

Listing of Statistics for Run3-1998

Total Amount of User Time in this interval 1154.15 Hours

User periods in this interval

```
-----
05/18/1998 08:01 To 05/25/1998 07:59 167.98 Hours
05/26/1998 08:45 To 06/01/1998 08:00 143.24 Hours
06/02/1998 08:00 To 06/08/1998 08:00 143.99 Hours
06/09/1998 08:00 To 06/15/1998 08:01 144.01 Hours
06/16/1998 15:22 To 06/22/1998 08:00 136.63 Hours
06/23/1998 08:00 To 06/29/1998 08:00 143.99 Hours
06/30/1998 11:00 To 07/06/1998 07:59 140.98 Hours
07/07/1998 10:40 To 07/13/1998 00:00 133.33 Hours
```

```
Delivered Beam                1091.04 Hours
Percentage of Scheduled Time   94.53 %
Downtime During Period        63.11 Hours
Percentage of scheduled time SR current > 10 ma 96.19 %
Average Delivered Current During This Period    77.95 ma
Total integrated Current During This Period     85.05 A-hr
```

Data from an on going fill (if one exists) is not used in Fill length calculations.

```
Mean Fill Duration in Period      37.62 Hours
Mean Fill Duration from Poisson Fit 41.13 Hours
Mean Time Between Faults (MTBF)   38.97 Hours
Faults per Day of Delivered Beam   0.62
```

Valid fills Beginning in this Time Interval				Reason for	Length	Downtime is associated with the end of a fill.
Fill#	Start	End	Duration	Fill Termination	of	The first fill of a period will have any
					Downtime	downtime before the fill on the line above.
# 1	05/18 08:03	To 05/19 07:45	23.68	Int Refill: Low Current	0.05	
# 2	05/19 07:57	To 05/20 07:45	23.80	Int Refill: Low Current	0.21	
# 3	05/20 07:53	To 05/20 09:22	1.48	S16B:S3 water leak [PS]	0.14	
# 4	05/20 10:51	To 05/20 19:05	8.23	BPLD, S16B:Q4 [PS]	1.48 converter swap, also quad under sextupole	
# 6	05/20 20:17	To 05/21 03:02	6.77	Orphan Load, RF4 [RF]	1.19 trouble refilling, script problems	
# 7	05/21 04:06	To 05/22 05:10	25.05	5ID bpld - rt fdbk [DIA]	1.07 recovery	
# 8	05/22 06:35	To 05/22 07:04	0.49	Orphan Load, RF4 [RF]	1.42 additional trip for same reason, recovery	
# 9	05/22 07:41	To 05/22 11:56	4.25	BPLD, S16B:Q4 [PS]	0.61 recovery	
# 10	05/22 12:20	To 05/23 07:45	19.42	Int Refill: Low Current	0.40	
# 11	05/23 10:21	To 05/24 08:23	22.04	RF2 trip, PSS [RF]	2.60 replacement of S16B:Q4 and complications	
# 12	05/24 08:49	To 05/24 12:44	3.92	S29A:Q4 trip [PS]	0.43	
# 13	05/24 13:11	To 05/25 07:59	18.81	Int Dump: End of Period	0.45	
					0.00	
					0.30	

# 14	05/26 09:04	To 05/26 11:46	2.71	Int Dump: End of Period	0.14	.....
# 15	05/26 11:54	To 05/27 07:55	20.00	Int Refill: Low Current	0.11	.....
# 16	05/27 08:01	To 05/28 07:45	23.72	Int Refill: Low Current	0.12	.....
# 17	05/28 07:52	To 05/29 02:14	18.37	rf4 crowbar [RF]	2.16	recovery
# 18	05/29 04:24	To 05/30 07:44	27.33	Int Refill: Low Current	0.18	.....
# 19	05/30 07:54	To 05/30 17:19	9.41	rf2 trip, relay [RF]	1.32	recovery
# 20	05/30 18:38	To 05/31 07:44	13.10	Int Refill: Low Current	0.14	.....
# 21	05/31 07:53	To 05/31 21:45	13.87	rf1 trip SCR AC OI [RF]	0.40	recovery
# 22	05/31 22:09	To 06/01 08:00	9.85	Int Dump: End of Period	0.00	.....

# 23	06/02 09:25	To 06/02 11:18	1.87	rf3 reflected power [RF]	1.42	L4 modulator
# 24	06/02 11:50	To 06/02 17:24	5.57	rf3 crowbar [RF]	0.53	recovery
# 25	06/02 21:45	To 06/03 07:44	9.99	Int Refill: Low Current	4.35	L4 modulator, control law, subsequent rf3 problems
# 26	06/03 07:57	To 06/03 16:04	8.11	rf4 trip [RF]	0.23	.....
# 27	06/03 17:18	To 06/04 07:44	14.42	Int Refill: Low Current	1.23	recovery, trouble injecting
# 28	06/04 08:05	To 06/04 13:16	5.19	rf3 crowbar [RF]	0.36	.....
# 29	06/04 13:33	To 06/05 07:44	18.19	Int Refill: Low Current	0.27	recovery
# 30	06/05 08:11	To 06/05 14:52	6.68	rf1 orphan load leak[RF]	0.44	.....
# 32	06/05 18:06	To 06/06 07:45	13.66	Int Refill: Low Current	3.23	repair, recovery
# 33	06/06 07:54	To 06/07 07:45	23.84	Int Refill: Low Current	0.14	.....
# 34	06/07 08:13	To 06/08 08:00	23.78	Int Dump: End of Period	0.47	.....

# 35	06/09 08:18	To 06/10 08:01	23.71	Int Refill: Low Current	0.30	
# 36	06/10 08:47	To 06/11 07:47	23.00	Int Refill: Low Current	0.77	beam lost during fill on fill, linac eff down
# 37	06/11 08:36	To 06/11 14:30	5.89	SR Fire Alarm [OTHER]	0.82	replace S15A:S3 converter
# 38	06/11 17:02	To 06/12 00:11	7.15	rf1 klyst out arc [RF]	2.54	recovery
# 39	06/12 01:41	To 06/12 07:46	6.08	Int Refill: Low Current	1.50	rf system swap, recovery
# 40	06/12 07:57	To 06/13 00:57	17.00	VV02 sec. 2 closed [CTL]	0.19	.....
# 41	06/13 01:41	To 06/13 07:45	6.06	Int Refill: Low Current	0.73	orbit control problems
# 42	06/13 07:59	To 06/14 07:45	23.77	Int Refill: Low Current	0.24	.....
# 43	06/14 07:57	To 06/15 02:18	18.34	S32,33 corr trip [PS]	0.21	.....
# 44	06/15 02:58	To 06/15 07:59	5.03	Int Dump: End of Period	0.66	recovery

# 49	06/16 15:22	To 06/17 07:44	16.36	Int Refill: Low Current	0.00	
# 50	06/17 07:52	To 06/18 07:44	23.87	Int Refill: Low Current	0.14	.....
# 51	06/18 07:53	To 06/18 20:33	12.66	Int Dump: End of Period	0.15	.....
# 52	06/18 21:33	To 06/19 07:45	10.21	Int Refill: Low Current	0.99	operations to tornado shelter, refill
# 53	06/19 08:12	To 06/20 07:45	23.54	Int Refill: Low Current	0.46	orbit problem... operations
# 54	06/20 07:55	To 06/21 03:05	19.16	rf3 kalmus amp [RF]	0.18	.....
# 55	06/21 05:12	To 06/22 08:00	26.80	Int Dump: End of Period	2.12	switch to rf2, recovery

# 56	06/23 08:00	To 06/24 07:45	23.74	Int Refill: Low Current	0.00	
# 57	06/24 08:13	To 06/25 07:45	23.53	Int Refill: Low Current	0.47	5ID BPLD trip, ID opening delay
					0.49	rf3 control law problem

# 58	06/25 08:14	To 06/26 04:52	20.63	IOC soaked [OTHER]	4.28	converter problems, IOC reboot reload
# 59	06/26 09:08	To 06/26 11:54	2.76	more water damage[OTHER]	0.63	recovery
# 60	06/26 12:32	To 06/26 13:11	0.65	rf3 collect int [OPS]	0.33	recovery
# 61	06/26 13:31	To 06/27 07:46	18.25	Int Refill: Low Current	0.12	.....
# 62	06/27 07:53	To 06/28 07:45	23.86	Int Refill: Low Current	0.13	.....
# 63	06/28 07:53	To 06/29 08:00	24.12	Int Dump: End of Period	0.00	.....

# 66	06/30 11:00	To 06/30 13:33	2.55	Int Dump: End of Period	0.15	.....
# 67	06/30 13:42	To 07/01 07:44	18.03	Int Refill: Low Current	0.18	.....
# 68	07/01 07:55	To 07/02 07:44	23.83	Int Refill: Low Current	0.14	.....
# 69	07/02 07:53	To 07/03 07:44	23.85	Int Refill: Low Current	0.37	.....
# 70	07/03 08:07	To 07/03 20:05	11.97	rf1 trip, lightning [RF]	0.79	recovery
# 71	07/03 20:53	To 07/04 07:44	10.85	Int Refill: Low Current	0.42	.....
# 72	07/04 08:09	To 07/05 07:44	23.59	Int Refill: Low Current	0.20	.....
# 73	07/05 07:56	To 07/06 07:59	24.06	Int Dump: End of Period	0.00	.....

# 75	07/07 10:41	To 07/07 19:45	9.06	Int Refill: Low Current	0.22	.....
# 76	07/07 19:58	To 07/08 07:44	11.77	Int Refill: Low Current	0.18	.....
# 77	07/08 07:55	To 07/08 19:44	11.83	Int Refill: Low Current	0.15	.....
# 78	07/08 19:54	To 07/08 22:39	2.76	S10B:V3 [PS]	2.95	recovery, dipole ps problems
# 79	07/09 01:36	To 07/09 07:58	6.37	Int Refill: Low Current	0.17	.....
# 80	07/09 08:08	To 07/09 19:59	11.85	Int Refill: Low Current	0.12	.....
# 81	07/09 20:07	To 07/10 03:31	7.40	rf PSS trip [RF]	7.89	repair of fans, trouble injecting, SR dipole rdbk
# 82	07/10 11:24	To 07/10 19:45	8.34	Int Refill: Low Current	0.11	.....
# 83	07/10 19:51	To 07/11 07:47	11.94	Int Refill: Low Current	0.16	.....
# 84	07/11 07:57	To 07/11 19:45	11.80	Int Refill: Low Current	0.09	.....
# 85	07/11 19:50	To 07/12 07:55	12.07	Int Refill: Low Current	0.11	.....
# 86	07/12 08:01	To 07/12 08:26	0.40	14BM PSS trip [XFD]	2.64	recovery, SR dipole PS
# 87	07/12 11:04	To 07/13 00:00	12.94	Int Dump: End of Period	0.00	.....