Cross checking time series of left hand channels with right PEM channels

H1:PSL-FSS_FAST_MON_OUT_DQ

H1:PSL-FSS_TPD_DC_OUT_DQ

H1:IMC-MC2_TRANS_SUM_IN1_DQ

H1:PSL-PWR_NPRO_OUT_DQ

H1:PSL-PMC_MIXER_OUT_DQ

H1:PSL-PMC_HV_MON_OUT_DQ

H1:PEM-CS_ACC_PSL_PERISCOPE_X_DQ

H1:PEM-CS_ACC_PSL_PERISCOPE_Y_DQ

H1:PEM-CS_ACC_PSL_TABLE1_X_DQ

H1:PEM-CS_ACC_PSL_TABLE1_Y_DQ

H1:PEM-CS_ACC_PSL_TABLE1_Z_DQ

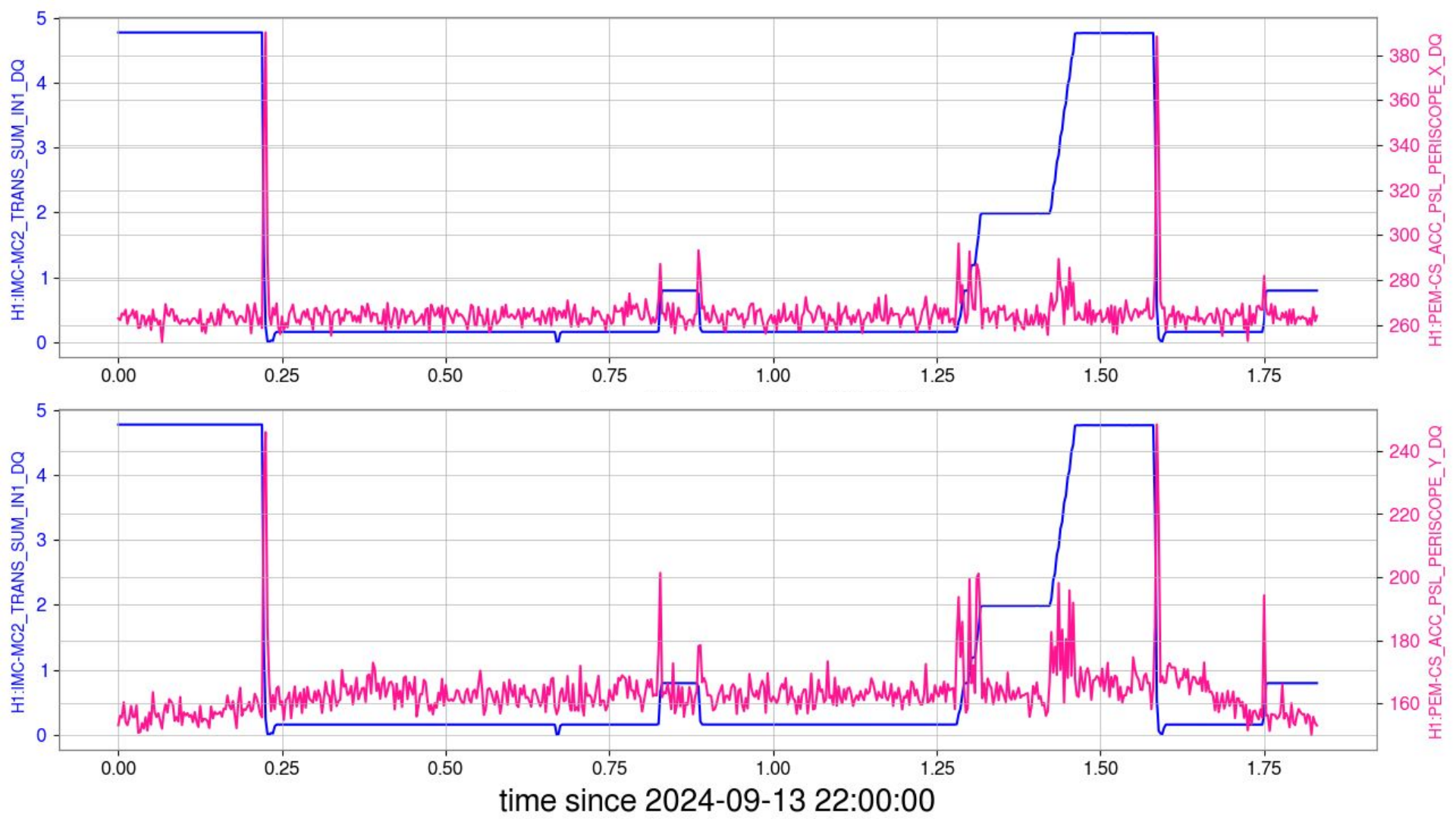
H1:PEM-CS_ACC_PSL_TABLE2_Z_DQ

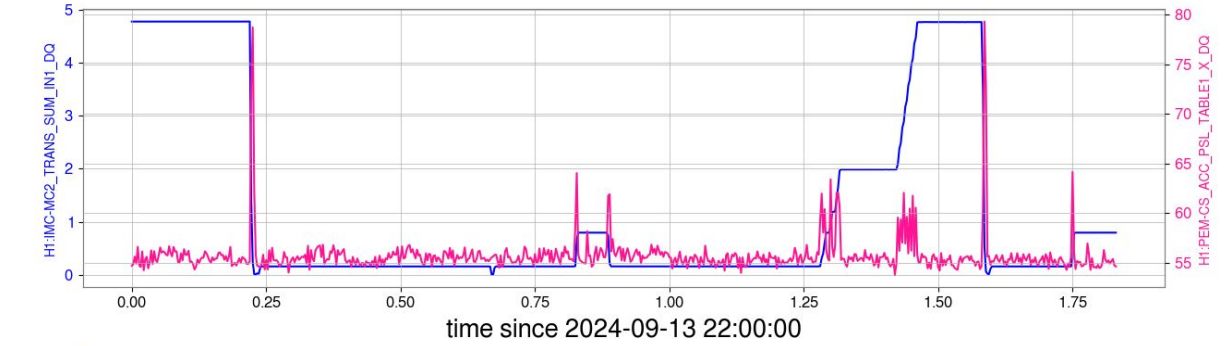
H1:PEM-CS_MIC_PSL_CENTER_DQ

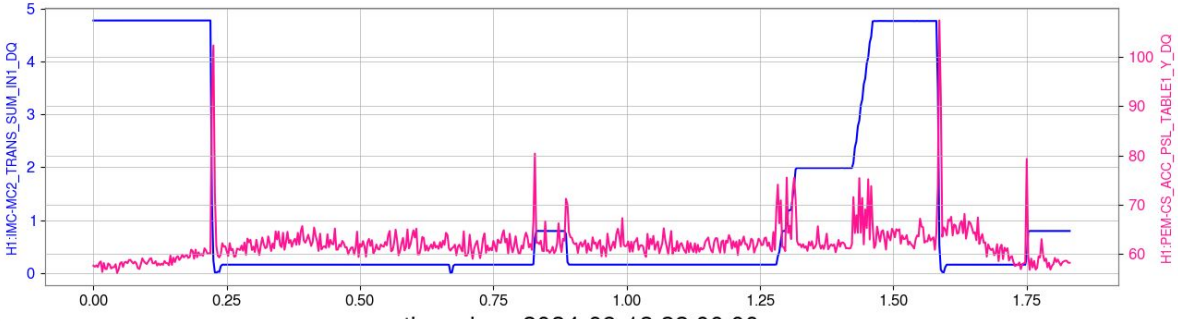
All plots can be found at this link. Only showing plots with obvious correlations

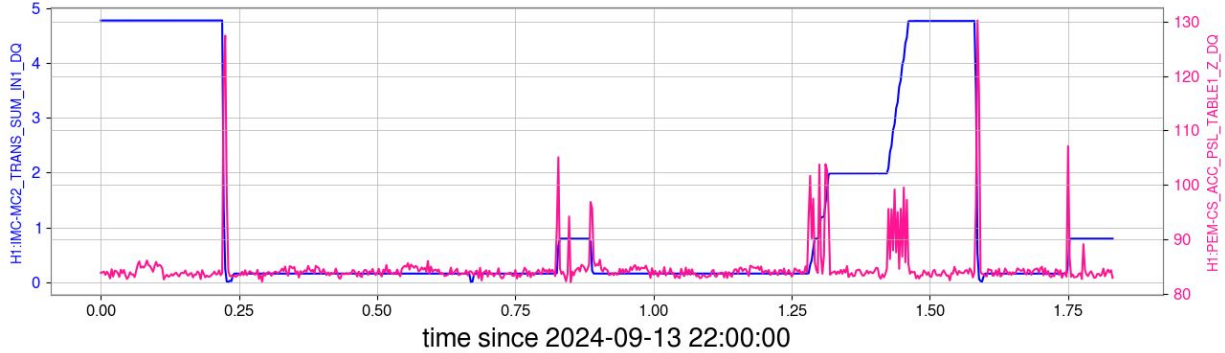
Sept 13 - initial reports of PSL issues (i think..)

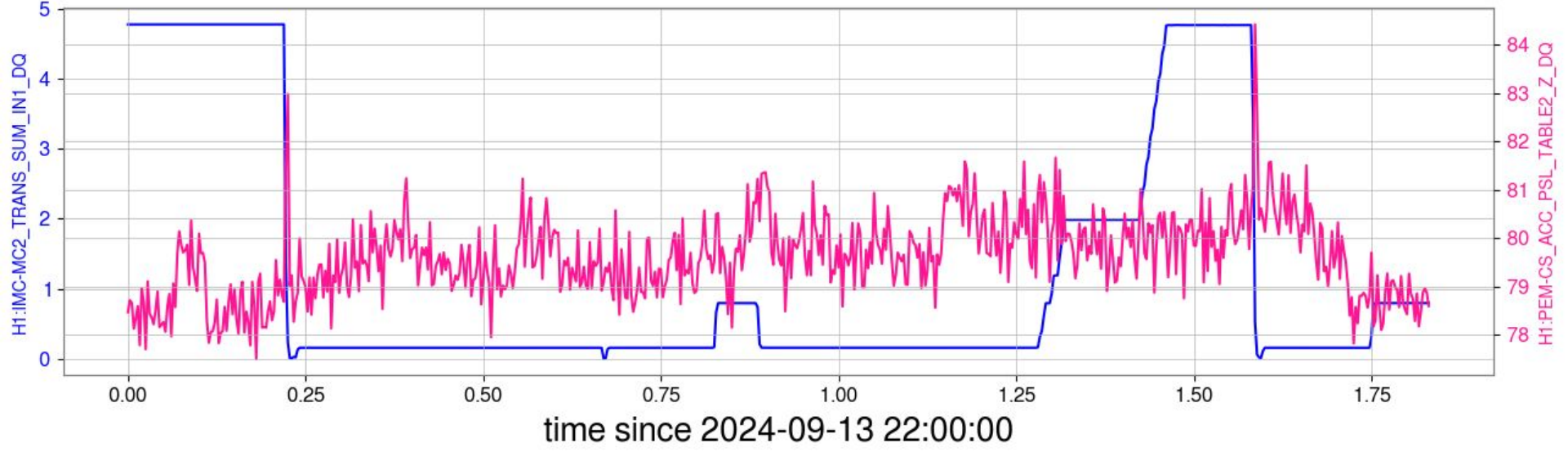
- Coincident glitching between IMC_TRANS2 and the FSS_FAST_MON and all the pem sensors besides the microphone,
  - Although, the amplitude of the glitch in the PSL_TABLE2_Z is much less compared to the sensors on PSL_TABLE1
- No interesting correlations with the NPRO PWR sensor (this is the case for all of the times I've looked at so far)

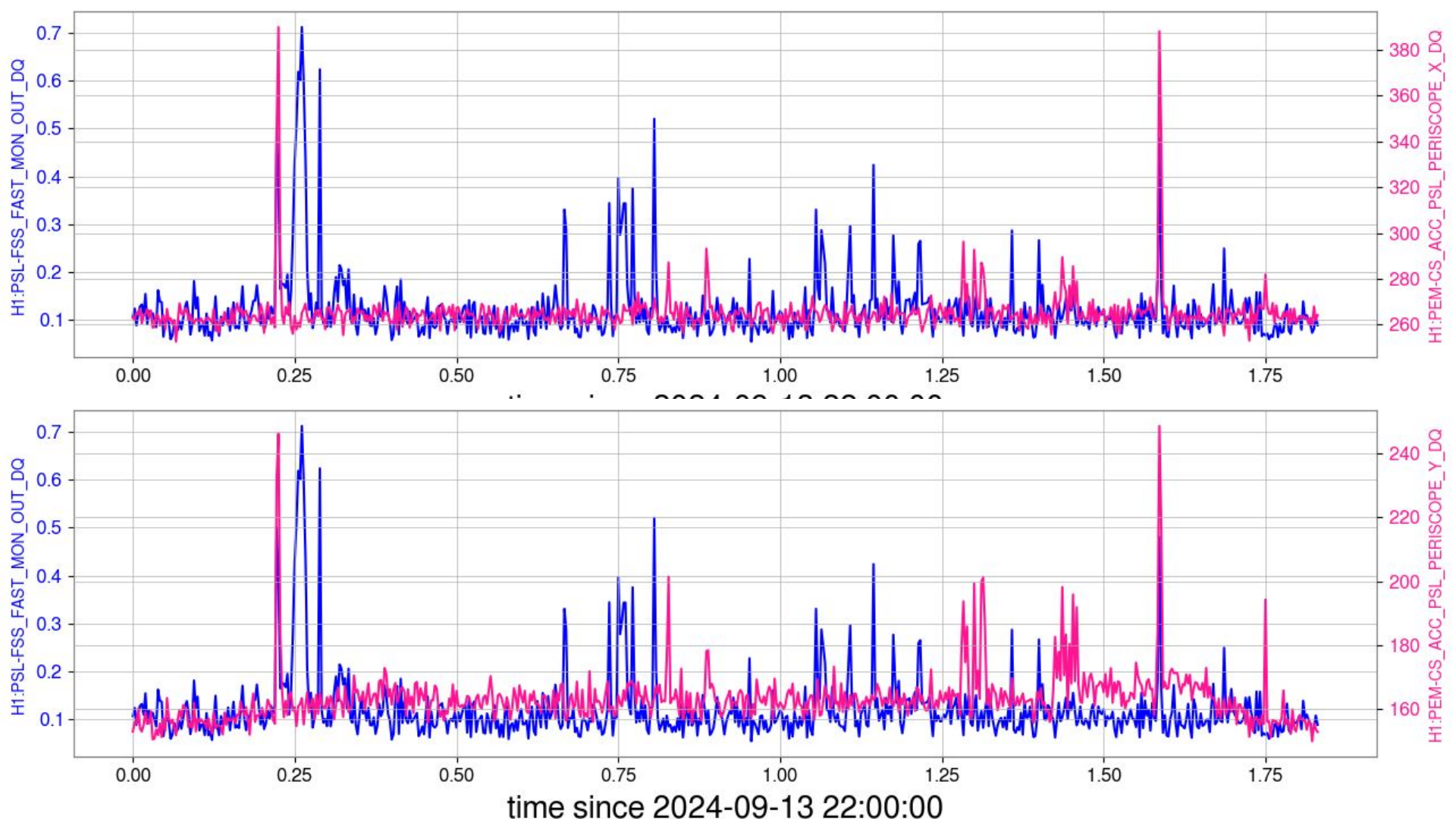

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_X_DQ
H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_Y_DQ
time since 2024-09-13 22:00:00

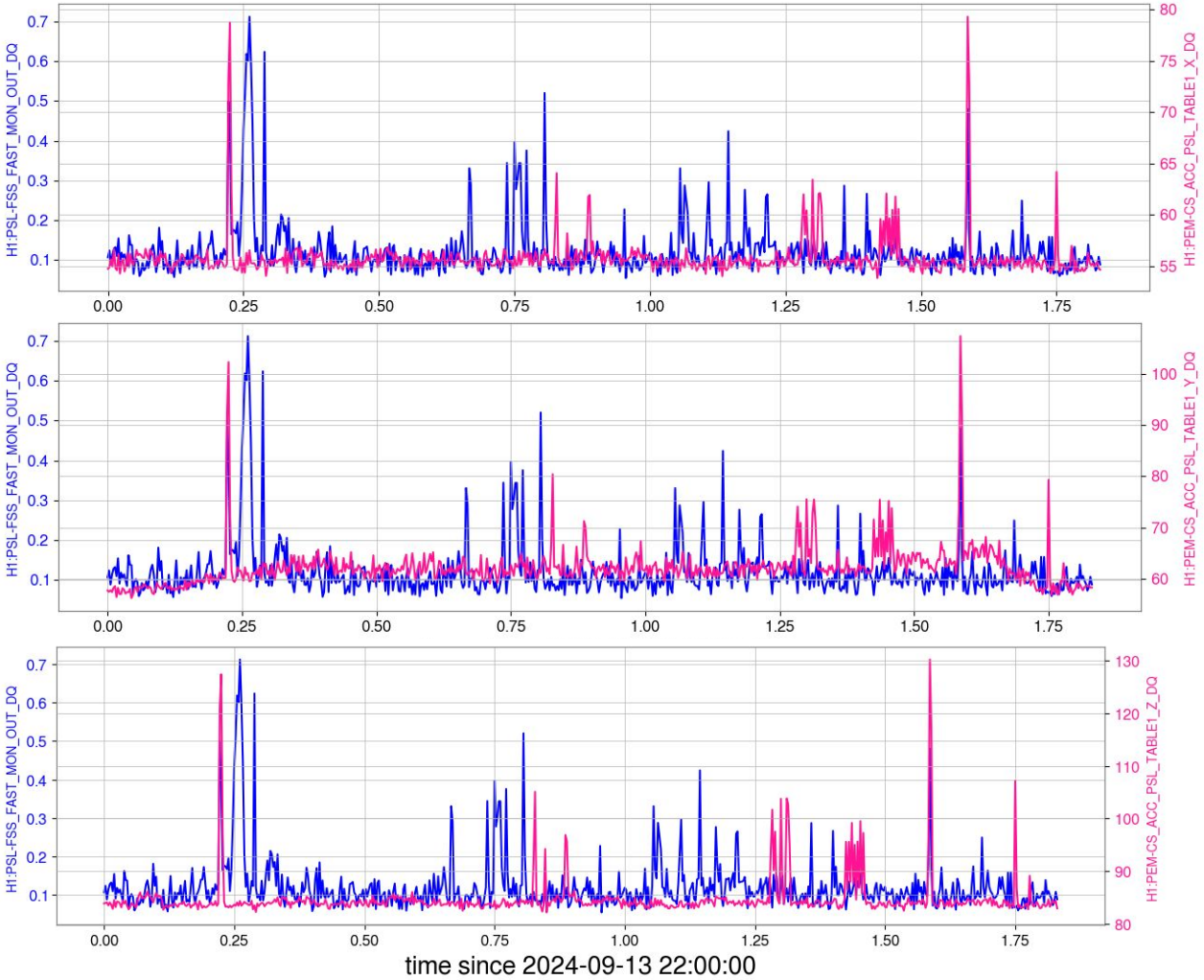

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_X_DQ
time since 2024-09-13 22:00:00

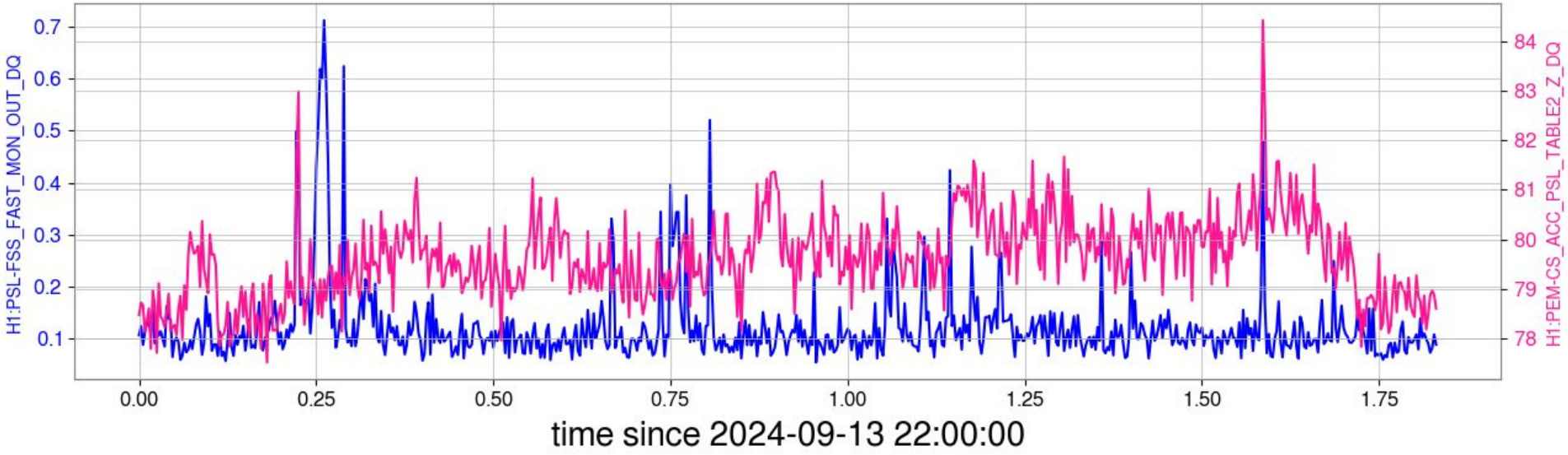

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Y_DQ

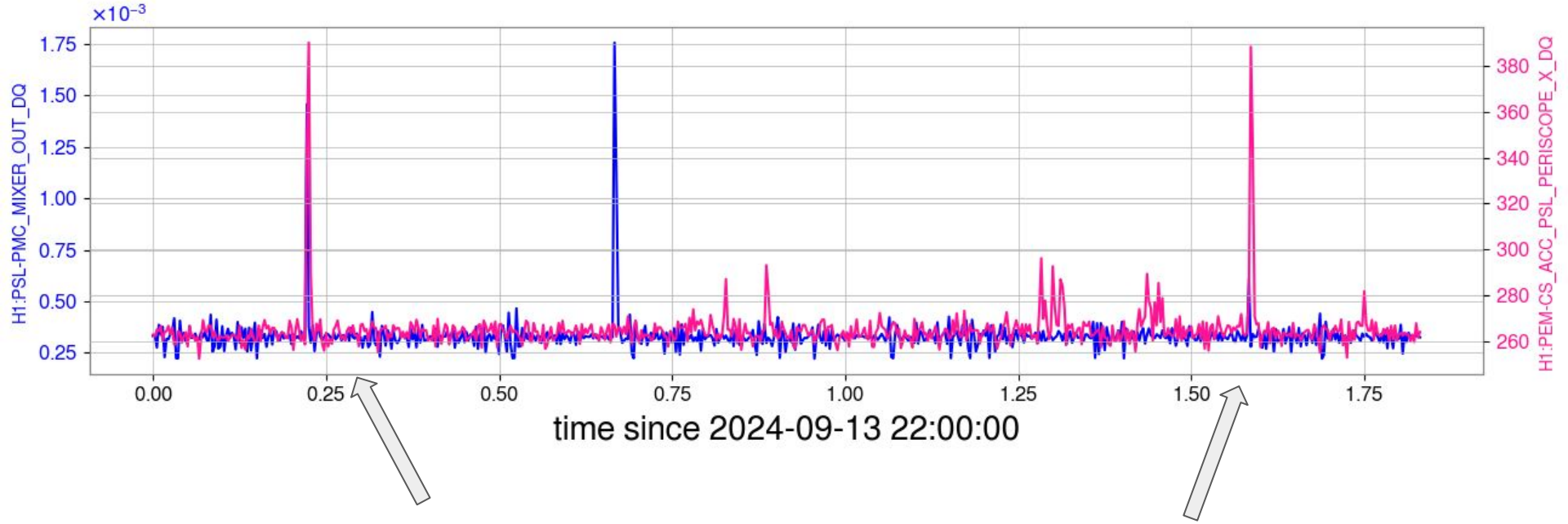

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Z_DQ
time since 2024-09-13 22:00:00


H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE2_Z_DQ
time since 2024-09-13 22:00:00
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
0
1
2
3
4
5
78
79
80
81
82
83
84


H1:PSL-FSS_FAST_MON_OUT_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_X_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_Y_DQ
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
time since 2024-09-13 22:00:00


H1:PSL-FSS_FAST_MON_OUT_DQ
H1:PEM-CS_ACC_PSL_TABLE1_X_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Y_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Z_DQ
time since 2024-09-13 22:00:00


H1:PSL-FSS_FAST_MON_OUT_DQ
0.7
0.6
0.5
0.4
0.3
0.2
0.1
H1:PEM-CS_ACC_PSL_TABLE2_Z_DQ
84
83
82
81
80
79
78
0.00
0.25
0.50
0.75
1.00
1.25
1.50
1.75
time since 2024-09-13 22:00:00

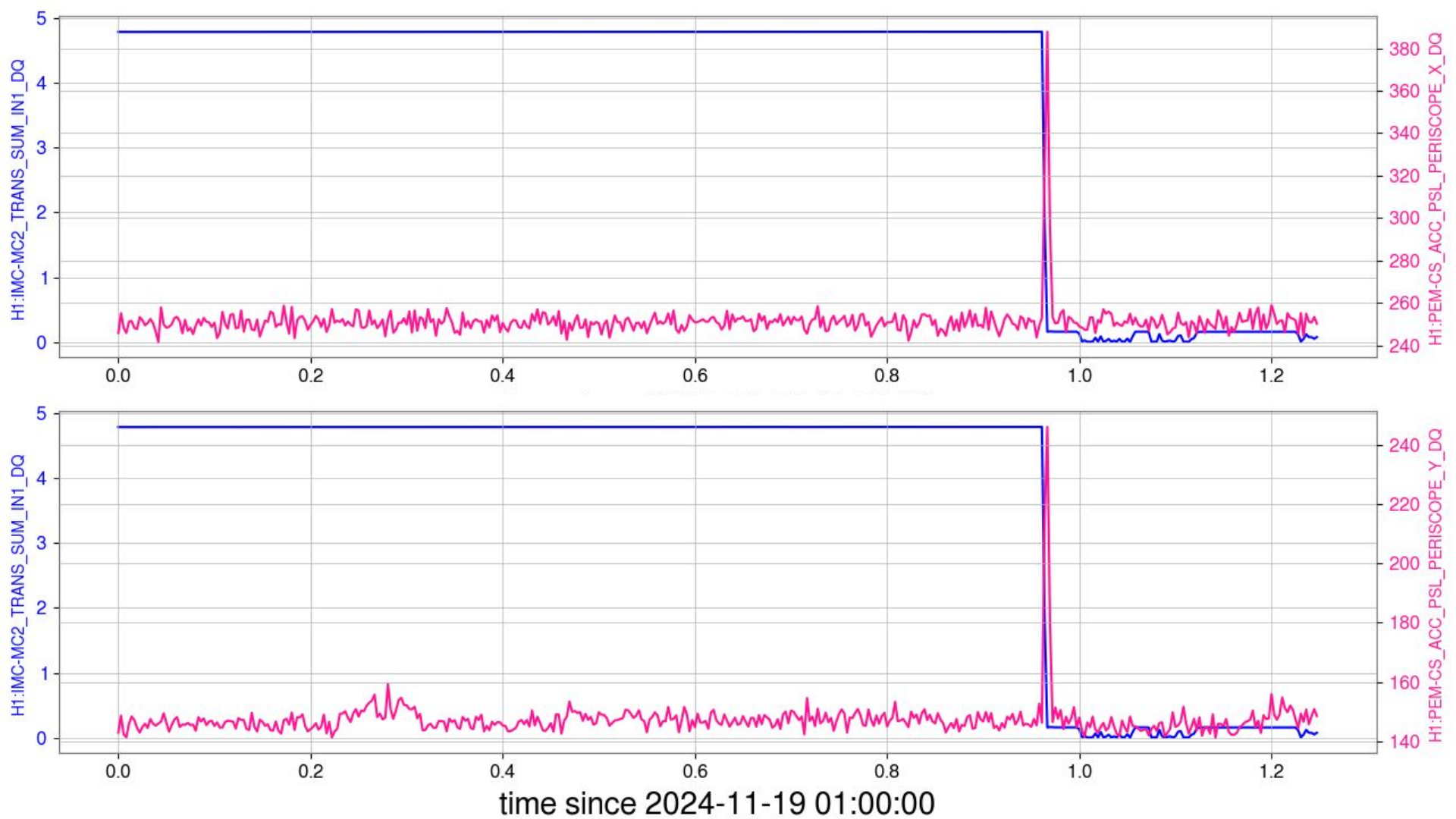


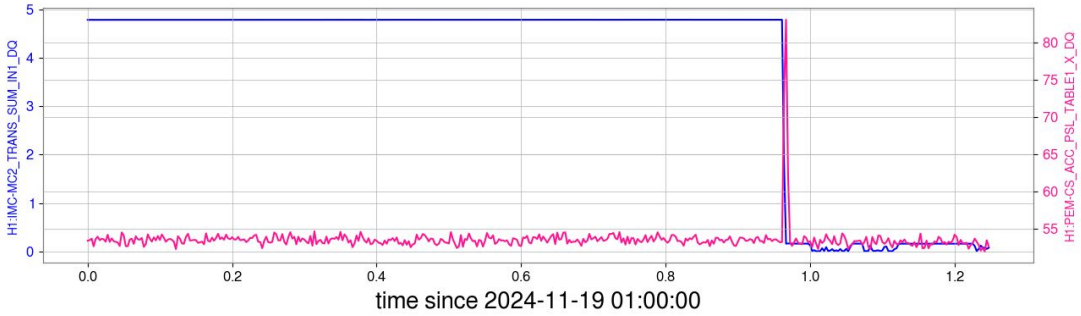
- Roughly similar amplitude PEM sensor glitches don't produce same effect in this channel

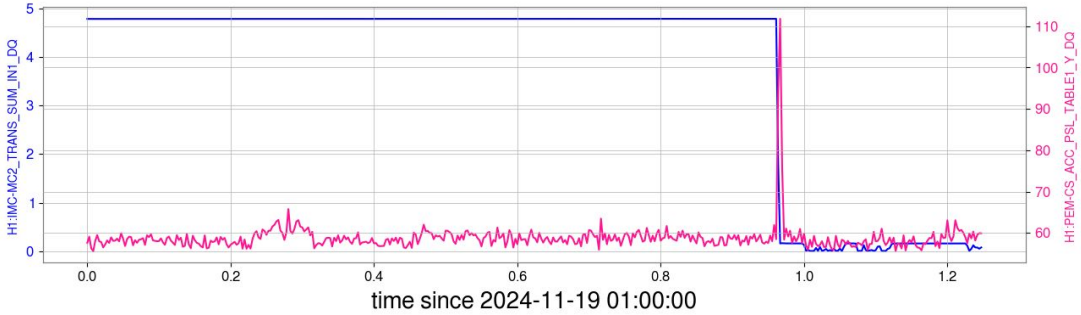
Nov 19th 1-2:15 UTC

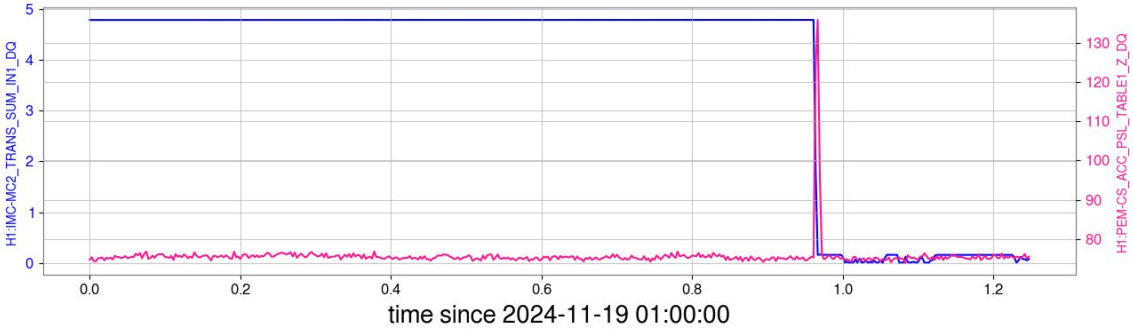
this time period was tagged as an FSS oscillation LL

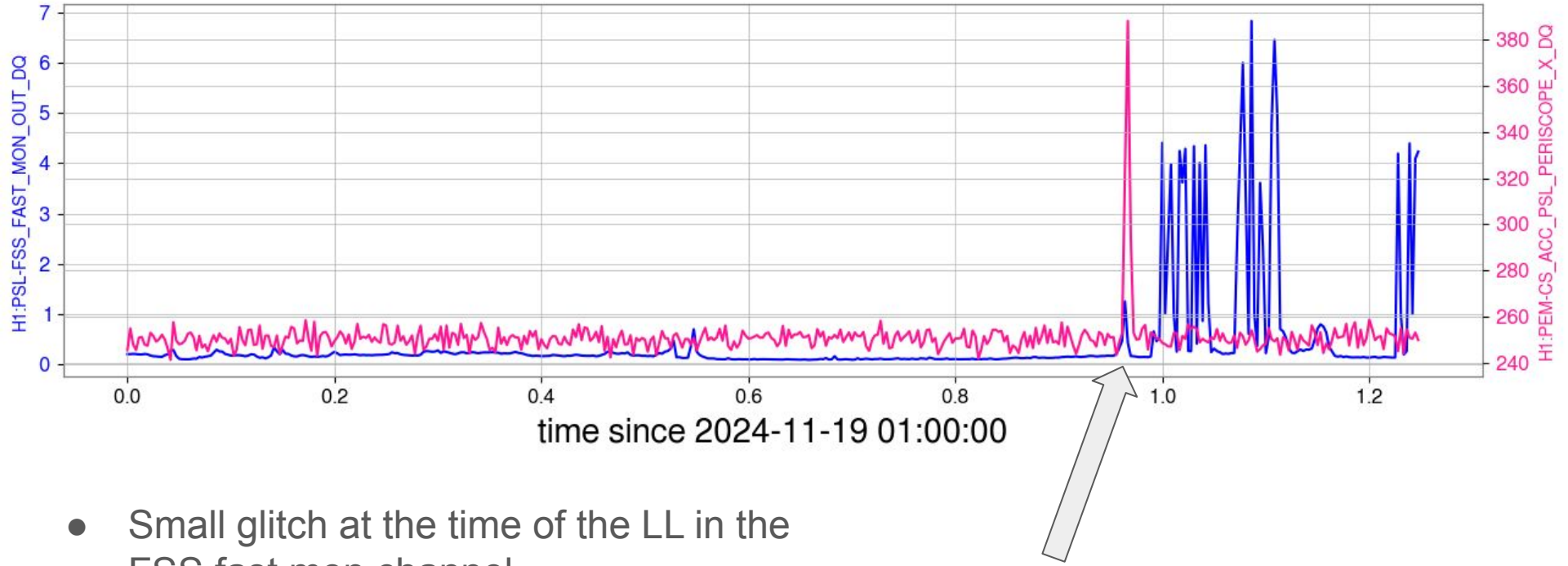
- The same PEM PSL channels (periscope X/Y and PSL TABLE_1_X/Y/Z) again show a large glitch when lock is lost
  - Correlates again with the IMC-MC2_TRANS
- FSS glitching is obvious during this time period, and some channels (slides 9-11) show a small glitch that lines up with the PSL pem channels
- PMC_MIXER and PMC_HV_MON also have a glitch that correlates with these PEM PSL channels


H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_X_DQ
H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_Y_DQ
time since 2024-11-19 01:00:00

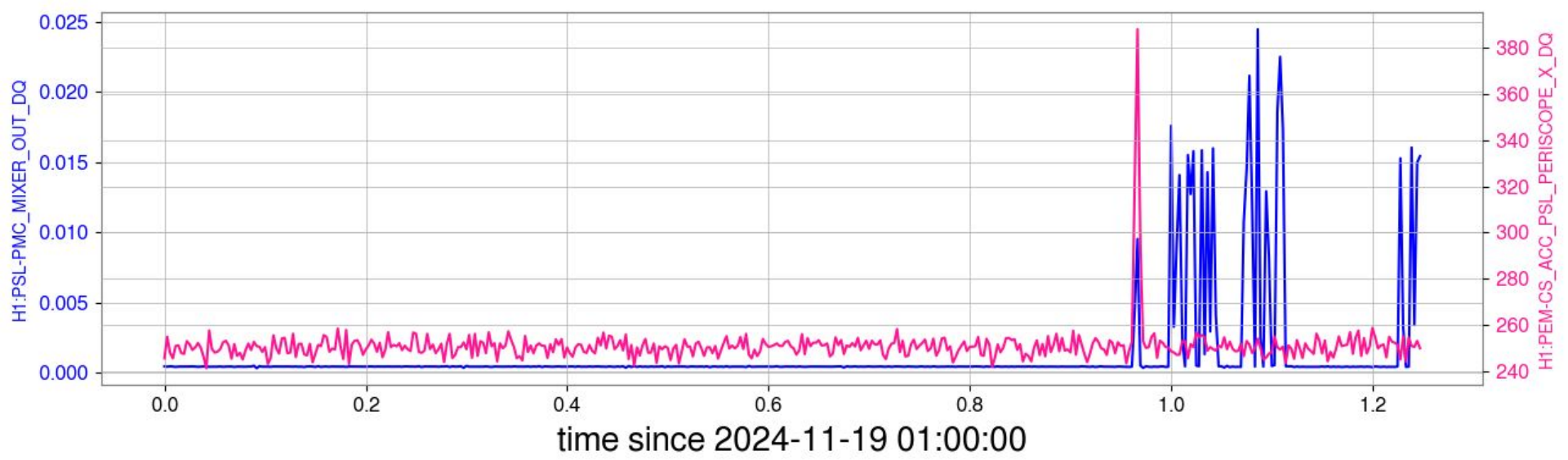

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_X_DQ
time since 2024-11-19 01:00:00


H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Y_DQ
time since 2024-11-19 01:00:00

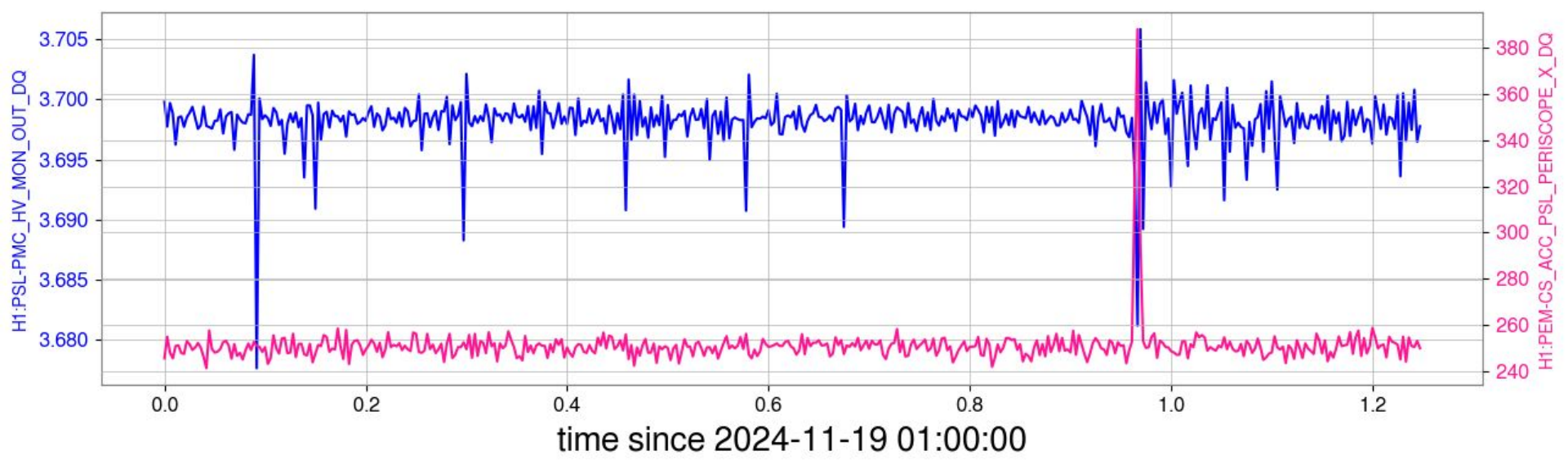

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Z_DQ
time since 2024-11-19 01:00:00



- Small glitch at the time of the LL in the FSS fast mon channel.
- This small glitch is also correlates with the PSL periscope Y, and PSL table 1_X/Y/X



- PSL-PMC_MIXER has same behavior with PEM channels like on previous two slides

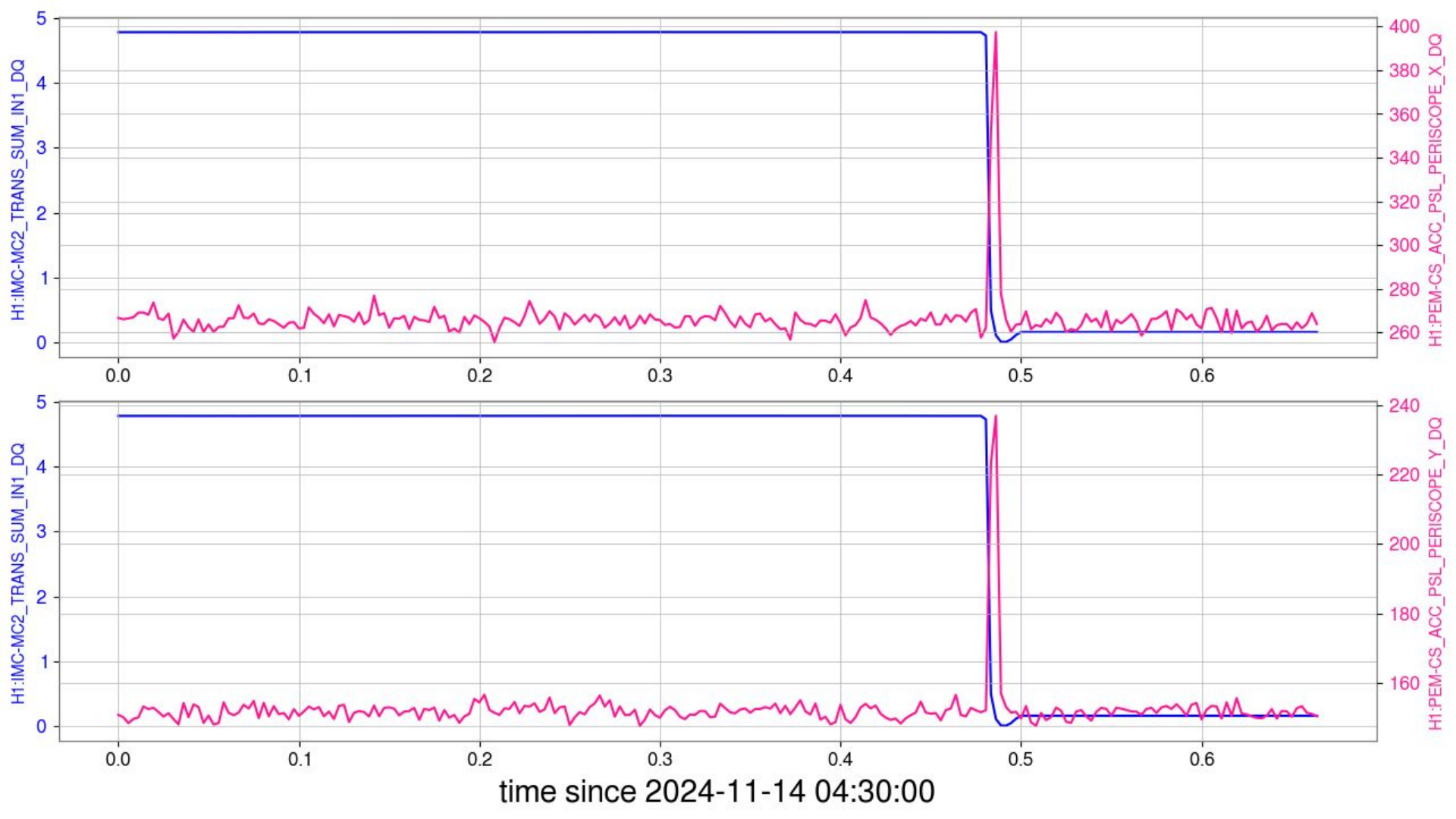


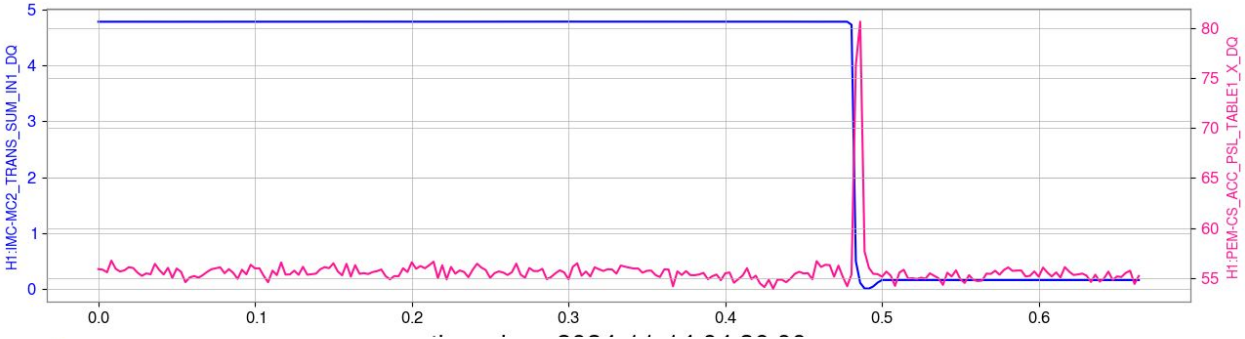
- Two glitches in PSL-PMC_HV_MON, but only one coincides with the glitch in the PSL periscope_X/Y and PSL table 1_X/Y/X

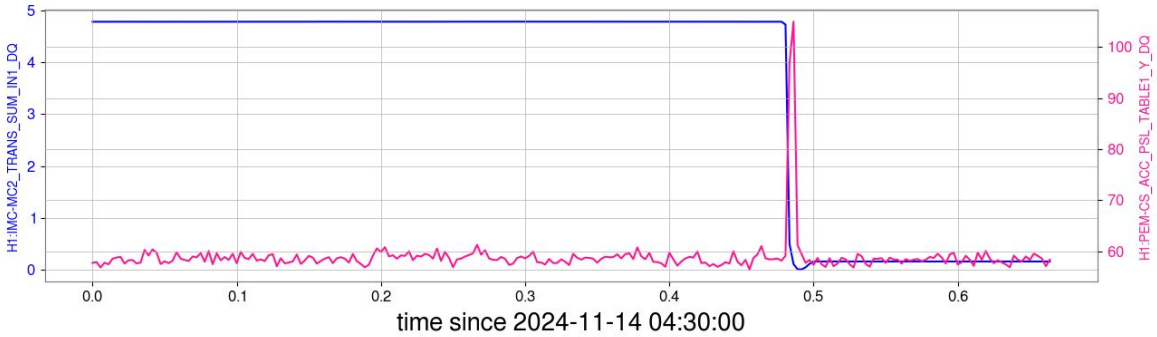
Nov 14th 4:30-5:10

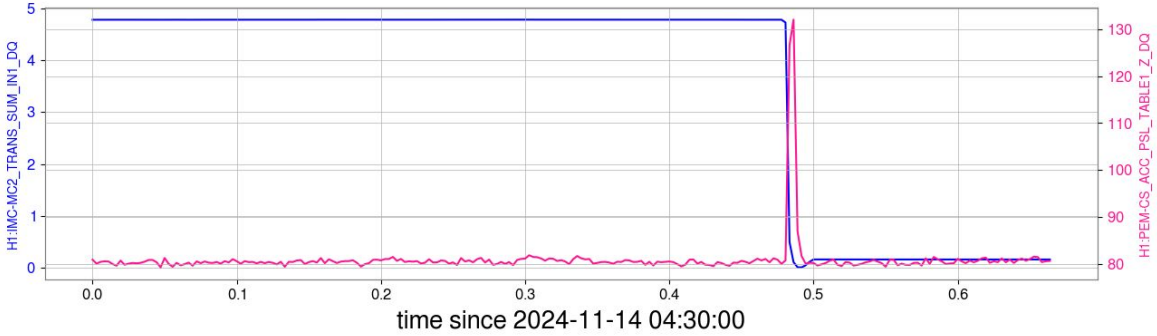
FSS oscillation tag on the LL page

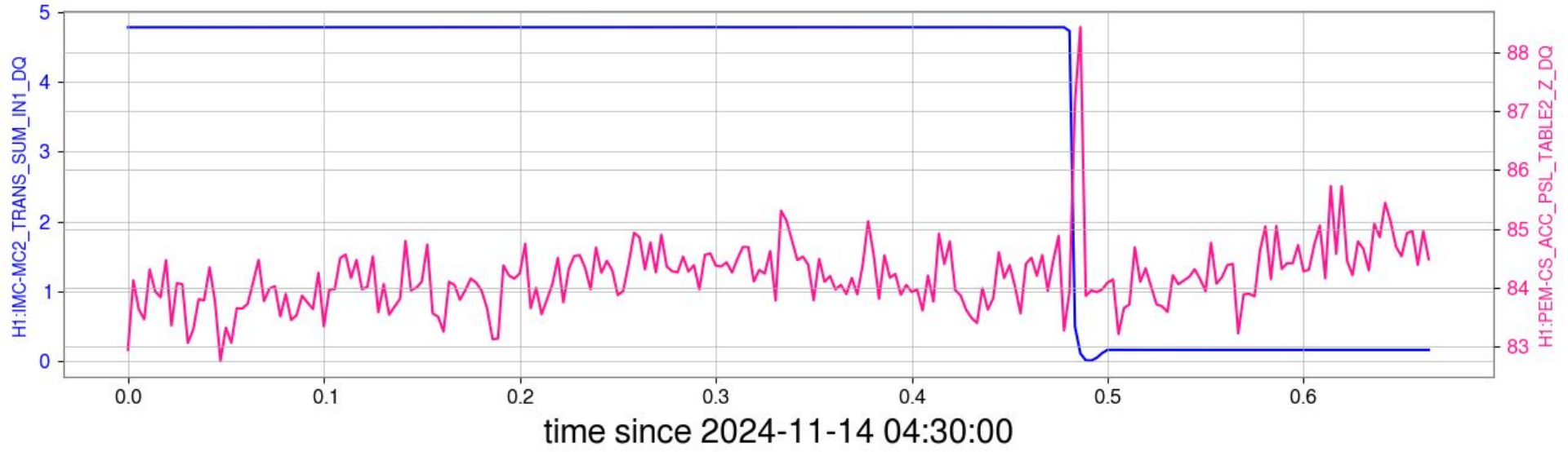
- Visible glitch in all of the PSL channels during this time period except the microphone.
  - This is slightly different compared to the other times. The PSL_TABLE2_Z DID have a glitch during this time period (it didn't during the other times).
  -


H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_X_DQ
H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_PERISCOPE_Y_DQ
time since 2024-11-14 04:30:00

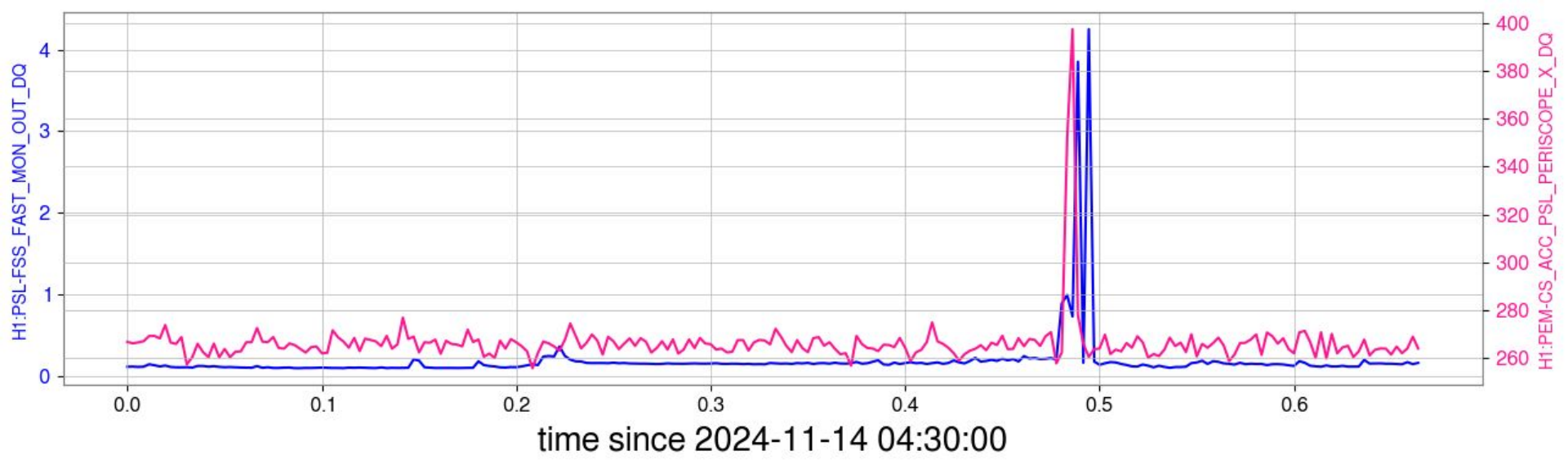

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_X_DQ


H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Y_DQ
time since 2024-11-14 04:30:00

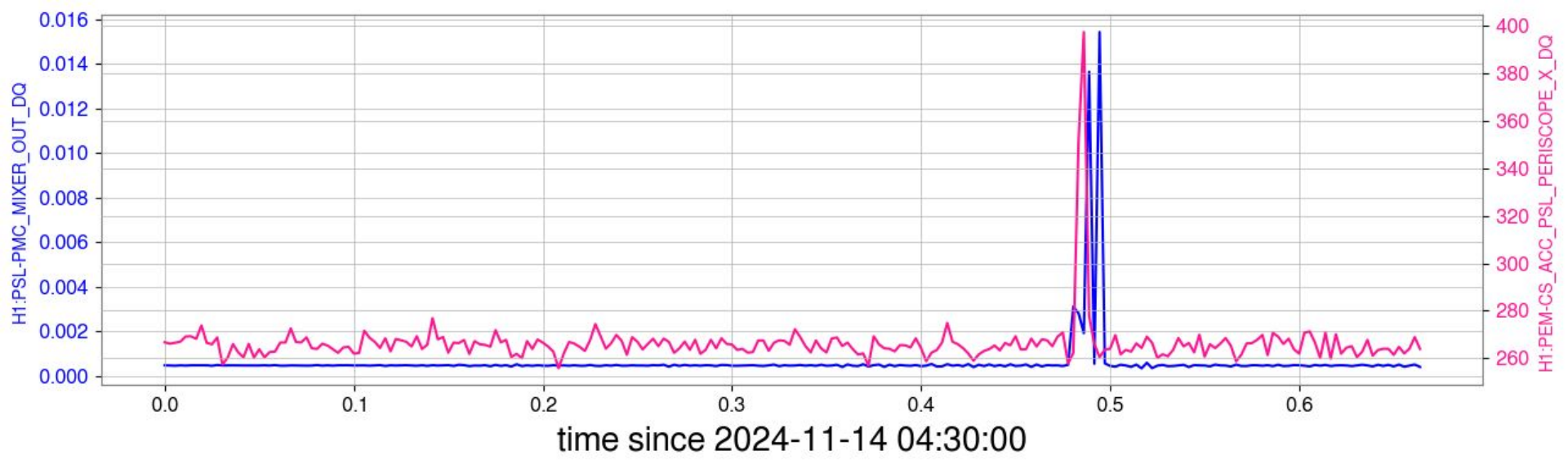

H1:IMC-MC2_TRANS_SUM_IN1_DQ
H1:PEM-CS_ACC_PSL_TABLE1_Z_DQ
time since 2024-11-14 04:30:00



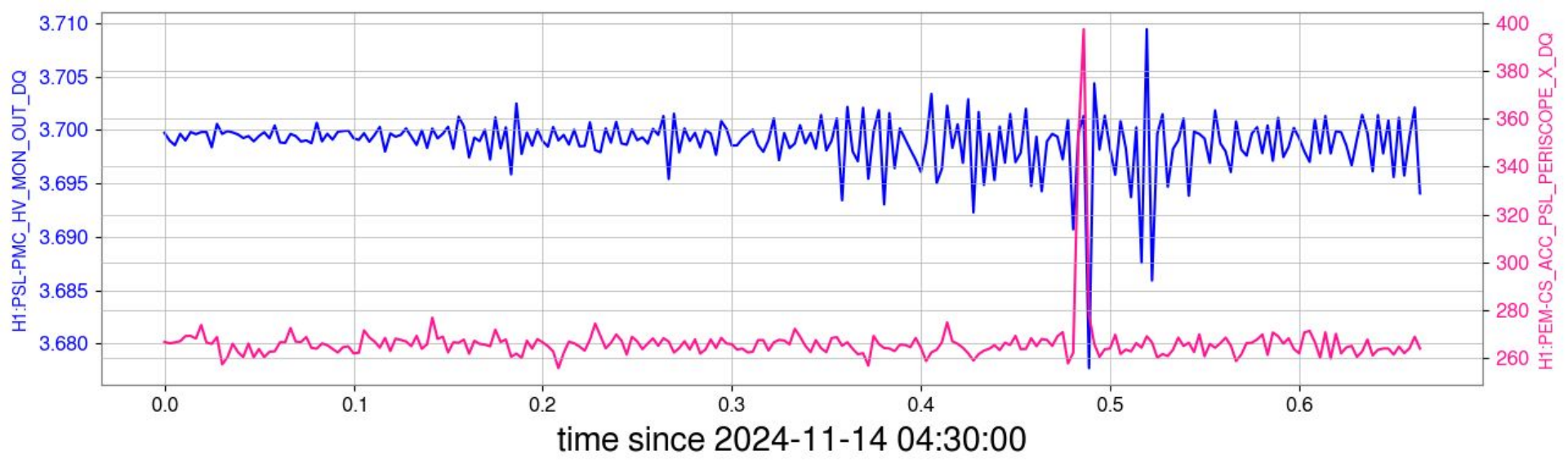
- Glitch present in this channel.
  - Nov 13th & 19th didn't witness a glitch in this PEM PSL channel



- Small glitch in the FSS_FAST_MON
  - Also correlates with the other PSL pem channel besides the microphone



- Small glitch in the PMC_MIXER
  - Again, also correlates with the other PSL pem channel besides the microphone



- Again, PEM channel glitches (besides microphone) line up with a glitch in PMC_HV_MON