

Recombine3: Suspension Transfer Functions

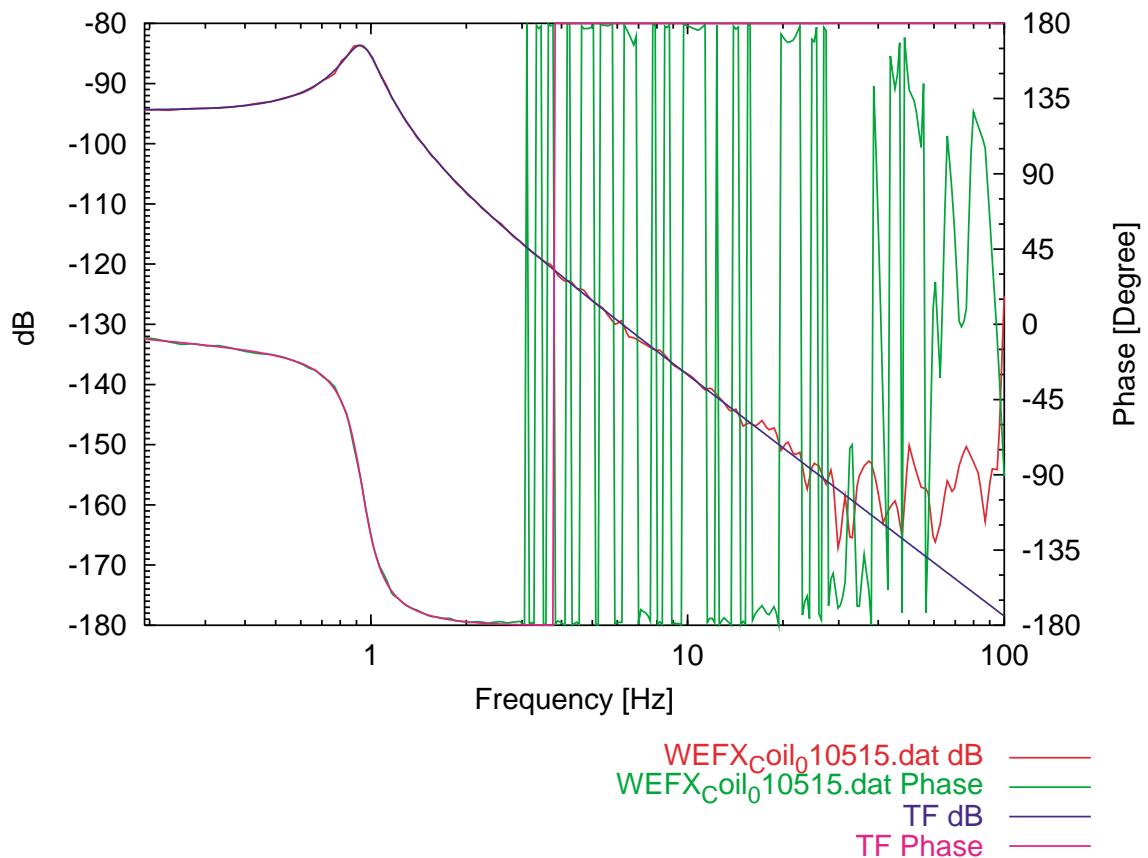
National Astronomical Observatory, TAMA project

Koji Arai

April 10, 2001

Revised: May 17, 2001

WE Front Length Coil



Filename: WEFX_Coil_010515.dat

Measured: 2000/05/16

Actuator: Coil

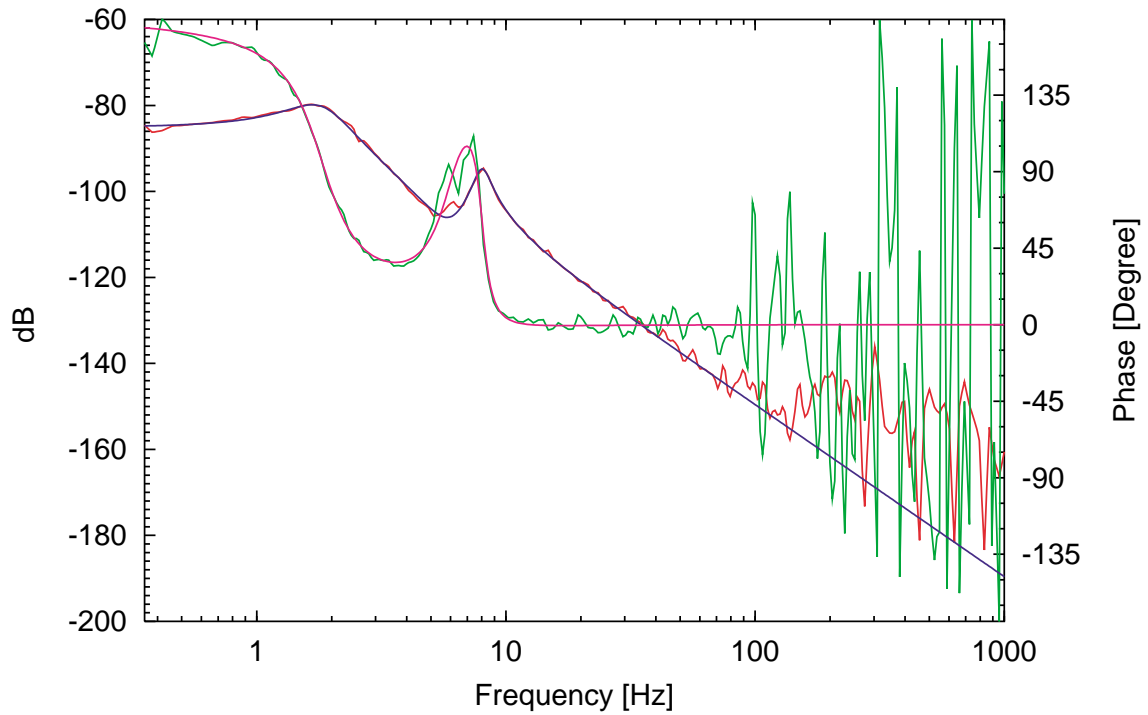
pole 498.38716m 438.34735m

pole 939.96245m 4.2694232

zero 595.84114m 430.47901m

factor 19.270227u

WE Front Pitch Coil



WEFP_{Coil_010515}.dat dB ———
WEFP_{Coil_010515}.dat Phase ———
TF dB ———
TF Phase ———

Filename: WEFP_Coil_010515.dat

Measured: 2001/05/16

Actuator: Coil

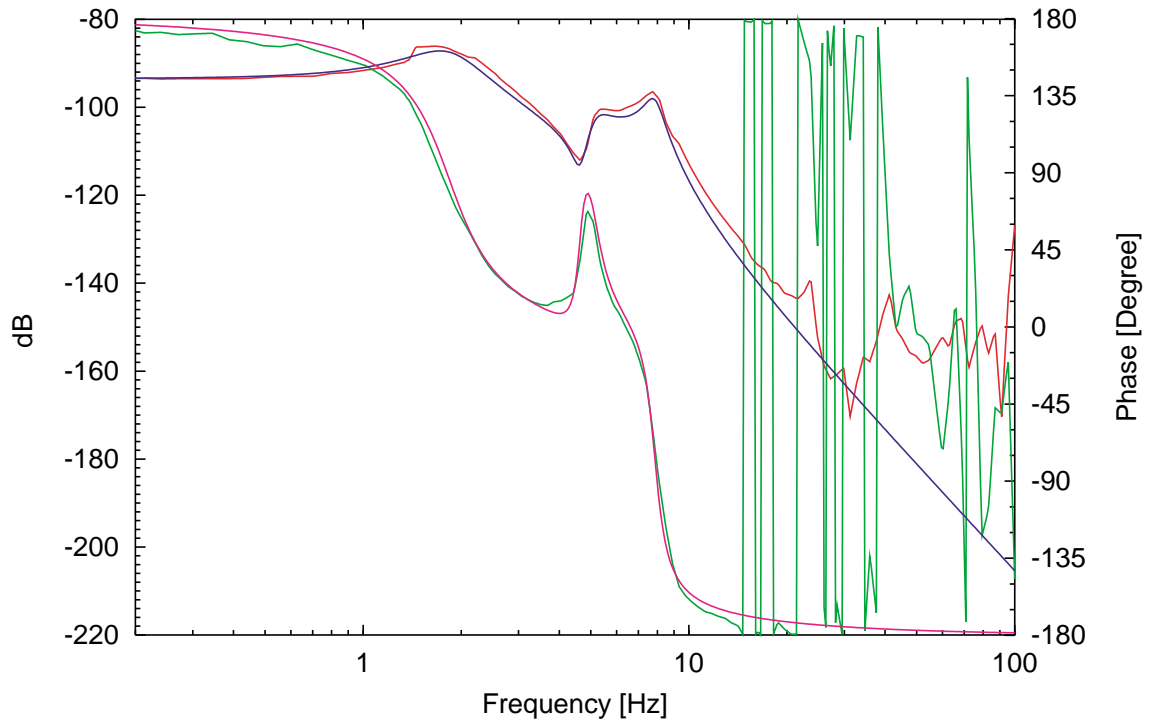
pole 1.8302917 1.7963219

pole 8.0092455 6.3624018

zero 6.029237 2.4424594

factor -55.98415u

WE Front Pitch PZT



WEFP_{PZT0}01106.dat dB ——— TF dB ———
 WEFP_{PZT0}01106.dat Phase ——— TF Phase ———

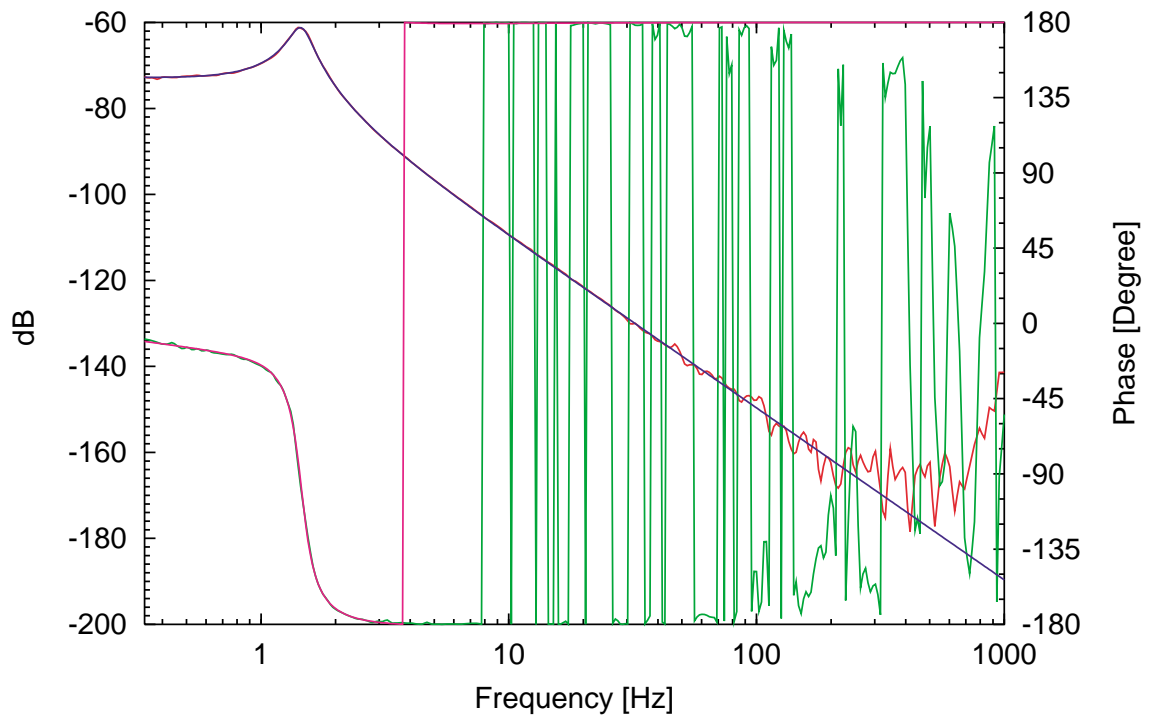
Filename: WEFP_PZT_001106.dat

Measured: 2000/11/06

Actuator: PZT

pole 1.838965 1.9543587
 pole 7.8533994 7.4993756
 pole 5.0990797 5.3614304
 zero 4.6369576 10.803121
 factor -21.195962u

WE Front Yaw Coil



WEFY_Coil_010515.dat dB
WEFY_Coil_010515.dat Phase
TF dB
TF Phase

Filename: WEFY_Coil_010515.dat

Measured: 2001/05/16

Actuator: Coil

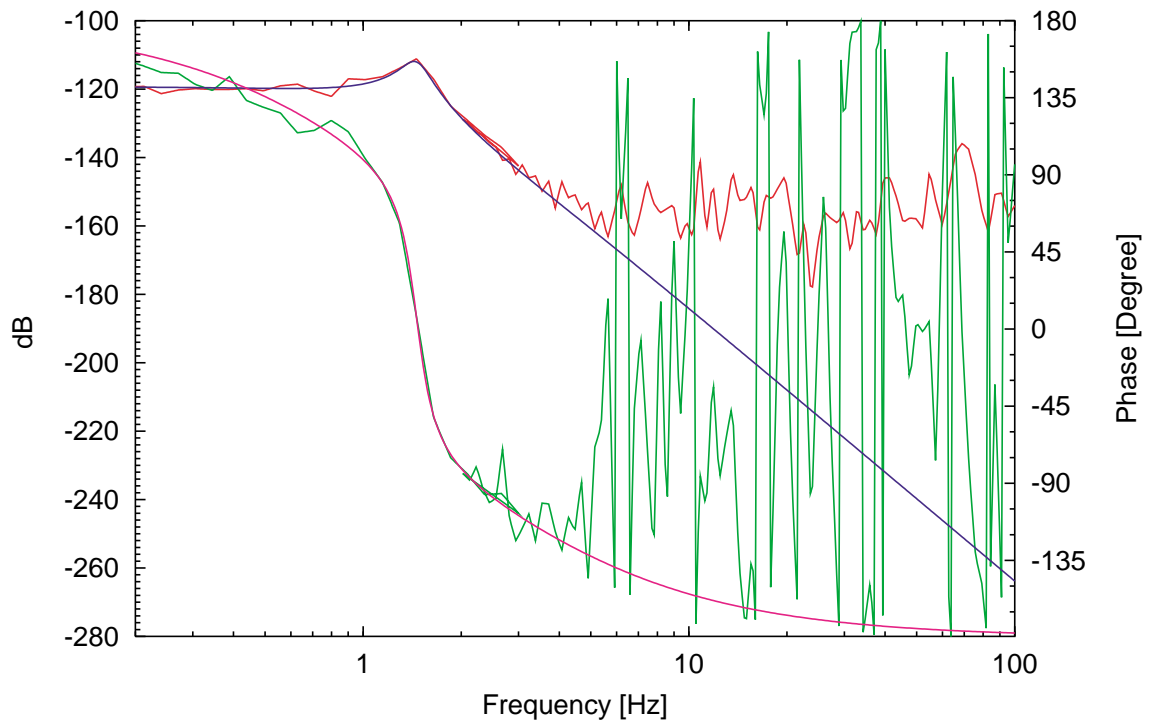
pole 1.4154088 365.89744m

pole 1.4566651 4.9983241

zero 1.7307943 403.6784m

factor 231.8507u

WE Front Yaw PZT

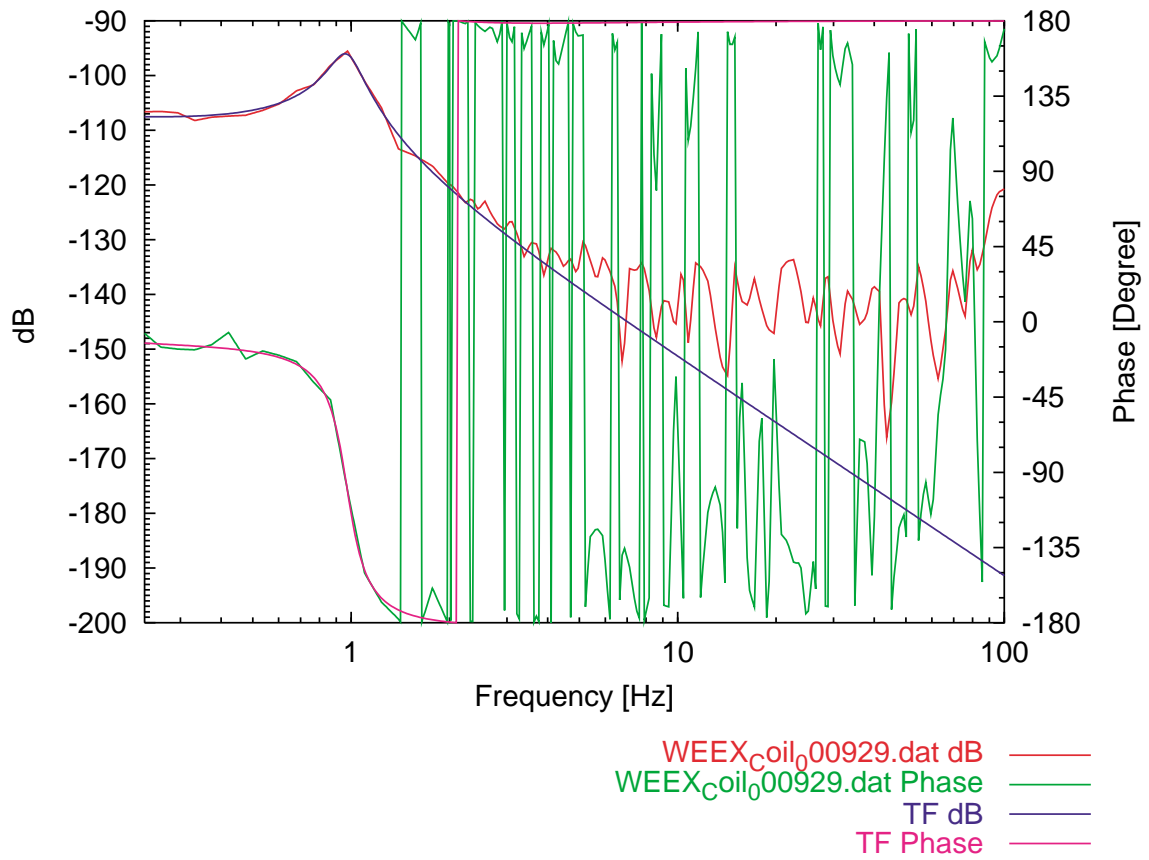


WEFY_pZT₀01106.dat dB ——— TF dB ———
WEFY_pZT₀01106.dat Phase ——— TF Phase ———

Filename: WEFY_PZT_001106.dat
Measured: 2000/11/06
Actuator: PZT

pole 1.4603232 5.2029964
pole 1.6696571 390.15122m
factor -1.0828428u

WE End Length Coil



Filename: WEEX_Coil_000929.dat

Measured: 2000/09/29

Actuator: Coil

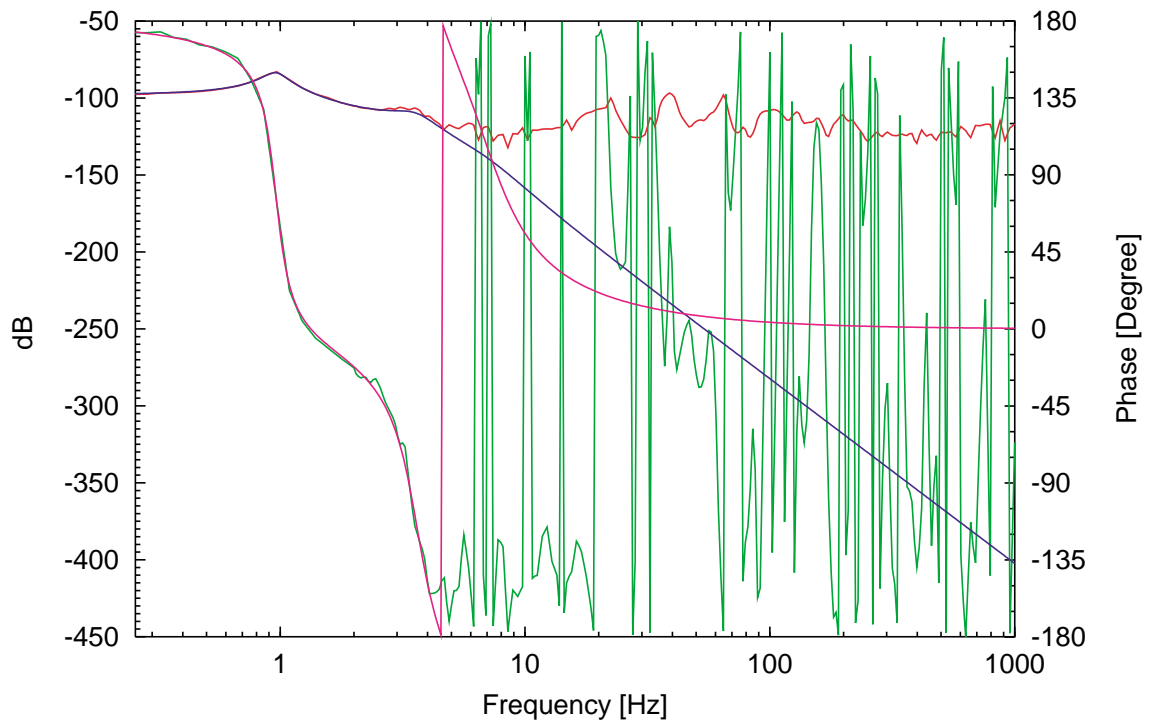
pole 504.72791m 336.87317m

pole 970.3006m 4.7142916

zero 639.71993m 345.91816m

factor 4.5971798u

WE End Length PZT



WEEXPZT_00929.dat dB ——— TF dB ———
WEEXPZT_00929.dat Phase ——— TF Phase ———

Filename: WEEXPZT_00929.dat

Measured: 2000/09/29

Actuator: PZT

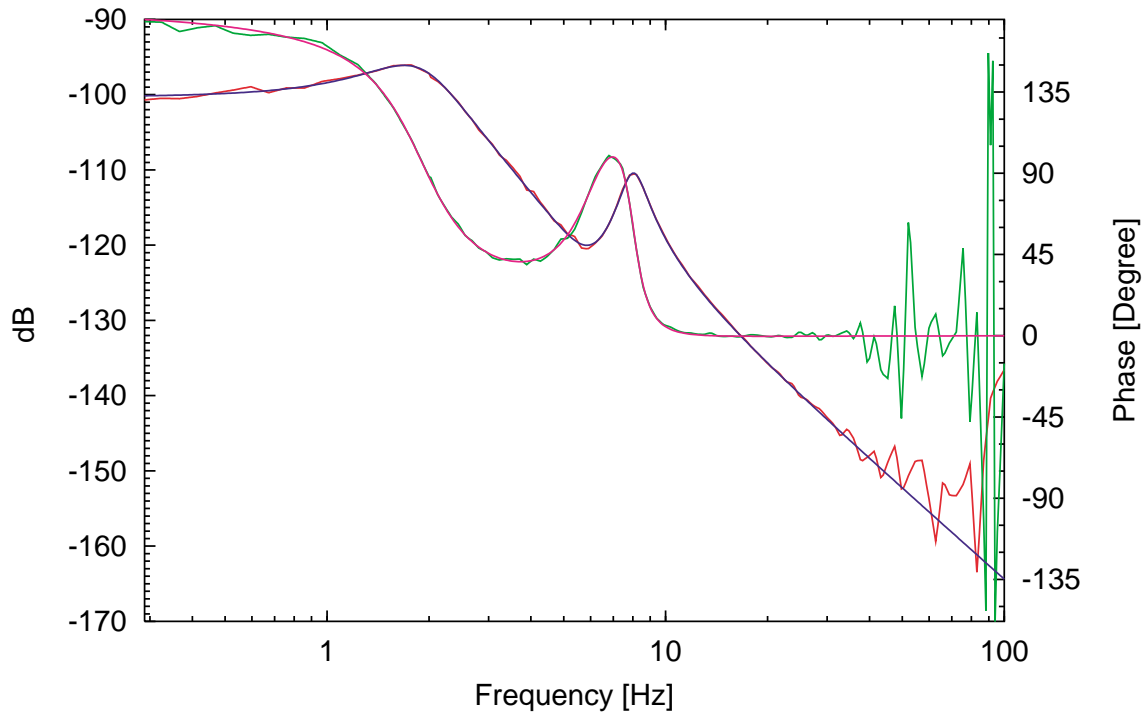
pole 960.40551m 4.7687635

pole 3.6024109 2.7201021

pole 7.0149421 1.3324394

factor -12.892093u

WE End Pitch Coil



WEEP_Coil_000929.dat dB ———
WEEP_Coil_000929.dat Phase ———
TF dB ———
TF Phase ———

Filename: WEEP_Coil_000929.dat

Measured: 2000/09/29

Actuator: Coil

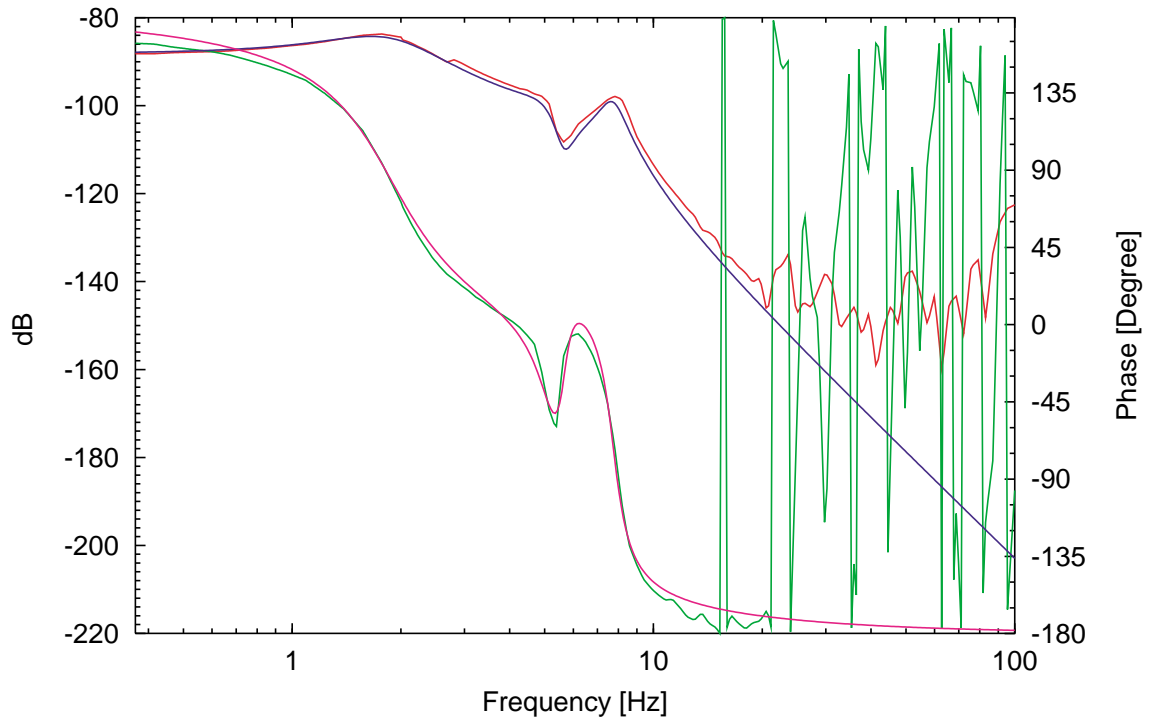
pole 1.9054777 1.5782662

pole 8.0215206 5.7406313

zero 6.1264058 2.2513504

factor -9.659452u

WE End PZT Coil

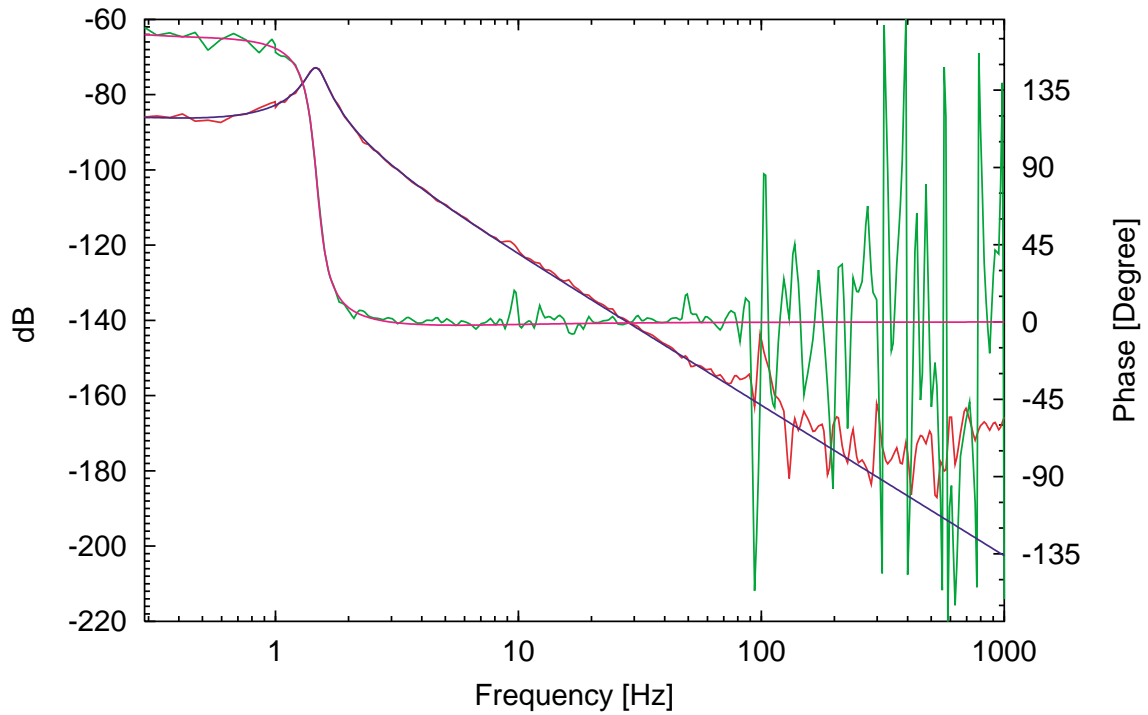


WEEP_PZT₀00929.dat dB ——— TF dB ———
WEEP_PZT₀00929.dat Phase ——— TF Phase ———

Filename: WEEP_PZT_000929.dat
 Measured: 2000/09/29
 Actuator: PZT

pole 1.8812192 1.3715206
 pole 7.7377484 6.4316274
 pole 5.2220776 3.8651542
 zero 5.6568936 9.1819918
 factor -39.303344u

WE End Coil Yaw



WEEY_Coil_01013.dat dB ———
WEEY_Coil_01013.dat Phase ———
TF dB ———
TF Phase ———

Filename: WEEY_Coil_001013.dat

Measured: 2000/10/13

Actuator: Coil

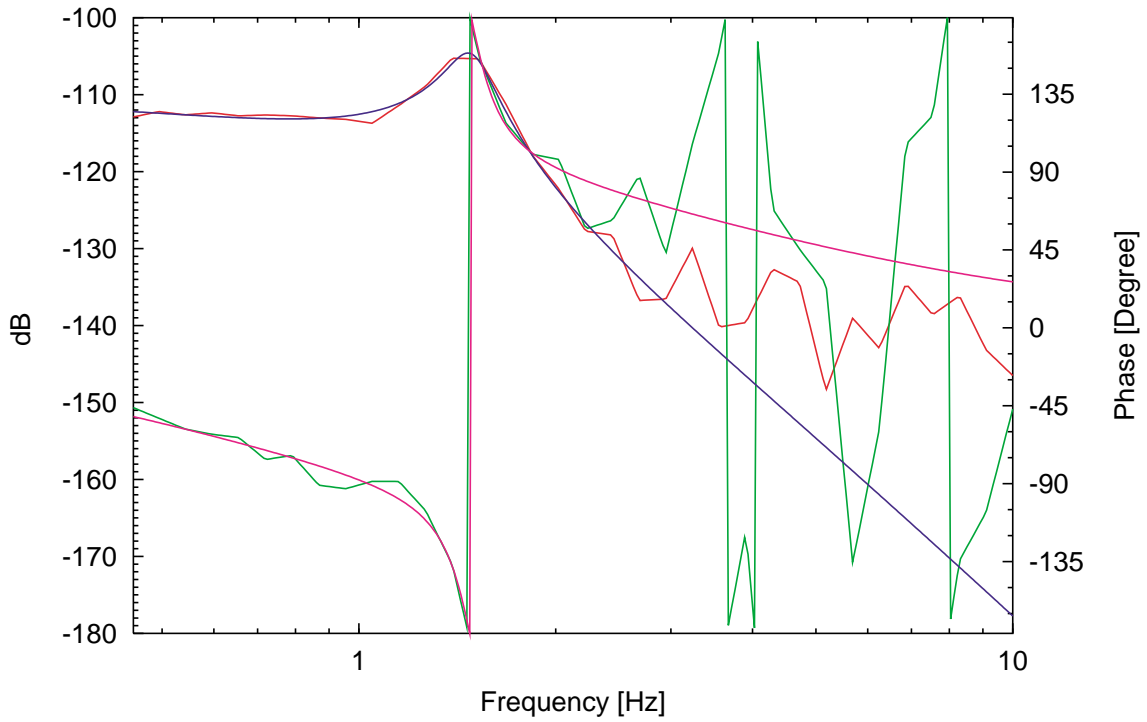
pole 858.27593m 293.0472m

pole 1.4775355 5.8265298

zero 1.0996081 316.83123m

factor -56.020237u

WE End PZT Yaw



WEEY_{PZT0}01013.dat dB ——— TF dB ———
WEEY_{PZT0}01013.dat Phase ——— TF Phase ———

Filename: WEEY_PZT_001013.dat

Measured: 2000/10/13

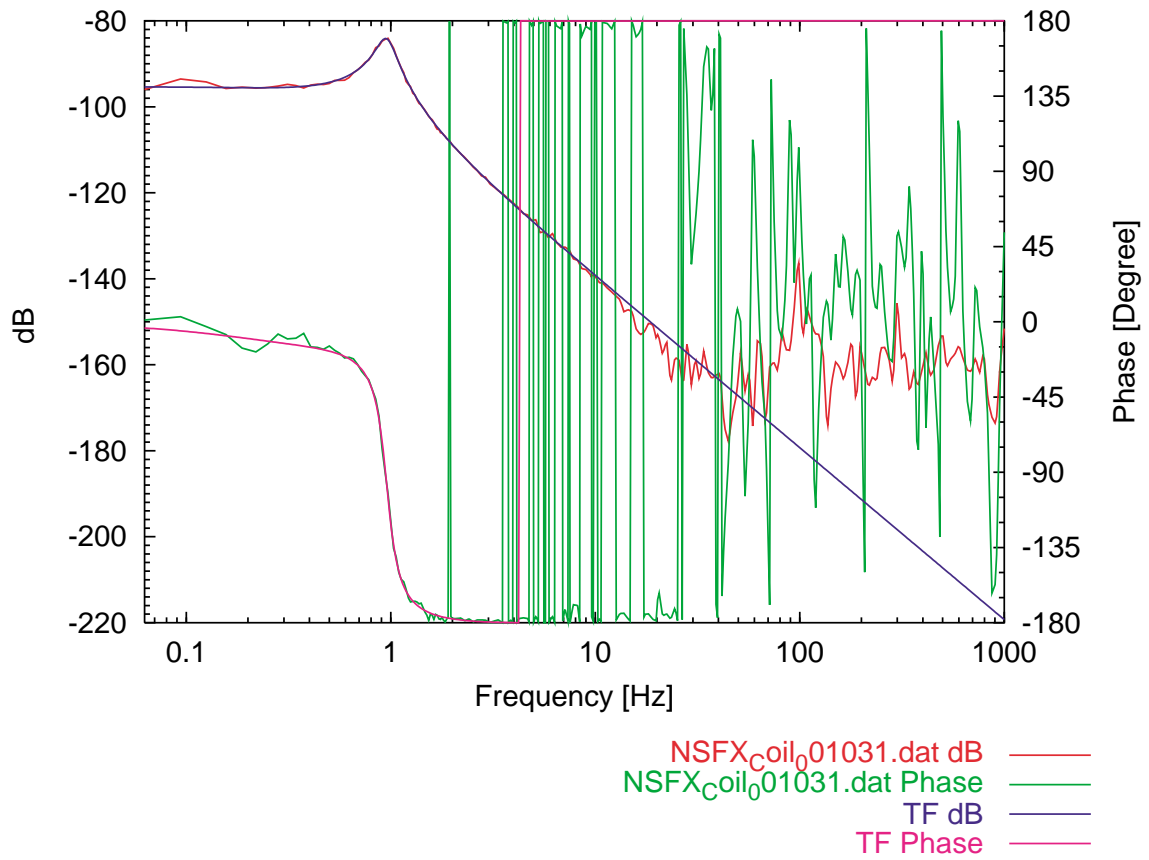
Actuator: PZT

pole 1.486515 6.4168696

pole 1.4357925 311.45836m

factor 3.0188961u

NS Front Length Coil



Filename: NSFX_Coil_001031.dat

Measured: 2000/10/31

Actuator: Coil

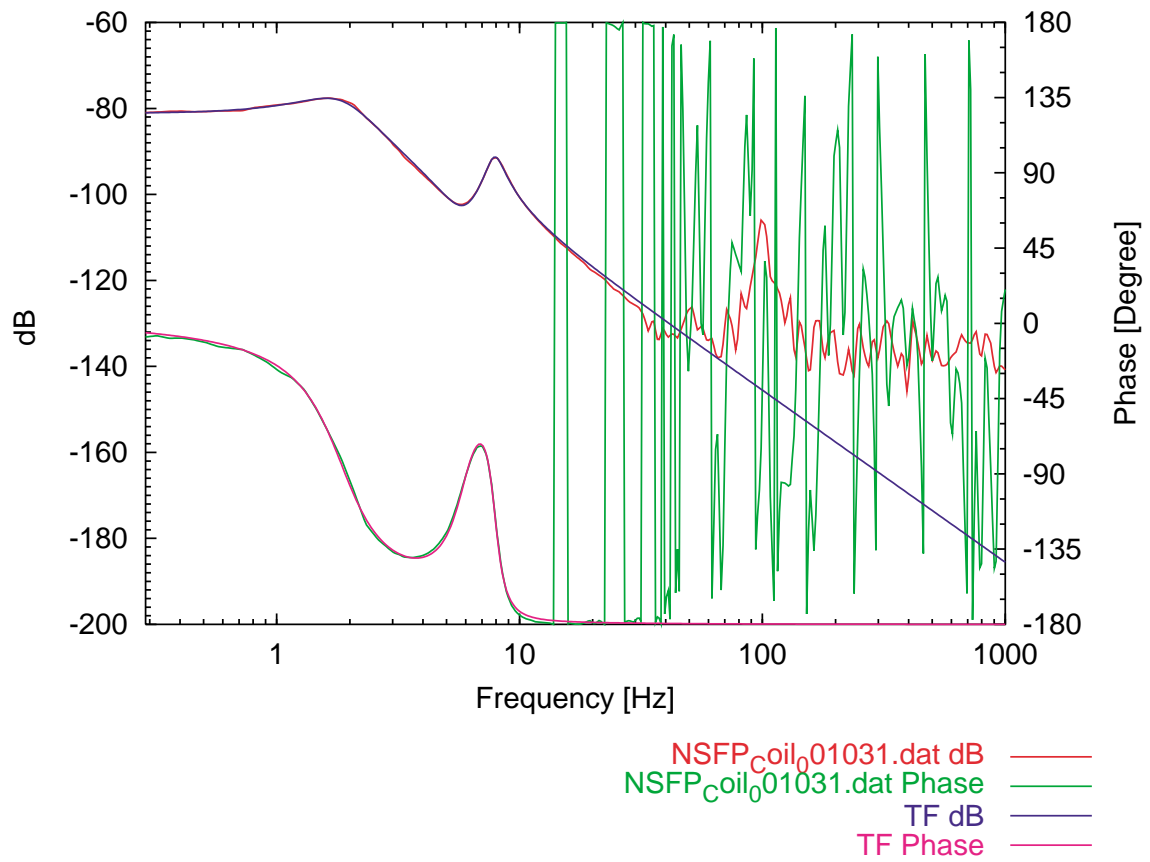
pole 954.78702m 4.7334997

pole 647.66545m 385.38783m

zero 776.09301m 407.03399m

factor 17.092986u

NS Front Pitch Coil



Filename: NSFP_Coil_001031.dat

Measured: 2000/10/31

Actuator: Coil

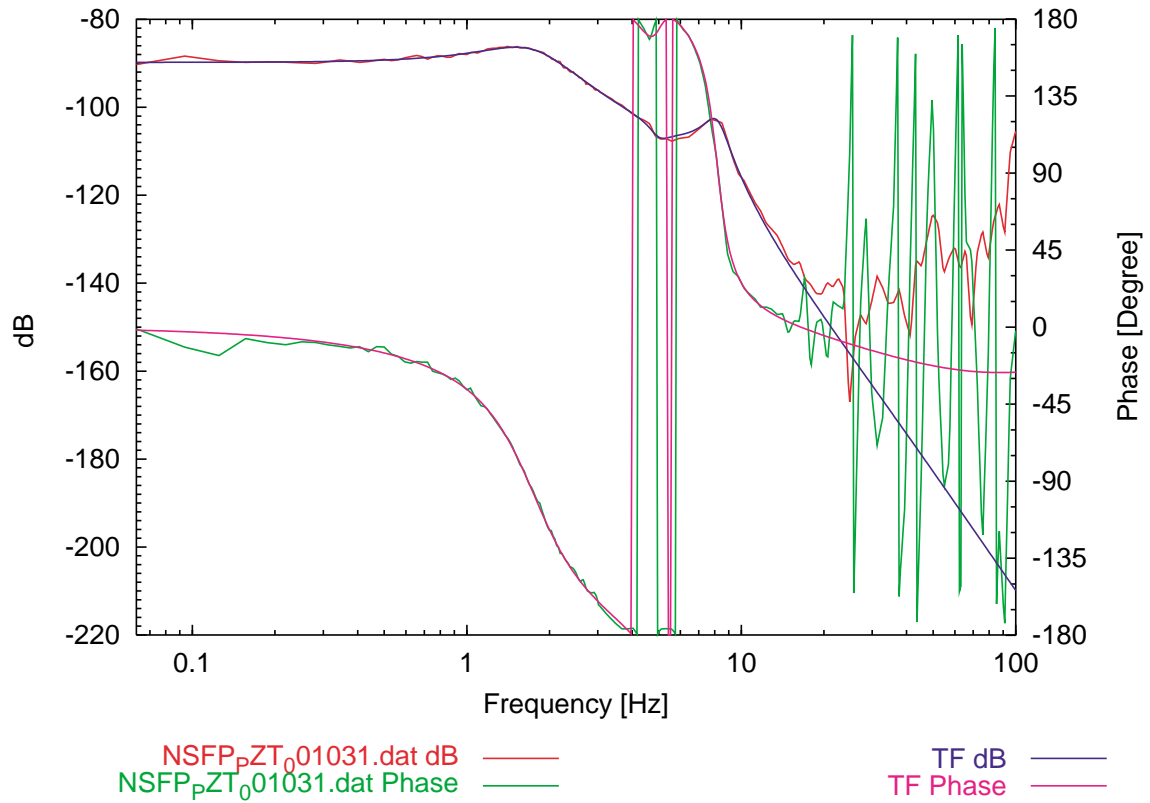
pole 1.8551652 1.4491349

pole 7.8967337 6.0061179

zero 5.9635561 2.6878706

factor 87.438616u

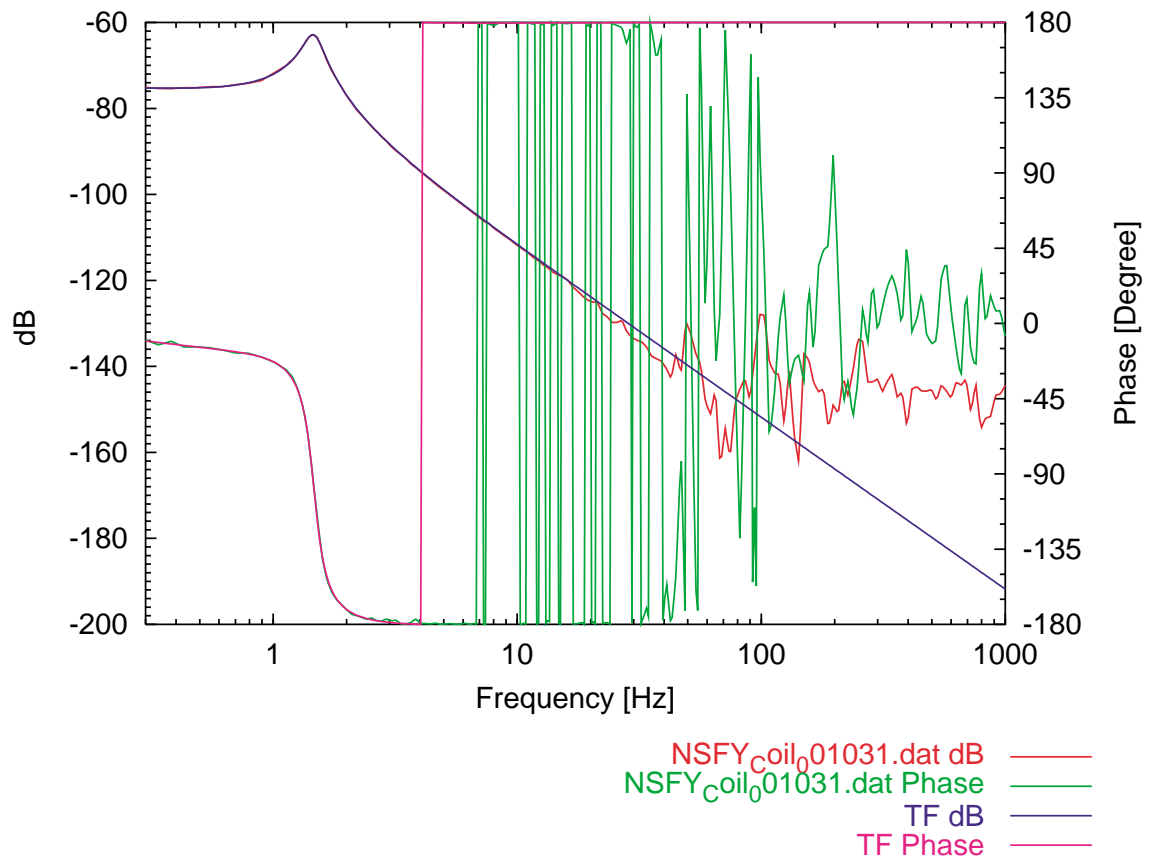
NS Front Pitch PZT



Filename: NSFP_PZT_001031.dat
 Measured: 2000/10/31
 Actuator: PZT

```
pole 1.7503127 1.350007
pole 4.9179872 3.6216401
pole 8.159577 5.3544091
zero 4.9970811 4.9804463
pole 12.433026 242.87525m
zero 21.718033 155.96287m
factor 32.394108u
```

NS Front Yaw Coil



Filename: NSFY_Coil_001031.dat

Measured: 2000/10/31

Actuator: Coil

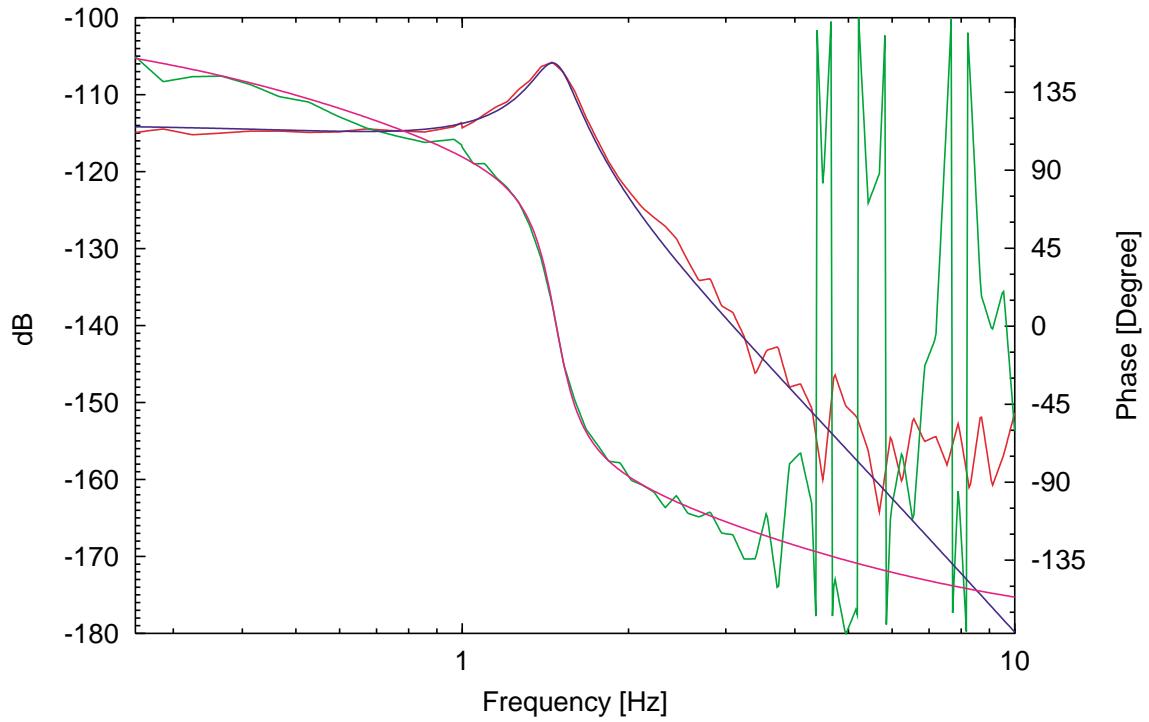
pole 915.81182m 414.08539m

pole 1.4682933 5.4986317

zero 1.1203811 439.8507m

factor 178.08691u

NS Front Yaw PZT

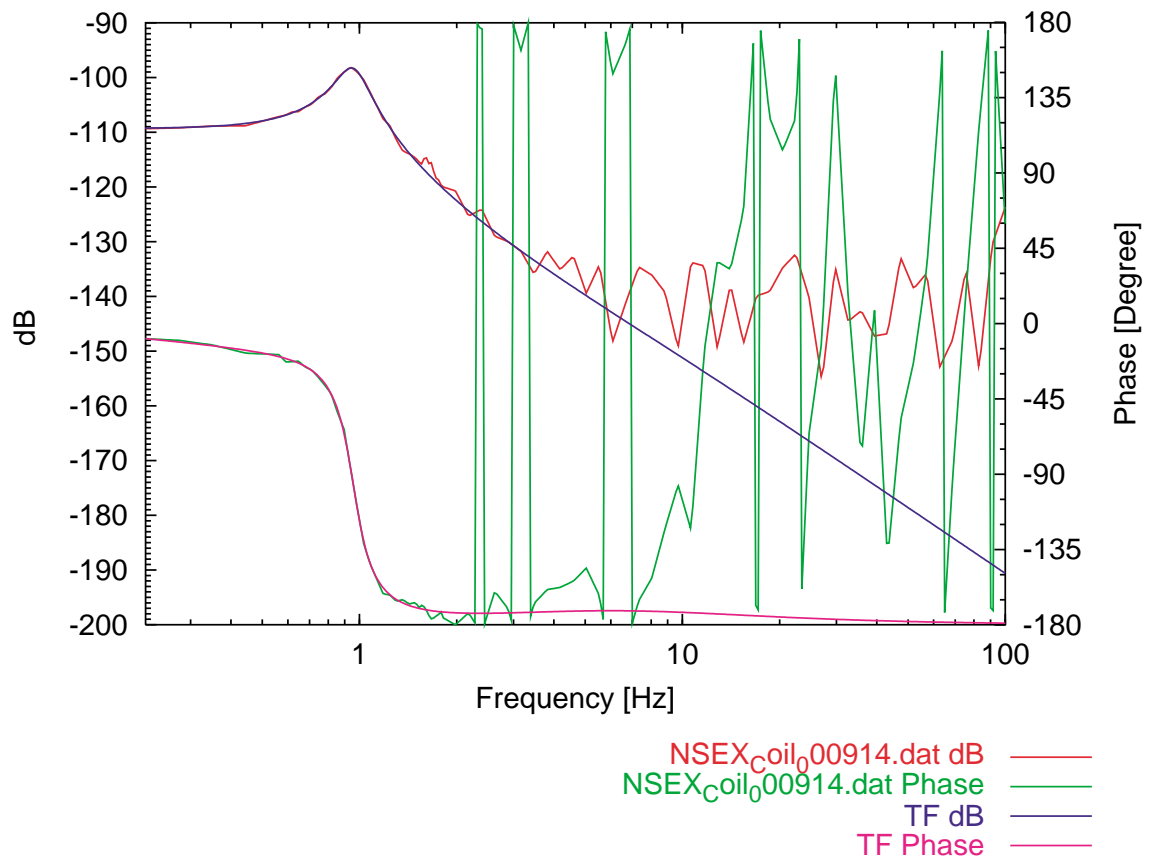


NSFY_{PZT0}01031.dat dB ——— TF dB ———
NSFY_{PZT0}01031.dat Phase ——— TF Phase ———

Filename: NSFY_PZT_001031.dat
Measured: 2000/10/31
Actuator: PZT

pole 1.5451992 385.54752m
pole 1.477209 6.1694858
factor -2.0186892u

NS End Length Coil



Filename: NSEX_Coil_000914.dat

Measured: 2000/09/14

Actuator: Coil

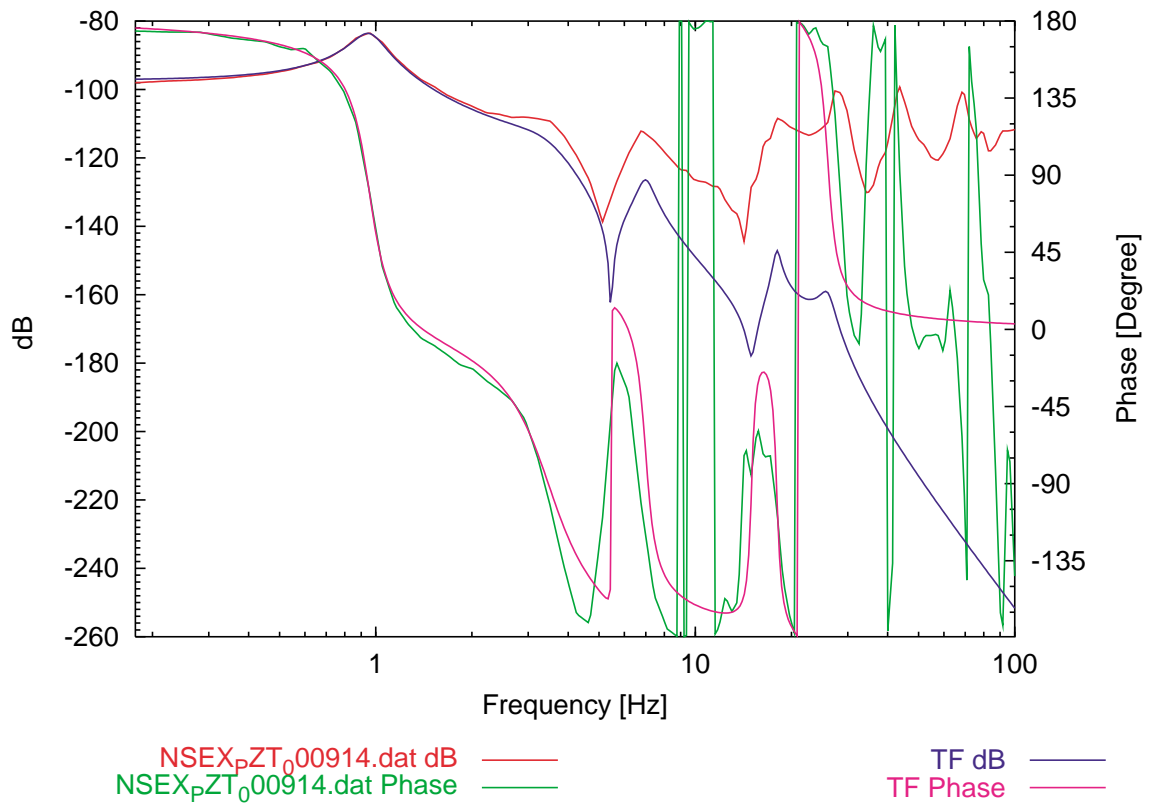
pole 957.31784m 4.5550114

pole 1.8723384 246.42779m

zero 1.9308107 321.94661m

factor 3.4232591u

NS End Length PZT



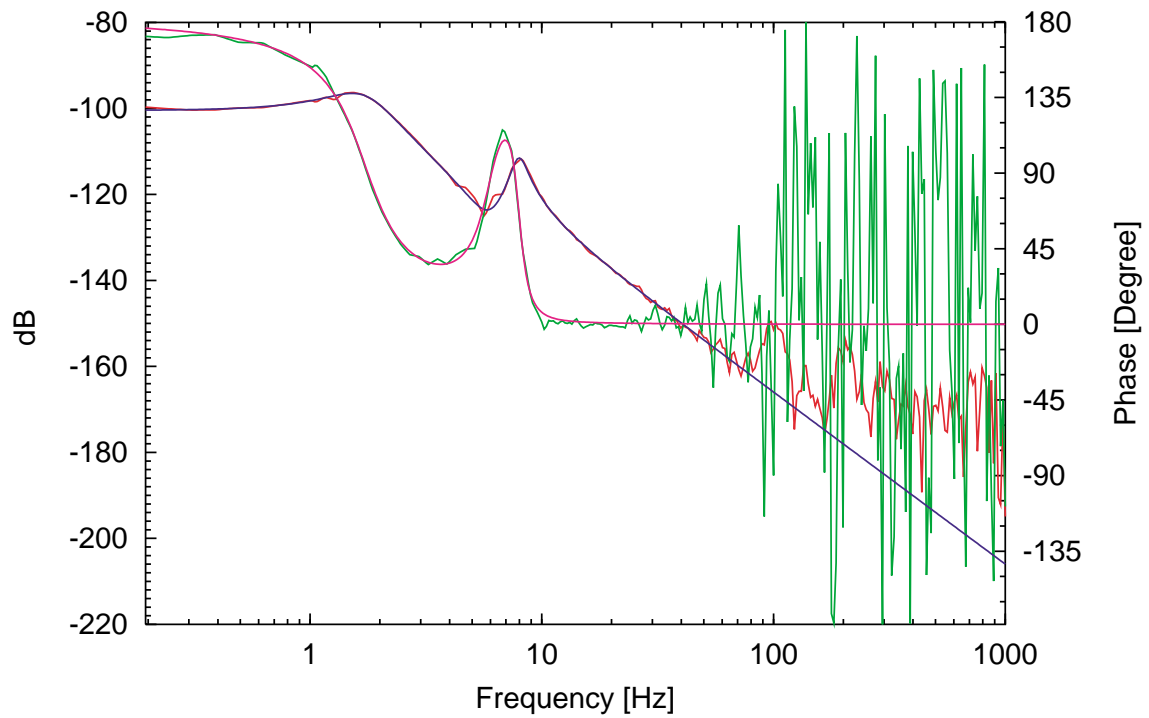
Filename: NSEX_PZT_000914.dat

Measured: 2000/09/14

Actuator: PZT

```
pole 954.08905m 4.5833969
pole 3.4824995 1.9625579
pole 6.9897816 9.2078216
pole 17.999206 20
pole 25.998251 10.247134
zero 5.4499167 497.04687
zero 15.005965 21.823885
factor -13.628682u
```

NS End Pitch Coil



NSEP_Coil_000914.dat dB ———
NSEP_Coil_000914.dat Phase ———
TF dB ———
TF Phase ———

Filename: NSEP_Coil_000914.dat

Measured: 2000/09/14

Actuator: Coil

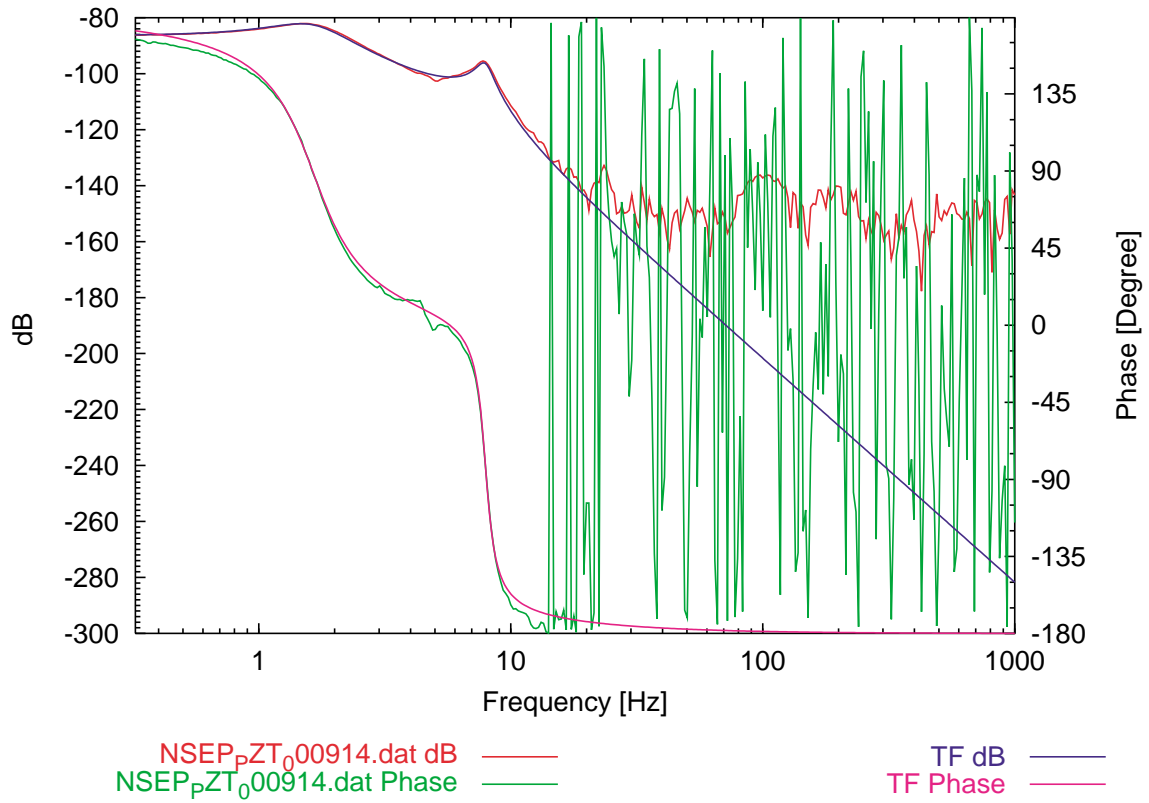
pole 1.7298546 1.5325428

pole 7.963057 6.3141808

zero 5.984944 2.7897179

factor -9.4707802u

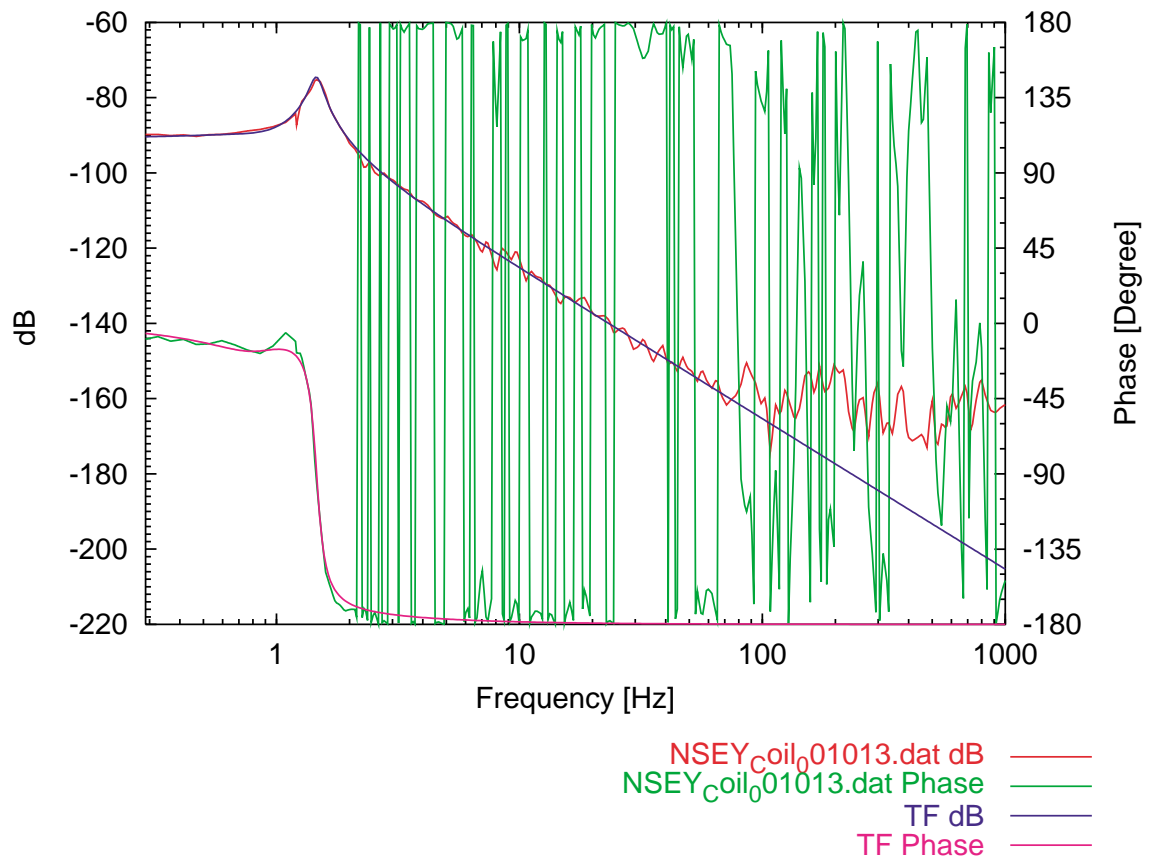
NS End Pitch PZT



Filename: NSEP_PZT_000914.dat
Measured: 2000/09/14
Actuator: PZT

pole 1.6511242 1.4794422
pole 7.9263065 7.1297869
factor -47.939148u

NS End Yaw Coil



Filename: NSEY_Coil_001013.dat

Measured: 2000/10/13

Actuator: Coil

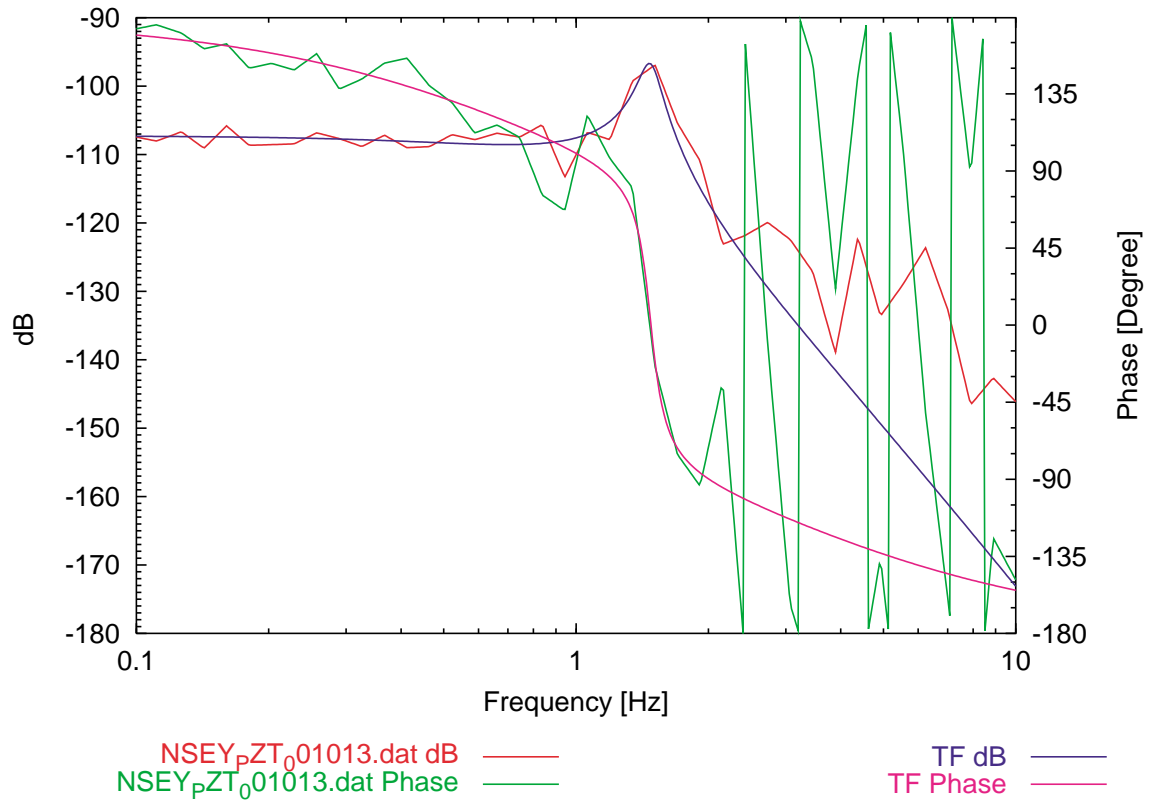
pole 864.46109m 1.0067575

pole 1.4616628 8.1807808

zero 930.75797m 1.2056586

factor 29.375552u

NS End Yaw PZT



Filename: NSEY_PZT_001013.dat

Measured: 2000/10/13

Actuator: PZT

pole 1.4773925 8.9488658

pole 1.5646358 355.78088m

factor -4.329794u