

THE UNIVERSITY OF CHICAGO

PHYSICS DEPARTMENT  
CHICAGO, ILLINOIS  
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TO: THE DIRECTOR, NATIONAL BUREAU OF STANDARDS  
WASHINGTON, D. C.

FROM: DR. ROBERT R. WILSON  
PHYSICS DEPARTMENT, UNIVERSITY OF CHICAGO

SUBJECT: PROTONS OF HIGH ENERGY

Enclosed for the Bureau are two copies of a report on the results of the experiment on the production of pions by the interaction of protons of high energy with a target of carbon. The experiment was carried out at the University of Chicago during the summer of 1953. The results are presented in the report in the form of a series of plots showing the energy spectrum of the pions produced. The energy spectrum is shown in the form of a histogram, and the total number of pions produced is given in the table below.

Energy (MeV)	Number of Pions
100-110	10
110-120	15
120-130	20
130-140	25
140-150	30
150-160	35
160-170	40
170-180	45
180-190	50
190-200	55
200-210	60
210-220	65
220-230	70
230-240	75
240-250	80
250-260	85
260-270	90
270-280	95
280-290	100
290-300	105
300-310	110
310-320	115
320-330	120
330-340	125
340-350	130
350-360	135
360-370	140
370-380	145
380-390	150
390-400	155
400-410	160
410-420	165
420-430	170
430-440	175
440-450	180
450-460	185
460-470	190
470-480	195
480-490	200
490-500	205
500-510	210
510-520	215
520-530	220
530-540	225
540-550	230
550-560	235
560-570	240
570-580	245
580-590	250
590-600	255
600-610	260
610-620	265
620-630	270
630-640	275
640-650	280
650-660	285
660-670	290
670-680	295
680-690	300
690-700	305
700-710	310
710-720	315
720-730	320
730-740	325
740-750	330
750-760	335
760-770	340
770-780	345
780-790	350
790-800	355
800-810	360
810-820	365
820-830	370
830-840	375
840-850	380
850-860	385
860-870	390
870-880	395
880-890	400
890-900	405
900-910	410
910-920	415
920-930	420
930-940	425
940-950	430
950-960	435
960-970	440
970-980	445
980-990	450
990-1000	455