

APS Reliability, FY2001

Reliability Budget per
memo of 10/15/2001

System	Unavailability Allotment	Number of Faults	Mean Time to Beam Loss	Faults Per Day
RF	1.0%		200	0.12
Diagnostics	0.2%		800	0.03
PS	1.0%		200	0.12
Controls	0.2%		800	0.03
Water/ME	0.5%		500	0.05
Vacuum	0.3%		1600	0.02
S&A	0.0%		10000	0.00
Operations	0.1%		1600	0.02
OAG	0.1%		1600	0.02
Physics	0.0%		10000	0.00
ID-FE	0.1%		3200	0.01
ISI	0.1%		500	0.05
Other	0.1%		1600	0.02
Unidentified	0.1%		3200	0.01
Total	3.8%		50.4	0.48

Data through Run 2001-3

FY 2001 Actual	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.87%	43.26	55	87.1	0.28	User Downtime Hours	211.51
Diagnostics	0.18%	8.91	6	798.1	0.03		
PS	1.31%	65.62	40	119.7	0.20	Scheduled Hours	5000.30
Controls	0.65%	32.41	30	159.6	0.15		
Water/ME	0.19%	9.51	8	598.6	0.04	Delivered Hours	4788.79
Vacuum	0.10%	5.23	5	957.8	0.03		
S&A	0.00%	0.00	0	0.0	0.00	User Availability	95.8%
Operations	0.11%	5.53	5	957.8	0.03		
OAG	0.01%	0.28	0	0.0	0.00		
Physics	0.01%	0.34	0	0.0	0.00		
ID-FE	0.36%	17.84	7	684.1	0.04		
ISI	0.19%	9.62	8	598.6	0.04		
Other	0.21%	10.33	7	684.1	0.04		
Unidentified	0.20%	10.15	17	281.7	0.09		
Total	4.38%	219.03	188	25.5	0.94		

Run 2000-4	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	1.14%	11.37	18	52.9	0.45	User Downtime Hours	47.15
Diagnostics	0.09%	0.88	0	0.0			
PS	1.38%	13.81	8	119.1	0.20	Scheduled Hours	1000.1
Controls	0.30%	3.02	4	238.2	0.10		
Water/ME	0.19%	1.89	2	476.5	0.05	Delivered Hours	953.0
Vacuum	0.00%	0.00	0	0.0			
S&A	0.00%	0.00	0	0.0		User Availability	95.3%
Operations	0.10%	1.01	2	476.5	0.05		
OAG	0.00%	0.00	0	0.0			
Physics	0.03%	0.34	0	0.0			
ID-FE	0.05%	0.50	0	0.0			
ISI	0.00%	0.00	0	0.0			
Other	0.85%	8.55	2	476.5	0.05		
Unidentified	0.58%	5.78	9	105.9	0.23		
Total	4.71%	47.15	45	21.2	1.13		

Run 2001-1	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.97%	14.85	17	86.8	0.28	User Downtime Hours	52.90
Diagnostics	0.28%	4.28	5	295.1	0.08		
PS	0.82%	12.48	9	163.9	0.15	Scheduled Hours	1528.2
Controls	0.71%	10.81	12	122.9	0.20		
Water/ME	0.17%	2.53	1	1475.3	0.02	Delivered Hours	1475.3
Vacuum	0.00%	0.00	0	0.0			
S&A	0.00%	0.00	0	0.0		User Availability	96.5%
Operations	0.05%	0.77	1	1475.3	0.02		
OAG	0.01%	0.15	0	0.0			
Physics	0.00%	0.00	0	0.0			
ID-FE	0.50%	7.62	5	295.1	0.08		
ISI	0.13%	1.97	0	0.0			
Other	0.00%	0.00	0	0.0			
Unidentified	0.05%	0.77	2	737.6	0.03		
Total	3.68%	56.23	52	28.4	0.85		

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System	Unavailability Allotment		Number of Faults	Mean Time to Beam Loss	Faults Per Day		
Run 2001-2	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.51%	6.32	6	197.4	0.12	User Downtime Hours	55.66
Diagnostics	0.00%	0.02	0	0.0			
PS	1.79%	22.21	7	169.2	0.14	Scheduled Hours	1240.0
Controls	0.92%	11.46	8	148.0	0.16		
Water/ME	0.30%	3.76	3	394.8	0.06	Delivered Hours	1184.3
Vacuum	0.12%	1.53	1	1184.3	0.02		
S&A	0.00%	0.00	0	0.0		User Availability	95.5%
Operations	0.14%	1.68	1	1184.3	0.02		
OAG	0.01%	0.13	0	0.0			
Physics	0.00%	0.00	0	0.0			
ID-FE	0.24%	3.00	1	1184.3	0.02		
ISI	0.27%	3.30	4	296.1	0.08		
Other	0.00%	0.00	0	0.0			
Unidentified	0.21%	2.62	4	296.1	0.14		
Total	4.52%	56.03	35	33.8	0.77		

System	Unavailability Allotment		Number of Faults	Mean Time to Beam Loss	Faults Per Day		
Run 2001-3	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.86%	10.72	14	84.0	0.29	User Downtime Hours	55.7
Diagnostics	0.30%	3.73	1	1176.2	0.02		
PS	1.38%	17.12	16	73.5	0.33	Scheduled Hours	1232.0
Controls	0.57%	7.12	6	196.0	0.12		
Water/ME	0.11%	1.33	2	588.1	0.04	Delivered Hours	1176.2
Vacuum	0.30%	3.70	4	294.1	0.08		
S&A	0.00%	0.00	0	0.0		User Availability	95.5%
Operations	0.17%	2.07	1	1176.2	0.02		
OAG	0.00%	0.00	0	0.0			
Physics	0.00%	0.00	0	0.0			
ID-FE	0.54%	6.72	1	1176.2	0.02		
ISI	0.35%	4.35	4	294.1	0.08		
Other	0.14%	1.78	5	235.2	0.10		
Unidentified	0.08%	0.98	2	588.1	0.04		
Total	4.81%	59.62	56	21.0	1.14		

Updated 10/15/01