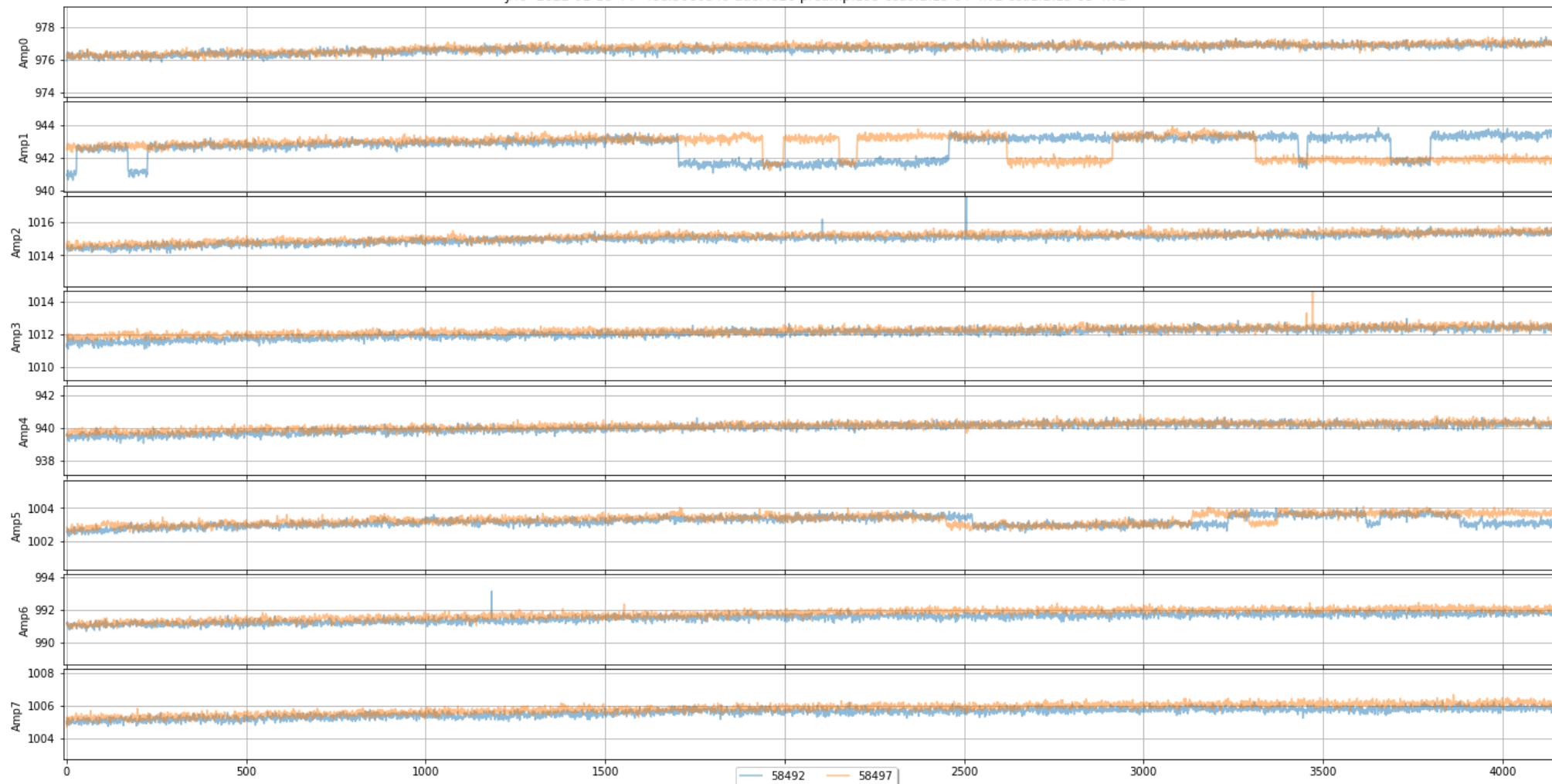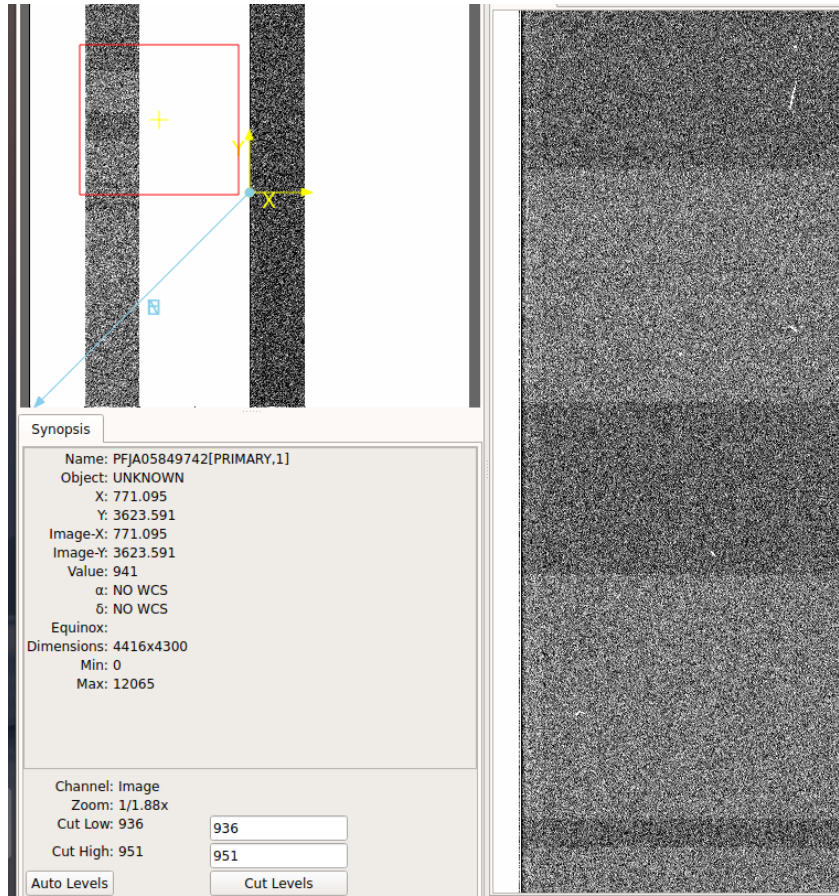# PFS

CCD Bias analysis

Arnaud Le Fur

R4-FPA-JHU

Step feature :

JHU 2022-01-18 r4   fee:3060349 adc:4020 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2
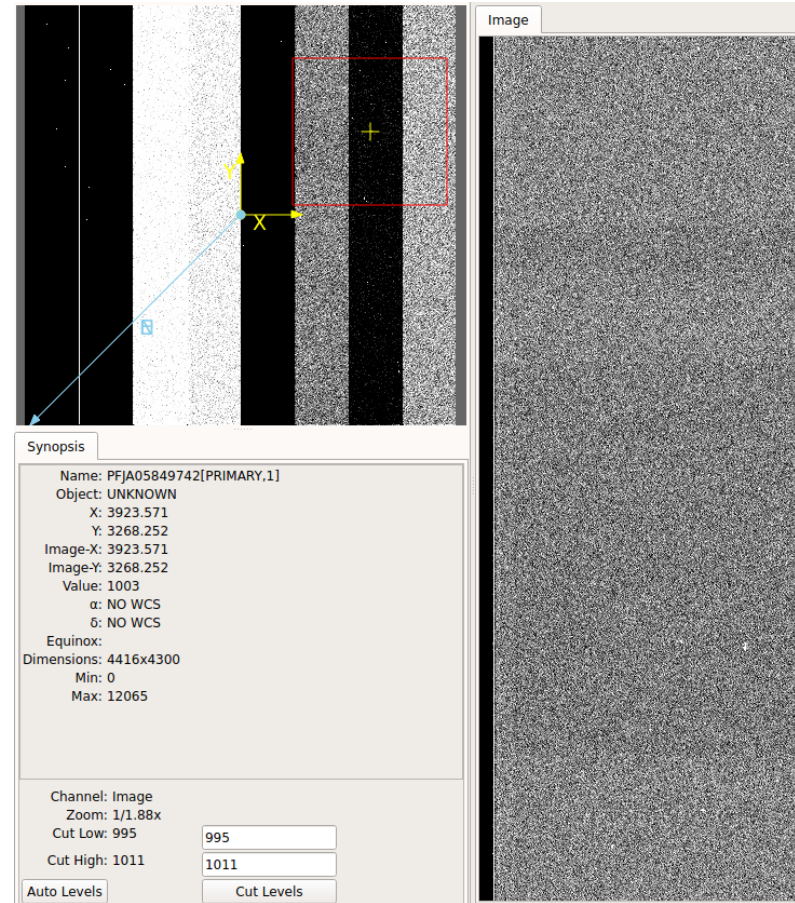
Mostly present in amp1(~2 counts) and amp5 (~0.8 counts)

Step feature :

Definitely more distinguishable in amp1 (left), than amp 5(right)

R4-FPA-JHU

Step feature :

JHU 2022-01-17 r4   fee:3060349 adc:4020 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=58296;58497
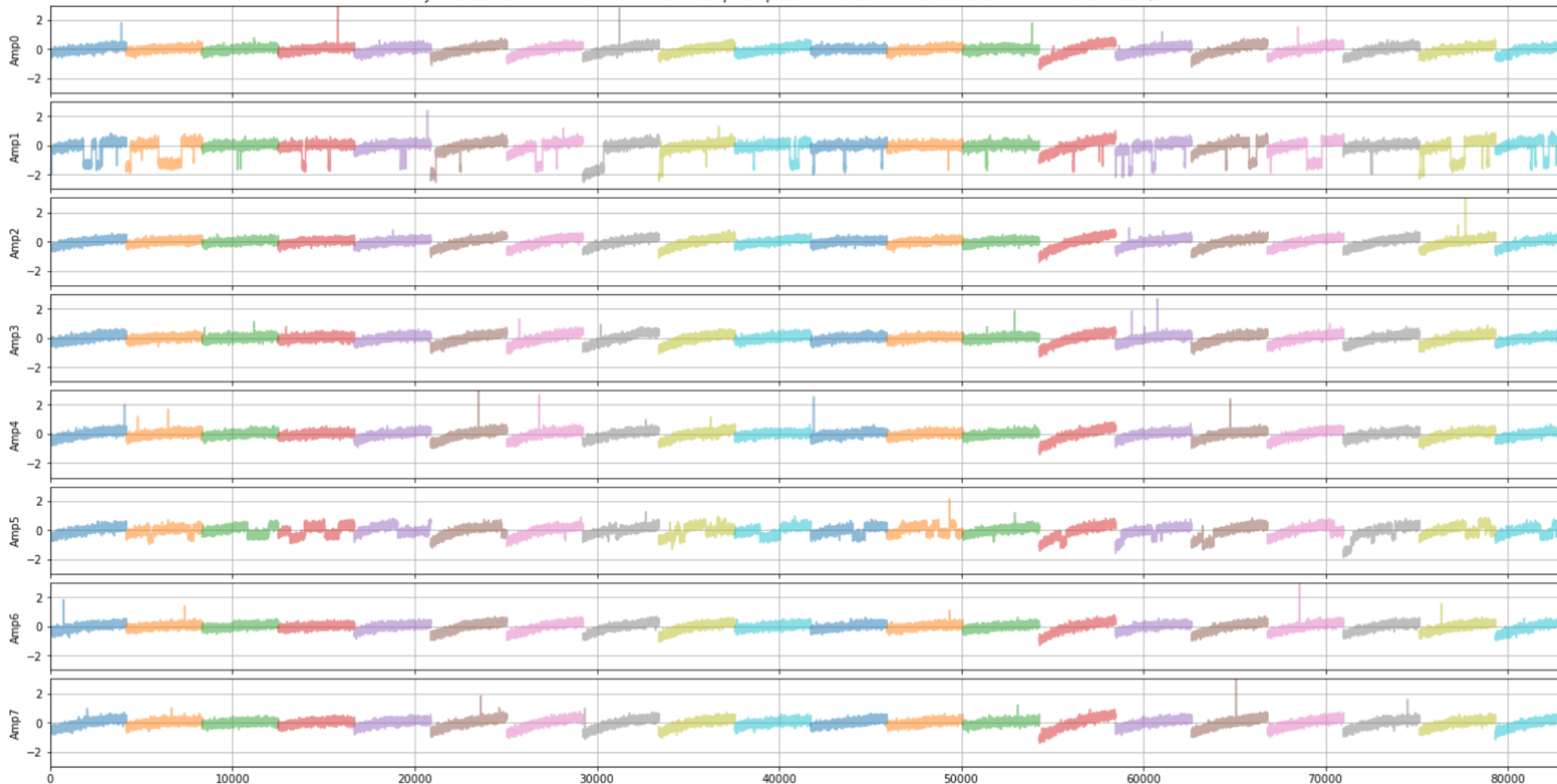
Occuring in mostly every biases now.

R4-FPA-JHU

After switching FEE and ADC

JHU 2022-01-26 r4 fee:30856495 adc:34841618 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=58498;58517
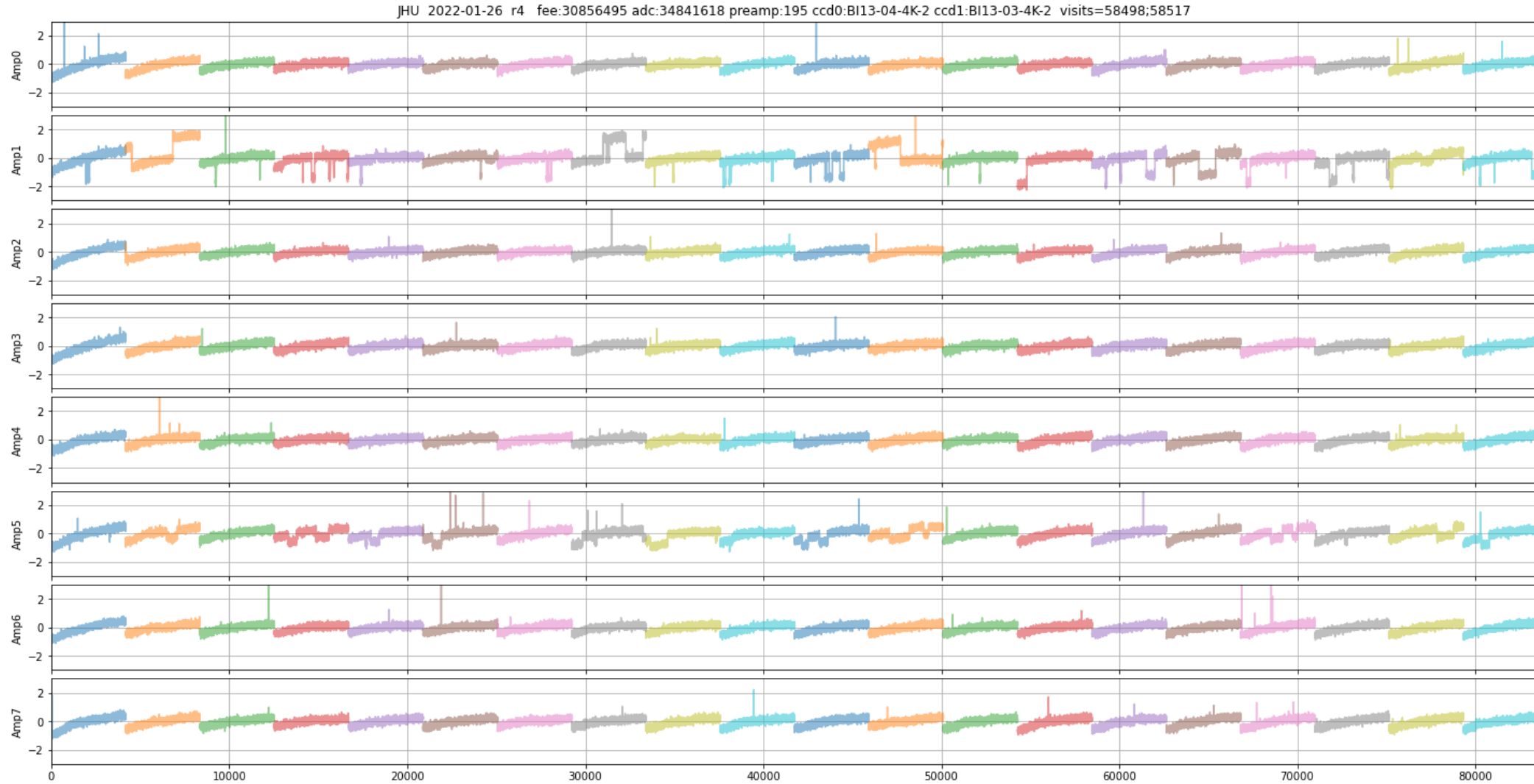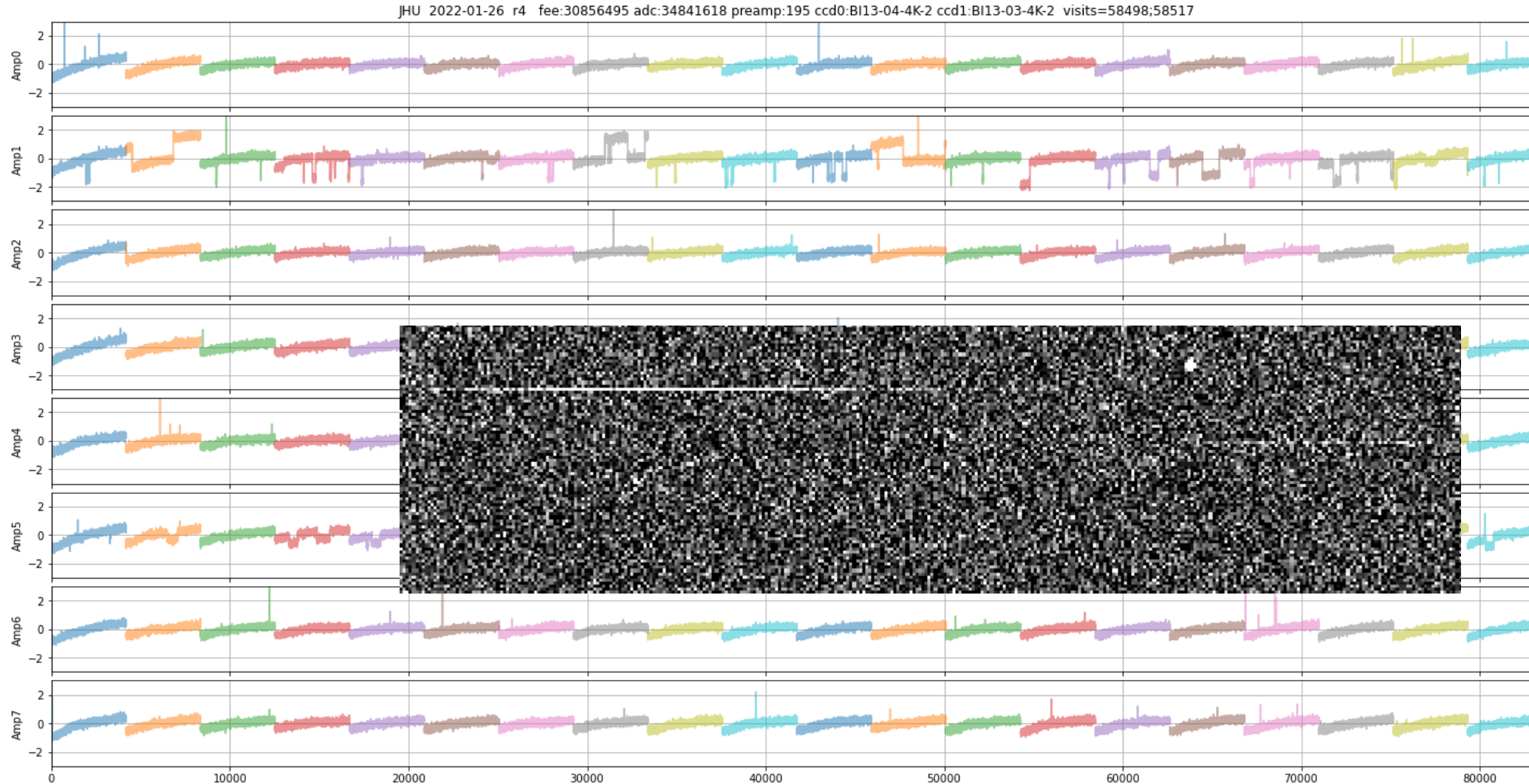
Same features…

R4-FPA-JHU

After switching FEE and ADC

JHU 2022-01-26 r4   fee:30856495 adc:34841618 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=58498;58517

For those who wonder what are the spikes, they are also real and look like this.

Step feature : data from June

JHU 2021-06-10 r4   fee:3060349 adc:4020 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=57927;58283
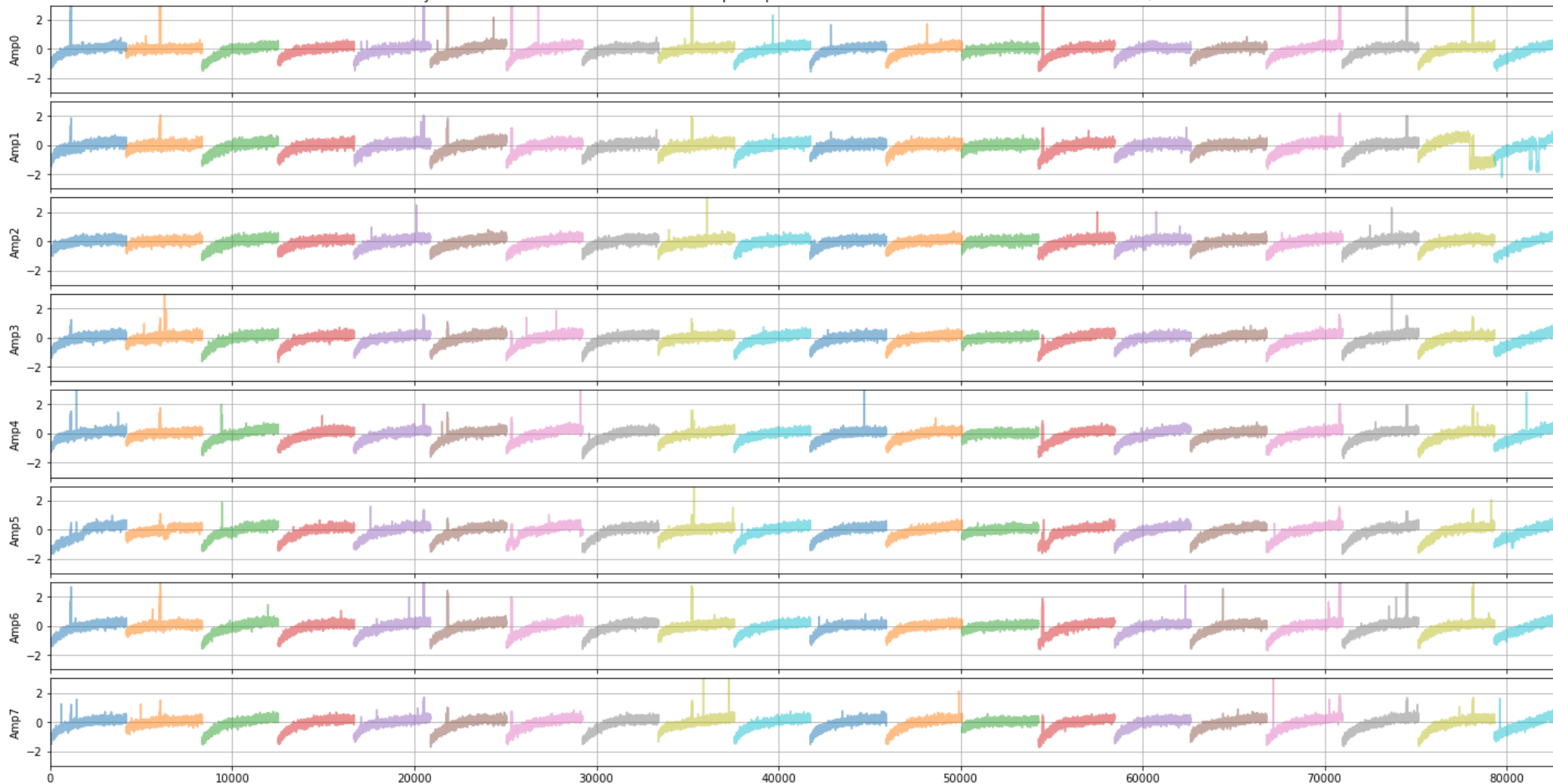
There were definitely less occurrence before…

Step feature : data from June

JHU 2021-06-09 r4   fee:3060349 adc:4020 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=57670;57923
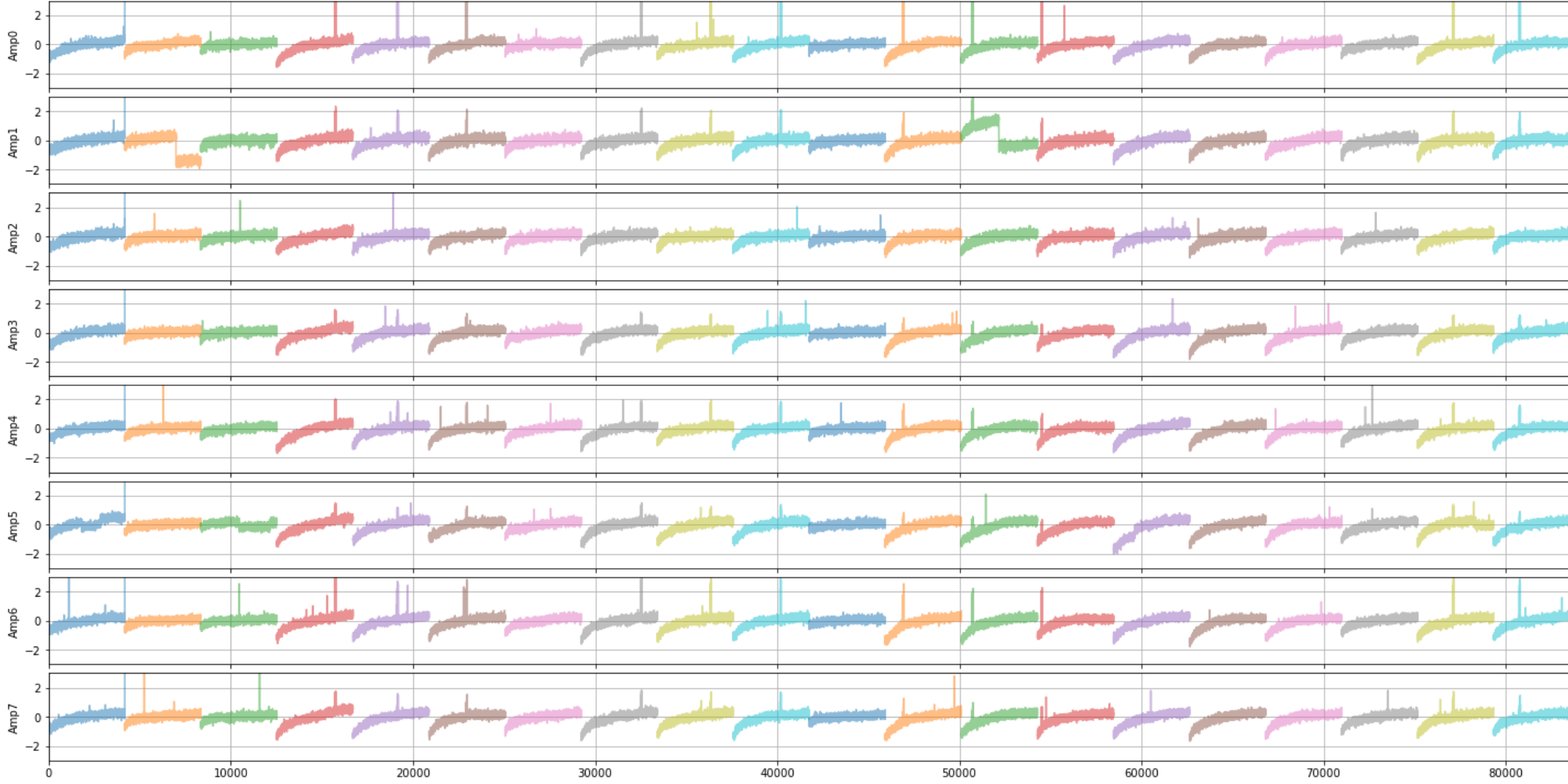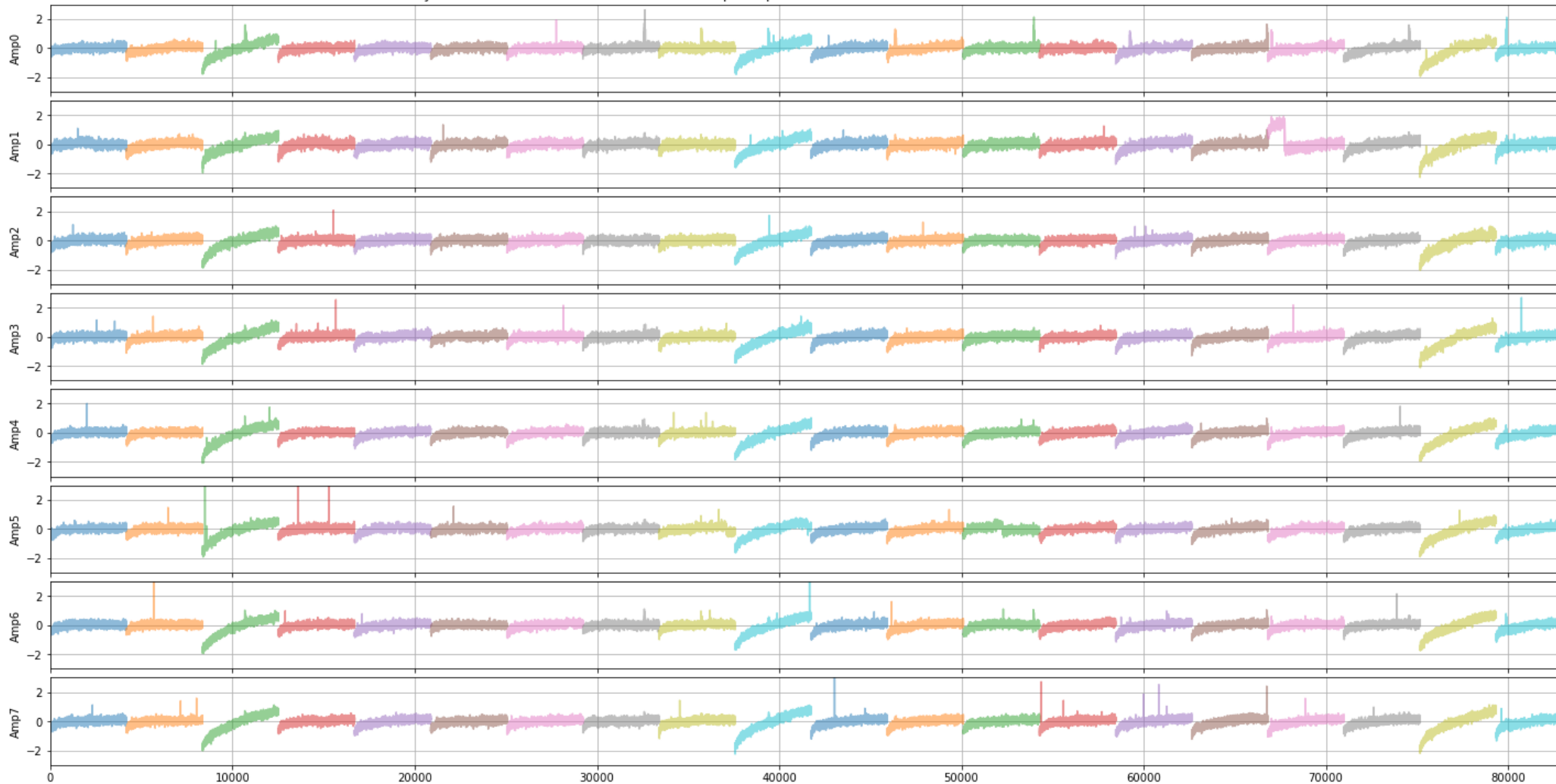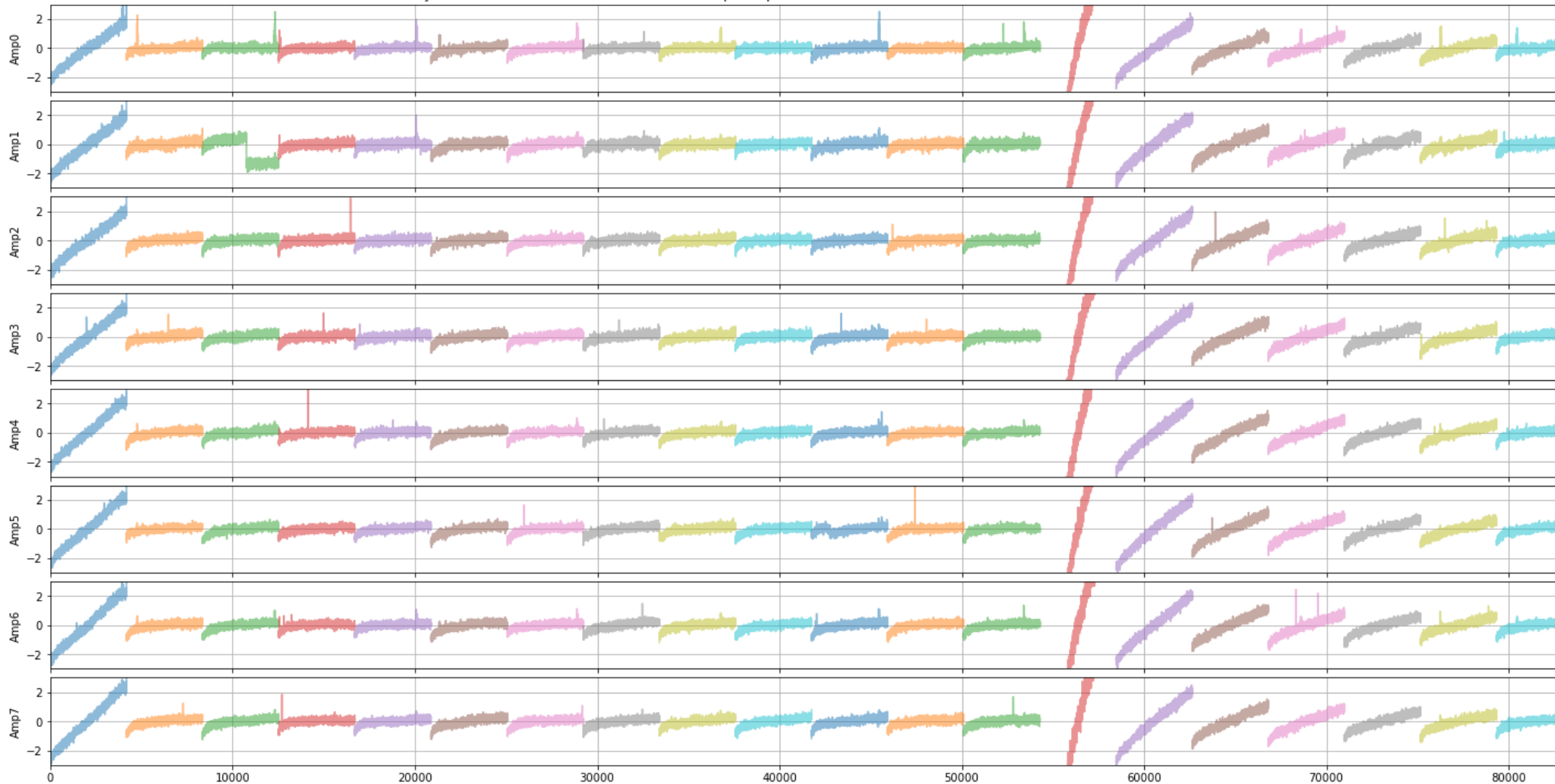
There were definitely less occurrence before…

Step feature : data from March

JHU 2021-03-02 r4 fee:3060349 adc:4020 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=56487;56699

There were definitely less occurrence before…

R4-FPA-JHU

Step feature : data from February

JHU 2021-02-07 r4   fee:3060349 adc:4020 preamp:195 ccd0:BI13-04-4K-2 ccd1:BI13-03-4K-2 visits=55163;55481

There were definitely less occurrence before ... maybe 1 over 20, so it looks like it's getting worse over time.
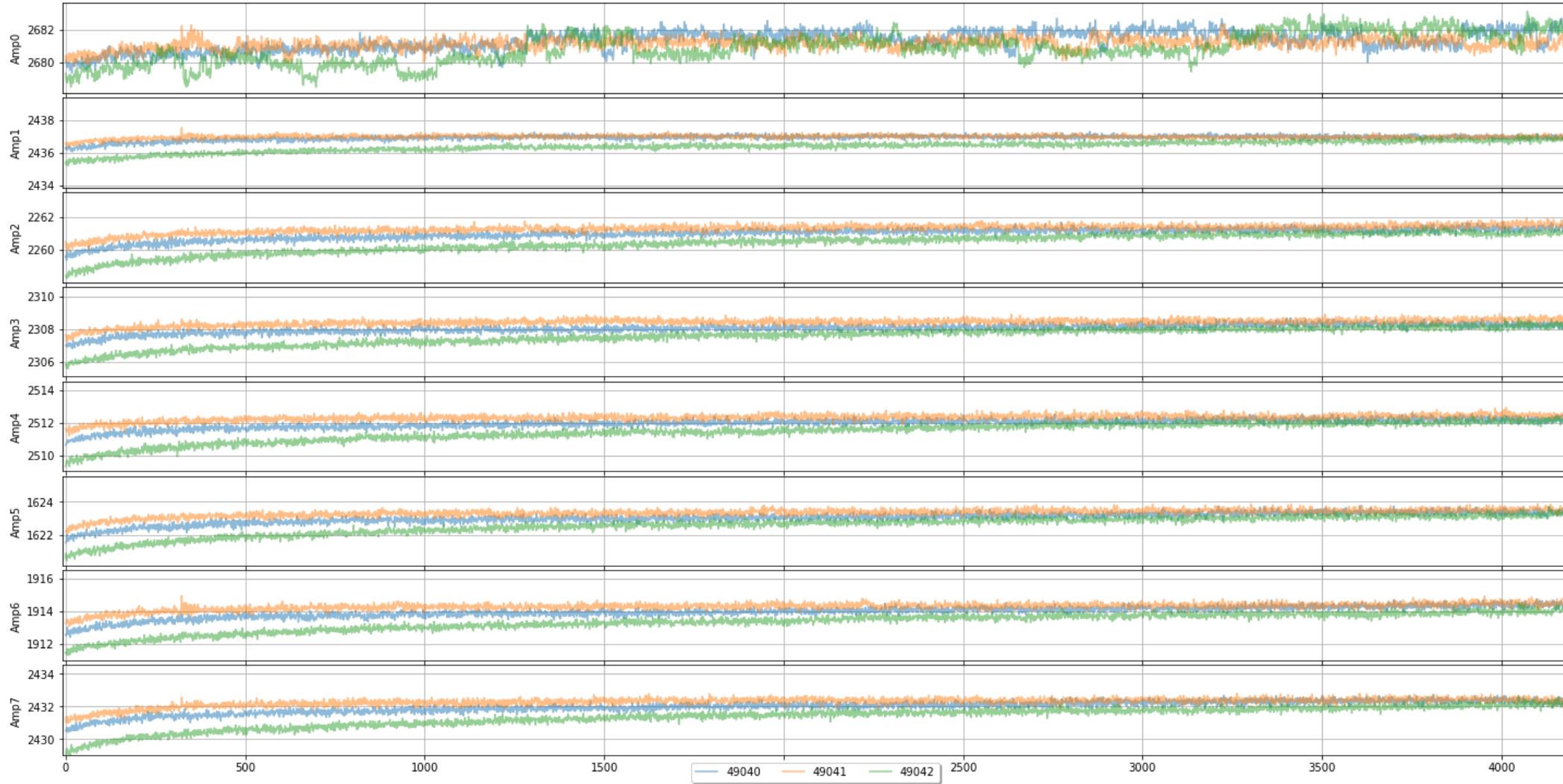
JHU 2019-11-26 b2 fee:3060349 adc:4020 preamp:193 ccd0:BI-14-24-4K-3 ccd1:BI-14-31-4K-1 visits=49025;49043
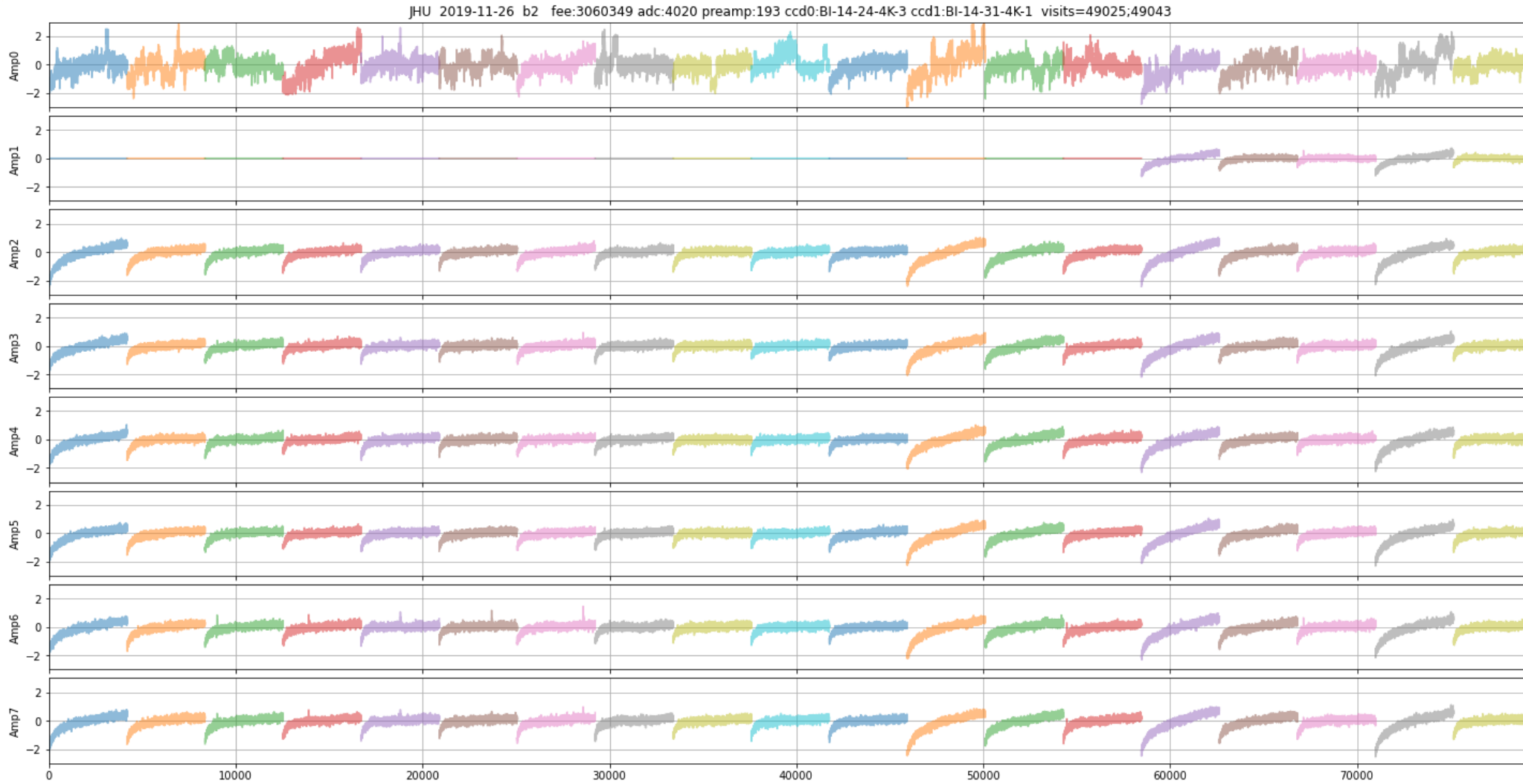
Amp0 is noisier and shows similar features.

B2-FPA-JHU

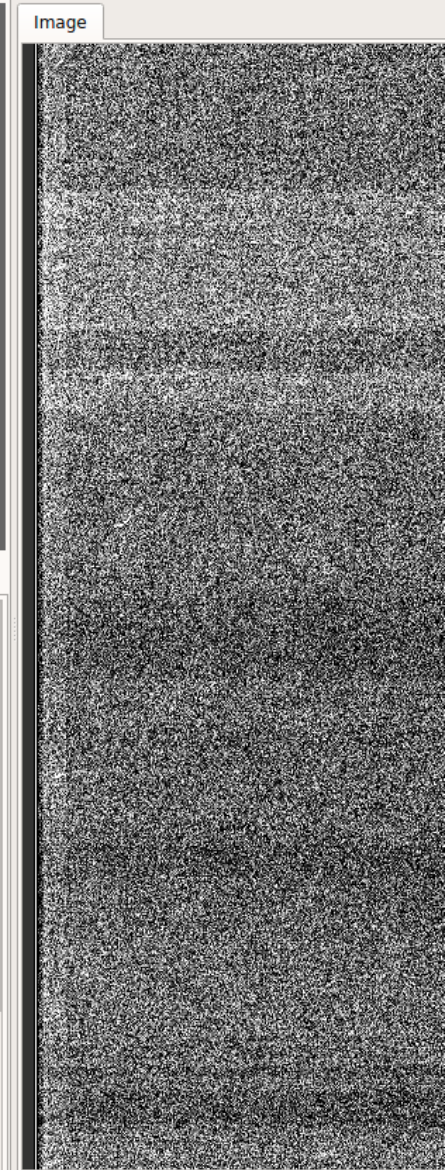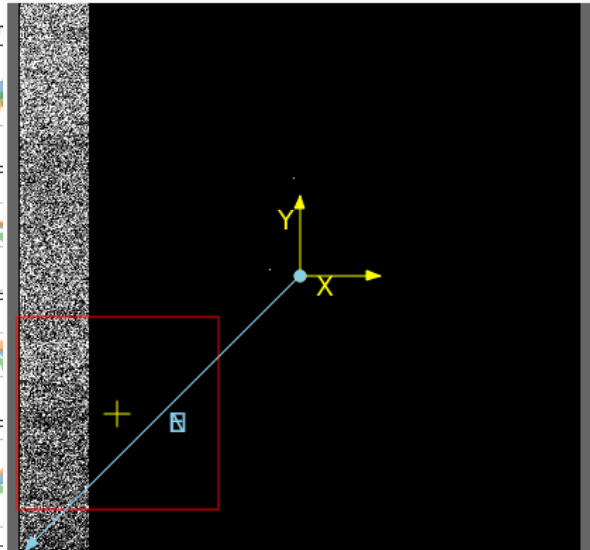Amp0 is noisier and show similar features
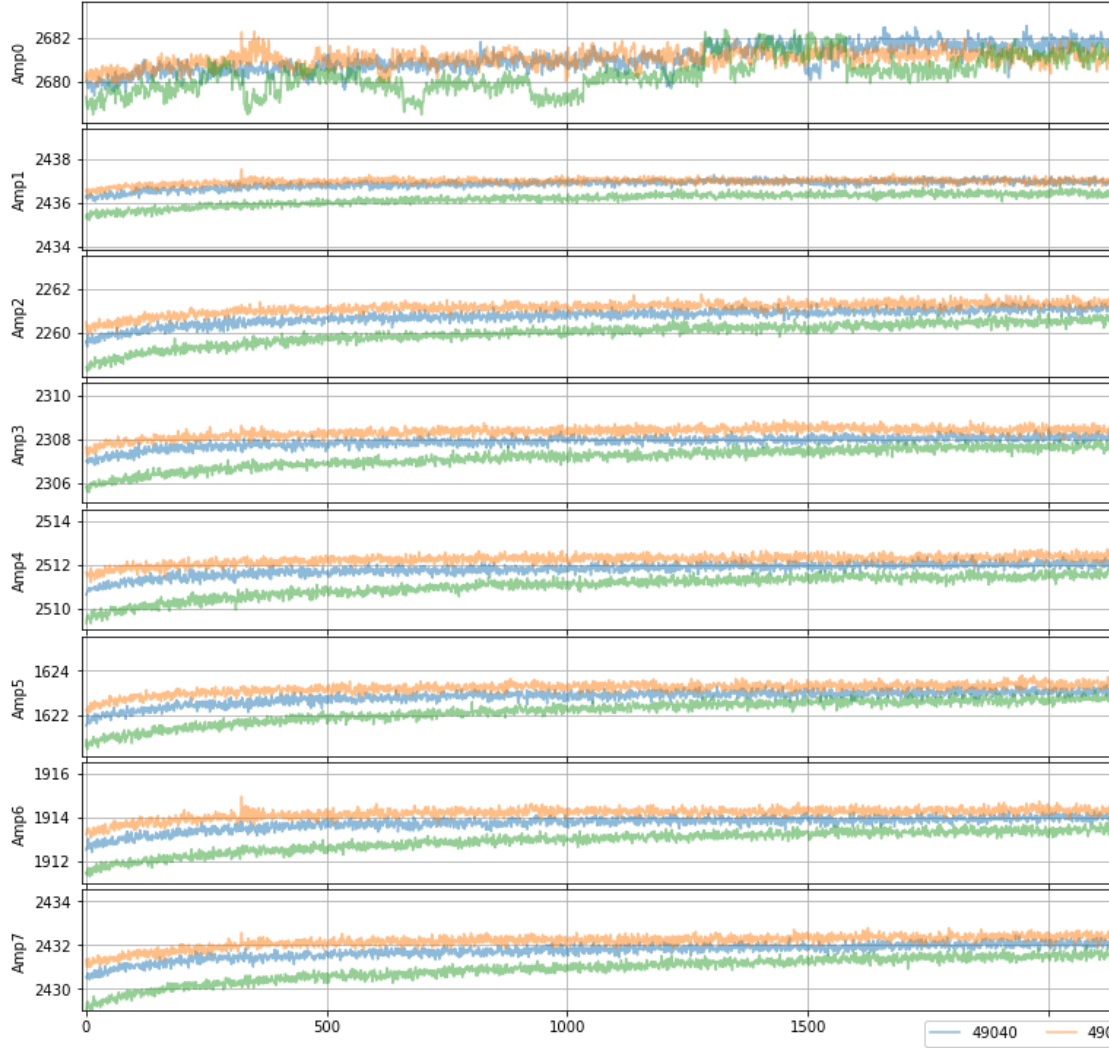

JHU 2019-11-26 b2 fee:3060349 adc:4020 preamp:193 ccd0:BI-14-24-4K-3 ccd1:BI-14-31-4K-1

49040 49041 49042

B2-FPA-JHU

Amp0 is noisier and show similar features

B2-FPA-LAM

Amp0 is noisier and show similar features

LAM 2020-11-20 b2 fee:3060346 adc:30641616 preamp:193 ccd0:BI14-24-4k-3 ccd1:BI14-31-4k-1 visits=23622;23641
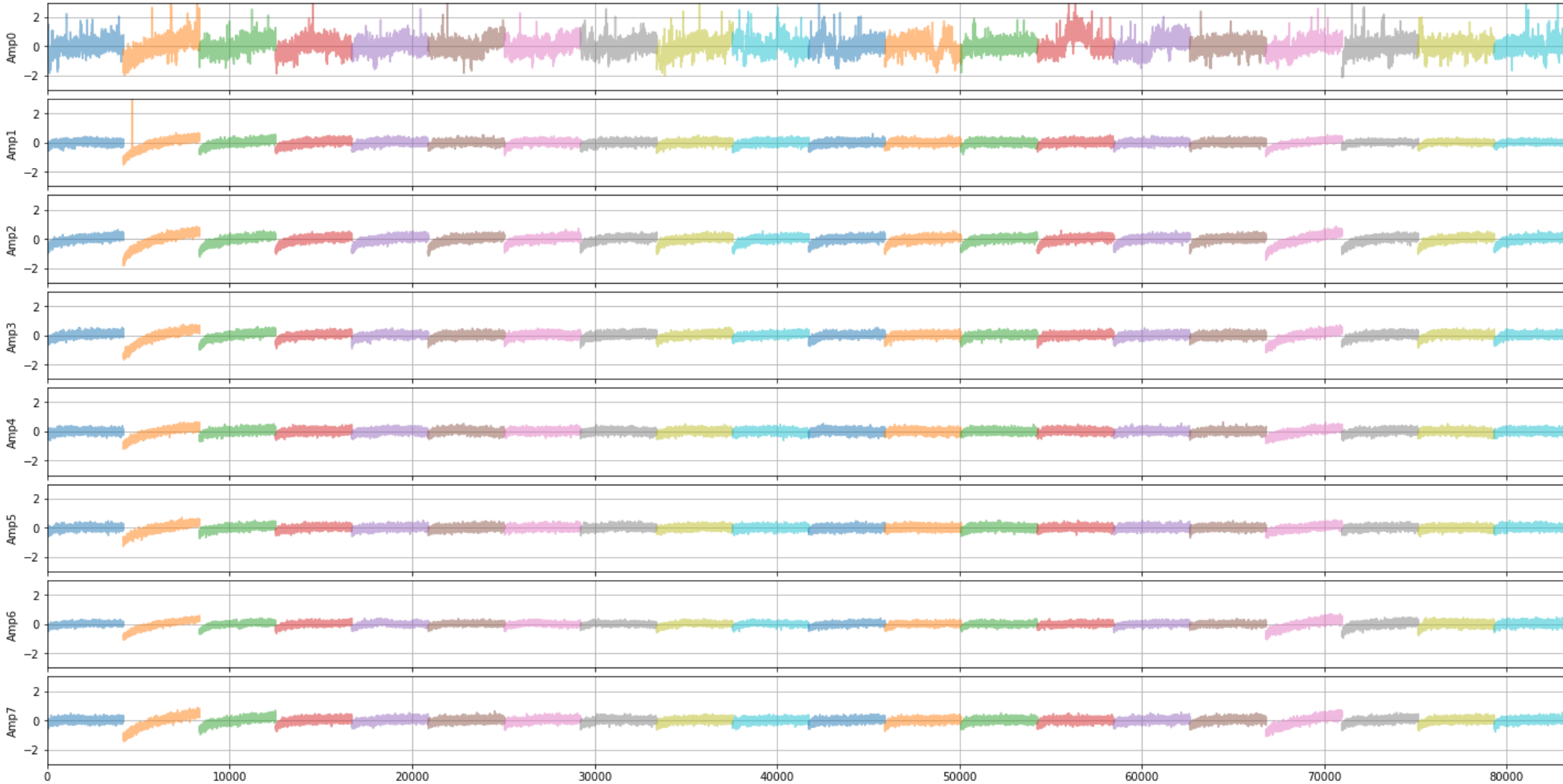
Problem did not disappeared crossing the atlantic...

Similar features and amp5 and amp6

Amp6 show another high frequency noise in addition to the step feature.

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R1-FPA-JHU

Similar features and amp5 and amp6

JHU 2020-01-30 r1   fee:3060349 adc:4020 preamp:193 ccd0:BI-14-24-4K-3 ccd1:BI-14-31-4K-1 visits=49283;49388
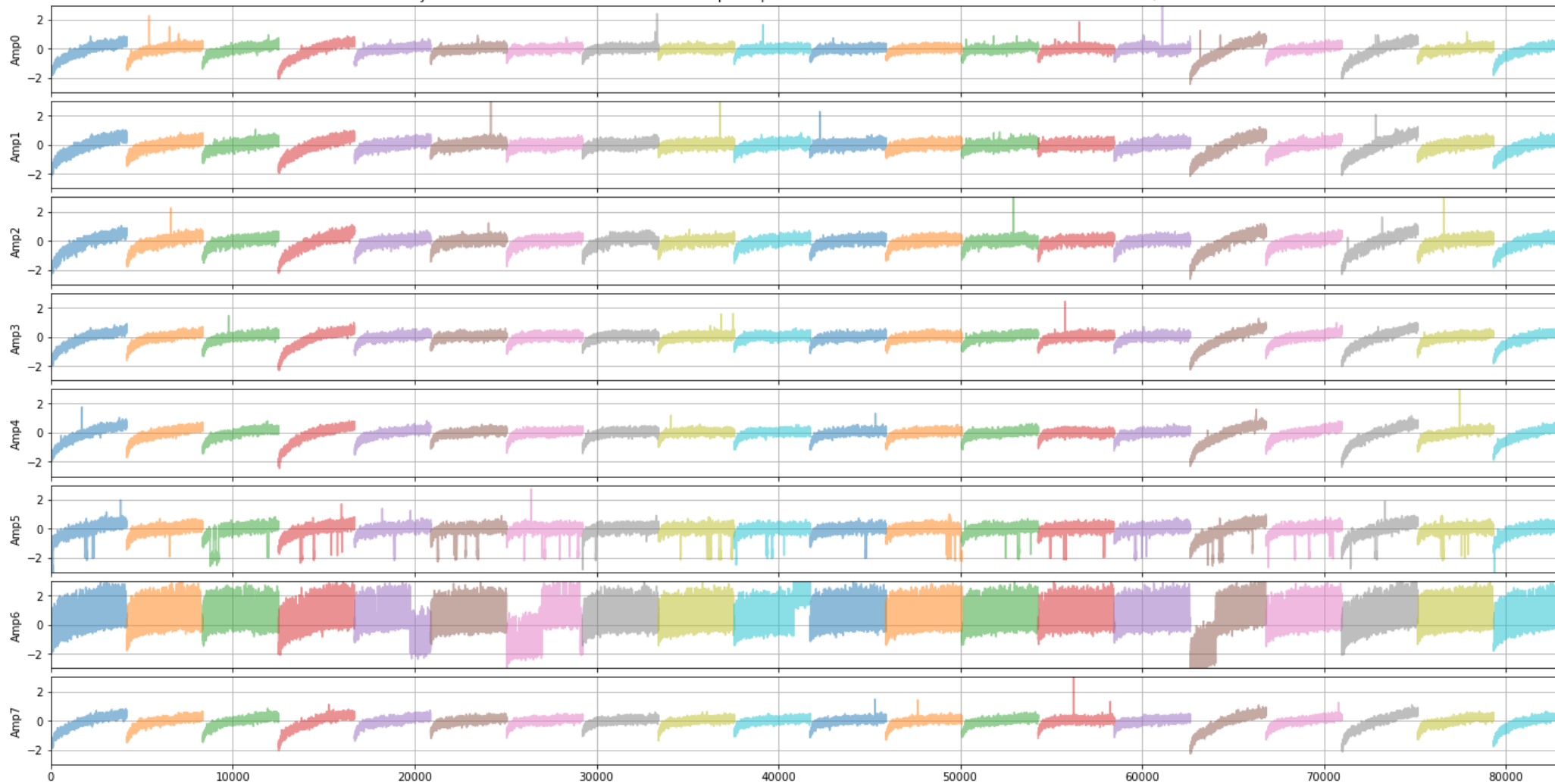
Amp6 show another high frequency noise in addition to the step feature.

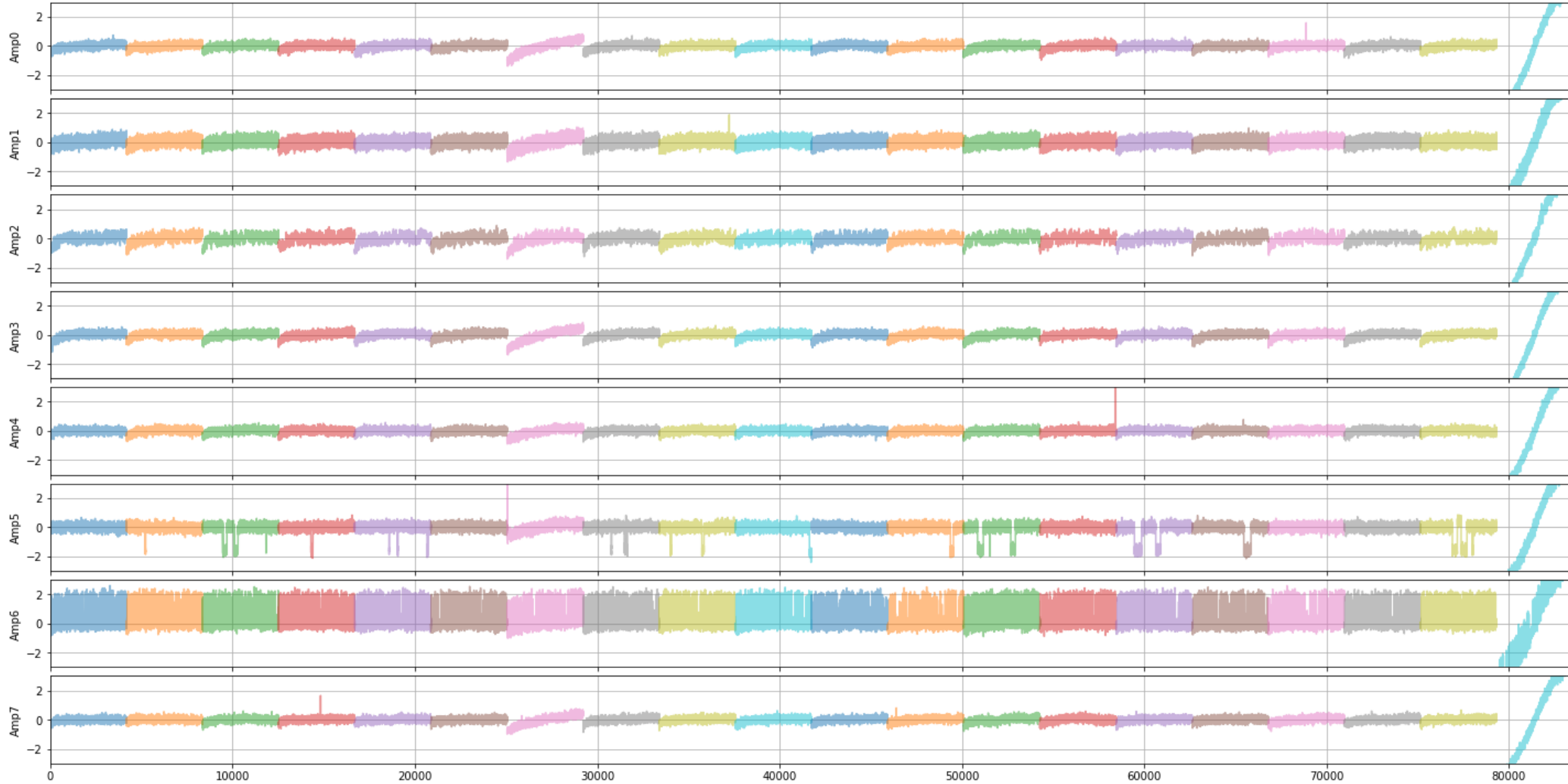## Similar features and amp5 and amp6
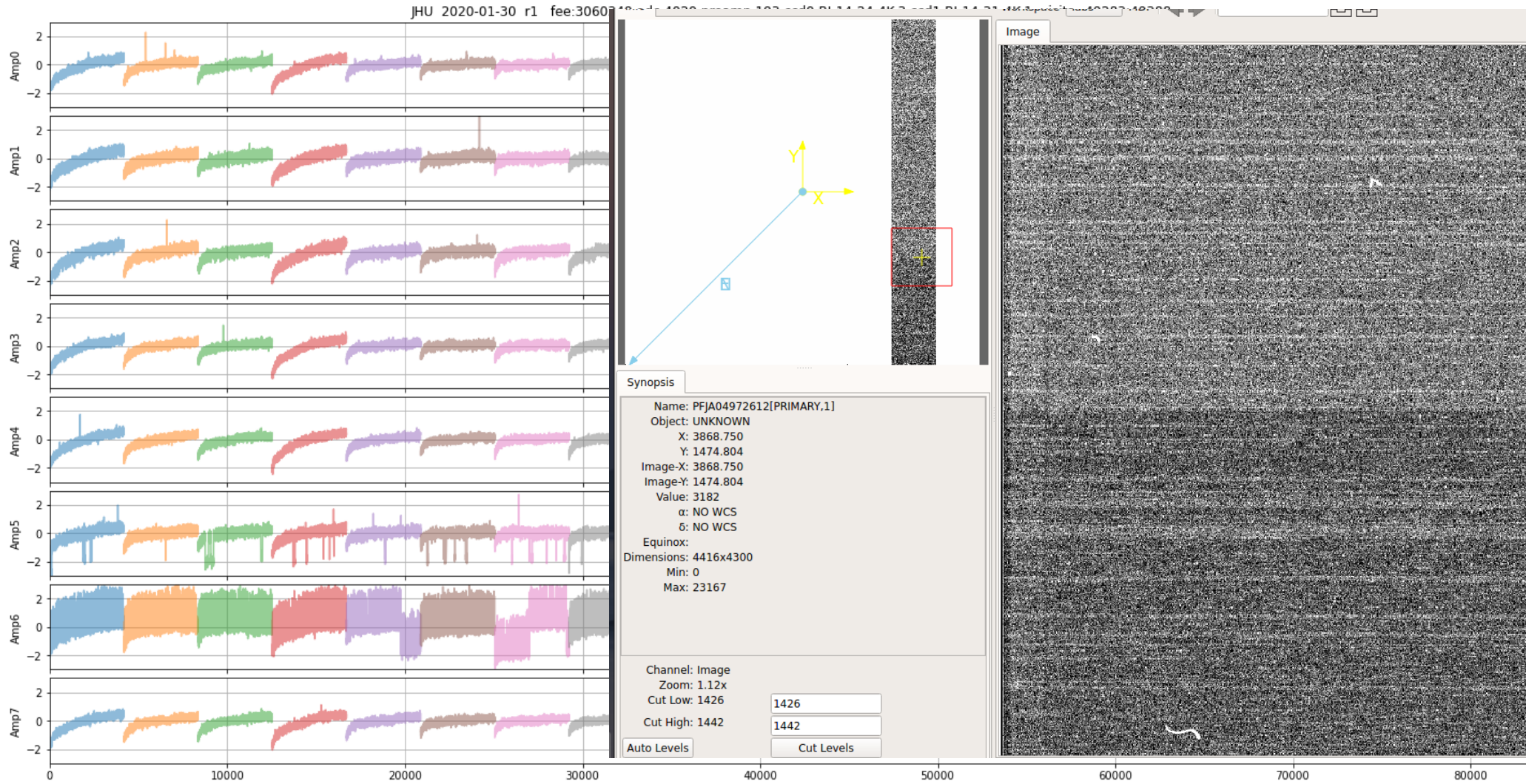
Amp6 show another high frequency noise in addition to the step feature.

R1-FPA-LAM (in R2 CAM)

Similar features and amp5 and amp6

LAM 2020-11-20 r2 (r1-fpa) fee:3060353 adc:41614 preamp:185 ccd0:BI13-06-4k-1 ccd1:BI13-07-4k-1 visits=23632;23923
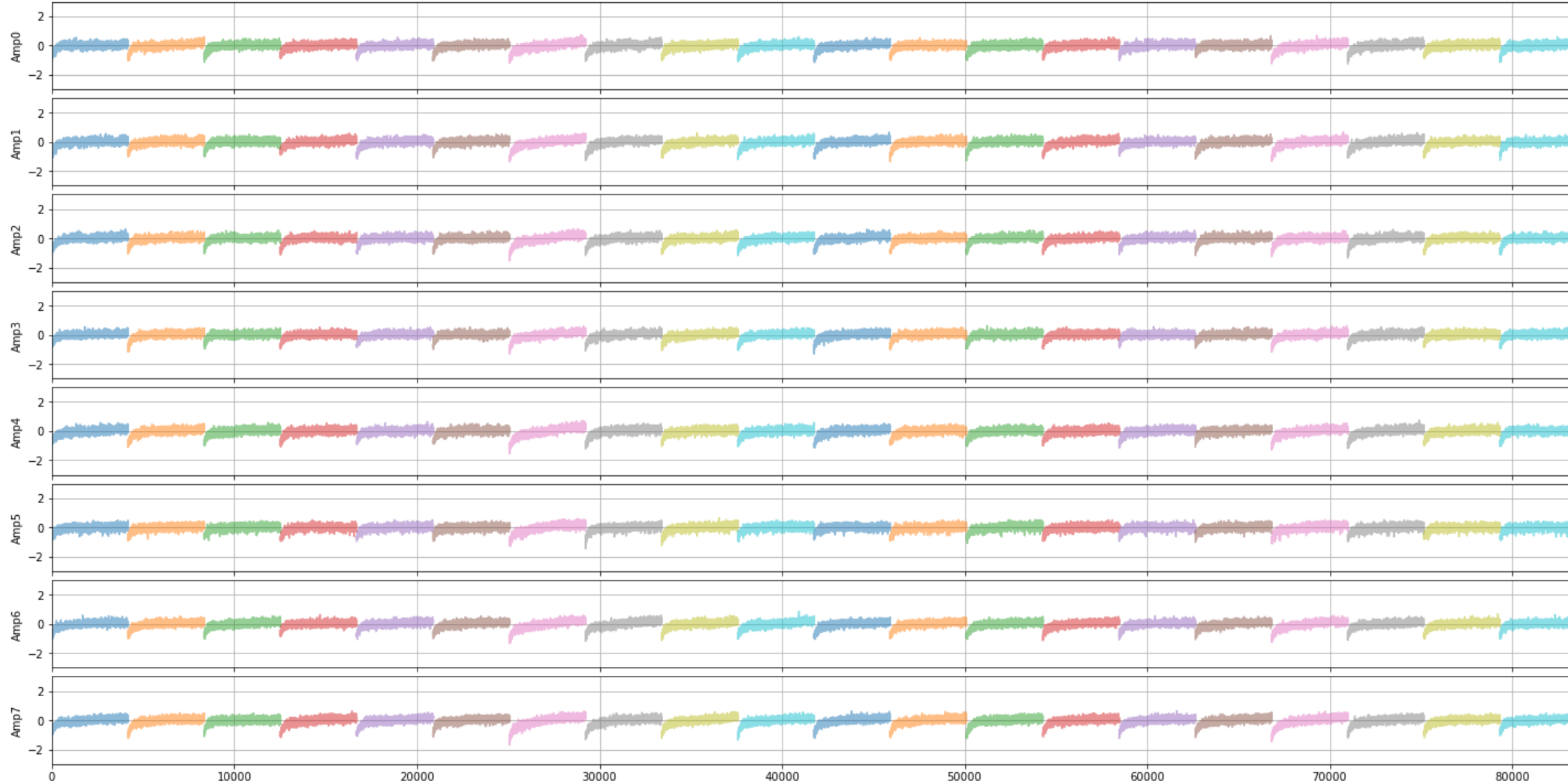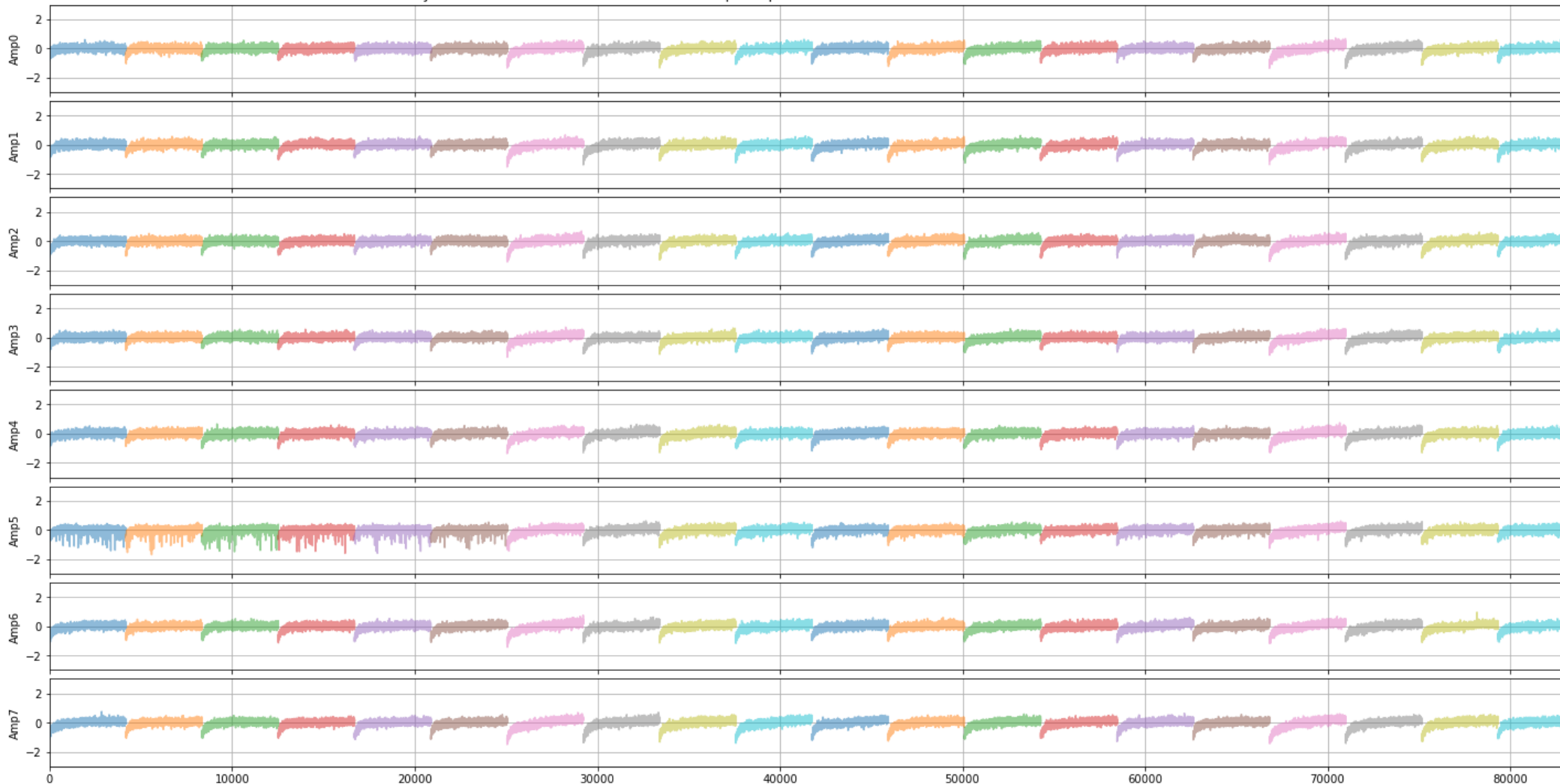
Problem still there in LAM.

B3-FPA-JHU

Look fairly clean

JHU 2020-11-20 b3 fee:3060349 adc:4020 preamp:183 ccd0:BI14-25-4K-1 ccd1:BI14-31-4K-2 visits=52877;52939
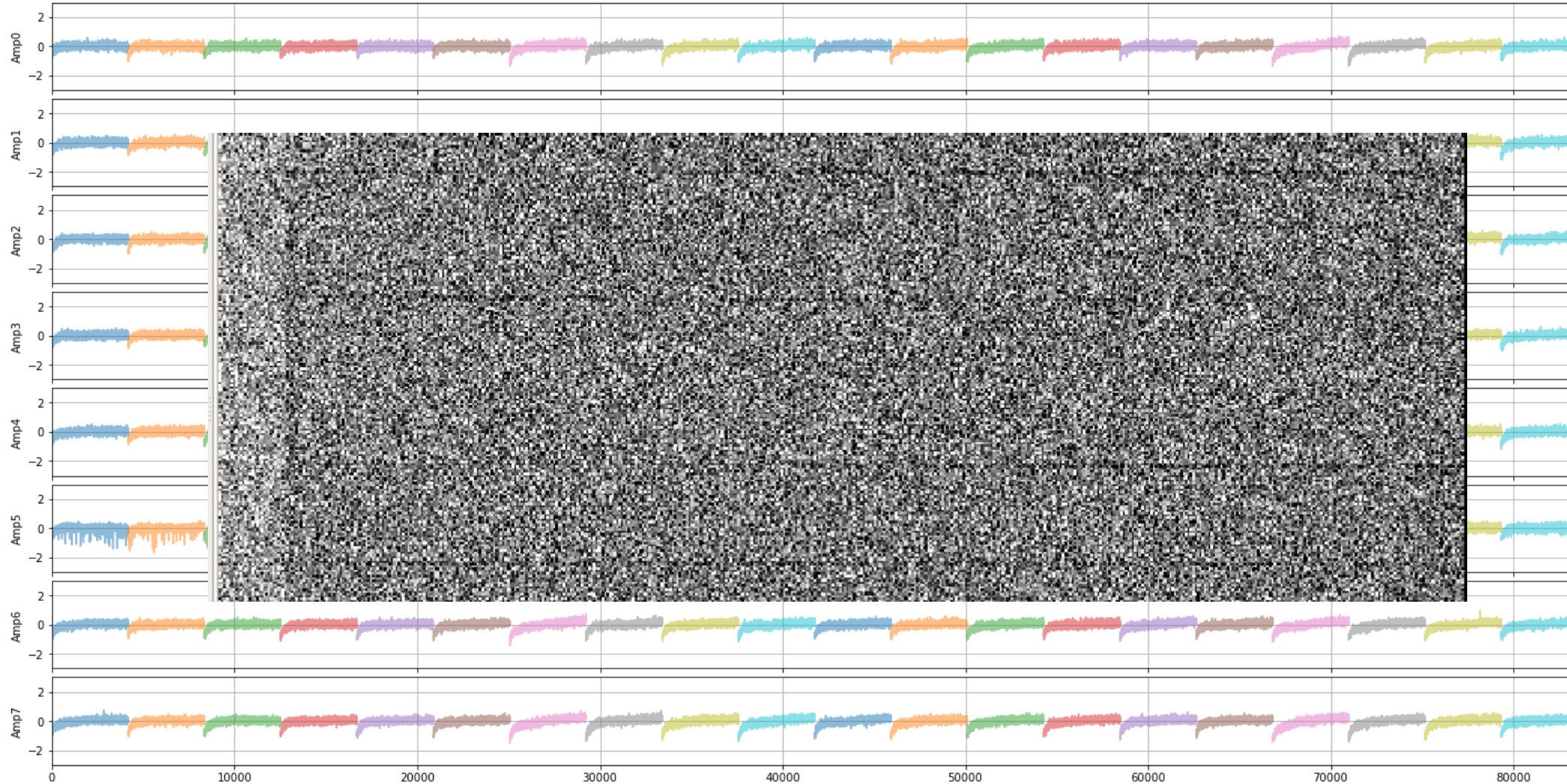
B3-FPA-JHU

Look fairly clean

JHU 2020-11-17 b3 fee:3060349 adc:4020 preamp:183 ccd0:BI14-25-4K-1 ccd1:BI14-31-4K-2 visits=52834;52875

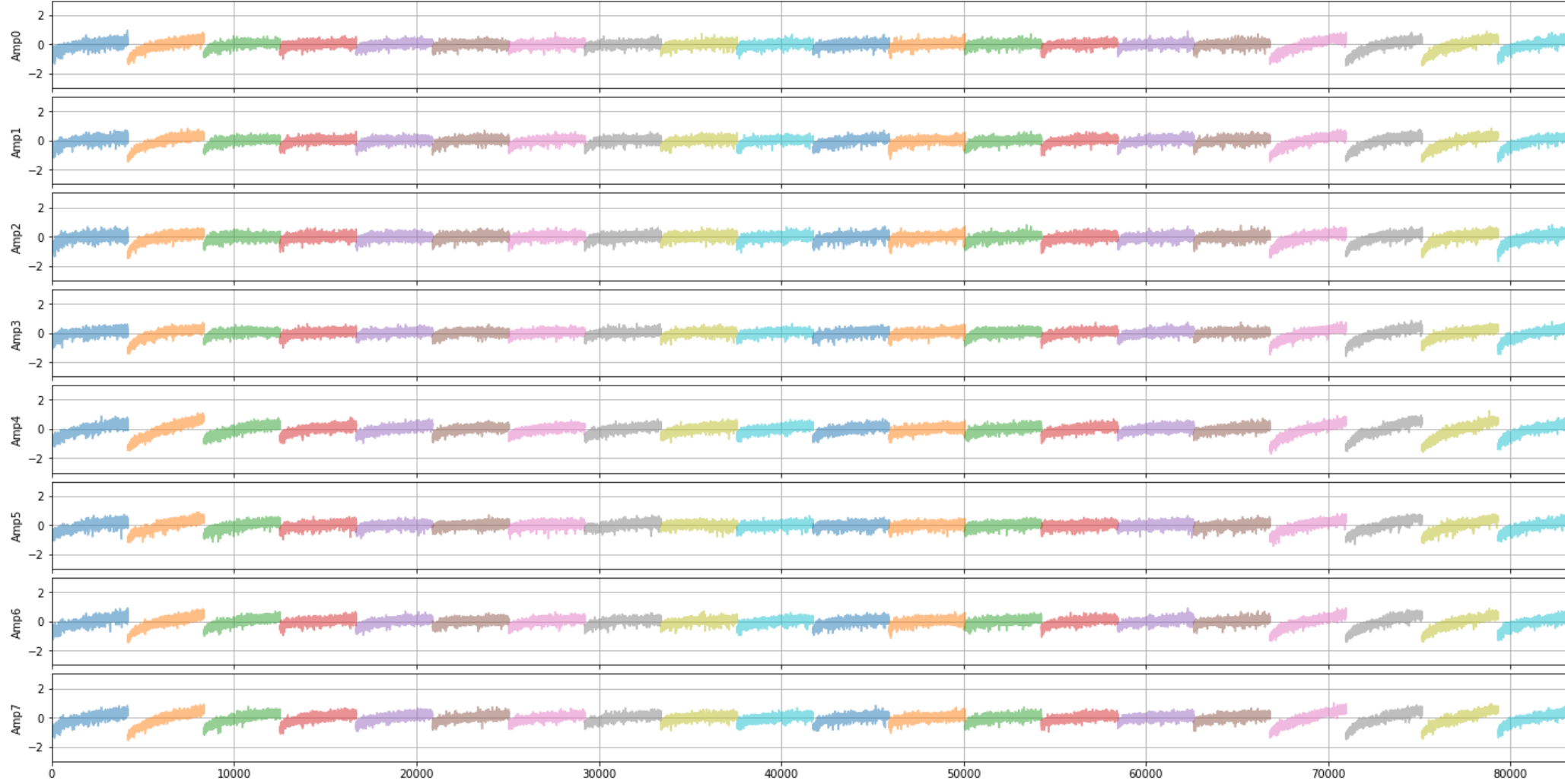Amp5 has shown some spikes, but it looks like it was gone by the end of the dataset.

B3-FPA-JHU

Look fairly clean

JHU 2020-11-17 b3 fee:3060349 adc:4020 preamp:183 ccd0:BI14-25-4K-1 ccd1:BI14-31-4K-2 visits=52834;52875
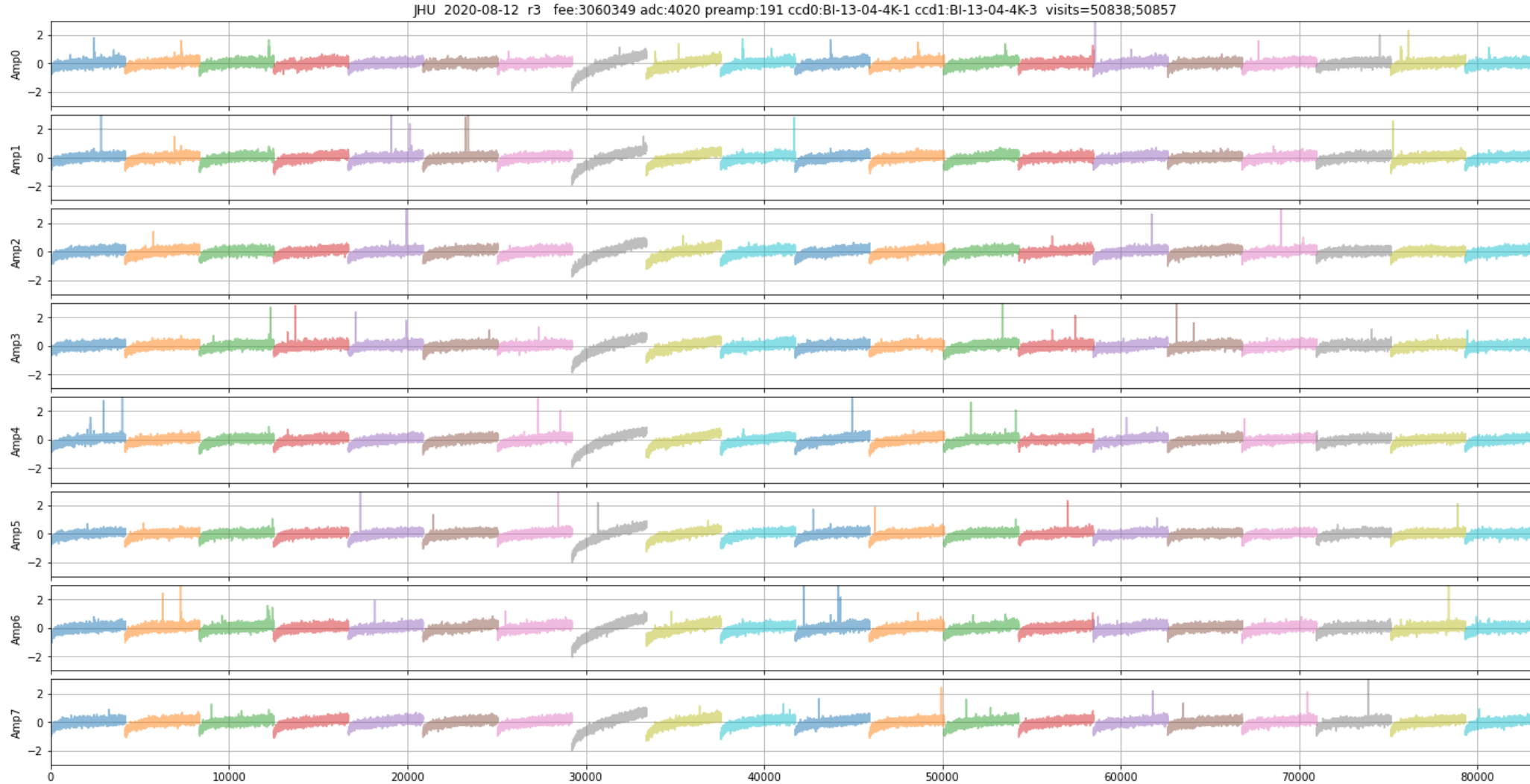
It's a pretty faint effect.

B3-FPA-LAM (in B3 CAM)

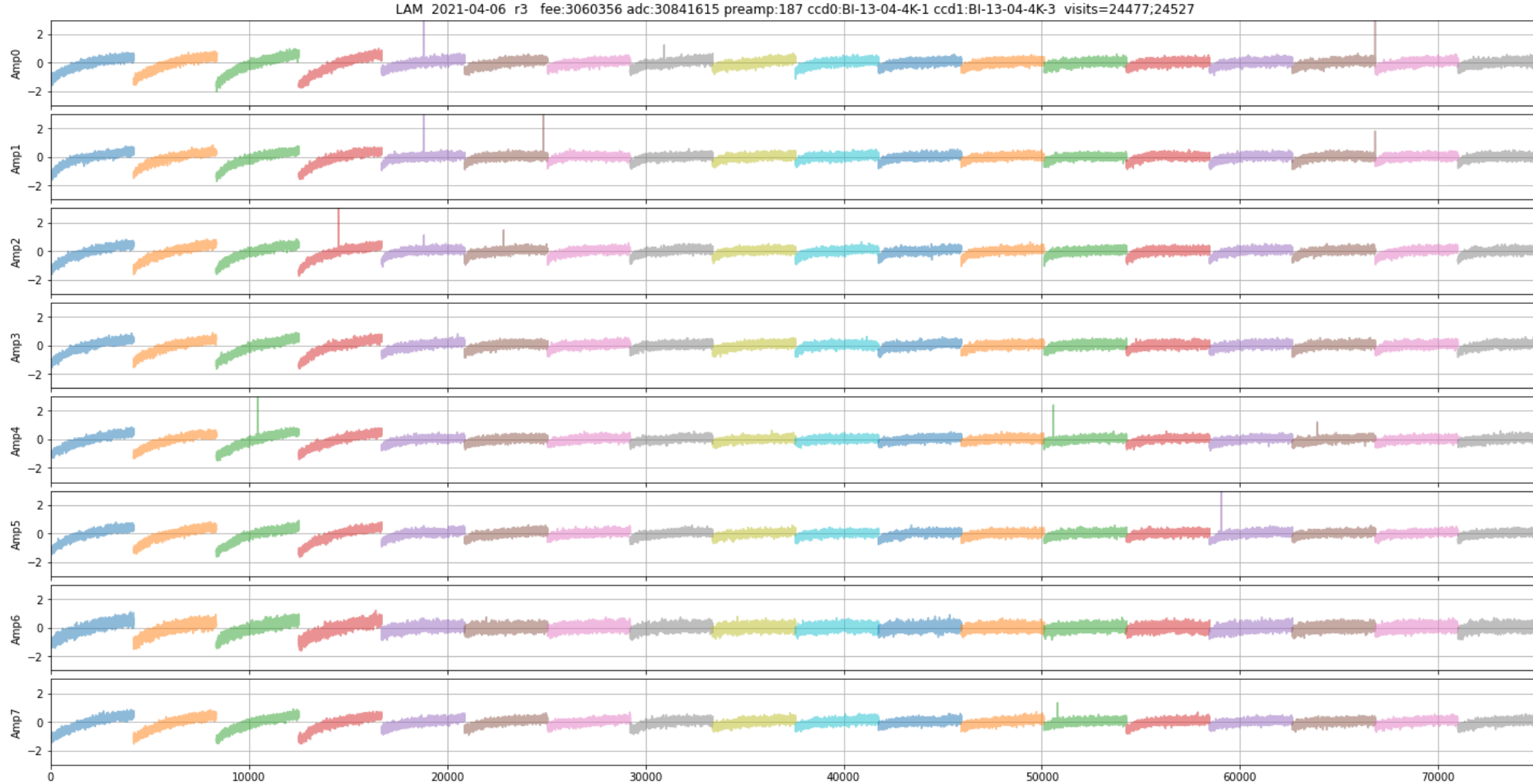LAM 2021-04-02 b3 fee:3060351 adc:30641622 preamp:183 ccd0:BI14-25-4K-1 ccd1:BI14-31-4K-2 visits=24444;24470

Still looks clean.

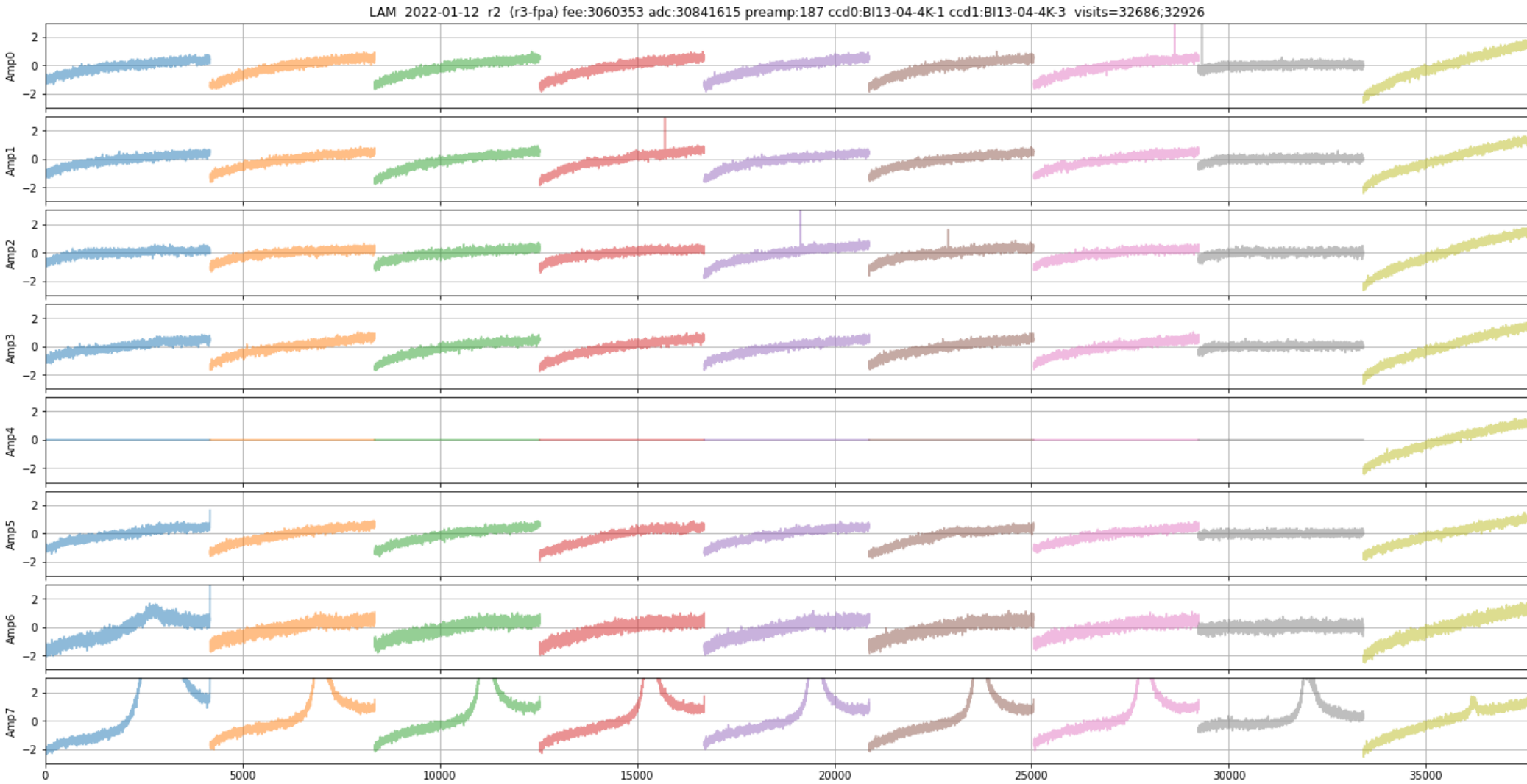JHU 2020-08-12 r3 fee:3060349 adc:4020 preamp:191 ccd0:BI-13-04-4K-1 ccd1:BI-13-04-4K-3 visits=50838;50857

Look also fairly clean.

LAM 2021-04-06 r3 fee:3060356 adc:30841615 preamp:187 ccd0:BI-13-04-4K-1 ccd1:BI-13-04-4K-3 visits=24477;24527

No changes.

LAM 2022-01-12 r2 (r3-fpa) fee:3060353 adc:30841615 preamp:187 ccd0:BI13-04-4K-1 ccd1:BI13-04-4K-3 visits=32686;32926

No changes, just ignore stray light in amp7...

B1-FPA-SUBARU (in B1 CAM)

SUBARU 2021-07-07 b1 fee:3060355 adc:3063063 preamp:188 ccd0:BI13-20-4K-2 ccd1:BI13-18-4K-3 visits=63822;71218

Looks OK.

SUBARU 2020-05-13 r1 fee:3060348 adc:3058 preamp:188 ccd0:BI13-20-4K-2 ccd1:BI13-18-4K-3 visits=17649;19014

Looks OK.