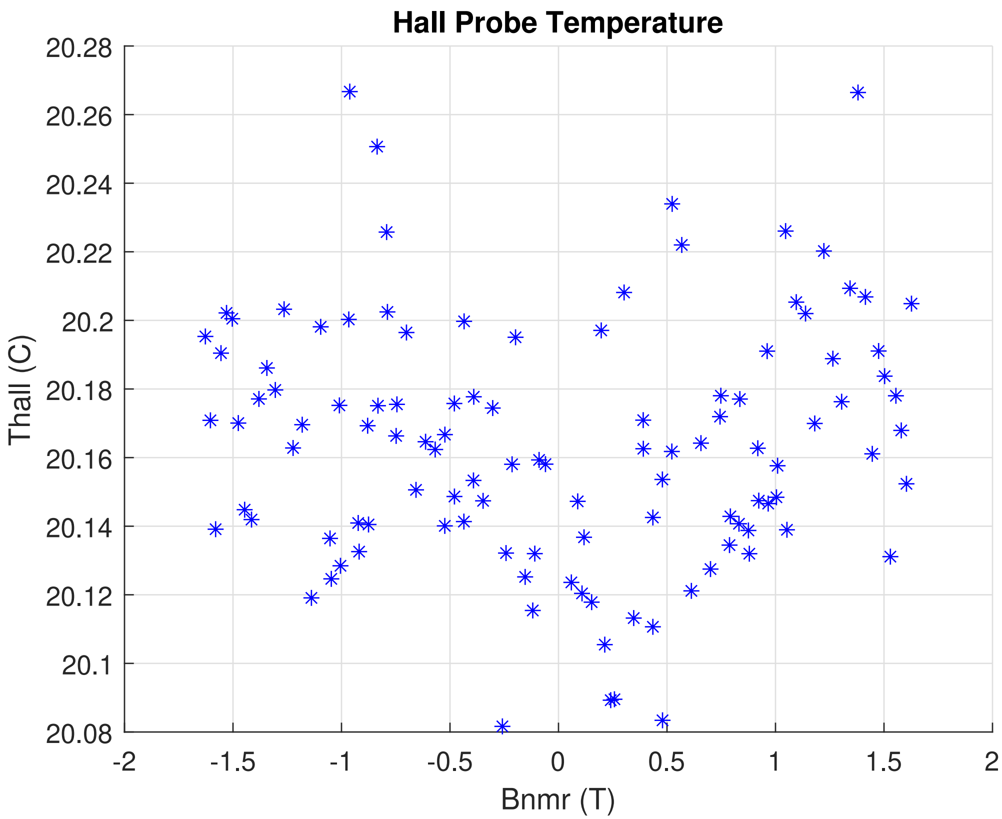
SLAC Magnetic Measurements
Hall Probe Calibration

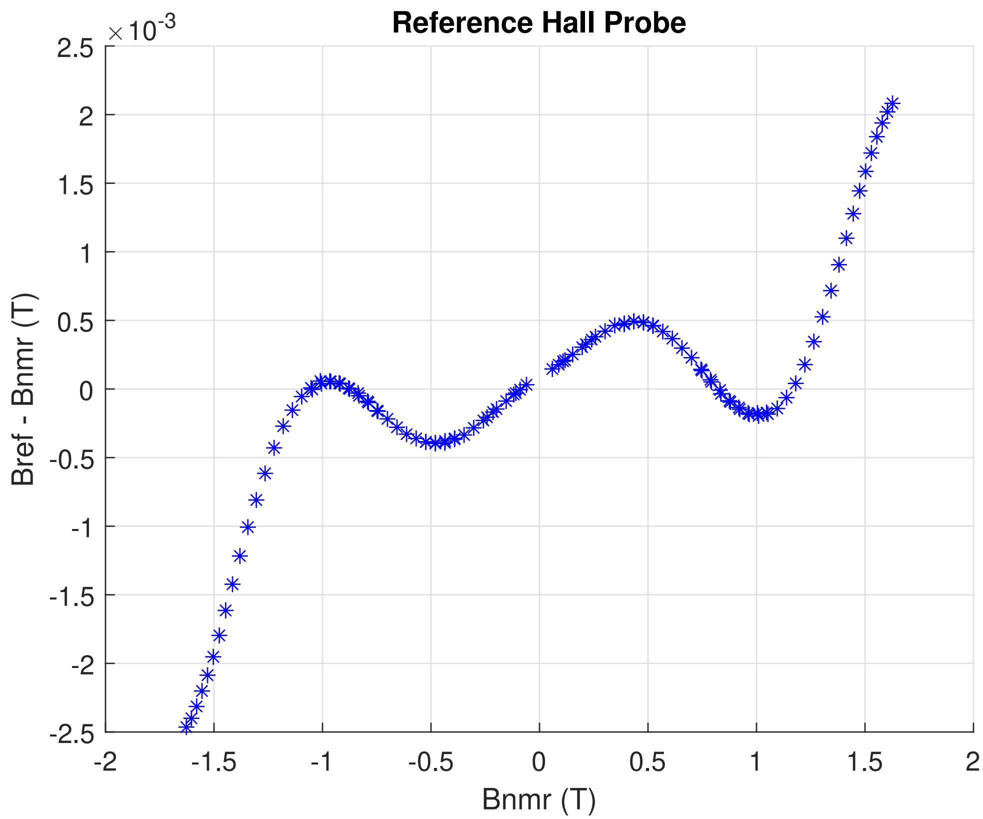
Header:
SLAC Magnetic Measurements
Date: 07-08-2021
Time: 08:23:50

Project: LCLS-II
Device Type: Hall probe
Data Type: Y
Serial Number: SENIS-27-14
Run Number: 6
Measurement Type: HPCS
Operator: YL
Comment: PC71027; +6.00002, -6.00002, +0.99999

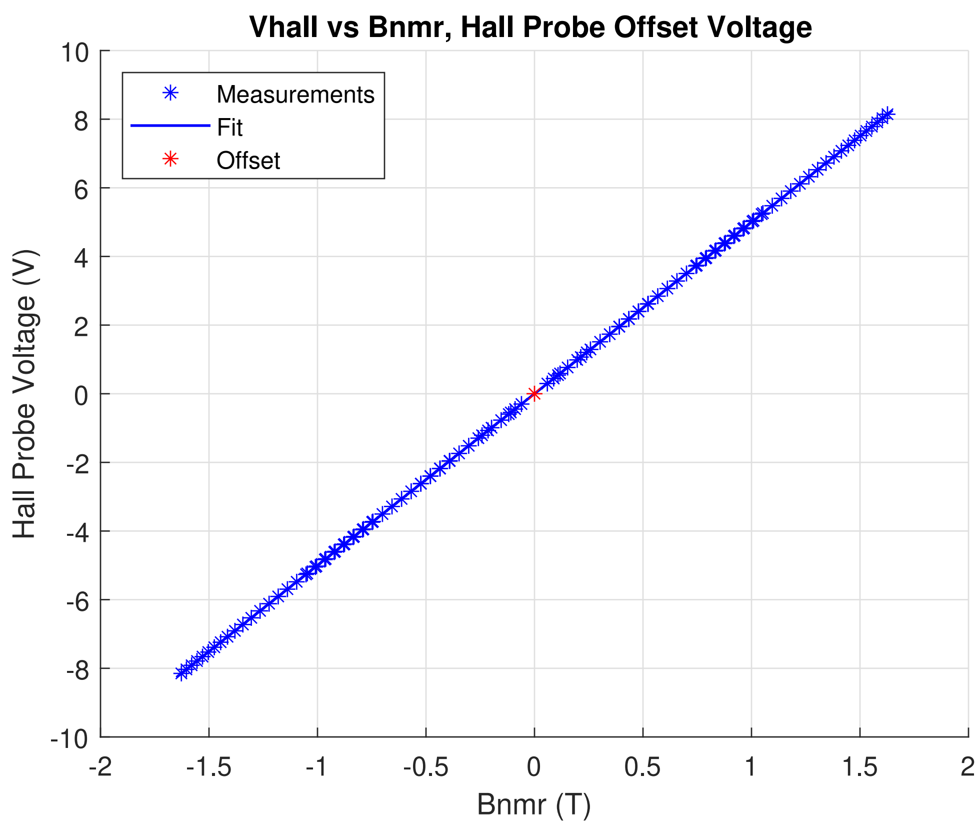
Current(A) T(C) Case T(C) Est.Field(T) Voltage Field

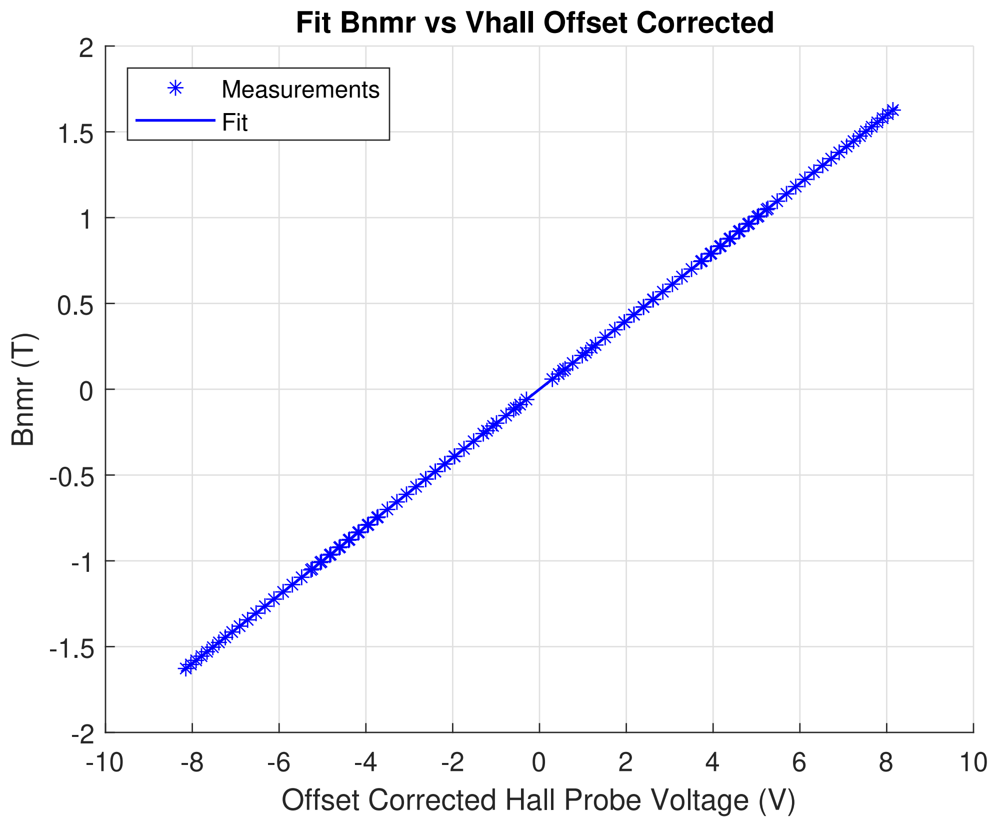
Parameters:
INPUT-FILE-DIR =T:\MagData\LCLS-II\Hall probe\SENIS-27-14\HPCS-006\
INPUT-FILE-NAME =hpcs-dat.001
POLY-FIT-ORDER =15
NUM-SIG-OUTLIER =2
NOM-CALIB-CONST =0.2
MAX-B-NMR-FIT =1.65

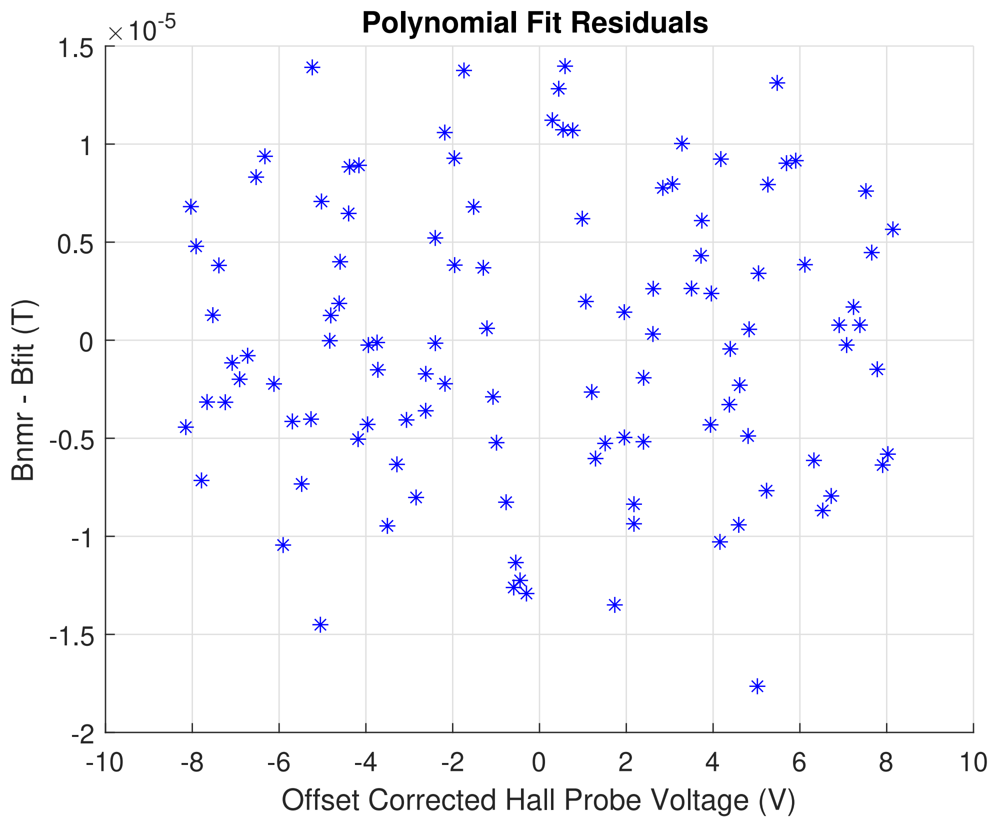

Hall Probe Temperature
20.28
20.26
20.24
20.22
20.2
20.18
20.16
20.14
20.12
20.1
20.08
Thall (C)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Bnmr (T)

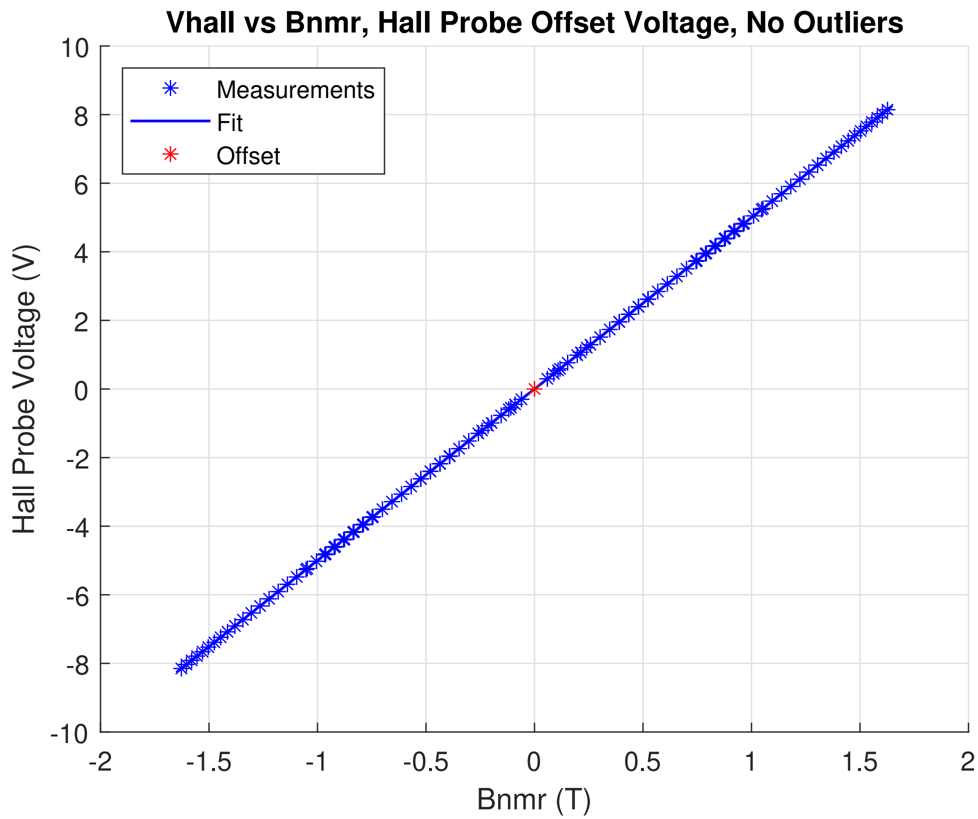


Reference Hall Probe
×10-3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
Bref - Bnmr (T)
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
Bnmr (T)

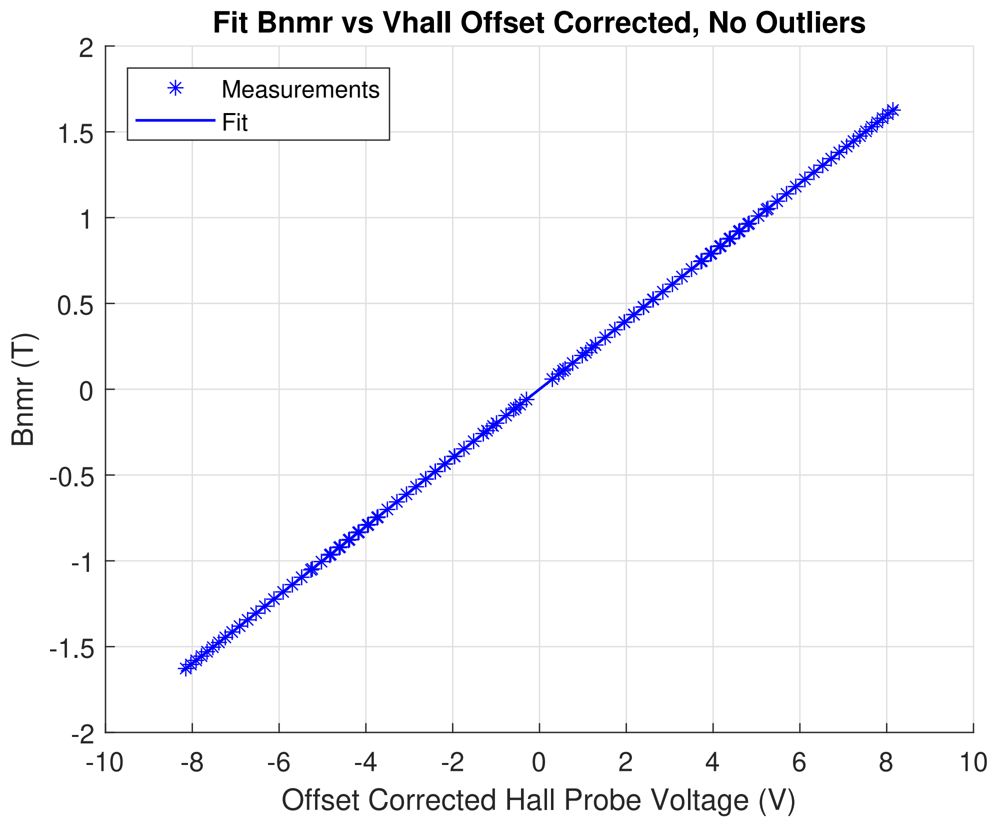

Vhall vs Bnmr, Hall Probe Offset Voltage
Measurements
Fit
Offset
Hall Probe Voltage (V)
Bnmr (T)
10
8
6
4
2
0
-2
-4
-6
-8
-10
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2

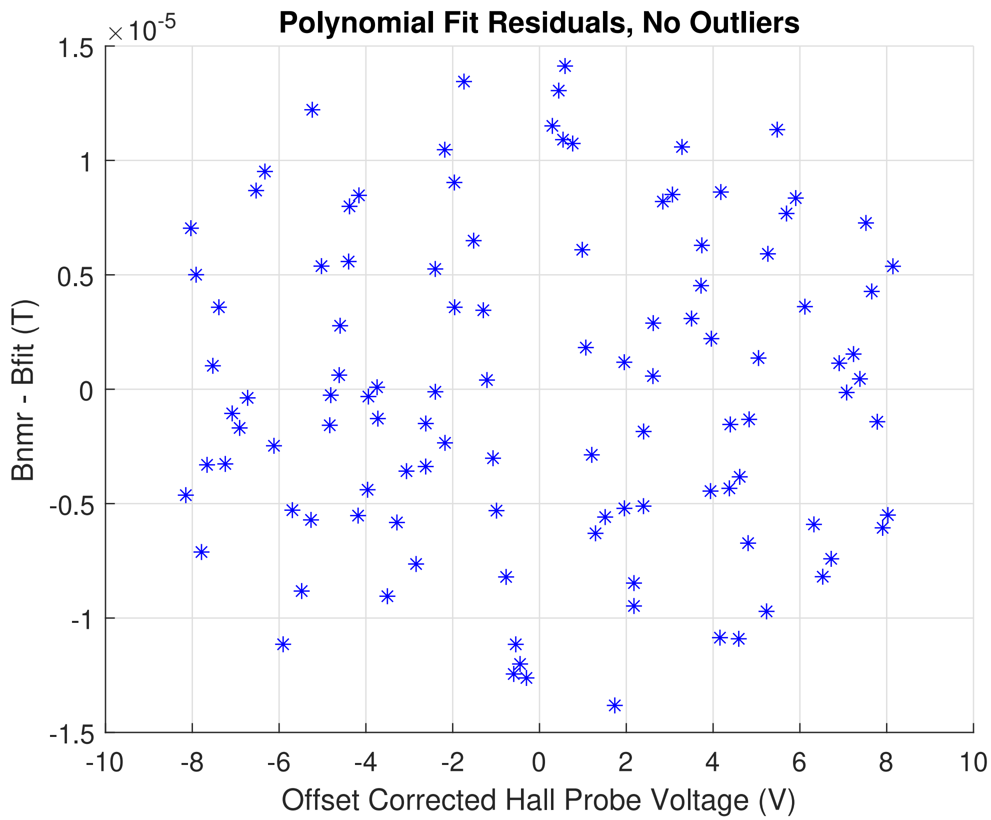

Fit Bnmr vs Vhall Offset Corrected
Measurements
Fit
Bnmr (T)
Offset Corrected Hall Probe Voltage (V)
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
-10
-8
-6
-4
-2
0
2
4
6
8
10


Polynomial Fit Residuals
×10^-5
1.5
1
0.5
0
-0.5
-1
-1.5
-2
Bnmr - Bfit (T)
-10
-8
-6
-4
-2
0
2
4
6
8
10
Offset Corrected Hall Probe Voltage (V)



Vhall vs Bnmr, Hall Probe Offset Voltage, No Outliers
Measurements
Fit
Offset
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


Fit Bnmr vs Vhall Offset Corrected, No Outliers
Measurements
Fit
Bnmr (T)
Offset Corrected Hall Probe Voltage (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


Polynomial Fit Residuals, No Outliers
×10^-5
1.5
1
0.5
0
-0.5
-1
-1.5
Bnmr - Bfit (T)
-10
-8
-6
-4
-2
0
2
4
6
8
10
Offset Corrected Hall Probe Voltage (V)

**(Calibrated Field - Nominal Hall Field) vs Offset Corrected Hall Voltage, No Outliers**