



Brookhaven  
National Laboratory

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## AGS OPERATIONS SUMMARY FOR 1965

R. R. Adams

March 1966

Collider Accelerator Department  
**Brookhaven National Laboratory**

**U.S. Department of Energy**

USDOE Office of Science (SC)

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Accelerator Department  
BROOKHAVEN NATIONAL LABORATORY  
Associated Universities, Inc.  
Upton, L.I., N.Y.

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:

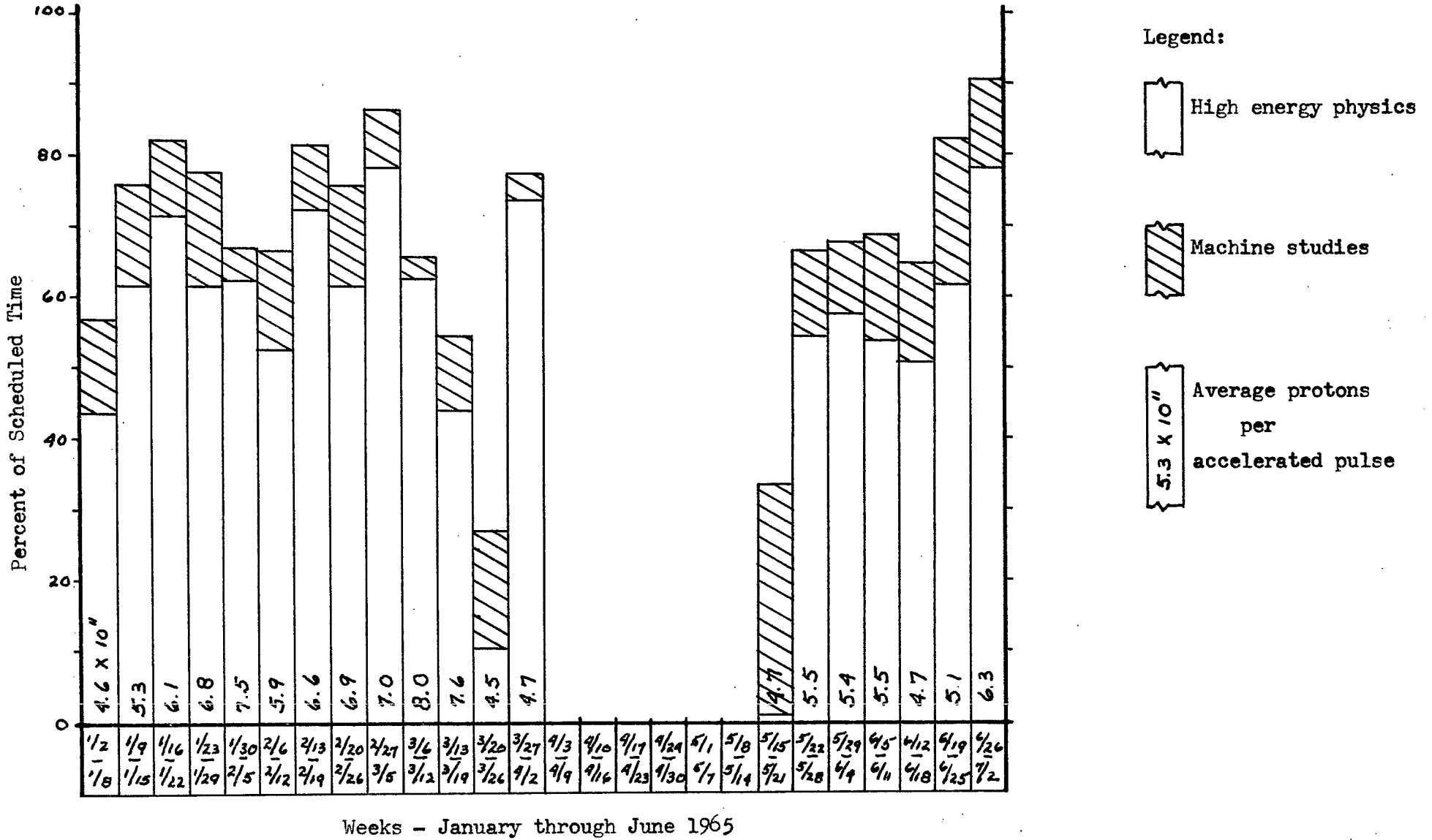
- a) Comparing the first half of the year with the second half, AGS failures decreased from 15.4% to 8.6% of the scheduled operations time. It is hoped that this trend can be maintained. This might, in part, be due to the increased maintenance time. The net gain is obvious; it seems not unreasonable 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  $6 \times 10^{11}$  protons per pulse to  $12 \times 10^{11}$  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

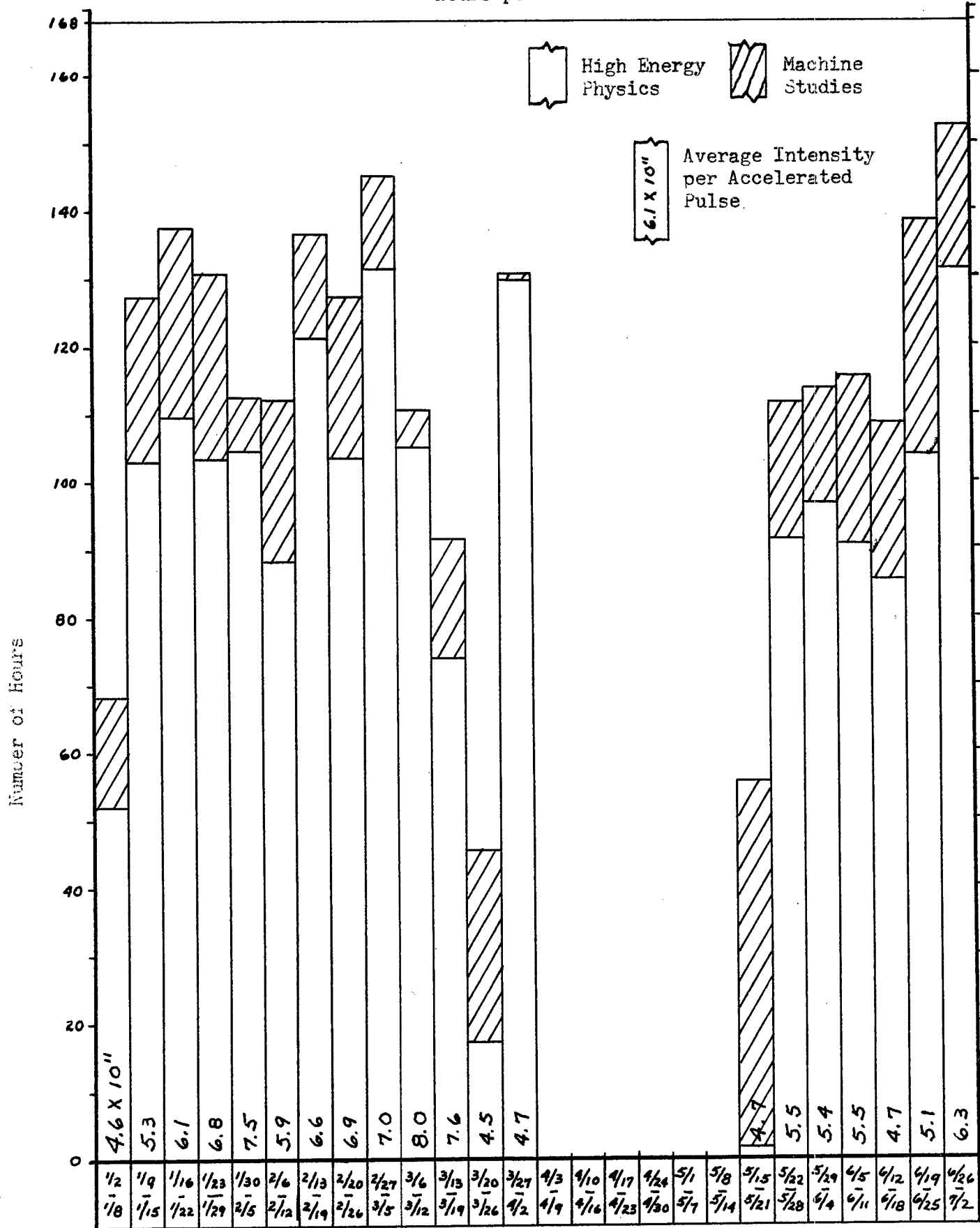
Hours DATE	AGS ON				AGS OFF						
	SCHED. OPRS.	HEP	AGS STUD.	TOTAL AGS ON	SET-UP	REQ'D DOWN	EXP. SET-UP	SCHED. MAINT.	EAO FAIL.	AGS FAIL.	TOTAL DOWN
Jan. 2-Jan. 8	120.00	52.03	16.30	68.33	5.56	-	-	24.00	1.00	21.11	51.67
Jan. 9-Jan. 15	168.00	103.11	24.50	127.61	3.50	0.22	-	17.00	1.33	18.34	40.39
Jan. 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



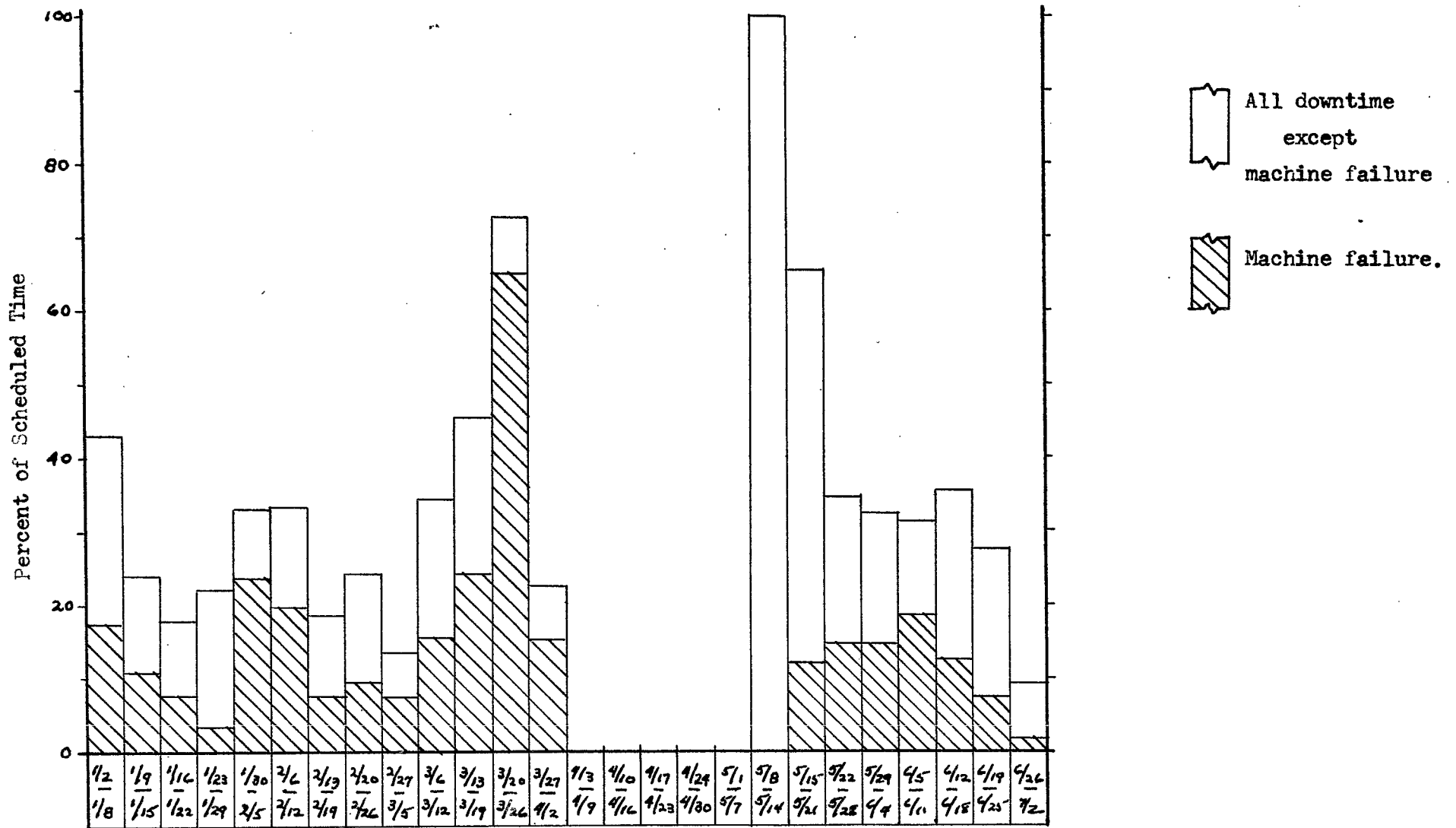
# AGS ON for High Energy Physics and Machine Studies

Hours per Week



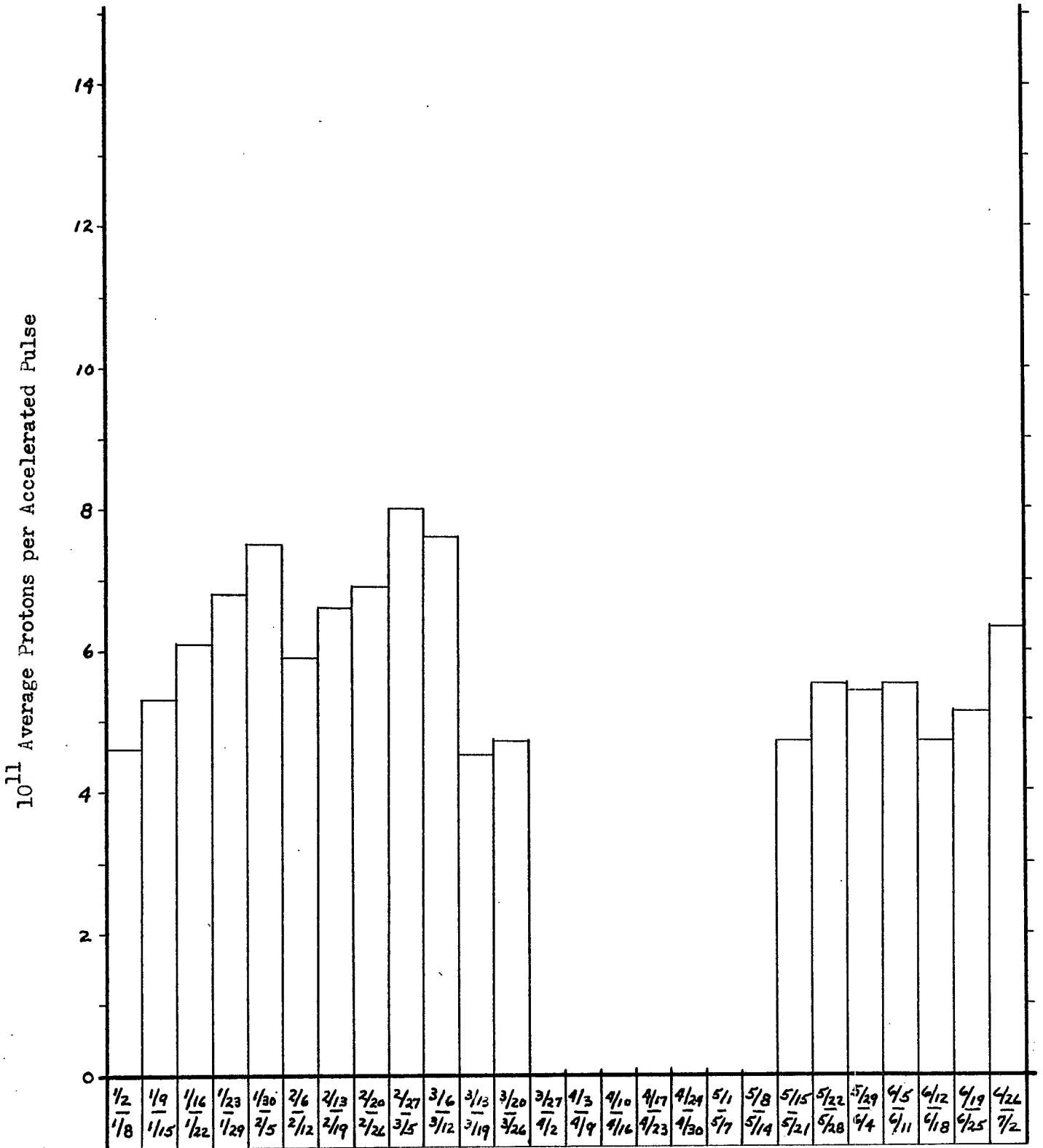
weeks - January through June 1965

MACHINE DOWNTIME  
Percent of Scheduled Time



Weeks - January through June 1965

AVERAGE BEAM INTENSITY



Week - January through June 1965









