165.8	5.2		38.4	136.0	4.7	
38.9	98.4	4.0		39.3	63.8	3.2		39.7	35.4	2.4	
40.2	17.5	1.7		40.6	12.4	1.4		41.1	8.1	1.1	
41.5	5.3	.9		41.9	5.6	.9		42.4	3.3	.7	
42.8	3.0	.7		43.3	1.9	.6		43.7	1.8	.5	
44.2	.6	.3		44.6	.2	.2		45.1	.0	.0	
44.5	.8	.4		45.6	.2	.2		46.4	.0	.0	
45.8	.0	.0		47.2	.0	.0		47.7	.0	.0	
46.1	.0	.0		48.6	.0	.0		49.0	.0	.0	
47.4	.0	.0		49.9	.0	.0		50.3	.0	.0	
50.8	.0	.0		51.2	.0	.0		51.6	.0	.0	
52.1	.0	.0		52.5	.0	.0		53.1	.0	.0	

540 20°PR(P,ALPHA) 34.33 MEV 45 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.1	2.6	.5		11.5	5.7	.7		12.0	10.3	.9	
12.4	17.6	1.2		12.8	26.1	1.4		13.3	34.8	1.7	
13.7	30.8	1.6		14.2	32.4	1.6		14.6	31.3	1.6	
15.1	31.2	1.6		15.5	31.8	1.6		15.9	28.2	1.5	
16.4	28.0	1.5		16.8	31.5	1.6		17.3	31.3	1.6	
17.7	34.1	1.6		18.1	41.8	1.8		18.6	39.5	1.8	
19.0	50.4	2.0		19.5	55.5	2.1		19.9	59.1	2.2	
20.3	70.9	2.4		20.8	77.4	2.5		21.2	85.7	2.6	
21.7	92.8	2.7		22.1	105.2	2.9		22.5	112.9	3.0	
23.0	123.0	3.1		23.4	125.7	3.2		23.9	133.7	3.3	
24.3	143.0	3.4		24.8	135.2	3.3		25.2	143.7	3.4	
25.6	147.9	3.4		26.1	145.1	3.4		26.5	143.0	3.4	
27.0	140.7	3.3		27.4	131.8	3.2		27.8	137.0	3.3	
28.3	127.5	3.2		28.7	116.5	3.1		29.2	119.0	3.1	
29.6	111.3	3.0		30.1	109.8	3.0		30.5	109.4	3.0	
30.9	100.0	2.8		31.4	97.7	2.8		31.8	96.8	2.8	
32.2	90.6	2.7		32.7	85.6	2.6		33.1	85.5	2.6	
33.6	80.7	2.5		34.0	78.6	2.5		34.5	76.3	2.5	
34.9	73.2	2.4		35.3	71.7	2.4		35.8	77.9	2.5	
36.2	78.7	2.5		36.7	86.2	2.6		37.1	81.5	2.5	
37.5	72.3	2.4		38.1	68.2	2.3		38.4	45.7	1.9	
38.9	27.3	1.5		39.3	15.0	1.2		39.7	9.3	.9	
40.2	4.9	.6		40.6	1.6	.4		41.1	1.0	.3	
41.5	.8	.3		41.9	.2	.2		42.4	.2	.1	
42.8	.2	.1		43.3	.0	.0		43.7	.3	.2	
44.2	.1	.1		44.6	.1	.1		45.1	.2	.1	
45.5	.0	.0		45.9	.0	.0		46.4	.0	.0	
46.8	.0	.0		47.2	.0	.0		47.7	.0	.0	
48.1	.0	.0		48.6	.0	.0		49.1	.0	.0	
49.4	.0	.0		49.9	.0	.0		50.3	.0	.0	
50.8	.0	.0		51.2	.0	.0		51.6	.0	.0	
52.1	.0	.0		52.5	.0	.0		53.0	.0	.0	

541 20°PR(P,ALPHA) 34.30 MEV 60 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.2	2.2	.4		11.7	5.0	.6		12.1	6.7	.7	
12.5	11.7	1.0		13.1	14.7	1.1		13.4	16.5	1.1	
13.9	19.2	1.2		14.3	21.2	1.3		14.8	17.7	1.2	
15.2	15.3	1.1		15.6	15.7	1.1		16.1	20.8	1.3	
16.5	19.9	1.3		17.0	16.5	1.2		17.4	18.8	1.2	
17.9	29.9	1.5		18.3	34.4	1.7		18.7	37.7	1.7	
19.2	35.5	1.7		19.6	41.5	1.8		20.1	41.9	1.8	
20.5	55.4	2.1		21.1	57.7	2.1		21.4	63.7	2.3	
21.8	66.6	2.3		22.3	70.6	2.4		22.7	75.6	2.5	
23.2	88.2	2.7		23.6	90.5	2.7		24.1	93.2	2.7	
24.5	96.6	2.8		24.9	100.2	2.8		25.4	102.4	2.9	
25.8	100.9	2.8		26.3	99.9	2.8		26.7	96.7	2.8	
27.2	90.8	2.7		27.6	92.2	2.7		28.0	87.2	2.6	
28.5	80.3	2.5		28.9	72.5	2.4		29.4	71.6	2.4	
29.8	69.4	2.4		30.3	64.1	2.3		30.7	64.8	2.3	
31.1	56.6	2.1		31.6	55.6	2.1		32.1	54.9	2.1	
32.5	51.6	2.0		32.9	47.0	1.9		33.4	48.4	2.0	
33.8	43.4	1.9		34.2	43.4	1.9		34.7	39.1	1.8	
35.1	33.7	1.6		35.6	33.9	1.6		36.0	38.2	1.7	
36.5	39.5	1.8		36.9	41.7	1.8		37.3	36.7	1.7	
37.8	31.1	1.6		38.2	21.7	1.3		38.7	11.9	1.0	
39.1	10.9	.9		39.6	5.8	.7		40.1	1.6	.4	
40.4	.8	.3		40.9	.1	.1		41.3	.2	.1	
41.8	.2	.1		42.2	.1	.1		42.7	.0	.0	
43.1	.1	.1		43.5	.0	.0		44.0	.0	.0	
44.4	.0	.0		44.9	.0	.0		45.3	.0	.0	
45.8	.0	.0		46.2	.0	.0		46.6	.0	.0	
47.1	.0	.0		47.5	.0	.0		48.1	.0	.0	
48.4	.0	.0		48.8	.0	.0		49.3	.0	.0	
49.7	.0	.0		50.2	.0	.0		50.6	.0	.0	
51.1	.0	.0		51.5	.0	.0		51.9	.0	.0	
52.4	.0	.0		52.8	.0	.0		53.3	.0	.0	

543 20*PP(P+ALPHA) 34.30 MEV 9J DEG. 12/1/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.4	.6	.2		11.9	.9	.3		12.3	1.7	.4	
12.7	3.1	.5		13.2	4.6	.6		13.6	5.7	.6	
14.1	7.2	.7		14.5	11.7	.9		15.1	9.5	.8	
15.4	12.4	.9		15.9	11.0	.9		16.3	10.2	.9	
15.8	13.2	1.0		17.2	14.8	1.0		17.6	14.4	1.0	
18.1	21.5	1.2		18.5	24.6	1.2		19.0	25.7	1.4	
19.4	26.6	1.4		19.9	26.6	1.4		20.3	30.8	1.5	
20.8	31.2	1.5		21.2	34.4	1.6		21.7	34.8	1.6	
22.1	35.4	1.6		22.5	40.3	1.7		23.1	37.4	1.6	
23.4	40.6	1.7		23.9	42.1	1.7		24.2	48.7	1.9	
24.8	43.6	1.8		25.2	46.1	1.8		25.7	40.8	1.7	
26.1	41.0	1.7		26.6	40.5	1.7		27.0	36.3	1.6	
27.5	36.6	1.6		27.9	34.8	1.6		28.3	33.5	1.6	
28.8	27.8	1.4		29.2	25.8	1.4		29.7	25.1	1.2	
30.1	24.1	1.3		30.6	22.3	1.3		31.0	22.2	1.3	
31.5	17.1	1.1		31.9	17.5	1.1		32.4	16.2	1.1	
32.8	15.7	1.1		33.2	14.4	1.0		33.7	12.9	1.0	
34.1	13.8	1.0		34.6	10.1	.9		35.0	9.3	.8	
35.5	10.3	.9		35.9	7.5	.7		36.4	9.8	.8	
36.8	8.8	.8		37.3	8.4	.8		37.7	6.7	.7	
38.1	5.2	.6		38.6	4.6	.6		39.1	2.6	.4	
39.5	1.2	.3		39.9	.4	.2		40.4	.1	.1	
41.8	.0	.0		41.3	.0	.0		41.7	.0	.0	
42.2	.0	.0		42.6	.0	.0		43.1	.0	.0	
43.5	.0	.0		43.9	.0	.0		44.4	.0	.0	
44.8	.0	.0		44.3	.0	.0		45.7	.0	.0	
45.2	.0	.0		46.6	.0	.0		47.1	.0	.0	
47.5	.0	.0		48.0	.0	.0		48.4	.0	.0	
48.8	.0	.0		49.3	.0	.0		49.7	.0	.0	
50.2	.0	.0		50.6	.0	.0		51.1	.0	.0	
51.5	.0	.0		52.0	.0	.0		52.4	.0	.0	
52.9	.0	.0		53.3	.0	.0		53.7	.0	.0	

544 20*PP(P+ALPHA) 34.30 MEV 12C DEG. 12/1/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.6	.3	.1		12.0	.9	.3		12.5	2.2	.4	
12.9	3.1	.5		13.4	3.3	.5		13.8	2.8	.5	
14.3	2.5	.4		14.7	1.7	.4		15.2	3.3	.5	
15.6	4.8	.6		16.1	6.7	.7		16.5	8.3	.8	
17.0	9.1	.8		17.4	12.7	.9		17.9	14.9	1.0	
18.3	18.1	1.1		18.8	19.5	1.2		19.2	22.6	1.3	
19.7	21.9	1.3		20.1	23.9	1.3		20.6	23.3	1.3	
21.0	25.0	1.3		21.5	29.5	1.3		21.9	24.1	1.3	
22.4	24.1	1.3		22.8	23.4	1.3		23.2	20.1	1.2	
23.7	24.4	1.3		24.2	22.5	1.3		24.6	21.2	1.2	
25.0	22.7	1.3		25.5	23.6	1.3		25.9	21.2	1.2	
26.4	19.6	1.2		26.8	19.3	1.2		27.3	14.8	1.1	
27.7	15.5	1.1		28.2	14.4	1.0		28.6	10.5	.9	
29.1	13.5	1.0		29.5	11.7	.9		30.0	12.0	.9	
30.4	9.8	.8		30.9	5.2	.8		31.2	9.1	.8	
31.8	7.9	.8		32.2	4.6	.8		32.7	5.4	.6	
33.1	5.7	.6		33.6	3.6	.5		34.0	4.3	.6	
34.5	4.1	.5		34.9	3.1	.5		35.4	2.7	.4	
35.8	3.6	.5		36.3	4.4	.6		36.7	3.7	.5	
37.2	2.2	.4		37.6	2.1	.4		38.1	2.1	.4	
38.5	1.5	.3		38.9	.6	.2		39.4	.7	.2	
39.8	.4	.2		40.3	.1	.1		40.7	.0	.0	
41.2	.0	.0		41.6	.0	.0		42.1	.0	.0	
42.5	.0	.0		43.1	.0	.0		43.4	.0	.0	
43.9	.0	.0		44.3	.0	.0		44.8	.0	.0	
45.2	.0	.0		45.7	.0	.0		46.1	.0	.0	
46.6	.0	.0		47.0	.0	.0		47.5	.0	.0	
47.9	.0	.0		48.4	.0	.0		48.8	.0	.0	
49.3	.0	.0		49.7	.0	.0		50.2	.0	.0	
51.6	.0	.0		51.1	.0	.0		51.5	.0	.0	
52.0	.0	.0		52.4	.0	.0		52.8	.0	.0	
53.3	.0	.0		53.7	.0	.0		54.2	.0	.0	

545 20*PP(P+ALPHA) 34.30 MEV 15J DEG. 12/1/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.7	.3	.1		12.2	.4	.1		12.6	.5	.2	
13.1	.5	.2		13.5	1.2	.2		14.0	1.8	.3	
14.4	3.3	.4		14.9	2.5	.3		15.3	3.4	.4	
15.8	4.4	.5		16.2	1.4	.2		16.7	7.8	.6	
17.1	6.3	.6		17.6	13.7	.8		18.1	15.0	.9	
18.5	17.7	.9		18.9	21.1	1.0		19.4	23.2	1.1	
19.8	21.9	1.0		20.3	20.5	1.0		20.7	22.3	1.1	
21.2	21.8	1.0		21.6	15.4	1.0		22.1	18.1	.9	
22.5	18.8	1.0		23.1	18.4	.9		23.4	16.7	.9	
23.9	17.2	.9		24.3	16.7	.9		24.8	16.5	.9	
25.2	15.9	.9		25.7	15.4	.9		26.1	12.8	.8	
26.6	12.7	.8		27.0	11.2	.7		27.5	9.5	.7	
27.9	8.8	.7		28.4	8.2	.6		28.8	8.2	.6	
29.3	7.2	.6		29.7	7.0	.6		30.2	5.6	.5	
30.6	4.5	.5		31.1	4.5	.5		31.5	4.7	.5	
32.0	3.9	.4		32.4	2.5	.4		32.9	4.1	.4	
33.3	2.4	.3		33.8	2.4	.3		34.2	2.2	.3	
34.7	2.0	.3		35.1	1.8	.2		35.6	1.7	.2	
35.0	1.9	.3		36.5	1.5	.3		36.9	1.5	.3	
37.4	1.1	.2		37.8	1.1	.2		38.2	.6	.2	
38.7	.7	.2		39.2	.9	.2		39.6	.3	.1	
40.1	.1	.1		40.5	.0	.0		41.0	.0	.0	
41.4	.0	.0		41.9	.0	.0		42.3	.0	.0	
42.8	.0	.0		43.2	.0	.0		43.7	.0	.0	
44.1	.0	.0		44.6	.0	.0		45.1	.0	.0	
45.5	.0	.0		46.0	.0	.0		46.4	.0	.0	
45.9	.0	.0		47.3	.0	.0		47.8	.0	.0	
48.2	.0	.0		48.7	.0	.0		49.1	.0	.0	
49.6	.0	.0		50.1	.0	.0		50.5	.0	.0	
50.9	.0	.0		51.4	.0	.0		51.8	.0	.0	
52.3	.0	.0		52.7	.0	.0		53.2	.0	.0	
53.6	.0	.0		54.1	.0	.0		54.5	.0	.0	

546 20*PP(P+ALPHA) 34.30 MEV 16S DEG. 12/1/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.7	.2	.1		12.2	.2	.1		12.6	.4	.1	
13.1	.6	.2		13.5	1.4	.3		14.0	1.9	.3	
14.4	2.4	.3		14.9	2.7	.4		15.3	4.0	.4	
15.8	5.3	.5		16.2	5.9	.5		16.7	8.8	.7	
17.1	10.8	.7		17.6	14.1	.8		18.0	16.8	.9	
18.5	18.4	.9		18.9	20.6	1.0		19.4	24.1	1.1	
19.8	20.8	1.0		20.3	20.5	1.0		20.7	21.1	1.0	
21.2	20.7	1.0		21.6	19.9	1.0		22.1	19.8	1.0	
22.5	18.6	.9		23.0	18.2	.9		23.4	16.5	.9	
23.9	15.2	.9		24.3	16.5	.9		24.8	13.8	.8	
25.2	14.2	.8		25.7	13.4	.8		26.1	12.8	.8	
26.6	12.1	.8		27.1	11.3	.7		27.5	9.9	.7	
27.9	8.3	.6		28.4	7.2	.6		28.8	7.1	.6	
29.3	6.6	.6		29.7	5.8	.6		30.2	4.3	.5	
30.6	4.7	.5		31.1	4.7	.5		31.5	3.5	.4	
32.0	3.3	.4		32.4	2.4	.4		32.9	2.6	.4	
33.3	2.9	.4		33.8	1.5	.3		34.2	2.1	.3	
34.7	1.3	.2		35.1	2.1	.3		35.6	2.2	.3	
35.0	1.2	.2		36.5	1.2	.2		36.9	1.3	.2	
37.4	1.0	.2		37.8	.7	.2		38.2	.7	.2	
38.7	.6	.2		39.2	.5	.2		39.6	.2	.1	
40.1	.2	.1		40.5	.1	.1		41.0	.0	.0	
41.4	.0	.0		41.9	.0	.0		42.3	.0	.0	
42.8	.0	.0		43.2	.0	.0		43.7	.0	.0	
44.1	.0	.0		44.6	.0	.0		45.1	.0	.0	
45.5	.0	.0		46.0	.0	.0		46.4	.0	.0	
45.9	.0	.0		47.3	.0	.0		47.8	.0	.0	
48.2	.0	.0		48.7	.0	.0		49.1	.0	.0	
49.6	.0	.0		50.1	.0	.0		50.5	.0	.0	
50.9	.0	.0		51.4	.0	.0		51.8	.0	.0	
52.3	.0	.0		52.7	.0	.0		53.2	.0	.0	
53.6	.0	.0		54.1	.0	.0		54.5	.0	.0	

499 20PPR(P+ALPHA) 38.40 MEV 31 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.3	17.5	1.5	12.7	49.3	3.2	13.2	59.5	3.2
13.6	44.6	3.0	14.1	51.8	3.3	14.5	43.4	3.0
14.9	44.1	3.0	15.4	43.8	3.0	15.8	49.5	3.2
16.3	50.8	3.2	16.7	47.1	3.1	17.2	57.1	3.4
17.6	64.3	3.6	18.1	77.1	3.8	18.5	76.2	4.0
19.0	77.5	4.0	19.4	91.6	4.2	19.9	119.4	5.0
20.3	115.7	4.9	20.8	119.8	4.9	21.2	128.3	5.1
21.7	151.0	5.6	22.1	158.6	5.7	22.6	185.5	6.2
23.0	186.4	6.2	23.5	184.9	6.2	23.9	202.2	6.4
24.3	105.5	6.5	24.8	192.2	6.2	25.2	215.7	6.7
25.7	226.2	6.8	26.1	211.1	6.6	26.6	223.6	6.8
27.0	111.0	6.6	27.5	213.6	6.9	27.9	222.7	6.6
28.4	204.0	6.5	28.8	214.3	6.6	29.3	204.7	6.5
29.7	193.1	6.3	30.2	200.1	6.4	30.6	207.3	6.5
31.1	189.2	6.2	31.5	189.4	6.2	32.0	162.1	5.8
32.4	174.4	6.0	32.9	170.2	6.0	33.2	155.7	5.7
33.7	169.9	5.9	34.2	151.1	5.6	34.6	154.5	5.6
35.1	158.0	5.7	35.5	145.5	5.5	36.0	139.2	5.4
36.4	146.9	5.5	36.9	141.8	5.4	37.3	147.7	5.5
37.8	129.2	5.2	38.2	126.4	5.1	38.7	124.3	5.1
39.1	126.2	5.1	39.6	121.4	5.0	40.0	141.5	5.4
40.5	141.8	5.4	40.9	113.2	4.8	41.4	71.9	3.6
41.8	41.3	2.9	42.3	15.4	1.8	42.7	7.8	1.3
43.1	7.2	1.2	42.6	4.5	1.0	44.0	4.1	.9
44.5	2.3	.7	44.9	1.4	.5	45.4	1.2	.5
45.8	.2	.2	46.2	1.0	.5	46.7	.4	.3
47.2	.0	.0	47.6	.1	.1	48.1	.0	.1
48.5	.0	.0	48.0	.0	.0	49.4	.0	.0
49.9	.0	.0	50.3	.1	.1	50.3	.0	.1
51.2	.0	.0	51.7	.0	.0	52.1	.0	.0
52.5	.0	.0	53.1	.1	.1	53.4	.0	.1
53.9	.0	.0	54.3	.0	.0	54.8	.0	.0

500 20PPR(P+ALPHA) 38.40 MEV 45 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.3	4.1	.9	12.7	31.5	2.5	13.2	22.3	2.6
13.6	29.2	2.5	14.1	35.2	2.7	14.5	37.9	2.5
14.9	30.3	2.5	15.4	29.9	2.5	15.8	34.2	2.7
16.3	33.8	2.6	16.7	36.9	2.8	17.2	36.9	2.8
17.6	42.0	2.9	18.1	50.9	3.2	18.5	58.1	3.5
19.0	62.8	3.6	19.4	62.8	3.6	19.9	73.3	3.9
20.3	80.5	4.1	20.8	98.0	4.5	21.2	112.0	4.8
21.7	106.7	4.7	22.1	109.5	4.7	22.6	131.9	5.2
23.0	126.5	5.3	23.5	141.8	5.4	23.9	149.1	5.5
24.3	155.0	5.6	24.8	159.4	5.7	25.2	152.2	5.6
25.7	154.8	5.6	26.1	159.8	5.7	26.6	150.5	5.6
27.0	154.4	5.6	27.5	159.1	5.7	27.9	148.2	5.5
28.4	142.7	5.4	28.8	151.9	5.6	29.3	154.2	5.6
29.7	141.6	5.4	30.2	129.3	5.1	30.6	125.4	5.1
31.1	120.0	5.0	31.5	119.4	5.0	32.0	106.7	4.7
32.4	118.3	4.7	32.9	111.3	4.5	33.3	92.4	4.4
33.7	86.3	4.2	34.2	86.7	4.2	34.6	85.0	4.2
35.1	78.4	4.1	35.5	77.5	3.9	36.0	71.9	3.8
36.4	79.5	4.0	36.9	78.2	4.0	37.3	67.1	3.7
37.8	73.5	3.9	38.2	61.6	3.6	38.7	59.1	3.5
39.1	54.8	3.4	39.6	55.8	3.4	40.0	62.0	3.6
40.5	62.2	3.6	40.9	47.8	3.1	41.4	29.4	2.5
41.8	10.9	1.5	42.3	.6	.4	42.7	1.6	.6
43.1	1.2	.5	43.6	1.2	.5	44.1	1.1	.5
44.5	.0	.0	44.9	.4	.2	45.4	.2	.2
45.8	.0	.0	46.3	.1	.1	46.7	.0	.1
47.2	.0	.0	47.6	.0	.0	48.1	.0	.0
48.5	.0	.0	49.0	.1	.1	49.4	.0	.1
49.9	.0	.0	50.3	.0	.0	50.8	.0	.0
51.2	.0	.0	51.7	.1	.1	52.1	.0	.1
52.5	.0	.0	53.0	.0	.0	53.4	.0	.0
53.9	.1	.0	54.3	.1	.1	54.8	.0	.1

501 20PPR(P+ALPHA) 38.40 MEV 61 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.4	4.7	1.1	12.9	22.9	2.2	13.3	22.0	2.1
13.8	19.6	2.0	14.2	21.6	2.1	14.7	17.5	1.9
15.1	23.5	2.2	15.6	21.6	2.1	16.1	21.4	2.1
16.5	23.3	2.2	16.9	18.3	1.9	17.4	28.4	2.4
17.8	35.0	3.7	18.3	43.1	2.9	18.7	37.9	2.8
19.2	41.8	2.9	19.6	59.1	3.5	20.1	62.0	3.6
20.5	64.9	3.6	21.1	69.4	3.8	21.4	86.9	4.2
21.8	81.9	4.1	22.2	86.5	4.2	22.7	92.0	4.4
23.2	93.3	4.4	23.6	92.4	4.4	24.1	108.9	4.7
24.5	113.4	4.8	25.0	107.1	4.7	25.4	106.0	4.7
25.9	111.0	4.8	26.3	132.7	4.6	26.8	99.4	4.5
27.2	104.0	4.6	27.7	101.1	4.6	28.1	93.3	4.4
28.6	96.2	4.4	29.1	144.2	4.6	29.5	95.3	4.4
29.9	93.1	4.4	30.4	87.7	4.2	30.8	78.9	4.0
31.3	69.4	3.8	31.7	67.3	3.7	32.2	64.9	3.6
32.6	58.5	3.5	33.1	57.9	3.5	33.5	57.0	3.4
34.0	53.5	3.3	34.4	47.4	3.1	34.9	41.0	2.9
35.3	51.9	3.3	35.8	38.5	2.8	36.2	44.3	3.0
36.7	43.2	3.1	37.1	35.8	2.7	37.6	36.2	2.7
38.0	33.8	2.6	38.5	31.5	2.5	38.9	25.5	2.3
39.4	25.7	2.3	39.8	22.9	2.2	40.3	21.6	2.1
40.7	23.7	2.2	40.2	22.2	2.1	41.6	10.7	1.5
42.1	6.6	1.2	42.5	1.6	.6	43.1	.0	.1
43.4	.0	.0	43.9	.0	.0	44.2	.0	.0
44.8	.0	.0	45.2	.1	.1	45.7	.0	.1
46.1	.0	.0	46.6	.0	.0	47.0	.0	.0
47.5	.0	.0	47.9	.1	.1	48.4	.0	.1
48.8	.0	.0	48.2	.0	.0	49.7	.0	.0
50.2	.0	.0	50.6	.0	.0	51.1	.0	.1
51.5	.0	.0	52.0	.0	.0	52.4	.0	.0
52.9	.0	.0	53.3	.1	.1	53.8	.0	.1
54.2	.0	.0	54.7	.0	.0	55.1	.0	.0

514 20PPR(P+ALPHA) 38.40 MEV 90 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.6	1.4	.4	13.1	6.1	.9	13.5	7.9	.9
14.0	9.8	.9	14.4	14.5	1.1	14.9	11.7	1.1
15.3	17.3	1.1	15.8	11.1	1.0	16.2	11.9	1.1
16.7	15.2	1.2	17.1	19.7	1.4	17.6	25.1	1.6
18.0	24.0	1.6	18.5	33.5	1.8	18.9	31.4	1.7
19.4	31.6	1.7	19.8	38.5	1.9	20.3	37.8	1.9
20.7	39.7	2.0	21.2	42.2	2.0	21.6	45.2	2.1
22.1	45.3	2.1	22.6	46.5	2.1	23.1	50.2	2.2
23.5	49.9	2.2	23.9	51.0	2.2	24.4	47.2	2.1
24.8	48.3	2.2	25.3	51.7	2.2	25.7	45.4	2.1
26.2	46.7	2.1	26.6	46.5	2.1	27.1	45.1	2.1
27.5	43.3	2.0	28.1	43.2	2.1	28.4	43.2	2.1
28.9	39.5	2.0	29.3	38.8	1.9	29.8	38.2	1.9
30.2	34.5	1.8	30.7	31.4	1.7	31.2	27.4	1.6
31.6	25.7	1.6	32.1	23.6	1.5	32.5	22.2	1.5
33.0	21.3	1.4	33.4	19.3	1.4	33.9	18.8	1.3
34.3	15.1	1.2	34.8	14.2	1.2	35.2	13.1	1.1
35.7	11.7	1.1	36.1	11.3	1.1	36.6	10.7	1.1
37.0	9.7	1.0	37.5	11.0	1.0	37.9	9.5	1.0
38.4	7.5	.9	38.9	5.2	.8	39.3	6.1	.8
39.7	5.0	.7	40.2	4.6	.7	40.7	5.6	.7
41.1	3.8	.6	41.6	2.5	.5	42.1	2.2	.5
42.5	.7	.3	42.9	.2	.1	43.4	.0	.0
43.8	.1	.1	44.3	.1	.1	44.7	.0	.1
45.2	.0	.0	45.6	.0	.0	46.1	.0	.0
46.5	.0	.1	47.1	.1	.1	47.4	.0	.1
47.9	.0	.0	48.2	.0	.0	48.8	.0	.0
49.3	.1	.1	49.7	.1	.1	50.2	.0	.1
50.6	.0	.0	51.1	.0	.0	51.5	.0	.0
52.0	.1	.1	52.4	.1	.1	52.9	.0	.1
53.3	.0	.0	53.8	.0	.0	54.2	.0	.0
54.7	.1	.1	55.1	.1	.1	55.6	.0	.1

513 20°PR(P+ALPHA) 39.40 MEV 120 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.8	.8	.2	13.2	3.4	.4	13.7	2.7	.4
14.2	3.5	.5	14.6	3.5	.5	15.1	5.1	.5
15.5	7.9	.7	16.1	8.5	.7	16.4	9.9	.8
16.9	12.2	.8	17.2	15.9	1.0	17.8	19.5	1.1
19.3	21.2	1.1	19.7	22.9	1.2	19.2	27.3	1.3
19.6	27.2	1.3	20.1	29.0	1.3	20.5	30.1	1.3
21.0	29.3	1.3	21.4	27.2	1.3	21.9	28.7	1.3
22.3	31.0	1.3	22.8	26.5	1.2	23.2	28.6	1.3
23.7	27.1	1.3	24.2	24.9	1.2	24.6	27.3	1.3
25.1	23.5	1.2	25.5	24.5	1.2	26.0	22.4	1.1
26.4	23.1	1.2	26.9	23.1	1.2	27.4	21.7	1.1
27.8	20.8	1.1	28.3	20.1	1.1	28.7	18.7	1.0
29.2	17.9	1.1	29.6	18.5	1.0	30.1	15.3	.9
30.5	13.4	.9	31.0	12.5	.9	31.4	10.5	.8
31.9	11.2	.8	32.4	11.1	.8	32.8	8.5	.7
33.3	8.1	.7	33.7	7.6	.7	34.2	6.2	.6
34.6	5.3	.6	35.1	5.7	.6	35.5	4.9	.5
36.0	4.9	.5	36.5	4.9	.5	36.9	3.2	.4
37.4	2.3	.4	37.8	2.5	.4	38.3	2.8	.4
38.7	2.3	.4	39.2	2.6	.4	39.6	2.0	.3
40.1	2.3	.4	40.6	1.5	.3	41.1	2.0	.3
41.5	1.6	.3	41.9	.6	.2	42.4	.2	.1
42.8	.1	.1	43.3	.1	.1	43.7	.1	.1
44.2	.0	.0	44.6	.0	.0	45.1	.0	.0
45.6	.0	.0	46.0	.0	.0	46.5	.0	.0
46.9	.0	.0	47.4	.0	.0	47.8	.0	.0
48.3	.0	.0	48.7	.0	.0	49.2	.0	.0
49.7	.0	.0	50.1	.0	.0	50.6	.0	.0
51.0	.0	.0	51.5	.0	.0	51.9	.0	.0
52.4	.0	.0	52.8	.0	.0	53.2	.0	.0
53.7	.0	.0	54.2	.0	.0	54.7	.0	.0
55.1	.0	.0	55.6	.0	.0	56.0	.0	.0

512 20°PR(P+ALPHA) 38.40 MEV 150 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	.1	.1	13.4	2.3	.4	13.8	4.3	.5
14.3	3.6	.5	14.8	3.4	.4	15.2	4.1	.5
15.7	7.7	.7	16.1	7.4	.7	16.6	9.9	.8
17.0	14.6	.9	17.5	17.1	1.1	18.1	20.1	1.1
18.4	22.6	1.1	18.9	23.8	1.2	19.2	26.9	1.3
19.8	28.2	1.3	20.2	24.5	1.2	20.7	26.0	1.2
21.2	25.5	1.2	21.6	26.0	1.2	22.1	24.0	1.2
22.5	20.7	1.1	23.1	21.7	1.1	23.4	21.4	1.1
23.9	17.9	1.0	24.4	20.1	1.1	24.8	17.7	1.0
25.3	17.3	1.0	25.7	17.1	1.0	26.2	15.3	.9
26.6	14.0	.9	27.1	12.6	.9	27.6	14.7	.9
28.1	13.8	.9	28.5	12.3	.9	28.9	12.0	.8
29.4	11.5	.8	29.8	9.9	.8	30.2	8.2	.7
31.8	7.8	.7	31.2	7.8	.7	31.7	5.9	.6
32.1	5.9	.6	32.6	4.7	.5	33.0	5.4	.6
33.5	3.8	.5	34.1	4.3	.5	34.4	3.2	.4
34.9	3.5	.5	35.3	3.2	.4	35.8	2.7	.3
35.2	1.6	.3	36.7	1.3	.3	37.2	1.8	.3
37.6	1.6	.3	38.1	1.5	.3	38.5	1.1	.3
39.0	1.4	.3	39.4	.4	.2	39.9	.8	.2
40.4	.6	.2	41.8	.8	.2	41.2	.3	.1
41.7	.6	.2	42.2	.3	.1	42.6	.2	.1
42.1	.1	.1	43.6	.0	.0	44.0	.0	.0
44.5	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.0	.0	47.7	.0	.0	48.1	.0	.0
48.6	.0	.0	49.0	.0	.0	49.5	.0	.0
51.1	.0	.0	51.4	.0	.0	51.9	.0	.0
51.3	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.6	.0	.0
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0

511 20°PR(P+ALPHA) 33.40 MEV 165 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.9	.5	.2	13.4	5.7	.6	13.8	4.1	.5
14.3	2.7	.4	14.8	3.3	.4	15.2	4.7	.5
15.7	7.2	.6	16.1	11.1	.8	16.6	13.1	.9
17.0	12.7	.9	17.5	20.0	1.1	18.0	24.1	1.2
18.4	25.5	1.2	18.9	25.9	1.2	19.3	27.6	1.3
19.8	27.9	1.3	20.2	27.6	1.2	20.7	27.4	1.2
21.2	26.9	1.3	21.6	24.4	1.2	22.1	24.2	1.2
22.5	21.5	1.1	23.0	20.1	1.1	23.4	20.2	1.1
23.9	18.8	1.0	24.4	19.9	1.1	24.8	19.2	1.1
25.3	17.5	1.0	25.7	19.2	1.1	26.2	14.8	.9
26.6	13.3	.9	27.1	11.9	.8	27.6	12.4	.9
28.1	10.9	.8	28.5	11.6	.8	28.9	9.8	.8
29.4	11.3	.8	29.8	11.3	.8	30.3	7.7	.7
30.8	6.2	.6	31.2	5.2	.6	31.7	5.2	.6
32.1	4.9	.5	32.6	3.4	.4	33.1	4.6	.5
32.5	3.6	.5	34.0	2.6	.4	34.4	3.4	.4
34.9	2.6	.4	35.3	2.9	.4	35.8	1.9	.3
36.2	2.2	.4	36.7	2.2	.4	37.2	1.5	.3
37.6	1.3	.3	38.1	.8	.2	38.5	.9	.2
39.0	1.1	.2	39.4	1.4	.3	39.9	.8	.2
40.4	.6	.2	40.8	.7	.2	41.3	.3	.1
41.7	.5	.2	42.2	.4	.1	42.6	.1	.1
43.1	.1	.1	43.6	.0	.0	44.1	.0	.0
44.5	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.2	.0	.0	47.7	.0	.0	48.1	.0	.0
48.6	.0	.0	49.1	.0	.0	49.5	.0	.0
51.0	.0	.0	51.4	.0	.0	51.9	.0	.0
51.3	.0	.0	51.8	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.6	.0	.0
54.1	.0	.0	54.5	.0	.0	55.0	.0	.0
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0

467 20°PR(P+ALPHA) 42.70 MEV 20 DEG. 12/11/72

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
11.3	7.4	1.1	11.8	21.1	3.2	12.2	39.0	3.6
12.7	43.1	3.8	13.1	53.1	4.3	13.6	55.4	4.3
14.0	42.4	3.8	14.5	46.4	4.1	14.9	45.1	3.9
15.4	46.8	4.0	15.8	49.5	4.1	16.3	51.9	4.2
16.7	46.1	4.0	17.2	50.7	4.2	17.6	55.7	4.4
18.1	64.9	4.7	18.5	72.3	5.1	19.1	81.3	5.2
19.4	88.8	5.5	19.9	102.9	6.0	20.2	117.2	6.3
20.8	126.8	6.6	21.2	138.7	6.9	21.7	144.9	7.1
22.1	160.2	7.4	22.6	187.1	7.6	23.0	200.9	8.3
23.5	202.6	8.3	23.9	219.7	8.7	24.4	222.4	8.7
24.8	242.2	9.1	25.2	249.1	9.2	25.7	255.6	9.3
25.2	251.8	9.3	26.6	235.4	9.0	27.1	235.8	9.1
27.5	243.6	9.1	28.0	260.4	9.4	28.4	262.1	9.5
28.9	249.4	9.2	29.3	242.2	9.1	29.8	232.7	8.9
30.2	249.4	9.2	31.7	222.8	8.7	31.1	241.6	9.1
31.6	239.5	9.0	32.1	231.1	8.9	32.5	239.5	9.1
32.9	238.5	9.0	32.4	228.2	8.8	33.8	217.0	8.6
34.3	222.1	8.7	34.7	241.2	9.1	35.2	251.1	9.3
35.6	218.7	8.6	36.1	231.8	8.5	36.5	210.5	8.5
37.0	186.9	8.0	37.4	192.4	8.1	37.9	181.4	7.9
38.3	178.6	7.7	38.8	172.2	7.7	39.2	150.7	7.2
39.6	138.1	6.9	41.1	144.5	7.1	41.5	142.5	7.1
41.0	131.2	6.7	41.4	116.2	6.2	41.9	119.6	6.4
42.3	81.3	5.2	42.8	49.5	4.1	43.2	24.3	2.9
43.7	8.9	1.7	44.1	1.7	.4	44.6	6.8	1.5
45.1	4.1	1.2	45.5	3.8	1.1	45.9	2.4	.9
46.4	2.1	.8	46.8	1.7	.8	47.2	.3	.2
47.7	1.1	.6	48.2	.7	.5	48.6	.1	.1
49.1	.7	.5	49.5	.0	.0	50.0	.0	.0
50.4	.0	.0	50.9	.0	.0	51.3	.0	.0
51.8	.0	.0	52.2	.0	.0	52.7	.0	.0
53.1	.0	.0	53.6	.0	.0	54.1	.0	.0

459 20°PR(P+ALPHA) 43.71 MEV 45 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.3	54.4	4.3		11.8	42.1	3.8		12.2	15.4	2.3	
12.7	23.6	2.8		13.1	29.1	3.2		13.6	27.0	3.0	
14.0	26.7	3.0		14.5	32.2	3.3		14.9	32.2	3.3	
15.4	35.6	3.5		15.8	31.2	3.2		16.2	33.6	3.4	
16.7	38.3	3.6		17.2	44.2	3.9		17.6	45.2	3.9	
18.1	53.4	4.3		18.5	60.6	4.6		19.1	64.1	4.7	
19.4	76.7	5.1		19.9	75.3	5.1		20.3	81.8	5.3	
20.8	102.4	5.9		21.2	115.7	6.2		21.7	125.3	6.5	
22.1	124.3	6.5		22.6	144.1	7.0		23.0	158.5	7.4	
23.5	150.6	7.2		23.9	164.2	7.5		24.4	158.9	7.4	
24.8	179.7	7.8		25.3	176.3	7.8		25.7	180.4	7.9	
26.2	161.3	7.4		26.6	172.6	7.7		27.1	189.3	8.1	
27.5	181.5	7.9		28.0	179.7	7.8		28.4	186.9	8.1	
28.9	164.3	7.5		29.3	161.2	7.4		29.8	162.6	7.5	
31.2	152.4	7.2		31.7	155.1	7.3		31.1	163.2	7.4	
31.6	146.2	7.1		32.0	152.7	7.2		32.5	134.9	6.8	
32.9	147.2	7.1		33.4	131.8	6.7		33.9	132.5	6.7	
34.3	138.3	6.9		34.7	152.0	7.2		35.2	149.3	7.1	
35.6	134.2	6.8		36.1	106.1	6.0		36.5	121.2	6.4	
37.0	103.1	5.9		37.4	111.2	5.9		37.9	92.4	5.6	
38.3	97.2	5.8		38.8	92.1	5.6		39.2	83.5	5.3	
39.6	71.2	4.9		40.1	65.7	4.7		40.5	66.6	4.8	
41.0	56.1	4.4		41.4	54.2	4.5		41.9	46.6	4.0	
42.3	28.4	3.1		42.8	14.4	2.2		43.2	10.3	1.5	
43.7	.7	.5		44.1	.3	.3		44.6	.3	.3	
45.0	.3	.3		45.5	.3	.3		45.9	.3	.3	
45.4	.0	.0		46.8	.1	.1		47.3	.1	.1	
47.7	.0	.0		48.2	.0	.0		48.6	.0	.0	
49.1	.0	.0		49.5	.1	.1		50.1	.0	.0	
50.4	.0	.0		50.9	.0	.0		51.2	.0	.0	
51.8	.1	.0		52.2	.1	.1		52.7	.0	.0	
53.1	.0	.0		53.6	.0	.0		54.0	.0	.0	

471 20°PR(P+ALPHA) 43.70 MEV 60 DEG. 12/10/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.5	40.2	2.6		11.9	25.0	2.1		12.4	14.7	1.6	
12.8	15.1	1.6		13.3	19.5	1.8		13.7	19.7	1.8	
14.2	20.2	1.9		14.6	18.5	1.8		15.1	23.6	2.0	
15.5	22.1	1.9		16.1	21.7	1.9		16.4	24.1	2.0	
16.9	28.8	2.2		17.3	31.5	2.3		17.8	38.7	2.6	
18.2	43.0	2.7		18.7	51.9	3.1		19.1	52.4	3.0	
19.6	60.1	3.2		20.0	67.8	3.4		20.5	74.0	3.6	
21.9	84.9	3.8		21.4	89.7	3.9		21.9	95.5	4.0	
22.3	98.1	4.1		22.8	107.2	4.2		23.2	116.1	4.5	
23.7	124.8	4.6		24.1	128.6	4.7		24.6	126.9	4.7	
25.0	128.7	4.7		25.5	132.2	4.8		25.9	130.1	4.7	
26.4	121.7	4.6		26.8	132.8	4.8		27.3	131.3	4.7	
27.7	123.1	4.6		28.2	124.1	4.6		28.6	119.2	4.5	
29.1	117.8	4.5		29.5	111.8	4.4		30.0	111.3	4.4	
30.4	110.4	4.3		30.9	107.2	4.3		31.2	101.2	4.2	
31.8	93.6	4.0		32.2	89.7	3.9		32.7	92.6	4.0	
32.1	81.7	3.7		32.6	85.6	3.8		34.0	89.0	3.9	
34.5	95.1	4.0		34.9	87.5	3.8		35.4	89.5	3.7	
35.8	68.1	3.4		36.3	65.3	3.4		36.7	62.8	3.3	
37.2	61.3	3.2		37.6	51.5	3.1		38.1	49.5	2.9	
38.5	47.1	2.8		39.0	46.1	2.8		39.4	41.9	2.7	
39.9	38.3	2.6		40.4	32.1	2.3		40.8	27.6	2.2	
41.3	31.3	2.3		41.7	29.2	2.2		42.2	21.1	1.5	
42.6	11.1	1.4		43.1	7.1	1.1		43.5	1.5	.5	
44.0	.5	.3		44.4	.2	.2		44.9	.0	.0	
45.3	.0	.0		45.8	.1	.1		46.2	.2	.2	
46.7	.0	.0		47.1	.2	.2		47.6	.0	.0	
48.0	.0	.0		48.5	.1	.1		48.9	.0	.0	
49.4	.0	.0		49.8	.0	.0		50.2	.1	.0	
51.7	.0	.0		51.2	.1	.0		51.6	.0	.0	
52.1	.0	.0		52.5	.0	.0		53.0	.0	.0	
53.4	.1	.0		53.9	.1	.0		54.3	.0	.0	

472 20°PR(P+ALPHA) 43.71 MEV 75 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.5	25.7	1.6		11.9	14.3	1.2		12.4	9.5	1.1	
12.8	11.2	1.1		13.3	14.4	1.2		13.7	14.5	1.2	
14.2	11.9	1.1		14.6	15.5	1.3		15.1	13.8	1.2	
15.5	15.2	1.3		16.0	19.5	1.4		16.4	21.0	1.5	
16.9	25.9	1.6		17.3	31.1	1.8		17.8	36.3	1.9	
18.2	41.3	2.1		18.7	41.0	2.2		19.1	47.7	2.2	
19.6	52.4	2.3		20.1	62.4	2.5		20.5	61.4	2.5	
20.9	65.6	2.6		21.4	70.1	2.7		21.9	81.0	2.9	
22.3	76.0	2.9		22.8	75.7	2.8		23.2	78.5	2.8	
23.7	88.9	3.0		24.1	82.0	2.9		24.6	81.5	2.9	
25.0	87.9	3.0		25.5	84.5	3.0		25.9	89.2	3.0	
26.4	80.3	2.9		26.8	83.2	2.9		27.3	78.8	2.9	
27.7	77.3	2.8		28.2	73.1	2.8		28.6	73.5	2.8	
29.1	64.3	2.6		29.5	65.2	2.7		30.0	69.2	2.7	
31.4	66.1	2.6		31.9	51.5	2.5		31.3	59.7	2.5	
31.8	56.8	2.4		32.2	54.5	2.4		32.7	50.3	2.3	
33.1	49.3	2.2		33.6	54.7	2.4		34.1	59.3	2.3	
34.5	50.4	2.3		34.9	46.1	2.2		35.4	43.2	2.1	
35.8	36.2	1.9		36.3	41.1	2.1		36.7	28.4	1.7	
37.2	25.4	1.6		37.6	26.8	1.7		38.1	25.1	1.6	
38.5	24.9	1.6		39.0	21.7	1.5		39.4	18.8	1.4	
39.9	16.8	1.3		40.4	13.4	1.2		40.8	19.0	1.4	
41.3	12.9	1.2		41.7	11.9	1.1		42.2	13.4	1.1	
42.6	4.5	.7		43.1	2.1	.5		43.5	.3	.2	
44.0	.1	.1		44.4	.1	.1		44.9	.0	.0	
45.3	.0	.0		45.8	.0	.0		46.2	.0	.0	
46.7	.1	.0		47.1	.1	.1		47.6	.0	.0	
48.0	.0	.0		48.5	.0	.0		48.9	.0	.0	
49.4	.1	.0		49.8	.1	.1		50.2	.0	.0	
50.7	.0	.0		51.2	.0	.0		51.6	.0	.0	
52.1	.1	.0		52.5	.1	.1		53.0	.0	.0	
53.4	.0	.0		53.9	.0	.0		54.3	.0	.0	

489 20°PR(P+ALPHA) 43.71 MEV 91 DEG. 2/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.7	21.9	1.4		12.1	9.7	1.1		12.6	8.5	.9	
13.0	9.5	1.0		13.5	11.0	1.1		13.9	30.2	1.0	
14.4	11.8	1.1		14.8	13.1	1.1		15.3	13.9	1.2	
15.8	15.9	1.2		16.2	23.2	1.3		16.7	25.9	1.6	
17.1	23.7	1.5		17.6	34.7	1.8		18.1	37.2	1.9	
18.5	39.9	2.0		18.9	43.5	2.4		19.4	47.2	2.1	
19.8	51.7	2.2		20.3	53.4	2.3		20.7	55.0	2.3	
21.2	62.1	2.2		21.7	51.5	2.2		22.1	56.0	2.2	
22.6	61.3	2.4		23.1	59.1	2.4		23.5	62.0	2.4	
23.9	59.5	2.4		24.4	60.6	2.4		24.8	58.5	2.4	
25.3	58.6	2.4		25.7	54.7	2.3		26.2	55.8	2.3	
26.7	54.2	2.3		27.1	56.5	2.3		27.6	52.1	2.2	
28.1	52.3	2.2		28.5	44.4	2.2		28.9	47.7	2.1	
29.4	49.1	2.2		29.8	42.9	2.1		30.3	39.7	2.0	
31.7	39.8	2.1		31.2	37.3	1.9		31.7	35.8	1.9	
32.1	33.8	1.8		32.6	27.6	1.8		33.0	33.1	1.8	
33.5	31.1	1.7		33.2	31.5	1.7		34.4	32.6	1.8	
34.8	25.4	1.6		35.3	24.7	1.6		35.7	21.2	1.4	
36.2	18.6	1.3		36.6	17.5	1.3		37.1	15.5	1.2	
37.6	15.4	1.2		38.1	11.2	1.2		38.5	13.4	1.1	
38.9	12.1	1.1		39.4	10.4	1.1		39.8	9.6	1.1	
40.3	8.5	.9		41.7	5.1	.5		41.2	6.7	.8	
41.6	7.5	.8		42.1	4.1	.6		42.6	1.5	.4	
43.0	.4	.2		43.5	.1	.1		43.9	.0	.0	
44.4	.1	.1		44.8	.1	.1		45.3	.0	.0	
45.7	.0	.0		46.2	.0	.0		46.6	.0	.0	
47.1	.1	.1		47.6	.1	.1		48.1	.0	.0	

44E 20'FB(P+ALPHA) 43.70 MEV 320 DEG. (12/10/72)

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
11.9	15.4	1.2		12.3	14.8	1.0		12.8	2.1	.5	
13.2	2.3	.5		13.7	3.6	.6		14.1	3.4	.6	
14.6	3.2	.6		15.1	4.4	.6		15.5	5.8	.7	
16.0	7.6	.9		16.4	11.6	1.0		16.9	12.2	1.1	
17.3	17.1	1.3		17.8	21.5	1.4		18.3	26.8	1.6	
19.7	31.1	1.7		19.2	34.4	1.8		19.6	40.4	2.0	
20.1	40.0	2.0		20.5	42.2	2.0		21.0	35.4	1.8	
21.4	41.2	2.0		21.9	44.1	2.0		22.4	35.5	1.9	
22.8	32.0	1.8		23.2	34.3	1.8		23.7	30.2	1.7	
24.2	30.3	1.7		24.6	24.4	1.6		25.1	32.2	1.8	
25.6	30.1	1.7		26.0	24.2	1.5		26.5	24.6	1.5	
25.9	24.5	1.5		27.4	21.6	1.4		27.8	25.1	1.6	
28.3	18.9	1.4		28.8	18.9	1.4		29.2	17.7	1.3	
29.7	15.4	1.2		30.1	15.1	1.2		30.6	15.7	1.2	
31.0	14.0	1.2		31.5	14.6	1.2		32.0	10.2	1.0	
32.4	13.9	1.2		32.9	12.4	1.1		33.3	11.7	1.1	
33.8	9.9	1.0		34.2	8.8	.9		34.7	8.6	.9	
35.2	7.9	.9		35.6	7.1	.8		36.1	5.8	.7	
36.5	5.7	.7		37.0	4.9	.7		37.4	3.2	.6	
37.9	3.7	.6		38.4	3.4	.6		38.8	4.0	.6	
39.3	3.7	.6		39.7	2.5	.5		40.2	2.4	.5	
40.6	2.2	.5		41.1	2.1	.4		41.6	1.3	.3	
42.0	1.5	.4		42.5	1.8	.4		42.9	.6	.2	
43.4	.5	.2		43.9	.1	.1		44.3	.1	.1	
44.8	.0	.0		45.2	.0	.0		45.7	.0	.0	
46.1	.0	.0		46.6	.0	.0		47.1	.0	.0	
47.5	.0	.0		48.0	.0	.0		48.4	.0	.0	
48.9	.0	.0		49.3	.0	.0		49.8	.0	.0	
50.2	.0	.0		50.7	.0	.0		51.2	.0	.0	
51.6	.0	.0		52.1	.0	.0		52.6	.0	.0	
53.0	.0	.0		53.4	.0	.0		53.9	.0	.0	
54.4	.0	.0		54.8	.0	.0		55.3	.0	.0	

447 20'FB(P+ALPHA) 43.70 MEV 150 DEG. 12/11/72

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.0	14.9	.8		12.4	3.1	.4		12.9	1.4	.5	
13.4	2.6	.4		13.8	3.0	.4		14.3	3.3	.4	
14.7	3.7	.4		15.2	4.8	.5		15.6	5.9	.5	
16.1	9.8	.7		16.6	11.8	.8		17.0	15.1	.9	
17.5	19.3	1.0		17.9	22.3	1.0		18.4	27.6	1.2	
18.9	32.8	1.3		19.3	34.5	1.4		19.8	37.8	1.4	
21.2	42.0	1.4		21.7	39.5	1.4		22.2	38.2	1.4	
21.6	34.3	1.3		22.1	31.2	1.3		22.5	32.3	1.2	
23.0	31.9	1.2		23.5	29.3	1.2		23.9	26.8	1.1	
24.4	24.7	1.1		24.9	23.9	1.1		25.3	23.0	1.1	
25.7	22.0	1.0		26.2	21.3	1.0		26.7	19.1	1.0	
27.1	20.1	1.0		27.6	18.7	.9		28.0	16.6	.9	
28.5	16.7	.9		29.1	15.8	.9		29.4	14.0	.8	
29.9	13.7	.8		30.3	12.6	.8		30.8	11.7	.8	
31.3	11.5	.7		31.7	9.9	.7		32.2	9.4	.7	
32.6	8.2	.7		33.1	8.9	.6		33.6	6.2	.5	
34.0	6.1	.5		34.5	5.9	.6		34.9	7.1	.6	
35.4	5.3	.5		35.8	4.8	.5		36.3	3.4	.4	
36.8	3.9	.4		37.2	3.1	.4		37.7	2.7	.4	
38.1	2.8	.4		38.6	2.5	.3		39.1	1.9	.3	
39.5	2.2	.3		40.1	1.6	.3		40.4	1.4	.3	
40.9	1.2	.2		41.8	1.3	.3		41.6	1.0	.2	
42.3	1.3	.2		42.7	.7	.2		43.2	.8	.2	
43.6	.4	.1		44.1	.1	.1		44.6	.0	.0	
45.1	.1	.1		45.5	.1	.1		45.9	.0	.0	
46.4	.0	.0		46.9	.0	.0		47.2	.0	.0	
47.8	.0	.0		48.2	.1	.1		48.7	.0	.0	
49.2	.0	.0		49.6	.0	.0		50.1	.0	.0	
50.5	.0	.0		51.1	.0	.0		51.5	.0	.0	
51.9	.0	.0		52.6	.0	.0		52.8	.0	.0	
53.3	.0	.0		53.7	.0	.0		54.2	.0	.0	
54.7	.0	.0		55.1	.0	.0		55.6	.0	.0	

44E 20'FB(P+ALPHA) 43.70 MEV 165 DEG. (12/10/72)

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
12.0	7.1	.6		12.4	11.1	.7		12.9	2.2	.2	
13.4	2.3	.3		13.8	2.5	.3		14.3	2.8	.4	
14.7	3.6	.4		15.2	1.7	.5		15.6	5.9	.5	
16.1	7.9	.6		16.6	2.1	.6		17.0	13.5	.3	
17.5	16.1	.9		17.9	21.0	1.0		18.4	24.4	1.1	
19.9	30.9	1.2		19.3	33.2	1.3		19.8	35.6	1.3	
20.2	38.0	1.4		20.7	34.5	1.4		21.2	41.2	1.4	
21.6	40.1	1.4		22.1	39.1	1.4		22.5	34.4	1.3	
22.0	29.6	1.2		23.5	31.7	1.2		23.9	28.0	1.2	
24.4	26.9	1.1		24.9	24.4	1.1		25.3	23.2	1.1	
25.7	22.3	1.0		26.2	20.3	1.0		26.7	19.4	1.0	
27.1	19.1	.9		27.6	19.6	.9		28.0	15.1	.9	
28.5	14.9	.8		29.0	15.2	.9		29.4	12.4	.8	
29.9	11.6	.8		30.3	11.5	.7		30.8	10.8	.7	
31.3	10.7	.7		31.7	9.7	.7		32.2	8.2	.6	
32.6	7.8	.6		33.1	5.9	.6		33.6	6.2	.5	
34.0	6.1	.5		34.5	4.2	.5		34.9	5.5	.5	
35.4	4.4	.5		35.8	4.8	.5		36.3	4.2	.5	
36.8	4.0	.4		37.2	2.1	.4		37.7	2.6	.4	
38.1	2.7	.4		38.6	1.7	.3		39.1	2.3	.3	
39.5	2.2	.3		40.1	1.9	.3		40.4	1.5	.3	
40.9	1.4	.3		41.4	1.5	.3		41.8	1.2	.2	
42.3	.9	.2		42.7	.8	.2		43.2	.4	.1	
43.6	.3	.1		44.1	.2	.1		44.6	.2	.1	
45.0	.0	.0		45.5	.0	.0		45.9	.0	.0	
46.4	.0	.0		46.9	.0	.0		47.2	.0	.0	
47.8	.0	.0		48.2	.0	.0		48.7	.0	.0	
49.2	.0	.0		49.6	.1	.1		50.1	.1	.1	
50.5	.0	.0		51.1	.0	.0		51.5	.0	.0	
51.9	.0	.0		52.6	.0	.0		52.8	.0	.0	
53.3	.0	.0		53.7	.0	.0		54.2	.0	.0	
54.7	.0	.0		55.1	.0	.0		55.6	.0	.0	

318 20IPR(P,ALPHA) 31.00 MEV 31 DEG. 14/21/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.3	32.9	2.1	13.8	23.6	1.7	14.3	22.9	1.7
14.8	24.9	1.8	15.2	23.6	1.7	15.8	23.1	1.7
15.3	25.8	1.9	16.3	26.6	1.8	17.3	28.7	1.9
17.7	35.5	2.1	18.2	34.6	2.1	18.7	45.8	2.4
19.2	55.5	2.6	19.7	57.7	2.7	21.2	65.6	2.9
20.7	81.8	3.2	21.2	96.1	3.5	21.7	105.8	3.6
22.2	105.6	3.6	22.6	125.4	4.0	23.1	129.4	4.1
23.6	138.1	4.1	24.3	131.9	4.0	24.6	150.8	4.3
25.1	137.3	4.1	25.6	156.9	4.4	26.1	152.4	4.4
26.6	152.3	4.4	27.1	155.3	4.4	27.5	150.4	4.2
28.0	137.3	4.1	28.5	145.1	4.2	29.1	141.4	4.2
29.5	138.6	4.2	30.0	132.1	4.1	30.5	139.9	4.2
31.0	149.7	4.3	31.5	161.8	4.5	32.0	182.2	4.8
32.4	185.5	4.8	32.9	192.1	4.9	33.4	174.1	4.7
33.9	148.1	4.3	34.4	116.7	3.8	34.9	91.5	3.4
35.4	65.3	2.9	35.9	45.8	2.4	36.4	33.2	2.6
36.9	26.3	1.8	37.3	21.5	1.6	37.8	19.0	1.5
38.3	17.4	1.5	38.8	14.8	1.4	39.3	12.8	1.3
39.8	9.8	1.0	40.3	6.1	.9	40.8	7.7	1.0
41.3	4.2	.7	41.8	5.2	.8	42.2	4.9	.8
42.7	3.6	.7	43.2	2.5	.6	43.7	2.0	.5
44.2	1.5	.4	44.7	1.7	.5	45.2	.7	.3
45.7	.9	.3	46.2	.2	.2	46.7	.2	.2
47.1	.2	.2	47.6	.2	.2	48.1	.4	.2
48.6	.1	.1	49.1	.1	.1	49.6	.1	.1
50.1	.1	.1	50.6	.0	.0	51.1	.1	.1
51.6	.0	.0	52.1	.1	.1	52.6	.0	.0
53.0	.0	.0	53.5	.0	.0	54.0	.0	.0
54.5	.0	.0	55.1	.1	.1	55.5	.0	.0
56.0	.0	.0	56.5	.0	.0	56.9	.0	.0
57.4	.0	.0	57.9	.1	.1	58.4	.0	.0
58.9	.0	.0	59.4	.0	.0	59.9	.0	.0

317 20IPR(P,ALPHA) 30.00 MEV 60 DEG. 14/21/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.5	9.0	1.1	14.0	9.7	1.1	14.5	10.1	1.1
15.1	11.2	1.1	15.5	7.5	1.0	16.1	5.9	.9
16.5	6.2	.9	16.9	10.1	1.1	17.4	14.0	1.2
17.9	10.2	1.1	18.4	11.1	1.2	18.9	15.1	1.4
19.4	15.2	1.4	19.9	22.2	1.7	20.4	24.6	1.8
21.9	34.3	2.1	21.4	37.4	2.2	21.9	39.0	2.2
22.4	50.4	2.5	22.9	48.6	2.5	23.3	59.4	2.7
23.8	65.1	2.8	24.3	70.3	3.0	24.8	67.3	2.9
25.3	66.2	2.9	25.8	72.2	3.0	26.3	74.7	3.1
26.8	72.8	3.1	27.3	69.2	2.9	27.8	67.8	2.9
28.3	69.2	2.9	28.8	63.9	2.8	29.2	61.6	2.8
29.7	60.5	2.7	31.2	53.1	2.7	30.7	51.4	2.5
31.2	47.8	2.4	31.7	48.6	2.5	32.2	53.8	2.6
32.7	67.7	2.9	33.2	61.1	2.7	33.7	50.3	2.5
34.2	43.3	2.3	34.7	33.4	2.0	35.1	20.2	1.6
35.6	16.6	1.4	36.1	11.2	1.2	36.6	7.6	1.1
37.1	.7	.3	37.6	.2	.2	38.1	.2	.2
38.6	.2	.2	39.1	.7	.3	39.6	.1	.1
40.1	.1	.1	40.6	.1	.1	41.1	.0	.0
41.5	.1	.1	42.1	.1	.1	42.5	.0	.0
43.0	.0	.0	43.5	.0	.0	44.0	.0	.0
44.5	.1	.1	45.1	.1	.1	45.5	.0	.0
46.0	.0	.0	46.5	.0	.0	47.0	.0	.0
47.4	.1	.1	47.9	.0	.0	48.4	.0	.0
48.9	.0	.0	49.4	.0	.0	49.9	.0	.0
50.4	.1	.1	50.9	.1	.1	51.4	.0	.0
51.9	.0	.0	52.4	.0	.0	52.9	.0	.0
53.3	.1	.1	53.8	.1	.1	54.3	.0	.0
54.8	.0	.0	55.3	.0	.0	55.8	.0	.0
56.3	.1	.1	56.8	.1	.1	57.3	.0	.0
57.8	.0	.0	58.2	.0	.0	58.8	.0	.0
59.3	.1	.1	59.7	.1	.1	60.2	.0	.0

315 20IPR(P,ALPHA) 31.01 MEV 91 DEG. 14/21/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.7	5.1	.9	14.2	5.4	.9	14.7	3.9	.8
15.2	5.1	.9	15.7	6.5	1.0	16.2	4.5	.8
16.7	5.1	.9	17.2	7.4	1.1	17.7	3.2	1.1
18.2	8.8	1.2	18.7	10.2	1.2	19.2	13.5	1.4
19.7	14.7	1.5	20.2	15.6	1.6	20.7	21.4	1.8
21.1	20.9	1.8	21.6	22.1	1.9	22.1	25.4	2.0
22.6	25.4	2.1	23.1	24.3	2.1	23.6	27.1	2.1
24.1	27.1	2.0	24.6	31.2	2.2	25.1	32.0	2.2
25.6	31.3	2.2	26.1	23.6	2.1	26.6	28.9	2.1
27.1	29.1	2.1	27.6	25.1	2.0	28.1	26.5	2.0
28.6	28.6	2.0	29.1	21.5	1.8	29.6	19.7	1.7
30.0	18.9	1.7	30.5	17.6	1.7	31.0	19.2	1.7
31.5	18.7	1.7	32.1	10.9	1.5	32.5	14.4	1.7
33.0	15.2	1.5	33.5	11.2	1.5	34.0	11.2	1.2
34.5	9.8	1.2	35.1	7.3	1.1	35.5	5.7	.9
36.0	3.4	.7	36.5	2.0	.6	37.0	.2	.2
37.4	.3	.2	37.9	.1	.1	38.4	.0	.0
38.9	.0	.0	39.4	.0	.0	39.9	.0	.0
40.4	.1	.1	40.9	.1	.1	41.4	.0	.0
41.9	.0	.0	42.4	.0	.0	42.9	.0	.0
43.4	.1	.1	43.9	.1	.1	44.4	.0	.0
44.9	.0	.0	45.4	.0	.0	45.9	.0	.0
46.3	.1	.1	46.8	.1	.1	47.3	.0	.0
47.8	.0	.0	48.3	.0	.0	48.8	.0	.0
49.3	.1	.1	49.8	.1	.1	50.3	.0	.0
50.8	.0	.0	51.3	.0	.0	51.8	.0	.0
52.3	.1	.1	52.8	.1	.1	53.3	.0	.0
52.7	.0	.0	53.2	.0	.0	54.7	.1	.1
53.2	.0	.0	55.7	.1	.1	56.2	.0	.0
56.7	.0	.0	57.2	.0	.0	57.7	.0	.0
58.2	.1	.1	58.7	.1	.1	59.2	.0	.0
59.7	.0	.0	60.2	.0	.0	60.7	.0	.0

314 20IPR(P,ALPHA) 30.01 MEV 105 DEG. 14/21/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.7	3.3	.7	14.2	3.2	.7	14.7	1.4	.5
15.2	4.4	.8	15.7	3.1	.7	16.2	2.8	.7
16.7	4.7	.9	17.2	7.8	1.1	17.7	7.3	1.1
18.2	9.2	1.2	18.7	11.1	1.2	19.2	14.0	1.5
19.7	14.3	1.5	20.2	17.2	1.5	20.7	16.8	1.6
21.1	16.2	1.6	21.6	21.2	1.9	22.1	16.0	1.6
22.6	19.3	1.7	23.1	21.2	1.8	23.6	10.9	1.6
24.1	21.5	1.8	24.6	20.1	1.8	25.1	22.6	1.9
25.6	22.9	1.9	26.1	21.7	1.8	26.6	20.6	1.8
27.1	21.5	1.8	27.6	19.8	1.8	28.1	18.0	1.7
28.6	16.5	1.6	29.1	17.4	1.8	29.6	15.1	1.5
30.1	15.2	1.5	30.5	17.1	1.4	31.0	11.2	1.3
31.5	9.3	1.2	32.1	14.3	1.2	32.5	10.3	1.2
33.0	9.3	1.2	33.5	4.5	1.2	34.0	6.7	1.0
34.5	4.7	.9	35.1	1.0	.9	35.5	3.0	.7
36.0	2.3	.6	36.5	.1	.6	37.0	.0	.0
37.4	.0	.0	37.9	.0	.0	38.4	.0	.0
38.9	.1	.1	39.4	.1	.1	39.9	.0	.0
40.4	.0	.0	40.9	.0	.0	41.4	.0	.0
41.9	.1	.1	42.4	.1	.1	42.9	.0	.0
43.4	.0	.0	43.9	.0	.0	44.4	.0	.0
44.9	.1	.1	45.4	.1	.1	45.9	.0	.0
46.3	.1	.1	46.8	.0	.0	47.3	.0	.0
47.8	.1	.1	48.3	.1	.1	48.8	.0	.0
49.3	.0	.0	49.8	.0	.0	50.3	.0	.0
50.8	.1	.1	51.3	.1	.1	51.8	.0	.0
52.3	.0	.0	52.8	.0	.0	53.3	.0	.0
52.7	.1	.1	54.7	.1	.1	56.2	.0	.0
53.2	.0	.0	55.7	.0	.0	57.7	.0	.0
56.7	.1	.1	57.2	.1	.1	59.2	.0	.0
58.2	.0	.0	58.7	.0	.0	60.7	.0	.0
59.7	.1	.1	61.2	.1	.1			

313 20PR(P+ALPHA) 33.00 MEV 121 DEG. (4/20/71)

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.0	2.6	.6		14.5	2.3	.6		15.0	2.8	.7	
15.5	3.7	.8		16.0	3.1	.7		16.4	3.1	.7	
16.9	4.8	.9		17.4	5.1	.9		17.9	4.8	.9	
18.4	7.3	1.1		18.9	6.5	1.2		19.4	11.2	1.2	
19.9	14.0	1.5		20.4	14.2	1.5		20.9	14.6	1.5	
21.4	14.3	1.5		21.9	13.0	1.4		22.4	14.1	1.5	
22.9	14.3	1.5		23.4	14.3	1.5		23.9	15.4	1.5	
24.4	16.5	1.6		24.9	14.4	1.5		25.4	18.6	1.7	
25.9	14.4	1.5		26.4	17.4	1.6		26.9	15.2	1.5	
27.4	17.8	1.5		27.9	12.2	1.4		28.4	9.8	1.2	
28.9	11.1	1.3		29.4	7.8	1.2		29.9	11.0	1.3	
30.4	8.2	1.1		30.9	10.1	1.3		31.4	7.9	1.1	
31.9	6.4	1.0		32.4	5.3	.9		32.8	5.7	.9	
33.3	6.4	1.0		33.8	5.1	.9		34.2	4.2	.8	
34.8	3.3	.7		35.3	2.6	.6		35.8	1.7	.5	
36.3	2.0	.6		36.8	.9	.4		37.3	.0	.0	
37.8	.0	.0		38.3	.0	.0		38.8	.0	.0	
39.3	.0	.0		39.8	.0	.0		40.2	.0	.0	
40.8	.0	.0		41.3	.0	.0		41.8	.0	.0	
42.3	.0	.0		42.8	.0	.0		43.2	.0	.0	
43.8	.0	.0		44.3	.0	.0		44.8	.0	.0	
45.3	.0	.0		45.8	.0	.0		46.2	.0	.0	
46.8	.0	.0		47.3	.0	.0		47.8	.0	.0	
48.3	.0	.0		48.7	.0	.0		49.2	.0	.0	
49.7	.0	.0		50.2	.0	.0		50.7	.0	.0	
51.2	.0	.0		51.7	.0	.0		52.2	.0	.0	
52.7	.0	.0		53.2	.0	.0		53.7	.0	.0	
54.2	.0	.0		54.7	.0	.0		55.2	.0	.0	
55.7	.0	.0		56.2	.0	.0		56.7	.0	.0	
57.2	.0	.0		57.7	.0	.0		58.2	.0	.0	
58.7	.0	.0		59.2	.0	.0		59.7	.0	.0	
60.2	.0	.0		60.7	.0	.0		61.2	.0	.0	

312 20PR(P+ALPHA) 30.00 MEV 125 DEG. (4/20/71)

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.0	3.1	.6		14.5	2.4	.5		15.0	2.6	.5	
15.5	2.2	.5		16.0	2.7	.5		16.4	3.0	.6	
16.9	4.9	.7		17.4	4.0	.6		17.9	7.6	.9	
18.4	7.6	.9		18.9	2.1	1.0		19.4	11.2	1.1	
19.9	11.9	1.1		20.4	13.9	1.2		20.9	13.4	1.2	
21.4	16.1	1.3		21.9	15.1	1.3		22.4	14.5	1.2	
22.9	12.6	1.1		23.4	14.3	1.2		23.9	13.3	1.2	
24.4	13.4	1.2		24.9	13.3	1.2		25.4	12.6	1.1	
25.9	12.4	1.1		26.4	12.1	1.1		26.9	9.8	1.0	
27.4	9.9	1.0		27.9	9.9	1.0		28.4	10.3	1.0	
28.9	7.7	.9		29.4	7.7	.9		29.9	7.2	.9	
30.4	5.9	.8		31.4	6.4	.8		31.9	4.7	.7	
31.9	4.3	.7		32.4	4.9	.7		32.8	4.2	.7	
33.3	3.1	.6		33.8	2.3	.5		34.2	2.3	.5	
34.8	.9	.3		35.3	1.8	.4		35.8	.6	.3	
36.3	.7	.3		36.8	.2	.1		37.3	.1	.1	
37.8	.0	.0		38.3	.0	.0		38.8	.0	.0	
39.3	.0	.0		39.8	.0	.0		40.2	.0	.0	
40.8	.0	.0		41.3	.0	.0		41.8	.0	.0	
42.3	.0	.0		42.8	.0	.0		43.2	.0	.0	
43.8	.0	.0		44.3	.0	.0		44.8	.0	.0	
45.3	.0	.0		45.8	.0	.0		46.2	.0	.0	
46.8	.0	.0		47.3	.0	.0		47.8	.0	.0	
48.3	.0	.0		48.7	.0	.0		49.2	.0	.0	
49.7	.0	.0		50.2	.0	.0		50.7	.0	.0	
51.2	.0	.0		51.7	.0	.0		52.2	.0	.0	
52.7	.0	.0		53.2	.0	.0		53.7	.0	.0	
54.2	.0	.0		54.7	.0	.0		55.2	.0	.0	
55.7	.0	.0		56.2	.0	.0		56.7	.0	.0	
57.2	.0	.0		57.7	.0	.0		58.2	.0	.0	
58.7	.0	.0		59.2	.0	.0		59.7	.0	.0	
60.2	.0	.0		60.7	.0	.0		61.2	.0	.0	

311 20PR(P+ALPHA) 33.00 MEV 151 DEG. (4/20/71)

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.1	1.9	.4		14.6	1.7	.4		15.1	2.2	.5	
15.6	1.9	.4		16.1	2.9	.5		16.6	3.5	.6	
17.1	3.5	.6		17.6	5.6	.8		18.1	7.5	.9	
18.6	8.7	1.0		19.1	10.5	1.0		19.6	12.7	1.1	
20.1	11.8	1.1		20.6	12.4	1.1		21.1	14.6	1.2	
21.6	14.5	1.2		22.1	15.4	1.3		22.6	12.4	1.1	
23.1	13.6	1.2		23.6	11.3	1.1		24.1	11.2	1.1	
24.6	10.3	1.0		25.1	11.4	1.1		25.6	11.0	1.1	
26.1	10.7	1.1		26.6	9.7	1.0		27.1	9.2	1.0	
27.6	8.8	1.0		28.1	7.1	.9		28.6	5.6	.8	
29.1	7.3	.9		29.6	5.3	.8		30.1	4.8	.7	
30.6	3.8	.6		31.1	3.0	.6		31.6	3.8	.6	
32.1	3.5	.6		32.6	3.1	.6		33.1	3.5	.6	
33.6	2.5	.5		34.1	2.2	.5		34.6	1.3	.4	
35.1	.8	.3		35.6	1.1	.3		36.1	.8	.3	
36.6	.3	.2		37.1	.1	.1		37.6	.0	.0	
38.1	.0	.0		38.6	.0	.0		39.1	.0	.0	
39.6	.0	.0		40.1	.0	.0		40.6	.0	.0	
41.1	.0	.0		41.6	.0	.0		42.1	.0	.0	
42.5	.0	.0		43.0	.0	.0		43.5	.0	.0	
44.0	.0	.0		44.5	.0	.0		45.0	.0	.0	
45.5	.0	.0		46.0	.0	.0		46.5	.0	.0	
47.0	.0	.0		47.5	.0	.0		48.0	.0	.0	
48.5	.0	.0		49.0	.0	.0		49.5	.0	.0	
50.0	.0	.0		50.5	.0	.0		51.0	.0	.0	
51.5	.0	.0		52.0	.0	.0		52.5	.0	.0	
53.0	.0	.0		53.5	.0	.0		54.0	.0	.0	
54.5	.0	.0		55.0	.0	.0		55.5	.0	.0	
56.0	.0	.0		56.5	.0	.0		57.0	.0	.0	
57.5	.0	.0		58.0	.0	.0		58.5	.0	.0	
59.0	.0	.0		59.5	.0	.0		60.0	.0	.0	
60.5	.0	.0		61.0	.0	.0		61.5	.0	.0	

310 20PR(P+ALPHA) 30.00 MEV 168 DEG. (4/20/71)

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.1	3.7	.8		14.6	2.4	.7		14.1	1.9	.5	
15.6	2.3	.6		16.1	3.3	.7		15.6	3.0	.7	
16.1	6.6	1.0		16.6	4.2	.8		17.1	7.2	1.1	
17.6	9.7	1.2		18.1	13.3	1.4		18.6	11.5	1.3	
19.1	12.9	1.4		19.6	16.7	1.6		20.1	12.2	1.4	
20.6	13.7	1.5		21.1	11.5	1.3		21.6	14.7	1.5	
22.1	11.2	1.3		22.6	11.2	1.3		23.1	12.0	1.4	
23.6	9.0	1.2		24.1	8.7	1.2		24.6	11.5	1.3	
25.1	8.4	1.1		25.6	11.3	1.3		26.1	8.6	1.2	
26.6	7.8	1.1		27.1	5.6	.9		27.6	6.7	1.0	
28.1	5.1	.9		28.6	5.1	.9		29.1	4.1	.8	
29.6	4.4	.8		30.1	2.7	.6		30.6	3.1	.7	
31.1	3.4	.7		31.6	2.2	.6		32.1	2.7	.6	
32.6	2.5	.6		33.1	1.4	.5		33.6	.9	.4	
34.1	1.4	.5		34.6	.8	.3		35.1	.3	.2	
35.6	.3	.2		36.1	.0	.0		36.6	.0	.0	
37.1	.0	.0		37.6	.0	.0		38.1	.0	.0	
38.6	.0	.0		39.1	.0	.0		39.6	.0	.0	
40.1	.0	.0		40.6	.0	.0		41.1	.0	.0	
41.6	.0	.0		42.1	.0	.0		42.5	.0	.0	
43.0	.0	.0		43.5	.0	.0		44.0	.0	.0	
44.5	.0	.0		45.0	.0	.0		45.5	.0	.0	
46.0	.0	.0		46.5	.0	.0		47.0	.0	.0	
47.5	.0	.0		48.0	.0	.0		48.5	.0	.0	
49.0	.0	.0		49.5	.0	.0		50.0	.0	.0	
50.5	.0	.0		51.0	.0	.0		51.5	.0	.0	
52.0	.0	.0		52.5	.0	.0		53.0	.0	.0	
53.5	.0	.0		54.0	.0	.0		54.5	.0	.0	
55.0	.0	.0		55.5	.0	.0		56.0	.0	.0	
56.5	.0	.0		57.0	.0	.0		57.5	.0	.0	
58.0	.0	.0		58.5	.0	.0		59.0	.0	.0	
59.5	.0	.0		60.0	.0	.0		60.5	.0	.0	

321 20IPP(P+ALPHA) 35.00 MEV 31 DEG. 04/20/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
12.8	31.4	2.8	13.3	27.9	2.7	13.8	34.7	3.1
14.3	26.1	2.6	14.8	28.4	2.7	15.2	23.0	2.4
15.8	37.6	2.9	16.3	31.9	2.8	16.8	28.9	2.7
17.3	26.1	2.6	17.7	32.7	2.9	18.2	34.7	3.0
18.7	42.3	3.3	19.2	52.7	3.7	19.7	61.8	3.9
20.2	69.6	4.2	20.7	86.9	4.7	21.2	95.1	4.9
21.7	114.6	5.1	22.2	121.1	5.5	22.6	133.7	5.8
23.1	149.2	6.1	23.6	161.1	6.4	24.1	171.2	6.6
24.6	188.9	6.9	25.1	177.8	6.7	25.6	211.1	7.1
26.1	178.6	6.7	26.6	191.0	6.9	27.1	178.0	6.7
27.5	188.2	6.9	28.1	184.9	6.8	28.5	176.3	6.7
29.0	179.3	6.7	29.5	161.1	6.5	30.0	154.2	6.3
31.5	163.9	6.4	31.1	151.2	6.2	31.5	151.9	6.2
33.0	154.0	6.2	32.4	151.2	6.2	32.9	129.8	6.0
34.4	135.6	5.9	33.9	142.6	6.1	34.4	131.9	5.8
35.9	120.8	5.5	35.4	115.8	5.5	35.9	118.3	5.5
37.4	117.5	5.5	36.9	130.5	5.9	37.3	144.1	6.1
38.8	155.0	6.3	38.3	157.3	6.2	38.8	158.6	6.2
39.3	126.1	5.7	39.8	99.7	4.9	40.3	64.1	4.1
40.8	43.6	2.3	40.3	21.6	2.5	40.8	16.0	2.0
42.2	11.1	1.7	42.7	7.6	1.4	43.2	4.6	1.1
43.7	4.1	1.0	44.2	3.8	1.0	44.7	.2	.3
45.2	4.3	1.1	45.7	1.1	.5	46.2	1.5	.6
46.7	.8	.4	47.2	.5	.4	47.6	.0	.0
48.1	.5	.4	48.6	.3	.3	49.1	.3	.3
49.6	.5	.4	50.1	.0	.1	50.6	.0	.0
51.1	.1	.1	51.6	.1	.1	52.1	.0	.1
52.5	.0	.0	53.0	.0	.0	53.5	.3	.3
54.0	.1	.1	54.5	.1	.1	55.1	.1	.1
55.5	.3	.2	56.0	.0	.0	56.5	.0	.0
56.9	.1	.1	57.4	.1	.1	57.9	.0	.1
58.4	.0	.0	58.9	.0	.0	59.4	.0	.0

322 20IPP(P+ALPHA) 35.00 MEV 40 DEG. 04/20/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
13.0	15.2	2.0	13.5	14.5	1.9	14.0	11.4	1.7
14.5	13.5	1.8	15.1	11.2	1.7	15.5	11.9	1.7
16.0	13.2	1.8	16.5	16.0	2.0	16.9	14.0	1.9
17.4	16.5	2.1	17.9	16.2	2.1	18.4	21.1	2.3
18.9	19.5	2.2	19.4	32.5	2.9	19.9	31.0	2.8
20.4	31.7	2.8	20.9	41.1	3.2	21.4	38.8	3.1
21.9	54.3	3.7	22.4	54.8	3.7	22.9	67.0	4.1
23.3	69.1	4.2	23.8	75.1	4.4	24.3	81.2	4.5
24.8	89.1	4.8	25.2	91.2	4.9	25.7	101.6	5.1
26.3	95.9	4.9	26.8	87.3	4.7	27.3	91.9	4.8
27.8	92.6	4.8	28.2	84.5	4.6	28.7	73.6	4.3
29.2	71.1	4.2	29.7	61.1	4.1	30.2	68.5	4.2
30.7	59.9	3.9	31.2	65.2	4.3	31.7	50.0	3.6
32.2	55.8	3.8	32.7	56.9	3.8	33.2	49.0	3.5
33.7	45.4	3.4	34.2	47.5	3.5	34.7	28.3	3.1
35.1	38.1	3.1	35.6	34.8	3.1	36.1	33.5	2.9
36.6	28.7	2.7	37.1	31.0	2.8	37.6	27.6	2.7
38.1	16.6	2.1	38.6	24.9	2.6	39.1	31.5	2.8
39.6	16.2	2.0	40.1	11.4	1.6	40.6	7.1	1.2
41.1	6.3	1.3	41.6	0.5	1.1	42.1	2.3	.8
42.5	.0	.0	43.0	.3	.2	43.5	.3	.3
44.0	.3	.3	44.5	.1	.1	45.0	.1	.1
45.5	.0	.0	46.0	.0	.0	46.5	.0	.0
47.0	.1	.1	47.5	.1	.1	48.0	.0	.0
48.5	.0	.0	49.0	.0	.0	49.5	.0	.0
50.0	.1	.1	50.5	.1	.1	51.0	.0	.1
51.5	.0	.0	52.0	.0	.0	52.5	.0	.0
52.0	.1	.1	52.5	.1	.1	53.0	.0	.1
53.5	.0	.0	54.0	.0	.0	54.5	.0	.0
55.0	.1	.1	55.5	.1	.1	56.0	.1	.1
56.5	.0	.0	57.0	.0	.0	57.5	.0	.0
58.0	.1	.1	58.5	.1	.1	59.0	.1	.1

323 20IPP(P+ALPHA) 35.00 MEV 91 DEG. 04/20/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
13.2	6.3	.9	13.7	5.1	.8	14.2	5.7	.9
14.7	5.4	.8	15.2	5.1	.8	15.7	8.2	1.0
16.2	5.1	.8	16.7	11.1	1.1	17.2	9.4	1.1
17.7	12.2	1.2	18.2	11.1	1.2	18.7	15.9	1.4
19.2	16.2	1.4	19.7	17.9	1.5	20.2	23.1	1.7
20.7	25.1	1.8	21.2	26.8	1.9	21.6	27.0	1.9
22.1	35.6	2.1	22.6	35.9	2.2	23.1	35.7	2.1
23.6	38.6	2.2	24.1	38.3	2.2	24.6	38.0	2.2
25.1	46.9	2.4	25.6	48.9	2.4	26.1	47.1	2.4
26.6	42.8	2.3	27.1	41.7	2.3	27.6	37.0	2.2
28.1	35.3	2.1	28.6	33.4	2.1	29.1	26.3	1.8
29.5	27.0	1.9	30.0	27.2	1.9	30.5	24.4	1.8
31.0	25.1	1.8	31.5	22.6	1.7	32.0	21.1	1.6
32.5	18.0	1.5	33.0	11.5	1.4	33.5	14.8	1.4
34.0	16.7	1.5	34.5	12.1	1.2	35.0	12.1	1.2
35.5	13.3	1.3	36.0	11.2	1.2	36.5	7.9	1.0
37.0	6.9	.9	37.4	.5	1.1	37.9	8.3	1.1
38.4	8.8	1.1	38.9	.0	.5	39.4	4.8	.8
39.9	3.1	.6	40.4	1.9	.5	40.9	1.9	.5
41.4	1.1	.4	41.9	.5	.3	42.4	.1	.1
42.9	.1	.1	43.4	.1	.1	43.9	.1	.1
44.4	.0	.0	44.9	.0	.0	45.4	.0	.0
45.9	.1	.1	46.4	.1	.1	46.9	.1	.1
47.4	.0	.0	47.9	.0	.0	48.4	.0	.0
48.9	.1	.1	49.4	.1	.1	49.9	.1	.1
50.4	.0	.0	50.9	.0	.0	51.4	.0	.0
51.9	.1	.1	52.4	.1	.1	52.9	.1	.1
53.4	.0	.0	53.9	.0	.0	54.4	.0	.0
54.9	.1	.1	55.4	.1	.1	55.9	.1	.1
56.4	.0	.0	56.9	.0	.0	57.4	.0	.0
57.9	.1	.1	58.4	.1	.1	58.9	.1	.1
59.4	.0	.0	59.9	.0	.0	60.4	.0	.0

325 20IPP(P+ALPHA) 35.00 MEV 120 DEG. 04/20/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SP*MEV		MEV	MICR/SP*MEV		MEV	MICR/SP*MEV	
13.5	4.7	.7	14.0	4.4	.8	14.5	4.0	.8
15.0	3.5	.7	15.5	4.7	.8	16.0	4.1	.8
16.4	5.8	.9	16.9	6.1	1.0	17.4	7.6	1.1
17.9	11.4	1.3	18.4	13.3	1.5	18.9	13.5	1.4
19.4	14.6	1.5	19.9	14.5	1.6	20.4	17.9	1.7
20.9	16.9	1.6	21.4	21.4	1.8	21.9	21.1	1.8
22.4	22.1	1.8	22.9	21.4	1.8	23.4	25.2	2.0
23.9	27.4	1.8	24.4	21.8	1.8	24.9	21.5	1.8
25.4	21.7	1.8	25.9	21.1	1.8	26.4	21.0	1.8
26.9	21.2	1.8	27.4	15.7	1.7	27.9	17.8	1.6
28.4	14.6	1.5	28.9	11.5	1.4	29.4	14.9	1.5
29.9	12.9	1.4	30.4	11.5	1.3	30.9	11.1	1.2
31.4	7.6	1.1	31.9	6.4	1.1	32.4	7.0	1.0
32.9	8.2	1.1	33.4	6.7	1.1	33.9	5.5	.9
34.4	5.5	.9	34.9	4.5	.9	35.4	4.1	.8
35.9	4.7	.8	36.4	4.1	.8	36.9	4.1	.8
37.4	4.4	.8	37.9	3.0	.7	38.4	3.8	.8
38.9	3.1	.7	39.4	1.5	.5	39.9	.9	.4
40.4	2.0	.5	40.9	.5	.2	41.4	.9	.4
41.9	.6	.3	42.4	.2	.2	42.9	.0	.1
43.4	.1	.1	43.9	.0	.0	44.4	.0	.0
44.9	.1	.1	45.4	.1	.1	45.9	.1	.1
46.4	.1	.1	46.9	.0	.0	47.4	.0	.0
47.9	.1	.1	48.4	.1	.1	48.9	.0	.0
49.4	.0	.0	49.9	.0	.0	50.4	.0	.0
50.9	.1	.1	51.4	.1	.1	51.9	.1	.1
52.4	.0	.0	52.9	.0	.0	53.4	.0	.0
53.9	.1	.1	54.4	.1	.1	54.9	.0	.1
55.4	.0	.0	55.9	.0	.0	56.4	.0	.0
56.9	.1	.1	57.4	.1	.1	57.9	.1	.1
58.4	.0	.0	58.9	.0	.0	59.4	.0	.0
59.9	.1	.1	60.4	.1	.1	60.9	.0	.1

326 20IPRP(4LPH4) 35.17 MEV 150 DEG. 14/23/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.1	6.9	1.1	13.6	3.5	.7	14.1	2.1	.6	14.6	3.8	.8
14.6	4.3	.8	15.1	3.5	.7	15.6	2.1	.6	16.1	3.4	.7
16.1	4.0	.8	16.6	3.3	.9	17.1	7.0	1.1	17.6	13.5	1.3
17.6	6.9	1.0	18.1	5.5	1.2	18.6	8.7	1.2	19.1	15.4	1.5
19.1	12.5	1.4	19.6	15.3	1.5	20.1	16.6	1.6	20.6	19.1	1.7
20.6	16.5	1.6	21.1	17.5	1.6	21.6	20.1	1.8	22.1	19.4	1.7
22.1	13.9	1.5	22.6	16.3	1.6	23.1	16.6	1.6	23.6	16.1	1.6
23.6	14.6	1.5	24.1	15.1	1.7	24.6	14.2	1.5	25.1	14.7	1.5
25.1	14.6	1.5	25.6	16.5	1.6	26.1	13.7	1.4	26.6	13.4	1.3
26.6	14.5	1.5	27.1	12.0	1.4	27.6	10.8	1.2	28.1	6.9	1.0
28.1	11.1	1.3	28.6	9.8	1.2	29.1	7.2	1.1	29.6	5.1	.9
29.6	7.5	1.1	30.1	5.2	.9	30.6	5.8	.9	31.1	5.5	.9
31.1	6.1	1.0	31.6	5.3	.9	32.1	2.7	.6	32.6	3.8	.8
32.6	4.3	.8	33.1	2.8	.7	33.6	3.4	.7	34.1	3.4	.7
34.1	2.9	.7	34.6	3.4	.7	35.1	2.1	.6	35.6	1.4	.5
35.6	2.9	.7	36.1	1.7	.5	36.6	1.1	.4	37.1	2.0	.6
37.1	1.1	.4	37.6	2.1	.6	38.1	1.5	.5	38.6	.5	.3
38.6	1.5	.5	39.1	.2	.2	39.6	.2	.2	40.1	.3	.2
40.1	.5	.3	40.6	.5	.3	41.1	.1	.1	41.6	.1	.1
41.6	.2	.2	42.1	.2	.2	42.6	.1	.1	43.1	.1	.1
43.1	.1	.1	43.6	.1	.1	44.1	.1	.1	44.6	.1	.1
44.6	.1	.1	45.1	.1	.1	45.6	.1	.1	46.1	.1	.1
46.1	.1	.1	46.6	.1	.1	47.1	.1	.1	47.6	.1	.1
47.6	.1	.1	48.1	.1	.1	48.6	.1	.1	49.1	.1	.1
49.1	.1	.1	49.6	.1	.1	50.1	.1	.1	50.6	.1	.1
50.6	.1	.1	51.1	.1	.1	51.6	.1	.1	52.1	.1	.1
52.1	.1	.1	52.6	.1	.1	53.1	.1	.1	53.6	.1	.1
53.6	.1	.1	54.1	.1	.1	54.6	.1	.1	55.1	.1	.1
55.1	.1	.1	55.6	.1	.1	56.1	.1	.1	56.6	.1	.1
56.6	.1	.1	57.1	.1	.1	57.6	.1	.1	58.1	.1	.1
58.1	.1	.1	58.6	.1	.1	59.1	.1	.1	59.6	.1	.1
59.6	.1	.1	60.1	.1	.1	60.6	.1	.1			

327 20IPRP(4LPH4) 35.17 MEV 160 DEG. 14/23/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.1	5.7	.9	13.6	5.2	.9	14.1	3.5	.7	14.6	3.8	.8
14.6	3.8	.8	15.1	3.5	.7	15.6	2.1	.6	16.1	3.4	.7
16.1	3.4	.7	16.6	3.3	.9	17.1	7.0	1.1	17.6	13.5	1.3
17.6	6.9	1.0	18.1	5.5	1.2	18.6	8.7	1.2	19.1	15.4	1.5
19.1	12.5	1.4	19.6	15.3	1.5	20.1	16.6	1.6	20.6	19.1	1.7
20.6	16.5	1.6	21.1	17.5	1.6	21.6	20.1	1.8	22.1	19.4	1.7
22.1	13.9	1.5	22.6	16.3	1.6	23.1	16.6	1.6	23.6	16.1	1.6
23.6	14.6	1.5	24.1	15.1	1.7	24.6	14.2	1.5	25.1	14.7	1.5
25.1	14.6	1.5	25.6	16.5	1.6	26.1	13.7	1.4	26.6	13.4	1.3
26.6	14.5	1.5	27.1	12.0	1.4	27.6	10.8	1.2	28.1	6.9	1.0
28.1	11.1	1.3	28.6	9.8	1.2	29.1	7.2	1.1	29.6	5.1	.9
29.6	7.5	1.1	30.1	5.2	.9	30.6	5.8	.9	31.1	5.5	.9
31.1	6.1	1.0	31.6	5.3	.9	32.1	2.7	.6	32.6	3.8	.8
32.6	4.3	.8	33.1	2.8	.7	33.6	3.4	.7	34.1	3.4	.7
34.1	2.9	.7	34.6	3.4	.7	35.1	2.1	.6	35.6	1.4	.5
35.6	2.9	.7	36.1	1.7	.5	36.6	1.1	.4	37.1	2.0	.6
37.1	1.1	.4	37.6	2.1	.6	38.1	1.5	.5	38.6	.5	.3
38.6	1.5	.5	39.1	.2	.2	39.6	.2	.2	40.1	.3	.2
40.1	.5	.3	40.6	.5	.3	41.1	.1	.1	41.6	.1	.1
41.6	.2	.2	42.1	.2	.2	42.6	.1	.1	43.1	.1	.1
43.1	.1	.1	43.6	.1	.1	44.1	.1	.1	44.6	.1	.1
44.6	.1	.1	45.1	.1	.1	45.6	.1	.1	46.1	.1	.1
46.1	.1	.1	46.6	.1	.1	47.1	.1	.1	47.6	.1	.1
47.6	.1	.1	48.1	.1	.1	48.6	.1	.1	49.1	.1	.1
49.1	.1	.1	49.6	.1	.1	50.1	.1	.1	50.6	.1	.1
50.6	.1	.1	51.1	.1	.1	51.6	.1	.1	52.1	.1	.1
52.1	.1	.1	52.6	.1	.1	53.1	.1	.1	53.6	.1	.1
53.6	.1	.1	54.1	.1	.1	54.6	.1	.1	55.1	.1	.1
55.1	.1	.1	55.6	.1	.1	56.1	.1	.1	56.6	.1	.1
56.6	.1	.1	57.1	.1	.1	57.6	.1	.1	58.1	.1	.1
58.1	.1	.1	58.6	.1	.1	59.1	.1	.1	59.6	.1	.1
59.6	.1	.1	60.1	.1	.1	60.6	.1	.1			

352 20IPRP(4LPH4) 41.11 MEV 30 DEG. 14/23/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
12.8	23.4	2.4	13.3	31.1	2.4	13.8	26.5	2.6	14.3	31.9	1.7
14.3	25.5	2.5	14.8	21.4	2.3	15.3	22.4	2.4	15.8	13.9	1.9
15.8	22.9	2.4	16.3	27.2	2.7	16.8	28.1	2.7	17.3	16.2	2.0
17.3	30.2	2.8	17.7	35.5	3.0	18.2	39.6	3.2	18.7	28.1	2.7
19.7	53.9	3.7	19.2	61.7	3.9	19.7	71.8	4.2	20.2	44.4	3.4
20.2	91.7	4.8	20.7	95.8	4.9	21.2	127.5	5.7	21.7	59.1	3.9
21.7	123.7	5.6	22.2	149.7	6.1	22.6	154.7	6.2	23.1	82.7	4.6
23.1	170.6	6.6	23.6	162.5	6.4	24.1	186.1	6.8	24.6	111.4	5.1
24.6	212.9	7.3	25.1	215.1	7.4	25.6	212.9	7.3	26.1	111.3	5.2
26.1	211.9	7.3	26.6	210.7	7.3	27.1	216.7	7.4	27.6	115.1	5.2
27.6	208.1	7.2	28.1	211.2	7.3	28.6	212.2	7.3	29.1	107.2	5.1
29.1	209.6	7.3	29.6	185.5	6.6	30.1	191.8	7.0	30.6	91.3	4.8
30.6	195.5	7.0	31.1	187.2	6.9	31.6	174.6	6.6	32.1	94.1	4.9
32.1	166.8	6.5	32.6	164.8	6.4	33.1	150.7	6.2	33.6	63.9	4.0
33.6	144.9	6.1	34.1	151.7	6.2	34.6	144.4	6.1	35.1	44.7	3.5
34.6	141.6	6.0	35.1	125.2	5.6	35.6	122.5	5.6	36.1	34.6	3.4
36.1	121.2	5.5	36.6	111.1	5.3	37.1	117.2	5.4	37.6	28.9	2.7
37.6	109.4	5.2	38.1	104.6	5.1	38.6	99.2	5.0	39.1	25.4	2.3
39.1	112.3	5.1	39.6	110.1	5.1	40.1	99.8	5.1	40.6	21.1	2.0
40.6	113.9	5.4	41.1	95.3	5.0	41.6	107.3	5.1	42.1	15.5	1.6
42.1	115.1	5.1	42.6	93.1	4.8	43.1	102.1	4.5	43.6	10.5	1.3
43.6	68.5	4.2	44.1	47.4	3.5	44.6	33.8	2.9	45.1	7.4	2.0
45.1	27.2	2.3	45.6	15.6	2.0	46.1	11.1	1.6	46.6	5.1	1.1
46.6	7.6	1.4	47.1	8.6	1.5	47.6	3.2	.9	48.1	3.5	.8
48.1	1.8	.7	48.6	1.3	.7	49.1	2.3	.8	49.6	1.1	.6
49.6	1.3	.6	50.1	1.3	.6	50.6	.8	.4	51.1	.8	.3
51.1	1.3	.6	51.6	1.5	.6	52.1	.3	.3	52.6	.4	.3
52.6	.8	.4	53.1	.6	.4	53.6	.2	.3	54.1	.4	.3
54.1	.1	.1	54.6	.5	.4	55.1	.1	.1	55.6	.4	.3
55.6	.3	.2	56.1	.6	.4	56.6	.1	.1	57.1	.4	.3
57.1	.1	.1	57.6	.1	.1	58.1	.1	.1	58.6	.4	.3
58.6	.1	.1	59.1	.6	.4	59.6	.1	.1	60.1	.4	.3

353 20IPRP(4LPH4) 41.11 MEV 60 DEG. 14/23/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MEV		MEV		MEV		MEV		MEV	
13.0	9.1	1.5	13.5	17.5	1.6	14.0	11.2	1.7	14.5	13.9	1.9
14.5	13.9	1.7	15.0	13.2	1.8	15.5	13.9	1.9	16.0	16.2	2.0
16.0	14.2	1.9	16.5	10.4	1.6	17.0	21.3	2.3	17.5	28.1	2.7
17.5	19.5	2.2	18.0	34.5	3.0	18.5	55.3	3.8	19.0	44.4	3.4
19.0	50.1	3.6	19.5	55.3	3.8	20.0	82.7	4.6	20.5	59.1	3.9
20.5	87.1	4.7	21.0	82.7	4.6	21.5	111.4	5.1	22.0	82.7	4.6
22.0	102.4	5.1	22.5	111.4	5.1	23.0	111.3	5.2	23.5	91.4	4.9
23.5	118.1	5.2	24.0	111.3	5.2	24.5	115.1	5.2	25.0	97.4	5.0
25.0	100.9	5.1	25.5	115.1	5.2	26.0	107.2	5.1	26.5	116.0	5.2
26.5	94.4	5.1	27.0	107.2	5.1	27.5	91.3	4.8	28.0	88.2	4.7
28.0	89.8	4.9	28.5	91.3	4.8	29.0	82.7	4.6	29.5	80.1	4.5
29.5	82.7	4.6	30.0	82.7	4.6	30.5	71.8	4.2	31.0	61.7	3.9
31.0	61.7	3.9	31.5	71.8	4.2	32.0	61.7	3.9	32.5	53.9	3.7
32.5	53.9	3.7	33.0	61.7	3.9	33.5	44.4	3.4	34.0	44.4	3.4
34.0	44.4	3.4	34.5	44.4	3.4	35.0	39.6	3.2	35.5	39.6	3.2
35.5	39.6	3.2	36.0	39.6	3.2	36.5	31.9	2.4	37.0	31.9	2.4
37.0	31.9	2.4	37.5	31.9	2.4	38.0	26.5	2.6	38.5	26.5	2.6
38.5	26.5	2.6	39.0	26.5	2.6	39.5	21.4	2.3	40.0	21.4	2.3
40.0	21.4	2.3	40.5	21.4	2.3	41.0	17.3	2.0	41.5	17.3	2.0
41.5	17.3	2.0	42.0	17.3	2.0	42.5	13.9	1.9	43.0	13.9	1.9
43.0	13.9	1.9	43.5	13.9	1.9	44.0	10.4	1.6	44.5	10.4	1.6
44.5	10.4	1.6	45.0	10.4	1.6	45.5	7.1	1.3	46.0	7.1	1.3
46.0	7.1	1.3	46.5	7.1	1.3	47.0	4.4	1.1	47.5	4.4	1.1
47.5	4.4	1.1	48.0	4.4	1.1	48.5	3.0	1.0	49.0	3.0	1.0
49.0	3.0	1.0	49.5	3.0	1.0	50.0	2.1	0.9	50.5	2.1	0.9
50.5	2.1	0.9	51.0	2.1	0.9	51.5	1.5	0.8	52.0	1.5	0.8
52.0	1.5	0.8	52.5	1.5	0.8	53.0	1.1	0.7	53.5	1.1	0.7
53.5	1.1	0.7	54.0	1.1	0.7	54.5	0.8	0.6	55.0	0.8	0.6
55.0	0.8	0.6	55.5	0.8	0.6	56.0	0.6	0.5	56.5	0.6	0.5
56.5	0.6	0.5	57.0	0.6	0.5	57.5	0.4	0.4	58.0	0.4	0.4
58.0	0.4	0.4	58.5	0.4	0.4	59.0	0.3	0.3	59.5	0.3	0.3

354 201PR(P+ALPHA) 40.00 MEV 90 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.2	4.4	.8	13.7	6.8	.9	14.2	6.8	.9
14.7	5.9	.9	15.2	8.2	.9	15.7	7.9	1.0
16.2	7.5	1.0	16.7	12.1	1.2	17.2	11.8	1.2
17.7	17.5	1.5	18.2	16.2	1.5	18.7	20.7	1.6
19.2	29.1	1.9	19.7	25.9	1.9	20.2	28.4	1.9
20.7	34.0	2.1	21.1	36.6	2.2	21.6	42.6	2.3
22.1	39.5	2.2	22.6	33.1	2.2	23.1	44.6	2.4
23.6	46.7	2.4	24.1	45.0	2.5	24.6	49.6	2.5
25.1	51.9	2.6	25.6	47.5	2.5	26.1	43.7	2.5
26.6	48.8	2.5	27.1	44.4	2.4	27.6	42.5	2.3
28.1	42.2	2.3	28.6	40.2	2.4	29.1	43.4	2.4
29.6	43.5	2.4	30.1	41.0	2.3	30.6	38.9	2.1
31.0	34.8	2.1	31.5	32.4	2.1	32.0	28.3	1.9
32.5	29.8	1.6	33.0	21.0	1.6	33.5	17.6	1.5
34.0	16.7	1.5	34.5	16.3	1.4	35.0	13.5	1.3
35.5	15.8	1.4	36.0	12.5	1.3	36.5	9.5	1.1
37.0	9.9	1.1	37.5	11.5	1.2	37.9	8.7	1.1
38.4	8.8	1.1	38.9	7.0	.9	39.4	5.7	.9
39.9	6.2	.9	40.4	9.5	.8	40.9	4.5	.8
41.4	5.0	.8	41.9	5.5	.9	42.4	3.8	.7
42.9	4.1	.7	43.4	1.5	.4	43.9	2.1	.5
44.4	1.7	.5	44.9	1.2	.5	45.4	.9	.3
45.8	.5	.3	46.3	.1	.1	46.8	.9	.3
47.3	.0	.0	47.8	.0	.0	48.3	.0	.0
48.8	.0	.0	49.3	.1	.0	49.8	.1	.0
50.3	.0	.0	50.8	.0	.0	51.3	.0	.0
51.8	.0	.0	52.3	.1	.0	52.8	.1	.0
53.3	.0	.0	53.8	.0	.0	54.3	.0	.0
54.7	.1	.0	55.2	.1	.0	55.7	.1	.0
56.2	.0	.0	56.7	.0	.0	57.2	.0	.0
57.7	.1	.0	58.2	.1	.0	58.7	.1	.0
59.2	.0	.0	59.7	.0	.0	60.2	.0	.0

356 201PR(P+ALPHA) 40.00 MEV 120 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.5	4.5	.7	14.0	5.7	.8	14.5	4.4	.7
15.0	5.9	.8	15.5	4.2	.7	16.0	5.8	.8
16.4	6.8	.8	16.9	10.8	1.0	17.4	9.4	1.0
17.9	12.1	1.1	18.4	16.7	1.3	18.9	17.8	1.3
19.4	23.2	1.5	19.9	23.5	1.5	20.4	23.0	1.5
20.9	23.9	1.7	21.4	26.9	1.6	21.9	24.9	1.6
22.4	25.5	1.6	22.9	27.9	1.7	23.4	26.0	1.6
23.9	27.1	1.6	24.4	24.7	1.6	24.9	25.1	1.6
25.4	26.5	1.6	25.9	25.5	1.6	26.4	27.5	1.7
26.9	26.4	1.6	27.4	22.1	1.5	27.9	21.0	1.4
28.4	21.6	1.5	28.9	20.5	1.4	29.4	17.8	1.3
29.9	19.2	1.4	30.4	18.1	1.3	30.9	19.1	1.4
31.4	13.2	1.2	31.9	12.8	1.1	32.4	10.3	1.0
32.8	11.1	1.0	33.3	8.4	.9	33.8	7.7	.9
34.3	7.1	.8	34.8	6.0	.8	35.3	5.3	.7
35.8	5.4	.7	36.3	4.6	.7	36.8	5.1	.7
37.3	4.5	.7	37.8	2.0	.4	38.3	2.4	.5
38.8	2.1	.4	39.3	2.7	.5	39.8	1.7	.4
40.3	1.9	.4	40.8	1.8	.4	41.3	1.1	.3
41.8	1.5	.4	42.3	1.6	.4	42.8	1.4	.4
43.3	1.1	.3	43.8	.9	.3	44.3	.9	.3
44.8	.4	.2	45.3	.2	.1	45.8	.1	.1
46.3	.2	.1	46.8	.0	.0	47.3	.0	.0
47.8	.1	.0	48.3	.1	.0	48.8	.0	.0
49.3	.0	.0	49.8	.0	.0	50.3	.0	.0
50.8	.1	.0	51.3	.1	.0	51.8	.0	.0
52.3	.0	.0	52.8	.0	.0	53.3	.0	.0
53.8	.1	.0	54.3	.1	.0	54.8	.1	.0
55.3	.0	.0	55.8	.0	.0	56.3	.0	.0
56.8	.1	.0	57.3	.1	.0	57.8	.1	.0
58.3	.0	.0	58.8	.0	.0	59.3	.0	.0
59.8	.1	.0	60.3	.1	.0	60.8	.0	.0

357 201PR(P+ALPHA) 40.00 MEV 150 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.1	9.4	1.1	13.6	4.5	.7	14.1	5.9	.8
14.6	5.7	.8	15.1	2.2	.6	15.6	5.0	.7
16.1	5.5	.7	16.6	5.4	.8	17.1	9.6	1.1
17.6	11.0	1.1	18.1	12.1	1.1	18.6	16.2	1.3
19.1	21.0	1.5	19.6	26.1	1.6	20.1	24.4	1.6
20.6	23.8	1.6	21.1	22.1	1.5	21.6	24.2	1.6
22.1	25.1	1.6	22.6	27.4	1.4	23.1	21.8	1.4
23.6	22.9	1.5	24.1	18.3	1.4	24.6	18.3	1.4
25.1	17.8	1.3	25.6	15.5	1.3	26.1	15.1	1.2
26.6	16.1	1.3	27.1	14.6	1.2	27.6	15.3	1.2
28.1	13.4	1.2	28.6	13.9	1.2	29.1	12.1	1.1
29.6	9.3	1.0	30.1	11.7	1.0	30.6	10.2	1.0
31.1	8.1	.9	31.6	7.1	.8	32.1	9.9	.7
32.6	4.9	.7	33.1	4.2	.7	33.6	3.3	.6
34.1	3.7	.6	34.6	4.1	.6	35.1	3.3	.6
35.6	2.7	.5	36.1	2.8	.5	36.6	1.9	.4
37.1	1.2	.3	37.6	1.7	.4	38.1	1.0	.3
38.6	1.6	.4	39.1	1.4	.4	39.6	1.1	.3
40.1	1.6	.4	40.6	1.3	.4	41.1	.7	.3
41.6	1.1	.3	42.1	.4	.2	42.6	.2	.2
43.1	.7	.3	43.6	.5	.2	44.1	.4	.2
44.6	.4	.2	45.1	.5	.2	45.6	.2	.1
46.1	.1	.1	46.6	.1	.1	47.1	.1	.1
47.6	.0	.0	48.1	.0	.0	48.6	.0	.0
49.1	.1	.0	49.6	.1	.0	50.1	.1	.0
50.6	.0	.0	51.1	.0	.0	51.6	.0	.0
52.1	.0	.0	52.6	.1	.0	53.1	.0	.0
53.6	.0	.0	54.1	.0	.0	54.6	.0	.0
55.1	.1	.0	55.6	.1	.0	56.1	.0	.0
56.6	.0	.0	57.1	.0	.0	57.6	.0	.0
58.1	.1	.0	58.6	.1	.0	59.1	.0	.0
59.6	.0	.0	60.1	.0	.0	60.6	.0	.0

358 201PR(P+ALPHA) 40.00 MEV 180 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
12.1	11.9	1.1	13.6	4.3	.7	14.1	6.2	.8
14.6	4.6	.7	15.1	9.9	.8	15.6	6.5	.8
16.1	6.4	.8	16.6	6.7	.8	17.1	9.4	1.0
17.6	13.9	1.2	18.1	15.8	1.3	18.6	16.8	1.3
19.1	18.7	1.4	19.6	22.2	1.5	20.1	25.0	1.6
20.6	23.7	1.6	21.1	24.6	1.6	21.6	23.7	1.6
22.1	22.8	1.5	22.6	17.7	1.3	23.1	17.6	1.3
23.6	17.1	1.3	24.1	15.1	1.4	24.6	16.4	1.3
25.1	15.2	1.2	25.6	15.2	1.2	26.1	17.9	1.4
26.6	14.3	1.2	27.1	12.9	1.1	27.6	13.4	1.2
28.1	12.9	1.1	28.6	11.2	1.1	29.1	10.8	1.0
29.6	9.6	1.0	30.1	9.2	1.0	30.6	7.0	.8
31.1	7.1	.9	31.6	6.4	.8	32.1	5.5	.7
32.6	4.3	.7	33.1	4.3	.7	33.6	4.1	.6
34.1	3.0	.6	34.6	3.7	.4	35.1	3.2	.4
35.6	3.9	.6	36.1	2.3	.5	36.6	3.9	.6
37.1	1.4	.4	37.6	1.2	.4	38.1	.5	.3
38.6	1.1	.3	39.1	1.7	.4	39.6	1.2	.4
40.1	.7	.3	40.6	.6	.2	41.1	.5	.2
41.6	.5	.2	42.1	.1	.1	42.6	.5	.2
43.1	.2	.1	43.6	.0	.0	44.1	.2	.1
44.6	.2	.1	45.1	.3	.2	45.6	.2	.1
46.1	.0	.0	46.6	.0	.0	47.1	.0	.0
47.6	.1	.0	48.1	.1	.0	48.6	.0	.0
49.1	.0	.0	49.6	.0	.0	50.1	.0	.0
50.6	.1	.0	51.1	.1	.0	51.6	.0	.0
52.1	.0	.0	52.6	.0	.0	53.1	.0	.0
53.6	.1	.0	54.1	.1	.0	54.6	.0	.0
55.1	.0	.0	55.6	.0	.0	56.1	.0	.0
56.6	.1	.0	57.1	.1	.0	57.6	.0	.0
58.1	.0	.0	58.6	.0	.0	59.1	.0	.0
59.6	.1	.0	60.1	.1	.0	60.6	.0	.0

348 201PB(P+ALPHA) 44.51 MEV 31 DEG. 14/23/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV	
12.8	19.8	3.9	13.3	30.4	4.8	13.8	28.1	4.6
14.3	28.1	4.6	14.8	26.6	4.5	15.3	34.2	5.1
15.8	31.4	4.8	16.3	35.1	5.2	16.8	34.2	5.1
17.3	35.8	5.2	17.7	41.8	5.6	18.2	62.4	6.9
18.7	82.9	7.9	19.2	84.4	8.1	19.7	89.3	8.2
20.2	113.3	9.3	20.7	121.9	9.6	21.2	112.7	8.6
21.7	141.5	11.4	22.2	154.4	10.8	22.6	174.2	11.5
23.1	181.8	11.8	23.6	211.5	12.7	24.1	187.1	11.9
24.6	308.8	15.3	25.1	289.8	14.8	25.6	278.4	14.6
26.1	152.5	13.9	26.6	271.5	14.4	27.1	268.9	14.1
27.5	223.6	13.9	28.0	261.9	14.1	28.5	218.3	12.9
29.0	306.9	12.5	29.5	266.9	12.5	30.0	212.2	12.7
31.5	300.8	12.4	31.0	201.8	12.4	31.5	227.4	13.2
32.0	171.1	11.4	32.4	182.6	11.8	32.9	198.5	12.3
33.4	173.4	11.5	33.9	192.4	12.1	34.4	165.1	11.2
34.9	190.2	12.0	35.4	172.7	11.5	35.9	165.8	11.2
35.4	171.4	11.4	36.9	176.5	11.6	37.3	114.1	9.3
37.8	128.5	9.9	38.3	121.9	9.6	38.8	99.6	8.7
39.3	109.5	9.1	39.8	111.1	9.2	40.3	105.0	8.9
40.8	124.7	9.7	41.3	96.6	8.6	41.8	85.2	8.0
42.2	76.8	7.6	42.7	91.5	8.3	43.2	69.2	7.3
43.7	80.6	7.8	44.2	76.1	7.6	44.7	71.5	7.4
45.2	72.3	7.4	45.7	61.5	6.3	46.2	79.9	7.8
46.7	63.9	7.0	47.1	54.8	6.5	47.6	31.9	4.9
48.1	17.5	3.6	48.6	15.2	3.4	49.1	3.4	2.5
49.6	5.3	2.0	50.1	6.1	2.2	50.6	1.5	1.1
51.1	4.6	1.9	51.6	3.1	1.5	52.1	1.5	1.1
52.5	2.3	1.3	53.0	1.3	1.3	53.5	2.3	1.3
54.0	3.1	1.5	54.5	.3	.8	55.0	1.5	1.1
55.5	.0	.0	56.0	.0	.0	56.5	.8	.8
56.9	.1	.0	57.4	.1	.1	57.9	.1	.1
58.4	.0	.0	58.9	.0	.0	59.4	.0	.0

349 201PB(P+ALPHA) 44.50 MEV 35 DEG. 14/23/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV	
12.8	24.8	2.5	13.3	22.8	2.4	13.8	27.6	2.6
14.3	24.1	2.5	14.8	21.5	2.3	15.3	21.0	2.3
15.8	20.5	2.3	16.3	25.6	2.5	16.8	27.1	2.6
17.3	38.5	3.1	17.7	32.2	2.9	18.2	47.7	3.5
18.7	50.2	3.6	19.2	60.6	3.4	19.7	76.1	4.4
20.2	93.6	4.9	20.7	97.9	5.1	21.2	119.4	5.5
21.7	130.1	5.7	22.2	144.7	6.0	22.6	154.2	6.3
23.1	168.9	6.5	23.6	189.7	6.9	24.1	199.8	7.1
24.6	118.0	7.4	25.1	213.2	7.4	25.6	219.3	7.5
26.1	226.2	7.6	26.6	205.6	7.2	27.1	216.3	7.4
27.5	119.8	7.5	28.0	213.5	7.4	28.5	199.8	7.1
29.0	207.9	7.3	29.5	189.1	6.9	30.0	201.3	7.1
31.5	191.2	6.9	31.0	182.8	6.8	31.5	188.4	6.9
32.0	176.2	6.7	32.4	186.6	6.9	32.9	171.9	6.6
33.4	161.0	6.8	33.9	175.2	6.7	34.4	162.5	6.4
34.9	169.9	6.6	35.4	154.2	6.3	35.9	161.0	6.4
36.4	142.7	6.0	36.9	134.9	5.8	37.3	120.4	5.5
37.8	111.3	5.3	38.3	94.1	4.9	38.8	97.9	5.1
39.3	101.2	5.1	39.8	86.2	4.7	40.3	87.0	4.7
40.8	99.8	4.8	41.3	81.4	4.5	41.8	82.4	4.6
42.2	73.5	4.3	42.7	71.8	4.3	43.2	73.8	4.3
43.7	69.5	4.2	44.2	65.9	4.1	44.7	65.4	4.1
45.2	56.0	3.9	45.7	58.2	3.8	46.2	59.6	3.9
46.7	58.2	3.7	47.1	43.6	3.3	47.6	28.7	2.7
48.1	22.8	2.4	48.6	9.1	1.5	49.1	4.1	1.0
49.6	1.3	.6	50.1	2.3	.8	50.6	.8	.4
51.1	1.3	.6	51.6	.5	.4	52.1	1.5	.6
52.5	1.1	.5	53.1	.5	.4	53.5	.3	.3
54.0	.5	.4	54.5	.3	.3	55.0	.0	.0
55.5	.9	.4	56.1	.1	.1	56.5	.5	.4
56.9	.1	.0	57.4	.0	.0	57.9	.0	.0
58.4	.1	.1	58.9	.1	.1	59.4	.0	.1

347 201PB(P+ALPHA) 44.51 MEV 61 DEG. 14/23/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV	
13.0	16.1	2.1	13.5	3.6	1.5	14.0	13.5	1.9
14.5	11.2	1.6	14.0	14.0	1.9	14.5	14.5	1.9
16.0	15.8	2.1	16.5	15.3	2.1	16.9	21.9	2.4
17.4	25.9	2.6	17.9	22.4	2.4	18.4	31.3	2.8
18.9	41.4	3.2	19.4	46.8	3.4	19.9	55.4	3.3
20.4	60.0	3.9	20.9	68.1	4.2	21.4	73.7	4.3
21.9	82.1	4.6	22.4	87.9	4.7	22.9	99.1	5.1
23.3	107.5	5.2	23.8	113.6	5.4	24.3	113.3	5.4
24.8	123.5	5.6	25.3	121.1	5.5	25.8	125.3	5.6
26.3	125.8	5.7	26.8	128.2	5.7	27.3	116.1	5.4
27.8	112.8	5.4	28.3	119.1	5.3	28.8	111.8	5.3
29.2	100.9	5.1	29.7	103.7	5.1	30.2	98.1	5.0
31.7	116.7	5.2	31.2	111.6	5.1	31.7	94.8	5.1
32.2	89.7	4.8	32.7	83.2	4.6	33.2	78.6	4.5
33.7	72.2	4.3	34.2	78.5	4.5	34.7	71.9	4.2
35.1	79.3	4.5	35.6	70.1	4.2	36.1	66.1	4.1
36.6	57.4	3.8	37.1	59.4	3.8	37.6	48.5	3.5
38.1	35.1	3.0	38.6	38.6	3.1	39.1	38.1	3.0
39.6	27.7	2.7	40.1	36.1	3.1	40.6	29.0	2.7
41.1	29.7	2.7	41.6	28.0	2.7	42.0	24.9	2.5
42.5	23.9	2.5	43.1	15.5	2.1	43.5	15.1	2.1
44.0	15.8	2.0	44.5	15.5	2.0	45.0	17.0	2.1
45.5	13.7	1.9	46.1	11.4	1.7	46.5	11.4	1.7
47.0	10.7	1.6	47.4	6.4	1.3	47.9	4.8	1.1
48.4	3.6	1.0	48.9	2.1	.7	49.4	.5	.4
49.9	.0	.0	50.4	.5	.4	51.0	.1	.0
51.4	.1	.0	51.9	.1	.1	52.4	.1	.1
52.9	.0	.0	53.3	.0	.0	53.8	.1	.0
54.3	.1	.1	54.8	.1	.1	55.3	.1	.1
55.8	.0	.0	56.2	.0	.0	56.8	.0	.0
57.3	.1	.1	57.8	.1	.1	58.3	.1	.1
58.8	.1	.0	59.3	.0	.0	59.7	.0	.0

346 201PB(P+ALPHA) 44.50 MEV 50 DEG. 14/23/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV		MEV	1ICR/SR*MEV	
13.2	5.4	1.2	13.7	6.2	1.4	14.2	5.6	1.2
14.7	9.2	1.5	15.2	10.1	1.6	15.7	12.0	1.9
16.2	9.2	1.5	16.7	17.3	2.1	17.2	15.3	2.0
17.7	21.2	2.3	18.2	20.1	2.5	18.7	26.0	2.6
19.2	22.2	2.9	19.7	40.6	3.2	20.2	41.9	3.3
21.7	40.4	3.4	21.1	51.3	3.6	21.6	51.6	3.6
22.1	51.8	3.6	22.6	47.0	3.4	23.1	53.4	3.7
23.6	56.2	3.8	24.1	62.6	4.1	24.6	58.2	3.9
25.1	63.1	4.0	25.6	54.7	3.9	26.1	59.0	3.5
26.6	56.4	3.8	27.1	59.9	3.8	27.6	48.5	3.5
28.1	57.4	3.8	28.6	51.6	3.6	29.0	50.3	3.6
29.5	47.5	3.5	30.1	41.9	3.2	31.5	44.4	3.4
31.0	22.9	2.6	31.5	37.8	2.9	32.0	39.1	2.2
32.5	31.9	2.9	33.1	26.3	2.6	33.5	31.7	2.8
34.0	20.4	2.7	34.5	24.6	2.8	35.0	24.3	2.5
35.5	26.8	2.6	36.1	24.3	2.5	36.5	18.1	2.2
37.0	19.4	2.2	37.4	11.2	1.8	37.9	16.6	2.1
38.4	15.1	2.1	38.9	14.3	1.9	39.4	9.4	1.6
39.9	9.2	1.4	40.4	6.6	1.2	40.9	11.0	1.7
41.4	9.2	1.5	41.9	6.6	1.2	42.4	5.6	1.2
42.9	7.1	1.4	43.4	4.1	1.0	43.9	2.6	.8
43.4	4.9	1.1	44.9	3.1	.9	45.4	3.1	.9
45.8	2.6	.8	46.3	3.3	.9	46.8	3.8	1.0
47.3	2.3	.8	47.8	1.9	.6	48.3	.8	.4
48.8	.5	.4	49.3	.2	.2	49.8	.0	.0
50.3	.1	.1	51.3	.1	.1	51.8	.0	.0
51.8	.1	.1	52.3	.1	.1	52.8	.0	.0
53.3	.1	.1	53.8	.1	.1	54.3	.0	.1
54.8	.1	.1	55.3	.0	.0	55.8	.0	.0
56.3	.1	.1	56.8	.1	.1	57.3	.0	.1
57.8	.1	.1	58.3	.1	.1	58.8	.0	.0
59.3	.1	.1	59.8	.1	.1	60.3	.1	.1

344 201PB(P*ALPHA) 44.51 MEV 121 DEG. 14/11/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.5	11.5	1.3		14.1	11.6	1.3		14.5	8.3	1.1	
15.0	6.7	1.0		15.5	7.1	1.0		16.0	8.0	1.1	
16.4	10.3	1.3		16.9	12.6	1.4		17.4	17.8	1.6	
17.9	16.5	1.6		18.4	20.2	1.8		18.9	23.5	1.9	
19.4	31.1	2.1		19.9	33.1	2.2		20.4	31.7	2.2	
20.9	29.6	2.1		21.4	35.5	2.3		21.9	30.2	2.1	
22.4	31.1	2.2		22.9	32.6	2.2		23.4	28.1	2.1	
23.9	32.8	2.2		24.4	34.5	2.3		24.9	30.7	2.2	
25.4	28.1	2.1		25.9	30.4	2.1		26.4	29.0	2.1	
26.9	26.0	2.0		27.4	27.9	2.1		27.9	25.4	2.0	
28.4	23.4	1.9		28.9	19.3	1.7		29.4	21.9	1.8	
29.9	20.0	1.7		30.4	17.5	1.6		30.9	16.7	1.6	
31.4	16.7	1.6		31.9	15.5	1.5		32.4	14.3	1.5	
32.8	12.8	1.4		32.3	12.1	1.4		32.8	12.1	1.4	
34.3	12.3	1.4		34.8	11.1	1.3		35.3	10.2	1.2	
35.8	10.2	1.2		36.3	7.6	1.1		36.8	7.3	1.1	
37.3	6.8	1.0		37.8	4.4	.8		38.3	4.9	.9	
38.8	3.9	.8		39.3	4.2	.8		39.8	2.6	.6	
40.3	3.6	.7		40.8	3.3	.7		41.3	1.1	.4	
41.8	1.5	.5		42.3	2.3	.6		42.8	1.4	.5	
43.3	2.0	.5		43.8	1.8	.5		44.3	1.5	.5	
44.8	.8	.3		45.3	.8	.3		45.8	1.4	.5	
46.3	.6	.3		46.8	1.2	.4		47.3	.6	.3	
47.8	.6	.3		48.3	.3	.2		48.7	.0	.0	
49.2	.0	.0		49.7	.1	.0		50.2	.0	.0	
50.7	.0	.0		51.2	.0	.0		51.7	.0	.0	
52.2	.0	.0		52.7	.1	.0		53.2	.0	.0	
53.7	.0	.0		54.2	.0	.0		54.7	.0	.0	
55.2	.0	.0		55.7	.1	.0		56.2	.0	.0	
56.7	.0	.0		57.2	.0	.0		57.7	.0	.0	
58.2	.0	.0		58.7	.1	.0		59.2	.0	.0	
59.7	.0	.0		60.2	.0	.0		60.7	.0	.0	

342 201PB(P*ALPHA) 44.50 MEV 150 DEG. 14/11/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.1	24.5	1.9		13.6	14.2	1.5		14.1	6.6	1.0	
14.6	7.3	1.1		15.1	3.4	1.1		15.6	7.9	1.1	
16.1	9.2	1.2		16.6	11.2	1.3		17.1	13.4	1.4	
17.6	15.5	1.5		18.1	17.7	1.6		18.6	22.5	1.9	
19.1	29.9	2.1		19.6	30.2	2.1		20.1	30.6	2.2	
20.6	34.7	2.3		21.1	32.4	2.2		21.6	31.2	2.1	
22.1	31.2	2.2		22.6	28.0	2.1		23.1	24.1	1.9	
23.6	26.4	2.0		24.1	25.7	2.0		24.6	21.8	1.8	
25.1	20.4	1.8		25.6	22.7	1.9		26.1	19.8	1.7	
26.6	19.4	1.7		27.1	18.3	1.7		27.6	16.9	1.6	
28.1	18.1	1.7		28.6	13.9	1.5		29.1	14.9	1.5	
29.6	16.5	1.6		30.1	9.7	1.2		30.6	12.3	1.4	
31.1	11.3	1.3		31.6	7.8	1.1		32.1	5.8	.9	
32.6	7.6	1.1		33.1	5.6	.9		33.6	5.8	.9	
34.1	7.9	1.1		34.6	5.5	.9		35.1	5.9	1.0	
35.6	6.1	1.0		36.1	4.6	.8		36.6	3.7	.7	
37.1	4.0	.8		37.6	4.1	.8		38.1	2.4	.6	
38.6	2.3	.6		39.1	1.4	.5		39.6	1.8	.5	
40.1	1.1	.4		40.6	1.1	.4		41.1	1.1	.4	
41.6	1.2	.4		42.1	1.4	.5		42.6	1.2	.4	
43.0	.9	.4		43.5	.9	.4		44.0	.8	.3	
44.5	.5	.3		45.1	.3	.2		45.5	.5	.3	
46.0	.3	.2		46.5	.2	.2		47.0	.0	.0	
47.5	.2	.2		48.1	.1	.1		48.5	.2	.2	
48.0	.0	.0		49.5	.0	.0		50.0	.0	.0	
50.5	.0	.0		51.1	.1	.0		51.5	.0	.0	
52.0	.0	.0		52.5	.0	.0		53.0	.0	.0	
53.5	.0	.0		54.1	.1	.0		54.5	.0	.0	
55.0	.0	.0		55.5	.0	.0		56.0	.0	.0	
56.5	.1	.0		57.1	.1	.0		57.5	.0	.0	
58.0	.0	.0		58.5	.0	.0		59.0	.0	.0	
59.5	.1	.0		60.1	.1	.0		60.5	.0	.0	

342 201PB(P*ALPHA) 44.51 MEV 163 DEG. 14/11/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.1	26.3	2.0		13.6	11.9	1.3		14.1	7.5	1.1	
14.6	8.2	1.1		15.1	7.9	1.1		15.6	7.6	1.1	
16.1	8.7	1.2		16.6	12.4	1.4		17.1	17.2	1.6	
17.6	16.9	1.6		18.1	19.7	1.7		18.6	24.9	1.9	
19.1	30.8	2.2		19.6	31.7	2.2		20.1	29.0	2.1	
20.6	32.1	2.2		21.1	32.1	2.2		21.6	34.0	2.3	
22.1	28.8	2.1		22.6	27.6	2.1		23.1	28.7	2.1	
23.6	22.6	1.9		24.1	21.8	1.8		24.6	20.8	1.8	
25.1	21.5	1.8		25.6	20.3	1.8		26.1	21.5	1.8	
26.6	16.8	1.6		27.1	15.6	1.5		27.6	16.9	1.6	
28.1	13.3	1.4		28.6	13.1	1.4		29.1	13.1	1.4	
29.6	14.0	1.5		30.1	10.4	1.3		30.6	7.9	1.1	
31.1	8.5	1.1		31.6	7.2	1.0		32.1	8.4	1.1	
32.6	5.5	.9		33.1	7.0	1.0		33.6	5.3	.9	
34.1	5.8	.9		34.6	5.2	.9		35.1	4.7	.8	
35.6	4.6	.8		36.1	4.4	.8		36.6	3.4	.7	
37.1	3.5	.7		37.6	2.4	.6		38.1	2.0	.5	
38.6	1.4	.6		39.1	2.1	.6		39.6	.6	.3	
40.1	.9	.4		40.6	1.7	.5		41.1	.9	.4	
41.6	.9	.4		42.0	.6	.3		42.5	1.4	.5	
43.1	.5	.3		43.5	.5	.3		44.1	.8	.3	
44.5	.3	.2		45.0	.3	.2		45.5	.2	.2	
46.1	.1	.1		46.5	.1	.1		47.1	.1	.1	
47.5	.2	.2		48.0	.2	.2		48.5	.0	.0	
49.1	.2	.2		49.5	.2	.2		50.1	.1	.1	
50.5	.0	.0		51.0	.0	.0		51.5	.0	.0	
52.0	.1	.1		52.5	.1	.1		53.1	.1	.1	
53.5	.0	.0		54.0	.0	.0		54.5	.0	.0	
55.0	.1	.1		55.5	.1	.1		56.1	.1	.1	
56.5	.0	.0		57.0	.0	.0		57.5	.0	.0	
58.0	.1	.1		58.5	.1	.1		59.1	.1	.1	
59.5	.0	.0		60.0	.0	.0		60.5	.0	.0	

86C 20°BI(P,ALPHA) 19.8MEV 30 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.4	1.7	.5		14.8	4.8	.8		15.2	5.6	.9	
15.5	3.1	.6		15.9	5.4	.8		16.3	7.4	1.1	
16.6	6.6	.9		17.0	8.2	1.1		17.4	7.5	1.0	
17.7	11.1	1.2		18.1	14.2	1.4		18.5	17.4	1.5	
18.8	19.0	1.6		19.2	24.3	1.8		19.5	26.3	1.9	
19.9	39.3	2.3		21.3	47.5	2.5		21.6	51.8	2.6	
21.0	70.6	3.1		21.4	77.4	3.2		21.7	98.3	3.6	
22.1	116.8	4.0		22.5	126.9	4.1		22.8	129.7	4.2	
23.2	138.4	4.3		23.6	138.0	4.2		23.9	129.8	4.2	
24.3	132.1	4.2		24.6	124.1	4.1		25.1	118.0	4.1	
25.4	99.8	3.7		25.7	82.6	3.3		26.1	67.1	3.0	
26.5	44.8	2.5		26.8	26.6	1.9		27.2	10.6	1.2	
27.6	7.4	1.0		27.9	5.4	.8		28.3	4.7	.8	
28.7	3.0	.6		29.0	3.1	.6		29.4	1.2	.4	
29.8	1.2	.4		30.1	.4	.2		30.5	.1	.1	
31.8	.3	.2		31.2	.1	.1		31.6	.0	.0	
33.0	.0	.0		32.3	.0	.0		32.7	.3	.2	
33.0	.3	.2		33.4	.0	.0		33.8	.3	.2	
34.1	.0	.0		34.5	.0	.0		34.9	.0	.0	
35.2	.0	.0		35.6	.0	.0		36.0	.0	.0	
36.3	.0	.0		36.7	.0	.0		37.0	.0	.0	
37.4	.0	.0		37.8	.0	.0		38.1	.0	.0	
38.5	.0	.0		38.9	.0	.0		39.2	.0	.0	
39.6	.0	.0		41.1	.0	.0		41.4	.0	.0	
40.7	.0	.0		41.1	.0	.0		41.4	.0	.0	
41.8	.0	.0		42.1	.0	.0		42.5	.0	.0	
42.9	.0	.0		43.2	.0	.0		43.6	.0	.0	
44.0	.0	.0		44.3	.0	.0		44.7	.0	.0	
45.1	.0	.0		45.4	.0	.0		45.8	.0	.0	
46.2	.0	.0		46.5	.0	.0		46.9	.0	.0	
47.3	.0	.0		47.6	.0	.0		48.0	.0	.0	
48.3	.0	.0		48.7	.0	.0		49.1	.0	.0	

862 20°BI(P,ALPHA) 19.8MEV 45 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.4	1.2	.4		14.8	.9	.4		15.2	2.4	.6	
15.5	3.9	.7		15.9	3.2	.7		16.3	5.5	.9	
16.6	5.8	.9		17.0	6.2	.9		17.4	9.1	1.1	
17.7	9.9	1.2		18.1	11.4	1.2		18.5	14.8	1.4	
18.8	14.8	1.4		19.2	21.3	1.7		19.5	23.4	1.8	
19.9	25.3	1.8		21.3	34.4	2.2		21.6	41.5	2.4	
21.0	46.1	2.5		21.4	52.3	2.7		21.7	63.7	2.9	
22.1	61.6	3.3		22.5	87.4	3.4		22.8	98.5	3.6	
23.2	102.3	3.7		23.6	102.1	3.7		23.9	108.6	3.8	
24.3	105.2	3.8		24.6	96.6	3.6		25.0	92.7	3.5	
25.4	72.7	3.1		25.7	53.2	2.7		26.1	35.2	2.2	
26.5	18.5	1.6		26.8	5.5	1.1		27.2	5.5	.9	
27.6	5.4	.9		27.9	2.1	.5		28.3	3.2	.7	
28.7	2.6	.6		29.0	2.8	.6		29.4	1.7	.5	
29.8	.9	.4		31.1	.4	.2		31.5	.3	.2	
31.8	.0	.0		31.2	.2	.2		31.6	.0	.0	
33.0	.0	.0		32.3	.0	.0		32.7	.0	.0	
33.0	.3	.2		33.4	.0	.0		33.8	.0	.0	
34.1	.0	.0		34.5	.0	.0		34.9	.0	.0	
35.2	.0	.0		35.6	.0	.0		36.0	.0	.0	
36.3	.0	.0		36.7	.0	.0		37.0	.0	.0	
37.4	.0	.0		37.8	.0	.0		38.1	.0	.0	
38.5	.0	.0		38.9	.0	.0		39.2	.0	.0	
39.6	.0	.0		41.1	.0	.0		41.4	.0	.0	
40.7	.0	.0		41.1	.0	.0		41.4	.0	.0	
41.8	.0	.0		42.1	.0	.0		42.5	.0	.0	
42.9	.0	.0		43.2	.0	.0		43.6	.0	.0	
44.0	.0	.0		44.3	.0	.0		44.7	.0	.0	
45.1	.0	.0		45.4	.0	.0		45.8	.0	.0	
46.2	.0	.0		46.5	.0	.0		46.9	.0	.0	
47.3	.0	.0		47.6	.0	.0		48.0	.0	.0	
48.3	.0	.0		48.7	.0	.0		49.1	.0	.0	

86E 20°BI(P,ALPHA) 19.8MEV 60 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.5	.4	.4		13.9	4.9	1.4		14.2	3.8	1.2	
14.5	3.8	1.2		14.9	3.1	1.1		15.2	4.2	1.3	
15.6	4.2	1.3		15.9	5.2	1.4		16.2	6.8	1.6	
16.6	7.2	1.7		16.9	12.9	2.2		17.2	13.6	2.3	
17.6	13.3	2.2		17.9	12.6	2.3		18.2	20.5	2.8	
18.6	22.7	2.9		18.9	25.1	3.1		19.3	31.8	3.5	
19.6	31.8	3.5		19.9	40.9	3.9		20.2	46.6	4.2	
20.6	53.0	4.5		20.9	71.1	5.2		21.3	71.2	5.2	
21.6	72.8	5.3		21.9	76.5	5.4		22.2	76.5	5.4	
22.6	71.2	5.2		22.9	66.3	5.0		23.3	67.4	5.1	
23.6	47.0	4.2		24.0	37.1	3.8		24.3	29.2	3.3	
24.6	17.8	2.6		25.1	11.0	2.0		25.5	4.9	1.4	
25.6	5.7	1.5		26.0	3.4	1.1		26.3	3.0	1.1	
26.6	1.9	.8		27.1	.8	.5		27.3	.8	.5	
27.7	.4	.4		28.0	.0	.0		28.3	.0	.0	
28.7	.0	.0		29.1	.0	.0		29.3	.0	.0	
29.7	.0	.0		30.0	.0	.0		30.3	.0	.0	
30.7	.0	.0		31.1	.0	.0		31.3	.0	.0	
31.7	.0	.0		32.0	.0	.0		32.4	.0	.0	
32.7	.0	.0		33.1	.0	.0		33.4	.0	.0	
33.7	.0	.0		34.0	.0	.0		34.4	.0	.0	
34.7	.0	.0		35.1	.0	.0		35.4	.0	.0	
35.7	.0	.0		36.1	.0	.0		36.4	.0	.0	
36.7	.0	.0		37.1	.0	.0		37.4	.0	.0	
37.7	.0	.0		38.1	.0	.0		38.4	.0	.0	
38.7	.0	.0		39.1	.0	.0		39.4	.0	.0	
39.7	.0	.0		40.1	.0	.0		40.4	.0	.0	
40.8	.0	.0		41.1	.0	.0		41.4	.0	.0	
41.8	.0	.0		42.1	.0	.0		42.4	.0	.0	
42.8	.0	.0		43.1	.0	.0		43.4	.0	.0	
43.8	.0	.0		44.1	.0	.0		44.5	.0	.0	
44.8	.0	.0		45.1	.0	.0		45.5	.0	.0	

864 20°BI(P,ALPHA) 19.8MEV 75 DEG.

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.8	1.1	.3		14.2	3.1	.6		15.5	3.1	.6	
15.9	4.4	.7		16.3	5.9	.8		16.6	5.8	.8	
17.0	5.4	.7		17.4	8.4	.8		17.7	9.1	1.0	
18.1	8.7	.9		18.5	10.5	1.0		18.8	9.1	1.0	
19.2	11.6	1.1		19.6	13.4	1.2		20.1	12.5	1.1	
20.3	13.7	1.2		20.7	18.0	1.3		21.1	20.0	1.4	
21.4	21.5	1.4		21.8	24.5	1.5		22.2	29.7	1.7	
22.5	32.7	1.8		22.9	33.5	1.8		23.3	35.4	1.9	
23.6	35.3	1.9		24.1	35.9	1.9		24.4	35.5	1.9	
24.7	33.5	1.8		25.1	24.8	1.7		25.5	22.7	1.5	
25.8	19.4	1.4		26.2	13.5	1.2		26.6	9.8	1.0	
26.9	5.6	.7		27.2	3.5	.6		27.7	1.2	.4	
28.1	.9	.3		28.4	.6	.2		28.8	.6	.2	
29.2	.6	.2		29.5	.2	.1		29.9	.4	.2	
30.3	.1	.1		31.6	.1	.1		31.1	.1	.1	
31.4	.0	.0		31.7	.0	.0		32.1	.0	.0	
32.5	.0	.0		32.8	.0	.0		33.2	.0	.0	
33.6	.0	.0		33.9	.0	.0		34.3	.0	.0	
34.7	.0	.0		35.1	.0	.0		35.4	.0	.0	
35.8	.0	.0		36.1	.0	.0		36.5	.0	.0	
36.9	.0	.0		37.0	.0	.0		37.6	.0	.0	
38.0	.0	.0		38.4	.0	.0		38.7	.0	.0	
39.1	.0	.0		39.5	.0	.0		39.3	.0	.0	
40.2	.0	.0		40.6	.0	.0		40.5	.0	.0	
41.3	.0	.0		41.7	.0	.0		42.1	.0	.0	
42.4	.0	.0		42.8	.0	.0		43.1	.0	.0	
43.5	.0	.0		43.9	.0	.0		44.2	.0	.0	
44.6	.0	.0		45.0	.0	.0		45.3	.0	.0	
45.7	.0	.0		46.1	.0	.0		46.4	.0	.0	
46.8	.0	.0		47.2	.0	.0		47.6	.0	.0	
47.9	.0	.0		48.3	.0	.0		48.7	.0	.0	
49.0	.0	.0		49.4	.0	.0		49.8	.0	.0	

872 20°PI(P+ALPHA) 19.8MEV 120 DEG.

CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR
15.0	1.2	.4	15.4	2.2	.6	15.7	2.5	.6
16.1	5.2	.9	16.5	3.2	.7	16.9	5.7	.9
17.2	8.2	1.2	17.6	8.2	1.2	18.0	7.6	1.1
18.3	11.3	1.4	18.7	11.3	1.3	19.1	10.5	1.3
19.4	10.7	1.3	19.8	11.3	1.4	20.2	10.5	1.3
20.6	12.2	1.4	21.0	13.3	1.5	21.3	14.8	1.6
21.7	17.4	1.7	22.0	14.2	1.6	22.4	22.0	1.9
22.8	23.5	2.0	23.1	26.9	2.1	23.5	23.8	2.2
23.9	31.0	2.3	24.2	25.9	2.1	24.6	26.9	2.1
25.0	19.3	1.8	25.4	22.3	1.9	25.7	15.8	1.6
26.1	14.3	1.5	26.6	6.2	1.2	26.8	5.2	.9
27.2	3.3	.7	27.6	1.2	.4	28.1	.8	.4
28.3	.3	.2	28.7	.0	.0	29.1	.6	.4
29.4	.7	.3	29.8	.1	.0	30.2	.3	.2
30.5	.2	.2	30.9	.0	.0	31.3	.1	.0
31.7	.0	.0	32.1	.0	.0	32.4	.0	.0
32.8	.0	.0	33.1	.0	.0	33.5	.0	.0
33.9	.1	.0	34.2	.1	.0	34.6	.0	.0
35.0	.0	.0	35.4	.0	.0	35.7	.0	.0
36.1	.0	.0	36.5	.0	.0	36.8	.0	.0
37.2	.0	.0	37.6	.0	.0	37.9	.0	.0
38.3	.0	.0	38.7	.0	.0	39.1	.0	.0
39.4	.0	.0	39.8	.0	.0	40.2	.0	.0
40.5	.0	.0	40.9	.0	.0	41.3	.0	.0
41.6	.0	.0	42.0	.0	.0	42.4	.0	.0
42.8	.0	.0	43.1	.0	.0	43.5	.0	.0
43.9	.0	.0	44.2	.0	.0	44.6	.0	.0
45.0	.0	.0	45.3	.0	.0	45.7	.0	.0
46.1	.0	.0	46.5	.0	.0	46.8	.0	.0
47.2	.0	.0	47.6	.0	.0	47.9	.0	.0
48.3	.0	.0	48.7	.0	.0	49.0	.0	.0
49.4	.0	.0	49.8	.0	.0	50.2	.0	.0

855 20°PI(P+ALPHA) 19.8MEV 150 DEG.

CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR
15.1	1.1	.2	15.5	2.4	.3	15.9	3.4	.4
16.3	3.6	.4	16.6	4.5	.4	17.0	6.0	.5
17.4	7.3	.5	17.7	7.9	.6	18.1	9.7	.6
18.5	9.5	.6	18.8	11.1	.6	19.2	10.8	.6
19.6	12.6	.7	20.1	13.3	.7	20.3	13.7	.7
20.7	14.3	.7	21.1	15.9	.8	21.4	18.3	.8
21.8	19.8	.9	22.2	20.3	.9	22.6	23.3	.9
22.9	24.5	1.0	23.3	26.4	1.0	23.7	25.5	1.0
24.1	22.9	.9	24.4	21.6	.9	24.8	18.6	.8
25.2	15.7	.8	25.5	14.0	.7	25.9	9.9	.6
26.3	4.6	.6	26.6	5.5	.5	27.1	4.2	.4
27.4	2.2	.3	27.8	.5	.2	28.1	.7	.2
28.5	.5	.1	28.9	.5	.1	29.2	.3	.1
29.6	.3	.1	30.0	.0	.0	30.4	.1	.1
30.7	.1	.0	31.1	.1	.0	31.5	.0	.0
31.8	.0	.0	32.2	.0	.0	32.6	.0	.0
32.9	.0	.0	33.3	.0	.0	33.7	.0	.0
34.1	.0	.0	34.4	.0	.0	34.8	.0	.0
35.2	.1	.0	35.5	.1	.0	35.9	.0	.0
36.3	.0	.0	36.7	.0	.0	37.0	.0	.0
37.4	.0	.0	37.8	.1	.0	38.1	.0	.0
38.5	.0	.0	38.9	.0	.0	39.2	.0	.0
39.6	.1	.0	40.1	.1	.0	40.4	.0	.0
40.7	.0	.0	41.1	.0	.0	41.5	.0	.0
41.9	.1	.0	42.2	.1	.0	42.6	.0	.0
43.0	.0	.0	43.3	.0	.0	43.7	.0	.0
44.1	.1	.0	44.4	.1	.0	44.8	.0	.0
45.2	.0	.0	45.6	.0	.0	45.9	.0	.0
46.3	.1	.0	46.7	.1	.0	47.1	.0	.0
47.4	.0	.0	47.8	.0	.0	48.2	.0	.0
48.5	.0	.0	48.9	.1	.0	49.3	.0	.0
49.6	.0	.0	50.0	.0	.0	50.4	.0	.0

867 20°PI(P+ALPHA) 19.8MEV 165 DEG.

CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR
15.1	1.6	.2	15.5	2.9	.3	15.9	3.8	.4
16.3	4.7	.4	16.6	5.2	.4	17.1	5.9	.5
17.4	7.8	.6	17.7	7.5	.5	18.1	9.8	.6
18.5	11.9	.7	18.8	11.4	.7	19.2	11.9	.7
19.6	12.5	.7	20.0	12.5	.7	20.3	13.6	.7
20.7	16.5	.8	21.1	16.9	.8	21.4	21.0	.9
21.8	18.4	.8	22.2	21.1	.9	22.6	23.9	1.0
22.9	23.2	.9	23.3	23.5	1.0	23.7	22.4	.9
24.0	20.1	.9	24.4	14.4	.9	24.8	17.1	.8
25.2	15.3	.8	25.5	11.9	.7	25.9	9.1	.6
26.3	6.5	.5	26.6	4.5	.4	27.0	2.9	.3
27.4	1.7	.3	27.8	.9	.2	28.1	.7	.2
28.5	.5	.1	28.9	.2	.1	29.2	.2	.1
29.6	.2	.1	30.1	.1	.1	30.4	.1	.1
30.7	.0	.0	31.1	.0	.0	31.5	.0	.0
31.8	.0	.0	32.2	.0	.0	32.6	.0	.0
32.9	.0	.0	33.3	.0	.0	33.7	.0	.0
34.1	.0	.0	34.4	.0	.0	34.8	.0	.0
35.2	.0	.0	35.5	.0	.0	35.9	.0	.0
36.3	.0	.0	36.7	.0	.0	37.0	.0	.0
37.4	.0	.0	37.8	.0	.0	38.1	.0	.0
38.5	.0	.0	38.9	.0	.0	39.2	.0	.0
39.6	.0	.0	40.1	.0	.0	40.4	.0	.0
40.7	.0	.0	41.1	.0	.0	41.5	.0	.0
41.9	.0	.0	42.2	.0	.0	42.6	.0	.0
43.0	.0	.0	43.3	.0	.0	43.7	.0	.0
44.1	.0	.0	44.4	.0	.0	44.8	.0	.0
45.2	.0	.0	45.6	.0	.0	45.9	.0	.0
46.3	.0	.0	46.7	.0	.0	47.1	.0	.0
47.4	.0	.0	47.8	.0	.0	48.2	.0	.0
48.5	.0	.0	48.9	.0	.0	49.3	.0	.0
49.6	.0	.0	50.0	.0	.0	50.4	.0	.0

313 20°PI(P+ALPHA) 31.1 MEV 11 DEG.

CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR	CH EN MEV	SIGMA MICR/SR*MEV	ERR
15.4	89.5	4.1	15.9	83.1	3.9	16.3	66.5	3.5
16.8	69.2	3.6	16.2	72.0	3.7	16.8	75.4	3.7
18.3	82.1	3.9	16.8	83.7	3.9	17.3	93.5	4.2
17.7	90.4	4.1	18.2	101.4	4.2	18.7	88.2	4.0
19.2	102.4	4.4	19.7	91.4	4.2	20.2	88.9	4.1
20.7	90.6	4.1	21.2	104.8	4.4	21.6	112.0	4.6
22.1	119.1	4.7	22.6	129.3	4.8	23.1	136.7	5.1
23.6	136.9	5.0	24.1	136.5	5.0	24.6	140.4	5.1
25.1	154.8	5.4	25.5	152.3	5.3	26.1	153.4	5.3
26.5	150.4	5.3	27.0	167.1	5.6	27.5	177.4	5.7
28.0	192.6	6.1	28.5	186.7	5.9	29.1	173.4	5.7
29.4	169.7	5.6	29.9	172.6	5.7	30.4	173.0	5.7
30.9	175.5	5.7	31.4	185.4	5.9	31.9	185.0	5.9
32.4	193.9	6.0	32.8	183.0	5.8	33.2	173.2	5.7
33.8	155.8	5.4	34.3	139.4	5.1	34.8	113.5	4.9
35.3	81.5	3.9	35.8	61.4	3.2	36.3	47.6	3.0
36.7	41.1	2.8	37.2	31.1	2.4	37.7	23.3	2.1
38.2	19.3	1.9	38.7	11.4	1.7	39.2	14.3	1.6
39.7	12.6	1.5	40.2	12.4	1.5	40.6	5.4	1.1
41.1	7.4	1.2	41.6	.4	.5	42.1	.4	.4
42.6	.4	.2	43.1	.1	.7	43.6	.3	.8
44.0	1.7	.6	44.5	1.2	.5	45.0	.4	.3
45.5	.9	.4	46.1	.7	.4	46.5	.2	.2
47.0	.7	.4	47.5	.7	.4	47.9	.6	.3
48.4	.4	.3	48.9	.4	.3	49.4	.2	.2
49.9	.1	.1	50.4	.1	.1	50.9	.2	.2
51.4	.1	.1	51.9	.1	.1	52.4	.2	.2
52.8	.1	.1	53.3	.1	.1	53.8	.1	.0
54.3	.1	.1	54.8	.1	.1	55.2	.1	.0
55.7	.1	.1	56.2	.1	.1	56.7	.1	.0
57.2	.1	.1	57.7	.1	.1	58.2	.1	.0
58.7	.1	.1	59.1	.1	.1	59.6	.1	.0

302 20°BI(P+ALPHA) 30.00 MEV 45 DEG. 04/10/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV	
13.4	54.4	3.2	13.9	49.2	3.0	14.3	43.8	2.9
14.8	36.4	2.6	15.3	39.9	2.7	15.3	41.6	2.8
16.3	46.4	2.9	16.8	57.9	3.3	17.2	52.5	3.1
17.7	54.3	3.2	18.2	54.9	3.2	18.7	53.8	3.2
19.2	42.9	2.8	19.7	39.2	2.7	20.2	48.6	3.0
21.7	49.3	3.0	21.2	63.3	3.3	21.6	58.6	3.3
22.1	75.9	3.8	22.6	75.4	3.8	23.1	91.2	4.1
23.6	93.3	4.2	24.1	96.1	4.2	24.5	96.3	4.2
25.1	103.7	4.4	25.5	110.6	4.5	26.0	111.7	4.6
26.5	116.9	4.7	27.0	119.2	4.7	27.5	114.3	4.6
28.0	120.1	4.7	28.5	106.7	4.5	29.0	106.5	4.4
29.4	138.4	4.5	29.9	102.3	4.4	30.4	99.1	4.3
30.9	105.0	4.4	31.4	107.5	4.5	31.9	111.9	4.6
32.4	121.3	4.7	32.8	119.3	4.7	33.3	111.6	4.5
33.8	89.5	4.1	34.3	76.1	3.8	34.8	62.2	3.4
35.3	41.1	2.7	35.8	29.9	2.4	36.3	19.5	1.9
36.7	15.0	1.7	37.2	10.0	1.4	37.7	8.0	1.2
38.2	4.3	.9	38.7	3.3	.8	39.2	1.7	.6
39.7	1.7	.6	40.2	.5	.4	40.6	.7	.4
41.1	.7	.4	41.6	1.9	.6	42.1	.0	.3
42.6	.0	.0	43.1	.2	.2	43.6	.0	.0
44.0	.2	.2	44.5	.2	.2	45.1	.0	.0
45.5	.0	.0	46.0	.0	.0	46.5	.0	.0
47.0	.0	.0	47.5	.0	.0	47.9	.0	.0
48.4	.0	.0	48.9	.0	.0	49.4	.0	.0
49.9	.0	.0	50.4	.0	.0	50.9	.0	.0
51.4	.0	.0	51.9	.0	.0	52.4	.0	.0
52.8	.0	.0	53.3	.0	.0	53.8	.0	.0
54.3	.0	.0	54.8	.0	.0	55.2	.0	.0
55.7	.0	.0	56.2	.0	.0	56.7	.0	.0
57.2	.0	.0	57.7	.0	.0	58.2	.0	.0
58.7	.0	.0	59.1	.0	.0	59.6	.0	.0

311 20°BI(P+ALPHA) 33.00 MEV 61 DEG. 04/10/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV	
13.5	31.9	2.4	14.0	23.4	2.3	14.5	28.4	2.3
15.0	30.3	2.4	15.5	24.9	2.3	16.0	22.2	2.0
16.5	25.2	2.2	17.0	27.5	2.3	17.5	24.9	2.1
17.9	26.2	2.2	18.4	21.5	1.9	18.9	23.2	2.1
19.4	29.1	2.3	19.9	27.9	2.4	20.4	31.3	2.4
20.9	38.0	2.7	21.4	39.0	2.7	21.9	47.1	3.0
22.4	52.1	3.1	22.9	57.7	3.3	23.4	56.0	3.2
23.8	65.0	3.5	24.3	63.1	3.4	24.8	63.1	3.4
25.3	67.4	3.4	25.8	82.4	3.9	26.3	75.7	3.7
26.8	75.3	3.7	27.2	71.5	3.8	27.7	69.0	3.6
28.2	73.9	3.7	28.7	72.2	3.7	29.2	65.7	3.5
29.7	68.7	3.6	30.2	64.0	3.4	30.7	57.5	3.3
31.2	59.6	3.3	31.6	62.2	3.4	32.1	63.8	3.4
32.6	62.0	3.4	33.1	66.4	3.5	33.6	57.0	3.3
34.1	43.1	2.8	34.6	34.7	2.6	35.1	27.1	2.2
35.6	17.6	1.8	36.0	17.6	1.8	36.5	11.7	1.5
37.0	9.3	1.3	37.5	4.3	.9	38.0	3.2	.8
38.5	1.3	.5	39.0	.4	.2	39.5	.9	.4
40.0	.4	.3	40.5	.4	.3	41.0	.2	.2
41.4	.4	.3	41.9	.0	.0	42.4	.0	.0
42.9	.0	.0	43.4	.0	.0	43.9	.0	.0
44.4	.0	.0	44.9	.0	.0	45.4	.0	.0
45.8	.0	.0	46.3	.0	.0	46.8	.0	.0
47.3	.0	.0	47.8	.0	.0	48.3	.0	.0
48.8	.0	.0	49.2	.0	.0	49.7	.0	.0
50.2	.0	.0	50.7	.0	.0	51.2	.0	.0
51.7	.0	.0	52.2	.0	.0	52.7	.0	.0
53.2	.0	.0	53.6	.0	.0	54.1	.0	.0
54.6	.0	.0	55.1	.0	.0	55.6	.0	.0
56.1	.0	.0	56.6	.0	.0	57.1	.0	.0
57.6	.0	.0	58.1	.0	.0	58.6	.0	.0
59.0	.0	.0	59.5	.0	.0	60.0	.0	.0

304 20°BI(P+ALPHA) 30.00 MEV 50 DEG. 04/10/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV	
13.8	10.8	1.5	14.3	8.8	1.2	14.8	10.2	1.4
15.2	12.6	1.6	15.7	9.3	1.4	16.2	9.4	1.4
16.7	12.0	1.6	17.2	12.2	1.6	17.7	14.4	1.7
18.2	16.8	1.8	18.7	18.2	1.9	19.2	18.4	1.9
19.7	19.4	2.0	20.2	22.4	2.1	20.7	26.4	2.3
21.2	25.2	2.2	21.6	27.4	2.3	22.1	26.0	2.3
22.6	28.4	2.4	23.1	24.6	2.4	23.6	31.6	2.5
24.1	27.2	2.3	24.6	24.9	2.2	25.1	29.4	2.4
25.6	32.2	2.5	26.1	24.6	2.4	26.6	32.0	2.5
27.1	25.2	2.2	27.5	24.4	2.4	28.0	28.8	2.4
28.5	22.0	2.1	29.0	26.8	2.3	29.5	22.0	2.1
30.0	21.2	2.1	30.5	21.3	2.3	31.0	23.6	2.2
31.5	19.6	1.9	32.0	24.4	2.0	32.5	20.6	2.0
33.0	16.0	1.8	33.5	14.2	1.7	34.0	11.2	1.5
34.4	7.6	1.2	34.9	8.6	1.3	35.4	4.2	.9
35.9	4.4	.9	36.4	4.1	.9	36.9	2.4	.7
37.4	1.2	.5	37.9	1.4	.5	38.4	.4	.2
38.9	.0	.0	39.4	.1	.1	39.9	.0	.0
40.3	.0	.0	40.8	.0	.0	41.2	.0	.0
41.8	.0	.0	42.3	.0	.0	42.8	.0	.0
43.3	.0	.0	43.8	.0	.0	44.3	.0	.0
44.8	.0	.0	45.3	.0	.0	45.8	.0	.0
46.2	.0	.0	46.7	.0	.0	47.2	.0	.0
47.7	.0	.0	48.2	.0	.0	48.7	.0	.0
49.2	.0	.0	49.7	.0	.0	50.2	.0	.0
50.7	.0	.0	51.2	.0	.0	51.7	.0	.0
52.1	.0	.0	52.6	.0	.0	53.1	.0	.0
53.6	.0	.0	54.1	.0	.0	54.6	.0	.0
55.1	.0	.0	55.6	.0	.0	56.1	.0	.0
56.6	.0	.0	57.1	.0	.0	57.6	.0	.0
58.1	.0	.0	58.6	.0	.0	59.1	.0	.0
59.5	.0	.0	60.0	.0	.0	60.5	.0	.0

315 20°BI(P+ALPHA) 33.00 MEV 121 DEG. 04/10/71

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV		MEV	*ICR/SP*MEV	
14.0	2.8	.8	14.5	1.6	.6	15.0	2.8	.8
15.5	1.8	.6	16.0	2.6	.9	16.5	5.4	1.0
17.0	9.1	1.3	17.4	10.1	1.4	17.9	11.5	1.5
18.4	11.3	1.5	18.9	16.9	1.8	19.4	20.7	2.0
19.9	17.7	1.9	20.4	21.7	2.1	20.9	21.3	2.1
21.4	20.5	2.0	21.9	21.5	2.0	22.4	18.9	1.9
22.9	24.9	2.2	23.4	17.7	1.9	23.9	20.3	2.1
24.4	18.1	1.9	24.9	14.5	2.0	25.4	16.9	1.8
25.8	16.9	1.8	26.3	15.3	1.8	26.8	16.9	1.8
27.3	18.5	1.9	27.8	12.7	1.6	28.3	12.2	1.6
28.8	11.3	1.5	29.3	11.9	1.5	29.8	11.1	1.5
30.3	9.4	1.4	30.8	8.6	1.3	31.3	11.2	1.5
31.8	6.8	1.2	32.3	7.4	1.3	32.8	7.0	1.2
33.3	6.2	1.1	33.8	5.4	1.0	34.3	4.6	.9
34.7	4.8	1.0	35.2	4.2	.9	35.7	1.8	.6
36.2	2.2	.7	36.7	1.4	.5	37.2	.8	.4
37.7	.6	.3	38.2	.2	.2	38.7	.0	.0
39.2	.0	.0	39.7	.0	.0	40.2	.0	.0
40.7	.0	.0	41.2	.0	.0	41.7	.0	.0
42.1	.0	.0	42.6	.0	.0	43.1	.0	.0
43.6	.0	.0	44.1	.0	.0	44.6	.0	.0
45.1	.0	.0	45.6	.0	.0	46.1	.0	.0
46.6	.0	.0	47.1	.0	.0	47.6	.0	.0
48.1	.0	.0	48.6	.0	.0	49.1	.0	.0
49.6	.0	.0	50.1	.0	.0	50.6	.0	.0
51.1	.0	.0	51.6	.0	.0	52.1	.0	.0
52.6	.0	.0	53.1	.0	.0	53.6	.0	.0
54.1	.0	.0	54.6	.0	.0	55.1	.0	.0
55.6	.0	.0	56.1	.0	.0	56.6	.0	.0
57.1	.0	.0	57.6	.0	.0	58.1	.0	.0
58.6	.0	.0	59.1	.0	.0	59.6	.0	.0
60.1	.0	.0	60.6	.0	.0	61.1	.0	.0

308 20°PI(P+ALPHA) 30.00 MEV 150 DEG. (4/22/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.3	3.9	.6	13.8	2.6	.5	14.3	1.6	.4
14.8	3.6	.6	15.3	3.3	.6	15.7	4.6	.7
16.2	6.6	.8	16.7	9.6	1.0	17.2	10.3	1.0
17.7	8.8	.9	18.2	13.1	1.2	18.7	15.7	1.3
19.2	10.2	1.4	19.7	20.6	1.4	20.2	20.7	1.4
21.7	21.5	1.5	21.2	21.3	1.4	21.7	19.2	1.4
22.2	18.9	1.4	22.7	16.4	1.3	23.2	16.2	1.3
23.7	13.8	1.2	24.2	14.3	1.2	24.7	11.9	1.1
25.2	11.6	1.1	25.6	11.6	1.1	26.1	10.0	1.0
26.6	9.1	1.0	27.1	9.1	1.0	27.6	9.2	1.0
28.1	6.4	.8	28.6	8.1	.9	29.1	6.4	.8
29.6	6.7	.8	30.1	3.9	.6	30.6	5.4	.7
31.1	3.8	.6	31.6	5.3	.7	32.1	3.8	.6
32.6	3.8	.6	33.1	3.8	.6	33.6	2.1	.5
34.1	1.8	.4	34.6	2.0	.5	35.1	1.1	.3
35.5	1.1	.3	36.0	.8	.3	36.5	.2	.1
37.0	.2	.1	37.5	.2	.2	38.0	.2	.1
38.5	.3	.2	39.0	.1	.1	39.5	.1	.1
40.0	.0	.0	40.5	.1	.1	41.0	.0	.0
41.5	.0	.0	42.0	.1	.1	42.5	.0	.0
43.0	.0	.0	43.5	.0	.0	44.0	.0	.0
44.5	.0	.0	45.0	.1	.1	45.4	.0	.0
45.9	.0	.0	46.4	.0	.0	46.9	.0	.0
47.4	.0	.0	47.9	.1	.1	48.4	.0	.0
48.9	.0	.0	49.4	.0	.0	49.9	.0	.0
51.4	.0	.0	51.9	.1	.1	51.4	.0	.0
51.9	.0	.0	52.4	.0	.0	52.9	.0	.0
53.4	.0	.0	53.9	.1	.1	54.4	.0	.0
54.9	.0	.0	55.3	.0	.0	55.8	.0	.0
56.3	.1	.1	56.8	.1	.1	57.3	.0	.0
57.8	.0	.0	58.3	.0	.0	58.8	.0	.0
59.3	.0	.0	59.8	.1	.1	60.3	.0	.0

310 20°PI(P+ALPHA) 31.00 MEV 160 DEG. (4/22/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.3	6.5	.8	13.8	4.7	.7	14.3	3.1	.6
14.8	7.2	.8	15.3	4.8	.7	15.7	7.1	.8
16.2	7.9	.9	16.7	9.7	1.0	17.2	11.9	1.1
17.7	13.3	1.2	18.2	15.1	1.2	18.7	17.1	1.3
19.2	21.2	1.4	19.7	21.8	1.5	20.2	21.7	1.4
21.7	19.5	1.4	21.2	17.6	1.3	21.7	17.2	1.3
22.2	18.2	1.4	22.7	17.1	1.3	23.2	13.2	1.2
23.7	14.1	1.2	24.2	11.2	1.0	24.7	9.8	1.0
25.2	11.0	1.0	25.6	9.4	1.0	26.1	10.8	1.1
26.6	8.8	.9	27.1	6.1	.8	27.6	7.5	.9
28.1	6.3	.8	28.6	5.3	.8	29.1	5.4	.7
29.6	6.8	.8	30.1	3.4	.6	30.6	3.6	.6
31.1	2.7	.5	31.6	3.6	.6	32.1	1.9	.4
32.6	1.8	.4	33.1	2.2	.5	33.6	1.8	.4
34.1	1.9	.4	34.6	1.3	.4	35.1	1.0	.3
35.5	.8	.3	36.0	.4	.2	36.5	.6	.2
37.0	.3	.2	37.5	.3	.2	38.0	.2	.1
38.5	.0	.0	39.0	.0	.0	39.5	.0	.0
40.0	.0	.0	40.5	.1	.1	41.0	.0	.0
41.5	.0	.0	42.0	.0	.0	42.5	.0	.0
43.0	.1	.1	43.5	.1	.1	44.0	.1	.1
44.5	.0	.0	45.0	.0	.0	45.4	.0	.0
45.9	.1	.1	46.4	.1	.1	46.9	.0	.0
47.4	.0	.0	47.9	.0	.0	48.4	.0	.0
48.9	.1	.1	49.4	.1	.1	49.9	.1	.1
51.4	.0	.0	51.9	.0	.0	51.4	.0	.0
51.9	.1	.1	52.4	.1	.1	52.9	.0	.0
53.4	.0	.0	53.9	.0	.0	54.4	.0	.0
54.9	.1	.1	55.3	.1	.1	55.8	.0	.0
56.3	.0	.0	56.8	.0	.0	57.3	.0	.0
57.8	.1	.1	58.3	.1	.1	58.8	.0	.0
59.3	.0	.0	59.8	.0	.0	60.3	.0	.0

334 20°PI(P+ALPHA) 35.00 MEV 30 DEG. (4/22/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.4	109.7	4.6	13.9	120.7	4.8	14.2	115.2	4.7
14.8	102.5	4.4	15.3	103.2	4.4	15.8	94.7	4.2
16.3	94.2	4.2	16.8	95.6	4.2	17.3	96.0	4.3
17.7	85.2	4.0	18.2	92.8	4.3	18.7	98.7	4.3
19.2	106.7	4.5	19.7	107.8	4.5	20.2	117.3	4.7
21.7	117.1	4.7	21.2	141.5	5.2	21.6	152.7	5.4
22.2	180.7	5.9	22.6	182.6	5.9	23.1	194.9	6.1
23.6	210.3	6.3	24.1	212.7	6.3	24.6	194.4	6.1
25.1	198.3	6.1	25.5	210.1	6.3	26.0	220.7	6.5
26.5	195.1	6.1	27.1	192.5	6.1	27.5	189.1	6.1
28.0	178.5	5.8	28.5	182.1	5.9	29.0	182.6	5.9
29.4	183.2	5.9	29.9	163.3	5.7	30.4	171.5	5.7
30.9	164.2	5.6	31.4	166.9	5.6	31.9	155.2	5.4
32.4	157.4	5.5	32.8	153.6	5.4	33.3	146.8	5.3
33.8	148.7	5.3	34.3	142.5	5.2	34.8	139.8	5.1
35.3	146.2	5.3	35.8	142.5	5.2	36.3	155.2	5.4
36.7	158.8	5.5	37.2	161.2	5.5	37.7	151.2	5.4
38.2	130.6	5.1	38.7	124.3	4.9	39.2	101.2	4.4
39.7	76.0	3.8	40.2	63.7	3.5	40.6	43.0	2.9
41.1	34.7	2.6	41.6	28.1	2.2	42.1	19.3	1.9
42.6	15.2	1.7	43.1	12.1	1.5	43.6	8.1	1.2
44.1	9.9	1.4	44.5	9.1	1.2	45.1	4.5	.9
45.5	4.0	.9	46.0	3.0	.8	46.5	2.5	.7
47.0	1.7	.6	47.5	1.9	.6	47.9	.6	.3
48.4	.8	.4	48.9	.2	.2	49.4	.6	.3
49.9	.9	.4	50.4	.4	.3	50.9	.0	.1
51.4	.0	.0	51.8	.0	.0	52.3	.0	.0
52.8	.0	.0	53.3	.2	.2	53.8	.2	.2
54.3	.0	.0	54.8	.0	.0	55.2	.0	.0
55.7	.1	.1	56.2	.1	.1	56.7	.1	.1
57.2	.0	.0	57.7	.0	.0	58.2	.0	.0
59.7	.1	.1	59.1	.1	.1	59.6	.1	.1

336 20°PI(P+ALPHA) 35.00 MEV 60 DEG. (4/22/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.5	45.1	2.9	14.1	41.9	2.8	14.5	41.1	2.8
15.0	41.2	2.8	15.5	35.7	2.6	16.0	40.4	2.8
16.5	36.8	2.6	17.1	44.2	2.9	17.5	35.1	2.6
17.9	35.3	2.6	18.4	51.6	3.1	18.9	51.1	3.1
19.4	53.5	3.2	19.9	58.3	3.3	20.4	61.9	3.4
20.9	61.7	3.4	21.4	67.4	3.6	21.9	66.4	3.6
22.4	69.7	3.6	22.9	73.1	3.7	23.4	78.0	3.8
23.8	85.4	4.0	24.3	91.2	4.2	24.8	86.9	4.1
25.3	91.7	4.2	25.8	99.1	4.3	26.3	89.6	4.1
26.8	98.7	4.3	27.2	90.7	4.1	27.7	99.5	4.2
28.2	82.8	4.1	28.7	79.3	3.9	29.2	76.9	3.8
29.7	69.1	3.6	30.2	70.0	3.6	30.7	67.8	3.6
31.2	65.9	3.5	31.6	61.7	3.4	32.1	52.1	3.1
32.6	56.0	3.3	33.1	47.5	3.0	33.6	49.0	3.0
34.1	48.2	3.1	34.6	46.1	3.1	35.1	42.3	2.8
35.6	36.3	2.6	36.0	36.2	2.6	36.5	38.0	2.7
37.1	36.3	2.6	37.5	36.3	2.6	38.1	37.6	2.7
38.5	26.0	2.3	39.0	25.1	2.2	39.5	11.6	1.5
40.1	16.1	1.7	40.6	11.6	1.4	41.1	8.9	1.3
41.4	3.2	.8	41.9	3.2	.7	42.4	2.1	.6
42.9	.6	.3	43.4	.4	.4	43.9	.1	.1
44.4	.2	.2	44.9	.4	.2	45.4	.0	.0
45.8	.2	.2	46.3	.2	.2	46.8	.0	.0
47.3	.0	.0	47.8	.0	.0	48.3	.0	.0
48.8	.2	.2	49.3	.1	.1	49.8	.0	.0
50.2	.0	.0	50.7	.0	.0	51.2	.0	.0
51.7	.1	.1	52.2	.1	.1	52.7	.0	.0
53.2	.0	.0	53.6	.0	.0	54.1	.0	.0
54.6	.1	.1	55.1	.1	.1	55.6	.0	.0
56.1	.0	.0	56.6	.0	.0	57.1	.0	.0
57.6	.1	.1	58.1	.1	.1	58.6	.0	.0
59.0	.0	.0	59.5	.0	.0	60.0	.0	.0

332 20°(P+ALPHA) 35.00 MEV 50 DEG. (4/2/77)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.8	13.5	1.6	14.2	14.8	1.7	14.8	15.6	1.7
15.2	15.2	1.7	15.7	14.1	1.9	16.2	17.7	1.8
16.7	15.2	1.7	17.2	16.1	1.9	17.7	22.4	2.1
19.2	22.3	2.1	19.7	24.5	2.2	19.2	28.3	2.3
19.7	30.0	2.4	20.2	32.5	2.5	20.7	36.1	2.6
21.2	33.7	2.5	21.6	33.5	2.5	22.1	36.1	2.6
22.6	31.4	2.4	23.1	46.4	3.0	23.6	28.4	2.7
24.1	41.1	2.8	24.6	36.1	2.6	25.1	43.4	2.9
25.6	42.8	2.9	26.1	44.9	2.9	26.6	41.1	2.8
27.1	41.5	2.8	27.5	39.9	2.8	28.1	35.9	2.6
28.5	31.6	2.5	29.0	31.6	2.5	29.5	29.5	2.4
31.0	26.1	2.2	31.5	31.6	2.5	31.1	21.5	2.1
31.5	26.4	2.2	32.0	19.6	1.9	32.5	17.7	1.8
33.0	18.3	1.9	33.5	15.2	1.7	33.9	15.4	1.7
34.4	16.4	1.8	34.9	16.9	1.8	35.4	12.9	1.6
35.9	12.2	1.5	36.4	11.1	1.4	36.9	9.3	1.3
37.4	9.7	1.4	37.9	11.1	1.4	38.4	6.8	1.1
38.9	8.0	1.2	39.4	5.1	1.1	39.8	3.0	.8
40.3	2.5	.7	40.8	2.2	.6	41.3	1.7	.6
41.8	.8	.4	42.3	1.7	.6	42.8	.4	.3
43.3	.0	.0	43.8	.0	.0	44.3	.0	.0
44.8	.0	.0	45.3	.0	.0	45.8	.0	.0
46.2	.0	.0	46.7	.0	.0	47.2	.0	.0
47.7	.2	.2	48.2	.0	.0	48.7	.0	.0
49.2	.0	.0	49.7	.0	.0	50.2	.0	.0
51.7	.0	.0	51.2	.0	.0	51.7	.0	.0
52.1	.0	.0	52.6	.0	.0	53.1	.0	.0
53.6	.0	.0	54.1	.0	.0	54.6	.0	.0
55.1	.0	.0	55.6	.0	.0	56.1	.0	.0
56.6	.0	.0	57.1	.0	.0	57.6	.0	.0
58.1	.0	.0	58.6	.0	.0	59.1	.0	.0
59.5	.0	.0	60.1	.0	.0	60.5	.0	.0

333 20°(P+ALPHA) 35.00 MEV 120 DEG. (4/2/77)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
14.1	6.2	.8	14.5	5.8	.6	15.1	4.6	.7
15.5	4.4	.7	16.0	7.1	.8	16.5	15.3	1.0
17.0	9.8	1.1	17.4	13.7	1.2	17.9	15.1	1.2
18.4	16.7	1.3	18.9	19.8	1.4	19.4	25.0	1.6
19.9	23.9	1.5	20.4	25.4	1.6	20.9	27.6	1.6
21.4	27.9	1.7	21.9	24.0	1.5	22.4	25.9	1.6
22.9	22.7	1.5	23.4	25.1	1.6	23.9	22.4	1.5
24.4	23.1	1.5	24.9	23.4	1.5	25.4	23.7	1.5
25.8	22.6	1.5	26.3	22.9	1.5	26.8	21.8	1.5
27.3	21.8	1.5	27.8	18.5	1.3	28.3	14.4	1.2
28.8	15.6	1.2	29.3	14.1	1.2	29.8	11.8	1.1
30.3	14.7	1.2	30.8	11.1	1.0	31.3	9.1	.9
31.8	8.7	.9	32.3	8.2	.9	32.8	7.3	.8
33.3	7.1	.8	33.8	7.0	.8	34.3	6.4	.8
34.7	4.8	.7	35.2	5.5	.7	35.7	4.1	.6
36.2	5.1	.7	36.7	3.2	.6	37.2	2.6	.5
37.7	2.7	.5	38.2	3.1	.5	38.7	2.1	.4
39.2	1.8	.4	39.7	2.2	.5	40.2	1.6	.4
40.7	1.1	.3	41.2	.8	.3	41.7	.4	.2
42.1	.7	.3	42.6	.1	.1	43.1	.1	.1
43.6	.1	.1	44.1	.0	.0	44.6	.0	.0
45.1	.0	.0	45.6	.0	.0	46.1	.0	.0
46.6	.0	.0	47.1	.0	.0	47.6	.0	.0
48.1	.0	.0	48.6	.0	.0	49.1	.0	.0
49.6	.0	.0	50.1	.0	.0	50.6	.0	.0
51.0	.0	.0	51.5	.0	.0	52.0	.0	.0
52.5	.0	.0	53.1	.0	.0	53.6	.0	.0
54.0	.0	.0	54.5	.0	.0	55.0	.0	.0
55.5	.0	.0	56.1	.0	.0	56.6	.0	.0
57.0	.0	.0	57.5	.0	.0	58.0	.0	.0
58.5	.0	.0	59.1	.0	.0	59.6	.0	.0
59.9	.0	.0	60.4	.0	.0	60.9	.0	.0

335 20°(P+ALPHA) 35.00 MEV 150 DEG. (4/2/77)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
14.1	7.9	.9	14.6	5.6	.8	15.1	3.8	.6
15.6	3.8	.6	16.1	5.1	.7	16.6	4.8	.7
17.1	6.7	.8	17.6	7.8	.9	18.1	13.0	1.1
19.6	15.7	1.2	19.1	14.9	1.4	19.6	21.9	1.5
21.1	21.4	1.5	20.6	25.7	1.6	21.1	23.7	1.5
21.6	27.5	1.6	22.1	29.6	1.6	22.6	22.0	1.5
23.0	21.3	1.4	23.5	21.5	1.5	24.0	18.0	1.3
24.5	21.2	1.4	25.0	15.6	1.3	25.5	19.1	1.4
26.0	16.1	1.3	26.5	14.3	1.2	27.0	17.4	1.3
27.5	12.5	1.1	28.0	12.1	1.1	28.5	12.1	1.1
29.0	10.2	1.0	29.5	8.8	.9	30.0	7.4	.9
31.5	9.4	1.0	31.0	5.3	.8	31.5	5.9	.8
32.0	7.2	.8	32.4	5.0	.7	32.9	4.6	.7
33.4	3.3	.6	33.9	3.1	.5	34.4	3.3	.6
34.9	3.2	.6	35.4	3.2	.6	35.9	3.1	.5
36.4	3.0	.5	36.9	1.6	.4	37.4	1.6	.4
37.9	1.2	.3	38.4	1.1	.2	38.9	.9	.3
39.4	.6	.2	39.9	1.3	.4	40.4	.9	.3
40.9	.7	.3	41.4	.8	.2	41.9	.2	.1
42.3	.2	.1	42.3	.1	.1	43.3	.2	.1
43.8	.0	.0	44.3	.0	.0	44.8	.0	.0
45.3	.0	.0	45.8	.0	.0	46.3	.0	.0
46.8	.0	.0	47.3	.0	.0	47.8	.0	.0
48.3	.0	.0	48.8	.0	.0	49.3	.0	.0
49.8	.0	.0	50.3	.0	.0	50.8	.0	.0
51.3	.0	.0	51.3	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.7	.0	.0
54.2	.0	.0	54.7	.0	.0	55.2	.0	.0
55.7	.0	.0	56.2	.0	.0	56.7	.0	.0
57.2	.0	.0	57.7	.0	.0	58.2	.0	.0
58.7	.0	.0	59.2	.0	.0	59.7	.0	.0
60.2	.0	.0	60.7	.0	.0	61.2	.0	.0

338 20°(P+ALPHA) 35.00 MEV 180 DEG. (4/2/77)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
14.1	13.1	1.1	14.6	7.1	.8	15.1	4.8	.7
15.6	4.4	.7	16.1	5.9	.8	16.6	7.6	.9
17.1	9.1	.9	17.6	11.8	1.1	18.1	14.7	1.2
19.6	17.4	1.3	19.1	21.9	1.4	19.6	23.5	1.5
21.1	23.7	1.5	21.6	25.5	1.6	22.1	26.9	1.6
21.6	27.3	1.6	22.1	22.0	1.5	22.6	24.7	1.6
23.0	23.9	1.5	23.5	19.2	1.4	24.0	15.8	1.2
24.5	16.7	1.3	25.0	15.6	1.2	25.5	13.7	1.2
26.0	13.4	1.2	26.5	12.4	1.1	27.0	14.6	1.2
27.5	10.9	1.0	28.0	11.5	1.1	28.5	9.2	1.0
29.0	7.4	.9	29.5	6.9	.8	30.0	7.4	.9
31.5	5.9	.8	31.0	5.5	.7	31.5	5.1	.7
32.0	3.1	.5	32.4	5.2	.7	32.9	4.1	.6
33.4	3.1	.5	33.9	2.6	.5	34.4	2.5	.5
34.9	2.6	.5	35.4	1.4	.4	35.9	1.7	.4
36.4	1.8	.4	36.9	3.5	.4	37.4	1.7	.4
37.9	2.2	.5	38.4	1.1	.3	38.9	.8	.3
39.4	1.2	.3	39.9	.9	.2	40.4	.8	.2
40.9	.8	.3	41.4	.8	.2	41.9	.2	.1
42.3	.1	.1	42.3	.2	.1	43.3	.1	.0
43.8	.0	.0	44.3	.0	.0	44.8	.0	.0
45.3	.0	.0	45.8	.0	.0	46.3	.0	.0
46.8	.0	.0	47.3	.0	.0	47.8	.0	.0
48.3	.0	.0	48.8	.0	.0	49.3	.0	.0
49.8	.0	.0	50.3	.0	.0	50.8	.0	.0
51.3	.0	.0	51.3	.0	.0	52.2	.0	.0
52.7	.0	.0	53.2	.0	.0	53.7	.0	.0
54.2	.0	.0	54.7	.0	.0	55.2	.0	.0
55.7	.0	.0	56.2	.0	.0	56.7	.0	.0
57.2	.0	.0	57.7	.0	.0	58.2	.0	.0
58.7	.0	.0	59.2	.0	.0	59.7	.0	.0
60.2	.0	.0	60.7	.0	.0	61.2	.0	.0

345 20°BI(P+ALPHA) 40.00 MEV 30 DEG. (4/2/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.4	104.4	4.3	13.9	100.5	4.3	14.3	62.7	3.6
14.8	97.3	4.0	15.3	97.5	4.0	15.3	78.9	3.8
16.3	91.0	4.1	16.8	86.7	4.0	17.3	93.6	4.1
17.7	93.4	4.1	18.2	112.1	4.3	18.7	115.7	4.6
19.2	127.4	4.8	19.7	123.0	4.9	20.2	143.9	5.1
21.7	145.3	5.1	21.2	163.1	5.4	21.6	169.2	5.5
22.1	178.1	5.7	22.6	183.7	5.8	23.1	188.1	5.8
23.6	194.4	5.9	24.1	199.8	6.0	24.6	198.7	6.0
25.1	239.3	6.6	25.5	251.8	6.8	26.0	236.2	6.5
26.5	239.6	6.6	27.0	244.3	6.7	27.5	233.7	6.5
28.0	233.3	6.6	28.5	226.1	6.3	29.0	212.5	6.2
29.4	234.2	6.1	29.9	219.3	6.2	30.4	216.7	6.1
31.9	198.7	6.0	31.4	200.4	6.0	31.9	170.3	5.6
32.4	162.2	5.4	32.3	151.3	5.2	33.3	147.2	5.2
33.8	148.2	5.2	34.3	144.8	5.1	34.8	135.0	4.9
35.3	142.3	5.1	35.8	127.2	4.8	36.3	118.6	4.6
36.7	120.9	4.7	37.2	116.6	4.6	37.7	105.5	4.4
38.2	109.1	4.4	38.7	103.9	4.3	39.2	108.2	4.4
39.7	109.1	4.4	40.2	111.1	4.5	40.6	111.3	4.5
41.1	109.1	4.4	41.6	108.1	4.4	42.1	101.4	4.3
42.6	91.0	4.1	43.1	65.9	3.6	43.6	64.1	3.4
44.1	47.8	2.9	44.5	40.5	2.7	45.1	27.2	2.2
45.5	18.8	1.8	46.0	16.5	1.7	46.5	12.1	1.5
47.1	9.8	1.3	47.5	10.1	1.3	47.9	4.0	.3
48.4	4.0	.6	48.9	4.2	.5	49.4	1.6	.5
49.9	2.9	.7	50.4	2.1	.6	50.9	2.4	.7
51.4	.7	.4	51.8	.5	.4	52.3	.7	.4
52.8	.7	.4	53.3	.5	.3	53.8	.4	.3
54.3	.2	.2	54.8	.5	.2	55.2	.0	.0
55.7	.2	.2	56.2	.2	.2	56.7	.1	.1
57.2	.0	.0	57.7	.0	.0	58.2	.0	.0
58.7	.3	.0	59.1	.1	.1	59.6	.0	.1

346 20°BI(P+ALPHA) 40.00 MEV 30 DEG. (4/2/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.5	39.2	2.7	14.1	37.1	2.6	14.5	38.1	2.6
15.0	41.2	2.7	15.5	43.5	2.8	16.0	47.0	2.9
15.5	47.9	2.9	17.1	44.4	2.8	17.5	47.7	2.9
17.9	50.2	3.0	18.4	52.6	3.1	18.9	57.3	3.2
19.4	61.4	3.3	19.9	65.1	3.4	20.4	74.7	3.7
20.9	76.4	3.7	21.4	82.5	3.9	21.9	82.9	3.9
22.4	91.7	4.1	22.8	96.5	4.2	23.3	102.7	4.3
23.8	99.9	4.3	24.3	94.7	4.2	24.8	108.1	4.4
25.3	110.7	4.5	25.8	99.7	4.3	26.3	113.8	4.4
26.8	104.3	4.2	27.2	103.9	4.3	27.7	104.3	4.3
28.2	99.6	4.2	28.7	108.3	4.4	29.2	110.7	4.3
29.7	104.1	4.3	30.2	95.8	4.2	30.7	95.0	4.2
31.2	95.8	4.2	31.6	84.9	3.9	32.1	84.0	3.9
32.6	68.4	3.5	33.1	65.8	3.5	33.6	55.9	3.2
34.1	54.4	3.1	34.6	51.2	3.1	35.1	51.6	3.1
35.6	44.1	3.0	36.0	42.2	2.8	36.5	43.7	2.8
37.1	35.5	2.5	37.5	39.1	2.5	38.1	35.4	2.5
38.5	34.6	2.5	39.0	24.0	2.3	39.5	26.7	2.2
40.1	26.8	2.2	40.4	25.2	2.1	40.9	23.9	2.1
41.6	22.5	2.0	41.9	23.2	2.1	42.4	20.9	1.9
42.9	14.0	1.6	43.4	11.9	1.4	43.9	8.9	1.3
44.4	7.8	1.2	44.9	7.1	1.1	45.4	5.4	1.0
45.8	2.7	.7	46.3	1.6	.5	46.8	.7	.4
47.3	.2	.2	47.8	.4	.2	48.3	.0	.0
48.8	.1	.1	49.3	.1	.1	49.7	.0	.0
50.2	.0	.0	50.7	.0	.0	51.2	.0	.0
51.7	.1	.0	52.2	.1	.1	52.7	.0	.0
53.2	.0	.0	53.6	.0	.0	54.1	.0	.0
54.6	.0	.0	55.1	.1	.1	55.6	.1	.1
56.1	.0	.0	56.6	.0	.0	57.1	.0	.0
57.6	.1	.0	58.1	.1	.1	58.5	.0	.0
59.0	.0	.0	59.5	.0	.0	60.0	.0	.0

343 20°BI(P+ALPHA) 40.00 MEV 30 DEG. (4/2/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.8	14.7	1.2	14.3	14.6	1.2	14.8	14.3	1.1
15.2	17.3	1.3	15.7	19.5	1.3	16.2	24.9	1.5
16.7	26.4	1.5	17.2	29.7	1.6	17.7	30.2	1.7
18.2	36.0	1.8	18.7	36.0	1.8	19.2	37.8	1.9
19.7	41.0	1.9	20.2	43.4	2.0	20.7	44.9	2.0
21.2	49.4	2.0	21.6	44.3	2.1	22.1	47.1	2.1
22.6	40.9	1.9	23.1	46.8	2.1	23.6	46.0	2.0
24.1	49.2	2.1	24.6	49.6	2.1	25.1	49.7	2.1
25.6	50.3	2.1	26.1	51.2	2.2	26.6	46.5	2.1
27.1	46.7	2.1	27.6	41.4	1.9	28.1	44.1	2.1
28.5	43.4	2.0	29.0	44.4	2.0	29.5	35.8	1.8
30.0	38.3	1.9	30.5	39.2	1.9	31.0	35.4	1.8
31.5	32.5	1.7	32.0	25.6	1.6	32.5	28.3	1.6
33.0	24.3	1.5	33.5	22.2	1.4	33.9	21.3	1.4
34.4	18.1	1.3	34.9	15.7	1.2	35.4	13.6	1.1
35.9	13.4	1.1	36.4	11.5	1.1	36.9	11.2	1.1
37.4	10.2	1.0	37.9	8.5	.9	38.4	9.2	.9
38.9	9.3	.9	39.4	7.7	.8	39.9	7.6	.8
40.3	6.5	.8	40.8	6.2	.7	41.3	5.4	.7
41.8	5.4	.7	42.3	3.7	.6	42.8	3.9	.6
43.3	3.2	.5	43.8	2.9	.5	44.3	2.5	.5
44.8	1.9	.4	45.3	.5	.2	45.8	.9	.3
46.2	.4	.2	46.7	.2	.1	47.2	.2	.1
47.7	.1	.1	48.2	.1	.0	48.7	.1	.0
49.2	.0	.0	49.7	.0	.0	50.2	.0	.0
50.7	.1	.0	51.2	.1	.1	51.7	.0	.1
52.1	.0	.0	52.6	.0	.0	53.1	.0	.0
53.6	.1	.0	54.1	.1	.1	54.6	.0	.1
55.1	.0	.0	55.6	.0	.0	56.1	.0	.0
56.6	.1	.0	57.1	.1	.1	57.6	.1	.1
58.1	.0	.0	58.5	.0	.0	59.0	.1	.0
59.5	.1	.0	60.0	.1	.1	60.5	.1	.1

341 20°BI(P+ALPHA) 40.00 MEV 30 DEG. (4/2/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MICR/SR*MEV		MEV	MICR/SR*MEV		MEV	MICR/SR*MEV	
13.1	9.3	1.1	14.5	8.5	.9	15.1	6.6	.8
15.5	9.9	1.0	16.0	10.9	1.1	16.5	11.3	1.1
17.1	16.9	1.3	17.4	19.1	1.4	17.9	21.5	1.5
18.4	28.5	1.7	18.9	28.2	1.7	19.4	22.9	1.8
19.9	35.1	1.9	20.4	39.4	2.1	20.9	41.7	2.1
21.4	35.3	1.9	21.9	30.2	1.9	22.4	32.7	1.8
22.9	33.1	1.8	23.4	31.7	1.8	23.9	28.6	1.7
24.4	29.9	1.6	24.9	29.3	1.7	25.4	25.3	1.6
25.8	27.5	1.7	26.3	25.8	1.7	26.8	24.6	1.6
27.3	25.7	1.6	27.8	24.1	1.6	28.3	23.1	1.5
28.8	22.1	1.5	29.3	19.6	1.4	29.8	19.9	1.4
30.3	16.1	1.3	30.8	18.1	1.4	31.3	14.2	1.2
31.8	14.1	1.2	32.3	15.4	1.2	32.8	11.0	1.1
33.3	10.2	1.0	33.8	8.9	1.0	34.3	8.0	.9
34.7	7.5	.9	35.2	7.2	.9	35.7	5.6	.8
36.2	5.8	.8	36.7	5.1	.7	37.2	4.8	.7
37.7	3.4	.6	38.2	3.5	.6	38.7	4.4	.7
39.2	2.7	.5	39.7	2.6	.5	40.2	2.9	.5
40.7	2.5	.5	41.2	2.5	.5	41.7	2.1	.5
42.1	1.5	.4	42.6	1.5	.3	43.1	1.2	.4
43.6	.9	.3	44.1	.5	.2	44.6	.6	.3
45.1	.7	.3	45.6	.6	.2	46.1	.2	.1
46.6	.1	.1	47.1	.1	.1	47.6	.1	.0
48.1	.1	.0	48.6	.0	.0	49.1	.0	.0
49.6	.1	.1	50.1	.1	.1	50.6	.0	.1
51.0	.0	.0	51.5	.0	.0	52.0	.0	.0
52.5	.1	.1	53.0	.1	.1	53.5	.0	.1
54.0	.1	.1	54.5	.0	.0	55.0	.0	.0
55.5	.1	.1	56.0	.1	.1	56.5	.0	.1
57.0	.1	.1	57.5	.0	.0	58.0	.0	.0
58.5	.1	.1	59.0	.1	.1	59.5	.0	.1
60.0	.1	.1	60.5	.0	.0	61.0	.0	.0

360 20 BT(P,ALPHA) 40.00 MEV 150 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV
13.6	18.4	1.4	14.1	5.2	.7	14.6	5.6	.6
15.1	6.1	.3	15.6	5.4	.8	16.1	8.8	1.1
16.6	12.1	1.1	17.1	16.1	1.3	17.6	21.6	1.5
18.1	24.4	1.6	18.6	25.5	1.6	19.1	29.1	1.7
19.6	30.7	1.8	20.1	34.9	1.9	20.6	34.6	1.5
21.1	37.9	2.1	21.6	36.3	1.9	22.1	31.1	1.3
22.5	29.9	1.8	23.0	25.5	1.6	23.5	25.7	1.6
24.0	21.3	1.5	24.5	20.1	1.5	25.1	18.3	1.4
25.5	21.2	1.5	26.0	19.7	1.4	26.5	18.2	1.4
27.0	16.2	1.3	27.5	17.2	1.3	28.1	12.5	1.1
28.5	14.5	1.2	29.0	11.9	1.1	29.5	13.7	1.2
31.0	13.4	1.2	31.5	11.1	1.1	31.1	7.6	.9
31.5	9.3	1.0	32.0	4.5	.8	32.4	6.4	.8
32.9	5.6	.8	33.4	4.3	.7	33.9	3.6	.6
34.4	4.4	.7	34.9	4.0	.6	35.4	3.6	.6
35.9	2.7	.5	36.4	2.1	.5	36.9	2.1	.5
37.4	2.1	.5	37.9	1.9	.4	38.4	1.5	.4
38.9	1.4	.4	39.4	1.5	.4	39.9	1.3	.4
40.4	1.3	.4	40.9	.7	.3	41.4	.9	.3
41.9	1.1	.3	42.3	.2	.1	42.3	.6	.3
43.3	.5	.2	43.8	.2	.2	44.3	.1	.1
44.8	.5	.2	45.3	.2	.1	45.8	.1	.1
46.3	.0	.0	46.8	.0	.0	47.3	.0	.0
47.8	.0	.0	48.3	.1	.1	48.8	.0	.1
49.3	.0	.0	49.8	.0	.0	50.3	.0	.0
51.8	.0	.0	51.3	.1	.1	51.4	.0	.1
52.2	.0	.0	52.7	.0	.0	52.2	.0	.0
53.7	.0	.0	54.2	.1	.1	54.7	.0	.1
55.2	.0	.0	55.7	.0	.0	56.2	.0	.0
56.7	.0	.0	57.2	.1	.1	57.7	.0	.1
58.2	.0	.0	58.7	.0	.0	59.2	.0	.0
59.7	.0	.0	61.2	.1	.1	62.7	.0	.1

350 20 BT(P,ALPHA) 40.00 MEV 150 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV
13.6	15.6	1.3	14.1	3.3	.9	14.6	7.3	.9
15.1	5.8	.6	15.6	1.0	1.0	16.1	10.6	1.1
16.6	12.5	1.1	17.1	14.1	1.4	17.6	21.7	1.5
18.1	23.8	1.6	18.6	26.3	1.7	19.1	32.3	1.8
19.6	31.1	1.8	20.1	35.9	1.9	20.6	34.7	1.9
21.1	38.1	2.0	21.6	28.1	1.7	22.1	31.4	1.8
22.5	31.1	1.8	23.0	24.9	1.7	23.5	29.2	1.6
24.0	19.6	1.4	24.5	21.6	1.5	25.0	20.0	1.4
25.5	21.7	1.5	26.0	17.1	1.3	26.5	16.6	1.3
27.0	16.9	1.3	27.5	12.2	1.1	28.0	12.4	1.1
28.5	12.2	1.1	29.0	11.1	1.1	29.5	9.5	1.1
31.0	11.2	1.1	31.5	6.5	1.0	31.0	9.0	1.0
31.5	6.9	.8	32.0	5.1	.8	32.4	6.3	.8
32.9	5.5	.8	33.4	3.5	.6	33.9	3.1	.6
34.4	3.4	.6	34.9	3.3	.6	35.4	3.2	.6
35.9	2.2	.5	36.4	3.1	.6	36.9	1.7	.4
37.4	1.2	.4	37.9	1.5	.4	38.4	1.2	.4
38.9	1.1	.3	39.4	1.2	.4	39.9	1.1	.3
40.4	.3	.2	40.9	1.3	.4	41.4	1.0	.3
41.9	1.2	.4	42.3	.5	.2	42.8	.1	.1
43.3	.2	.1	43.8	.5	.2	44.3	.7	.3
44.8	.6	.3	45.3	.0	.0	45.8	.0	.0
46.3	.1	.1	46.8	.1	.1	47.3	.0	.1
47.8	.0	.0	48.3	.0	.0	48.8	.1	.0
49.3	.1	.1	49.8	.1	.1	50.3	.0	.1
51.8	.1	.1	51.3	.0	.0	51.8	.0	.0
52.2	.1	.1	52.7	.1	.1	53.2	.0	.1
53.7	.1	.1	54.2	.0	.0	54.7	.0	.0
55.2	.1	.1	55.7	.1	.1	56.2	.0	.1
56.7	.1	.1	57.2	.0	.0	57.7	.0	.0
58.2	.1	.1	58.7	.1	.1	59.2	.0	.1
59.7	.0	.0	61.2	.0	.0	62.7	.0	.0

320 20 BT(P,ALPHA) 40.00 MEV 150 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV
13.6	104.5	9.4	13.9	91.4	4.2	14.3	84.6	4.0
14.8	84.6	4.1	15.3	84.4	4.1	15.8	76.6	3.8
16.3	64.4	3.9	16.8	91.6	4.2	17.3	98.2	4.2
17.7	91.7	4.1	18.2	114.7	4.4	18.7	113.1	4.7
19.2	124.3	4.8	19.7	135.2	5.0	20.2	147.0	5.2
20.7	168.4	5.6	21.2	185.4	5.8	21.6	181.1	5.8
22.1	102.4	6.1	22.6	203.7	6.1	23.1	219.4	6.4
23.6	139.1	6.6	24.1	249.1	6.8	24.6	249.5	6.8
25.1	157.0	6.9	25.5	251.2	6.8	26.0	262.0	7.0
26.5	246.9	6.8	27.1	247.6	6.8	27.5	245.2	6.7
28.0	142.4	6.7	28.5	254.6	6.9	29.0	261.0	6.7
29.4	241.1	6.7	29.9	221.3	6.4	31.4	211.2	6.2
31.9	111.4	6.2	31.4	221.2	6.4	31.9	215.1	6.2
32.4	228.7	6.4	32.9	215.4	6.3	33.3	207.9	6.2
32.8	195.4	6.0	34.3	195.0	6.1	34.8	199.0	6.1
35.3	184.6	5.8	35.3	193.3	5.9	36.3	173.7	5.7
36.7	169.0	5.6	37.2	151.8	5.2	37.7	147.0	5.2
38.2	128.9	4.9	38.7	123.5	4.3	39.2	123.1	4.3
39.7	136.3	5.0	40.2	123.5	4.3	40.6	116.9	4.6
41.1	117.8	4.5	41.6	111.1	4.5	42.1	117.5	4.5
42.6	103.2	4.4	43.1	95.3	4.1	43.6	85.2	4.0
44.0	82.4	3.9	44.5	78.1	3.8	45.1	89.0	4.1
44.5	76.8	3.8	46.0	72.4	3.7	46.5	63.5	3.4
47.0	59.1	3.3	47.5	51.1	3.1	47.9	52.5	3.4
48.4	23.1	2.1	48.9	15.0	1.7	49.4	8.5	1.2
49.9	8.3	1.2	51.4	7.9	1.2	51.9	4.2	.9
51.4	4.2	.9	51.8	3.5	.8	52.3	2.6	.7
52.8	1.7	.6	53.3	2.4	.7	53.3	1.5	.5
54.3	.9	.4	54.8	2.0	.6	55.3	.6	.3
55.7	.9	.4	55.2	1.3	.5	56.7	.7	.4
57.2	.3	.0	57.7	.0	.0	58.2	.0	.0
58.7	.1	.1	59.1	.1	.1	59.6	.1	.1

330 20 BT(P,ALPHA) 40.00 MEV 150 DEG. (4/20/71)

CH EN	SIGMA	ERR	CH EN	SIGMA	ERR	CH EN	SIGMA	ERR
MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV	MEV
13.5	42.9	2.8	14.1	40.1	2.4	14.5	35.3	2.6
15.0	35.7	2.6	15.6	44.1	2.7	16.0	33.2	2.5
16.5	39.4	2.7	17.1	44.5	2.7	17.5	53.7	3.2
17.9	62.7	3.4	18.4	61.8	3.4	18.9	75.7	3.7
19.4	75.3	3.7	19.9	80.1	3.9	20.4	85.7	4.1
20.9	96.2	4.2	21.4	104.8	4.5	21.9	102.9	4.4
22.4	112.1	4.6	22.9	121.5	4.7	23.4	117.7	4.7
23.8	114.2	4.6	24.3	118.6	4.7	24.8	131.5	4.9
25.3	135.2	5.0	25.8	131.4	4.9	26.3	129.5	4.9
26.8	172.8	5.1	27.2	121.4	4.6	27.7	124.3	4.8
28.2	126.5	4.8	28.7	116.4	4.6	29.2	112.1	4.6
29.7	116.2	4.6	30.2	104.7	4.4	30.7	100.3	4.3
31.2	93.8	4.2	31.6	87.7	4.1	32.1	91.0	4.1
32.6	97.9	4.2	33.1	85.5	4.0	33.6	80.3	3.9
34.1	72.5	3.7	34.4	79.9	3.8	35.1	81.4	3.9
35.6	72.9	3.7	36.1	68.7	3.6	36.6	68.6	3.6
37.1	65.1	3.5	37.5	59.4	3.2	38.1	51.8	3.1
38.5	36.8	2.6	39.0	36.3	2.6	39.5	38.5	2.7
40.1	36.1	2.6	40.4	34.4	2.5	40.9	31.5	2.4
41.4	26.1	2.2	41.9	25.5	2.2	42.4	24.2	2.1
42.9	23.5	2.1	43.4	14.2	1.9	43.9	16.8	1.8
44.4	15.9	1.7	44.9	11.2	1.6	45.4	14.4	1.6
45.8	16.1	1.7	46.3	11.5	1.4	46.8	11.3	1.4
47.3	11.4	1.4	47.8	4.3	1.2	48.3	3.5	.8
48.8	3.1	.8	49.3	1.1	.5	49.7	.4	.3
50.2	.0	.0	50.7	.2	.2	51.2	.2	.2
51.7	.1	.1	52.2	.1	.1	52.7	.0	.1
53.2	.0	.0	53.7	.2	.2	54.1	.0	.0
54.6	.1	.1	55.1	.1	.1	55.6	.0	.1
56.1	.0	.0	56.6	.0	.0	57.1	.0	.0
57.6	.1	.1	58.1	.1	.1	58.6	.0	.1
59.0	.0	.0	60.5	.0	.0	61.0	.0	.0

325 204E(P,ALPHA) 44.50 MEV 50 DEG. 04/20/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.6	26.9	2.2		14.3	19.5	1.5		14.6	19.1	1.5	
15.2	21.1	1.9		15.7	21.2	1.9		16.2	24.9	2.1	
16.7	25.2	2.4		17.2	25.1	2.3		17.7	42.7	2.8	
18.2	39.3	2.7		18.7	48.2	3.1		19.2	51.8	3.1	
19.7	59.1	3.3		21.2	55.5	3.2		21.7	54.5	3.2	
21.2	61.1	3.4		21.6	56.1	3.2		22.1	63.5	3.4	
22.6	59.6	3.3		23.1	62.3	3.4		23.6	64.9	3.5	
24.1	57.7	3.3		24.6	63.5	3.4		25.1	61.1	3.4	
25.6	60.1	3.3		26.1	57.0	3.3		26.6	58.6	3.3	
27.1	57.9	3.3		27.5	53.8	3.2		28.1	56.4	3.2	
28.5	48.6	3.0		29.0	54.7	3.2		29.5	47.1	3.0	
31.1	40.9	3.0		31.5	35.4	2.7		31.1	39.2	2.7	
31.5	41.6	2.8		32.0	32.6	2.5		32.5	30.6	2.4	
33.0	33.8	2.5		33.5	31.2	2.4		33.9	28.2	2.3	
34.4	21.4	2.4		34.9	29.5	2.3		35.4	26.0	2.2	
35.9	22.1	2.0		36.4	23.2	2.1		36.9	18.4	1.8	
37.4	17.4	1.8		37.9	15.6	1.7		38.4	15.0	1.7	
38.9	11.4	1.4		39.4	13.5	1.2		39.9	11.8	1.4	
40.3	9.0	1.2		41.8	7.1	1.1		41.3	7.8	1.2	
41.8	5.2	1.0		42.3	5.8	1.0		42.3	5.9	1.1	
43.3	5.8	1.0		43.8	4.6	.9		44.3	2.4	.7	
44.8	3.9	.9		45.3	3.9	.9		45.9	3.2	.8	
46.2	2.4	.7		46.7	.9	.4		47.2	1.1	.5	
47.7	.7	.4		48.2	.6	.3		48.7	.4	.3	
49.2	.9	.4		49.7	.0	.0		50.2	.0	.0	
51.7	.0	.0		51.2	.1	.0		51.7	.0	.0	
52.1	.0	.0		52.6	.0	.0		53.1	.0	.0	
53.6	.0	.0		54.1	.1	.1		54.6	.0	.1	
55.1	.0	.0		55.6	.0	.0		56.1	.0	.0	
56.6	.0	.0		57.1	.1	.1		57.6	.0	.1	
58.1	.0	.0		58.5	.0	.0		59.0	.0	.0	
59.5	.1	.0		61.1	.1	.1		61.5	.1	.1	

330 204E(P,ALPHA) 44.50 MEV 120 DEG. 04/20/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
14.0	17.2	1.3		14.5	9.1	1.0		15.1	11.0	1.1	
15.5	10.1	1.0		16.0	17.1	1.1		16.5	15.6	1.3	
17.0	23.4	1.5		17.4	27.2	1.7		17.9	31.0	1.7	
18.4	34.1	1.9		18.9	42.2	2.1		19.4	42.7	2.1	
19.9	49.1	2.1		21.4	47.1	2.2		21.9	54.5	2.3	
21.4	46.3	2.2		21.9	46.4	2.2		22.4	45.2	2.1	
22.9	41.6	2.1		23.4	33.9	2.1		23.9	36.2	1.9	
24.4	38.6	2.0		24.9	31.4	1.9		25.4	33.5	1.8	
25.8	35.8	1.9		26.3	29.2	1.7		26.8	31.5	1.8	
27.3	27.1	1.7		27.8	26.8	1.7		28.3	23.5	1.5	
28.8	24.5	1.6		29.3	24.6	1.6		29.8	25.1	1.6	
30.3	19.9	1.4		30.8	19.0	1.4		31.3	18.2	1.4	
31.8	16.1	1.3		32.3	13.4	1.2		32.8	14.5	1.2	
33.3	17.9	1.2		33.8	12.5	1.1		34.3	11.1	1.1	
34.7	11.2	1.1		35.2	9.5	1.0		35.7	11.2	1.0	
36.2	7.5	.9		36.7	7.2	.9		37.2	5.5	.8	
37.7	5.4	.7		38.2	5.1	.8		38.7	4.1	.6	
38.2	4.3	.7		39.7	2.1	.5		40.2	3.1	.5	
40.7	3.6	.6		41.2	3.7	.6		41.7	2.3	.5	
41.2	2.6	.5		42.6	1.6	.4		43.1	1.5	.4	
41.6	1.7	.4		44.1	.3	.3		44.6	1.0	.3	
42.1	1.6	.4		45.6	1.5	.4		46.1	.7	.3	
43.6	1.1	.3		47.1	.7	.3		47.6	.3	.2	
44.1	.0	.1		48.6	.5	.2		49.1	.1	.1	
45.6	.3	.2		51.1	.1	.1		51.6	.0	.0	
46.1	.0	.0		51.6	.0	.0		52.1	.0	.0	
47.6	.0	.0		53.1	.1	.1		53.6	.1	.1	
48.1	.0	.0		54.6	.0	.0		55.1	.0	.0	
49.6	.0	.0		56.1	.1	.1		56.6	.0	.0	
50.1	.0	.0		57.6	.0	.0		58.1	.0	.0	
51.6	.0	.0		59.1	.1	.1		59.6	.0	.0	
52.1	.0	.0		61.1	.0	.0		61.6	.0	.0	

340 204E(P,ALPHA) 44.50 MEV 150 DEG. 04/20/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.6	9.5	1.0		14.1	9.5	1.0		14.6	10.0	1.0	
15.1	17.6	1.1		15.6	11.9	1.1		16.1	15.5	1.3	
16.6	16.3	1.3		17.1	21.8	1.5		17.6	24.6	1.6	
18.1	32.1	1.8		18.6	35.3	1.9		19.1	41.2	2.1	
19.6	44.4	2.1		21.1	46.5	2.2		21.6	47.2	2.2	
21.1	49.3	2.2		21.6	42.7	2.1		22.1	42.2	2.1	
22.6	37.3	1.9		22.0	32.1	1.8		22.5	31.4	1.8	
24.1	33.3	1.8		24.5	27.4	1.7		25.1	26.5	1.6	
25.6	29.8	1.6		26.0	22.6	1.5		26.5	19.5	1.4	
27.1	22.5	1.5		27.5	19.3	1.4		28.1	16.4	1.3	
28.5	18.5	1.4		29.0	17.2	1.3		29.5	16.3	1.3	
31.1	15.6	1.3		31.5	12.9	1.1		31.1	11.2	1.1	
31.5	12.0	1.1		32.0	11.1	1.1		32.4	10.1	1.0	
32.9	7.5	.9		33.4	6.1	.8		33.9	7.8	.9	
34.4	7.3	.9		34.9	6.2	.8		35.4	5.7	.8	
35.9	4.2	.7		36.4	6.2	.7		36.9	3.7	.6	
37.4	4.3	.7		37.9	1.9	.5		38.4	2.5	.5	
38.9	2.5	.5		39.4	2.1	.5		39.9	1.4	.4	
40.4	1.5	.4		41.9	1.6	.4		41.4	1.8	.4	
41.9	1.4	.4		42.3	.9	.3		42.3	.9	.3	
43.3	.2	.1		43.8	.6	.3		44.3	.4	.2	
44.8	.8	.3		45.3	.5	.2		45.8	.3	.2	
46.3	.2	.1		46.8	.5	.2		47.3	.5	.2	
47.8	.2	.1		48.3	.1	.1		48.8	.1	.1	
49.3	.0	.0		49.8	.0	.0		50.3	.0	.0	
51.8	.1	.0		51.3	.1	.1		51.8	.0	.0	
52.2	.0	.0		52.7	.0	.0		53.2	.0	.0	
53.7	.1	.0		54.2	.1	.1		54.7	.0	.0	
55.2	.0	.0		55.7	.0	.0		56.2	.1	.1	
56.7	.1	.1		57.2	.1	.1		57.7	.0	.0	
58.2	.0	.0		58.7	.0	.0		59.2	.1	.1	
59.7	.1	.0		61.2	.1	.1		61.7	.0	.0	

341 204E(P,ALPHA) 44.50 MEV 164 DEG. 04/20/71

CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR	CH	EN	SIGMA	ERR
MEV		MICR/SR*MEV		MEV		MICR/SR*MEV		MEV		MICR/SR*MEV	
13.6	13.5	1.2		14.1	12.6	1.1		14.6	11.1	1.1	
15.1	17.8	1.1		15.6	14.0	1.2		16.1	19.5	1.4	
16.6	21.3	1.5		17.1	27.5	1.7		17.6	31.7	1.3	
18.1	31.6	1.8		18.6	37.9	1.8		19.1	45.4	2.1	
19.6	49.2	2.1		21.1	52.1	2.3		21.6	48.3	2.2	
21.1	45.6	2.1		21.6	42.7	2.1		22.1	39.8	2.0	
22.6	36.4	1.9		22.1	36.3	1.9		22.6	29.1	1.7	
24.1	28.6	1.7		24.6	24.4	1.6		25.1	24.6	1.6	
25.6	22.6	1.5		26.1	23.4	1.5		26.6	18.3	1.4	
27.1	16.7	1.3		27.6	16.5	1.3		28.1	16.6	1.4	
28.5	14.5	1.3		29.1	14.9	1.2		29.6	13.6	1.2	
31.1	12.2	1.1		31.6	11.8	1.0		32.1	9.0	1.0	
31.5	11.4	1.1		32.1	7.1	.8		32.6	9.0	1.1	
32.9	7.5	.9		33.4	6.3	.8		33.9	7.5	.9	
34.4	5.3	.7		34.9	6.1	.8		35.4	5.9	.8	
35.9	4.5	.7		36.4	2.5	.5		36.9	3.5	.6	
37.4	3.3	.6		37.9	2.1	.5		38.4	2.6	.5	
38.9	1.9	.4		39.4	1.3	.4		39.9	.7	.3	
40.4	1.1	.3		41.9	.7	.3		41.4	1.0	.3	
41.9	1.1	.3		42.3	.3	.2		42.8	.5	.2	
43.3	.7	.1		43.8	.2	.1		44.3	.3	.2	
44.8	.6	.0		45.3	.2	.1		45.8	.4	.2	
46.3	.2	.1		46.8	.1	.1		47.3	.1	.1	
47.8	.2	.1		48.3	.1	.1		48.8	.2	.1	
49.3	.1	.0		49.8	.0	.0		50.3	.0	.0	
51.8	.1	.0		51.3	.1	.1		51.8	.0	.0	
52.2	.0	.0		52.7	.0	.0		53.2	.0	.0	
53.7	.1	.0		54.2	.1	.1		54.7	.0	.0	
55.2	.0	.0		55.7	.0	.0		56.2	.1	.1	
56.7	.1	.1		57.2	.0	.0		57.7	.0	.0	
58.2	.0	.0		58.7	.0	.0		59.2	.1	.1	
59.7	.1	.0		61.2	.1	.1		61.7	.0	.0	