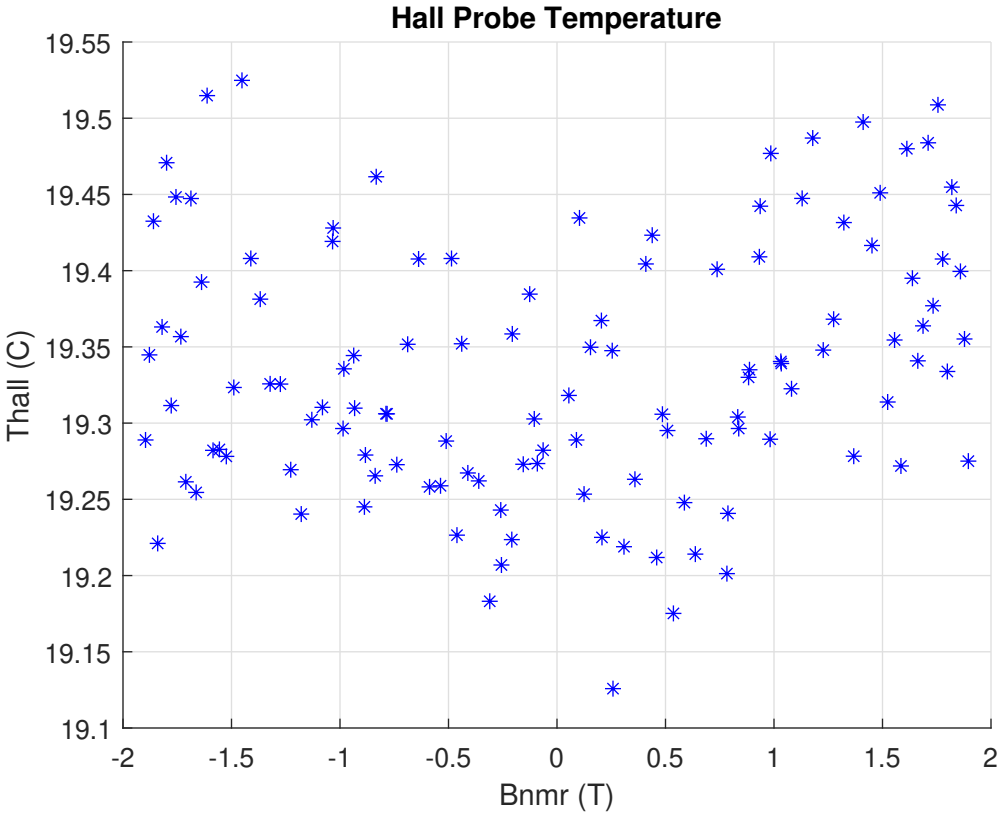
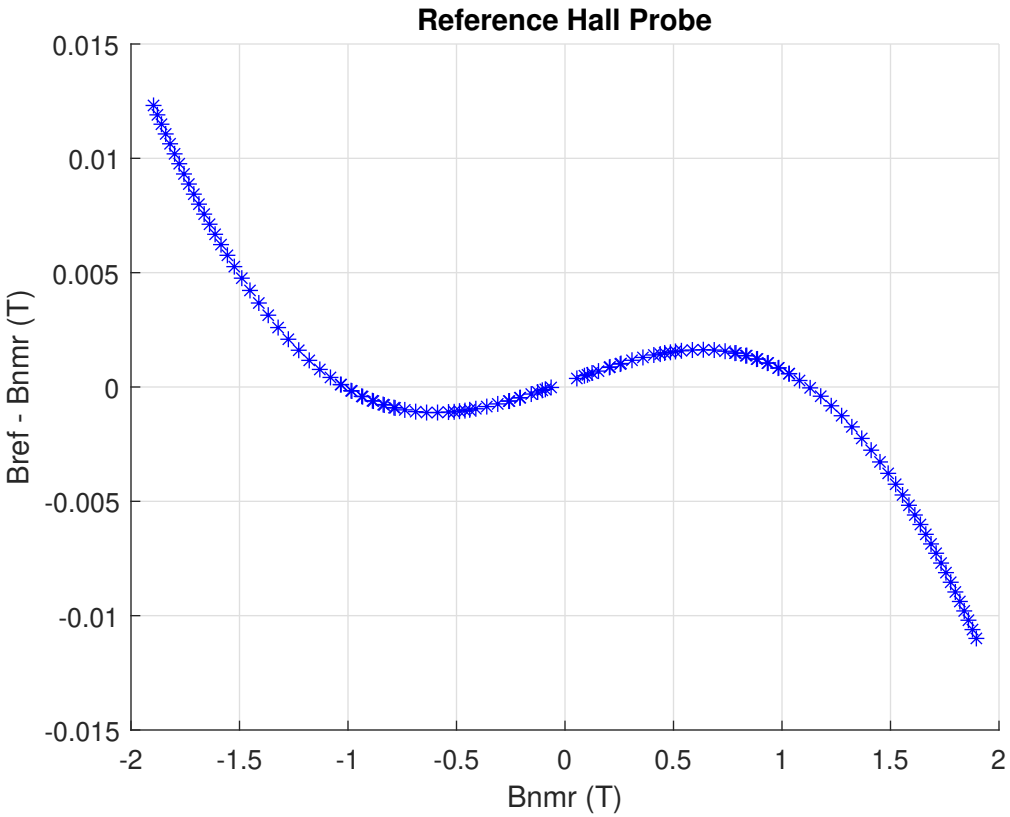
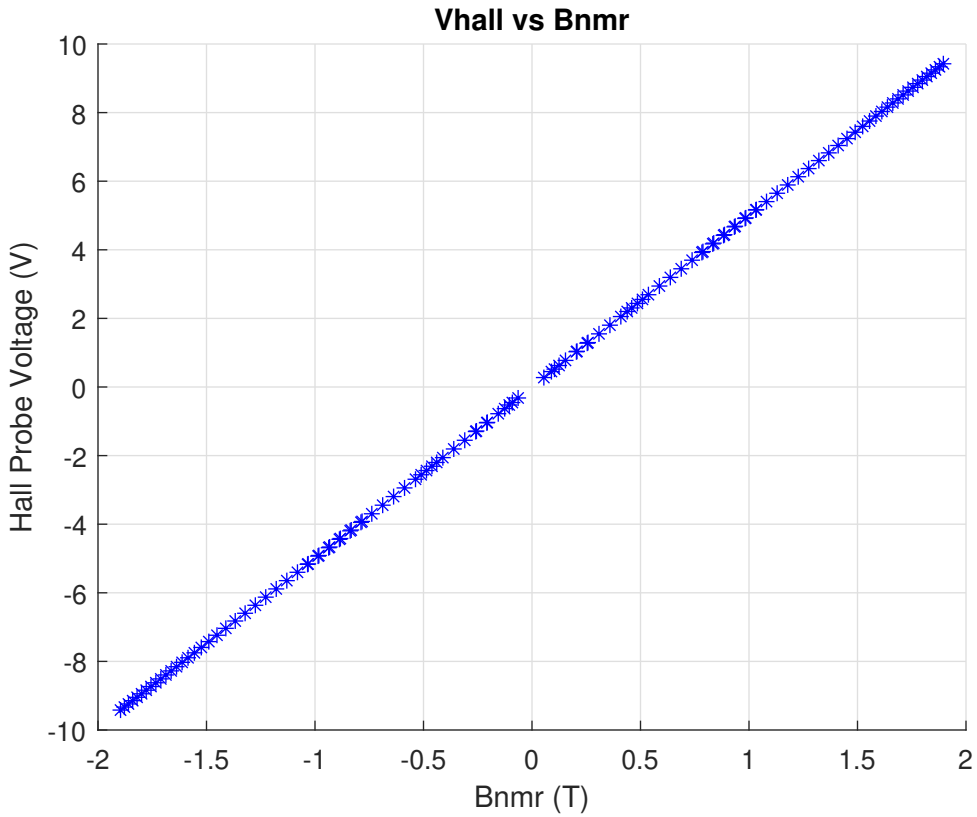
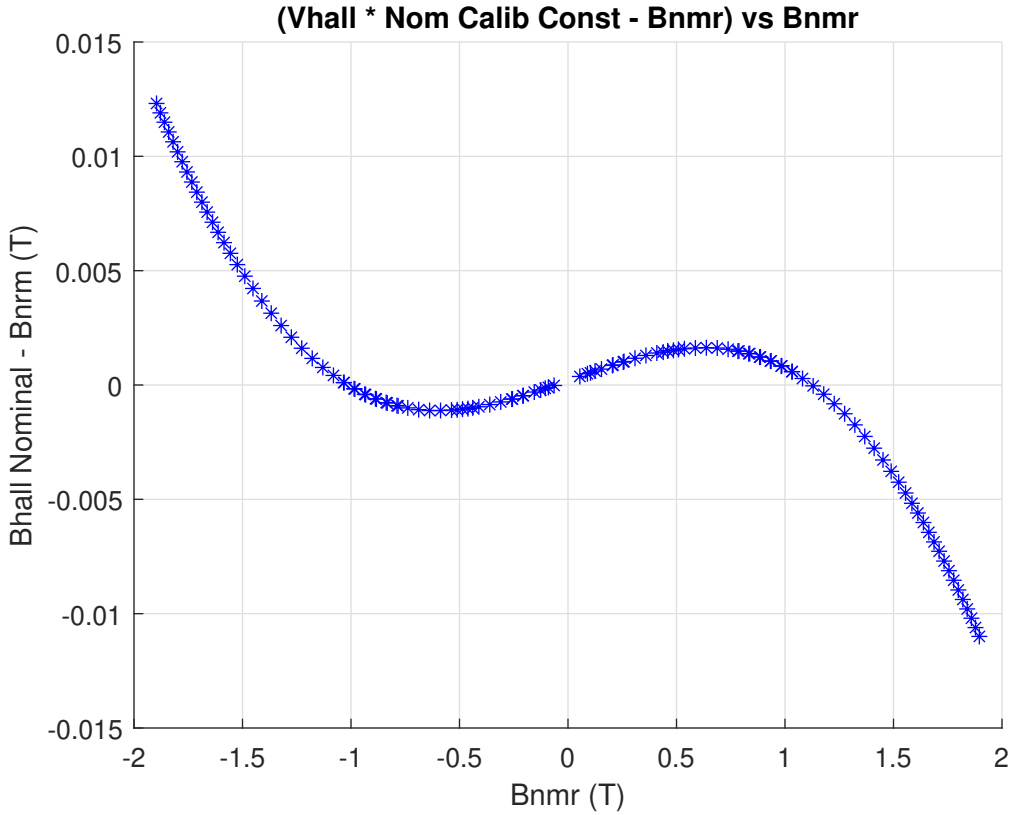
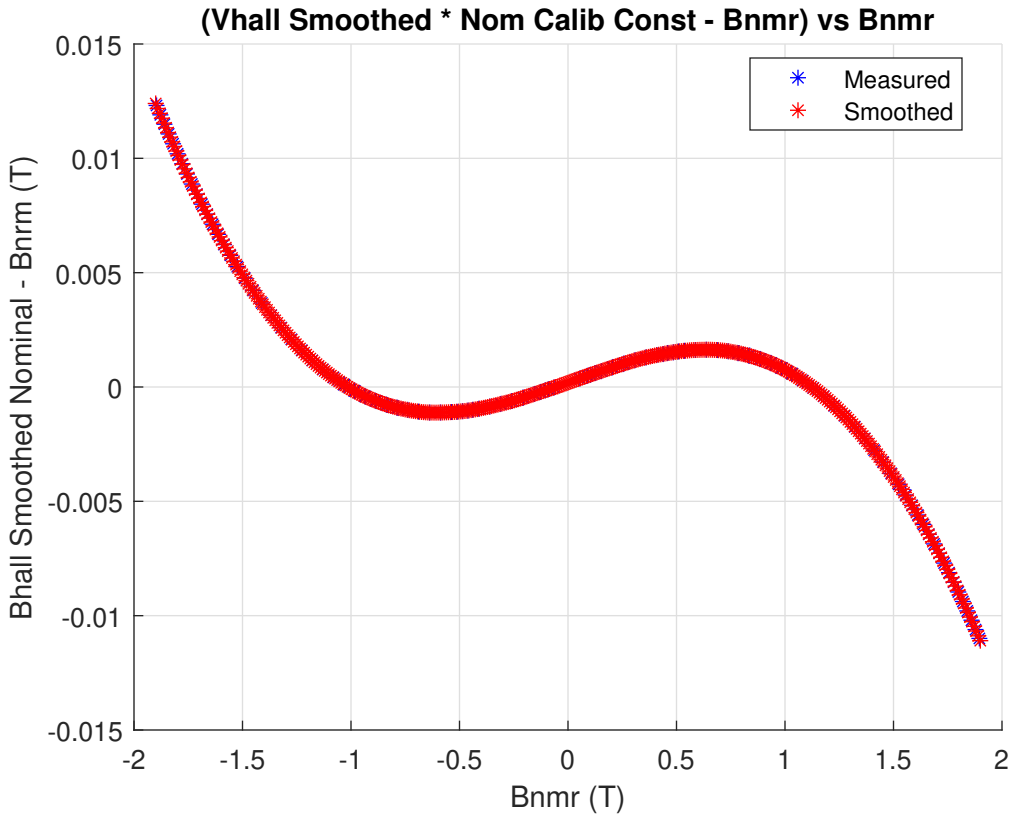
SLAC Magnetic Measurements#
Date: 02-01-2023#
Time: 14:29:23#

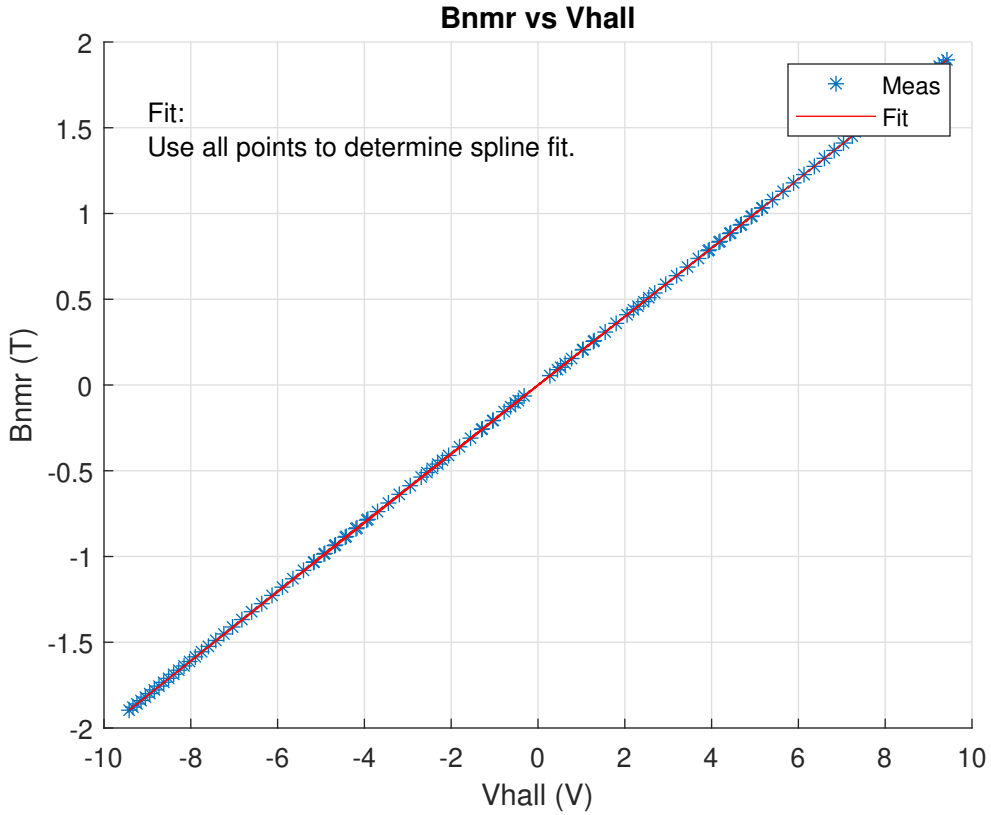

Hall Probe Temperature
Thall (C)
Bnmr (T)
19.55
19.5
19.45
19.4
19.35
19.3
19.25
19.2
19.15
19.1
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2

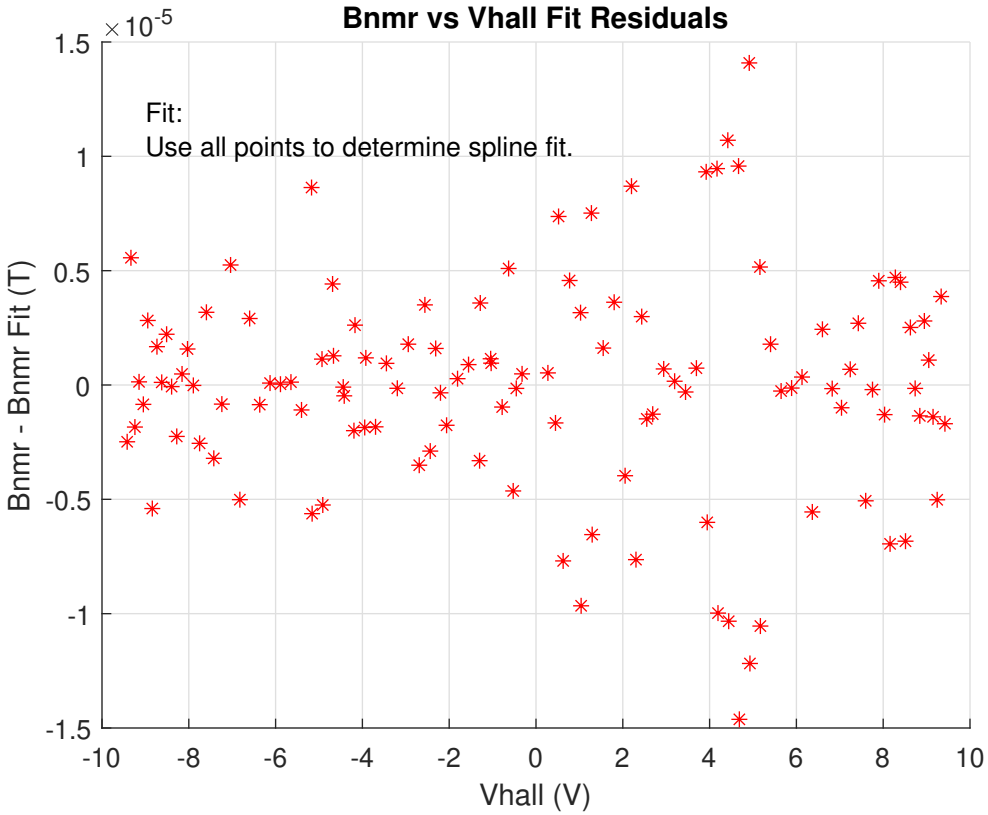

Reference Hall Probe
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
Bref - Bnmr (T)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Bnmr (T)

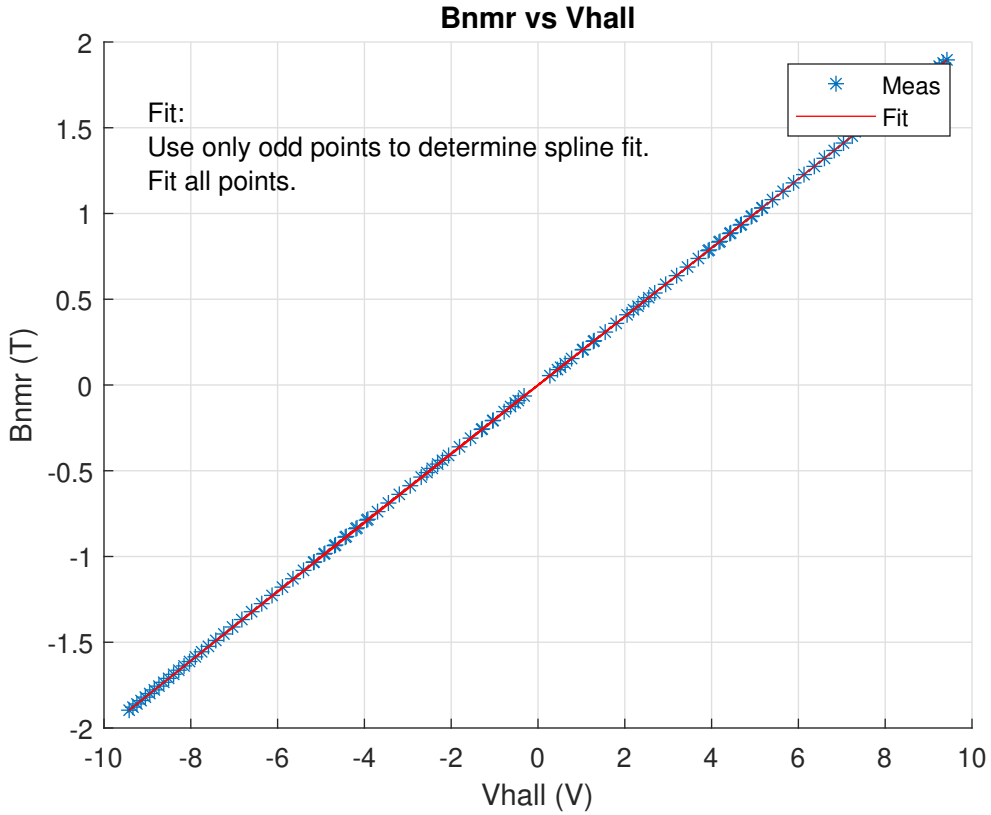

Vhall vs Bnmr
Hall Probe Voltage (V)
Bnmr (T)
10
8
6
4
2
0
-2
-4
-6
-8
-10
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2

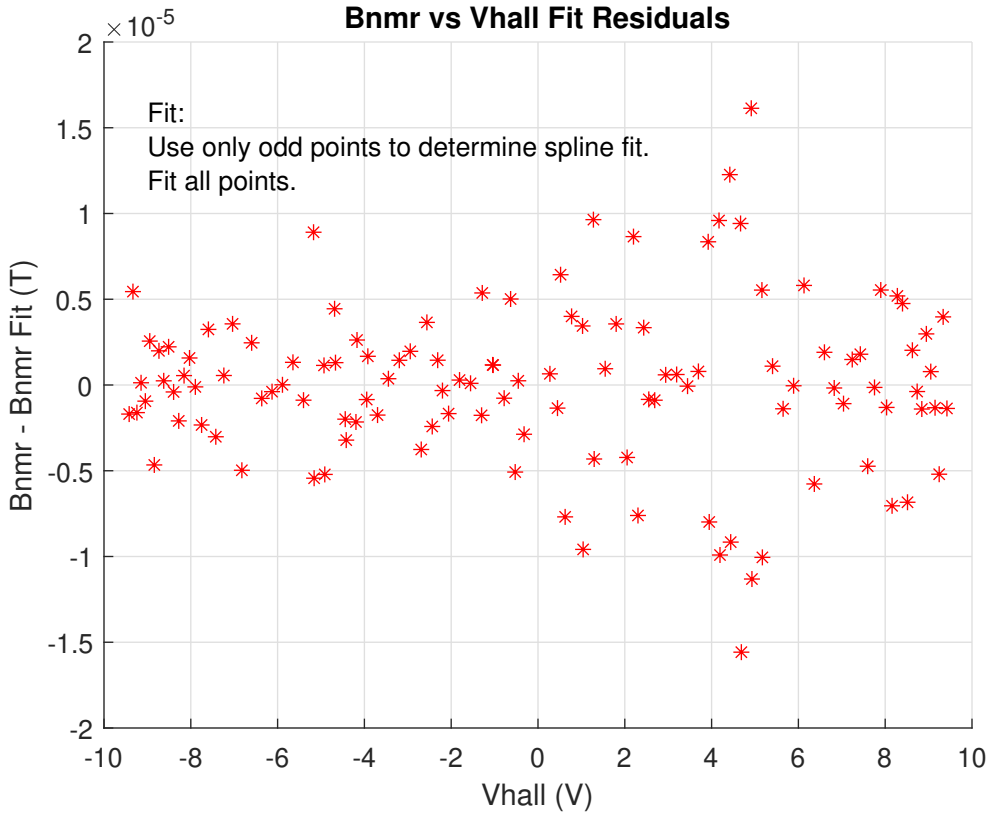

(Vhall * Nom Calib Const - Bnmr) vs Bnmr
Bhall Nominal - Bnrm (T)
Bnmr (T)
0.015
0.01
0.005
0
-0.005
-0.01
-0.015
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2


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


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)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-10
-8
-6
-4
-2
0
2
4
6
8
10