Listing of Statistics for Run3-2020 (Created Wed Aug 25 07:30:26 CDT 2021)

Total Amount of User Time in this interval 1608.96 Hours

User periods in this interval

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10/01/2020 08:00  To  10/12/2020 08:00 264.00 Hours, Delivered Beam: 228.51 Hours,  5 Fault(s),  45.70 MTBF,  86.56% of Sched. Time
10/13/2020 08:00  To  10/19/2020 08:00 144.00 Hours, Delivered Beam: 138.43 Hours,  2 Fault(s),  69.22 MTBF,  96.13% of Sched. Time
10/20/2020 08:00  To  10/26/2020 08:00 144.00 Hours, Delivered Beam: 140.82 Hours,  2 Fault(s),  70.41 MTBF,  97.79% of Sched. Time
10/27/2020 08:00  To  11/02/2020 08:00 145.00 Hours, Delivered Beam: 142.70 Hours,  1 Fault(s), 142.70 MTBF,  98.42% of Sched. Time
11/03/2020 08:00  To  11/09/2020 08:00 144.00 Hours, Delivered Beam: 127.56 Hours,  4 Fault(s),  31.89 MTBF,  88.58% of Sched. Time
11/11/2020 08:00  To  11/16/2020 08:00 120.00 Hours, Delivered Beam: 114.44 Hours,  1 Fault(s), 114.44 MTBF,  95.36% of Sched. Time
11/17/2020 08:00  To  11/25/2020 08:00 192.00 Hours, Delivered Beam: 191.04 Hours,  1 Fault(s), 191.04 MTBF,  99.50% of Sched. Time
11/27/2020 08:00  To  12/07/2020 08:00 240.00 Hours, Delivered Beam: 237.64 Hours,  2 Fault(s), 118.82 MTBF,  99.02% of Sched. Time
12/08/2020 08:00  To  12/17/2020 08:00 216.00 Hours, Delivered Beam: 215.99 Hours,  0 Fault(s), 215.99 MTBF, 100.00% of Sched. Time
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Delivered Beam	1537.14 Hours
Percentage of Scheduled Time	95.54 %
Downtime During Period	71.83 Hours
Percentage of scheduled time SR current > 10 ma	96.29 %
Average Delivered Current During This Period	98.55 mA
Total integrated Current During This Period	151.49 A-hr

Mean Fill Duration in Period	80.90 Hours
Mean Fill Duration from Poisson Fit	95.14 Hours
Mean Time Between Faults (MTBF)	85.40 Hours
Faults per Day of Delivered Beam	0.28
Total Number of Faults	18
Scheduled Topup Time	1104.00 Hours

Valid fills Beginning in this Time Interval (min: 1.0)				Reason for Fill Termination	Length of Downtime	Downtime is associated with the end of a fill. The first fill of a period will have any downtime before the fill on the line above.
Fill#	Start	End	Duration			
					0.00	
1	10/01 08:00	To 10/02 00:06	16.10	RF4 HVPS trip[RF]	1.05	Booster RF trip during recovery, refilled
2	10/02 01:09	To 10/02 10:15	9.10	21ID PSS trip [SI]	3.00	Emittance troubleshooting 1.35hr-SI, 1.25hr-AOP
3	10/02 13:15	To 10/02 14:44	1.49	RF4 HVPS trip [RF]	2.75	WG switch, Booster recovery issues, adjustments
4	10/02 17:29	To 10/09 18:05	168.62	21-ID PSS trip[SI]	6.74	IT issues delayed recovery Si-0.5 hr.,IT-6.52 hr.
5	10/10 00:50	To 10/11 03:51	27.01	19ID FE Vacuum[MOM]	21.95	Access to troubleshoot & pump down SR vacuum
6	10/12 01:48	To 10/12 07:59	6.20	Int Dump: End of Period	0.00	
					0.74	35ID closed with PS1 shutter open
7	10/13 08:44	To 10/14 14:56	30.20	29ID BPLD Htbt err.[CTL]	1.16	Replaced VME P.S., loaded limits, stored beam
8	10/14 16:05	To 10/17 12:54	68.81	S21 RTFB Htbt err.[CTL]	3.67	Multiple reboots, replaced 21fb dsp board
9	10/17 16:34	To 10/19 07:59	39.42	Int Dump: End of Period	0.00	
					0.00	
10	10/20 08:00	To 10/20 23:00	15.01	Susp. P.S. glitch [PS]	2.50	Investigation, opened RTFB trip limits
11	10/21 01:30	To 10/22 04:13	26.71	Under Investigation	0.67	Investigation, refill
12	10/22 04:53	To 10/26 07:59	99.10	Int Dump: End of Period	0.00	
					1.47	Access to fix 19-ID FE vac leak {MOM}
13	10/27 09:28	To 10/30 13:28	76.01	RF3 HVPS fault [RF]	0.83	Investigation, refill
14	10/30 14:18	To 11/02 07:59	66.69	Int Dump: End of Period	0.00	
					6.23	Recovery from S19 broken pipe {DIAG]
15	11/03 14:13	To 11/03 17:35	3.36	S19A:V3 P.S. trip [PS]	2.41	Swapped supply, conditioned, stored beam
16	11/03 20:00	To 11/05 09:44	37.73	Pump521 flow glitch[MOM]	1.74	Investigation, conditioned P.S., refill
17	11/05 11:28	To 11/07 09:51	46.38	S34C:BM P.S. glitch[PS]	0.46	Investigation, refill
18	11/07 10:19	To 11/08 02:39	16.33	S34C:BM PS glitch [PS]	5.59	2nd beam loss, swapped supply, conditioned
20	11/08 08:14	To 11/09 07:59	23.76	Int Dump: End of Period	0.00	
					2.23	RF3 trips, waveguide switch, refill [RF]

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# 21  11/11 10:13  To  11/15 17:59  103.76  | 13-ID EPS trip[SI]       |  3.34 Investigation, replaced PLC, refilled
# 22  11/15 21:19  To  11/16 07:59   10.68  | Int Dump: End of Period  |  0.00
-------------------------------------------------------------------------------------------------------------------------------
                                             |                          |  0.00
# 23  11/17 08:00  To  11/18 09:24   25.40  | Human Error [AOP]        |  0.96 Investigation, refill
# 24  11/18 10:21  To  11/25 07:59  165.64  | Int Dump: End of Period  |  0.00
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                                             |                          |  0.44 Beam turned over to MCR too late to prepare [AOP]
# 25  11/27 08:26  To  12/03 13:11  148.76  | 9BM-A Door Fault[??]     |  1.41 Recovered from CA, refilled ring
# 26  12/03 14:36  To  12/05 13:40   47.07  | RF4 HVPS trip [RF]       |  0.51 Recovered RF system, refilled
# 27  12/05 14:11  To  12/07 07:59   41.81  | Int Dump: End of Period  |  0.00
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                                             |                          |  0.01
# 28  12/08 08:00  To  12/17 07:59  215.99  | Int Dump: End of Period  |  0.00

Top-Up Mode Statistics
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Target Current Range +/- 2.0, Minimum Injector Downtime = 8.0 minutes

Total
  Current in Range during Scheduled Topup Time   92.58 %
  Current in Range during Delivered Beam Time    97.26 %
  Injector Availability                          97.09 %

Period Beginning 10/01/2020 08:00
Current in Range                                 96.94 %
Injector Availability                            96.84 %
  Out of Range at:     10/02/2020 17:47:12 to 10/02/2020 18:23:12 :  36.00 minutes
    Injector downtime: 10/02/2020 17:42:16 to 10/02/2020 18:22:08 :  39.87 minutes
  Out of Range at:     10/11/2020 01:25:28 to 10/11/2020 01:37:52 :  12.40 minutes
    Injector downtime: 10/11/2020 01:20:32 to 10/11/2020 01:37:48 :  17.27 minutes
  Out of Range at:     10/12/2020 01:48:08 to 10/12/2020 07:59:52 : 371.73 minutes
    Injector downtime: 10/12/2020 01:43:40 to 10/12/2020 07:59:12 : 375.53 minutes

Period Beginning 10/13/2020 08:00
Current in Range                                 97.39 %
Injector Availability                            97.09 %
  Out of Range at:     10/13/2020 08:44:32 to 10/13/2020 08:48:00 :   3.47 minutes
    Injector downtime: 10/13/2020 08:36:32 to 10/13/2020 08:44:32 :   8.00 minutes (est)
  Out of Range at:     10/13/2020 15:51:04 to 10/13/2020 15:56:32 :   5.47 minutes
    Injector downtime: 10/13/2020 15:43:04 to 10/13/2020 15:51:04 :   8.00 minutes (est)
  Out of Range at:     10/13/2020 16:22:56 to 10/13/2020 18:27:36 : 124.67 minutes
    Injector downtime: 10/13/2020 16:18:00 to 10/13/2020 18:27:32 : 129.53 minutes
  Out of Range at:     10/14/2020 12:24:24 to 10/14/2020 12:37:20 :  12.93 minutes
    Injector downtime: 10/14/2020 12:19:28 to 10/14/2020 12:35:04 :  15.60 minutes
  Out of Range at:     10/15/2020 17:27:28 to 10/15/2020 18:13:04 :  45.60 minutes
    Injector downtime: 10/15/2020 17:22:32 to 10/15/2020 18:13:00 :  50.47 minutes
  Out of Range at:     10/17/2020 12:29:20 to 10/17/2020 12:54:16 :  24.93 minutes
    Injector downtime: 10/17/2020 12:24:24 to 10/17/2020 12:54:12 :  29.80 minutes

Period Beginning 10/20/2020 08:00
Current in Range                                 95.95 %
Injector Availability                            95.74 %
  Out of Range at:     10/20/2020 08:40:00 to 10/20/2020 09:38:16 :  58.27 minutes
    Injector downtime: 10/20/2020 08:35:04 to 10/20/2020 09:38:12 :  63.13 minutes
  Out of Range at:     10/20/2020 14:59:52 to 10/20/2020 15:02:56 :   3.07 minutes
    Injector downtime: 10/20/2020 14:51:52 to 10/20/2020 14:59:52 :   8.00 minutes (est)
  Out of Range at:     10/20/2020 16:49:36 to 10/20/2020 16:58:48 :   9.20 minutes
    Injector downtime: 10/20/2020 16:44:40 to 10/20/2020 16:58:44 :  14.07 minutes
  Out of Range at:     10/22/2020 07:00:00 to 10/22/2020 11:31:20 : 271.33 minutes
    Injector downtime: 10/22/2020 06:55:04 to 10/22/2020 11:30:08 : 275.07 minutes

Period Beginning 11/11/2020 08:00
Current in Range                                 95.99 %
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Injector Availability                          95.84 %
  Out of Range at:     11/14/2020 18:27:52 to 11/14/2020 23:02:08 : 274.27 minutes
    Injector downtime: 11/14/2020 18:22:56 to 11/14/2020 23:00:48 : 277.87 minutes
  Out of Range at:     11/15/2020 22:56:08 to 11/15/2020 22:56:32 :   0.40 minutes
    Injector downtime: 11/15/2020 22:48:08 to 11/15/2020 22:56:08 :   8.00 minutes (est)
  Out of Range at:     11/15/2020 23:00:32 to 11/15/2020 23:01:28 :   0.93 minutes

Period Beginning 11/17/2020 08:00
Current in Range                               98.35 %
Injector Availability                          98.22 %
  Out of Range at:     11/18/2020 10:22:16 to 11/18/2020 10:29:04 :   6.80 minutes
    Injector downtime: 11/18/2020 10:14:16 to 11/18/2020 10:22:16 :   8.00 minutes (est)
  Out of Range at:     11/18/2020 10:48:08 to 11/18/2020 11:40:32 :  52.40 minutes
    Injector downtime: 11/18/2020 10:43:12 to 11/18/2020 11:40:28 :  57.27 minutes
  Out of Range at:     11/19/2020 06:58:08 to 11/19/2020 07:17:28 :  19.33 minutes
    Injector downtime: 11/19/2020 06:53:12 to 11/19/2020 07:17:24 :  24.20 minutes
  Out of Range at:     11/23/2020 11:35:20 to 11/23/2020 13:25:36 : 110.27 minutes
    Injector downtime: 11/23/2020 11:30:24 to 11/23/2020 13:24:48 : 114.40 minutes

Period Beginning 11/27/2020 08:00
Current in Range                               98.00 %
Injector Availability                          97.81 %
  Out of Range at:     11/28/2020 17:18:56 to 11/28/2020 18:38:08 :  79.20 minutes
    Injector downtime: 11/28/2020 17:14:00 to 11/28/2020 18:35:52 :  81.87 minutes
  Out of Range at:     12/01/2020 10:25:28 to 12/01/2020 11:45:04 :  79.60 minutes
    Injector downtime: 12/01/2020 10:20:32 to 12/01/2020 11:44:32 :  84.00 minutes
  Out of Range at:     12/01/2020 14:18:32 to 12/01/2020 14:27:12 :   8.67 minutes
    Injector downtime: 12/01/2020 14:13:36 to 12/01/2020 14:27:08 :  13.53 minutes
  Out of Range at:     12/01/2020 22:16:48 to 12/01/2020 22:21:36 :   4.80 minutes
    Injector downtime: 12/01/2020 22:08:48 to 12/01/2020 22:16:48 :   8.00 minutes (est)
  Out of Range at:     12/01/2020 22:36:00 to 12/01/2020 23:40:16 :  64.27 minutes
    Injector downtime: 12/01/2020 22:31:04 to 12/01/2020 23:40:12 :  69.13 minutes
  Out of Range at:     12/03/2020 20:17:52 to 12/03/2020 20:18:00 :   0.13 minutes
    Injector downtime: 12/03/2020 20:09:52 to 12/03/2020 20:17:52 :   8.00 minutes (est)
  Out of Range at:     12/06/2020 06:48:08 to 12/06/2020 07:36:00 :  47.87 minutes
    Injector downtime: 12/06/2020 06:47:56 to 12/06/2020 07:35:56 :  48.00 minutes
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