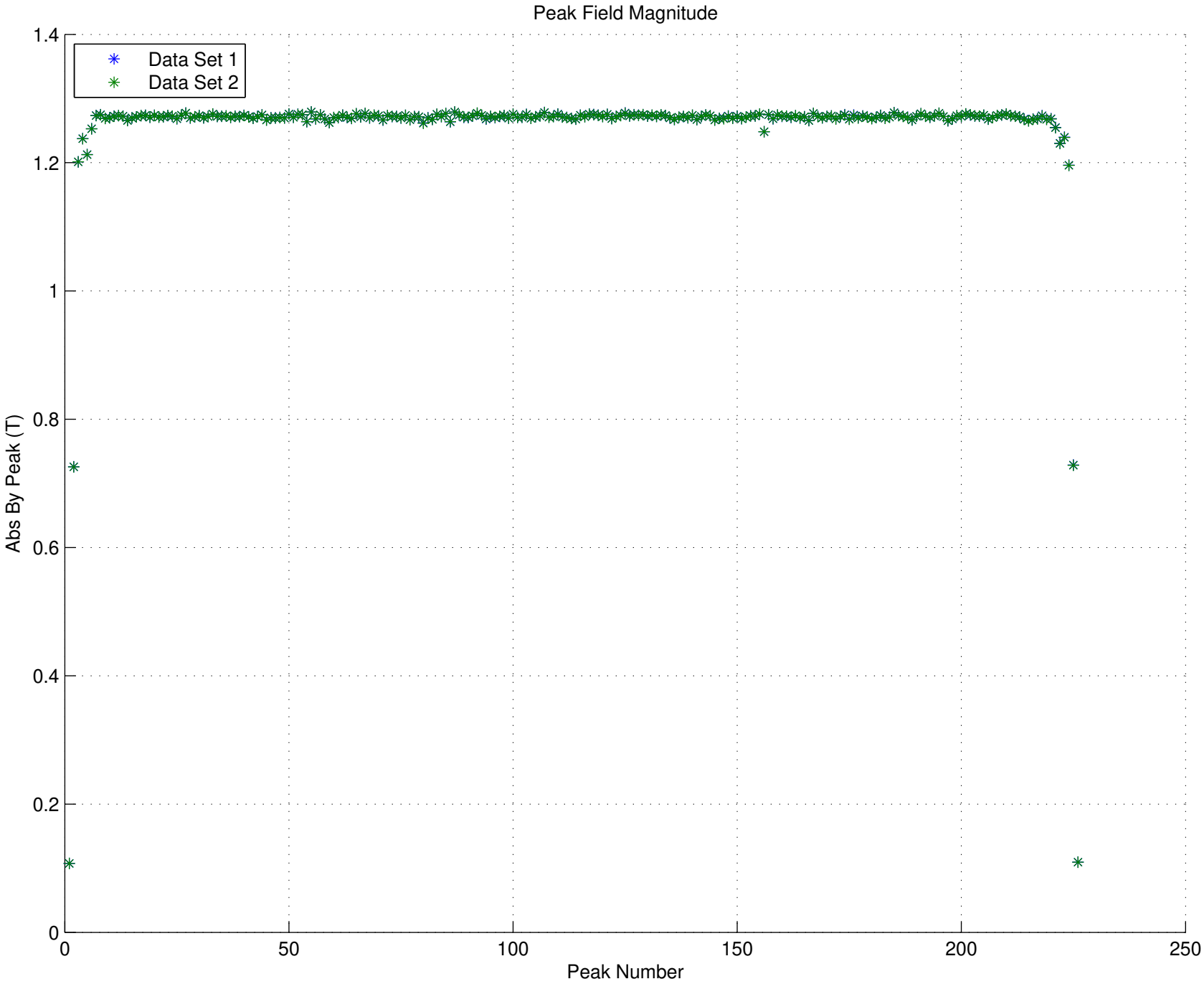
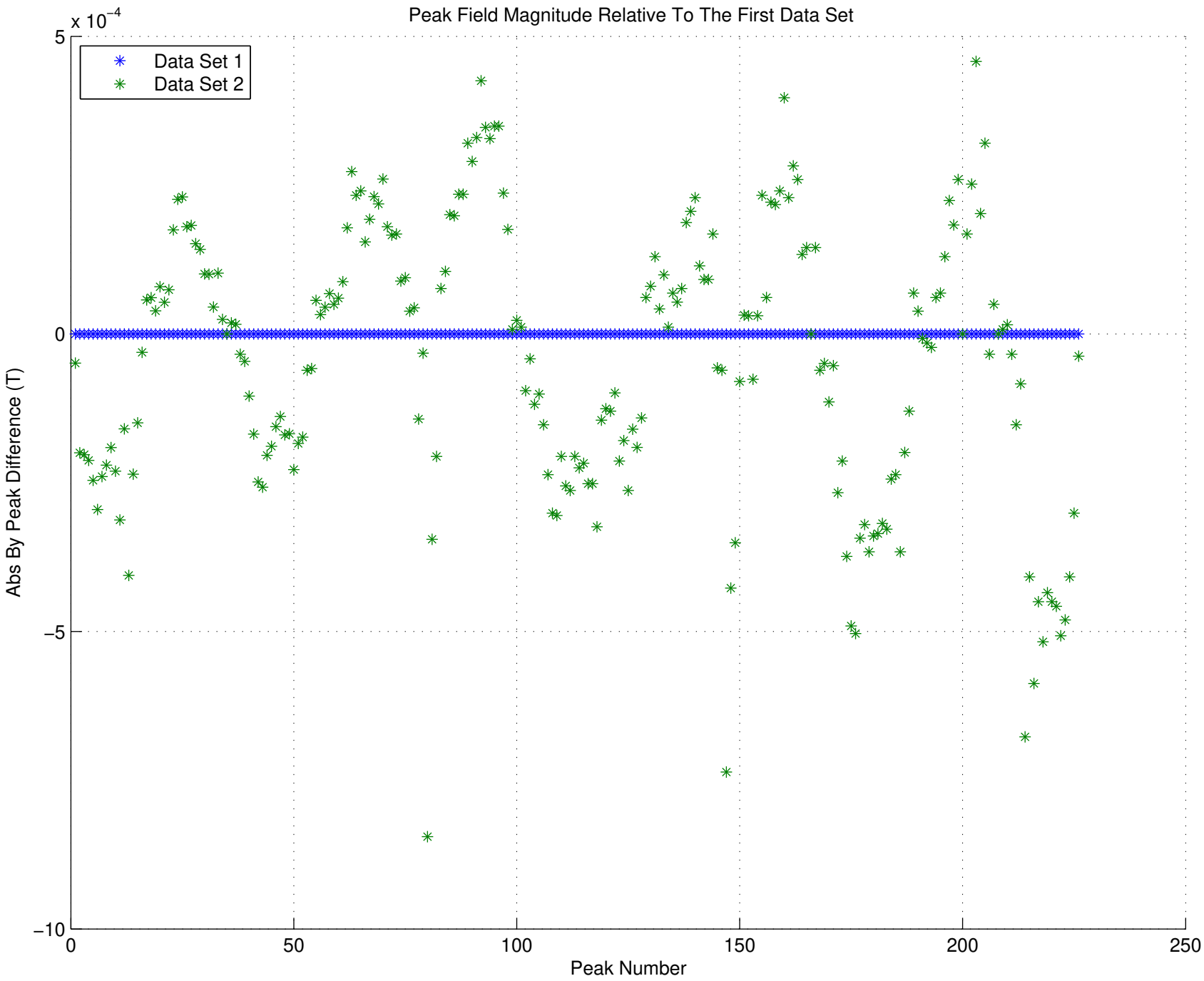
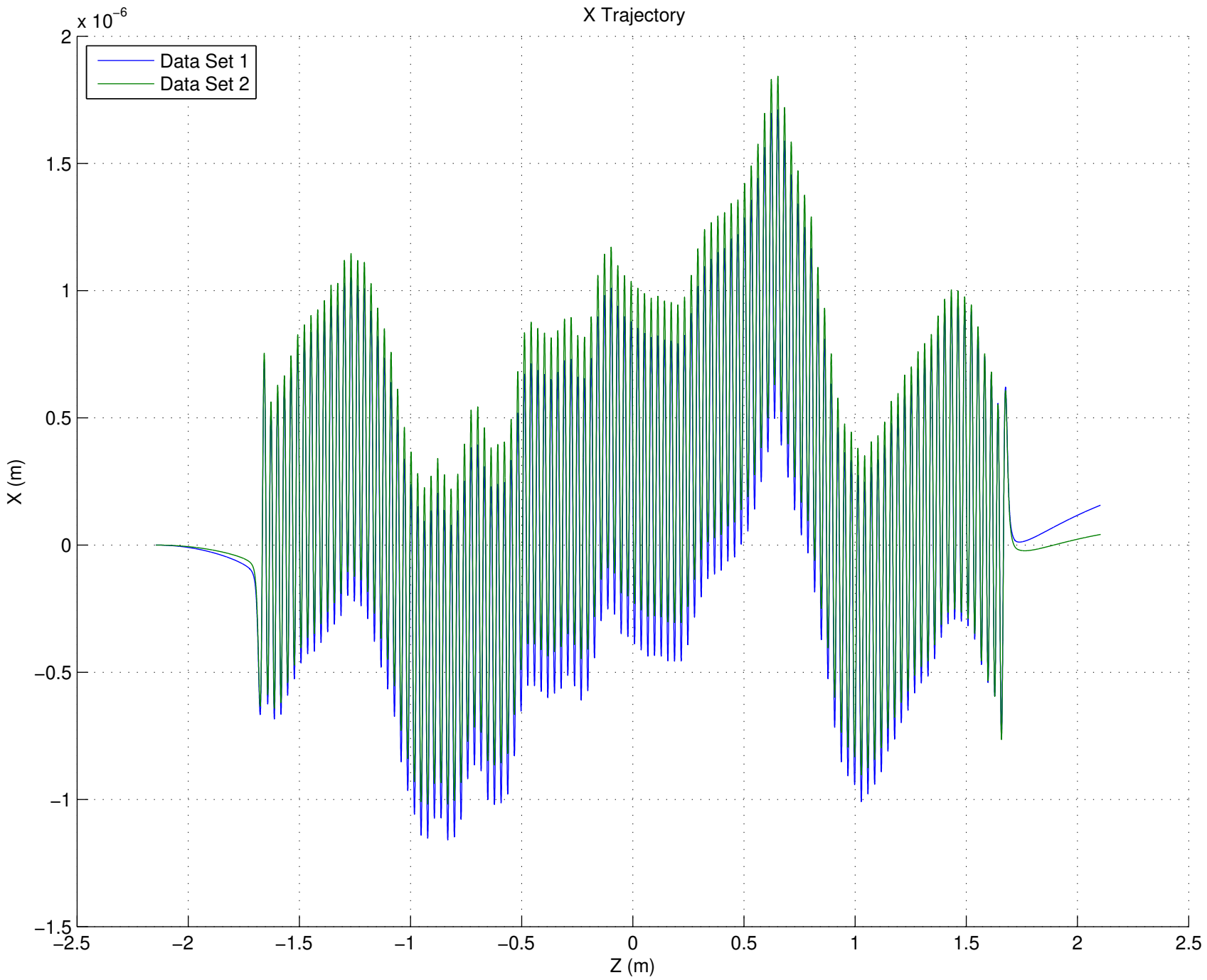
SLAC Magnetic Measurements
Undulator Analysis Comparison

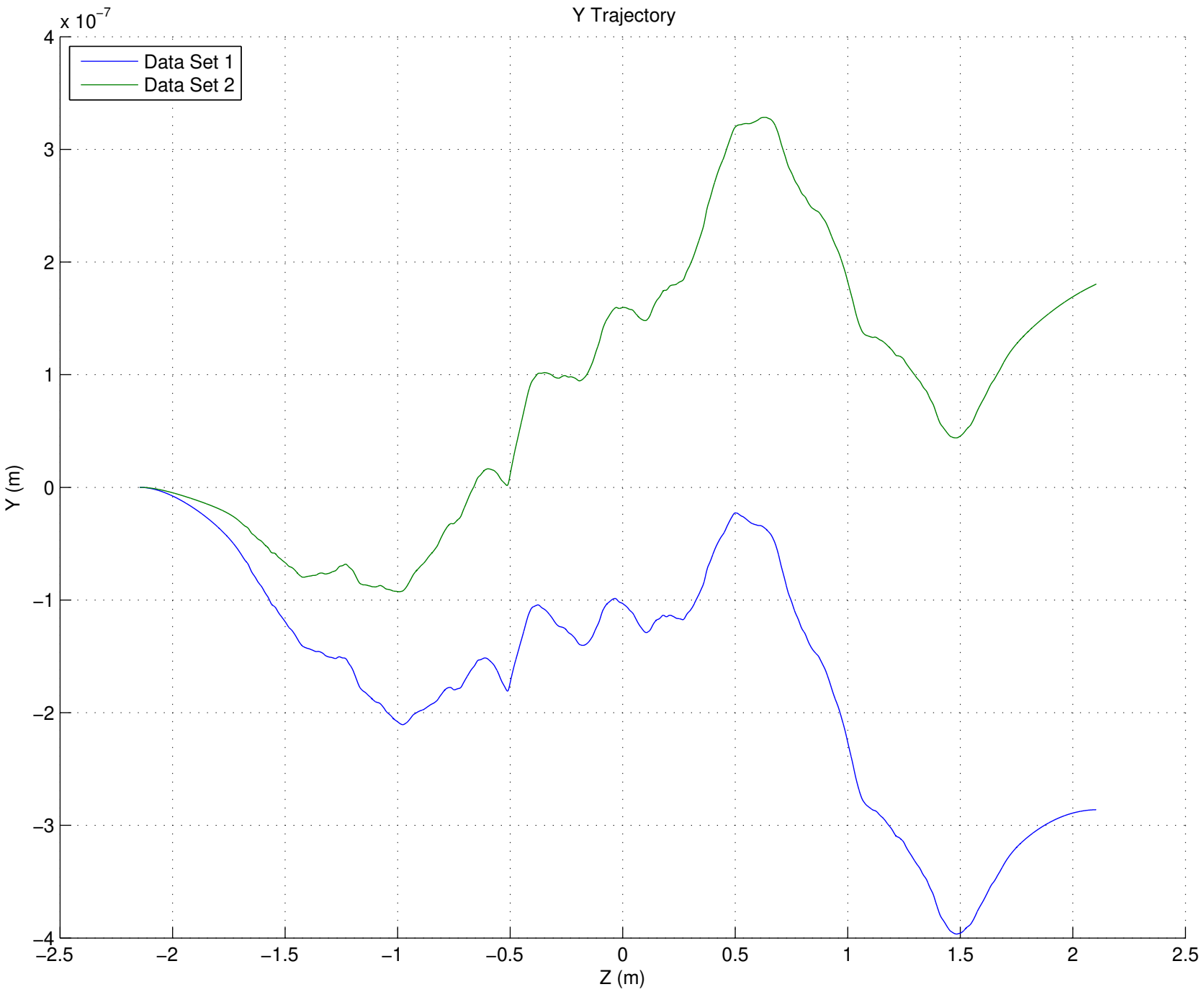
Title:
SN20, Datasets 1 and 2

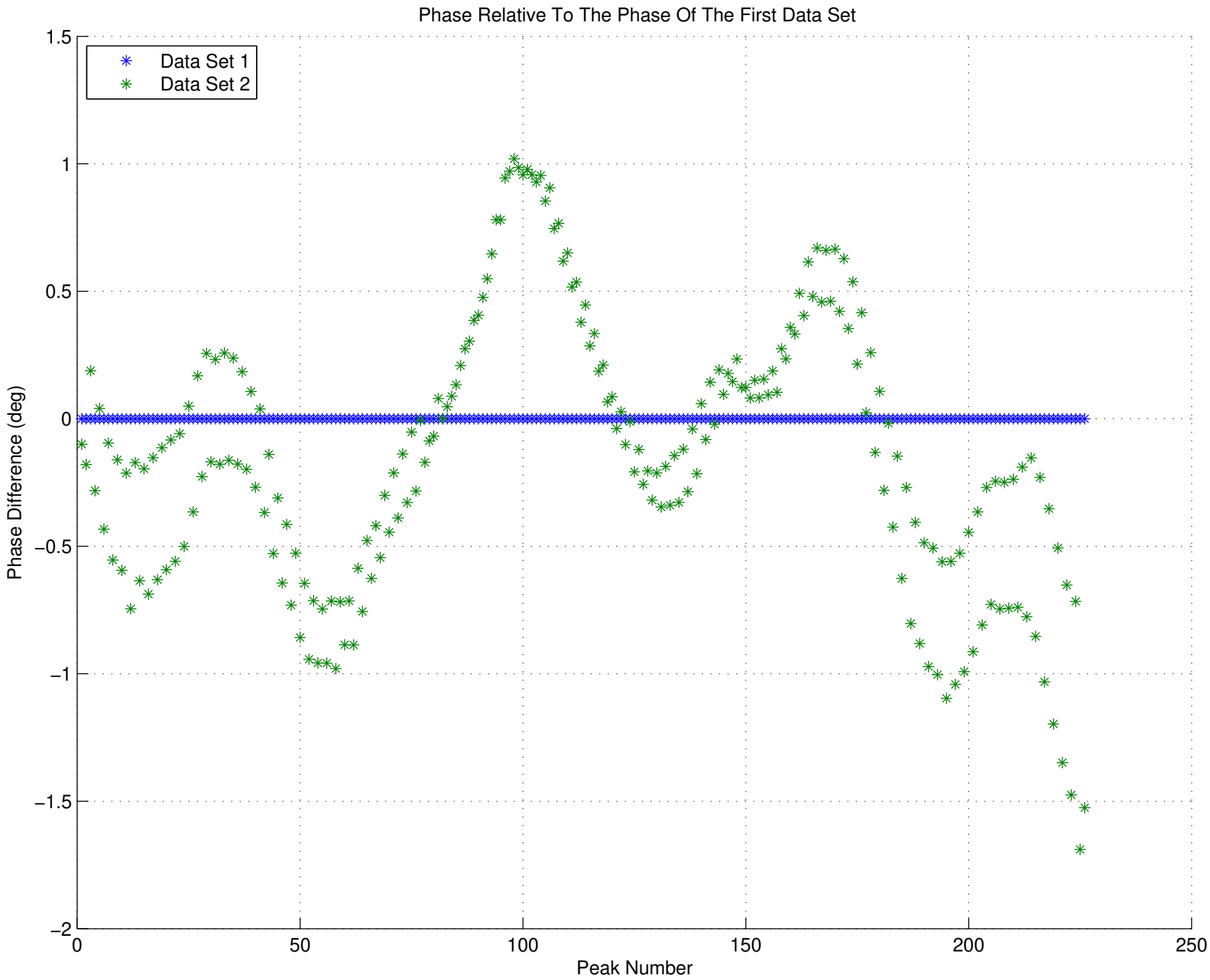
Input Files:
1) V:\MET\MagServe\MagData\LCLS\Undulator\L143−112000−20\DATASET0001\Fine Tuning\Z Scans\Run 043\id_anal.mat
2) V:\MET\MagServe\MagData\LCLS\Undulator\L143−112000−20\DATASET0002\Fine Tuning\Z Scans\Run 005\id_anal.mat

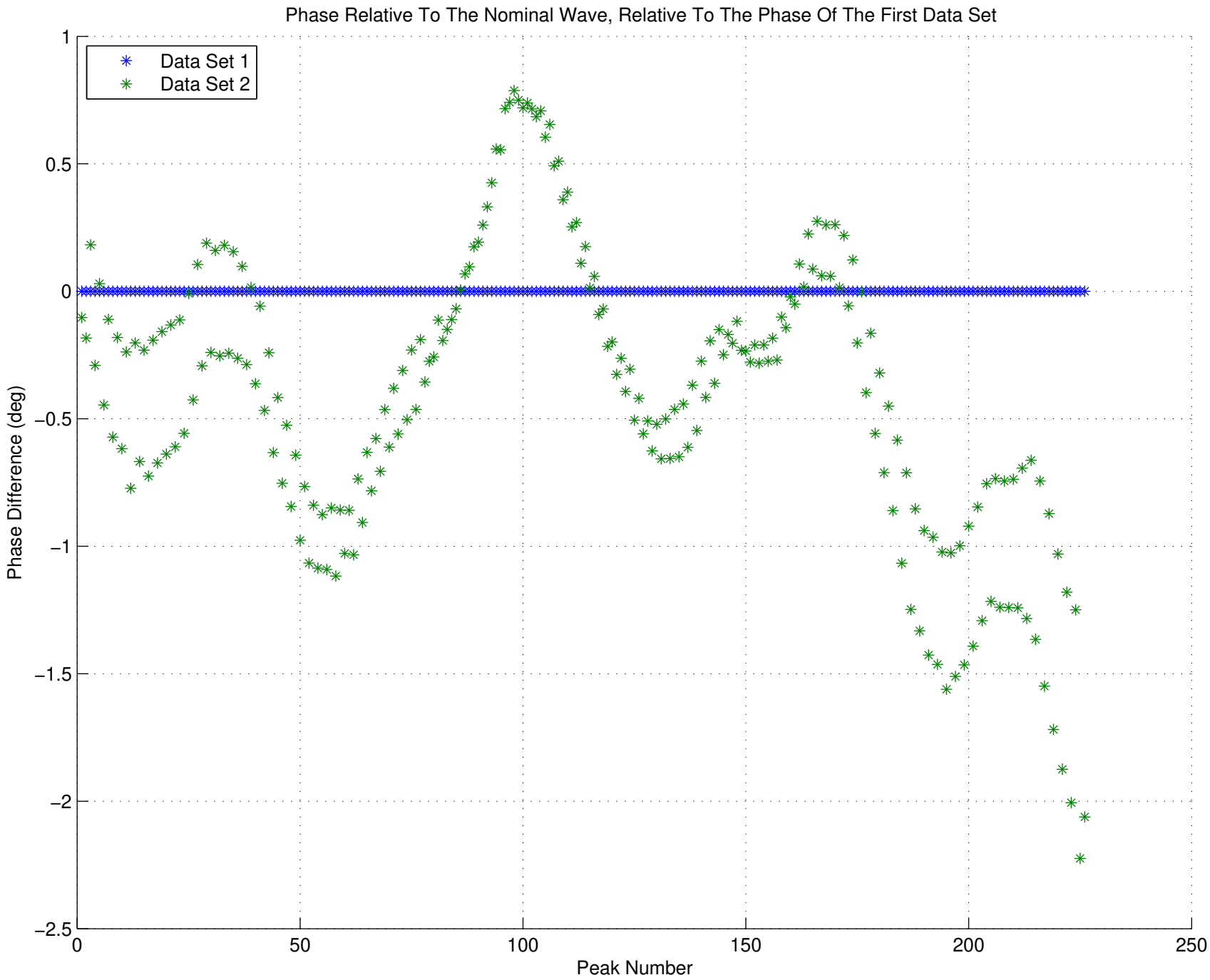

Peak Field Magnitude
Data Set 1
Data Set 2
Abs By Peak (T)
Peak Number
0
0.2
0.4
0.6
0.8
1
1.2
1.4
0
50
100
150
200
250

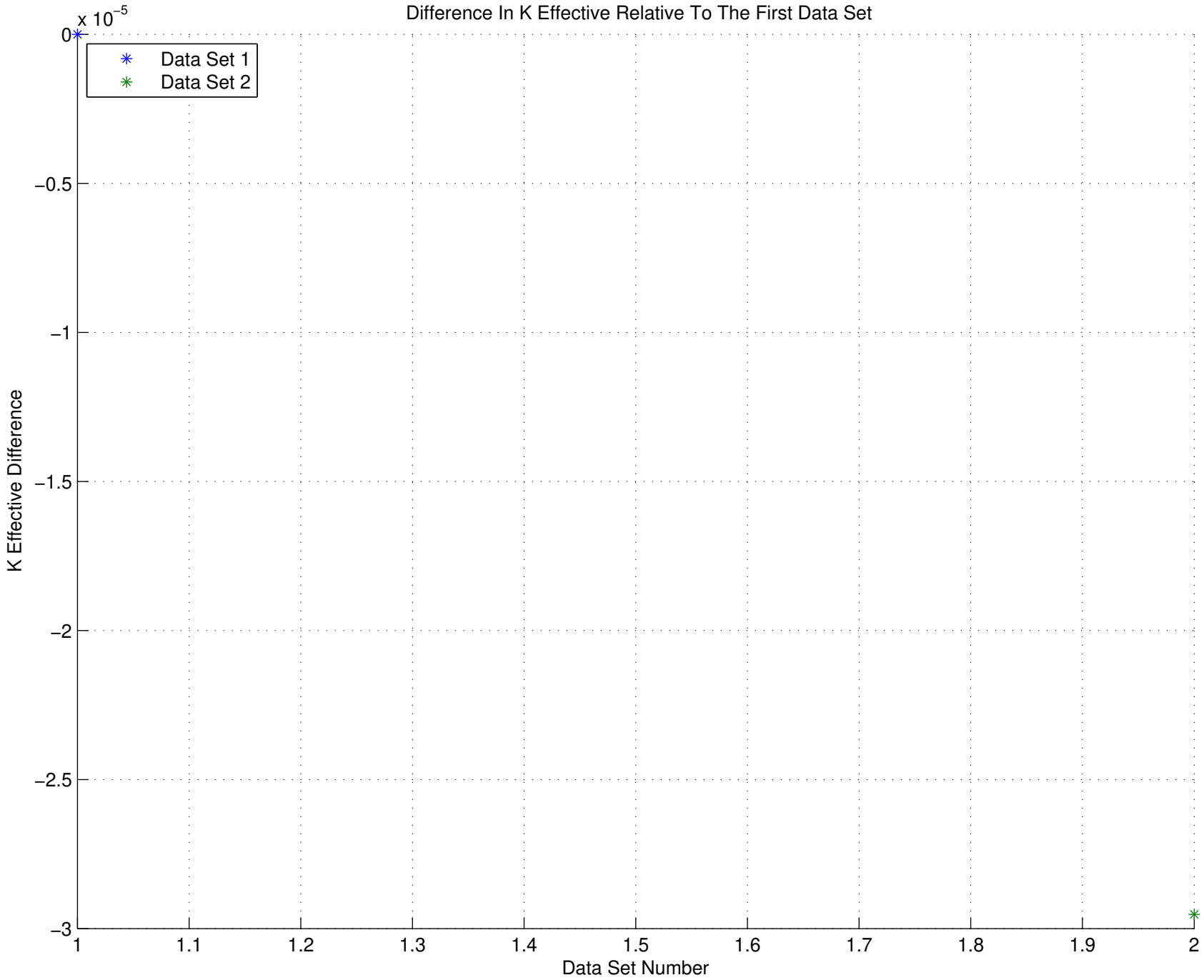

Peak Field Magnitude Relative To The First Data Set
x 10^-4
Data Set 1
Data Set 2
5
0
−5
−10
Abs By Peak Difference (T)
0
50
100
150
200
250
Peak Number

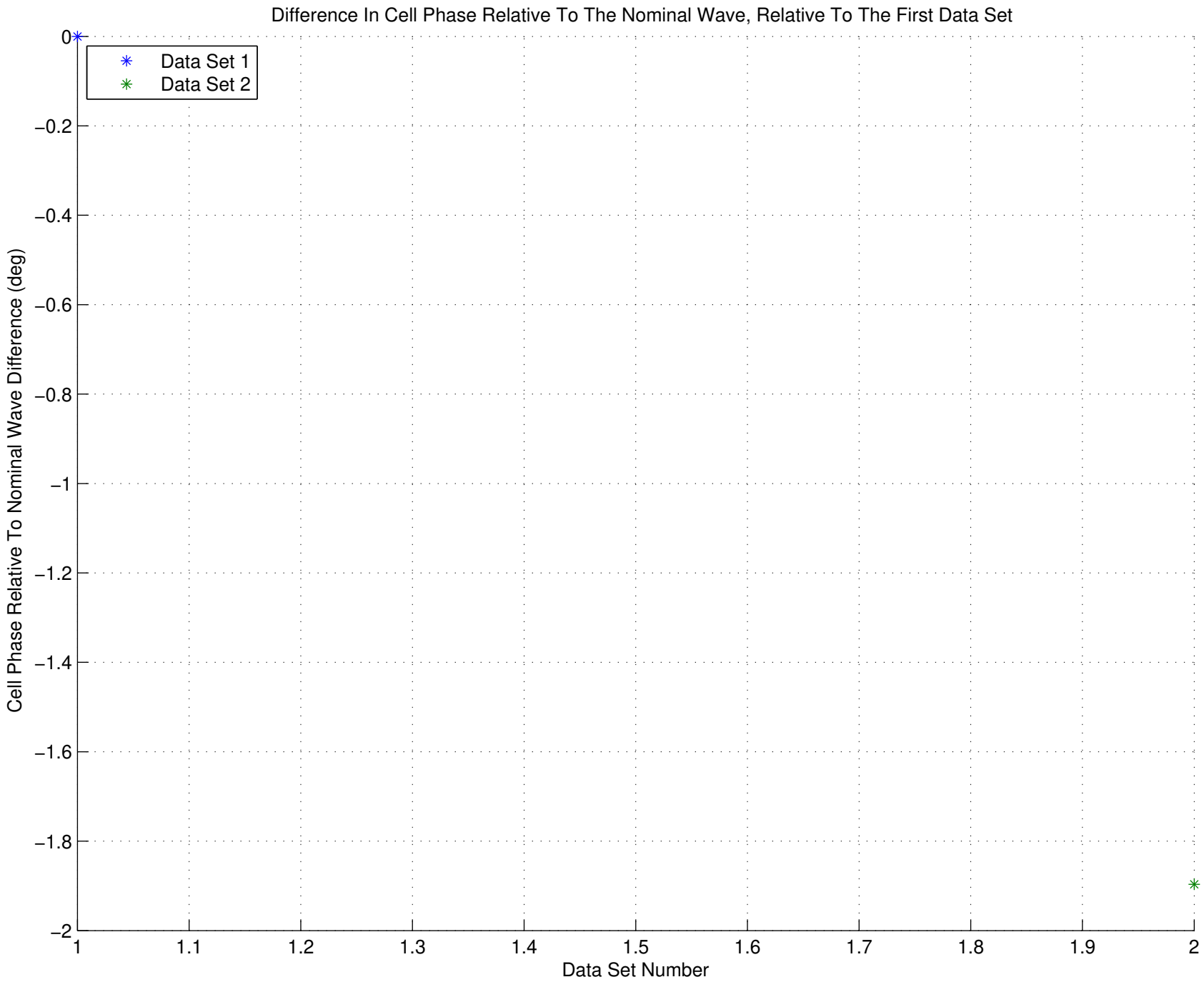

X Trajectory
x 10^-6
Data Set 1
Data Set 2
X (m)
Z (m)
2
1.5
1
0.5
0
−0.5
−1
−1.5
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
2.5


Y Trajectory
x 10^-7
Data Set 1
Data Set 2
Y (m)
Z (m)
4
3
2
1
0
−1
−2
−3
−4
−2.5
−2
−1.5
−1
−0.5
0
0.5
1
1.5
2
2.5


Phase Relative To The Phase Of The First Data Set
Data Set 1
Data Set 2
Phase Difference (deg)
Peak Number
1.5
1
0.5
0
−0.5
−1
−1.5
−2
0
50
100
150
200
250


Phase Relative To The Nominal Wave, Relative To The Phase Of The First Data Set
Data Set 1
Data Set 2
Phase Difference (deg)
Peak Number
1
0.5
0
−0.5
−1
−1.5
−2
−2.5
0
50
100
150
200
250


Difference In K Effective Relative To The First Data Set
x 10^-5
0
−0.5
−1
−1.5
−2
−2.5
−3
K Effective Difference
Data Set 1
Data Set 2
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2
Data Set Number


Difference In Cell Phase Relative To The Nominal Wave, Relative To The First Data Set
Data Set 1
Data Set 2
Cell Phase Relative To Nominal Wave Difference (deg)
Data Set Number
0
−0.2
−0.4
−0.6
−0.8
−1
−1.2
−1.4
−1.6
−1.8
−2
1
1.1
1.2
1.3
1.4
1.5
1.6
1.7
1.8
1.9
2