

Listing of Statistics for Run1-2023 (Created Fri Apr 21 13:57:30 CDT 2023)

Total Amount of User Time in this interval 1558.97 Hours

User periods in this interval

01/31/2023 08:00	To	02/06/2023 08:00	144.00 Hours,	Delivered Beam: 132.64 Hours,	4 Fault(s),	33.16 MTBF,	92.11% of Sched. Time
02/07/2023 08:00	To	02/13/2023 08:00	144.00 Hours,	Delivered Beam: 143.99 Hours,	0 Fault(s),	143.99 MTBF,	100.00% of Sched. Time
02/14/2023 08:00	To	02/20/2023 08:00	144.00 Hours,	Delivered Beam: 133.95 Hours,	6 Fault(s),	22.32 MTBF,	93.02% of Sched. Time
02/21/2023 08:00	To	02/27/2023 08:00	144.00 Hours,	Delivered Beam: 140.77 Hours,	3 Fault(s),	46.92 MTBF,	97.76% of Sched. Time
02/28/2023 08:00	To	03/06/2023 08:00	144.00 Hours,	Delivered Beam: 142.36 Hours,	2 Fault(s),	71.18 MTBF,	98.86% of Sched. Time
03/08/2023 08:00	To	03/13/2023 08:00	119.00 Hours,	Delivered Beam: 117.53 Hours,	1 Fault(s),	117.53 MTBF,	98.76% of Sched. Time
03/14/2023 08:00	To	03/20/2023 08:00	144.00 Hours,	Delivered Beam: 142.81 Hours,	1 Fault(s),	142.81 MTBF,	99.18% of Sched. Time
03/21/2023 08:00	To	03/27/2023 08:00	144.00 Hours,	Delivered Beam: 127.24 Hours,	2 Fault(s),	63.62 MTBF,	88.36% of Sched. Time
03/28/2023 08:00	To	04/03/2023 08:00	144.00 Hours,	Delivered Beam: 141.05 Hours,	2 Fault(s),	70.53 MTBF,	97.95% of Sched. Time
04/04/2023 08:00	To	04/10/2023 08:00	144.00 Hours,	Delivered Beam: 139.23 Hours,	2 Fault(s),	69.62 MTBF,	96.69% of Sched. Time
04/11/2023 08:00	To	04/17/2023 08:01	144.02 Hours,	Delivered Beam: 137.00 Hours,	3 Fault(s),	45.67 MTBF,	95.13% of Sched. Time

Delivered Beam 1498.58 Hours
 Percentage of Scheduled Time 96.13 %
 Downtime During Period 60.39 Hours
 Percentage of scheduled time SR current > 10 ma 96.64 %
 Average Delivered Current During This Period 101.88 mA
 Total integrated Current During This Period 152.68 A-hr

Mean Fill Duration in Period 55.50 Hours
 Mean Fill Duration from Poisson Fit 64.18 Hours
 Mean Time Between Faults (MTBF) 57.64 Hours
 Faults per Day of Delivered Beam 0.42
 Total Number of Faults 26
 Scheduled Topup Time 1559.00 Hours

Valid fills Beginning in this Time Interval	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 (min: 1.0)			
# 1 01/31 08:00 To 01/31 12:13 4.22	Dimtel instability [AOP]	0.00	
# 2 01/31 12:25 To 02/03 12:18 71.88	S26 GESPAC failed [PS]	0.21	
# 3 02/03 14:26 To 02/03 20:50 6.39	Dimtel instability [AOP]	2.14	
# 4 02/03 20:54 To 02/03 23:46 2.87	S26 GESPAC failed [PS]	0.07	
# 5 02/04 08:43 To 02/06 07:59 47.28	Int Dump: End of Period	8.94	K2 recovery 2.3 hrs RF S26 GESPAC 4.2 hrs PS 2.5 MCR
# 6 02/07 08:00 To 02/13 07:59 143.99	Int Dump: End of Period	0.00	
# 7 02/14 08:00 To 02/14 13:30 5.51	Dimtel instability [AOP]	0.00	
# 8 02/14 13:51 To 02/16 23:22 57.52	Unknown beam motion [UNK]	0.34	
# 9 02/17 00:03 To 02/17 01:11 1.13	S31/32 H20 flt [MOM]	0.68	
# 10 02/17 02:57 To 02/17 08:00 5.05	S31B:Q4 klixon [MOM]	1.77	
# 11 02/17 09:50 To 02/17 15:10 5.33	RF4 ion gage [RF]	1.82	
# 12 02/17 15:43 To 02/17 19:54 4.18	S31B:Q4 klixon [MOM]	0.55	
# 13 02/18 00:47 To 02/20 08:00 55.21	Int Dump: End of Period	4.88	
# 14 02/21 08:00 To 02/25 00:26 88.44	S4B:V4 glitch [AOP]	0.00	
# 15 02/25 01:12 To 02/26 21:56 44.73	14ID FEEPS flt [SI]	0.77	
# 16 02/26 23:54 To 02/27 01:54 1.99	RF-3 HVPS trip[RF]	1.97	
# 17 02/27 02:23 To 02/27 07:59 5.61	Int Dump: End of Period	0.48	
# 18 02/28 08:00 To 03/01 12:10 28.17	S13/14 water trip [MOM]	0.00	
# 19 03/01 13:13 To 03/05 06:20 89.12	Under investigation	1.05	

# 20	03/05 06:55	To	03/06 07:59	25.07	Int Dump: End of Period	0.00
# 21	03/08 08:00	To	03/12 18:32	105.54	S5/6 H2O fault [MOM]	1.47
# 22	03/12 20:01	To	03/13 07:59	11.98	Int Dump: End of Period	0.00
# 23	03/14 08:18	To	03/18 06:35	94.27	BPM reboot [MCR]	0.87
# 24	03/18 07:27	To	03/20 07:59	48.55	Int Dump: End of Period	0.00
# 25	03/21 23:15	To	03/23 08:00	32.75	13BM PSS glitch [SI]	0.87
# 26	03/23 08:52	To	03/25 00:02	39.17	BPLD load error [MCR]	0.64
# 27	03/25 00:40	To	03/27 07:59	55.32	Int Dump: End of Period	0.00
# 28	03/28 08:00	To	03/30 18:16	58.26	RF4 LLRF trip [RF]	0.61
# 29	03/30 18:52	To	04/03 01:11	78.32	IOCS29FB reboot [CTL]	2.33
# 30	04/03 03:31	To	04/03 07:59	4.47	Int Dump: End of Period	0.00
# 31	04/04 08:00	To	04/04 09:43	1.73	27ID BPLD trip [unk]	0.65
# 32	04/04 10:23	To	04/05 21:25	35.03	S2B:Q2 trip [PS]	4.11
# 33	04/06 01:31	To	04/10 07:59	102.47	Int Dump: End of Period	0.00
# 34	04/11 08:00	To	04/15 22:16	110.28	RF3 Anode OI [RF]	0.53
# 35	04/15 22:48	To	04/16 14:54	16.10	13ID RM ACIS [SI]	5.15
# 36	04/16 20:03	To	04/17 05:11	9.12	S26B:Q2 trip [PS]	1.33
# 37	04/17 06:31	To	04/17 08:00	1.49	Int Dump: End of Period	0.00

Top-Up Mode Statistics

Target Current Range +/- 2.0, Minimum Injector Downtime = 8.0 minutes

Total

Current in Range during Scheduled Topup Time 93.95 %
 Current in Range during Delivered Beam Time 97.84 %
 Injector Availability 97.59 %

Period Beginning 01/31/2023 08:00

Current in Range 94.88 %
 Injector Availability 94.65 %
 Out of Range at: 01/31/2023 12:25:52 to 01/31/2023 12:29:28 : 3.60 minutes
 Injector downtime: 01/31/2023 12:17:52 to 01/31/2023 12:25:52 : 8.00 minutes (est)
 Out of Range at: 02/02/2023 10:48:08 to 02/02/2023 11:29:12 : 41.07 minutes
 Injector downtime: 02/02/2023 10:43:12 to 02/02/2023 11:26:56 : 43.73 minutes
 Out of Range at: 02/02/2023 20:37:28 to 02/02/2023 20:51:20 : 13.87 minutes
 Injector downtime: 02/02/2023 20:32:32 to 02/02/2023 20:49:12 : 16.67 minutes
 Out of Range at: 02/02/2023 23:39:20 to 02/03/2023 01:40:40 : 121.33 minutes
 Injector downtime: 02/02/2023 23:34:24 to 02/03/2023 01:40:36 : 126.20 minutes
 Out of Range at: 02/03/2023 17:06:08 to 02/03/2023 20:45:28 : 219.33 minutes
 Injector downtime: 02/03/2023 17:01:12 to 02/03/2023 20:44:40 : 223.47 minutes
 Out of Range at: 02/03/2023 20:54:40 to 02/03/2023 21:02:56 : 8.27 minutes
 Injector downtime: 02/03/2023 20:46:40 to 02/03/2023 20:54:40 : 8.00 minutes (est)

Period Beginning 02/07/2023 08:00

Current in Range 96.53 %
 Injector Availability 96.27 %
 Out of Range at: 02/09/2023 13:10:48 to 02/09/2023 13:48:16 : 37.47 minutes
 Injector downtime: 02/09/2023 13:05:52 to 02/09/2023 13:48:12 : 42.33 minutes
 Out of Range at: 02/09/2023 16:30:16 to 02/09/2023 18:31:36 : 121.33 minutes
 Injector downtime: 02/09/2023 16:25:20 to 02/09/2023 18:29:20 : 124.00 minutes
 Out of Range at: 02/09/2023 19:12:16 to 02/09/2023 19:15:36 : 3.33 minutes

Injector downtime: 02/09/2023 19:04:16 to 02/09/2023 19:12:16 : 8.00 minutes (est)
Out of Range at: 02/09/2023 19:23:04 to 02/09/2023 20:35:36 : 72.53 minutes
Injector downtime: 02/09/2023 19:18:08 to 02/09/2023 20:33:20 : 75.20 minutes
Out of Range at: 02/09/2023 23:32:32 to 02/09/2023 23:57:36 : 25.07 minutes
Injector downtime: 02/09/2023 23:27:36 to 02/09/2023 23:57:32 : 29.93 minutes
Out of Range at: 02/10/2023 03:09:04 to 02/10/2023 03:49:04 : 40.00 minutes
Injector downtime: 02/10/2023 03:04:08 to 02/10/2023 03:46:48 : 42.67 minutes

Period Beginning 02/14/2023 08:00

Current in Range 98.24 %
Injector Availability 97.91 %
Out of Range at: 02/14/2023 13:51:28 to 02/14/2023 13:54:16 : 2.80 minutes
Injector downtime: 02/14/2023 13:43:28 to 02/14/2023 13:51:28 : 8.00 minutes (est)
Out of Range at: 02/14/2023 16:15:20 to 02/14/2023 16:19:04 : 3.73 minutes
Injector downtime: 02/14/2023 16:07:20 to 02/14/2023 16:15:20 : 8.00 minutes (est)
Out of Range at: 02/15/2023 00:01:04 to 02/15/2023 00:10:32 : 9.47 minutes
Injector downtime: 02/14/2023 23:56:08 to 02/15/2023 00:10:28 : 14.33 minutes
Out of Range at: 02/19/2023 13:16:32 to 02/19/2023 15:21:28 : 124.93 minutes
Injector downtime: 02/19/2023 13:11:36 to 02/19/2023 15:21:24 : 129.80 minutes
Out of Range at: 02/20/2023 07:59:12 to 02/20/2023 07:59:52 : 0.67 minutes
Injector downtime: 02/20/2023 07:51:12 to 02/20/2023 07:59:12 : 8.00 minutes (est)

Period Beginning 02/21/2023 08:00

Current in Range 98.08 %
Injector Availability 97.87 %
Out of Range at: 02/22/2023 02:35:28 to 02/22/2023 03:08:16 : 32.80 minutes
Injector downtime: 02/22/2023 02:30:32 to 02/22/2023 03:08:12 : 37.67 minutes
Out of Range at: 02/22/2023 20:47:52 to 02/22/2023 21:40:08 : 52.27 minutes
Injector downtime: 02/22/2023 20:42:56 to 02/22/2023 21:40:04 : 57.13 minutes
Out of Range at: 02/24/2023 09:40:40 to 02/24/2023 10:13:52 : 33.20 minutes
Injector downtime: 02/24/2023 09:35:44 to 02/24/2023 10:11:36 : 35.87 minutes
Out of Range at: 02/25/2023 14:36:16 to 02/25/2023 15:20:32 : 44.27 minutes
Injector downtime: 02/25/2023 14:31:20 to 02/25/2023 15:20:28 : 49.13 minutes

Period Beginning 02/28/2023 08:00

Current in Range 98.45 %
Injector Availability 98.24 %
Out of Range at: 03/01/2023 00:29:12 to 03/01/2023 00:41:12 : 12.00 minutes
Injector downtime: 03/01/2023 00:24:16 to 03/01/2023 00:41:08 : 16.87 minutes
Out of Range at: 03/01/2023 04:22:00 to 03/01/2023 06:02:32 : 100.53 minutes
Injector downtime: 03/01/2023 04:17:04 to 03/01/2023 06:00:08 : 103.07 minutes
Out of Range at: 03/05/2023 06:20:32 to 03/05/2023 06:20:32 : 0.00 minutes
Injector downtime: 03/05/2023 06:12:32 to 03/05/2023 06:20:32 : 8.00 minutes (est)
Out of Range at: 03/05/2023 16:42:48 to 03/05/2023 17:02:48 : 20.00 minutes
Injector downtime: 03/05/2023 16:37:52 to 03/05/2023 17:00:40 : 22.80 minutes

Period Beginning 03/08/2023 08:00

Current in Range 100.00 %
Injector Availability 100.00 %

Period Beginning 03/14/2023 08:00

Current in Range 97.35 %
Injector Availability 97.02 %
Out of Range at: 03/15/2023 12:58:40 to 03/15/2023 12:58:48 : 0.13 minutes
Injector downtime: 03/15/2023 12:50:40 to 03/15/2023 12:58:40 : 8.00 minutes (est)
Out of Range at: 03/15/2023 23:53:36 to 03/16/2023 01:06:40 : 73.07 minutes
Injector downtime: 03/15/2023 23:48:40 to 03/16/2023 01:06:36 : 77.93 minutes
Out of Range at: 03/16/2023 09:23:52 to 03/16/2023 10:19:36 : 55.73 minutes
Injector downtime: 03/16/2023 09:18:56 to 03/16/2023 10:18:32 : 59.60 minutes
Out of Range at: 03/16/2023 10:53:36 to 03/16/2023 11:16:40 : 23.07 minutes
Injector downtime: 03/16/2023 10:48:56 to 03/16/2023 11:15:28 : 26.53 minutes
Out of Range at: 03/17/2023 19:07:28 to 03/17/2023 19:19:28 : 12.00 minutes
Injector downtime: 03/17/2023 19:02:32 to 03/17/2023 19:18:16 : 15.73 minutes
Out of Range at: 03/18/2023 06:30:08 to 03/18/2023 06:34:56 : 4.80 minutes

Injector downtime: 03/18/2023 06:22:08 to 03/18/2023 06:30:08 : 8.00 minutes (est)
Out of Range at: 03/19/2023 15:17:20 to 03/19/2023 15:55:20 : 38.00 minutes
Injector downtime: 03/19/2023 15:12:24 to 03/19/2023 15:54:08 : 41.73 minutes
Out of Range at: 03/19/2023 15:59:20 to 03/19/2023 16:19:12 : 19.87 minutes
Injector downtime: 03/19/2023 15:59:48 to 03/19/2023 16:17:52 : 18.07 minutes

Period Beginning 03/21/2023 08:00

Current in Range 99.05 %
Injector Availability 98.77 %
Out of Range at: 03/22/2023 00:18:56 to 03/22/2023 00:34:32 : 15.60 minutes
Injector downtime: 03/22/2023 00:14:00 to 03/22/2023 00:34:28 : 20.47 minutes
Out of Range at: 03/22/2023 02:38:48 to 03/22/2023 02:50:24 : 11.60 minutes
Injector downtime: 03/22/2023 02:33:52 to 03/22/2023 02:50:20 : 16.47 minutes
Out of Range at: 03/24/2023 23:58:16 to 03/25/2023 00:02:24 : 4.13 minutes
Injector downtime: 03/24/2023 23:50:16 to 03/24/2023 23:58:16 : 8.00 minutes (est)
Out of Range at: 03/25/2023 22:10:56 to 03/25/2023 22:43:36 : 32.67 minutes
Injector downtime: 03/25/2023 22:06:00 to 03/25/2023 22:41:28 : 35.47 minutes
Out of Range at: 03/26/2023 10:17:20 to 03/26/2023 10:25:44 : 8.40 minutes
Injector downtime: 03/26/2023 10:12:24 to 03/26/2023 10:25:40 : 13.27 minutes

Period Beginning 03/28/2023 08:00

Current in Range 99.59 %
Injector Availability 99.36 %
Out of Range at: 03/29/2023 01:20:56 to 03/29/2023 01:29:20 : 8.40 minutes
Injector downtime: 03/29/2023 01:16:00 to 03/29/2023 01:29:16 : 13.27 minutes
Out of Range at: 03/30/2023 14:54:32 to 03/30/2023 15:03:52 : 9.33 minutes
Injector downtime: 03/30/2023 14:49:36 to 03/30/2023 15:03:48 : 14.20 minutes
Out of Range at: 04/02/2023 12:11:52 to 04/02/2023 12:27:52 : 16.00 minutes
Injector downtime: 04/02/2023 12:06:56 to 04/02/2023 12:25:36 : 18.67 minutes
Out of Range at: 04/02/2023 13:26:56 to 04/02/2023 13:27:52 : 0.93 minutes
Injector downtime: 04/02/2023 13:18:56 to 04/02/2023 13:26:56 : 8.00 minutes (est)

Period Beginning 04/04/2023 08:00

Current in Range 98.65 %
Injector Availability 98.45 %
Out of Range at: 04/05/2023 09:31:36 to 04/05/2023 09:46:00 : 14.40 minutes
Injector downtime: 04/05/2023 09:26:40 to 04/05/2023 09:45:56 : 19.27 minutes
Out of Range at: 04/05/2023 11:08:40 to 04/05/2023 12:01:52 : 53.20 minutes
Injector downtime: 04/05/2023 11:03:44 to 04/05/2023 11:59:36 : 55.87 minutes
Out of Range at: 04/07/2023 21:33:28 to 04/07/2023 21:47:44 : 14.27 minutes
Injector downtime: 04/07/2023 21:28:32 to 04/07/2023 21:47:40 : 19.13 minutes
Out of Range at: 04/09/2023 15:09:44 to 04/09/2023 15:40:24 : 30.67 minutes
Injector downtime: 04/09/2023 15:04:48 to 04/09/2023 15:40:20 : 35.53 minutes

Period Beginning 04/11/2023 08:00

Current in Range 95.69 %
Injector Availability 95.23 %
Out of Range at: 04/13/2023 23:52:08 to 04/14/2023 01:55:12 : 123.07 minutes
Injector downtime: 04/13/2023 23:47:12 to 04/14/2023 01:55:08 : 127.93 minutes
Out of Range at: 04/14/2023 17:58:48 to 04/14/2023 18:25:28 : 26.67 minutes
Injector downtime: 04/14/2023 17:53:52 to 04/14/2023 18:25:24 : 31.53 minutes
Out of Range at: 04/15/2023 02:56:08 to 04/15/2023 03:27:44 : 31.60 minutes
Injector downtime: 04/15/2023 02:51:12 to 04/15/2023 03:27:40 : 36.47 minutes
Out of Range at: 04/15/2023 11:12:32 to 04/15/2023 11:45:12 : 32.67 minutes
Injector downtime: 04/15/2023 11:07:36 to 04/15/2023 11:45:08 : 37.53 minutes
Out of Range at: 04/15/2023 12:55:52 to 04/15/2023 13:03:04 : 7.20 minutes
Injector downtime: 04/15/2023 12:47:52 to 04/15/2023 12:55:52 : 8.00 minutes (est)
Out of Range at: 04/16/2023 02:07:36 to 04/16/2023 02:45:44 : 38.13 minutes
Injector downtime: 04/16/2023 02:02:40 to 04/16/2023 02:45:40 : 43.00 minutes
Out of Range at: 04/16/2023 08:45:44 to 04/16/2023 09:36:48 : 51.07 minutes
Injector downtime: 04/16/2023 08:40:48 to 04/16/2023 09:34:32 : 53.73 minutes
Out of Range at: 04/16/2023 12:22:40 to 04/16/2023 12:37:44 : 15.07 minutes
Injector downtime: 04/16/2023 12:17:44 to 04/16/2023 12:37:40 : 19.93 minutes
Out of Range at: 04/16/2023 21:42:16 to 04/16/2023 22:07:12 : 24.93 minutes

Injector downtime: 04/16/2023 21:37:20 to 04/16/2023 22:07:08 : 29.80 minutes