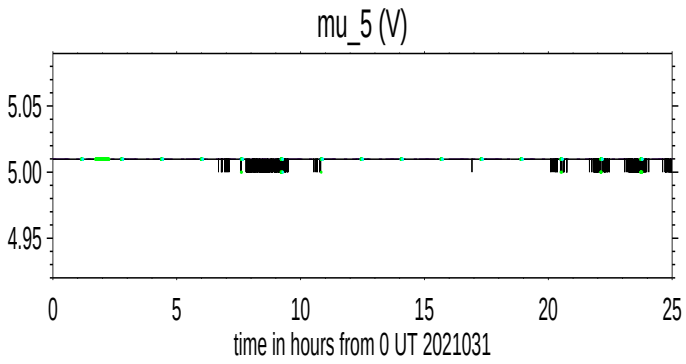
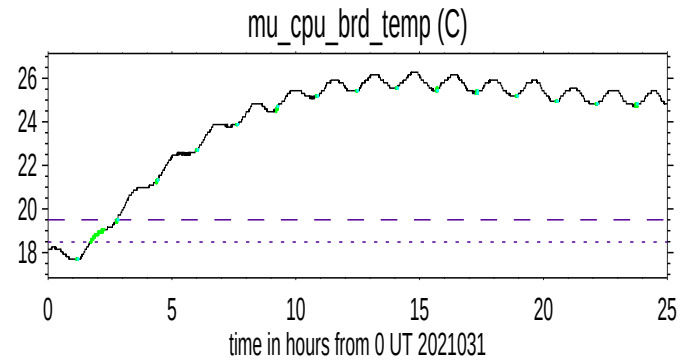
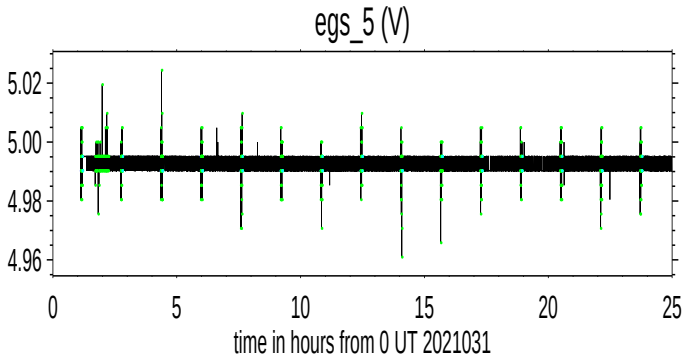
```
Information for      2021031
20:35:13.002: see_stat[1]: 9 internal error
```

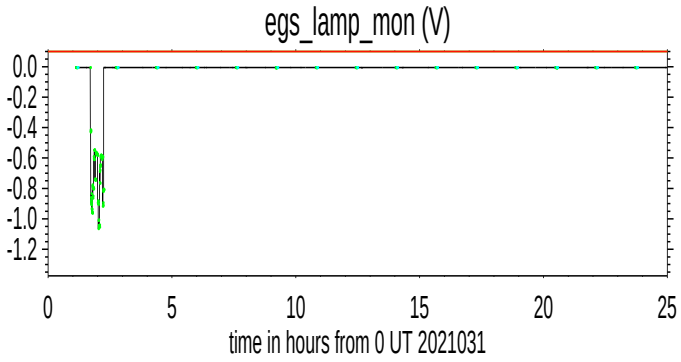
/export/timed/data/science_dp/tlm_limit/outoflimit_2021031_012.txt
Tue Mar 02 06:22:49 2021 1

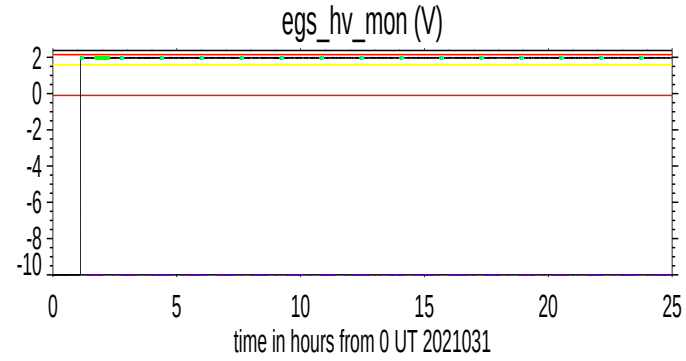
```
RH  OutOfLimit 1296086425 1296176410 hk.mu_cmd_pkt_reject
RL  OutOfLimit 1296086425 1296090415 hk.egs_hv_mon
```

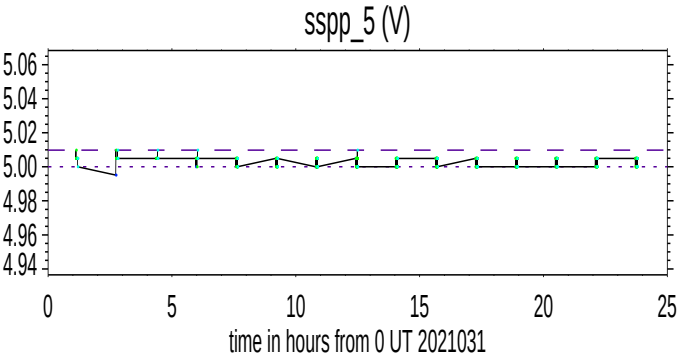

mu_5 (V)
5.05
5.00
4.95
0
5
10
15
20
25
time in hours from 0 UT 2021031

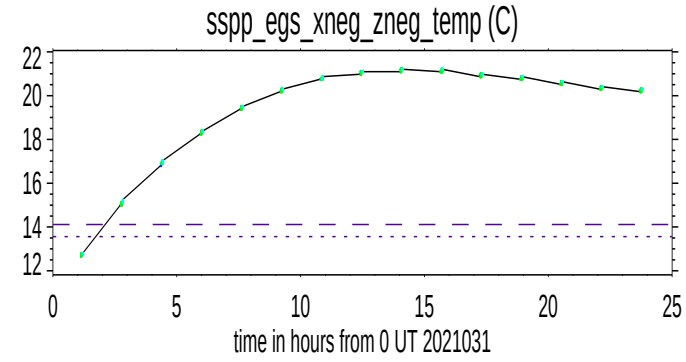

mu_cpu_brd_temp (C)
26
24
22
20
18
0
5
10
15
20
25
time in hours from 0 UT 2021031

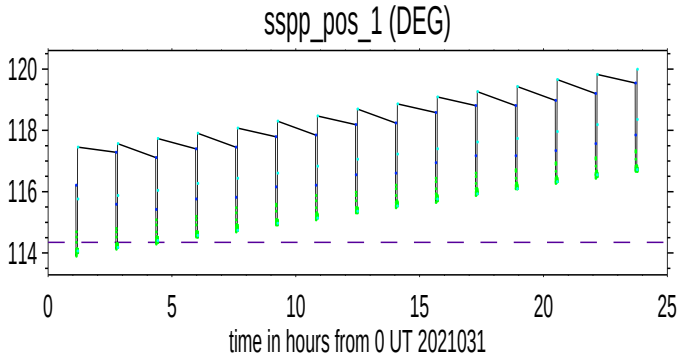

egs_5 (V)
5.02
5.00
4.98
4.96
0
5
10
15
20
25
time in hours from 0 UT 2021031

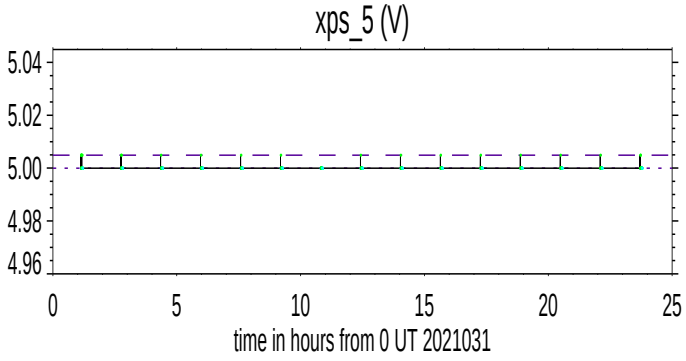

egs_lamp_mon (V)
0.0
-0.2
-0.4
-0.6
-0.8
-1.0
-1.2
0
5
10
15
20
25
time in hours from 0 UT 2021031

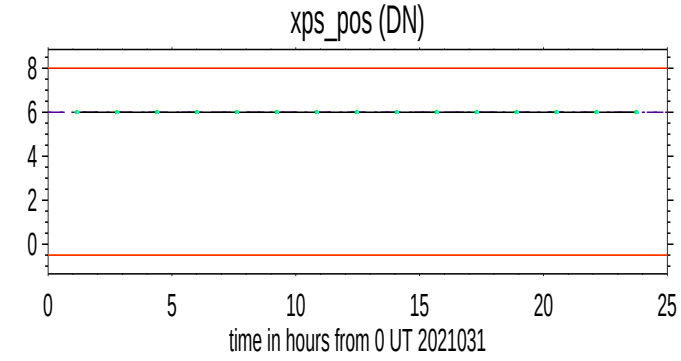

egs_hv_mon (V)
2
0
-2
-4
-6
-8
-10
0
5
10
15
20
25
time in hours from 0 UT 2021031

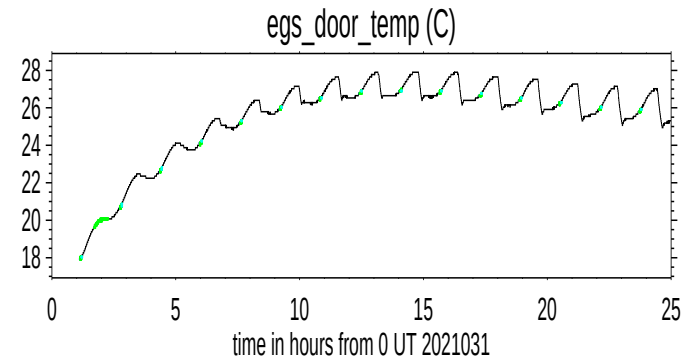

sspp_5 (V)
5.06
5.04
5.02
5.00
4.98
4.96
4.94
0
5
10
15
20
25
time in hours from 0 UT 2021031

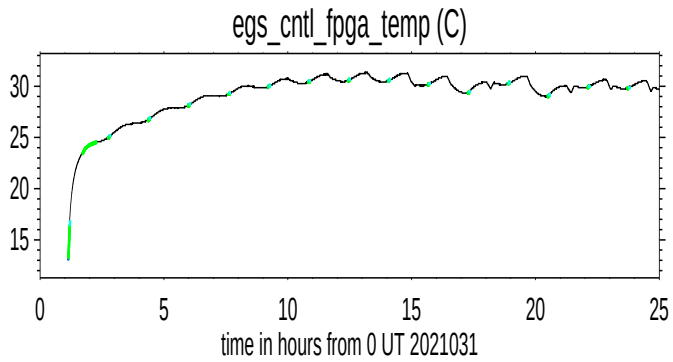

sspp_egs_xneg_zneg_temp (C)
22
20
18
16
14
12
0
5
10
15
20
25
time in hours from 0 UT 2021031

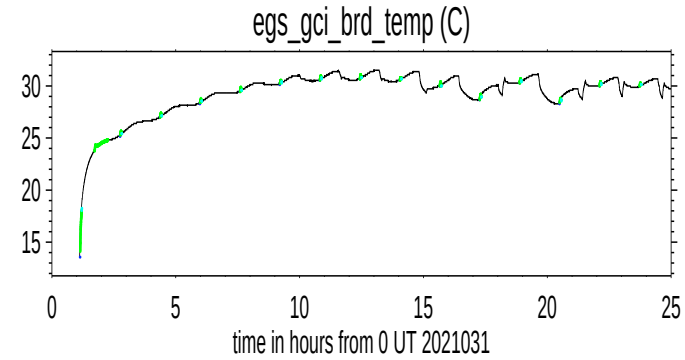

sspp_pos_1 (DEG)
120
118
116
114
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_5 (V)
5.04
5.02
5.00
4.98
4.96
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_pos (DN)
8
6
4
2
0
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_door_temp (C)
28
26
24
22
20
18
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_cntl_fpga_temp (C)
30
25
20
15
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_gci_brd_temp (C)
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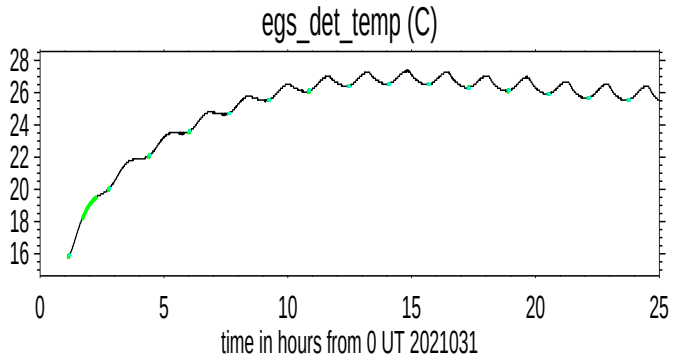
25
20
15
0
5
10
15
20
25
time in hours from 0 UT 2021031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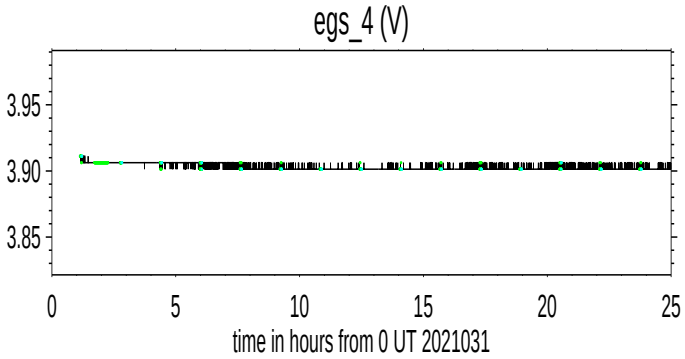
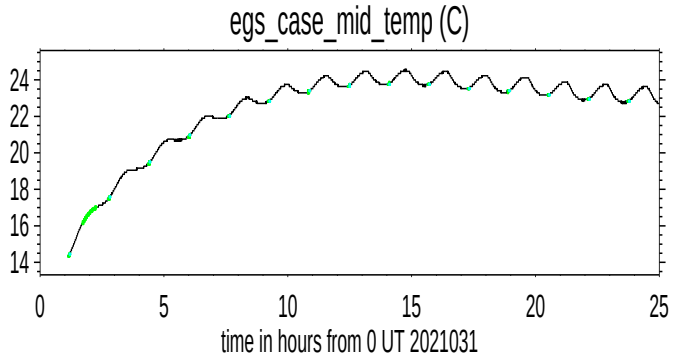
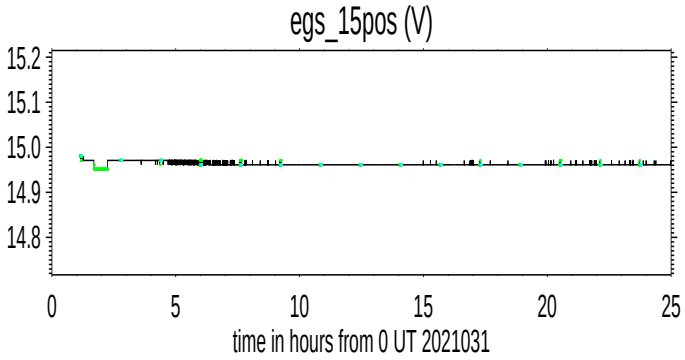
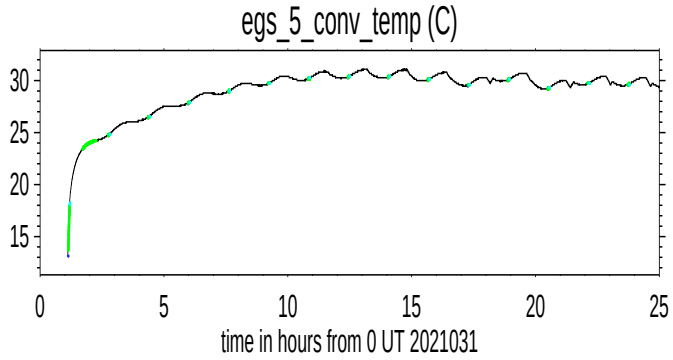
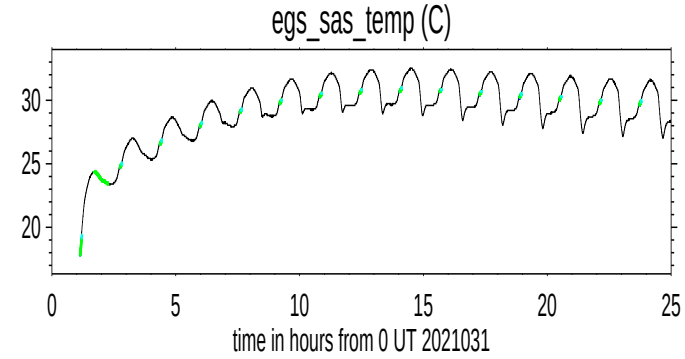
26
24
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031

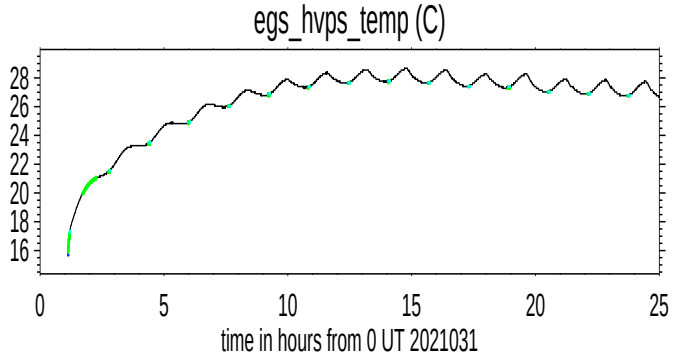

egs_4 (V)
3.95
3.90
3.85
0
5
10
15
20
25
time in hours from 0 UT 2021031

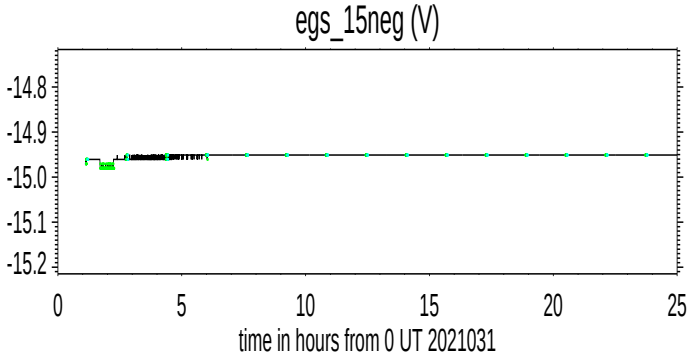

egs_case_mid_temp (C)
24
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031

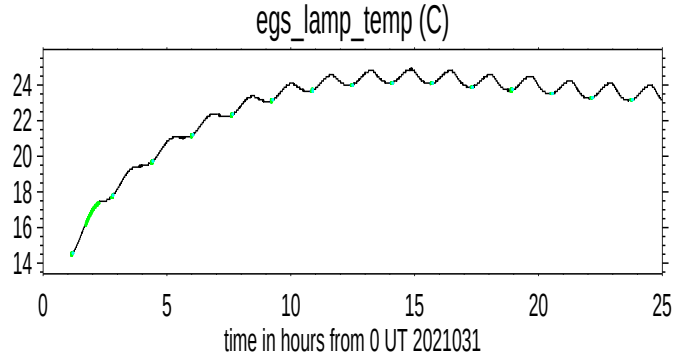

egs_15pos (V)
15.2
15.1
15.0
14.9
14.8
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_5_conv_temp (C)
30
25
20
15
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_sas_temp (C)
30
25
20
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_hvps_temp (C)
28
26
24
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031


egs_15neg (V)
-14.8
-14.9
-15.0
-15.1
-15.2
0 5 10 15 20 25
time in hours from 0 UT 2021031


egs_lamp_temp (C)
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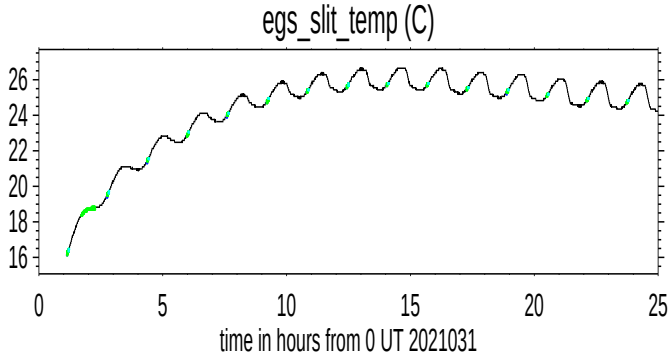
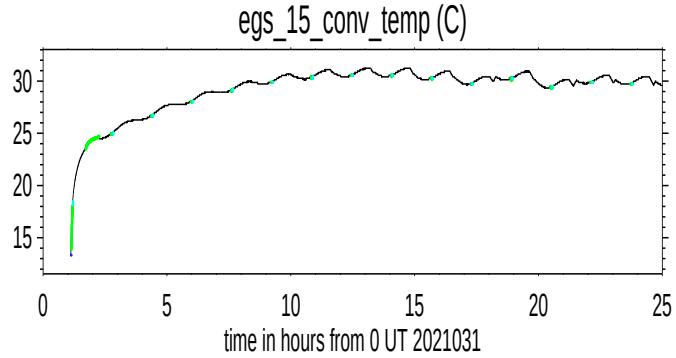
22
20
18
16
14
0 5 10 15 20 25
time in hours from 0 UT 2021031


egs_slit_temp (C)
26
24
22
20
18
16
0 5 10 15 20 25
time in hours from 0 UT 2021031


egs_15_conv_temp (C)
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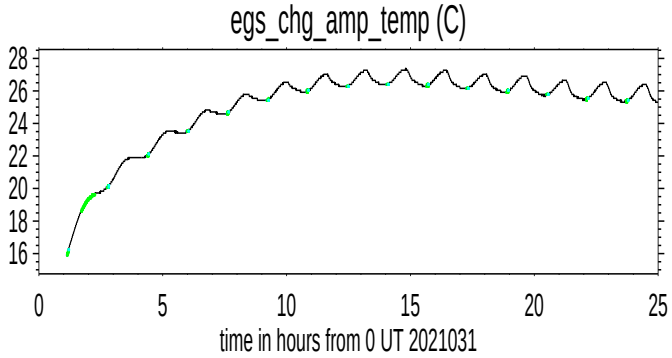
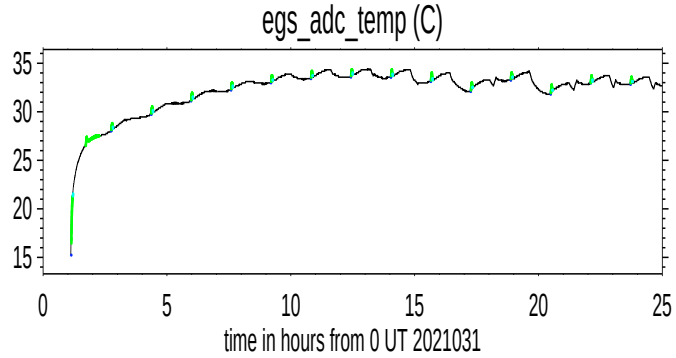
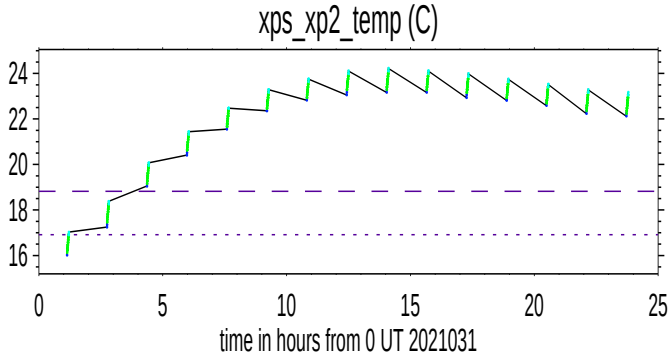
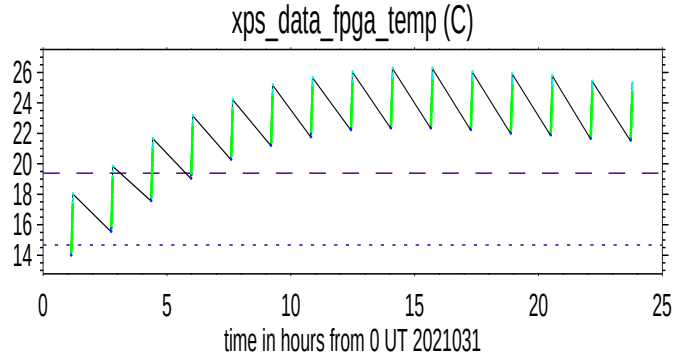
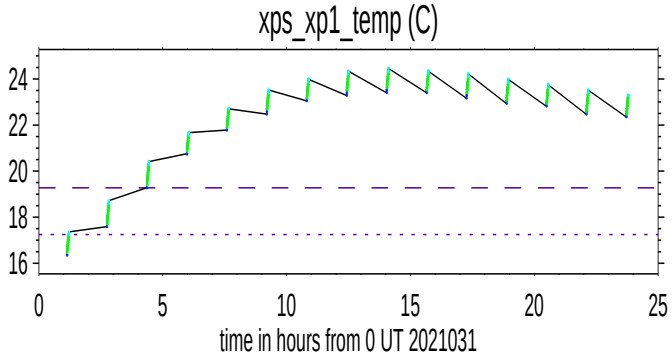
25
20
15
0 5 10 15 20 25
time in hours from 0 UT 2021031

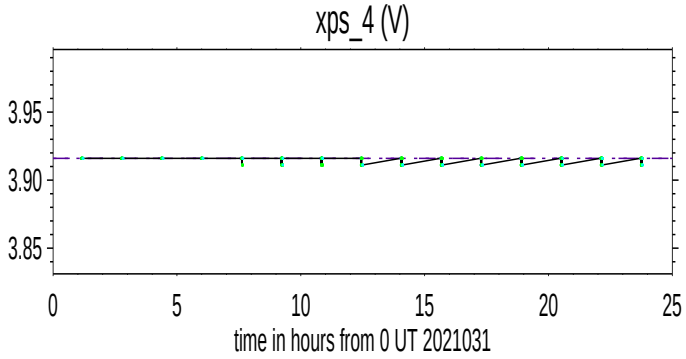

egs_chg_amp_temp (C)
28
26
24
22
20
18
16
0 5 10 15 20 25
time in hours from 0 UT 2021031

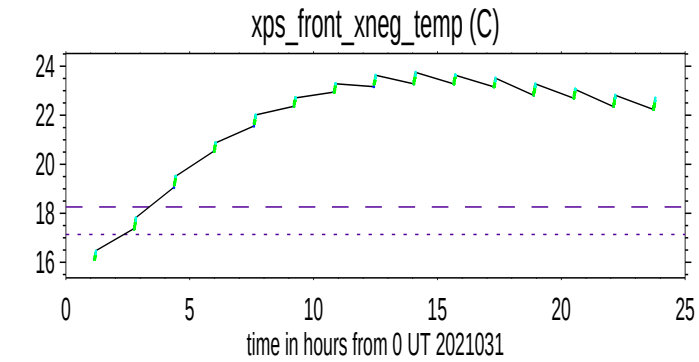

egs_adc_temp (C)
35
30
25
20
15
0 5 10 15 20 25
time in hours from 0 UT 2021031


xps_xp2_temp (C)
24
22
20
18
16
0 5 10 15 20 25
time in hours from 0 UT 2021031


xps_data_fpga_temp (C)
26
24
22
20
18
16
14
0 5 10 15 20 25
time in hours from 0 UT 2021031


xps_xp1_temp (C)
24
22
20
18
16
0 5 10 15 20 25
time in hours from 0 UT 2021031


xps_4 (V)
3.95
3.90
3.85
0 5 10 15 20 25
time in hours from 0 UT 2021031


xps_front_xneg_temp (C)
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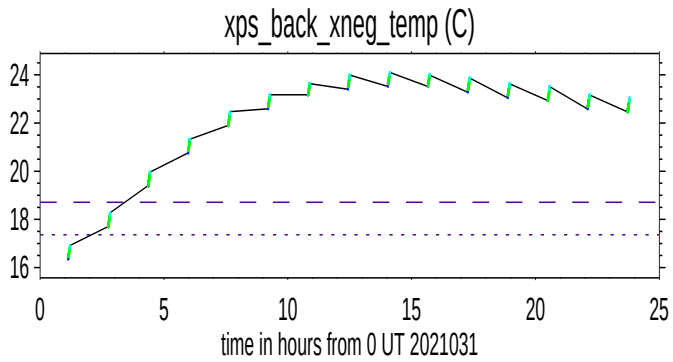
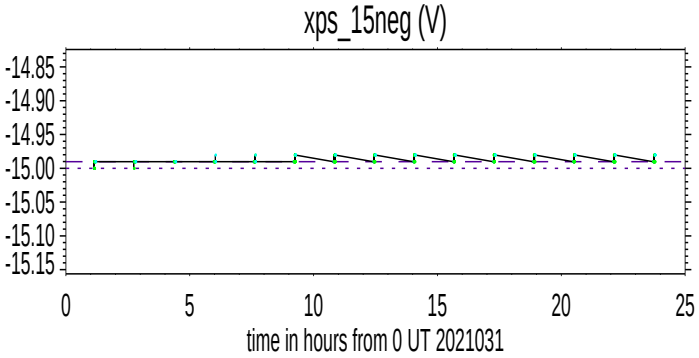
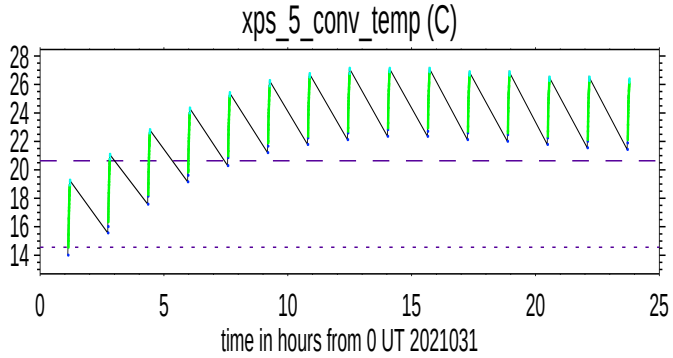
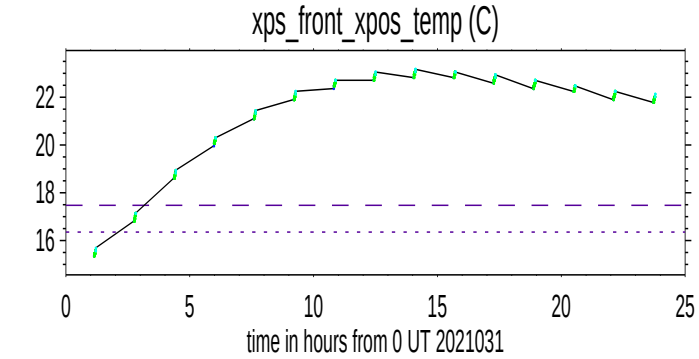
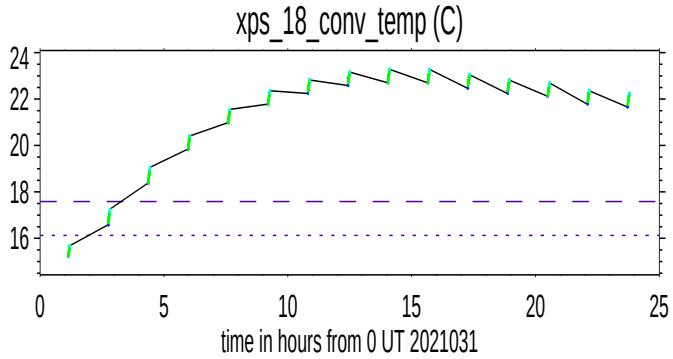
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_back_xneg_temp (C)
24
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_15neg (V)
-14.85
-14.90
-14.95
-15.00
-15.05
-15.10
-15.15
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_5_conv_temp (C)
28
26
24
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_front_xpos_temp (C)
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_18_conv_temp (C)
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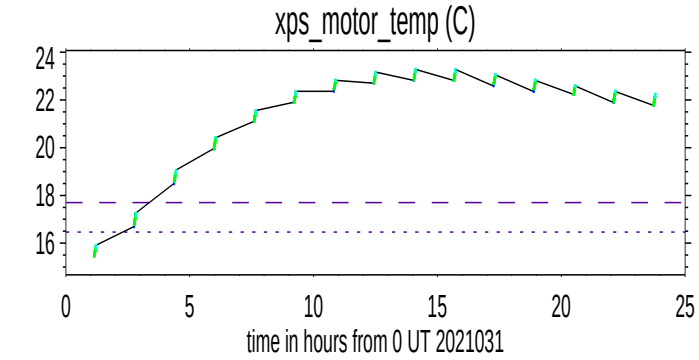
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031


xps_motor_temp (C)
24
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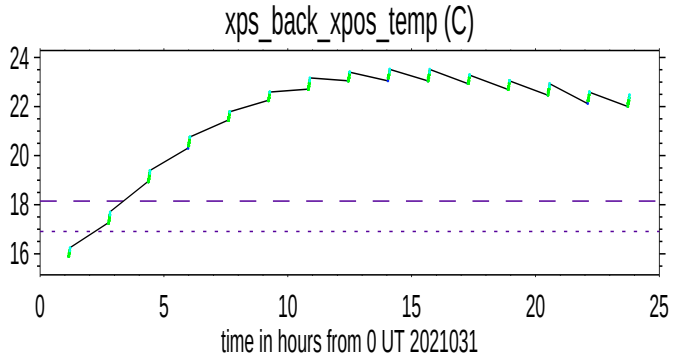
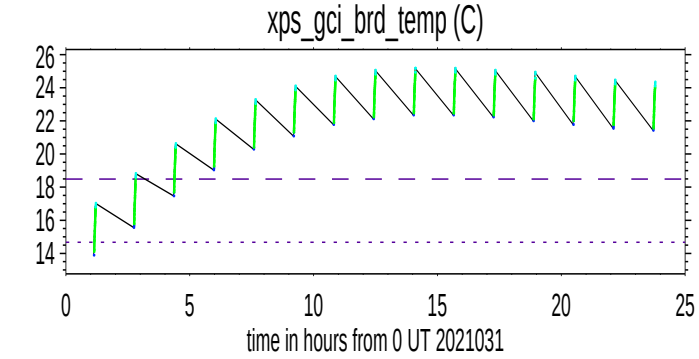
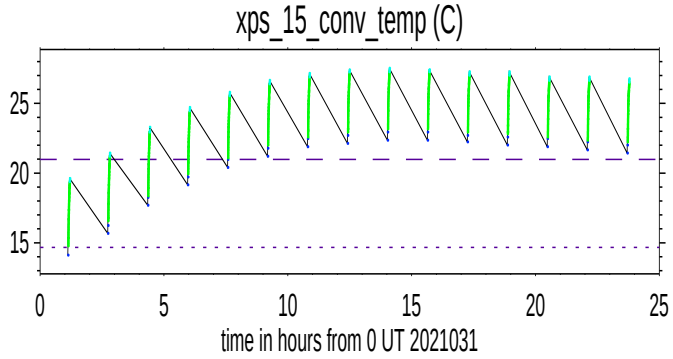
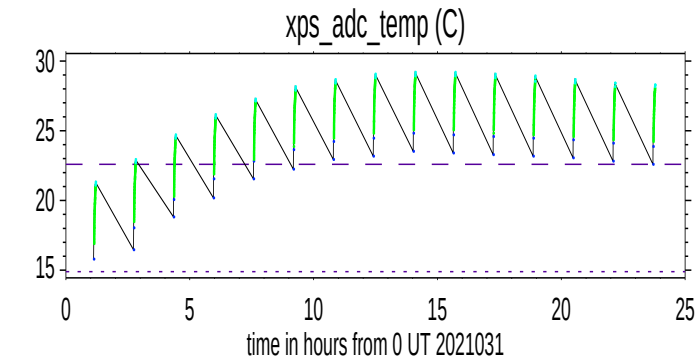
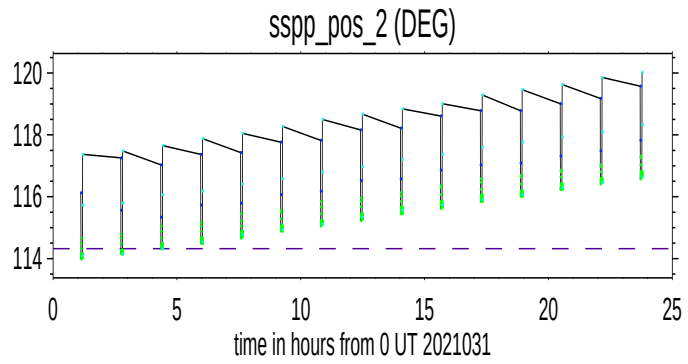
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031

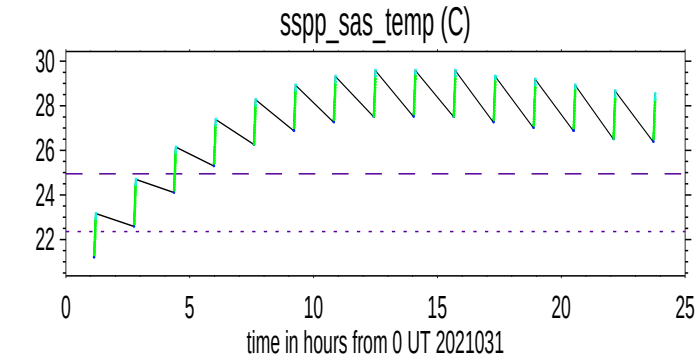

xps_back_xpos_temp (C)
24
22
20
18
16
0
5
10
15
20
25
time in hours from 0 UT 2021031

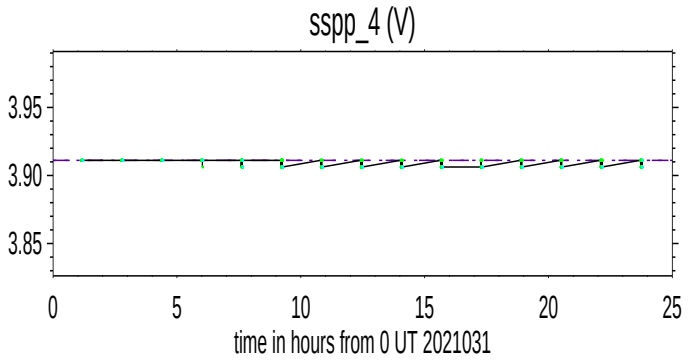

xps_gci_brd_temp (C)
26
24
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031

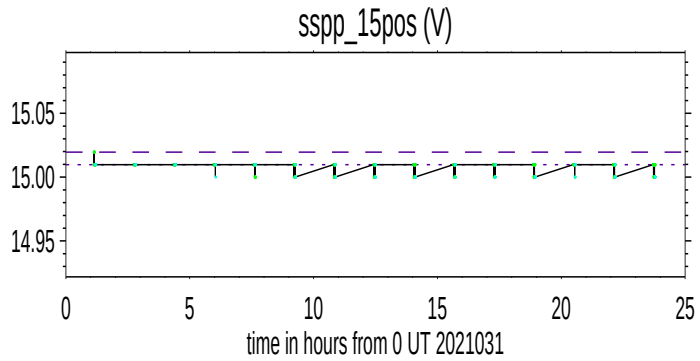

xps_15_conv_temp (C)
25
20
15
0
5
10
15
20
25
time in hours from 0 UT 2021031

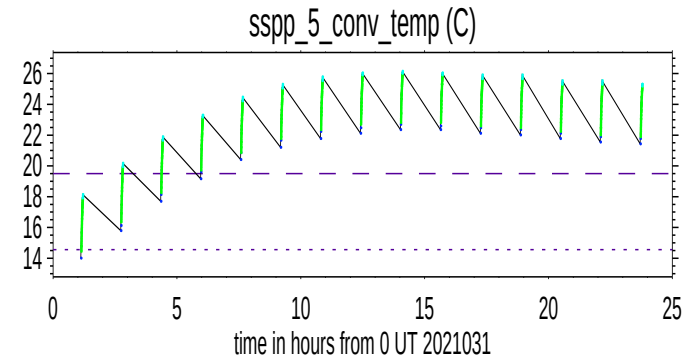

xps_adc_temp (C)
30
25
20
15
0
5
10
15
20
25
time in hours from 0 UT 2021031

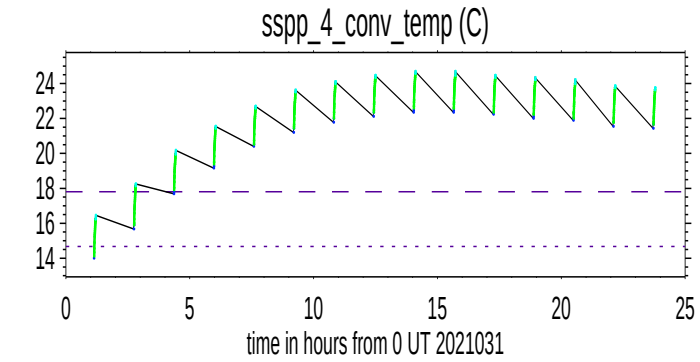

sspp_pos_2 (DEG)
120
118
116
114
0
5
10
15
20
25
time in hours from 0 UT 2021031

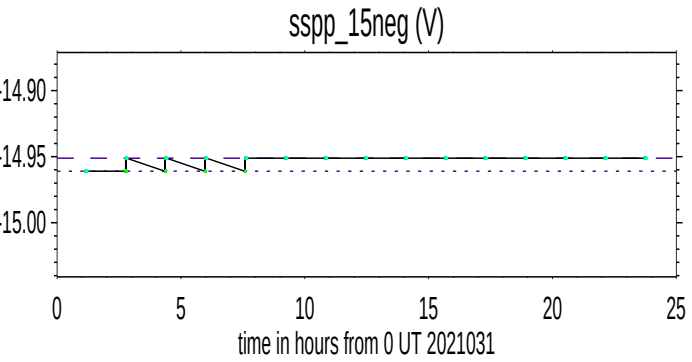

sspp_sas_temp (C)
30
28
26
24
22
0
5
10
15
20
25
time in hours from 0 UT 2021031

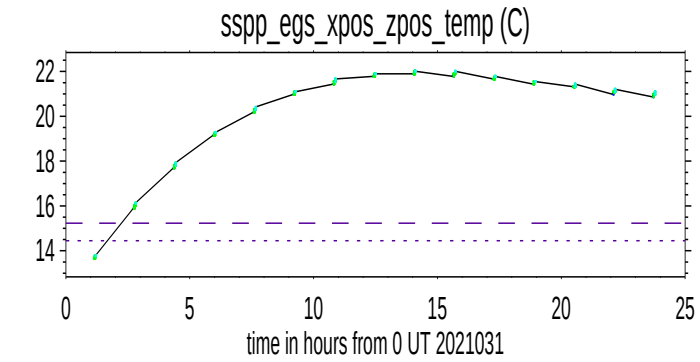

sspp_4 (V)
3.95
3.90
3.85
0
5
10
15
20
25
time in hours from 0 UT 2021031

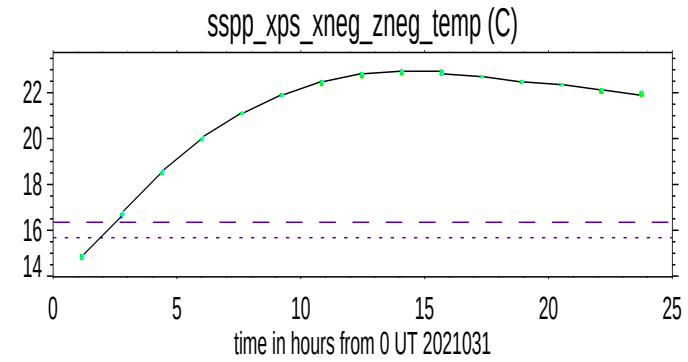

sspp_15pos (V)
15.05
15.00
14.95
0
5
10
15
20
25
time in hours from 0 UT 2021031

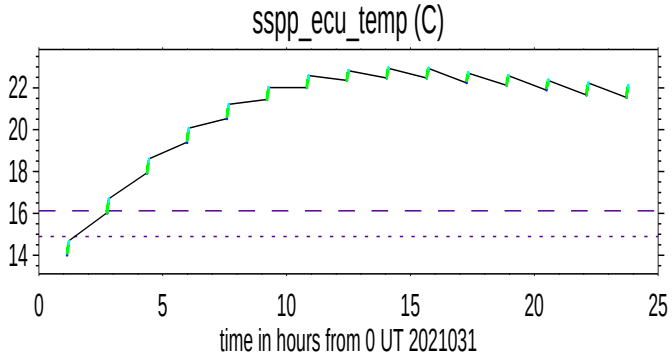

sspp_5_conv_temp (C)
26
24
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031

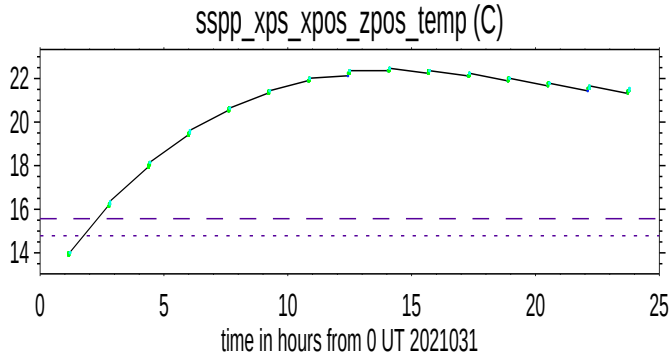

sspp_4_conv_temp (C)
24
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031

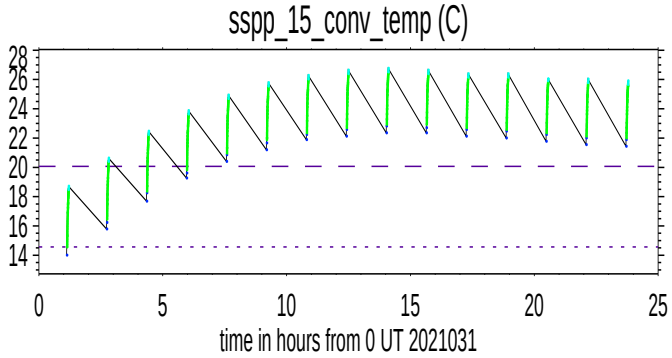

sspp_15neg (V)
-14.90
-14.95
-15.00
0
5
10
15
20
25
time in hours from 0 UT 2021031


sspp_egs_xpos_zpos_temp (C)
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031


sspp_xps_xneg_zneg_temp (C)
22
20
18
16
14
0
5
10
15
20
25
time in hours from 0 UT 2021031


sspp_ecu_temp (C)
time in hours from 0 UT 2021031


sspp_xps_xpos_zpos_temp (C)
time in hours from 0 UT 2021031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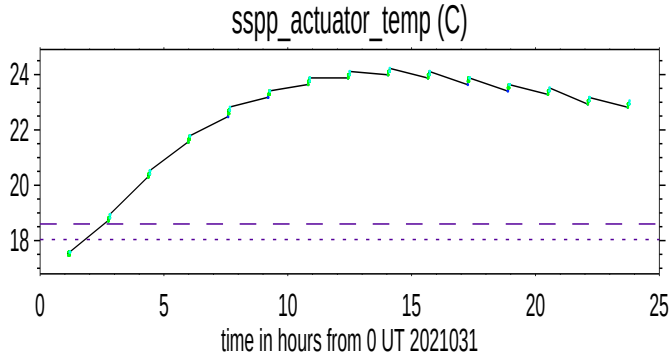
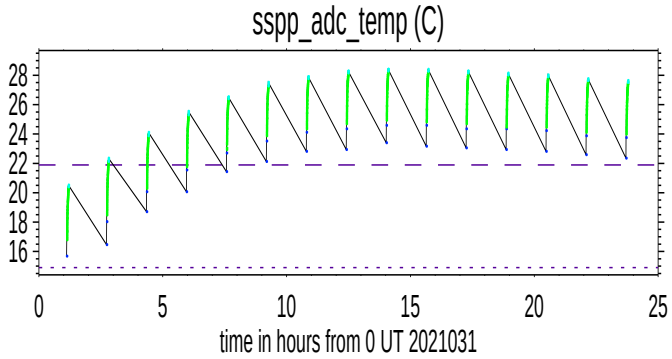
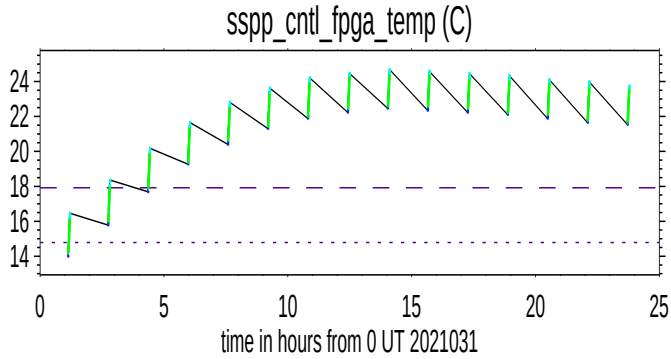
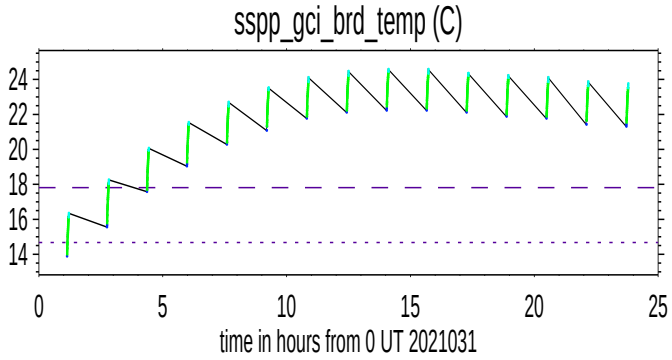
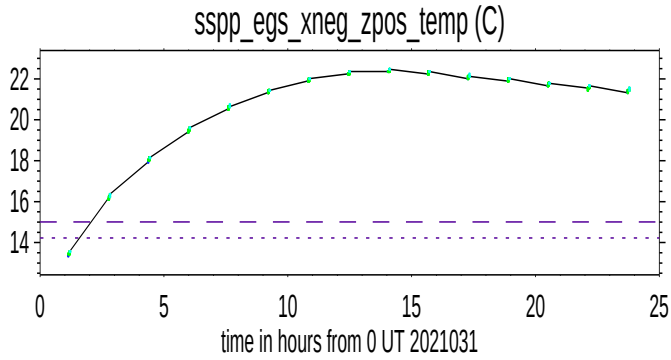
time in hours from 0 UT 2021031

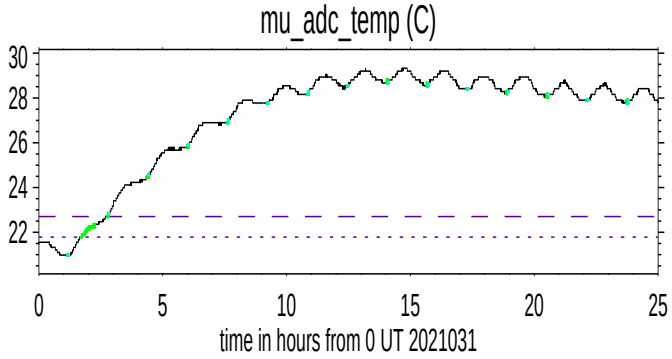

sspp_actuator_temp (C)
time in hours from 0 UT 2021031

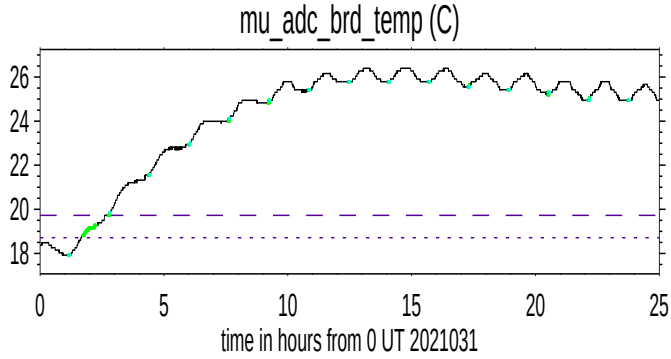

sspp_adc_temp (C)
time in hours from 0 UT 2021031

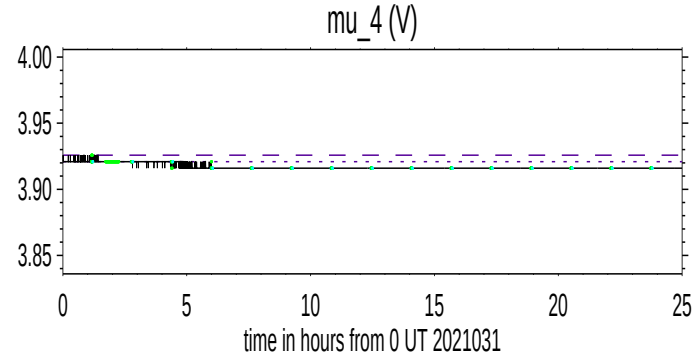

sspp_cntl_fpga_temp (C)
time in hours from 0 UT 2021031

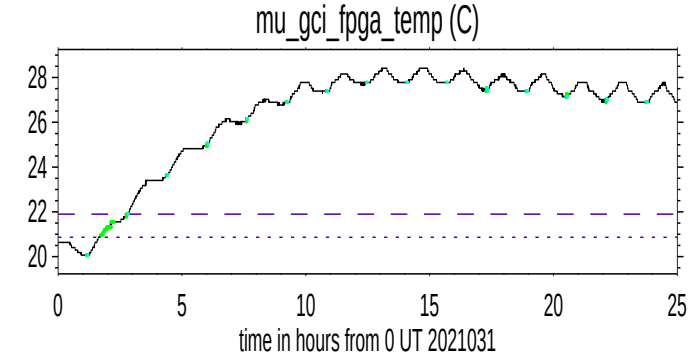

sspp_gci_brd_temp (C)
time in hours from 0 UT 2021031

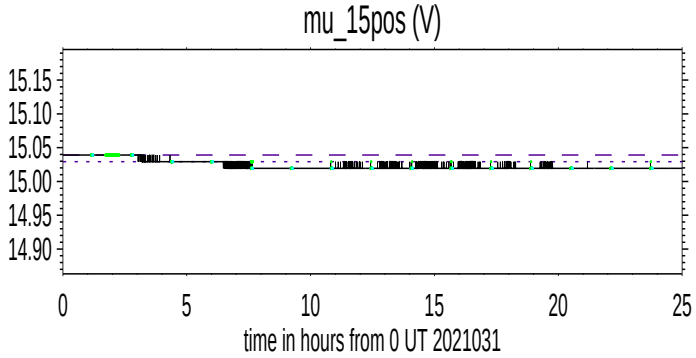

sspp_egs_xneg_zpos_temp (C)
time in hours from 0 UT 2021031

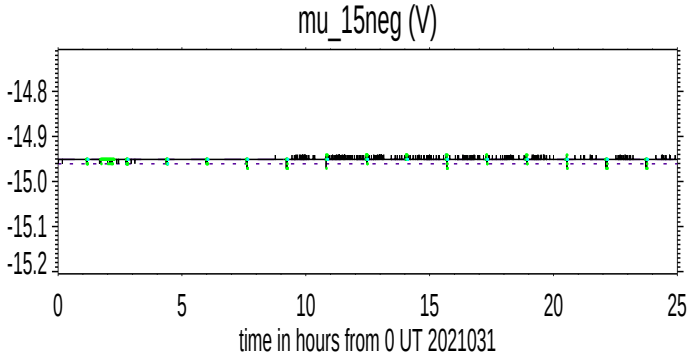

mu_adc_temp (C)
time in hours from 0 UT 2021031

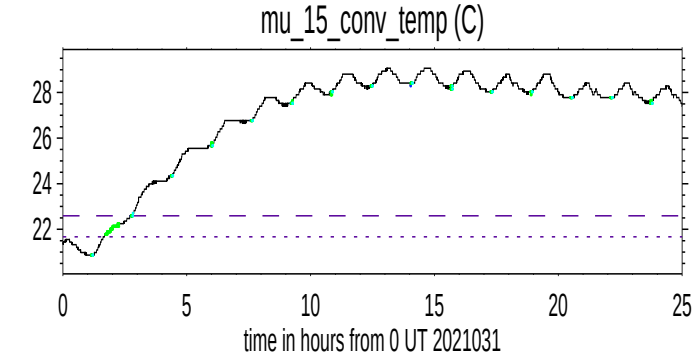

mu_adc_brd_temp (C)
time in hours from 0 UT 2021031

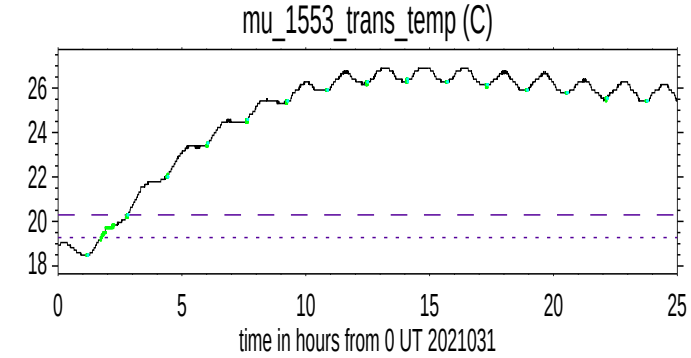

mu_4 (V)
4.00
3.95
3.90
3.85
0
5
10
15
20
25
time in hours from 0 UT 2021031

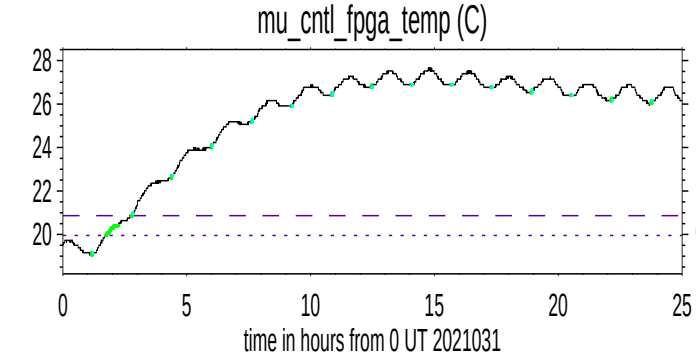

mu_gci_fpga_temp (C)
28
26
24
22
20
0
5
10
15
20
25
time in hours from 0 UT 2021031

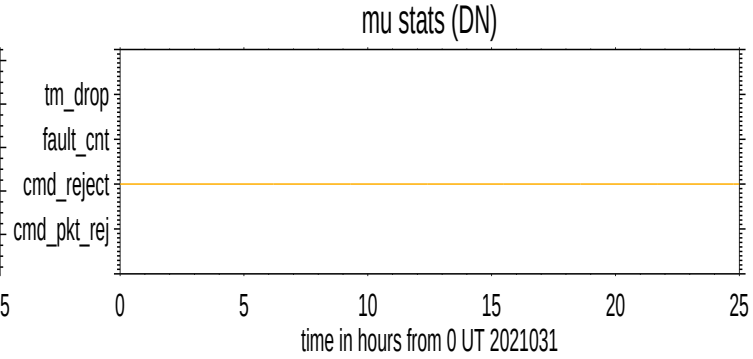

mu_15pos (V)
15.15
15.10
15.05
15.00
14.95
14.90
0
5
10
15
20
25
time in hours from 0 UT 2021031

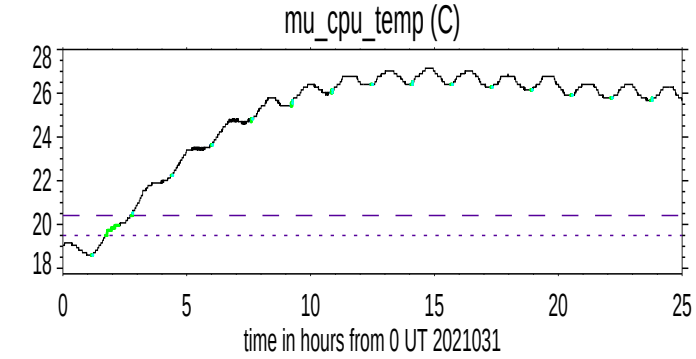

mu_15neg (V)
-14.8
-14.9
-15.0
-15.1
-15.2
0
5
10
15
20
25
time in hours from 0 UT 2021031

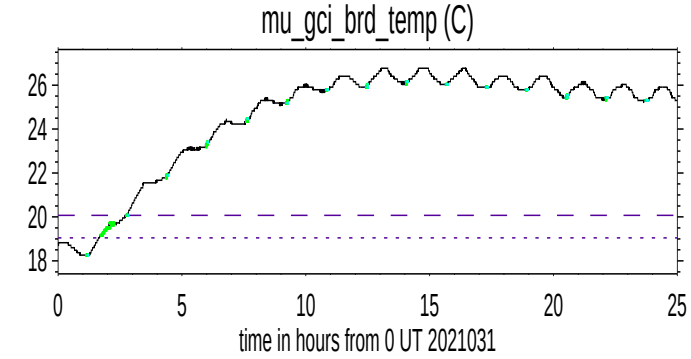

mu_15_conv_temp (C)
28
26
24
22
0
5
10
15
20
25
time in hours from 0 UT 2021031

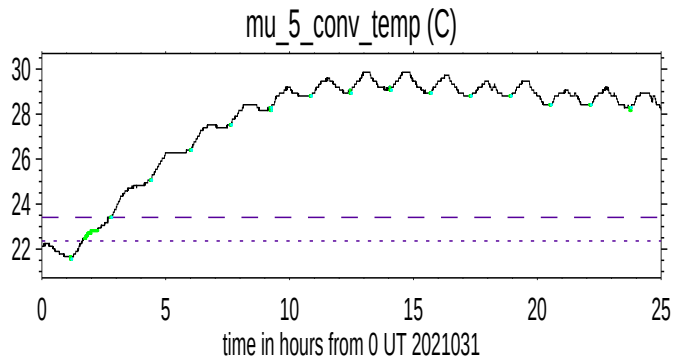

mu_1553_trans_temp (C)
26
24
22
20
18
0
5
10
15
20
25
time in hours from 0 UT 2021031

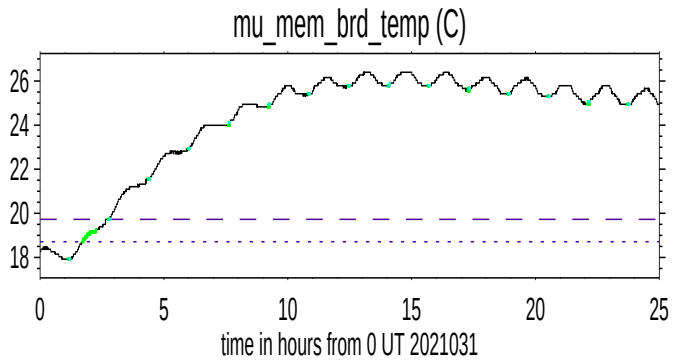

mu_cntl_fpga_temp (C)
28
26
24
22
20
0
5
10
15
20
25
time in hours from 0 UT 2021031

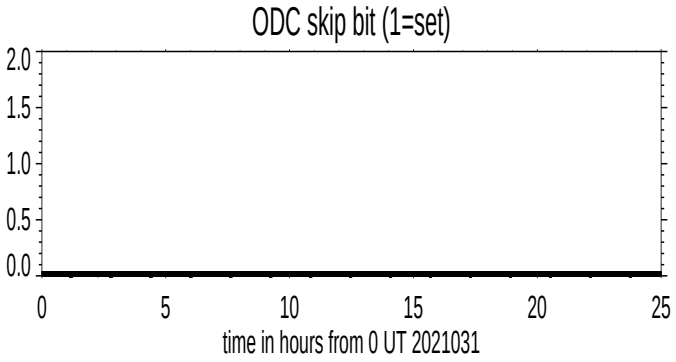

mu stats (DN)
tm_drop
fault_cnt
cmd_reject
cmd_pkt_rej
0
5
10
15
20
25
time in hours from 0 UT 2021031

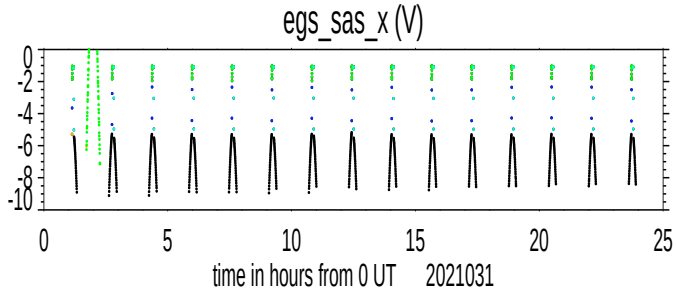

mu_cpu_temp (C)
28
26
24
22
20
18
0
5
10
15
20
25
time in hours from 0 UT 2021031

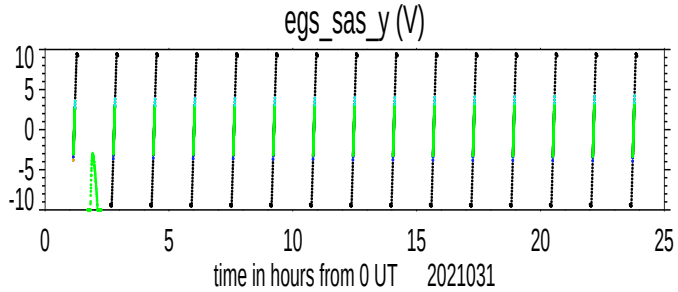

mu_gci_brd_temp (C)
26
24
22
20
18
0
5
10
15
20
25
time in hours from 0 UT 2021031

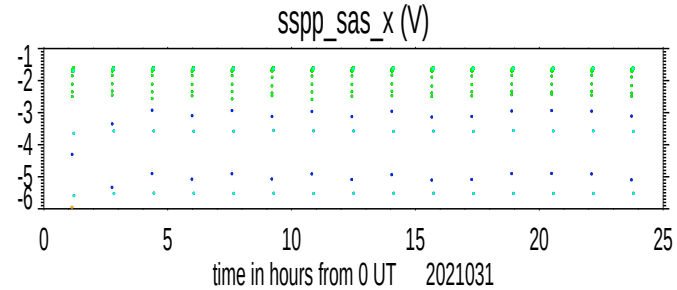

mu_5_conv_temp (C)
30
28
26
24
22
0
5
10
15
20
25
time in hours from 0 UT 2021031

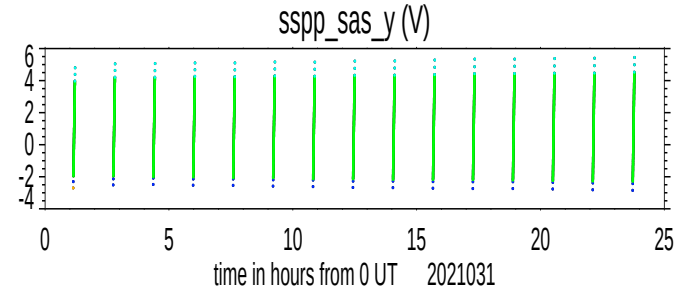

mu_mem_brd_temp (C)
26
24
22
20
18
0
5
10
15
20
25
time in hours from 0 UT 2021031

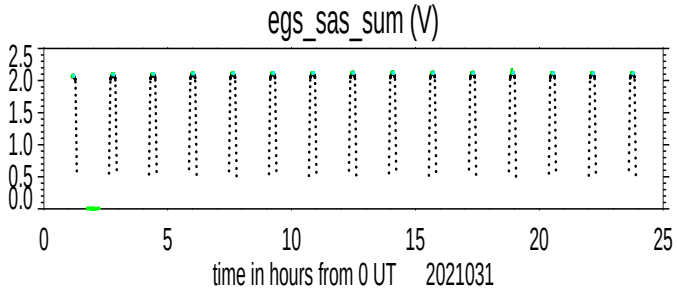

ODC skip bit (1=set)
2.0
1.5
1.0
0.5
0.0
0
5
10
15
20
25
time in hours from 0 UT 2021031

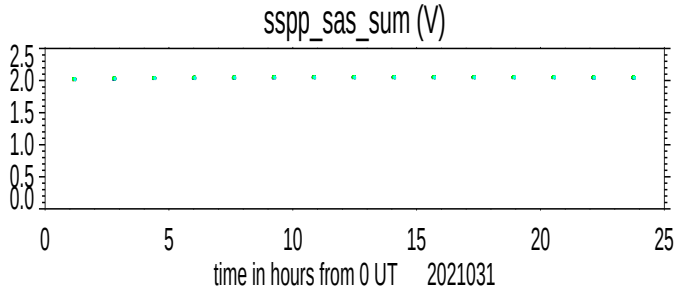

egs_sas_x (V)
time in hours from 0 UT 2021031

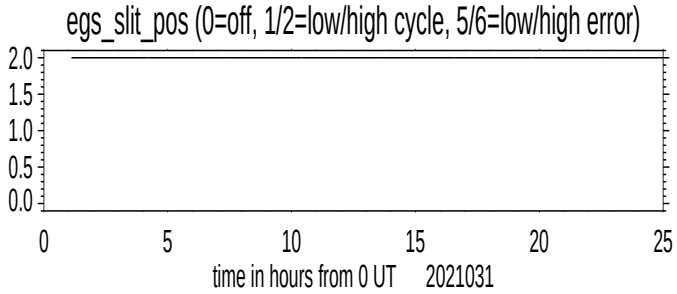

egs_sas_y (V)
time in hours from 0 UT 2021031

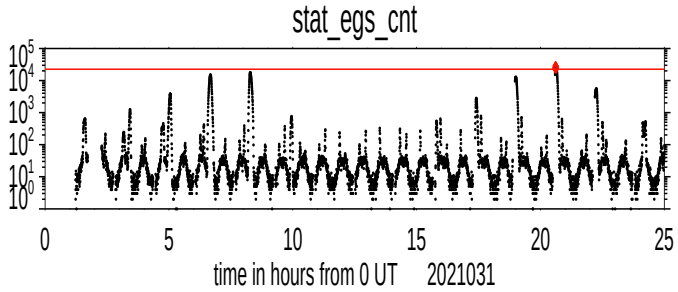

sspp_sas_x (V)
time in hours from 0 UT 2021031

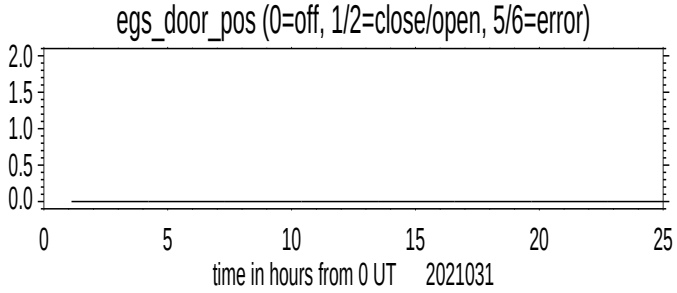

sspp_sas_y (V)
time in hours from 0 UT 2021031

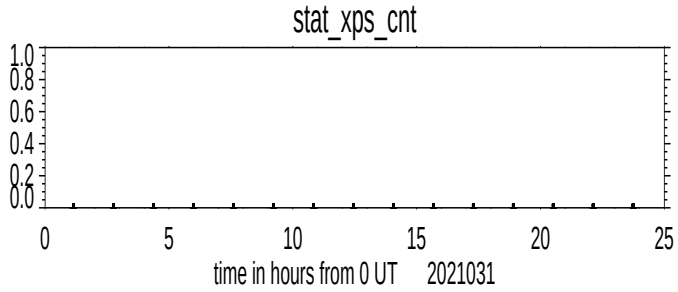

egs_sas_sum (V)
time in hours from 0 UT 2021031

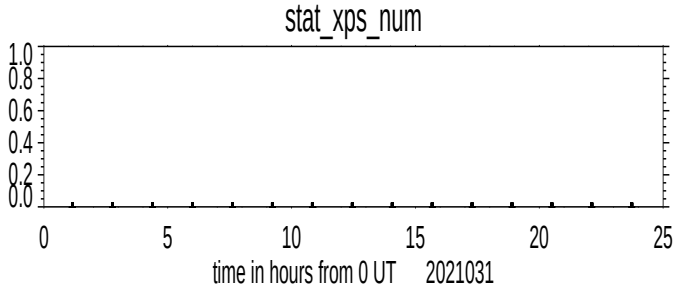

sspp_sas_sum (V)
time in hours from 0 UT 2021031

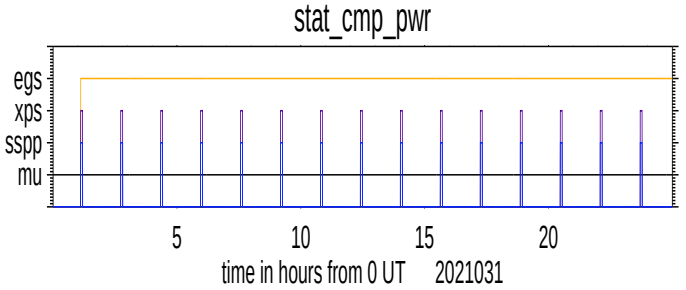

egs_slit_pos (0=off, 1/2=low/high cycle, 5/6=low/high error)
time in hours from 0 UT 2021031


stat_egs_cnt
time in hours from 0 UT 2021031

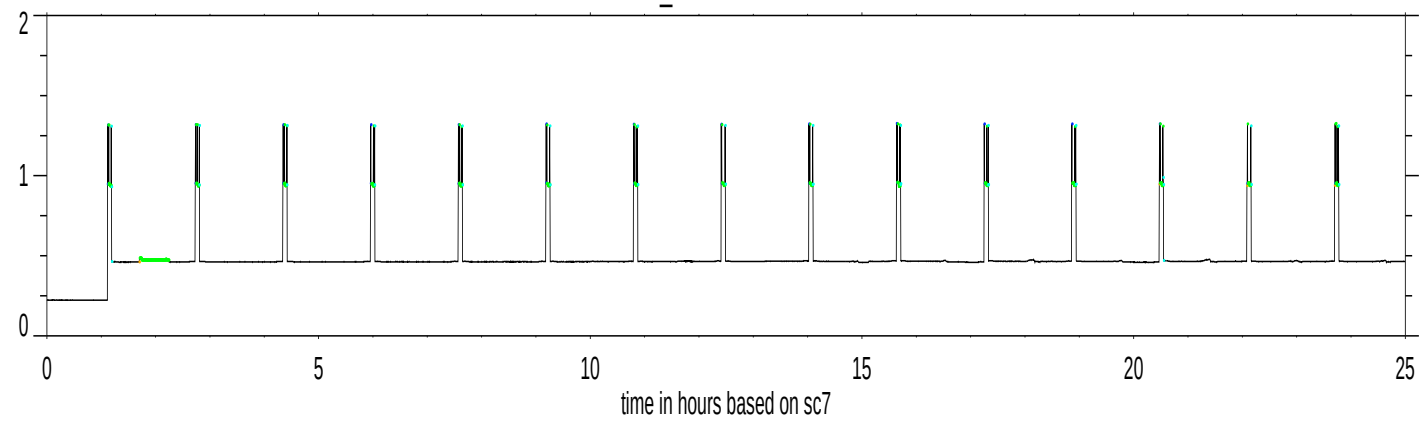

egs_door_pos (0=off, 1/2=close/open, 5/6=error)
time in hours from 0 UT 2021031


stat_xps_cnt
time in hours from 0 UT 2021031

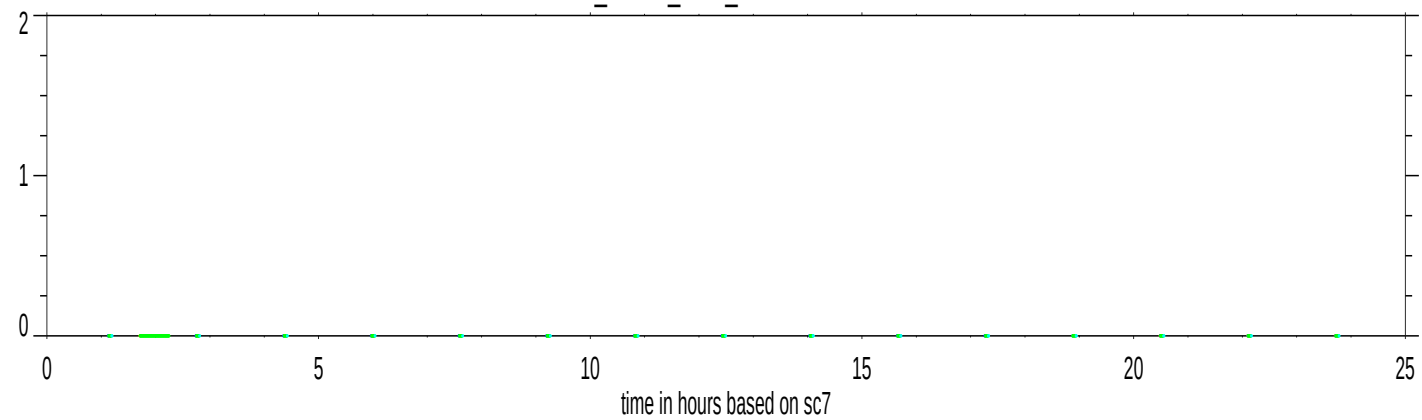

stat_xps_num
time in hours from 0 UT 2021031


stat_cmp_pwr
egs
xps
sspp
mu
time in hours from 0 UT 2021031

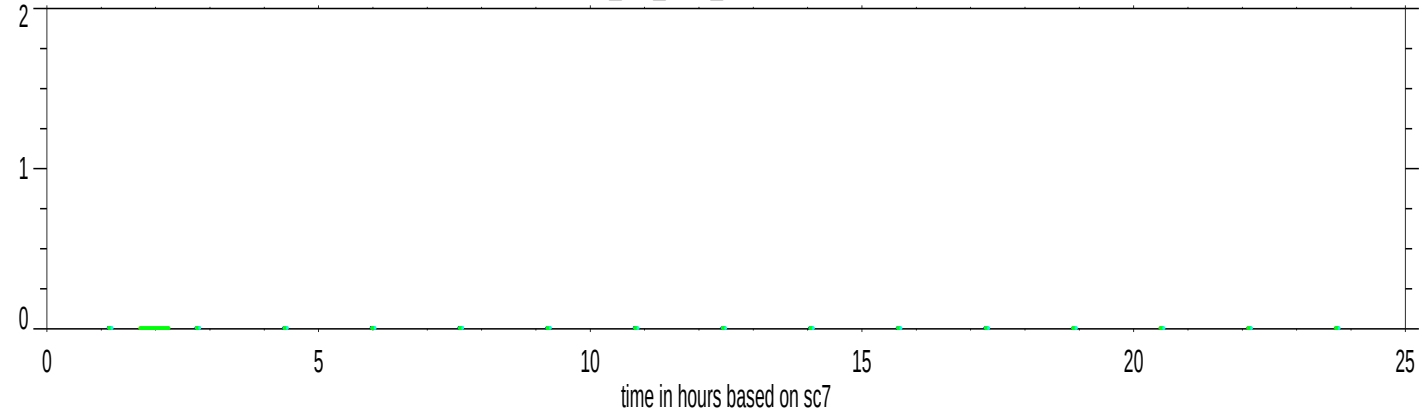
SEE_CUR 2021031



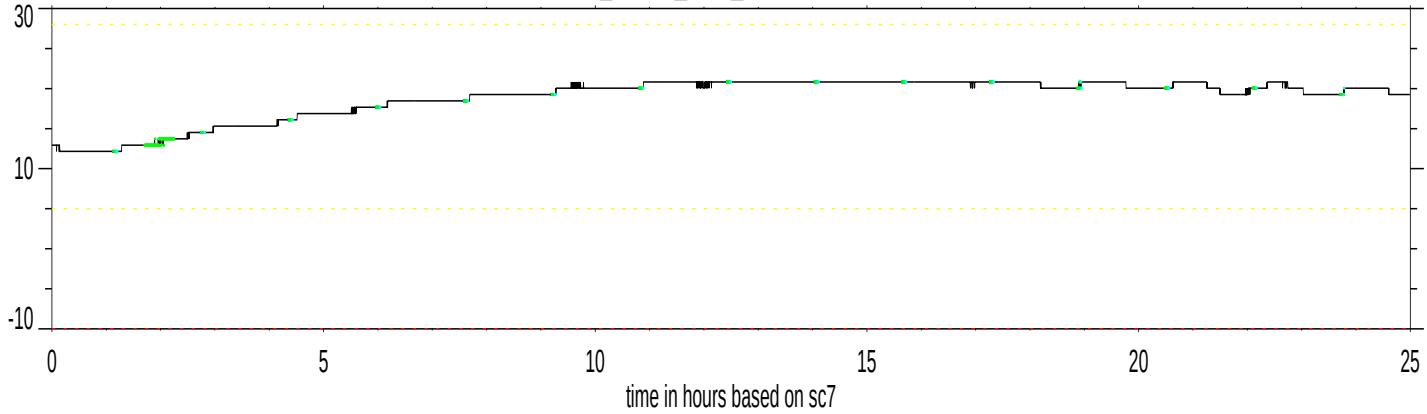
SEE_SURV_HTR_CUR 2021031



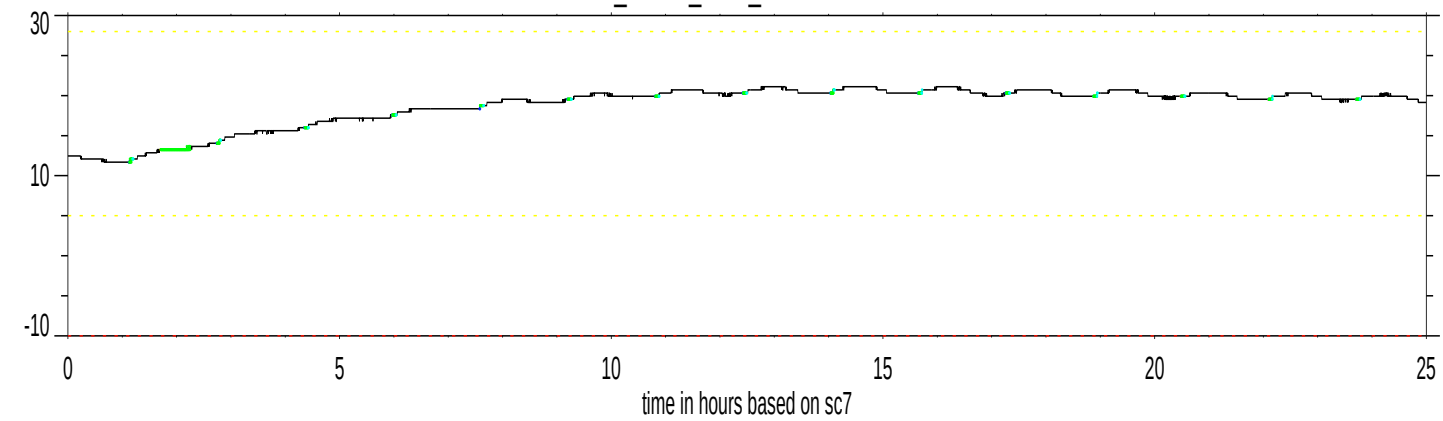
SEE_OP_HTR_CUR 2021031



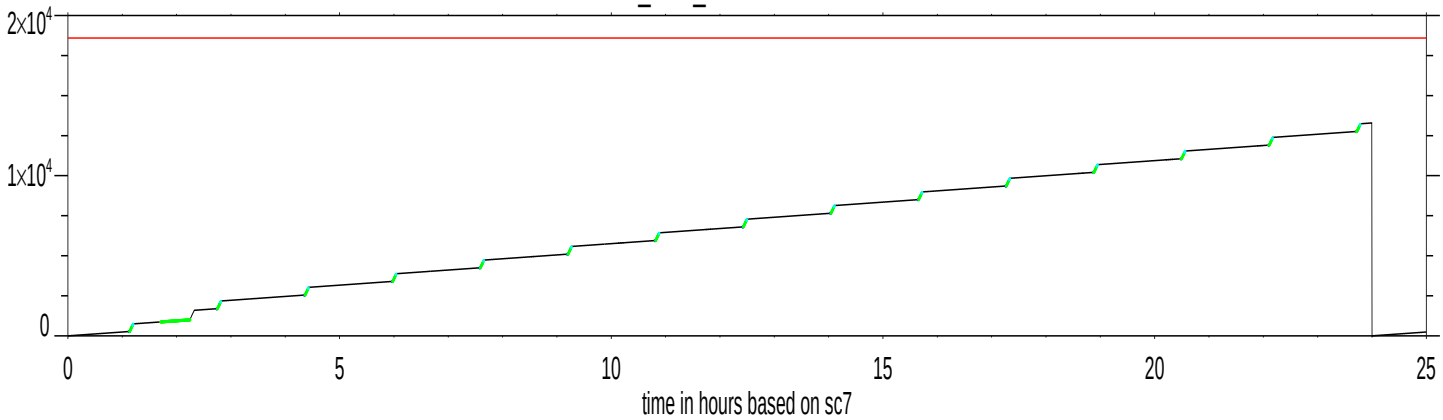
SSPP_BHND_XPS_TEMP 2021031



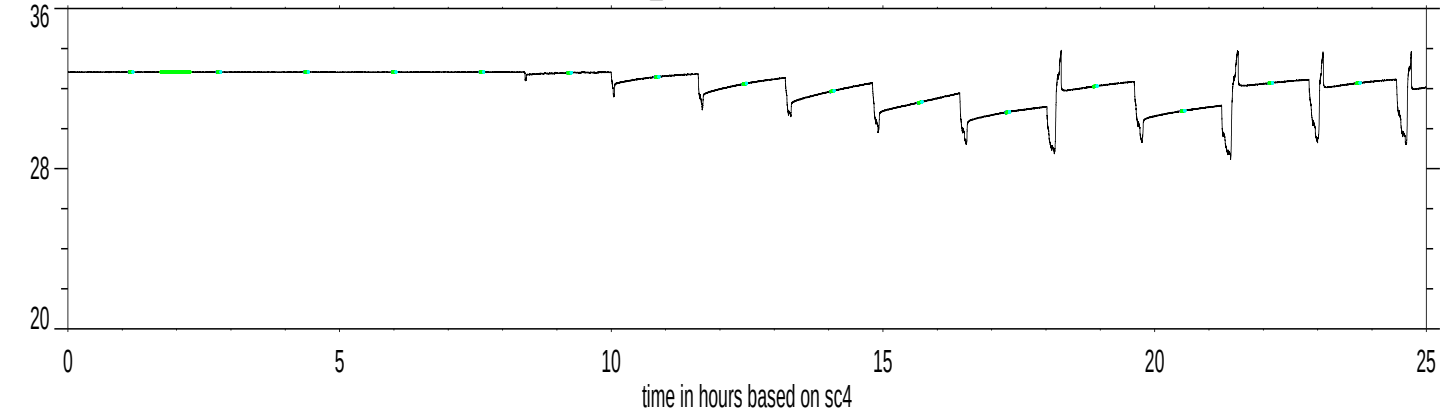
SSPP_BHND_MTR_TEMP 2021031



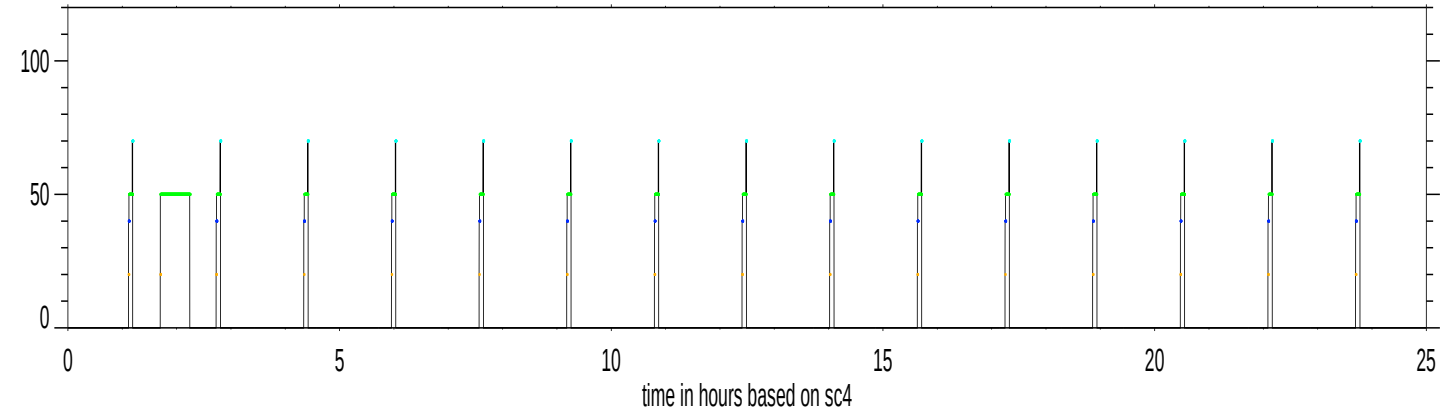
SEE_PKT_COUNT 2021031

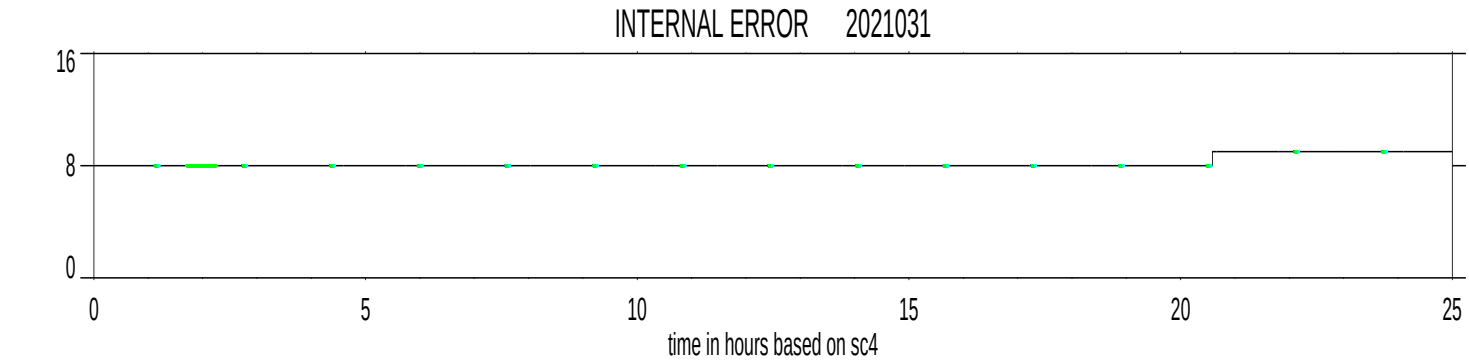


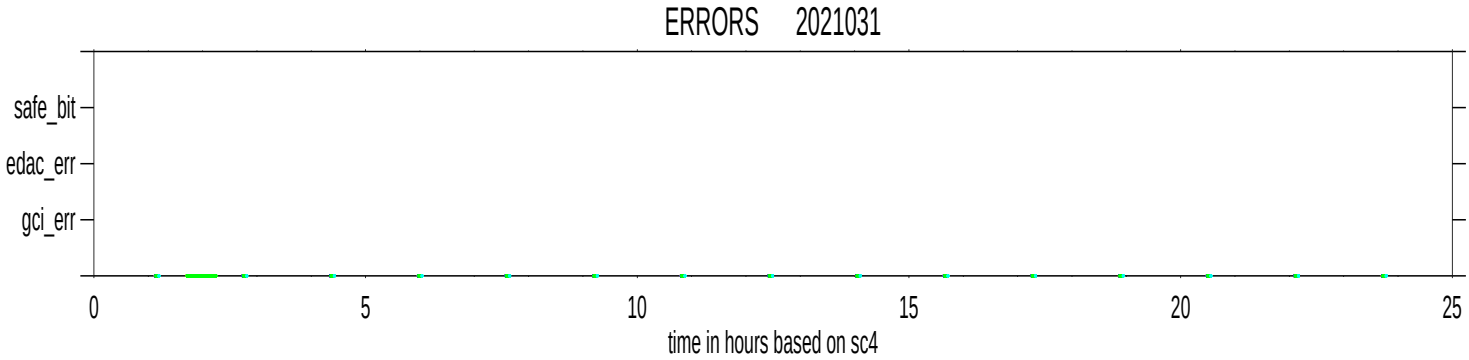
BUS_VOLTAGE 2021031

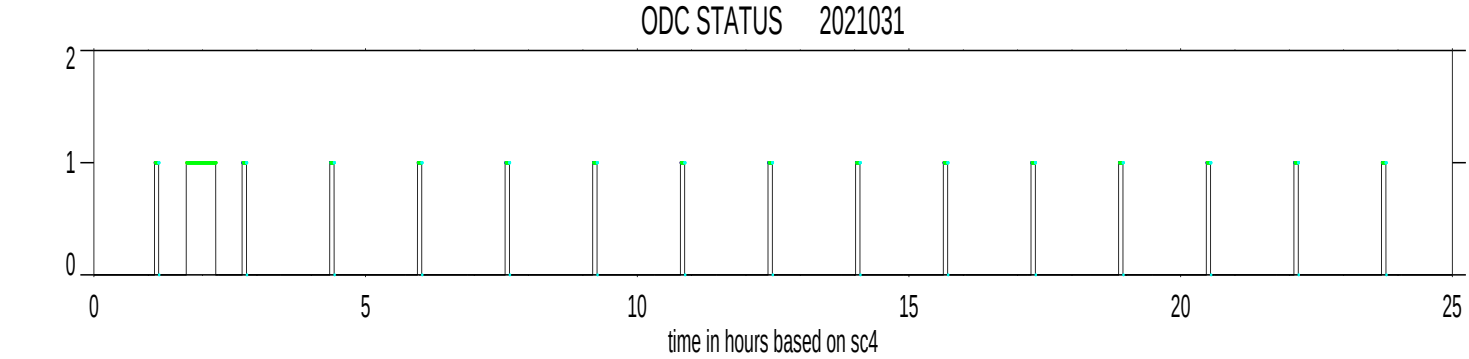


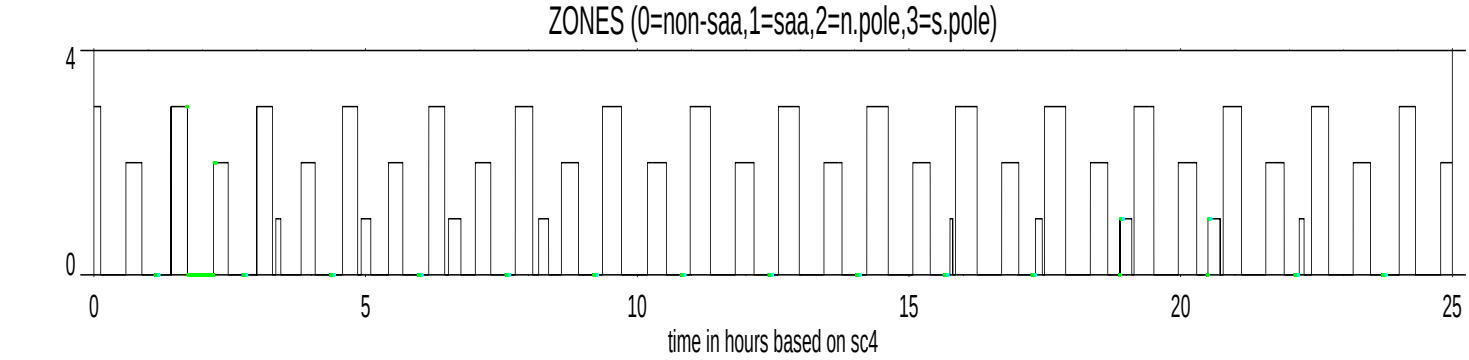
SEE_MU Operational Mode 2021031

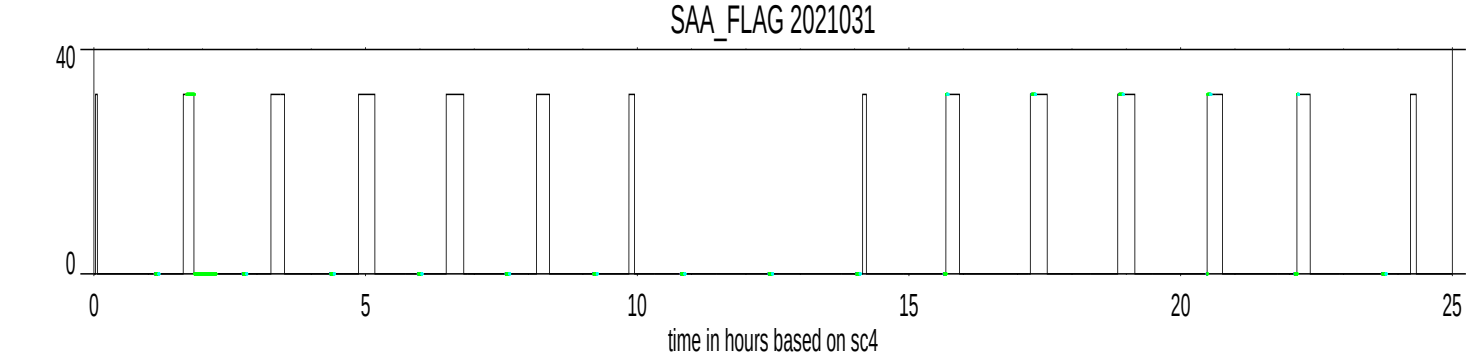


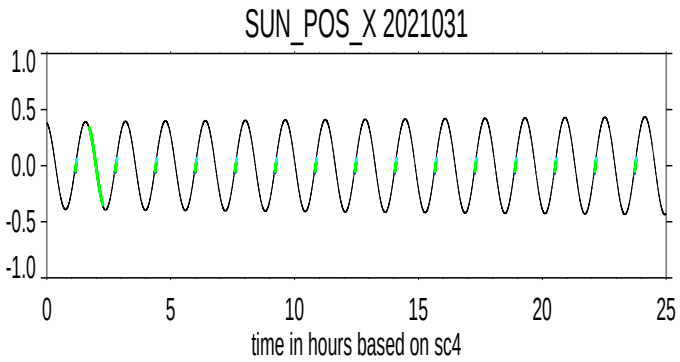

INTERNAL ERROR 2021031
16
8
0
0
5
10
15
20
25
time in hours based on sc4

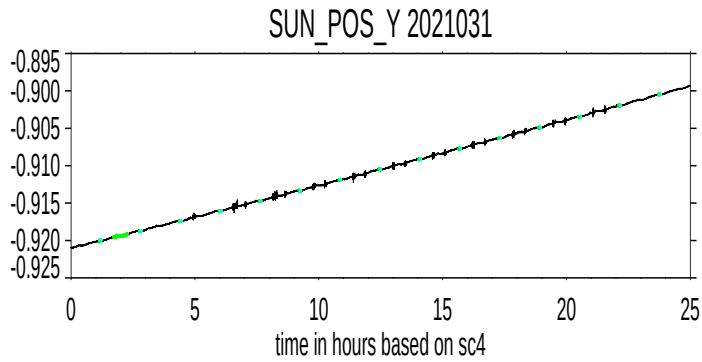

ERRORS 2021031
safe_bit
edac_err
gci_err
0
5
10
15
20
25
time in hours based on sc4

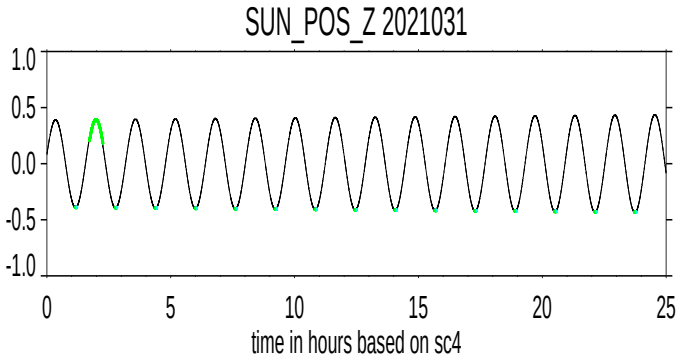

ODC STATUS 2021031
2
1
0
0
5
10
15
20
25
time in hours based on sc4

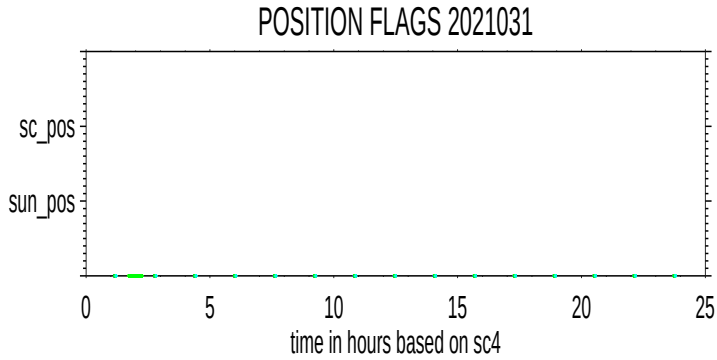

ZONES (0=non-saa,1=saa,2=n.pole,3=s.pole)
4
0
0
5
10
15
20
25
time in hours based on sc4

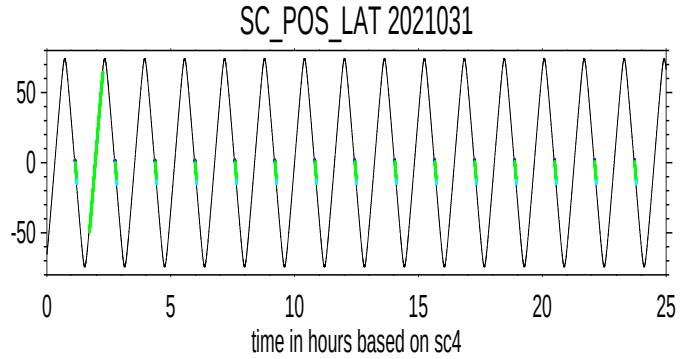

SAA_FLAG 2021031
40
0
0
5
10
15
20
25
time in hours based on sc4

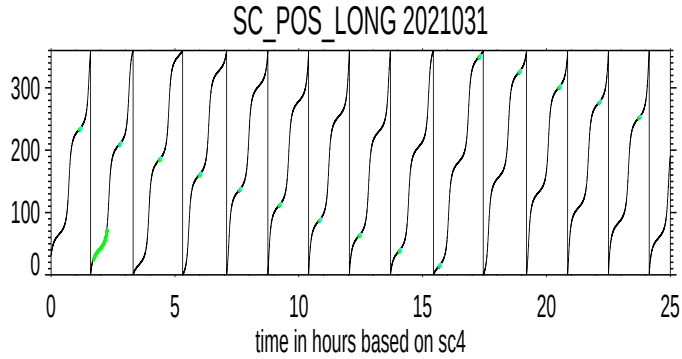

SUN_POS_X 2021031
1.0
0.5
0.0
-0.5
-1.0
0
5
10
15
20
25
time in hours based on sc4

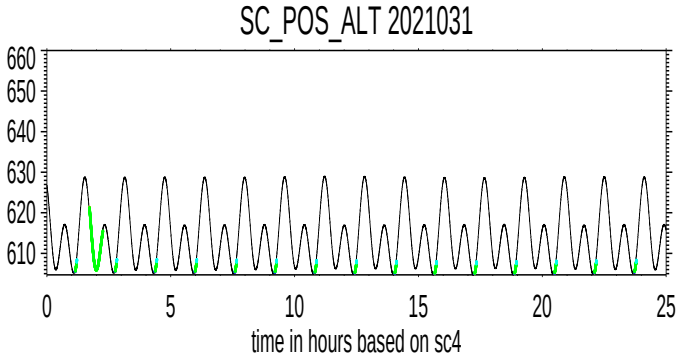

SUN_POS_Y 2021031
-0.895
-0.900
-0.905
-0.910
-0.915
-0.920
-0.925
0
5
10
15
20
25
time in hours based on sc4

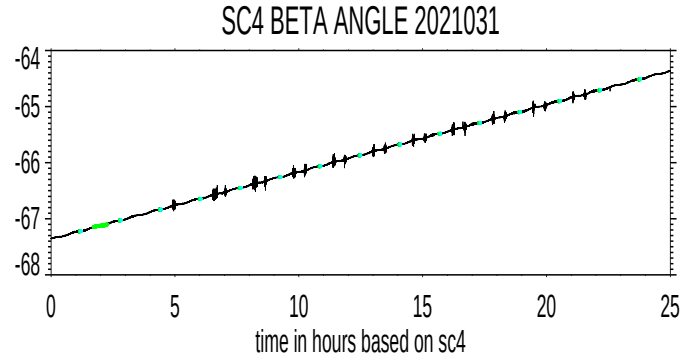

SUN_POS_Z 2021031
1.0
0.5
0.0
-0.5
-1.0
0
5
10
15
20
25
time in hours based on sc4


POSITION FLAGS 2021031
sc_pos
sun_pos
0
5
10
15
20
25
time in hours based on sc4


SC_POS_LAT 2021031
50
0
-50
0
5
10
15
20
25
time in hours based on sc4


SC_POS_LONG 2021031
300
200
100
0
0
5
10
15
20
25
time in hours based on sc4


SC_POS_ALT 2021031
660
650
640
630
620
610
0
5
10
15
20
25
time in hours based on sc4


SC4 BETA ANGLE 2021031
-64
-65
-66
-67
-68
0
5
10
15
20
25
time in hours based on sc4