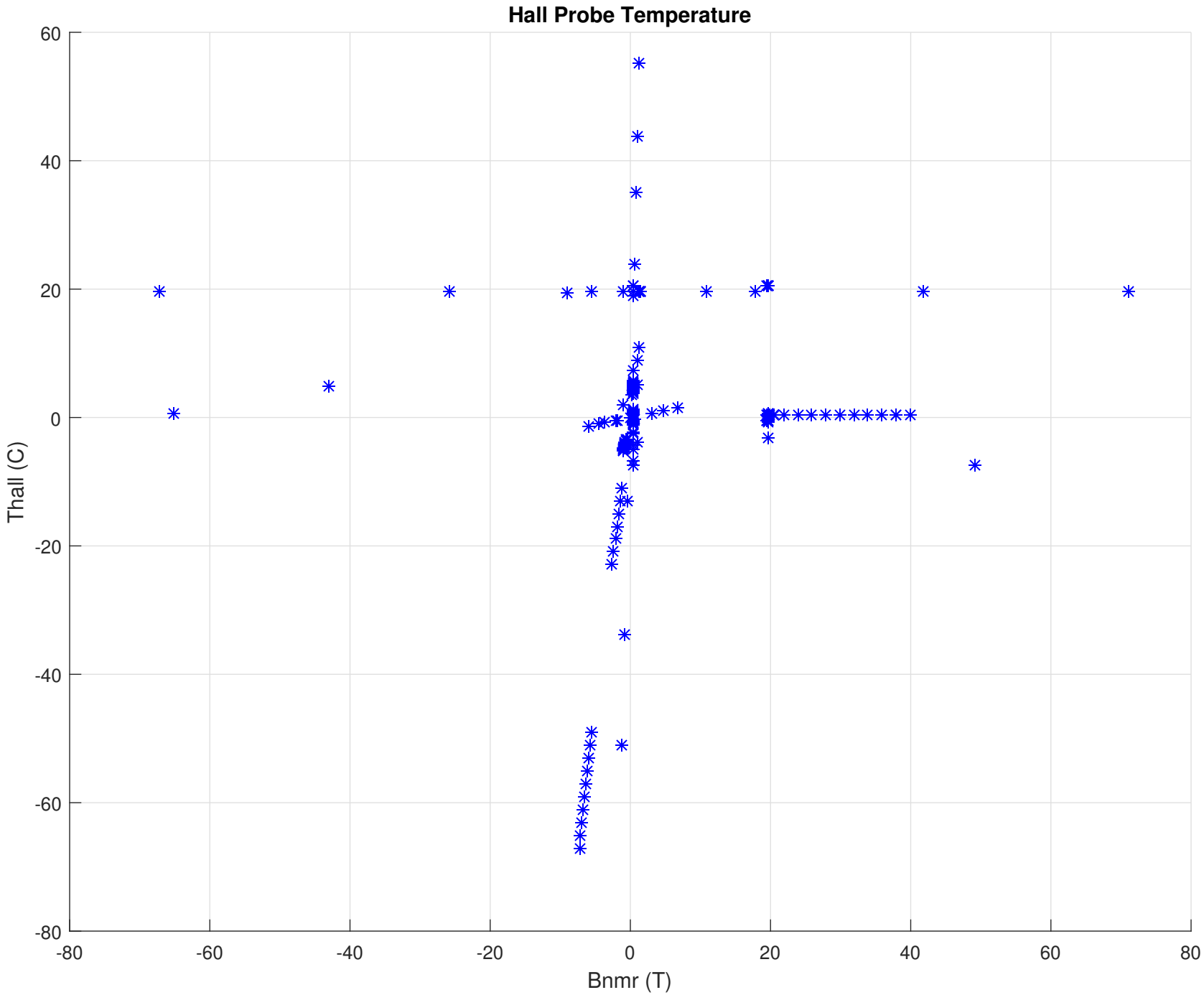
SLAC Magnetic Measurements
Hall Probe Calibration

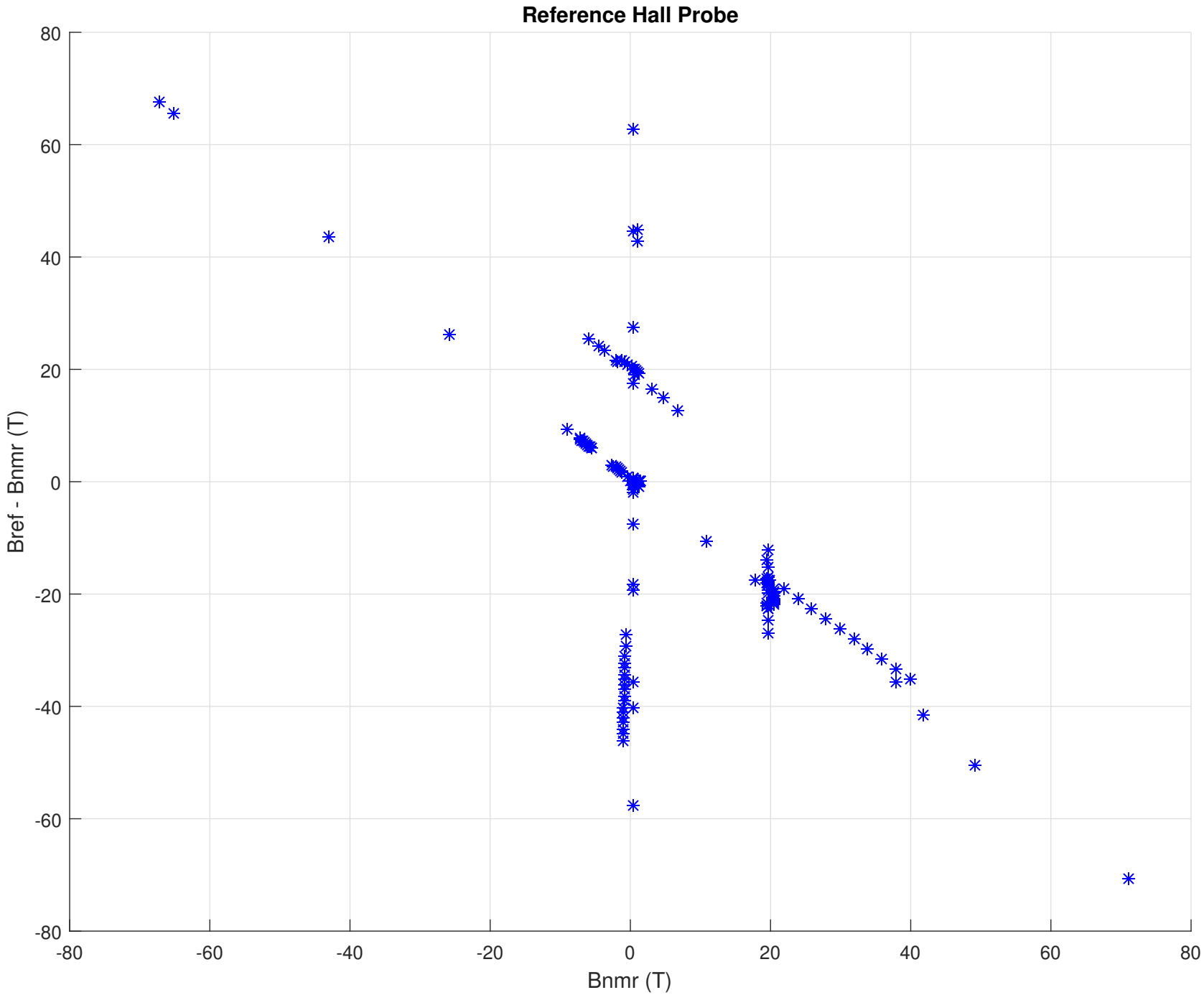
Header:
SLAC Magnetic Measurements
Date: 03-08-2016
Time: 08:16:27

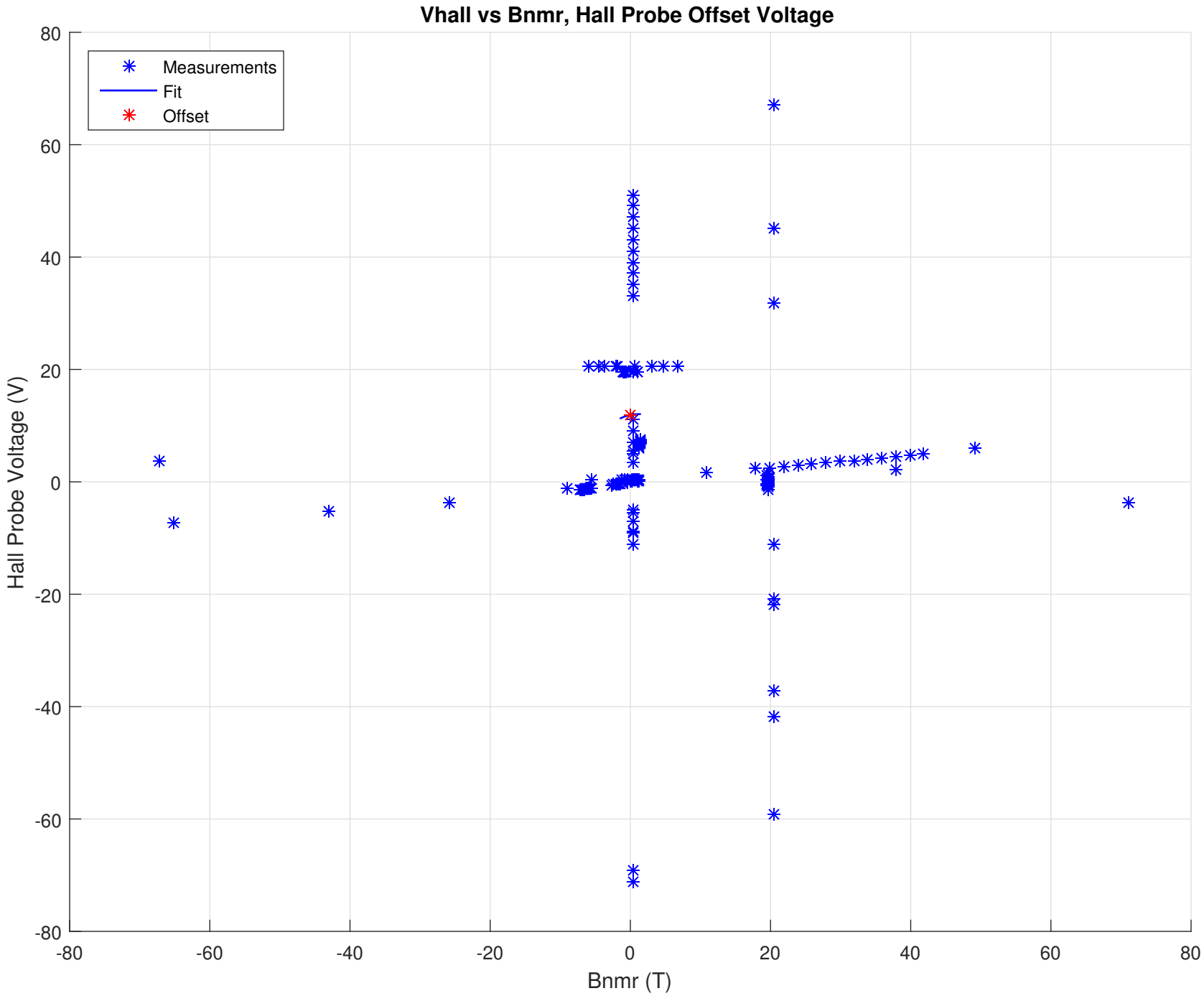
Project: LCLS
Device Type: Hall probe
Data Type: Y
Serial Number: SENIS-117-14
Run Number: 5
Measurement Type: HPCS
Operator: YL
Comment: Sentron441, voltmeter PC 71024, Voltage standart 5.99987V; alignment

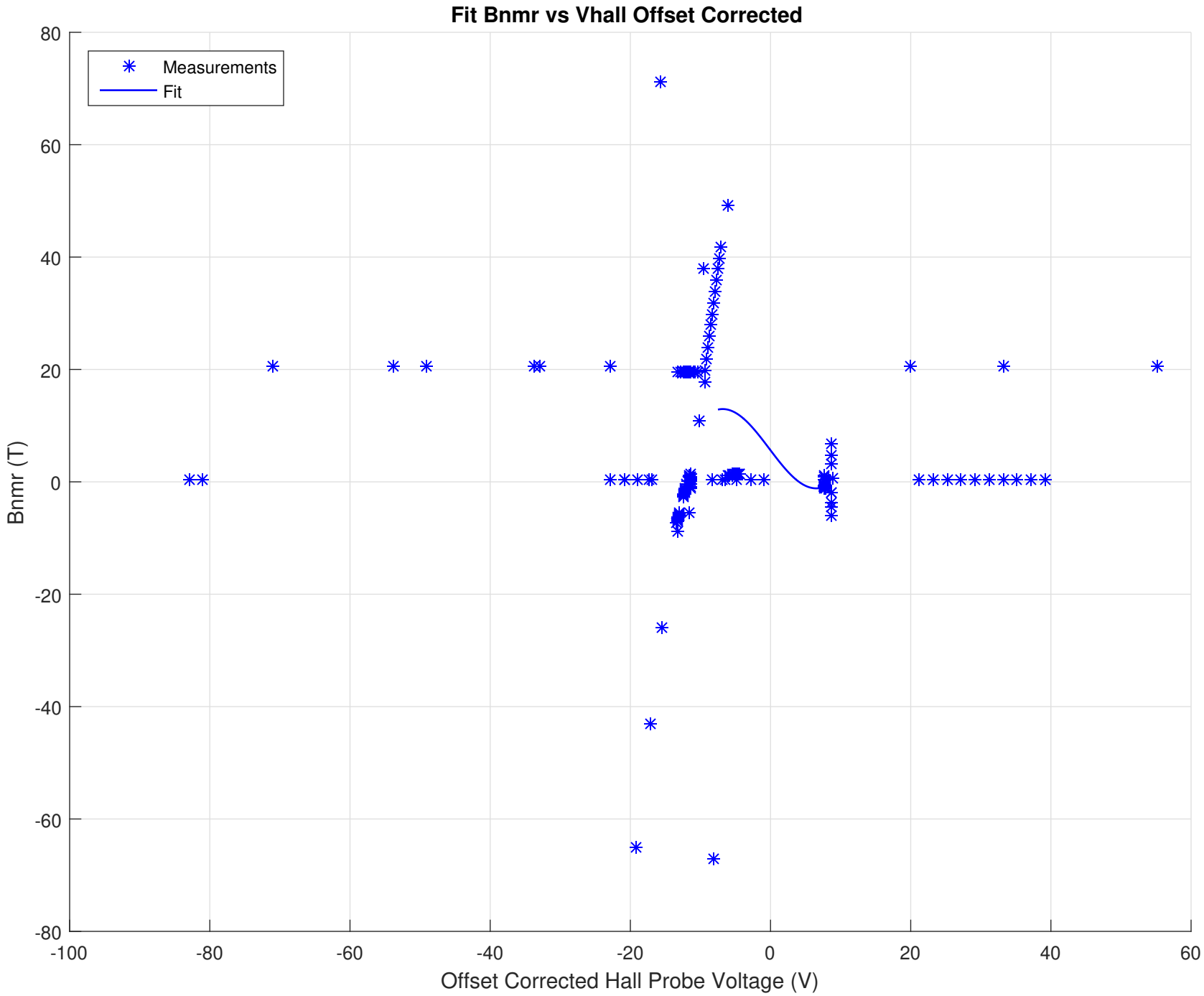
Current(A) T(C) Case T-V Est. Field(T) Voltage Voltage-T-Corr Field

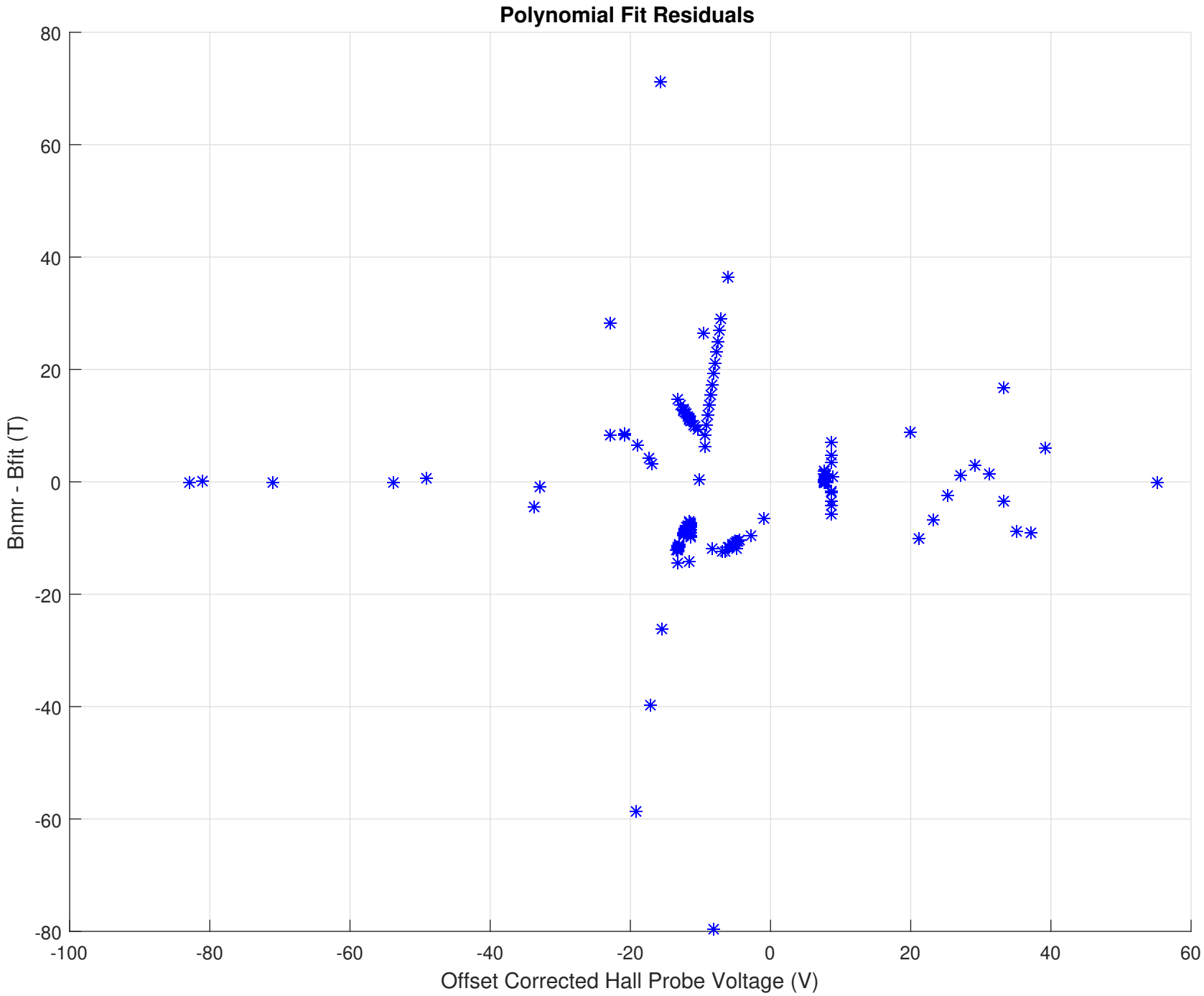
Parameters:
INPUT-FILE-DIR =S:\MagData\LCLS\Hall probe\SENIS-117-14\HPCS-005\
INPUT-FILE-NAME =hpcs-dat.001
POLY-FIT-ORDER =13
NUM-SIG-OUTLIER =2
NOM-CALIB-CONST =0.2
MAX-B-NMR-FIT =1.5

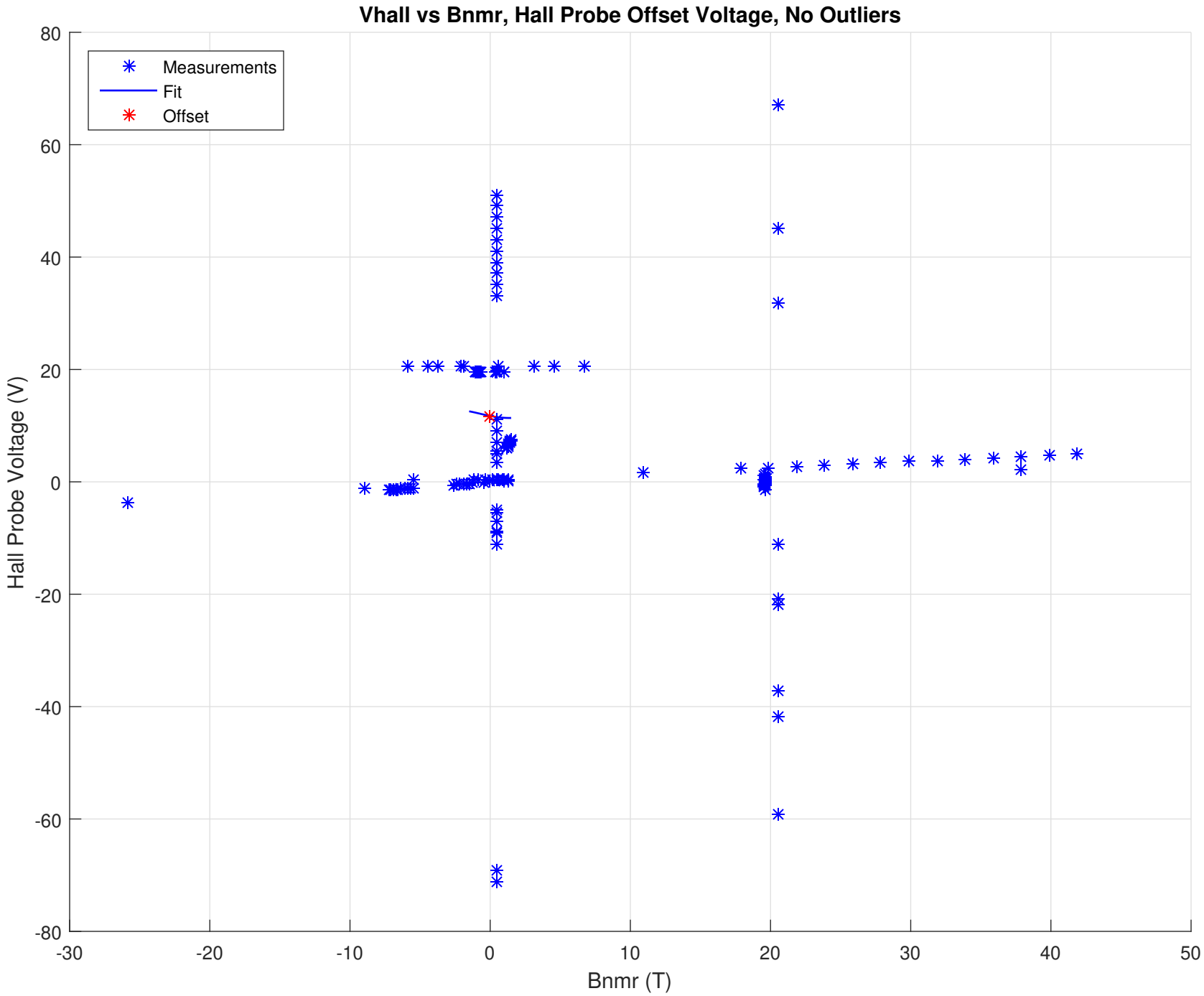

Hall Probe Temperature
Thall (C)
Bnmr (T)
60
40
20
0
-20
-40
-60
-80
-80
-60
-40
-20
0
20
40
60
80

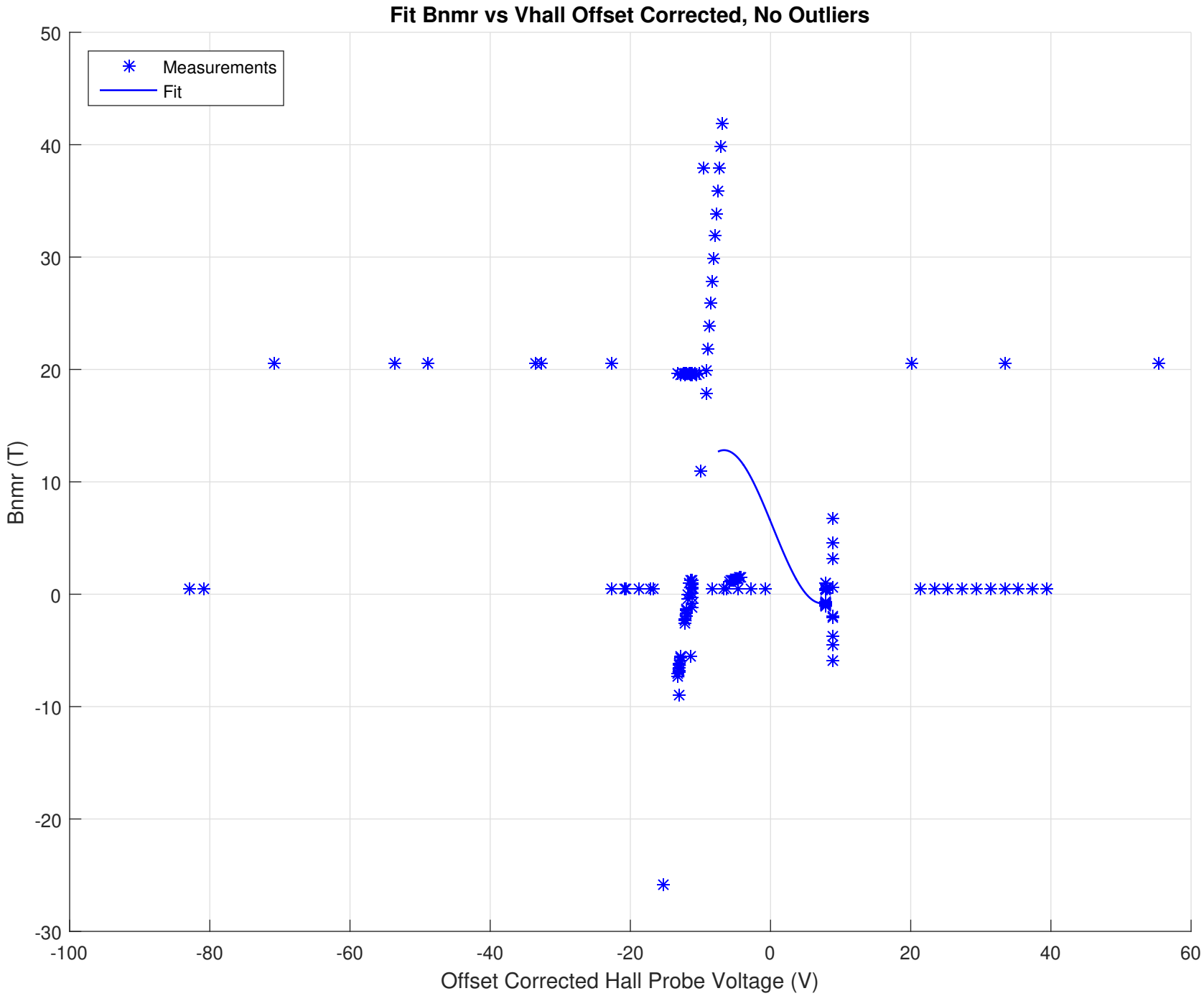

Reference Hall Probe
Bref - Bnmr (T)
Bnmr (T)
80
60
40
20
0
-20
-40
-60
-80
-80
-60
-40
-20
0
20
40
60
80

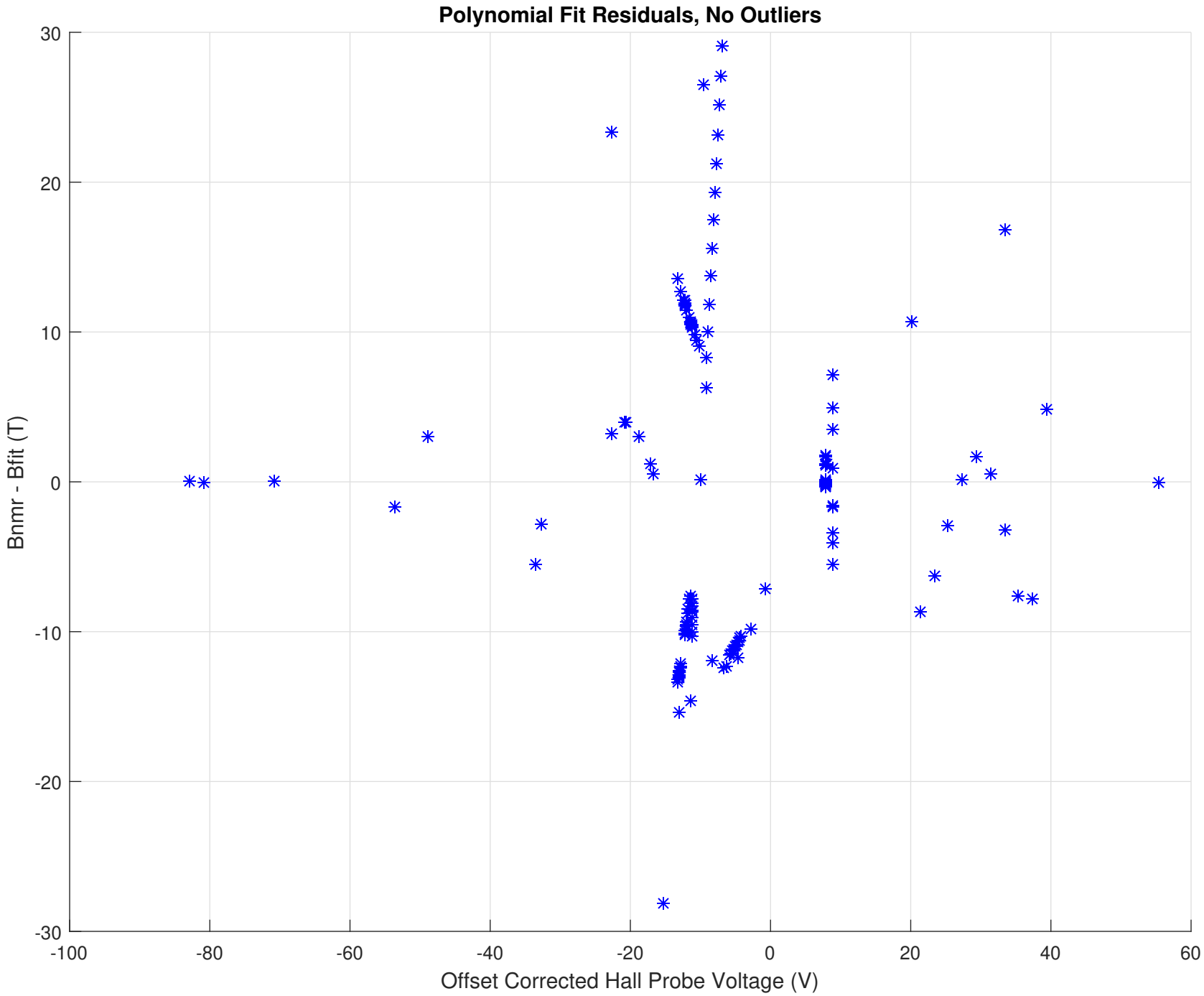

Vhall vs Bnmr, Hall Probe Offset Voltage
Measurements
Fit
Offset
Hall Probe Voltage (V)
Bnmr (T)
80
60
40
20
0
-20
-40
-60
-80
-80
-60
-40
-20
0
20
40
60
80

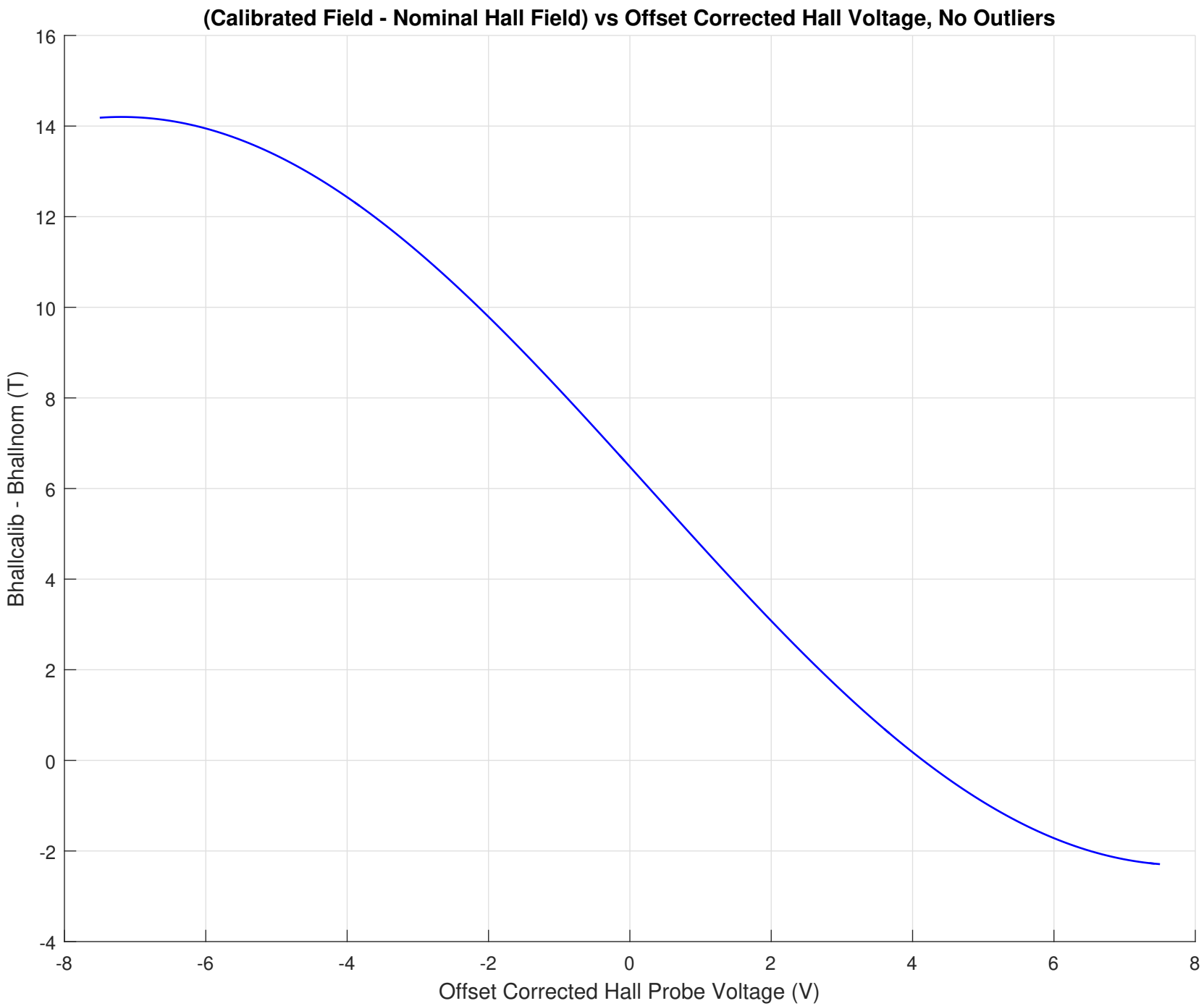

Fit Bnmr vs Vhall Offset Corrected
Measurements
Fit
Bnmr (T)
Offset Corrected Hall Probe Voltage (V)
80
60
40
20
0
-20
-40
-60
-80
-100
-80
-60
-40
-20
0
20
40
60


Polynomial Fit Residuals
Bnmr - Bfit (T)
Offset Corrected Hall Probe Voltage (V)
80
60
40
20
0
-20
-40
-60
-80
-100
-80
-60
-40
-20
0
20
40
60


Vhall vs Bnmr, Hall Probe Offset Voltage, No Outliers
Measurements
Fit
Offset
Hall Probe Voltage (V)
Bnmr (T)
80
60
40
20
0
-20
-40
-60
-80
-30
-20
-10
0
10
20
30
40
50


Fit Bnmr vs Vhall Offset Corrected, No Outliers
Measurements
Fit
Bnmr (T)
Offset Corrected Hall Probe Voltage (V)
50
40
30
20
10
0
-10
-20
-30
-100
-80
-60
-40
-20
0
20
40
60


Polynomial Fit Residuals, No Outliers
Bnmr - Bfit (T)
Offset Corrected Hall Probe Voltage (V)
30
20
10
0
-10
-20
-30
-100
-80
-60
-40
-20
0
20
40
60


(Calibrated Field - Nominal Hall Field) vs Offset Corrected Hall Voltage, No Outliers
Bhallcalib - Bhallnom (T)
Offset Corrected Hall Probe Voltage (V)
16
14
12
10
8
6
4
2
0
-2
-4
-8
-6
-4
-2
0
2
4
6
8