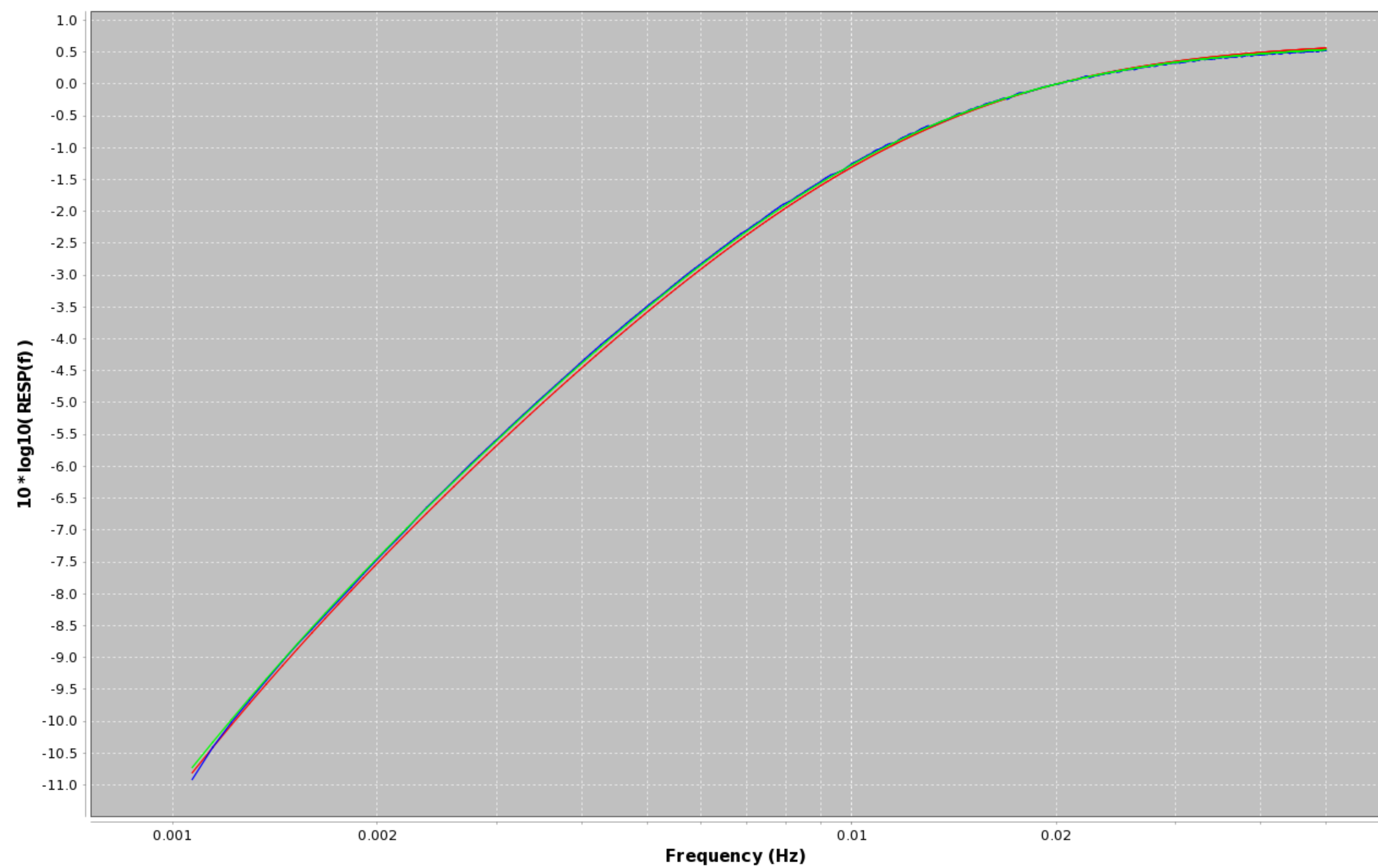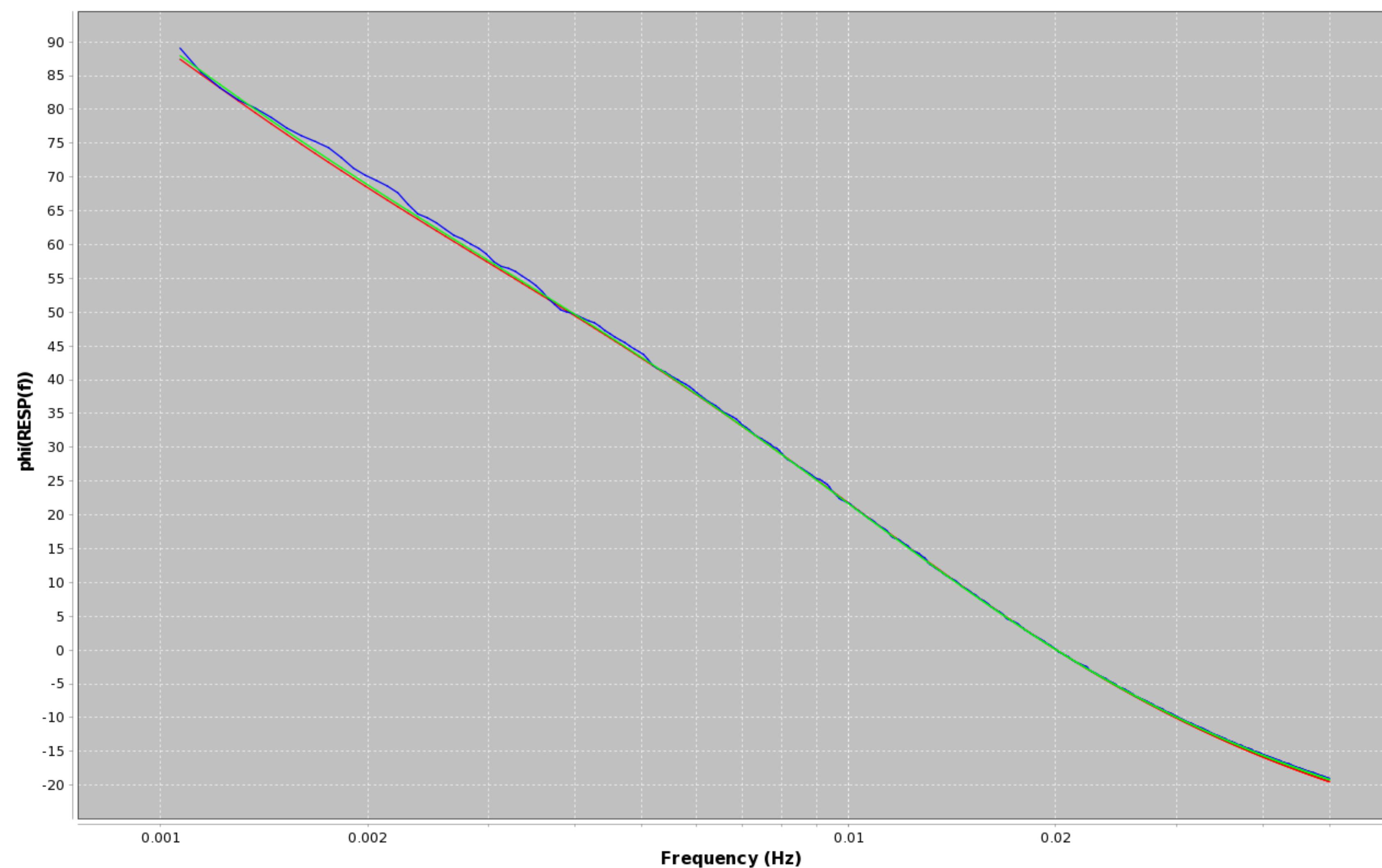# Randomized calibration (LOW FREQ.)

y-axis: 10*log10(RESP(f))
x-axis: Frequency (Hz)

— Initial param (KS54000_Q330HR_BH_40) magnitude — Calc. resp. (IU_ANMO_00_BHZ) magnitude — Fit resp. magnitude

Initial poles: **Residuals:**
-0.0048 (1308.88787 s);   -0.07676 (81.85974 s) **Initial (nom. resp curve): 674.8559410391524**
                    Fit poles: **Best fit: 352.8896537704659**
-0.0048 (1308.88787 s);   -0.07477 (84.03743 s)
                              NUMBER OF ITERATIONS: 9
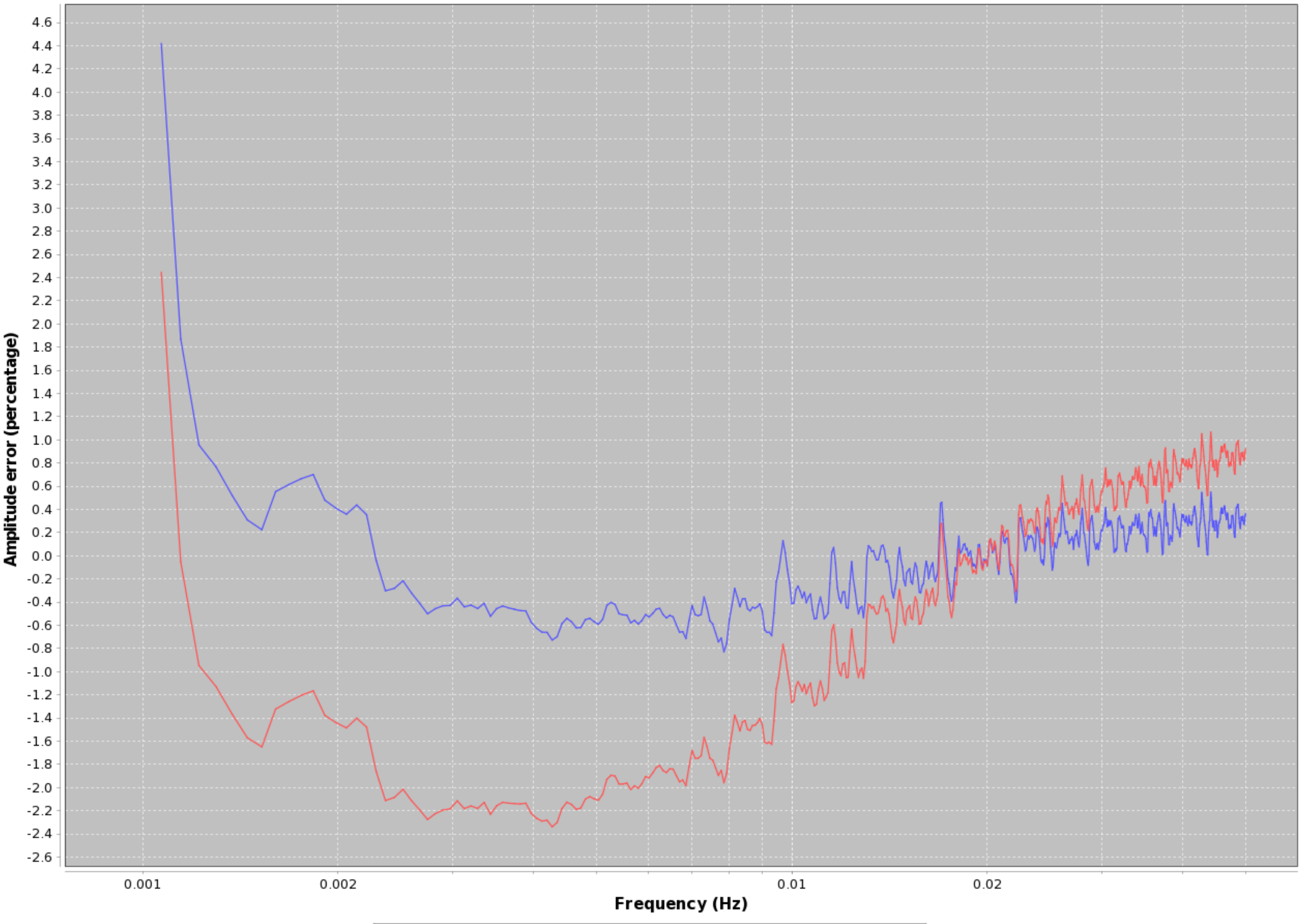
Randomized calibration (LOW FREQ.)

y-axis: phi(RESP(f))
x-axis: Frequency (Hz)

— Initial param (KS54000_Q330HR_BH_40) phase — Calc. resp. (IU_ANMO_00_BHZ) phase — Fit resp. phase

Initial poles: **Residuals:**
-0.0048 (1308.88787 s);   -0.07676 (81.85974 s) **Initial (nom. resp curve): 674.8559410391524**
                    Fit poles: **Best fit: 352.8896537704659**
-0.0048 (1308.88787 s);   -0.07477 (84.03743 s)
                              NUMBER OF ITERATIONS: 9

Randomized calibration

Amplitude error (percentage) vs Frequency (Hz)

Legend: Percent error of init. amplitude — Percent error of fit amplitude

Randomized calibration

Phase error (degrees) vs Frequency (Hz)

Legend: Diff. with init phase — Diff with fit phase

Initial poles:
-0.0048 (1308.88787 s);   -0.07676 (81.85974 s)
Fit poles:
-0.0048 (1308.88787 s);   -0.07477 (84.03743 s)
Residuals:
Initial (nom. resp curve): 674.8559410391524
Best fit: 352.8896537704659

Iteration count from solver: 9
Input filenames, with SEED and RESP files paired as appropriate:
IU_ANMO_ _BC0
IU_ANMO_00_BHZ
KS54000_Q330HR_BH_40
Residuals weighting:
    Amplitude: 1906.8706433328211
    Phase: 0.6433335684533169

Time of report generation:
2017.249.19:57:44
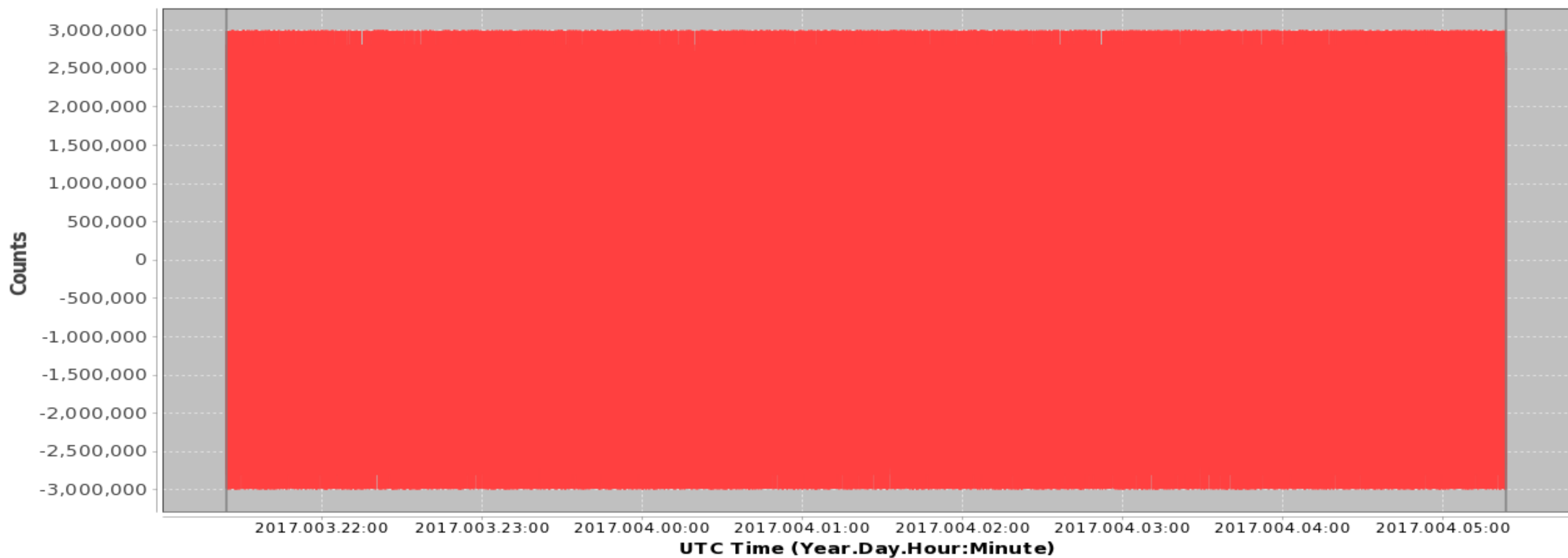Data start time:
2017.003.21:23:59
Data end time:
2017.004.05:23:31

```
POLE VARIABLES, AS CSV:
Init      Fit       Diff      Mean      PctDiff
-0.0048   -0.0048   +0        -0.0048   -0
+0        +0        +0        +0        +0
-0.0768   -0.0748   -0.002    -0.0758   +2.6603
+0        +0        +0        +0        +0
```
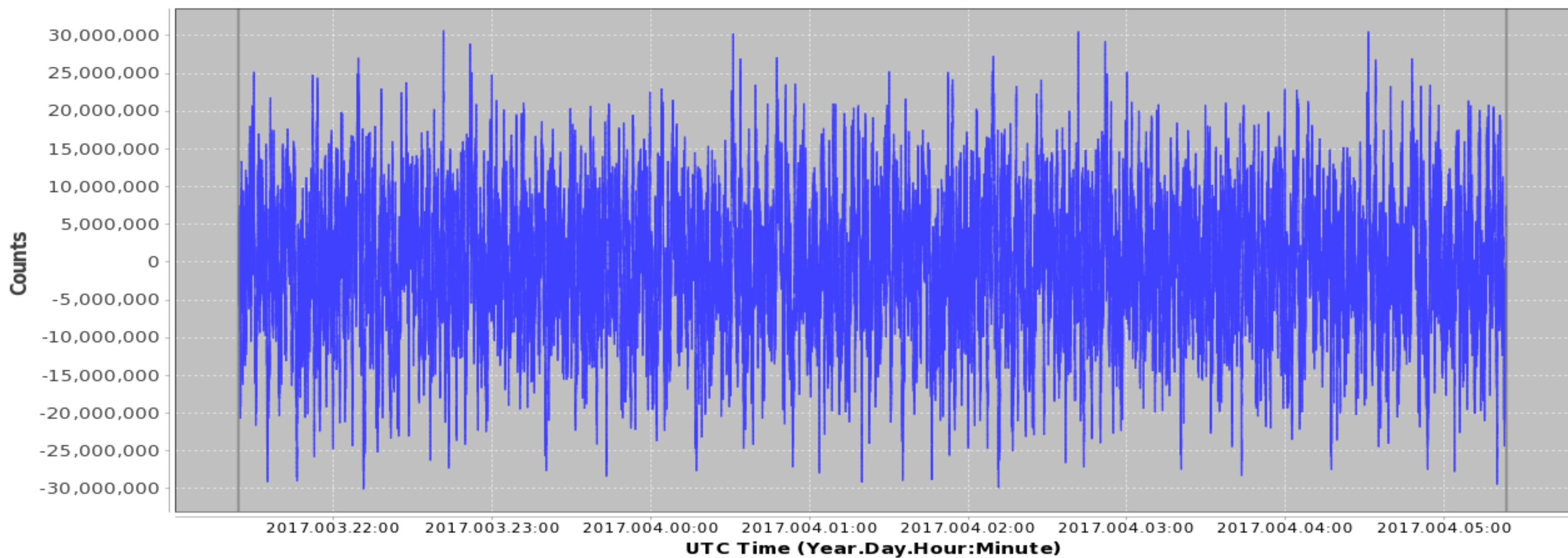
IU_ANMO_ _BC0 (20.0 Hz)

Counts

3,000,000
2,500,000
2,000,000
1,500,000
1,000,000
500,000
0
-500,000
-1,000,000
-1,500,000
-2,000,000
-2,500,000
-3,000,000

2017.003.22:00 2017.003.23:00 2017.004.00:00 2017.004.01:00 2017.004.02:00 2017.004.03:00 2017.004.04:00 2017.004.05:00

UTC Time (Year.Day.Hour:Minute)

IU_ANMO_00_BHZ (20.0 Hz)

Counts

30,000,000
25,000,000
20,000,000
15,000,000
10,000,000
5,000,000
0
-5,000,000
-10,000,000
-15,000,000
-20,000,000
-25,000,000
-30,000,000

2017.003.22:00 2017.003.23:00 2017.004.00:00 2017.004.01:00 2017.004.02:00 2017.004.03:00 2017.004.04:00 2017.004.05:00

UTC Time (Year.Day.Hour:Minute)

Response name: KS54000_Q330HR_BH_40

Gain stage values:

0: 3,355,442,000

1: 2,000

2: 1,677,720

Normalization: 38499.14

Normalization frequency (Hz): 0.02

Transfer function is LAPLACIAN

Response input units: velocity (m/s)

Response zeros:

0: 0

1: 0

Response poles:

0: -0.0048

1: -0.0768

2: -22.7121 + 27.1065i

3: -22.7121 - 27.1065i

4: -59.4313