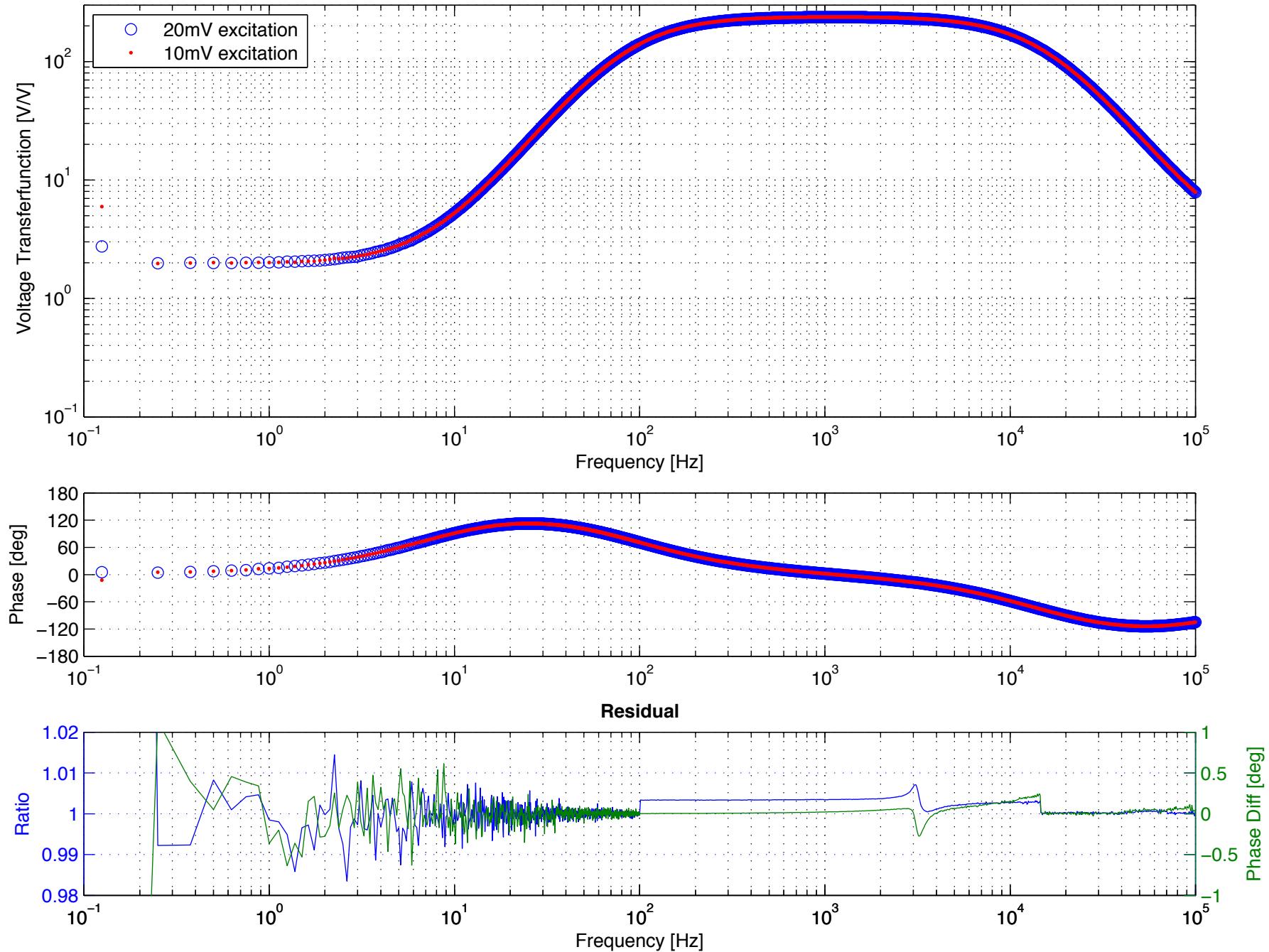
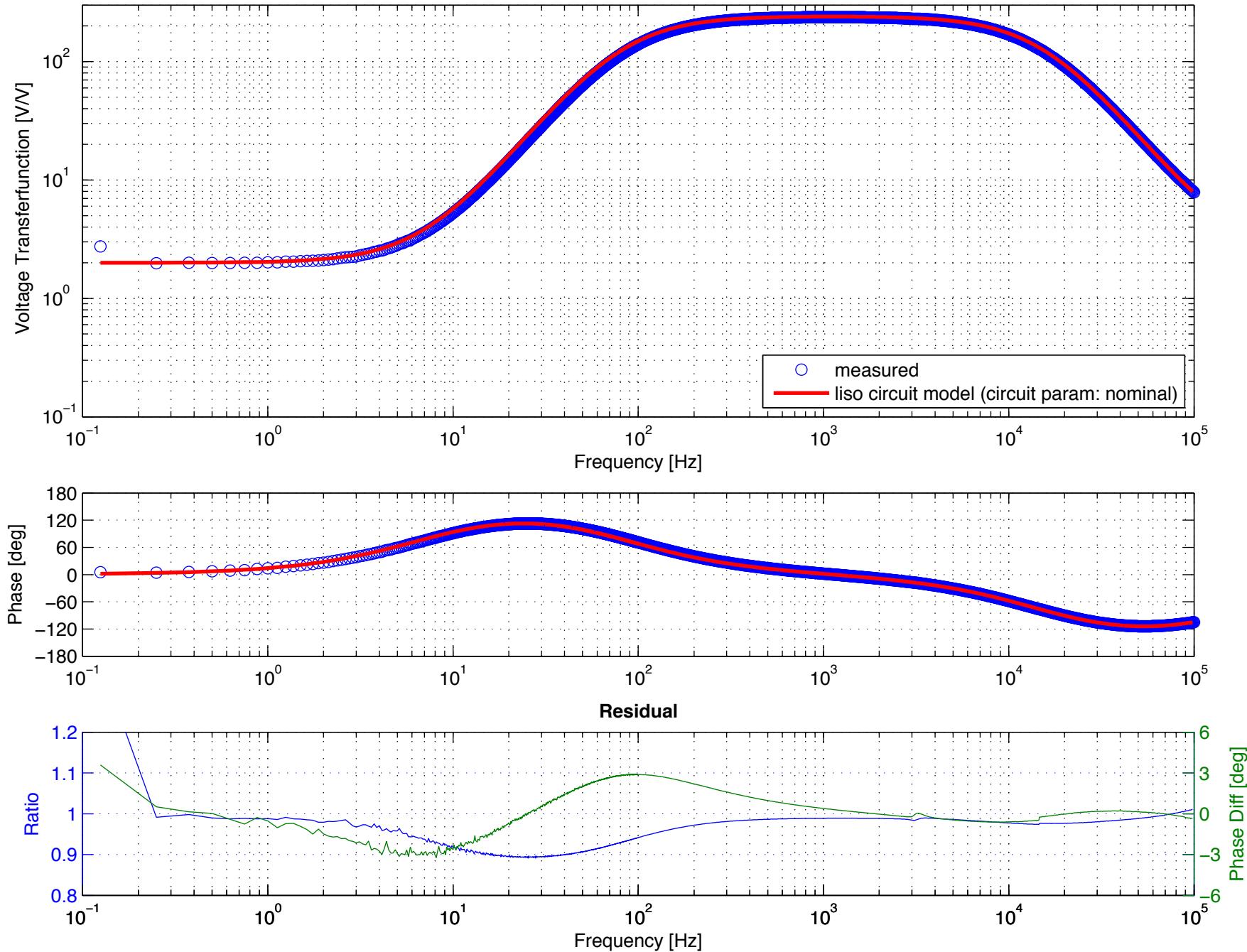


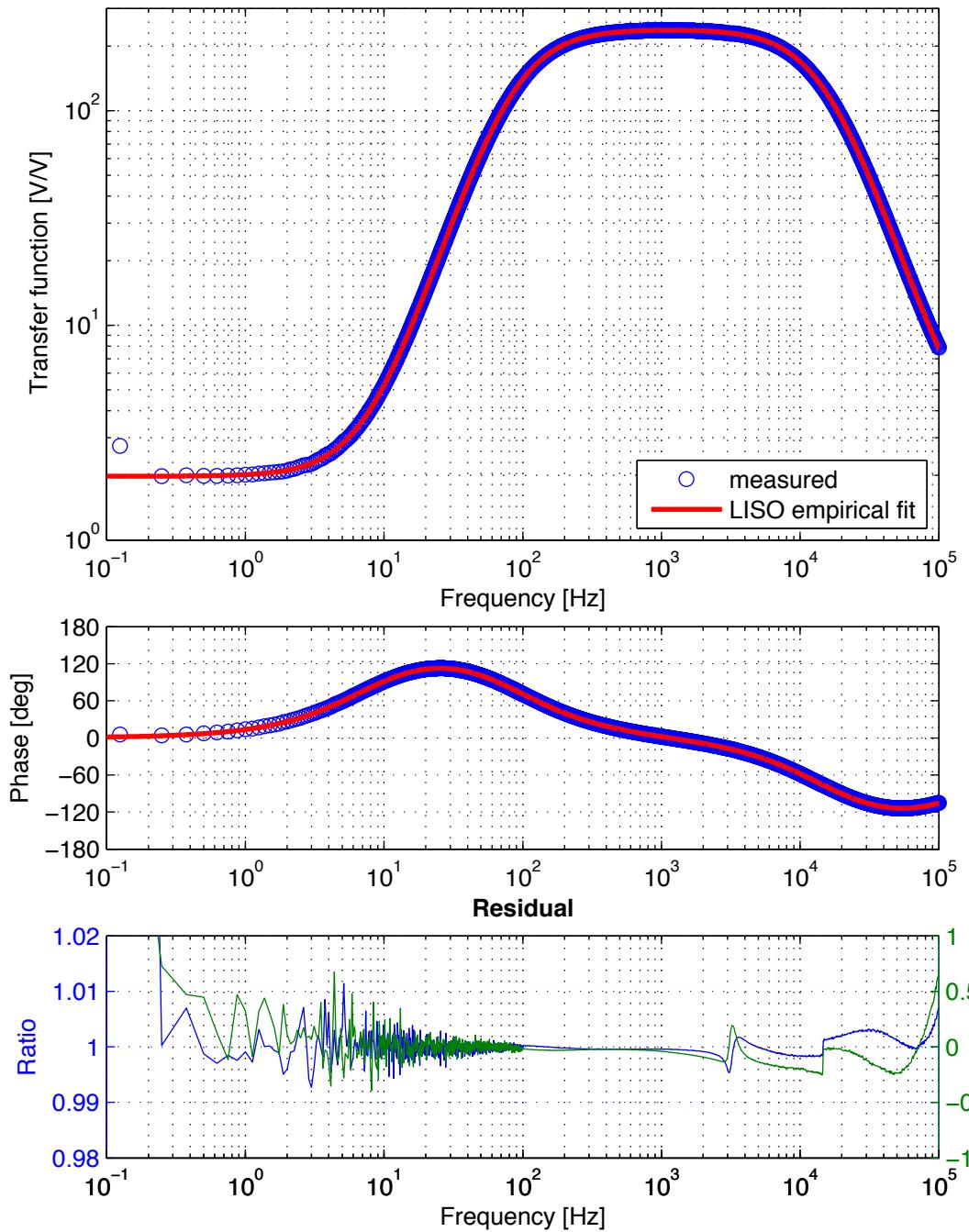
## Preamp #004 / Linearity Check (2013/11/08)



## Preamp #004 / Circuit model consistency check (2013/11/08)



# Preamp #004 / LISO empirical ZPK fit (2013/11/08)



```
#LISO SOURCE
zero 7.6888797467062959257 ### fitted (name = zero0)
zero 7.6888797467062959257 ### fitted (name = zero1)
zero 203.8951136310k 429.3478455409m ### fitted (name = zero2)

pole 78.911848773472399888 +- 1.48m (0.0192%)
pole 90.6417057880 ### fitted (name = pole1)
pole 17.7979845020k ### fitted (name = pole2)
pole 13.6911700320k ### fitted (name = pole3)

factor 1.9826044025 ### fitted

param zero0:f 1 100
#param zero1:f 1 100 # use zero0:f = zero1:f due to strong correlation
sparam zero1:f
param zero2:f 1k 1M
param zero2:q 0 100

param pole0:f 1 100k
param pole1:f 1 100k
param pole2:f 1 100k
param pole3:f 1 100k

param factor 1p 1M

fit TF004A.bod absdeg rel

rewrite samebetter

gnuterm pdf

freq log 0.01 100k 100000 ### from data file
```

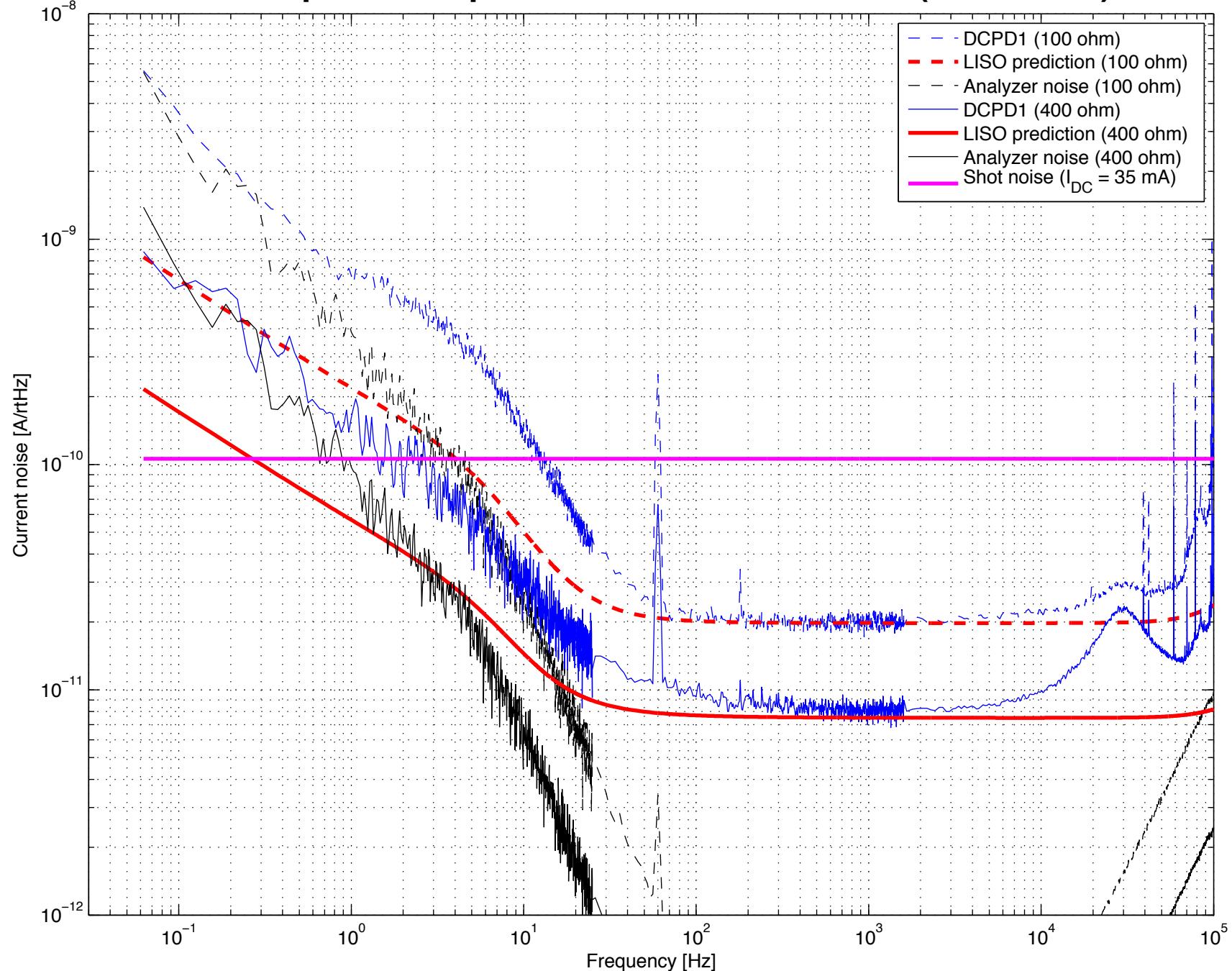
---

**#Parameter Estimation**

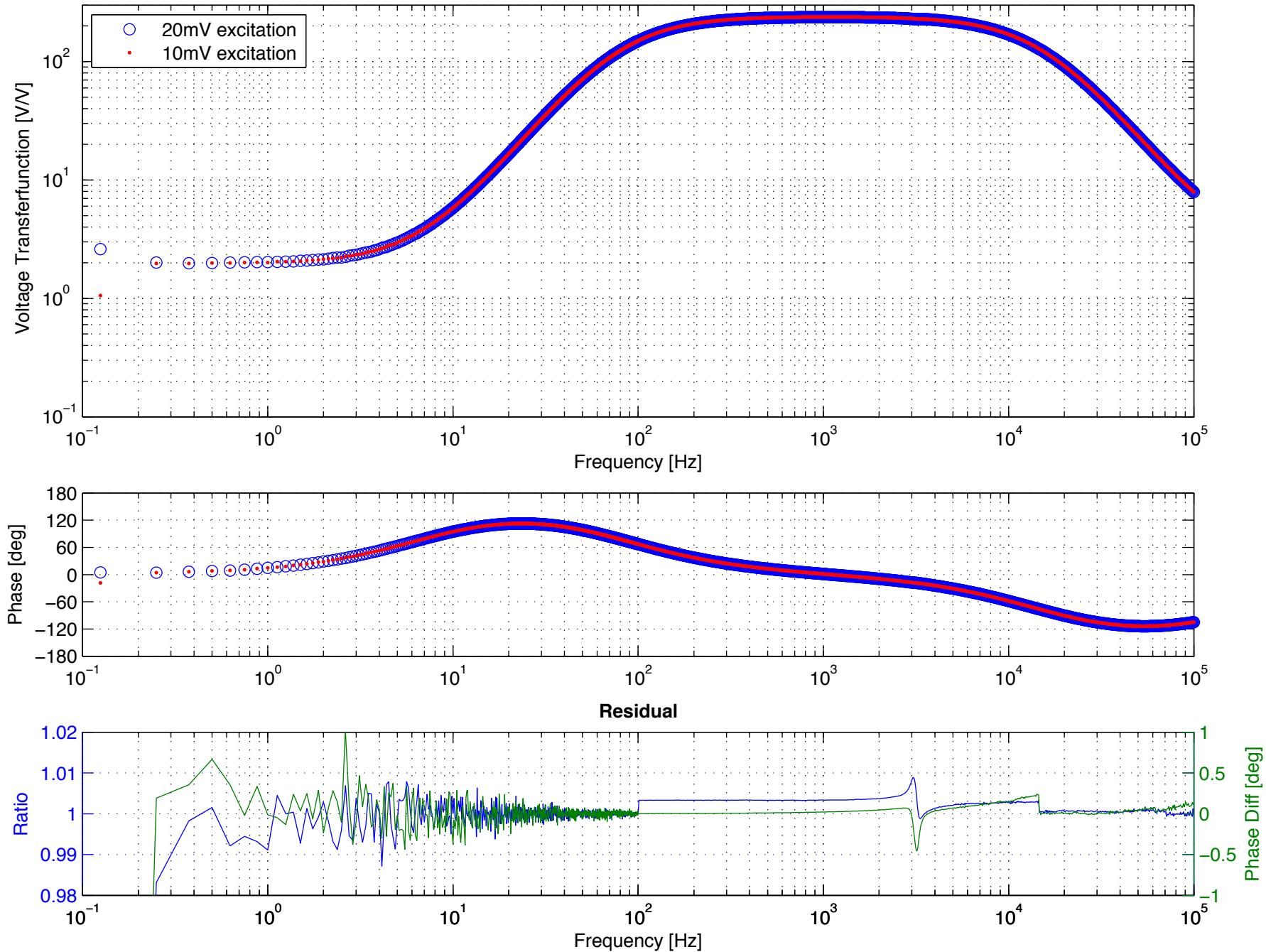
#Best parameter estimates:

```
#zero0:f = 7.6888797467062959257 +- 1.48m (0.0192%)
#--> zero1:f = 7.6888797467062959257 +- 1.48m (0.0192%)
#zero2:f = 203895.11363095470006 +- 327.3 (0.161%)
#zero2:q = 0.42934784554092980668 +- 988.1u (0.23%)
#pole0:f = 78.911848773472399888 +- 192.7m (0.244%)
#pole1:f = 90.641705787996272647 +- 215.5m (0.238%)
#pole2:f = 17797.984501992519654 +- 51.78 (0.291%)
#pole3:f = 13691.170031991910946 +- 33.54 (0.245%)
#factor = 1.9826044025025026203776 +- 559.1u (0.0282%)
```

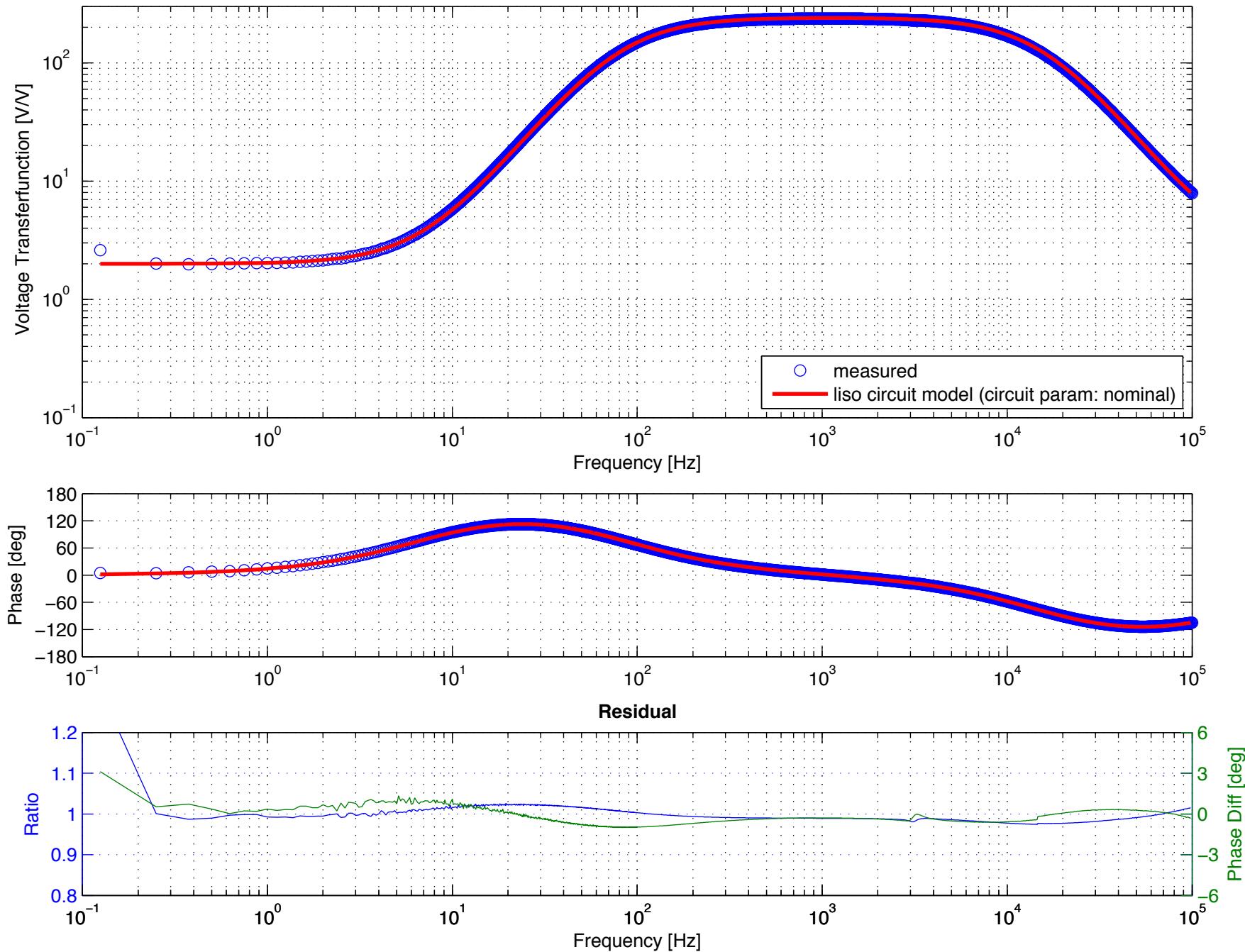
# Preamplifier #004 / Input-referred Current noise (2013/11/08)



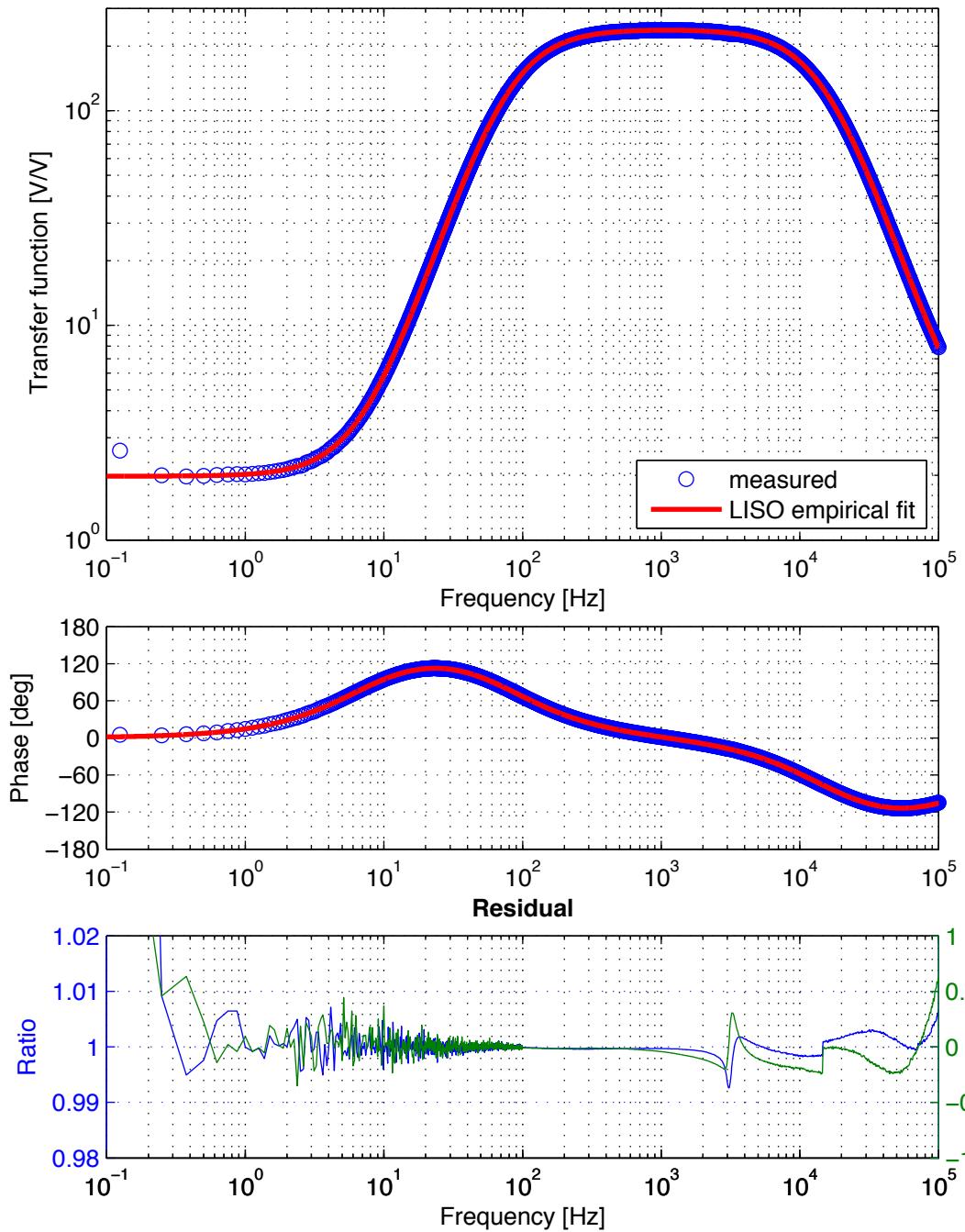
## Preamp #005 / Linearity Check (2013/11/08)



## Preamp #005 / Circuit model consistency check (2013/11/08)



# Preamp #005 / LISO empirical ZPK fit (2013/11/08)



```
#LISO SOURCE
zero 7.0942919452 ### fitted (name = zero0)
zero 7.0942919452 ### fitted (name = zero1)
zero 204.4392196028k 426.2327893430m ### fitted (name = zero2)
```

```
pole 73.1306183678 ### fitted (name = pole0)
pole 83.1674987244 ### fitted (name = pole1)
pole 17.8046818260k ### fitted (name = pole2)
pole 13.7144712644k ### fitted (name = pole3)
```

```
factor 1.9836135815 ### fitted
```

```
param zero0:f 1 100
#param zero1:f 1 100 # use zero0:f = zero1:f due to strong correlation
sparam zero1:f
param zero2:f 1k 1M
param zero2:q 0 100
```

```
param pole0:f 1 100k
param pole1:f 1 100k
param pole2:f 1 100k
param pole3:f 1 100k
```

```
param factor 1p 1M
```

```
fit TF005A.bod absdeg rel
```

```
rewrite samebetter
```

```
gnuterm pdf
```

```
freq log 0.01 100k 100000 ### from data file
```

## #Parameter Estimation

#Best parameter estimates:

```
#zero0:f = 7.094291945200001712 +- 1.341m (0.0189%)
#--> zero1:f = 7.0942919452 +- 1.341m (0.0189%)
#zero2:f = 204439.21960279991617 +- 313.4 (0.153%)
#zero2:q = 0.42623278934299996257 +- 934.8u (0.219%)
#pole0:f = 73.130618367800025226 +- 182.1m (0.249%)
#pole1:f = 83.167498724400019228 +- 201.6m (0.242%)
#pole2:f = 17804.681826000014553 +- 49.3 (0.277%)
#pole3:f = 13714.471264399995562 +- 31.95 (0.233%)
#factor = 1.983613581500000004 +- 550.7u (0.0278%)
```

# Preamp #005 / Input-referred Current noise (2013/11/08)

