

# APS Reliability, FY2002

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		
<b>Total</b>	<b>3.8%</b>			<b>50.4</b>	<b>0.48</b>		
Data through Run 2002-1							
FY 2002 Actual	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.58%	17.73	30	98.4	0.24	User Downtime Hours	93.68
Diagnostics	0.19%	5.72	7	421.9	0.06	Scheduled Hours	3047.00
PS	0.85%	26.00	14	211.0	0.11	Delivered Hours	2953.32
Controls	0.27%	8.15	11	268.5	0.09	User Availability	96.9%
Water/ME	0.08%	2.45	3	984.4	0.02		
Vacuum	0.00%	0.00	0	0.0	0.00		
S&A	0.00%	0.00	0	0.0	0.00		
Operations	0.10%	3.12	1	2953.3	0.01		
OAG	0.10%	3.15	1	2953.3	0.01		
Physics	0.04%	1.22	0	0.0	0.00		
BO	0.24%	7.38	4	738.3	0.03		
ISI	0.13%	3.82	3	984.4	0.02		
Other	0.23%	7.11	14	211.0	0.11		
Unidentified	0.28%	8.40	14	211.0	0.11		
<b>Total</b>	<b>3.09%</b>	<b>94.24</b>	<b>102</b>	<b>29.0</b>	<b>0.83</b>		
Run 2001-4	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.58%	6.53	12	90.1	0.27	User Downtime Hours	38.60
Diagnostics	0.15%	1.72	1	1081.4	0.02	Scheduled Hours	1120.0
PS	0.79%	8.89	7	154.5	0.16	Delivered Hours	1081.4
Controls	0.19%	2.15	2	540.7	0.04	User Availability	96.6%
Water/ME	0.22%	2.45	3	360.5	0.07		
Vacuum	0.00%	0.00	0	0.0			
S&A	0.00%	0.00	0	0.0			
Operations	0.15%	1.65	1	1081.4	0.02		
OAG	0.25%	2.75	1	1081.4	0.02		
Physics	0.10%	1.08	0	0.0			
BO	0.03%	0.33	1	1081.4	0.02		
ISI	0.34%	3.82	3	360.5	0.07		
Other	0.47%	5.28	10	108.1	0.22		
Unidentified	0.18%	2.05	5	216.3	0.11		
<b>Total</b>	<b>3.46%</b>	<b>38.71</b>	<b>46</b>	<b>23.5</b>	<b>1.02</b>		
Run 2002-1	Unavailability Percent	Unavailability Hours	Number of Faults	Mean Time to Beam Loss	Faults Per Day		
RF	0.58%	11.20	18	104.0	0.23	User Downtime Hours	55.1
Diagnostics	0.21%	4.00	6	312.0	0.08	Scheduled Hours	1927.0
PS	0.89%	17.11	7	267.4	0.09	Delivered Hours	1871.9
Controls	0.31%	6.00	9	208.0	0.12	User Availability	97.1%
Water/ME	0.00%	0.00	0	0.0			
Vacuum	0.00%	0.00	0	0.0			
S&A	0.00%	0.00	0	0.0			
Operations	0.08%	1.47	0	0.0			
OAG	0.02%	0.40	0	0.0			
Physics	0.01%	0.13	0	0.0			
BO	0.37%	7.05	3	624.0	0.04		
ISI	0.00%	0.00	0	0.0			
Other	0.10%	1.83	4	468.0	0.05		
Unidentified	0.33%	6.35	9	208.0	0.12		
<b>Total</b>	<b>2.88%</b>	<b>55.54</b>	<b>56</b>	<b>33.4</b>	<b>0.72</b>		