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AGS OPERATIONS SUMMARY FOR 1965

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March 1966

Collider Accelerator Department

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U.S. Department of Energy

USDOE Office of Science (SC)

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AGS DIVISION TECHNICAL NOTE

No. 15

R.R. Adams

March 11, 1966

AGS OPERATIONS SUMMARY FOR 1965

In the following, the AGS operations are summarized for the year 1965. This has been abstracted from the operations weekly reports and is intended to provide a better survey of the AGS performance in the past year.

In general, the tables and graphs do not need further comment except for the following:

a) Comparing the first half of the year with the second half, AGS failures decreased from 15.4% to 8.6% of the scheduled operations time. It is hoped that this trend can be maintained. This might, in part, be due to the increased maintenance time. The net gain is obvious; it seems not unreasonable to expect that eventually, AGS failures can be kept below 5% of scheduled operations time.

b) Over-all downtime decreased from 32% to approximately 25% of scheduled operations.

c) The time that the AGS was available for high energy physics experimentation increased from 55% to 63.5% of scheduled operations. This seems low.

d) Between July 1965 and the fall of 1965 shutdown, the AGS beam intensity gradually increased from a weekly average of 6×10^{11} protons per pulse to 12×10^{11} protons per pulse.

The AGS machine was shut down for approximately 12 weeks for changes in the experimental beams, additional experimental beams and machine improvements. In addition, the machine was shut down for two four-day weekends -- July 4 and Labor Day.

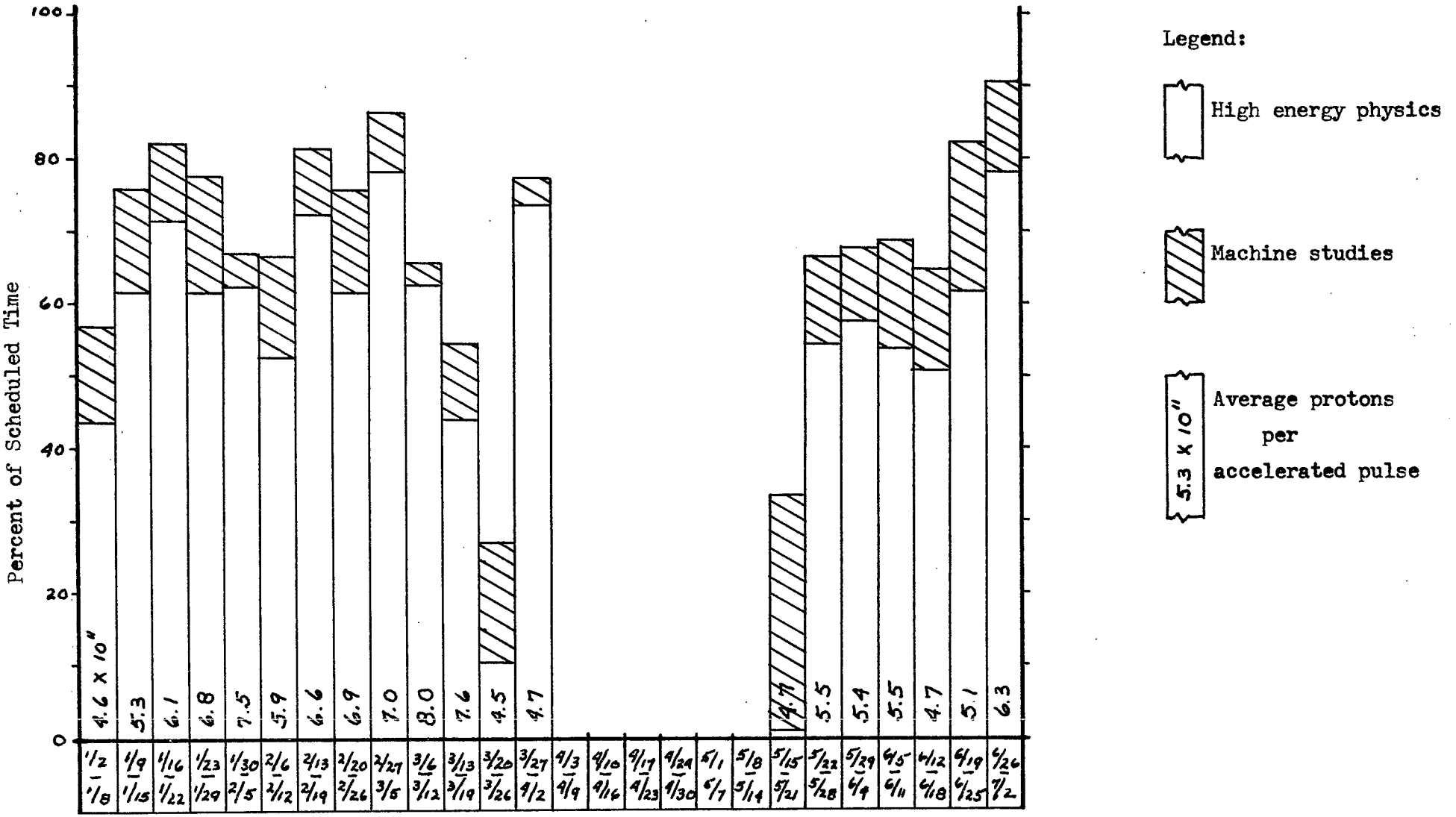
OPERATIONS SUMMARY

January through June 1965

Hours / DATE	SCHED. OPRS.	AGS ON			AGS OFF						
		HEP	AGS STUD.	TOTAL AGS ON	SET-UP	REQ'D DOWN	EXP. SET-UP	SCHED. MAINT.	EAO FAIL.	AGS FAIL.	TOTAL DOWN
Jan. 2-Jan. 8	120.00	52.03	16.30	68.33	5.56	-	-	24.00	1.00	21.11	51.67
Jan. 9-Jan.15	168.00	103.11	24.50	127.61	3.50	0.22	-	17.00	1.33	18.34	40.39
Jan.16-Jan.22	168.00	119.64	17.95	137.59	5.64	1.78	-	4.71	5.10	13.18	30.41
Jan.23-Jan.29	168.00	103.29	27.41	130.70	14.29	-	-	16.60	0.74	5.67	37.30
Jan.30-Feb. 5	168.00	104.51	8.14	112.65	5.89	0.61	-	9.00	-	39.85	55.35
Feb. 6-Feb.12	168.00	88.20	23.90	112.10	3.13	0.65	-	19.10	-	33.02	55.90
Feb.13-Feb.19	168.00	121.38	15.36	136.74	7.82	2.48	-	0.73	7.73	12.50	31.26
Feb.20-Feb.26	168.00	103.47	23.89	127.36	1.49	1.15	-	20.78	1.31	15.91	40.64
Feb.27-Mar. 5	168.00	131.38	13.79	145.17	2.54	0.22	-	6.82	0.45	12.80	22.83
Mar. 6-Mar.12	168.00	105.07	5.40	110.47	4.07	-	-	24.00	3.30	26.16	57.53
Mar.13-Mar.19	168.00	74.02	17.75	91.77	3.39	0.47	-	25.50	6.23	40.64	76.23
Mar.20-Mar.26	168.00	17.33	28.15	45.48	1.32	0.87	-	-	11.00	109.33	122.52
Mar.27-Apr. 2	168.00	123.92	6.15	130.07	3.20	0.95	8.00	-	0.13	25.65	37.93
Apr. 3-Apr. 9	0.0	SHUTDOWN									
Apr.10-Apr.16	0.0										
Apr.17-Apr.23	0.0										
Apr.24-Apr.30	0.0										
May 1-May 7	0.0										
May 8-May 14	24.00	-	-	-	9.24	-	-	14.76	-	-	24.00
May 15-May 21	168.00	1.72	54.86	56.58	55.12	0.55	-	35.02	0.47	20.26	111.42
May 22-May 28	168.00	91.23	20.61	111.84	7.81	4.09	0.63	-	18.76	24.87	56.16
May 29-Jun. 4	168.00	96.86	16.85	113.71	4.39	4.43	1.24	18.57	0.79	24.87	54.29
Jun. 5-Jun.11	168.00	90.59	24.96	115.55	6.18	0.68	-	13.72	0.32	31.55	52.45
Jun.12-Jun.18	168.00	85.26	23.22	108.48	9.42	3.67	1.75	23.52	-	21.16	59.52
Jun.19-Jun.25	168.00	103.85	34.48	138.33	2.94	0.25	-	13.71	-	12.77	29.67
Jun.26-Jul. 2	168.00	131.04	21.37	152.41	3.56	0.31	-	2.55	6.10	3.07	15.59
TOTALS	3336.00	1847.90	425.04	2272.94	160.50	23.30	11.62	290.09	64.76	512.71	1063.06
PERCENT	100%	55.4	12.7	68.1	4.8	0.7	0.3	8.7	2.0	15.4	31.9

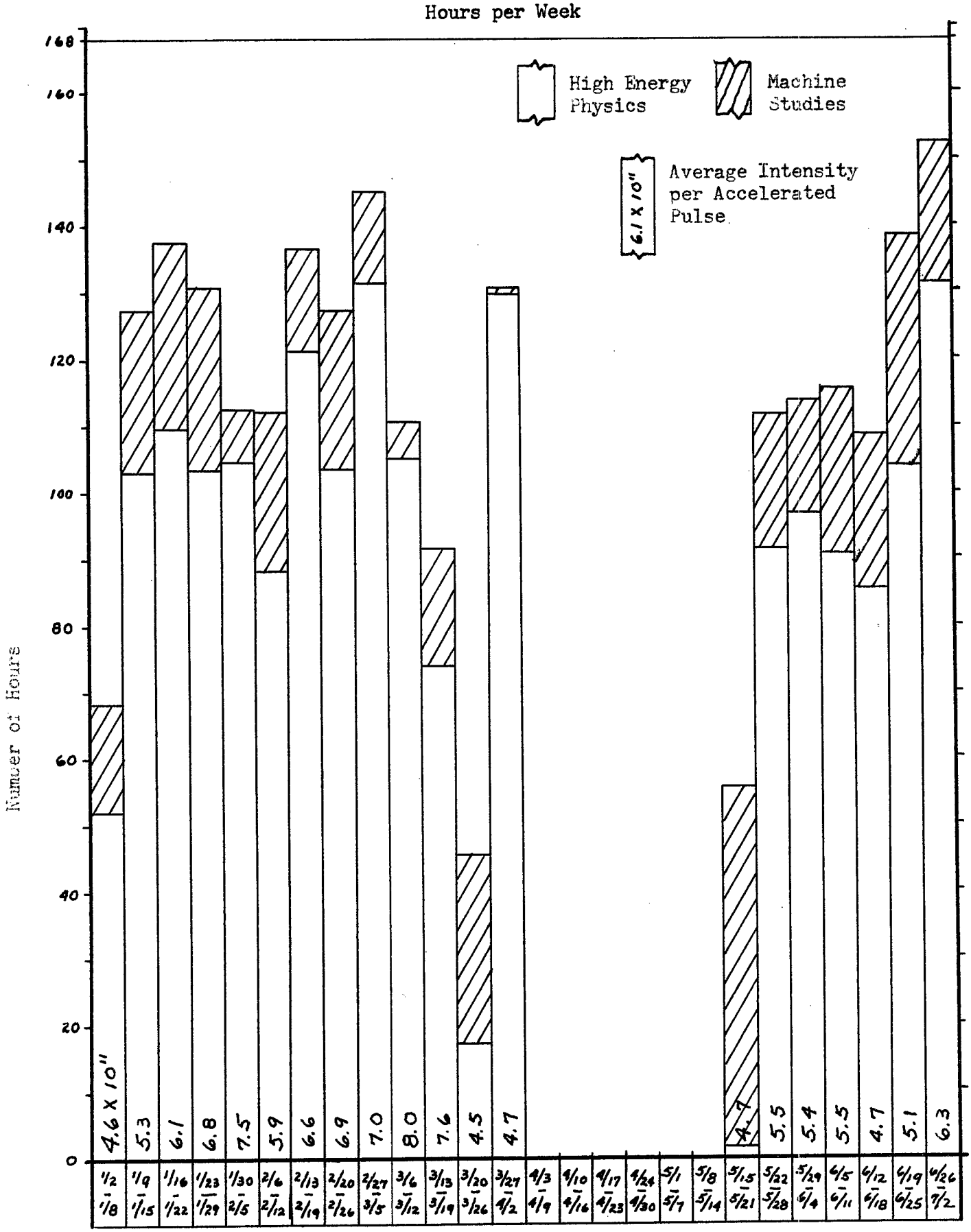
AGS ON for High Energy Physics and Machine Studies

Percent of Scheduled Time



AGS ON for High Energy Physics and Machine Studies

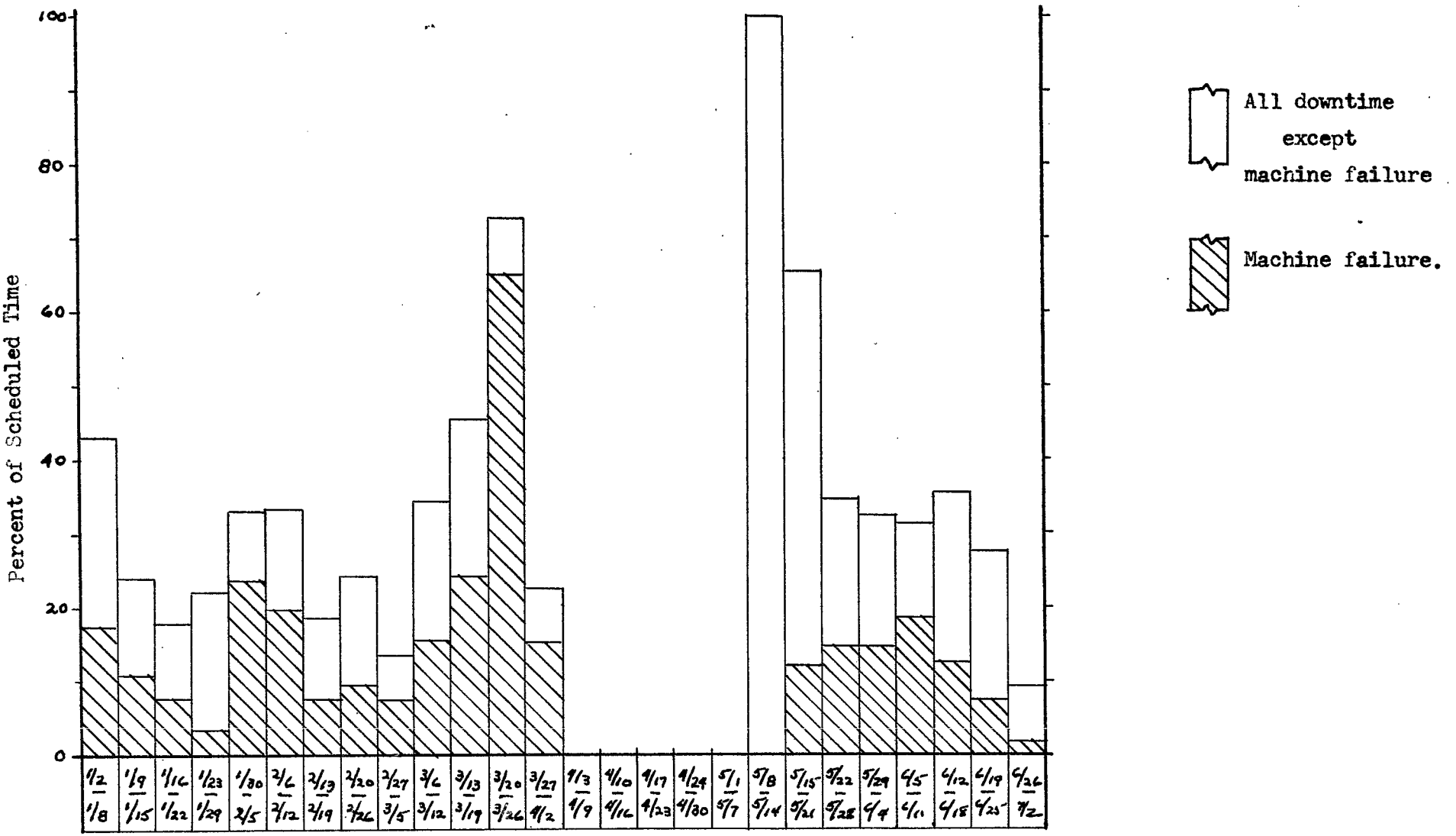
Hours per Week



Weeks - January through June 1965

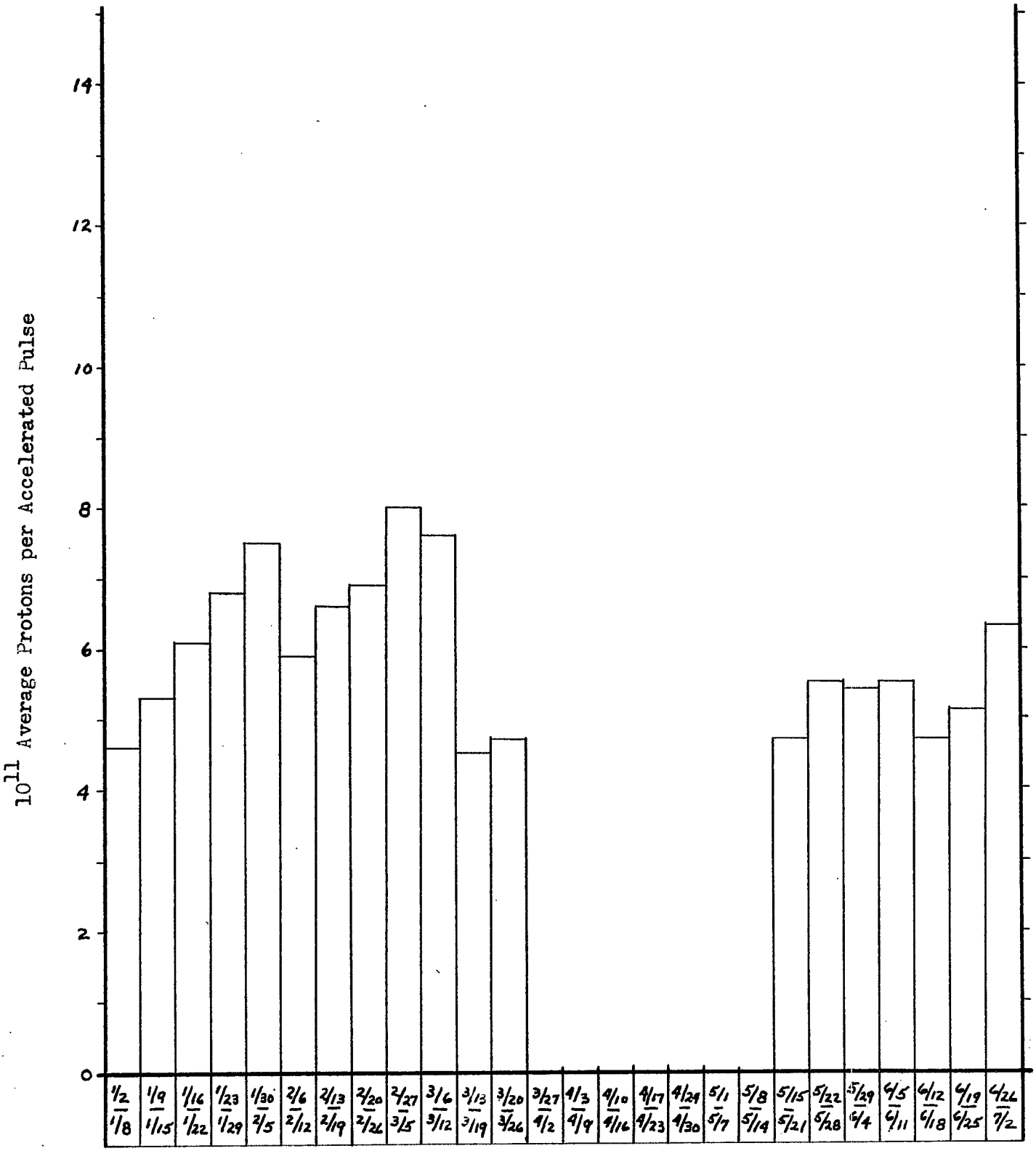
MACHINE DOWNTIME

Percent of Scheduled Time



Weeks – January through June 1965

AVERAGE BEAM INTENSITY



EXPERIMENTAL USERS' OPERATIONS SUMMARY

COUNTER EXPERIMENTS

1965

Hours Period	Experiment Number											
	153	159	184/185	189	192	205	206	210	213	226	229	232
1/ 1- 1/25			331.08R		63.97R	260.77R	173.17R		332.04R		156.99R	
1/26- 2/25			429.77R		198.45R	268.23R	256.08R		434.41R		159.03R	
2/26- 3/25			115.59R			135.71R	176.50R		272.63R		133.25R	
3/26- 4/25		75.25T				117.31R	115.97R					
4/26- 5/25		43.09R 43.09C										
5/26- 6/25		346.77R 298.03C										
Hrs. Test T " Run R " Chgd C		75.25T 389.86R 341.12C	876.44R		262.42R	782.02R	721.72R		1039.08R		449.27R	

EXPERIMENTAL USERS' OPERATIONS SUMMARY

COUNTER EXPERIMENTS

1965

Hours / Period	Experiment Number											
	245	260	278	292	Chem.							
1/ 1- 1/25					11.35							
1/26- 2/25												
2/26- 3/25												
3/26- 4/25												
4/26- 5/25		51.19T										
5/26- 6/25		378.50T			8.59							
Hrs. Test T " Run R " Chgd C		429.69T			19.94							

EXPERIMENTAL USERS' OPERATIONS SUMMARY

BUBBLE CHAMBER EXPERIMENTS

1965

Hours Pix / Period	Experiment Number 80" Bubble Chamber											
	94	120	121	122	127	147	148	155	164	190	198	225
1/ 1- 1/25												
1/26- 2/25						93.51 35,888T 35,888U						
2/26- 3/25			143.53 42,340T 37,062U		68.72 28,200T 13,177U	50.04 34,740T 32,184U						
3/26- 4/25												
4/26- 5/25												
5/26- 6/25					72.98 37,918T 35,650U	72.49 53,274T 47,696U						21.77 21,260T 19,514U
Hrs. On Pix(T) Taken Pix(U) Useful			143.53 42,340T 37,062U		141.70 66,118T 48,827U	236.04 123,902T 115,768U						21.77 21,260T 19,514U

EXPERIMENTAL USERS' OPERATIONS SUMMARY

BUBBLE CHAMBER EXPERIMENTS

1965

Hours Pix / Period	Experiment Number 80" Bubble Chamber							Experiment Number 30" Bubble Chamber				
	236	237	247	263	264			179	214	255	270	
1/ 1- 1/25				200.21 68,475T 68,475U				50.29 42,700T 37,000U				
1/26- 2/25				121.57 122,064T 122,064U								
2/26- 3/25												
3/26- 4/25												
4/26- 5/25			58.07 15,762T 12,910U									
5/26- 6/25	21.76 15,360T 11,074U		123.11 97,856T 78,749U									
Hours On Pix Taken T Pix Useful	21.76 15,360T 11,074U		181.18 113,618T 91,659U	321.78 190,539T 190,539U				50.29 42,700T 37,000U				