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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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#### 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:

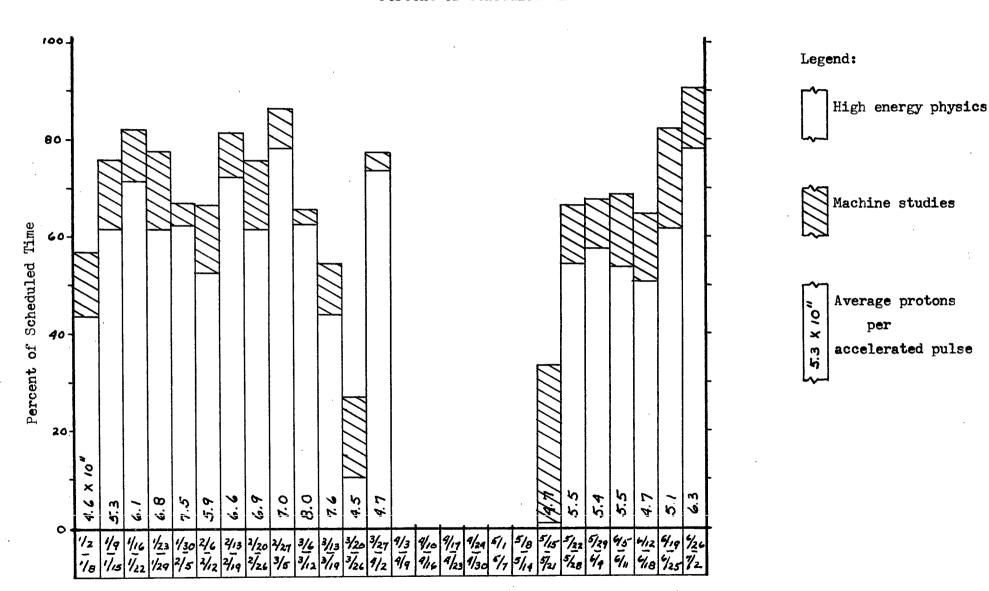
- a) Comparing the first half of the year with the second half, AGS failures decreased from 15.4% to 8.6% of the scheduled operations time. It is hoped that this trend can be maintained. This might, in part, be due to the increased maintenance time. The net gain is obvious; it seems not unreasonable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

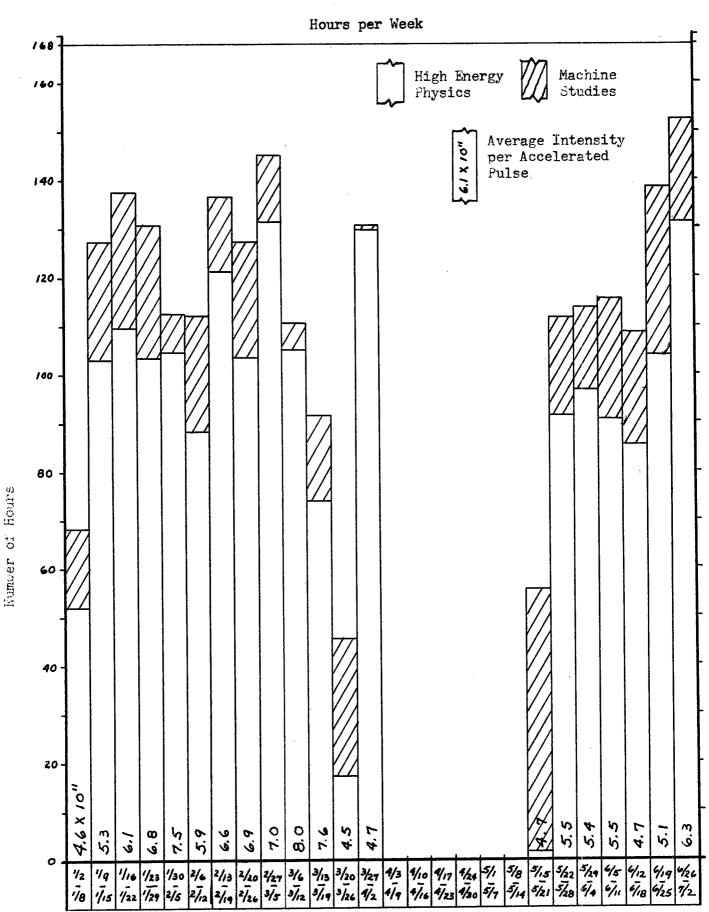
# OPERATIONS SUMMARY January through June 1965

		····	·							1	
Hours		A	GS ON				AGS OFF	ק			
	SCH ED.	** 177	AGS	TOTAL	O 112	REQ D	EXP.	SCHED.	EAO	AGS 7	TOTAL
DATE	OPRS.	HEP	STUD.	AGS ON	SET-UP		SET-UP	MAINT.	FAIL.	FAIL.	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	de the	9.00	***	39.85	55.35
Feb. 6-Feb.12	1.68.00	88.20	23.90	112.10	3.13	0.65	44	19.10	**	33.02	55.90
Feb.13-Feb.19	168.00	121.38	15.36	136.74	7.82	2.48	210	0.73	7.73	12.50	31.26
Feb.20-Feb.26	168.00	103.47	23.89	127.36	1.49	1.15	23	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	Comp.	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	1									
Apr.10-Apr.16	0.0		:								
Apr.17-Apr.23	0.0										
Apr.?4-Apr.30	0.0	> SHUTI	NWO								
May 1-May 7	0.0										
May 8-May 14	24.00		40	-	9.24	439	=	14.76	-	-	24.00
May 15-May 21	168.00	1.72	54.86	56.58	55.12	0.55	œ	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	eco	13.71	4-	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

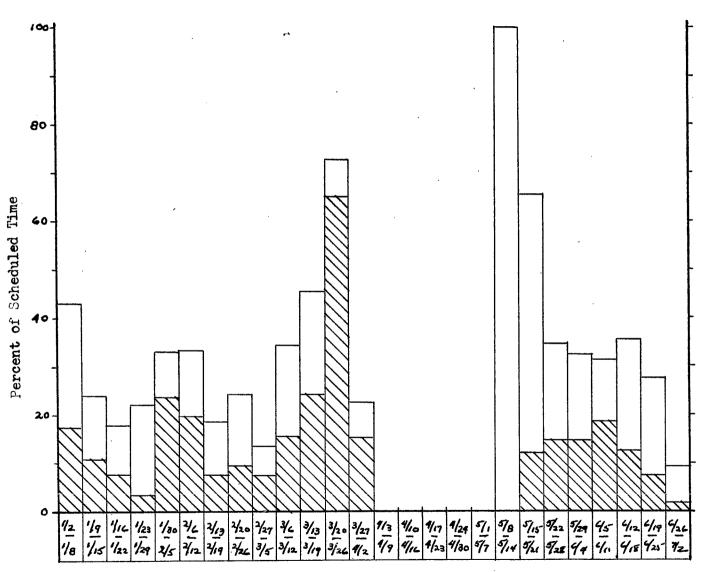


Weeks - January through June 1965



weeks - January through June 1905

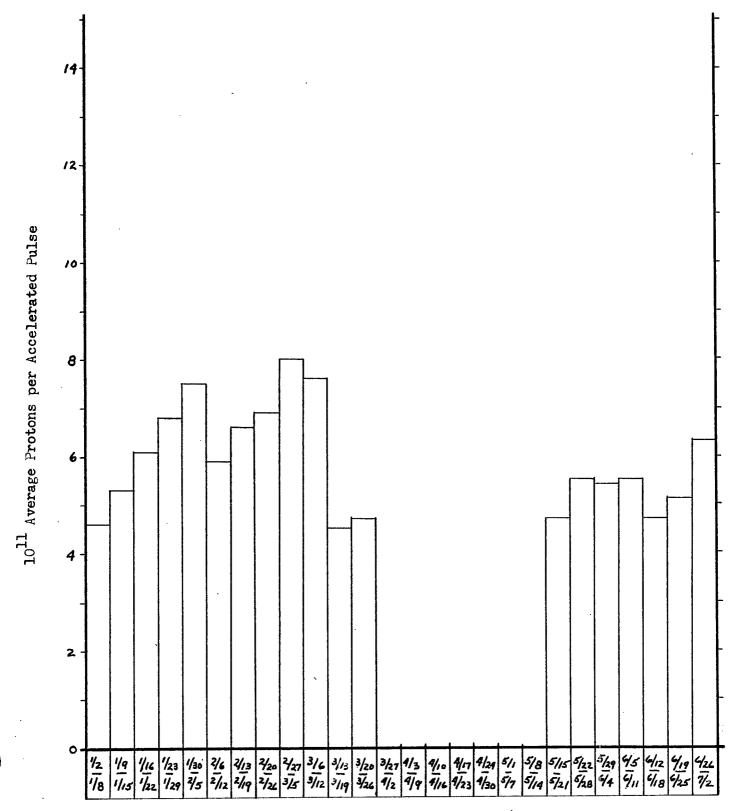
# MACHINE DOWNTIME Percent of Scheduled Time



Weeks - January through June 1965

All downtime except machine failure

Machine failure.



Week - January through June 1965

## EXPERIMENTAL USERS OPERATIONS SUMMARY COUNTER EXPERIMENTS 65

٦	96	į
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Hours	`	Experiment Number										
Period	153	159	184/185	1.89	192	205	206	210	213	<b>2</b> 26	229	232
1/ 1- 1/25			331.08R		63.9 <b>7</b> R	260 <b>.77</b> R	173.17Ř		332.04R	,	156.99R	
1/26- 2/25			429 <b>.77</b> R		198.45R	268.23R	256.08R		434.41R		159.03R	
2/26- 3/25	,		115.59R			135 <b>.71</b> R	176.50R		272.63R	•	133 <b>.</b> 25R	
3/26- 4/25		75.25T				117.31R	115.97R					
lµ/26= 5/25		43.09R 43.090									·	
5/26- 6/25		346.77R 298.030										
				,			·					
Hrs. Test T " Run R " Chgd C		75.25T 389.86R 341.120	876.44R		262 <b>.42</b> R	782.02R	721.72R		1039.08R		<b>ц</b> ц9.27R	

## EXPERIMENTAL USERS OPERATIONS SUMMARY COUNTER EXPERIMENTS 1965

Hours		Experiment Number										
Period	245	260	278	292	Chem.							
1/ 1- 1/25			Anger (C-) a deliberate en heille della Carrynin har	And the state of t	11.35							
1/26- 2/25										•		
2/26- 3/25	,									•		
3/26- 4/25								,		·		
Ļ/26- 5/25		51.19T										
5/26- 6/25		378.50T			8 <b>.5</b> 9							
				•								
Hrs. Test T " Run R " Chgd C		429.69T			19.9կ							

## EXPERIMENTAL USERS OPERATIONS SUMMARY BUBBLE CHAMBER EXPERIMENTS 1965

Hours Pix		Experiment Number 80" Bubble Chamber										
Period	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	<u>50.04</u> 3 <u>4,740</u> T 32,184U				•		
3/26- ц/25												
և/26- 5/25		·										
5/26- 6/25					72.98 37,918T 35,650U	72.49 53,274T 47,696y						21.77 21,260T 19,514U
1									,			
Hrs. On Fix <b>(7)</b> Taken Pix( <b>0)</b> Useful			143.53 42,340T 37,062U	and	141.70 66,118T 48,827U	236.04 123,902T 115,768U						21.77 21,260T 19,514U

### EXPERIMENTAL USERS CPERATIONS SUMMARY BUBBLE CHAMBER EXPERIMENTS

### 1965

Hours Fix	Experime	ent Numbei	r 80" Bubl	ole Chambe	]	Experiment Number 30" Bubble Chamber						
Period	236	237	247	263	264			1 <b>7</b> 9	214	255	<b>27</b> 0	
1/ 1- 1/25	(tal Laterica) - Promotion and State (1925)		Commission of the Commission o	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												
1/26- 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 11,07LU		181.18 113,618T 91,659U	321.78 190,539T 190,539U				50.29 42,700T 37,000U				