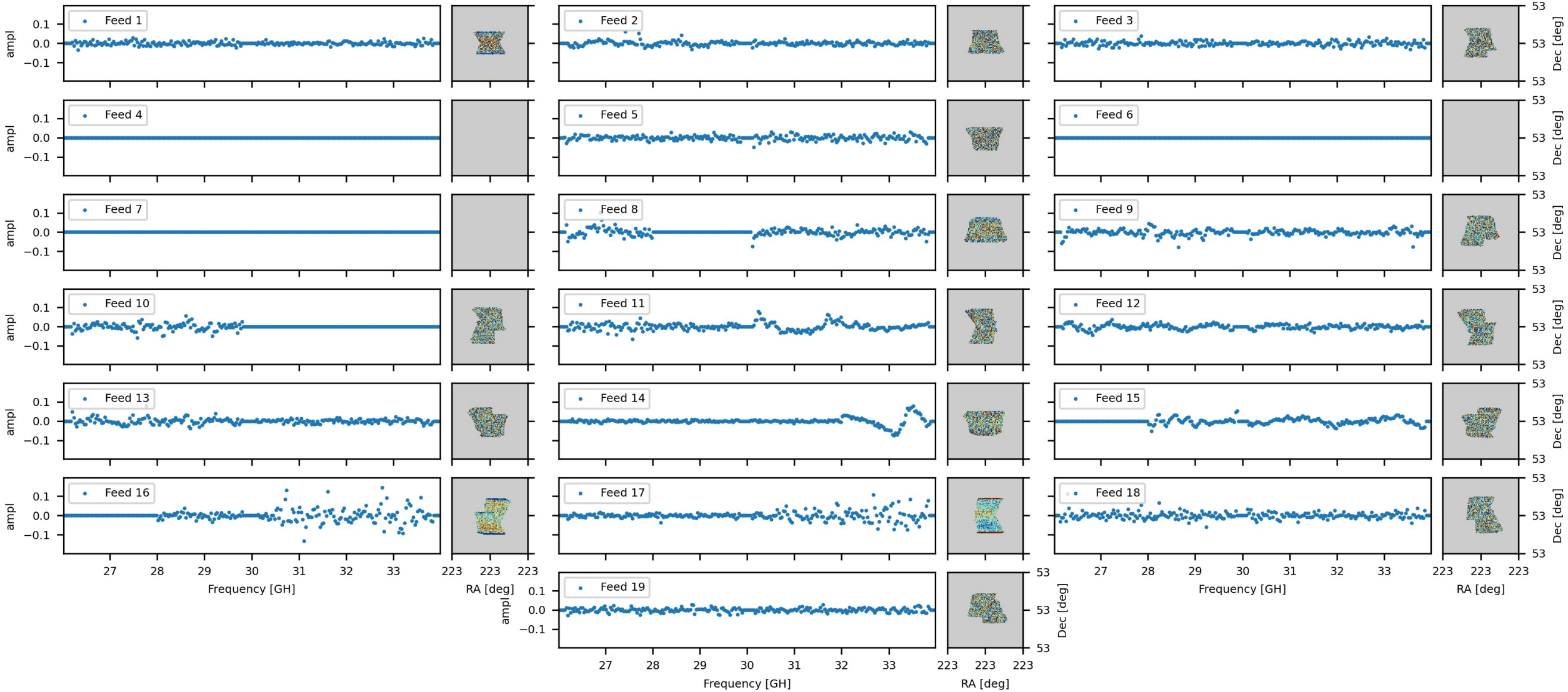
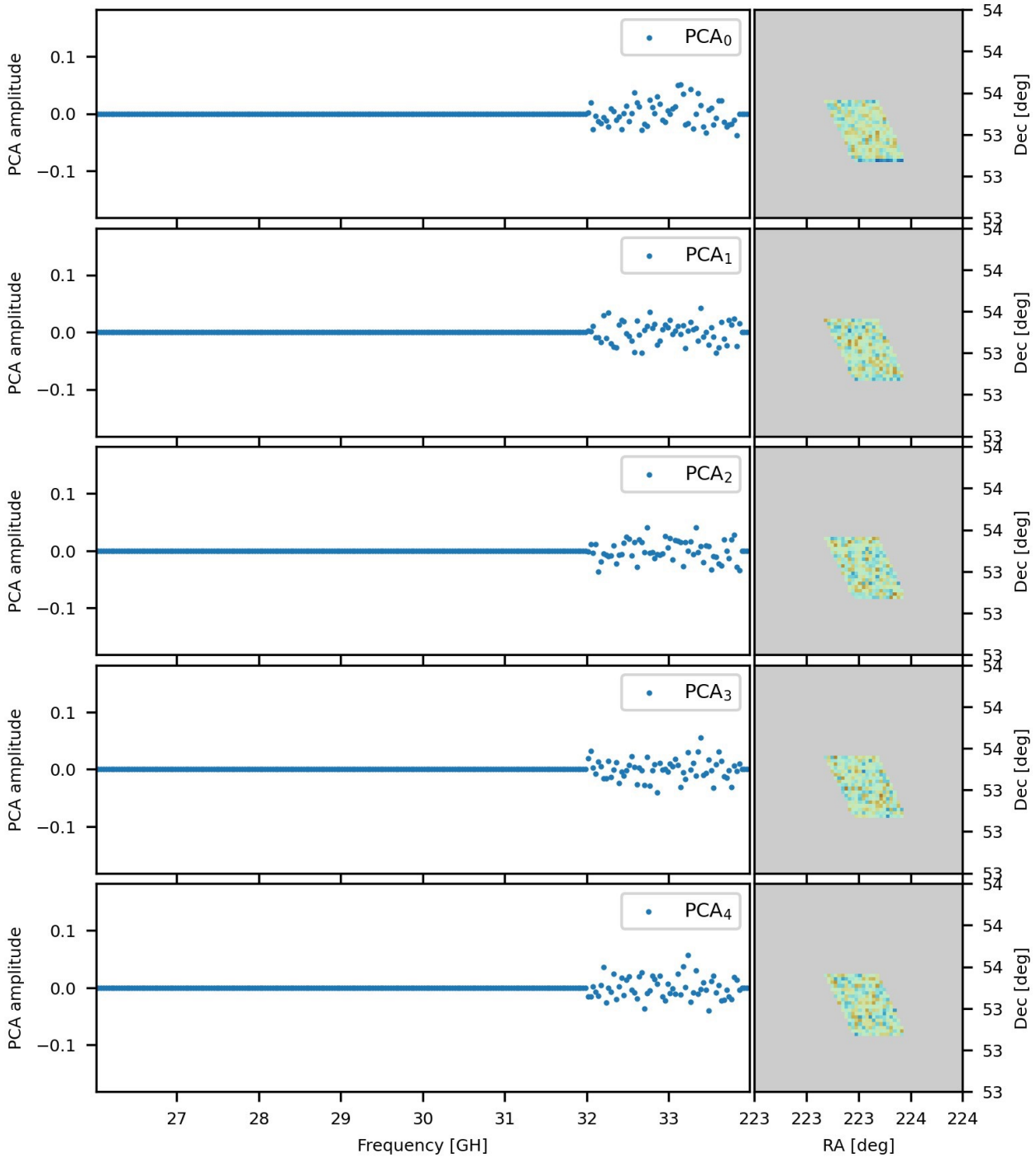
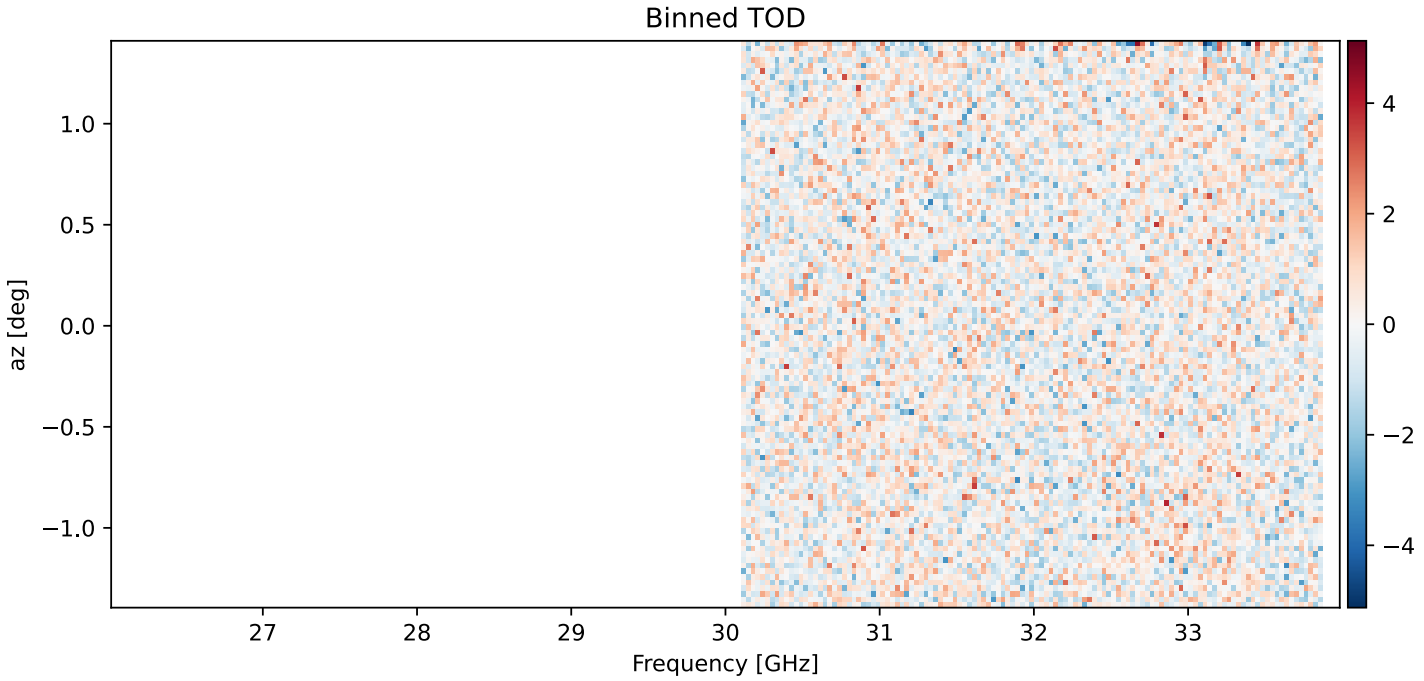
Turn-around effect

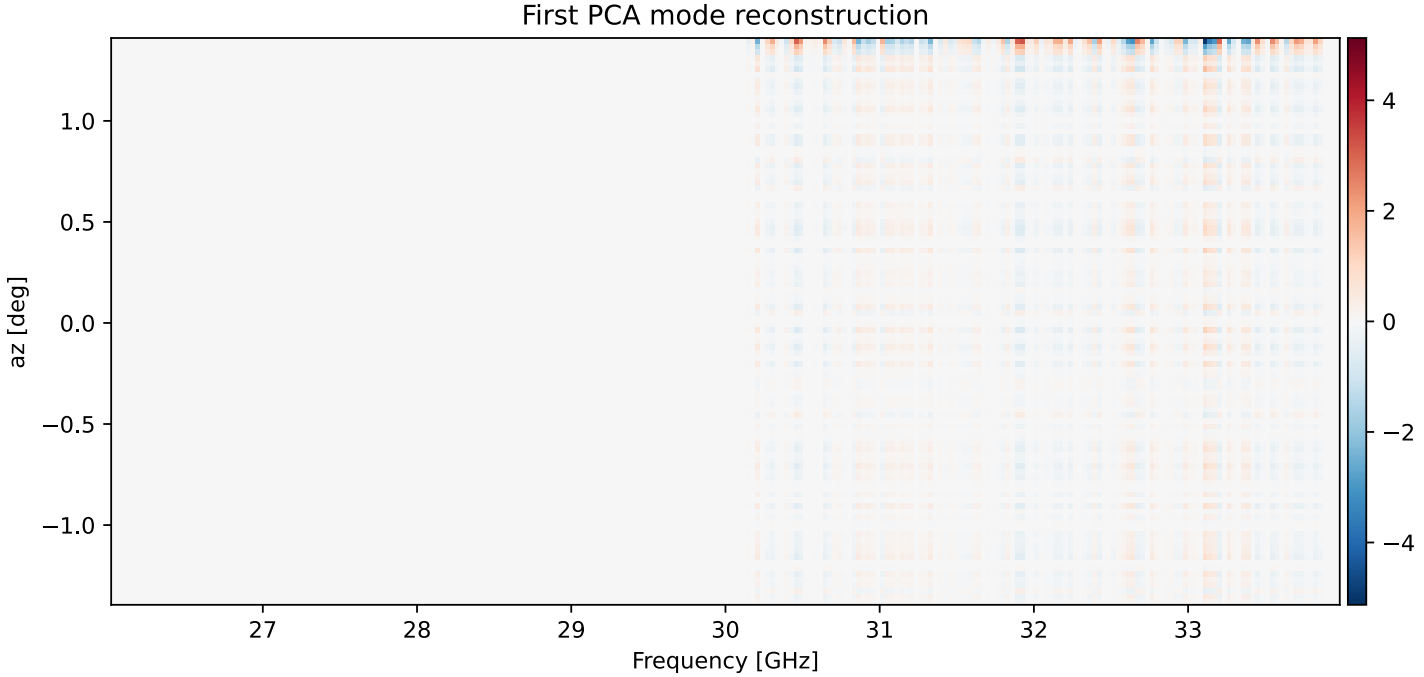

Feed 1
Feed 2
Feed 3
Feed 4
Feed 5
Feed 6
Feed 7
Feed 8
Feed 9
Feed 10
Feed 11
Feed 12
Feed 13
Feed 14
Feed 15
Feed 16
Feed 17
Feed 18
Feed 19
ampl
Frequency [GH]
RA [deg]
Dec [deg]

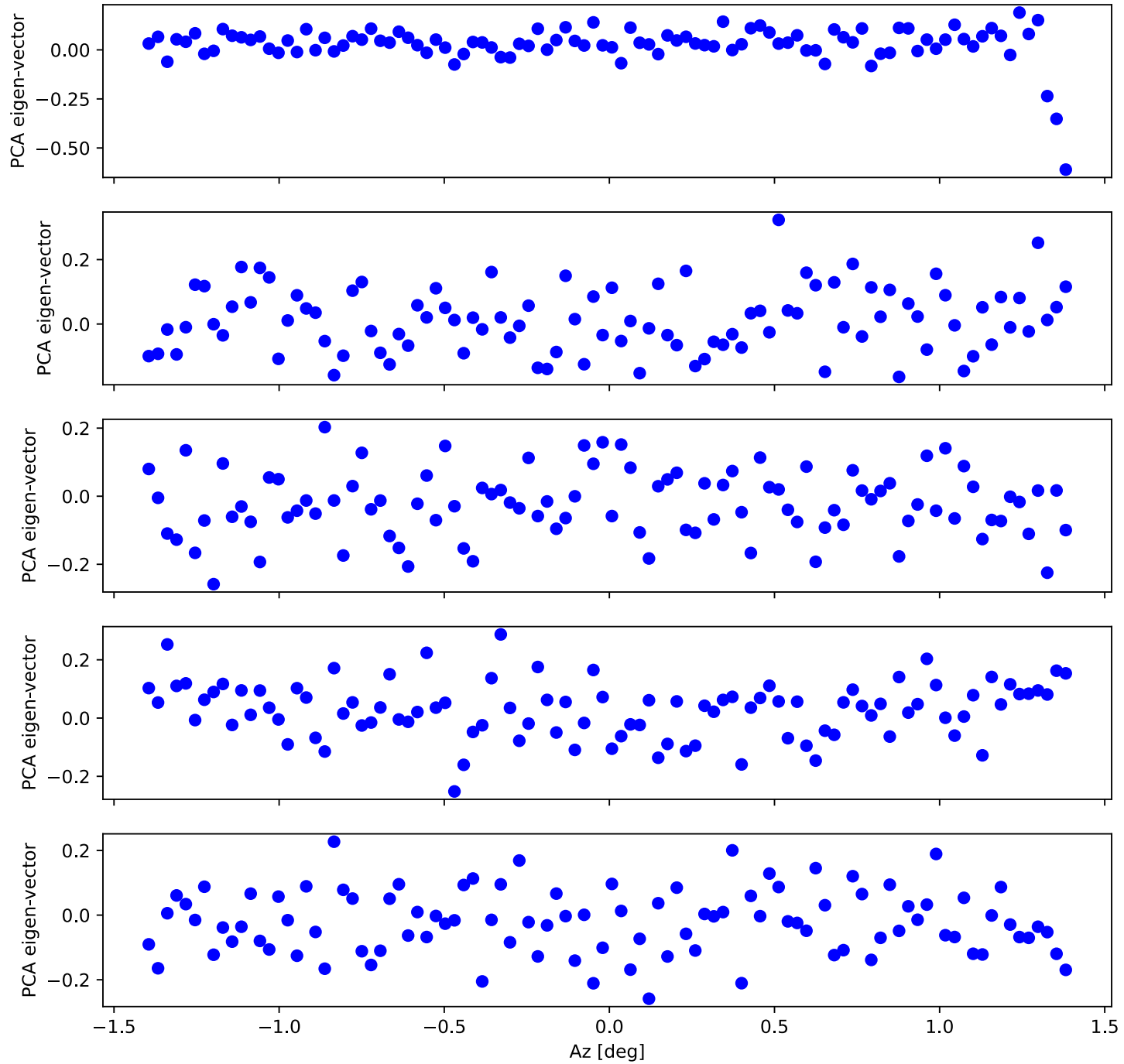
Scan: 1185810

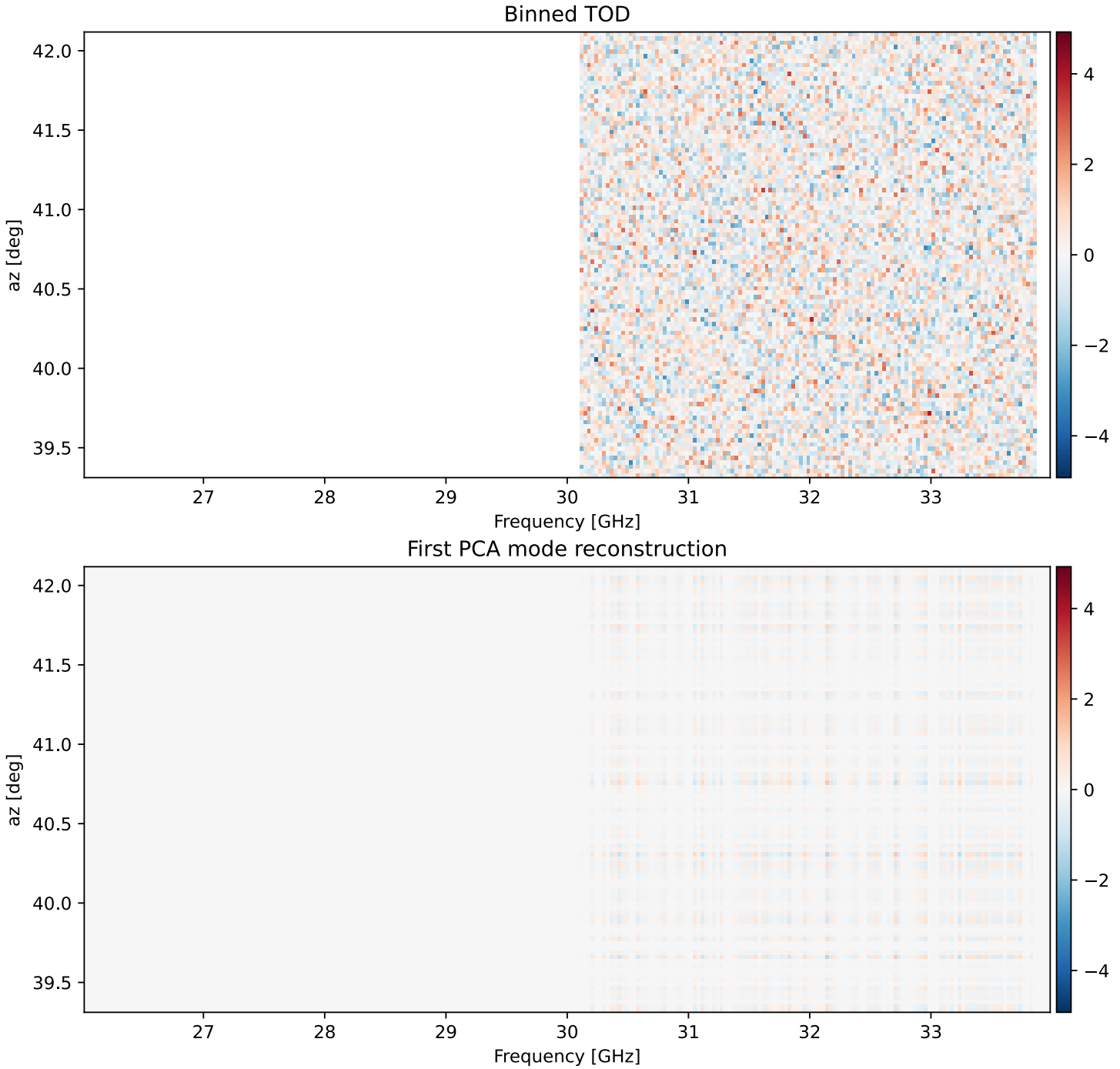


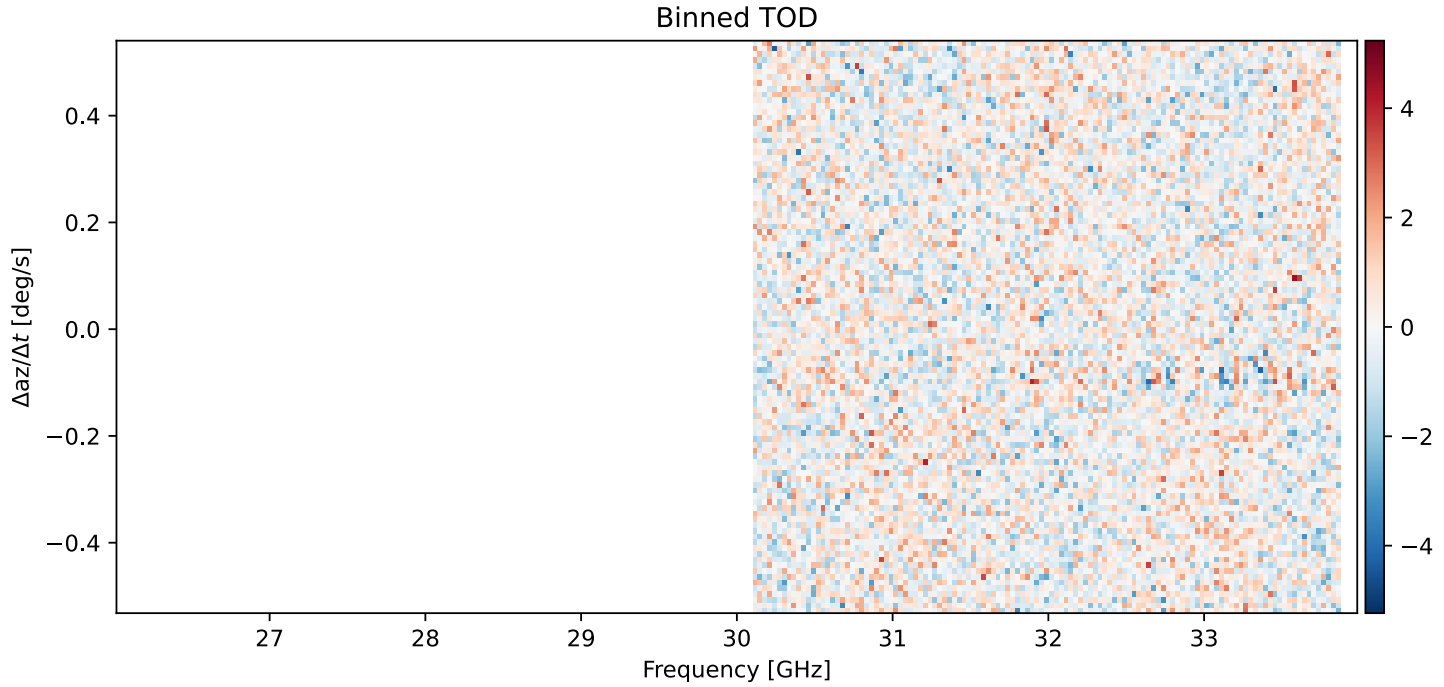
Scan: 1185810

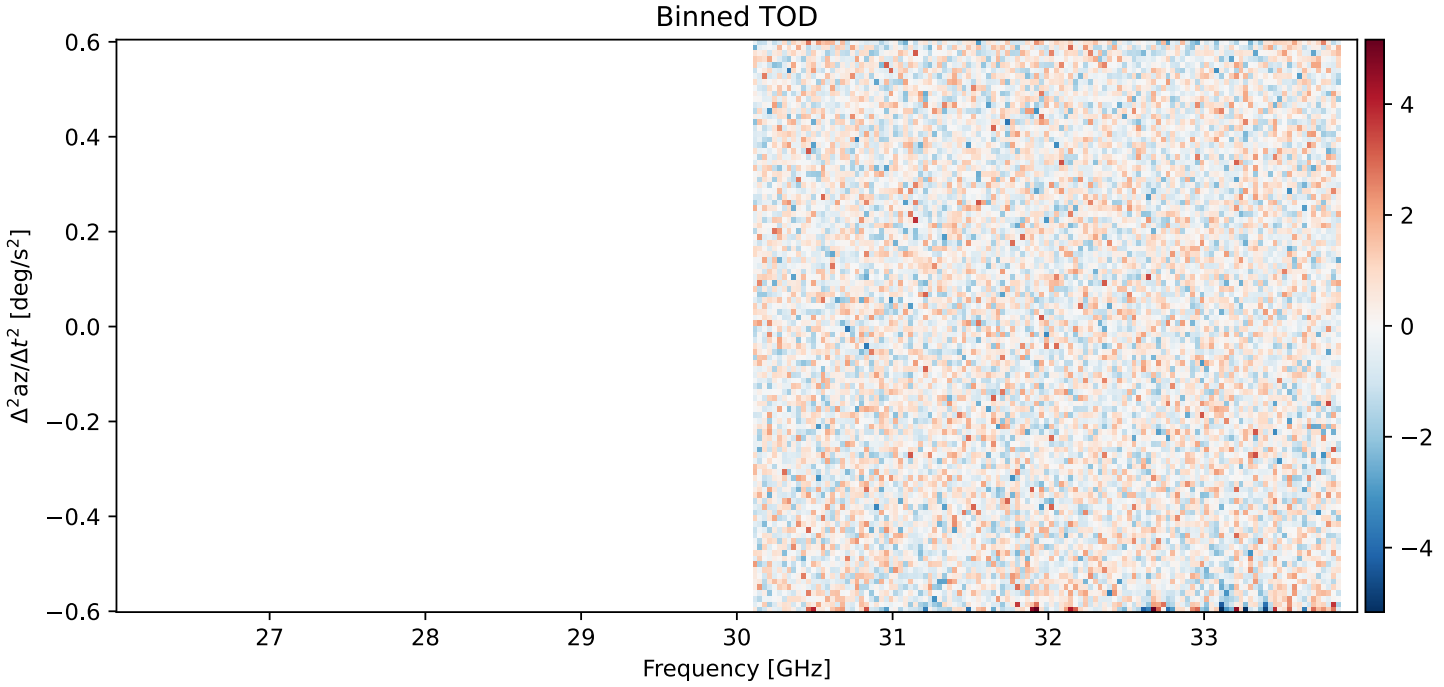


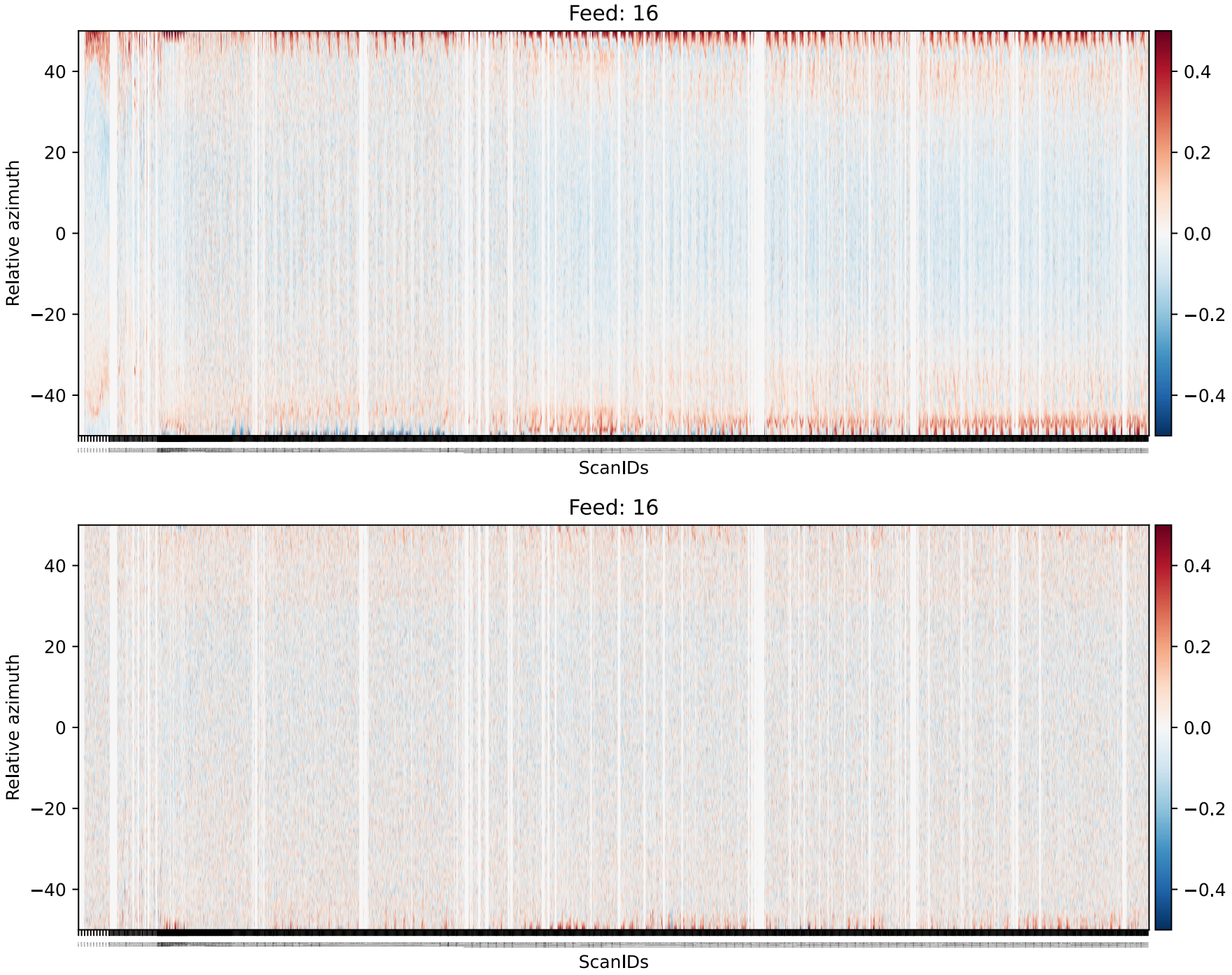


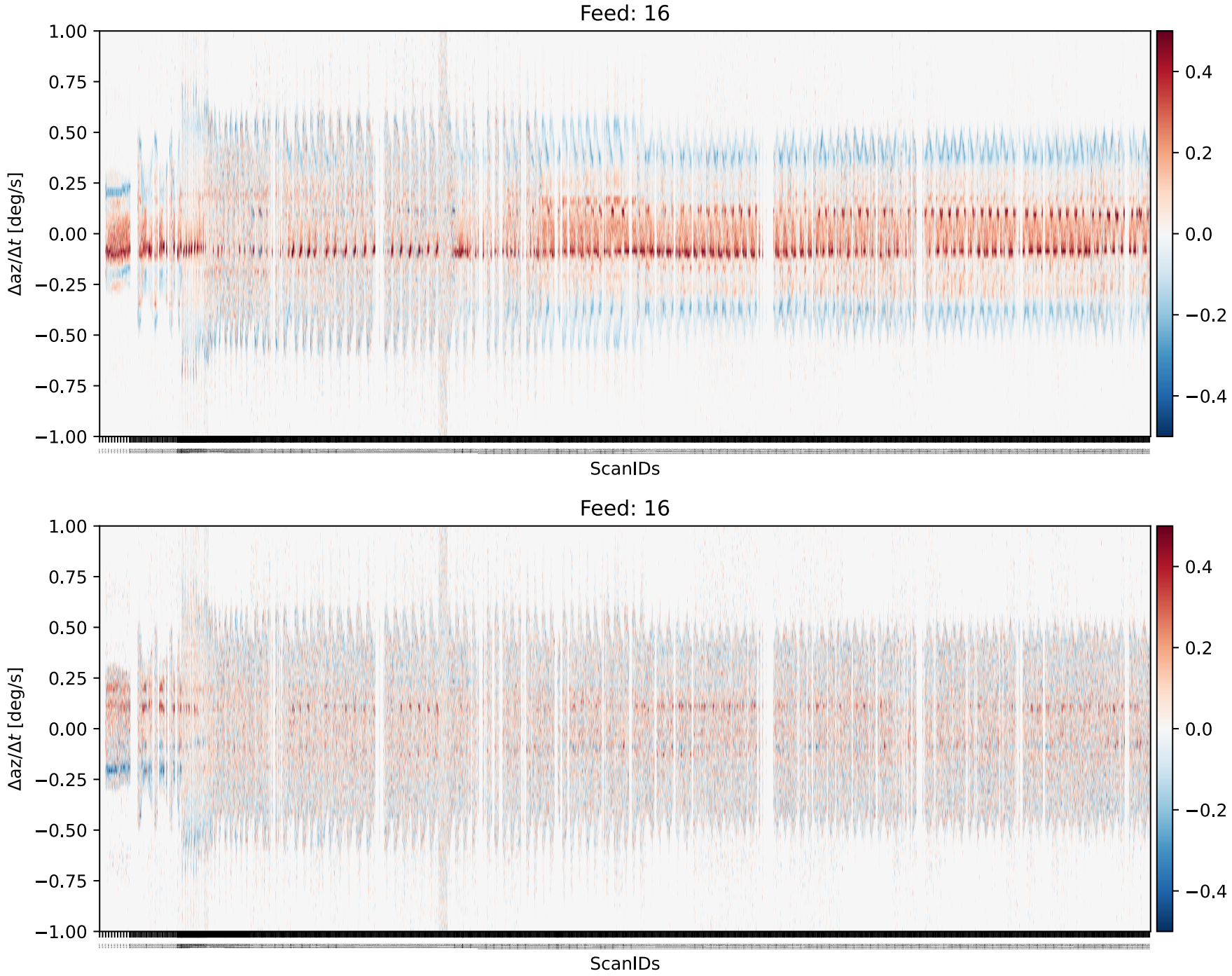

PCA eigen-vector
0.00
−0.25
−0.50
PCA eigen-vector
0.2
0.0
PCA eigen-vector
0.2
0.0
−0.2
PCA eigen-vector
0.2
0.0
−0.2
PCA eigen-vector
0.2
0.0
−0.2
−1.5
−1.0
−0.5
0.0
0.5
1.0
1.5
Az [deg]


Binned TOD
42.0
41.5
41.0
40.5
40.0
39.5
az [deg]
27
28
29
30
31
32
33
Frequency [GHz]
4
2
0
−2
−4
First PCA mode reconstruction
42.0
41.5
41.0
40.5
40.0
39.5
az [deg]
27
28
29
30
31
32
33
Frequency [GHz]
4
2
0
−2
−4


Binned TOD
Δaz/Δt [deg/s]
0.4
0.2
0.0
−0.2
−0.4
27
28
29
30
31
32
33
Frequency [GHz]
4
2
0
−2
−4

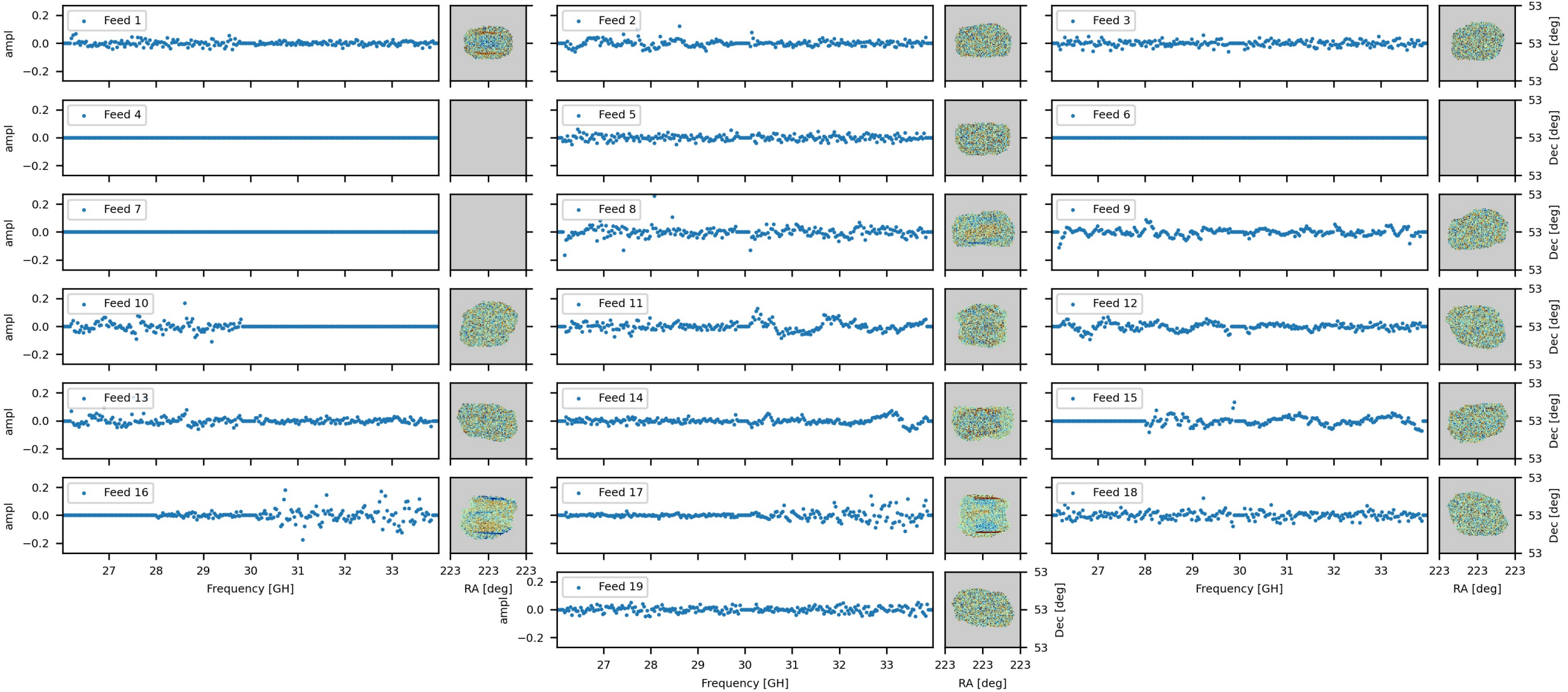

Binned TOD
Δ²az/Δt² [deg/s²]
0.6
0.4
0.2
0.0
−0.2
−0.4
−0.6
27
28
29
30
31
32
33
Frequency [GHz]
4
2
0
−2
−4


Feed: 16
Relative azimuth
40
20
0
−20
−40
0.4
0.2
0.0
−0.2
−0.4
ScanIDs
Feed: 16
Relative azimuth
40
20
0
−20
−40
0.4
0.2
0.0
−0.2
−0.4
ScanIDs

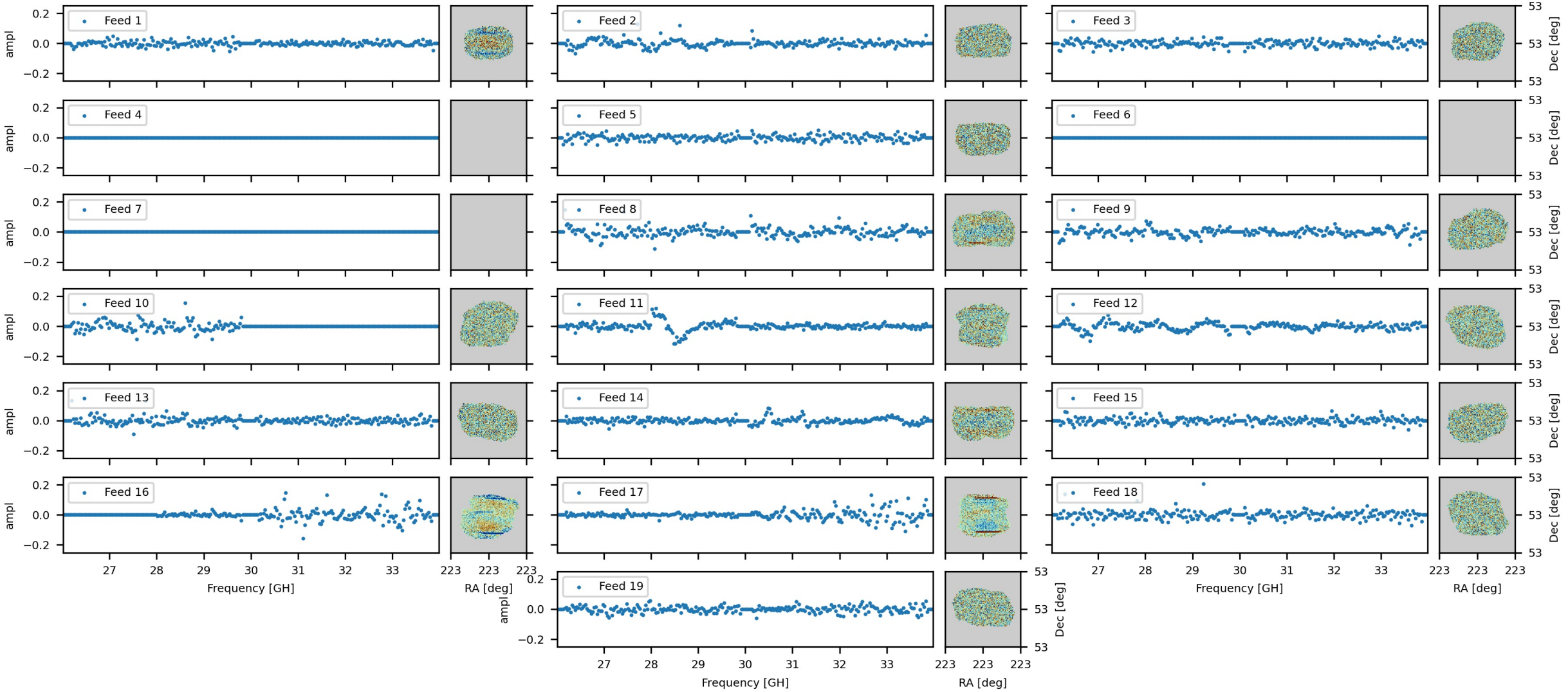

Feed: 16
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
Δaz/Δt [deg/s]
0.4
0.2
0.0
−0.2
−0.4
ScanIDs
Feed: 16
1.00
0.75
0.50
0.25
0.00
−0.25
−0.50
−0.75
−1.00
Δaz/Δt [deg/s]
0.4
0.2
0.0
−0.2
−0.4
ScanIDs

New PCA filter update

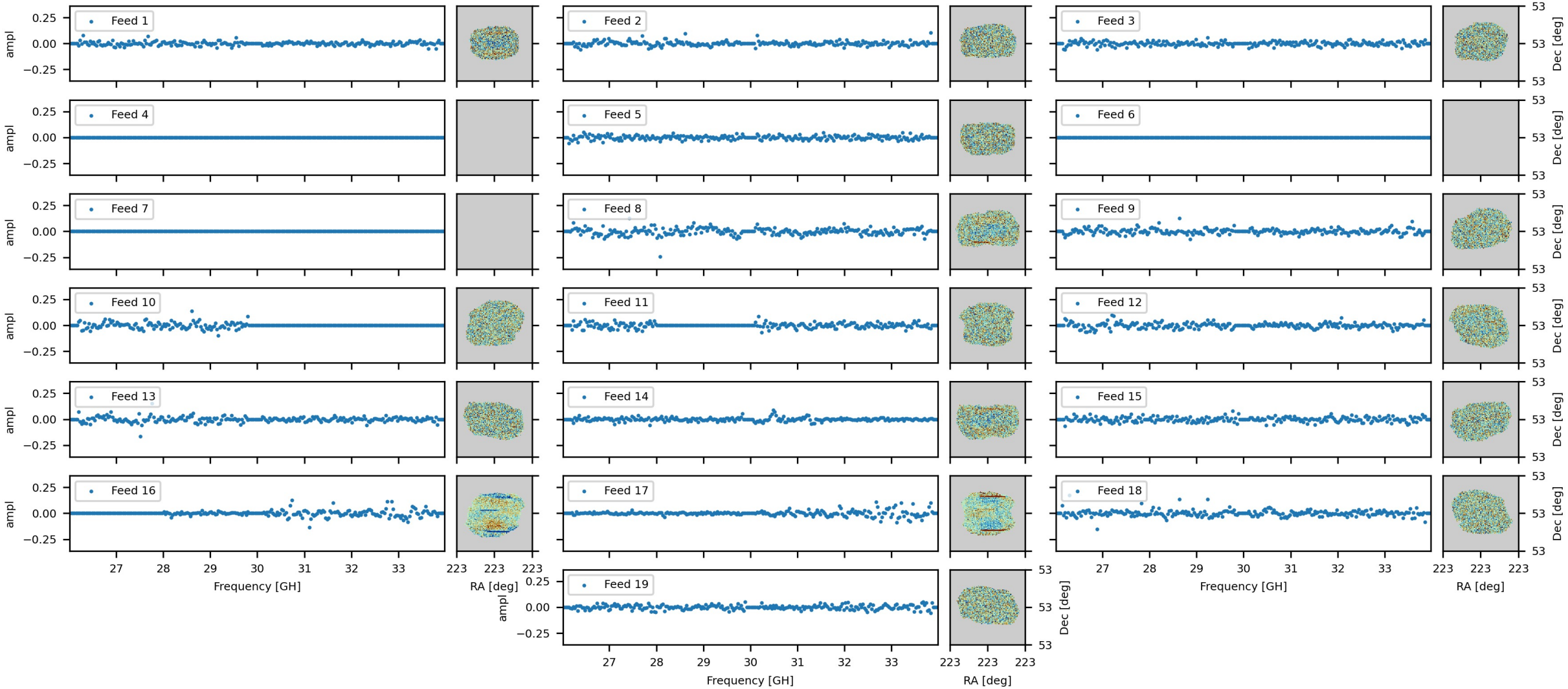
Without new PCA



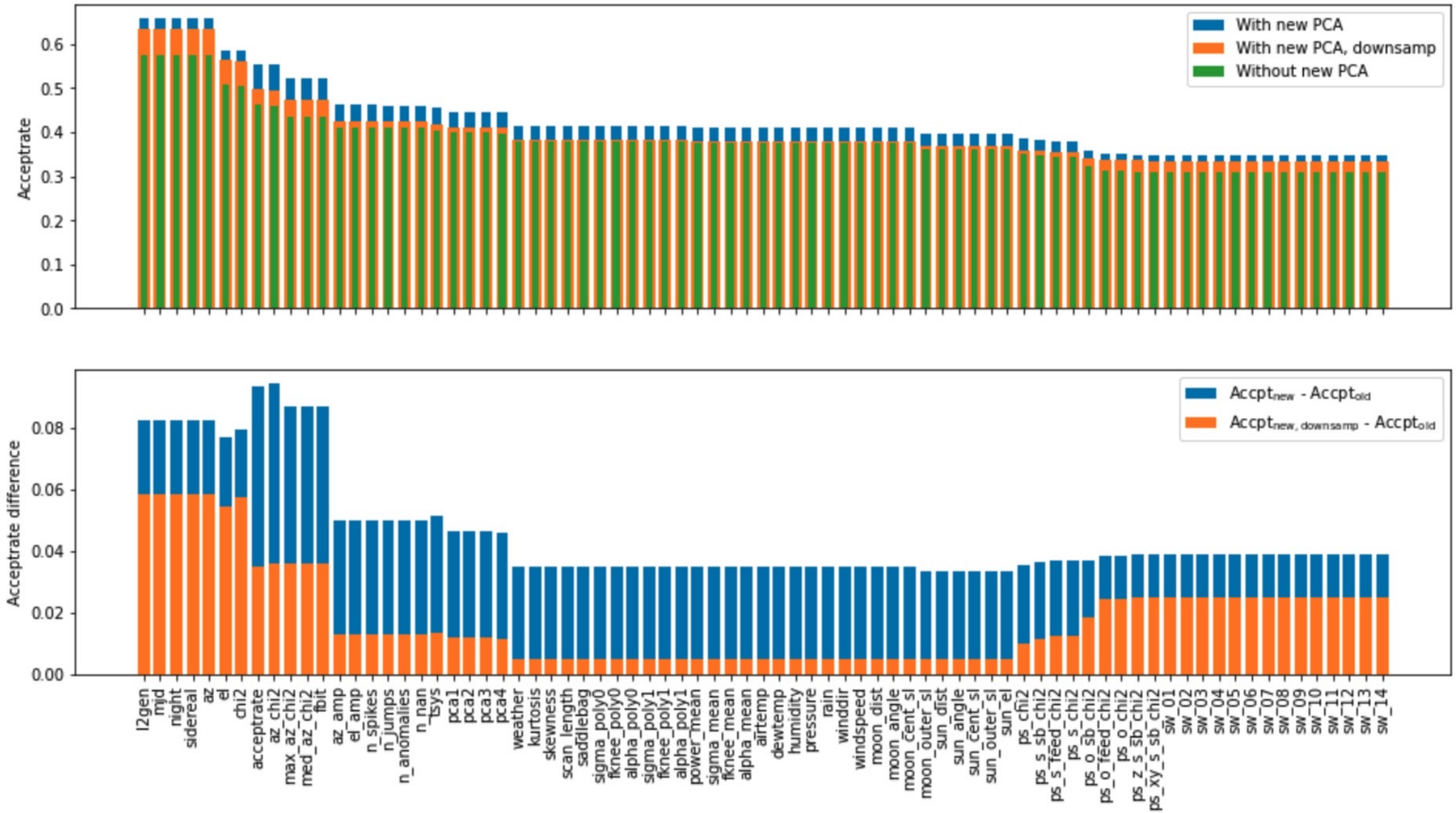
With new PCA


Feed 1
Feed 2
Feed 3
Feed 4
Feed 5
Feed 6
Feed 7
Feed 8
Feed 9
Feed 10
Feed 11
Feed 12
Feed 13
Feed 14
Feed 15
Feed 16
Feed 17
Feed 18
Feed 19
ampl
Frequency [GH]
RA [deg]
Dec [deg]

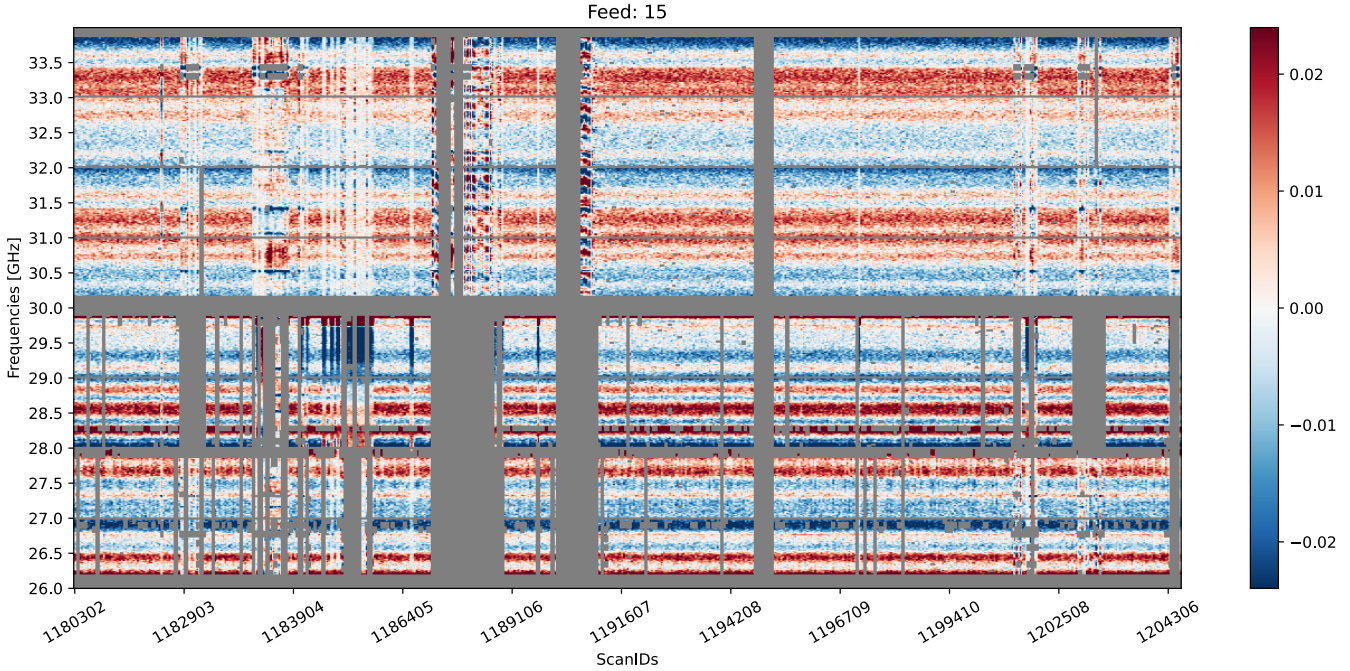
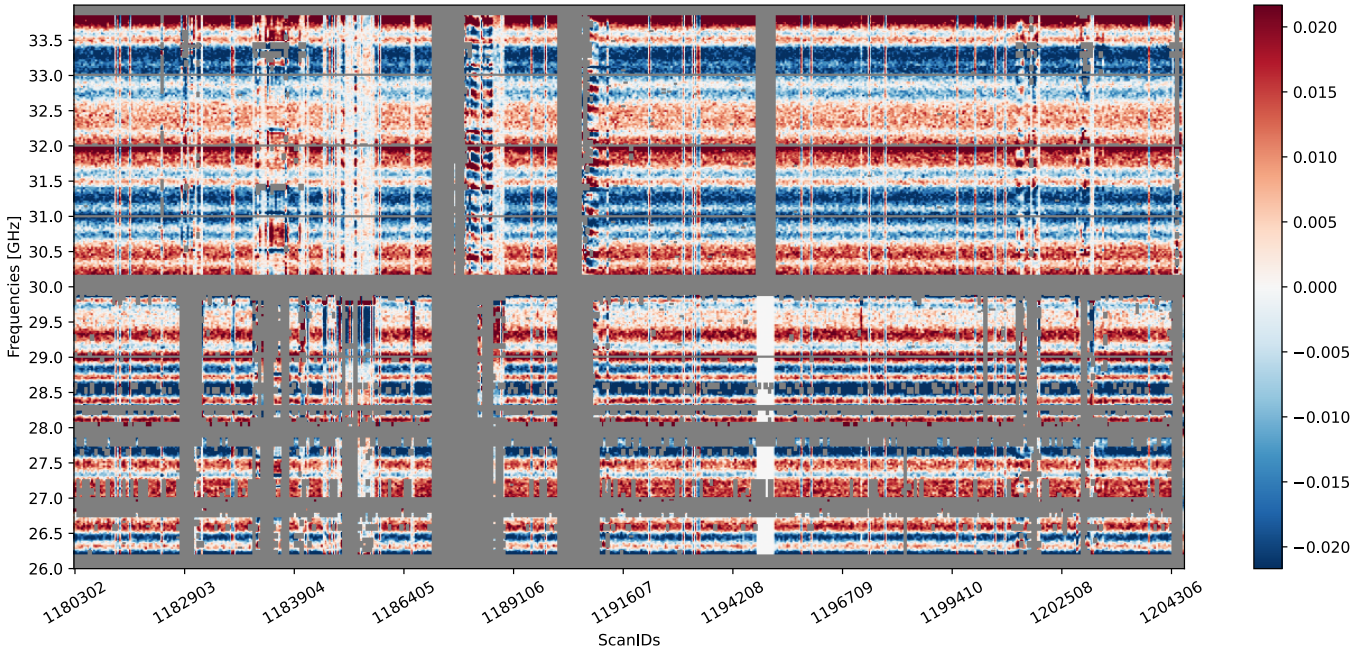
With new PCA + frequency down-sampling



… but there is still a bug I have to fix!


With new PCA
With new PCA, downsamp
Without new PCA
Acceptrate
0.0
0.1
0.2
0.3
0.4
0.5
0.6
Accpt$_{new}$ - Accpt$_{old}$
Accpt$_{new, downsamp}$ - Accpt$_{old}$
Acceptrate difference
0.00
0.02
0.04
0.06
0.08
l2gen
mjd
night
sidereal
az
el
chi2
acceptrate
az_chi2
max_az_chi2
med_az_chi2
fbit
az_amp
el_amp
n_spikes
n_jumps
n_anomalies
n_nan
tsys
pca1
pca2
pca3
pca4
weather
kurtosis
skewness
scan_length
saddlebag
sigma_poly0
fknee_poly0
alpha_poly0
sigma_poly1
fknee_poly1
alpha_poly1
power_mean
sigma_mean
fknee_mean
alpha_mean
airtemp
dewtemp
humidity
pressure
rain
winddir
windspeed
moon_dist
moon_angle
moon_cent_sl
moon_outer_sl
sun_dist
sun_angle
sun_cent_sl
sun_outer_sl
sun_el
ps_chi2
ps_s_sb_chi2
ps_s_feed_chi2
ps_s_chi2
ps_o_sb_chi2
ps_o_feed_chi2
ps_o_chi2
ps_z_s_sb_chi2
ps_xy_s_sb_chi2
sw_01
sw_02
sw_03
sw_04
sw_05
sw_06
sw_07
sw_08
sw_09
sw_10
sw_11
sw_12
sw_13
sw_14

Without down-sampling



With down-sampling