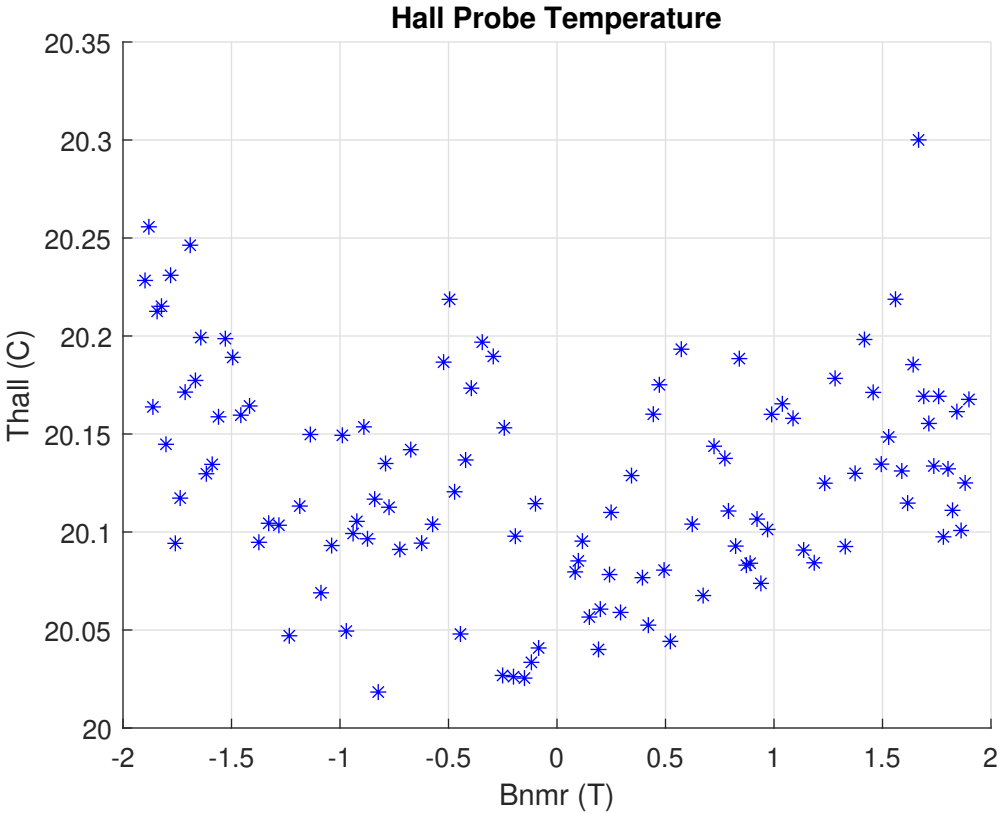
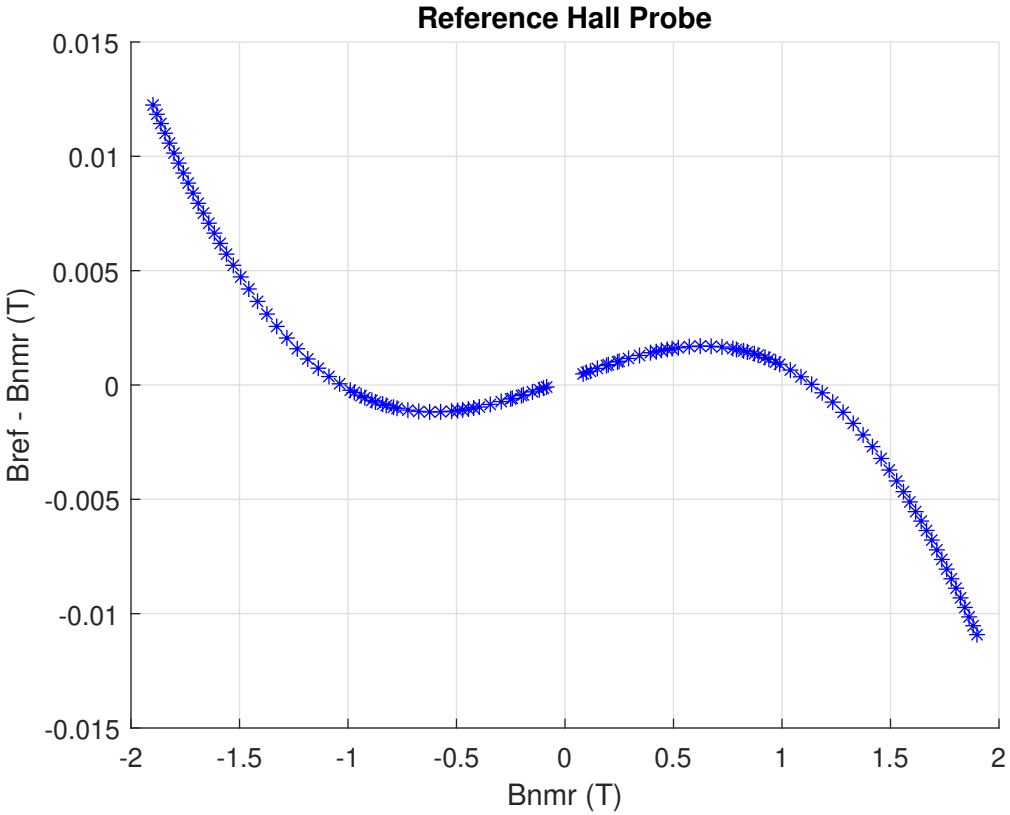
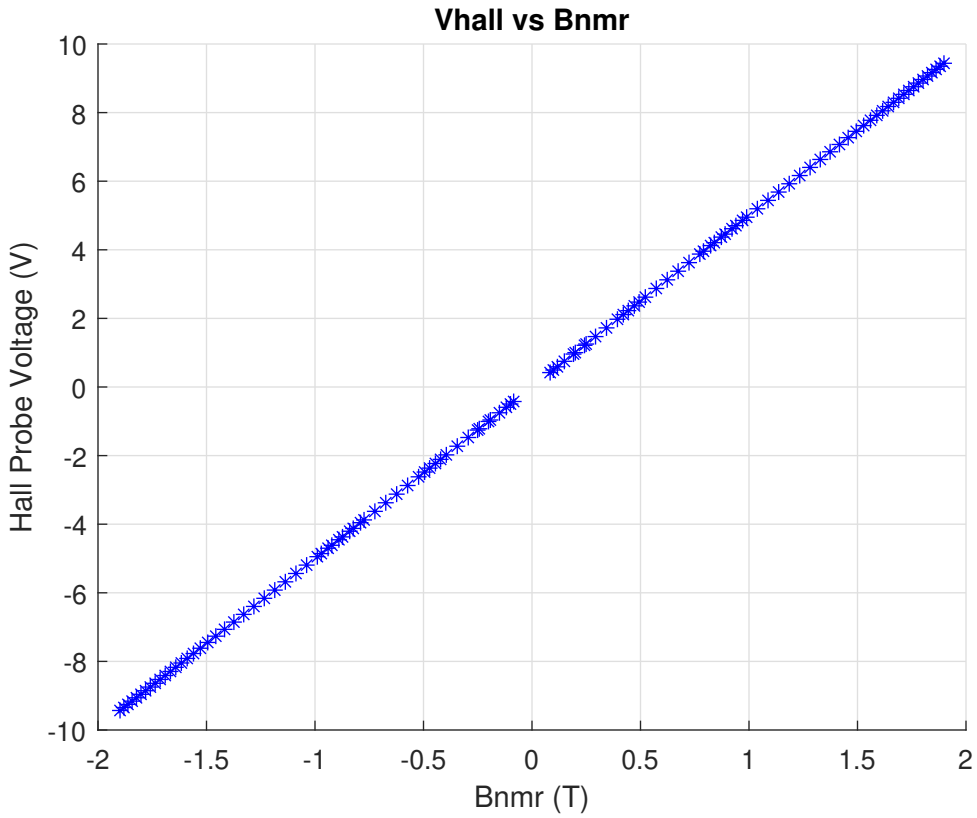
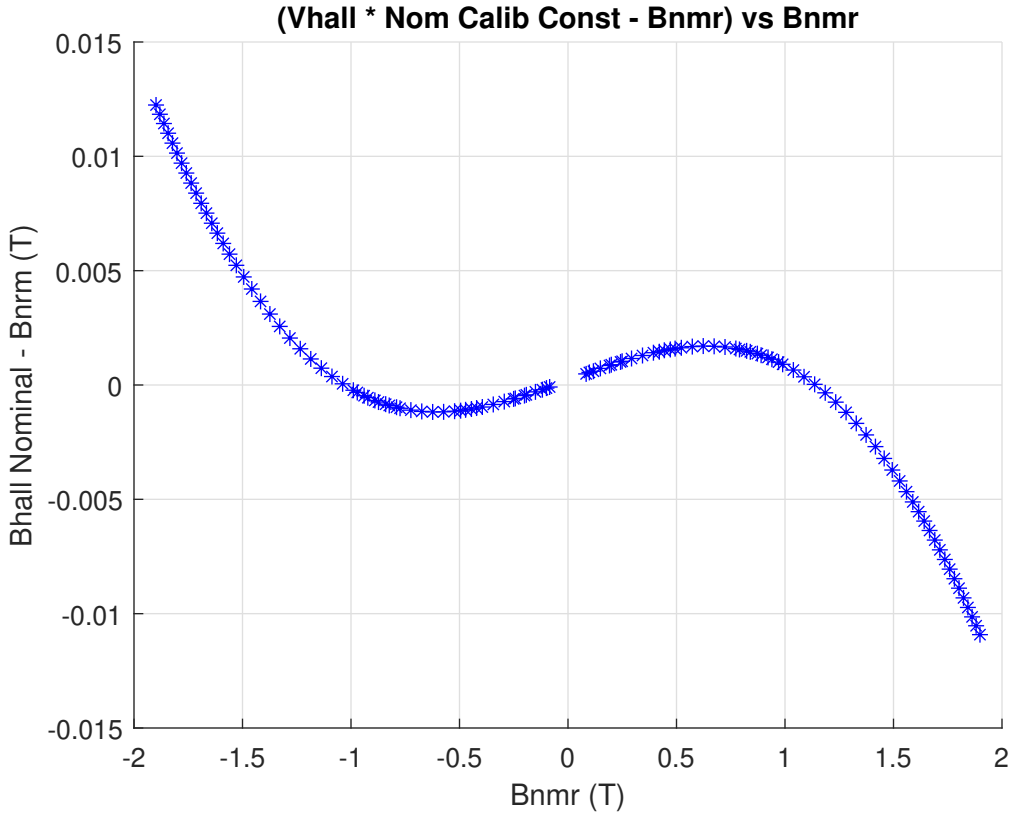
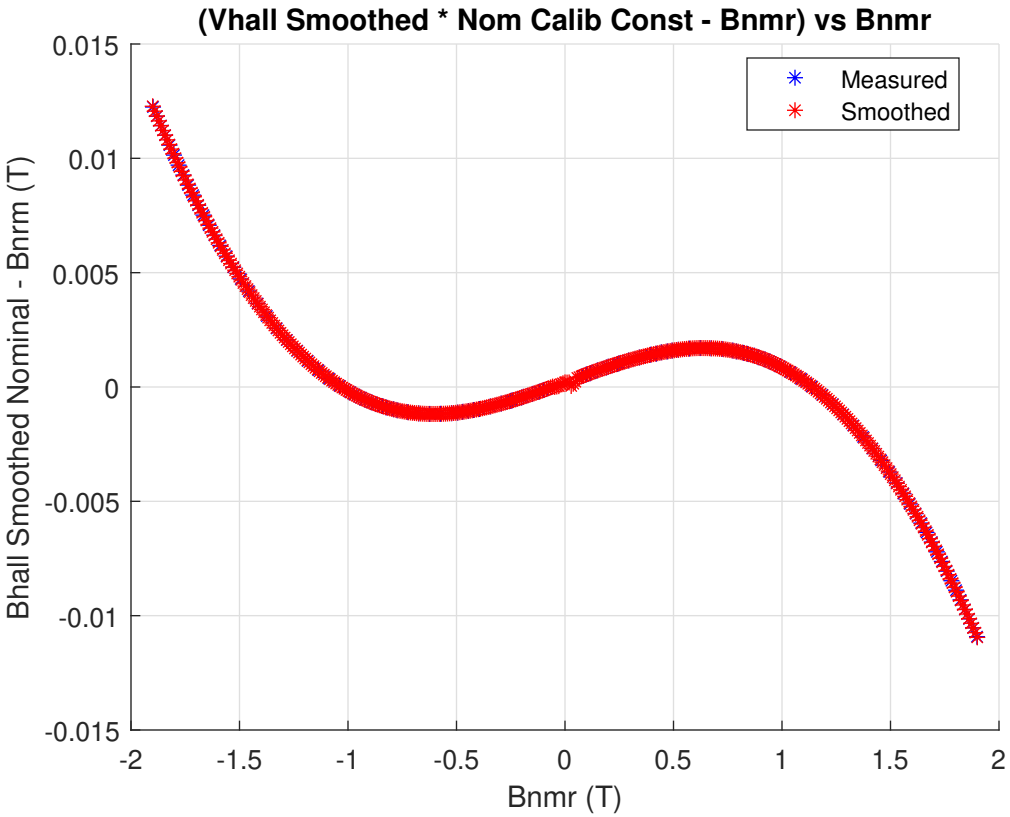
SLAC Magnetic Measurements#
Date: 10-28-2021#
Time: 15:06:07#

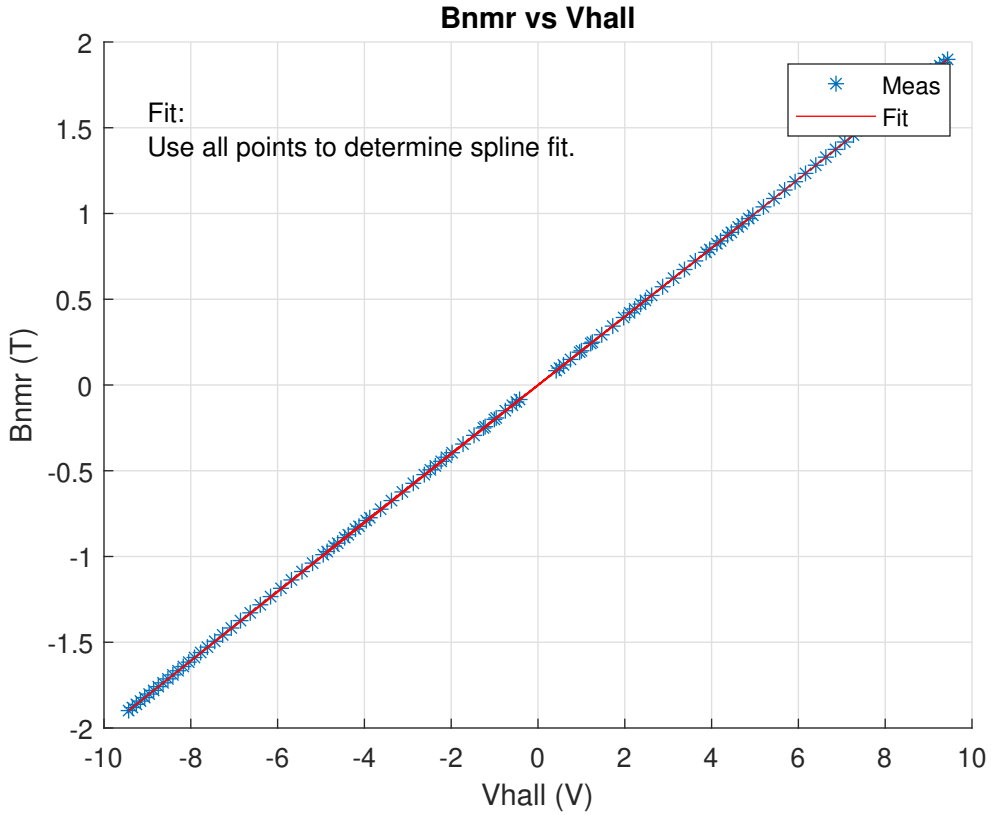

Hall Probe Temperature
Thall (C)
Bnmr (T)
20.35
20.3
20.25
20.2
20.15
20.1
20.05
20
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2

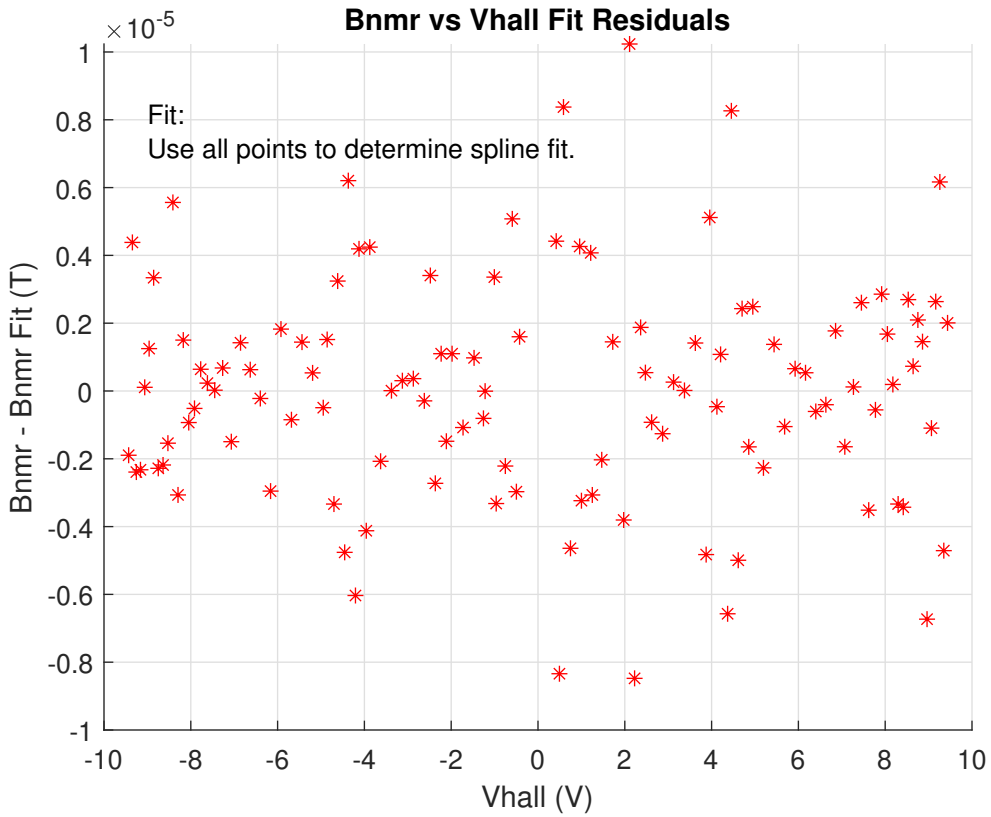

Reference Hall Probe
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
Bref - Bnmr (T)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Bnmr (T)

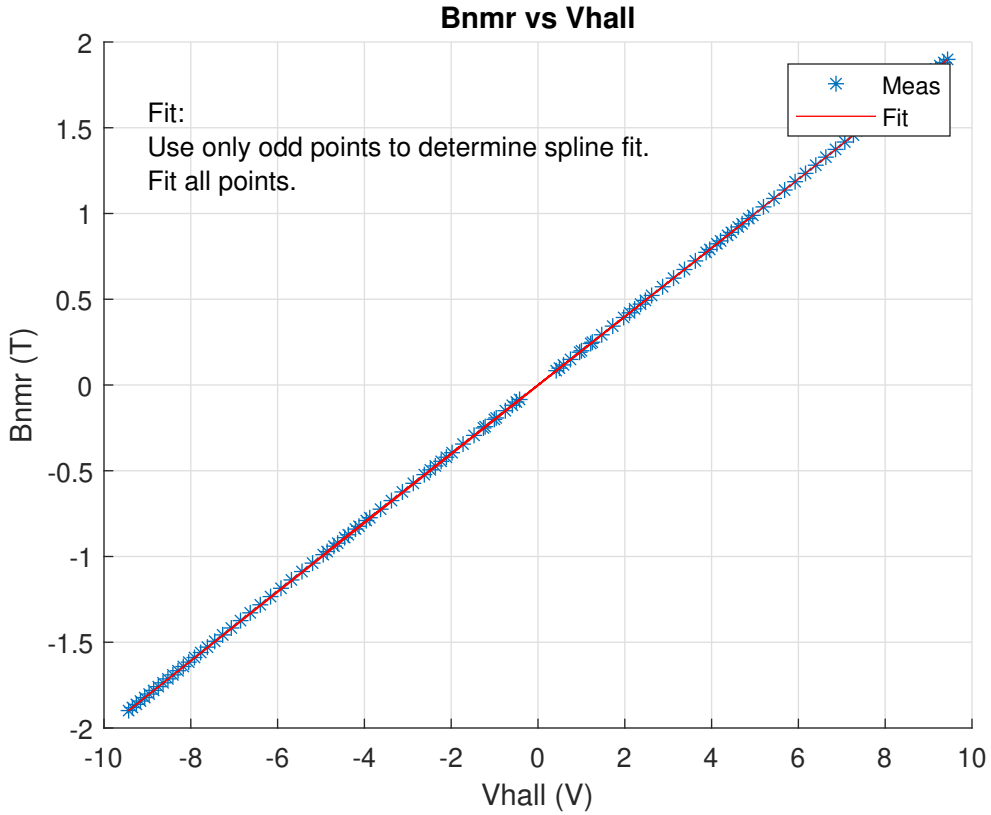

Vhall vs Bnmr
Hall Probe Voltage (V)
Bnmr (T)
10
8
6
4
2
0
-2
-4
-6
-8
-10
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2

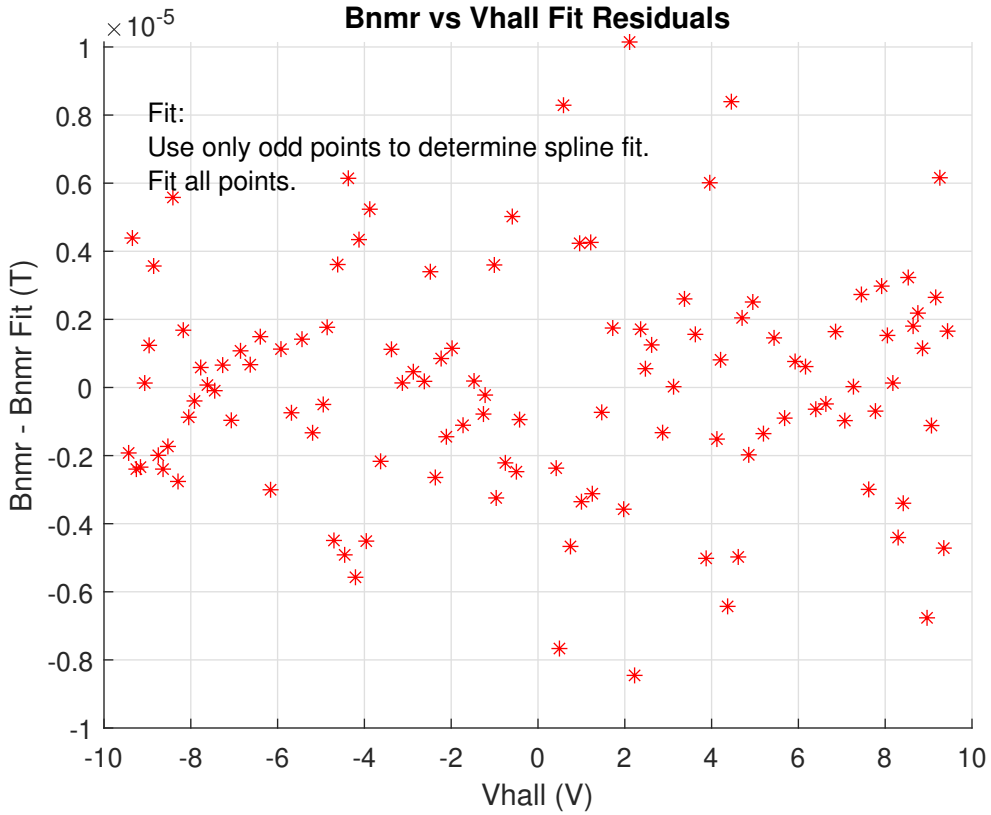

(Vhall * Nom Calib Const - Bnmr) vs Bnmr
Bhall Nominal - Bnrm (T)
Bnmr (T)
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2


(Vhall Smoothed * Nom Calib Const - Bnmr) vs Bnmr
Measured
Smoothed
Bhall Smoothed Nominal - Bnrm (T)
Bnmr (T)
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2


Bnmr vs Vhall
Fit:
Use all points to determine spline fit.
Meas
Fit
Bnmr (T)
Vhall (V)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-10
-8
-6
-4
-2
0
2
4
6
8
10


Bnmr vs Vhall Fit Residuals
×10-5
Fit:
Use all points to determine spline fit.
Bnmr - Bnmr Fit (T)
Vhall (V)
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-10
-8
-6
-4
-2
0
2
4
6
8
10


Bnmr vs Vhall
Fit:
Use only odd points to determine spline fit.
Fit all points.
Meas
Fit
Bnmr (T)
Vhall (V)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-10
-8
-6
-4
-2
0
2
4
6
8
10


Bnmr vs Vhall Fit Residuals
×10-5
Fit:
Use only odd points to determine spline fit.
Fit all points.
Bnmr - Bnmr Fit (T)
Vhall (V)
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
-0.8
-1
-10
-8
-6
-4
-2
0
2
4
6
8
10