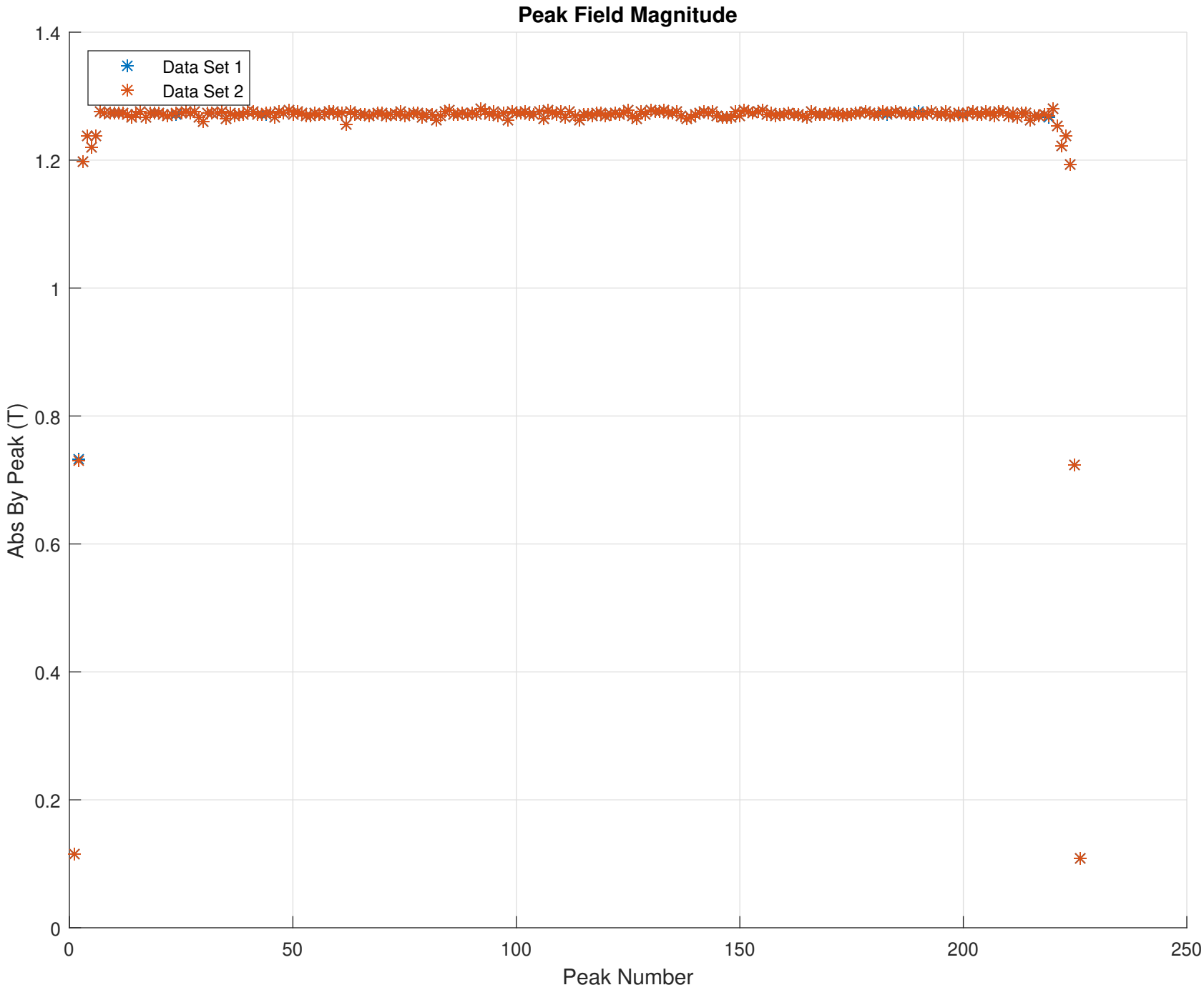
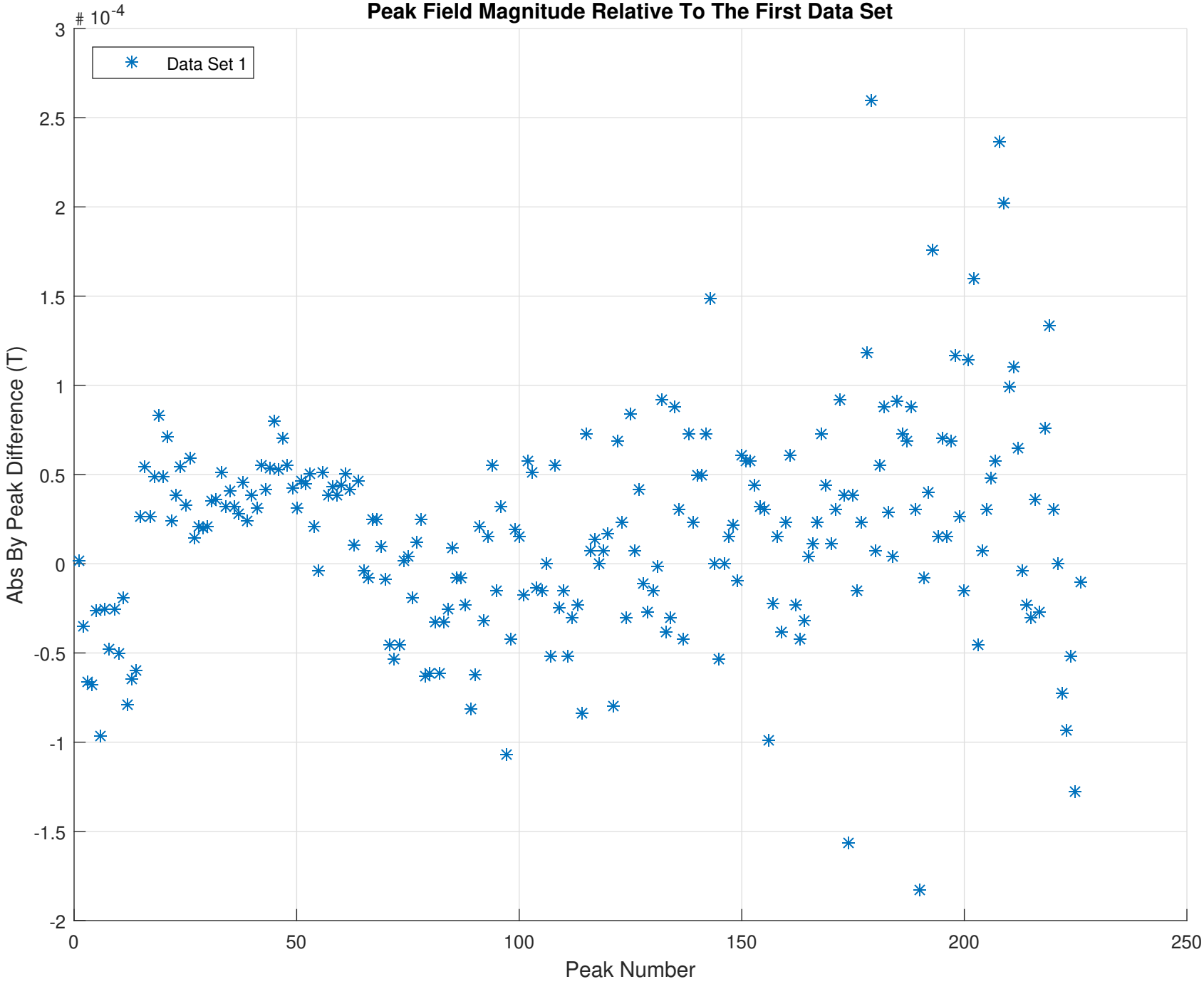
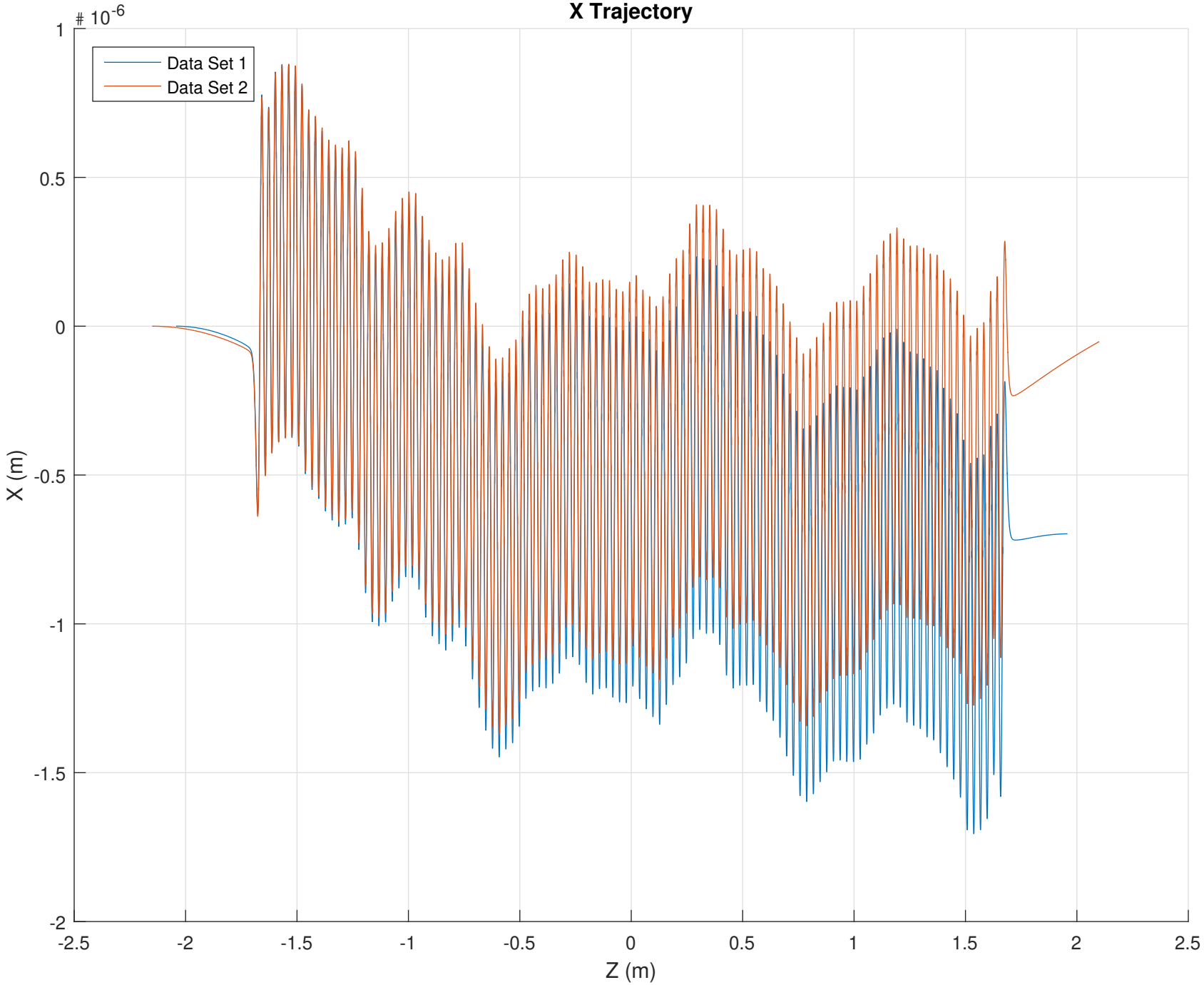
SLAC Magnetic Measurements
Undulator Analysis Comparison

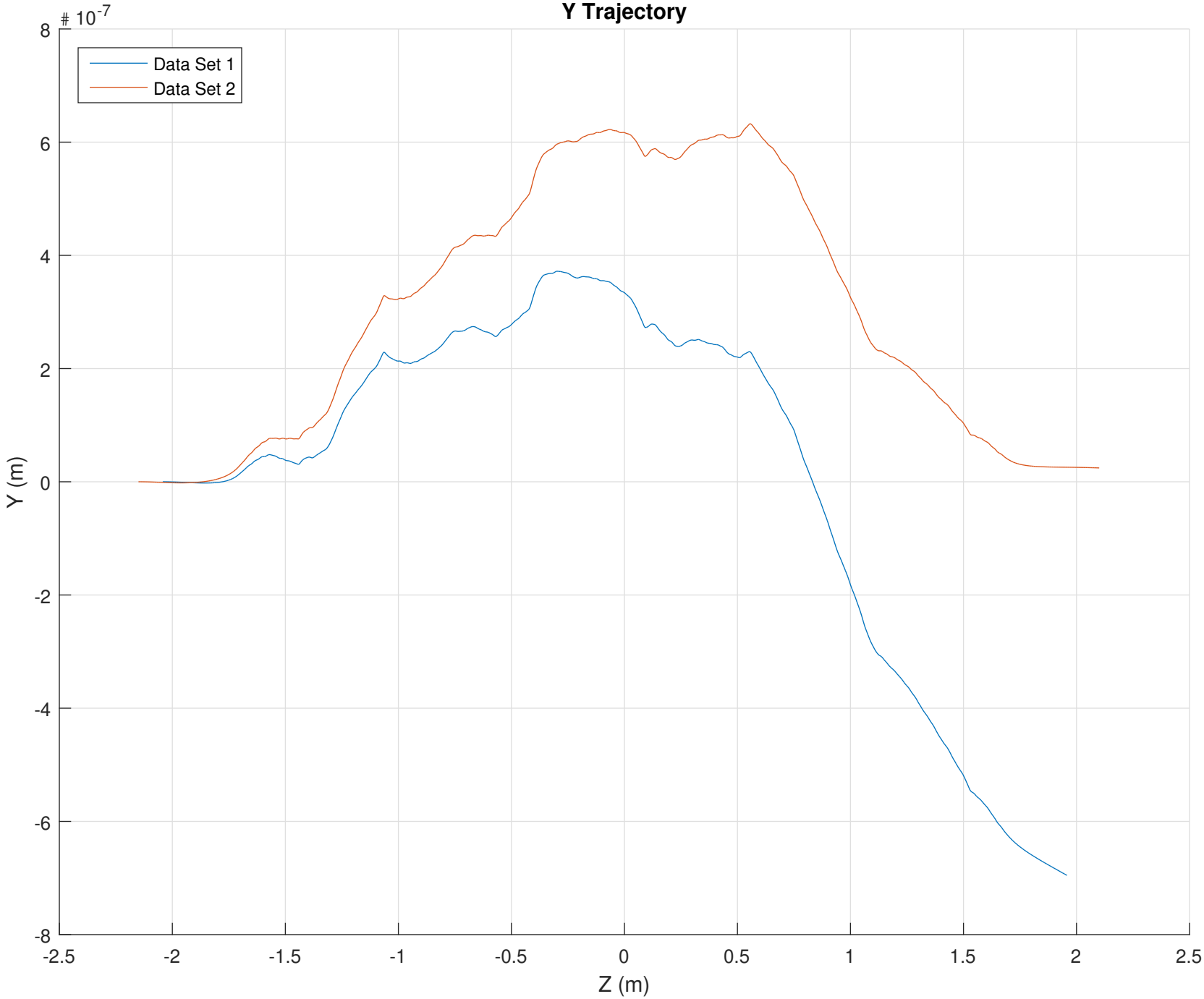
Title:
SN13, Datasets 2 and 3

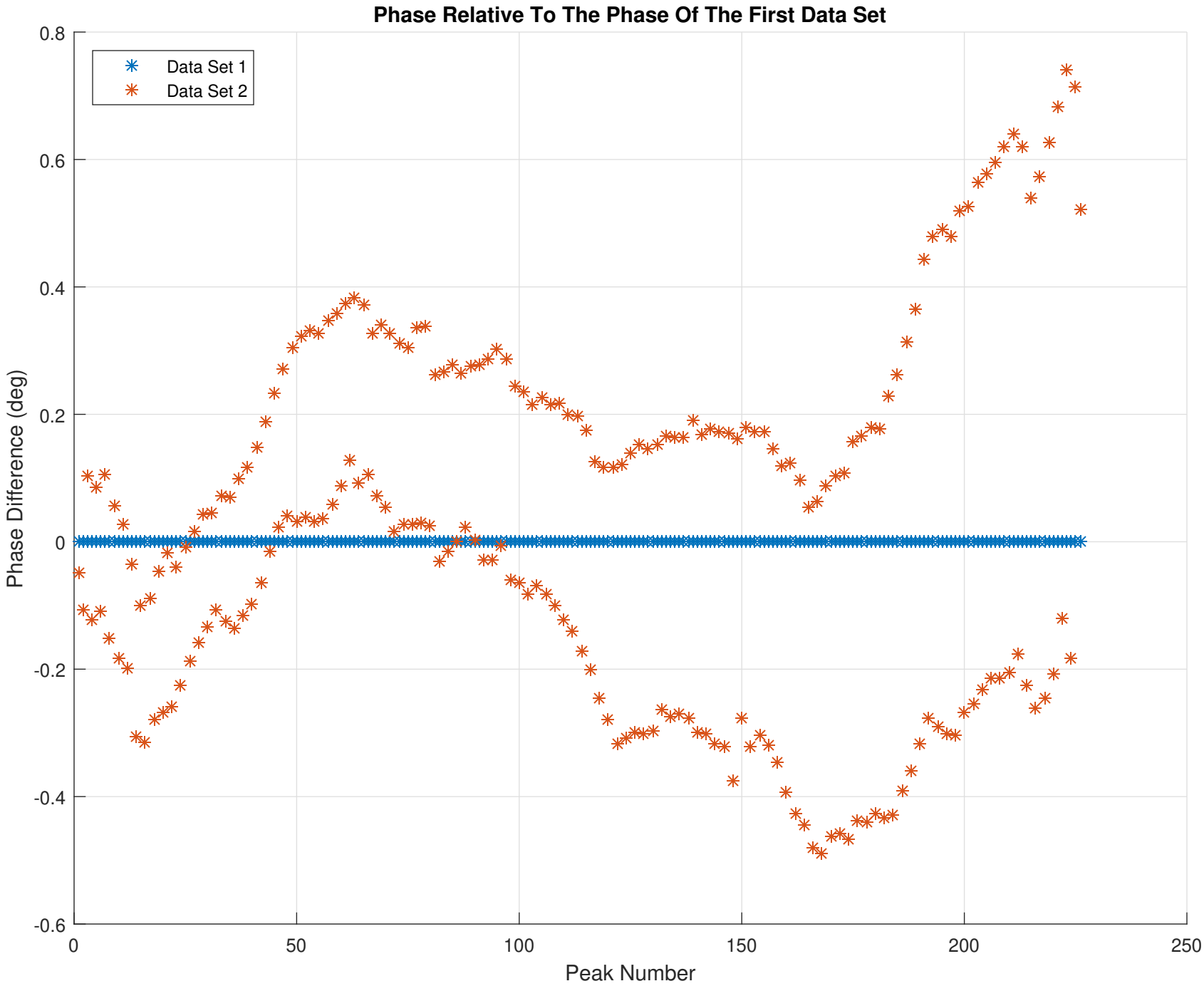
Input Files:
1) S:\MagData\LCLS\Undulator\L143-112000-18\DATASET0006\Fine Tuning\Z Scans\Run 015\pid_anal.mat
2) S:\MagData\LCLS\Undulator\L143-112000-18\DATASET0004\Fine Tuning\Z Scans\Run 025\id_anal.mat

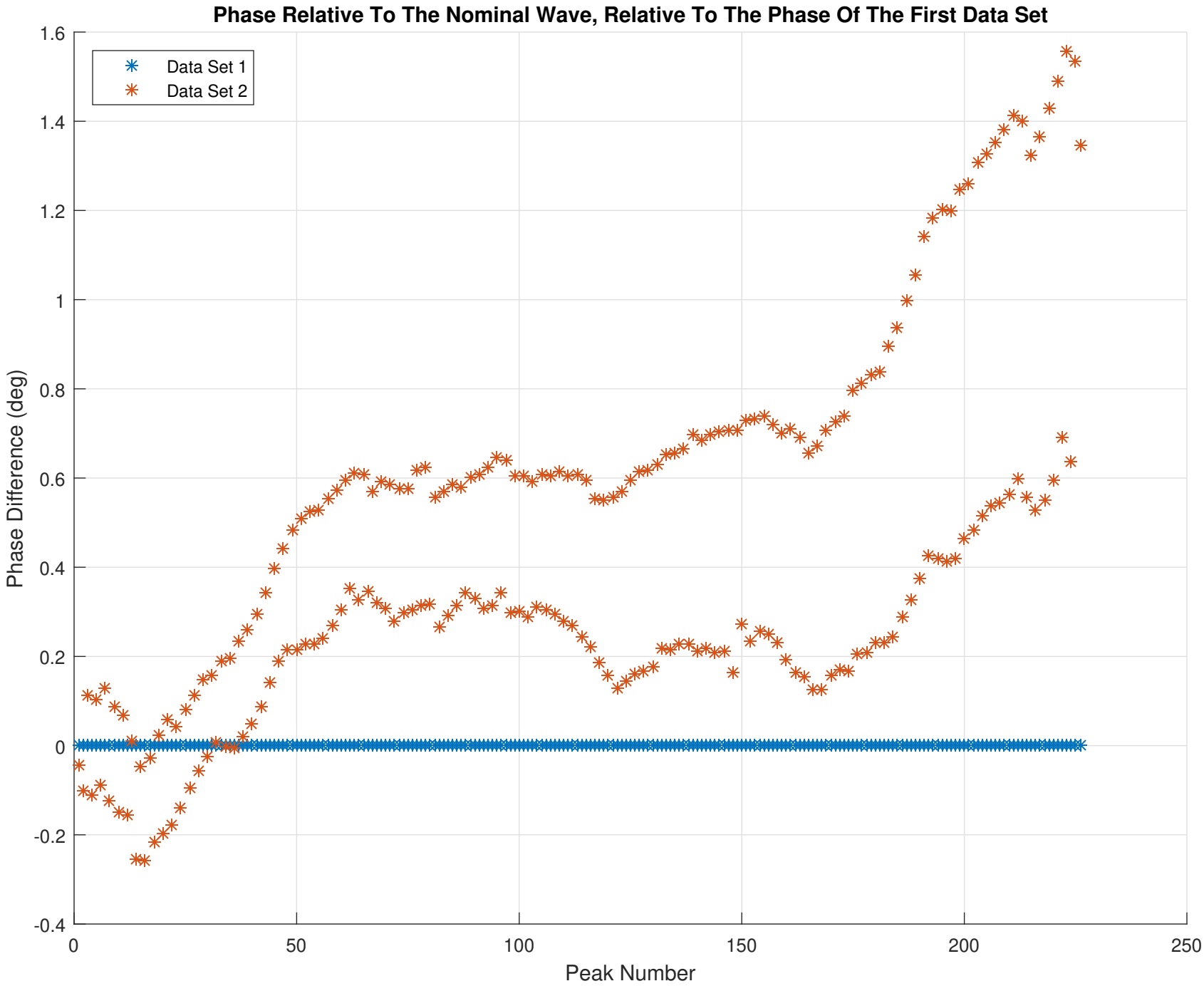

Peak Field Magnitude
Data Set 1
Data Set 2
Abs By Peak (T)
Peak Number
0
0.2
0.4
0.6
0.8
1
1.2
1.4
0
50
100
150
200
250

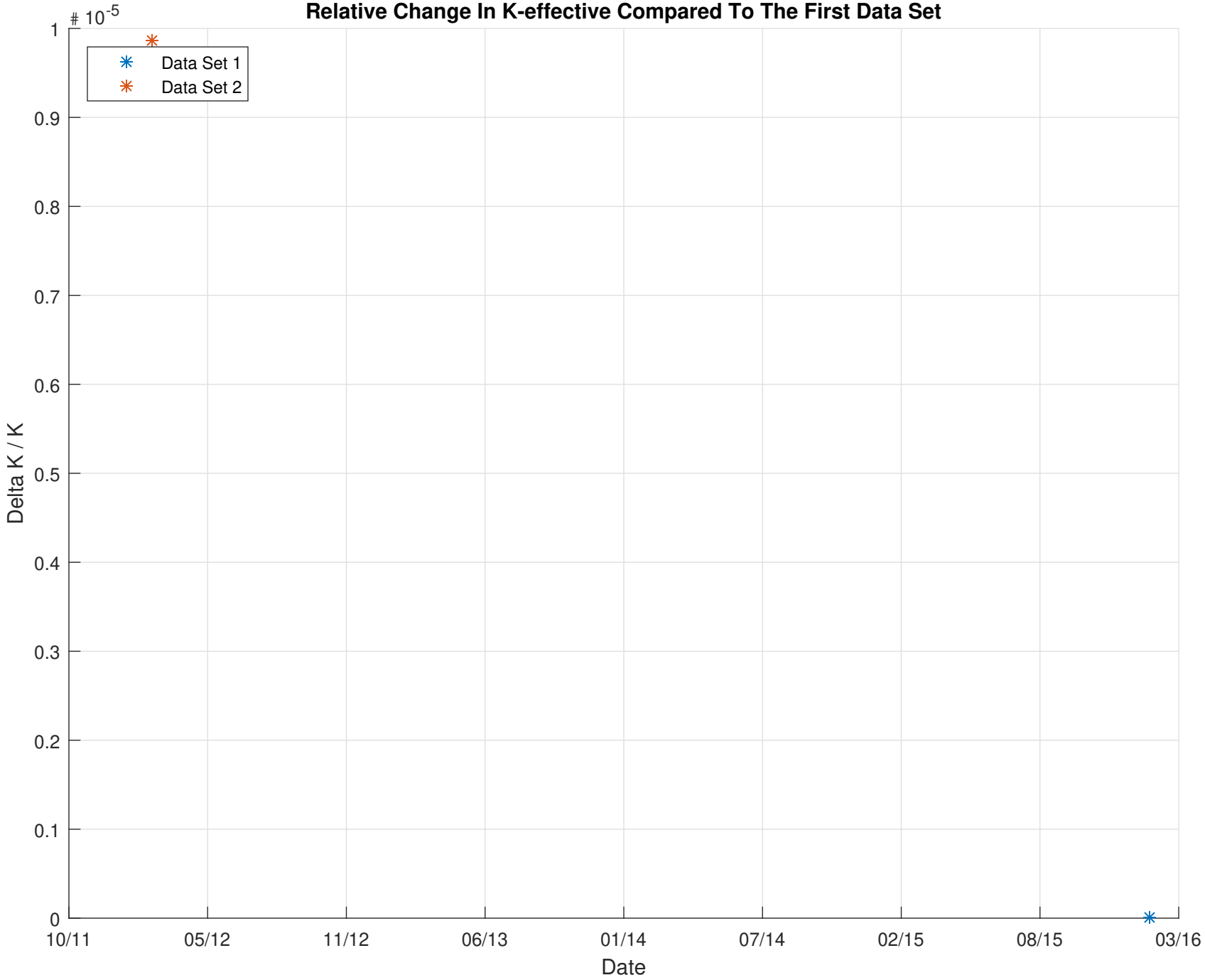

Peak Field Magnitude Relative To The First Data Set
10^-4
Data Set 1
Abs By Peak Difference (T)
Peak Number
3
2.5
2
1.5
1
0.5
0
-0.5
-1
-1.5
-2
0
50
100
150
200
250

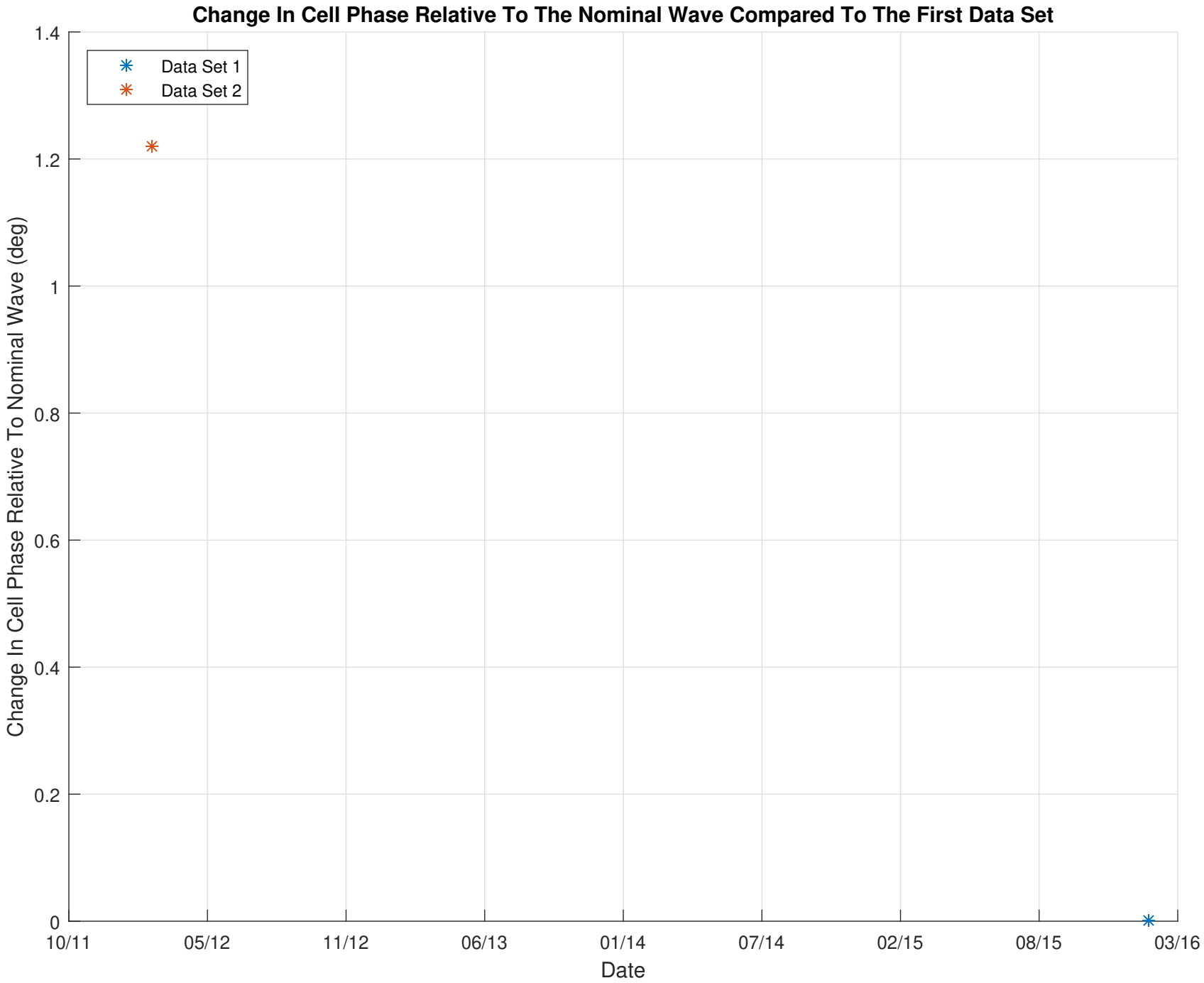

X Trajectory
10^-6
Data Set 1
Data Set 2
X (m)
Z (m)
1
0.5
0
-0.5
-1
-1.5
-2
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5

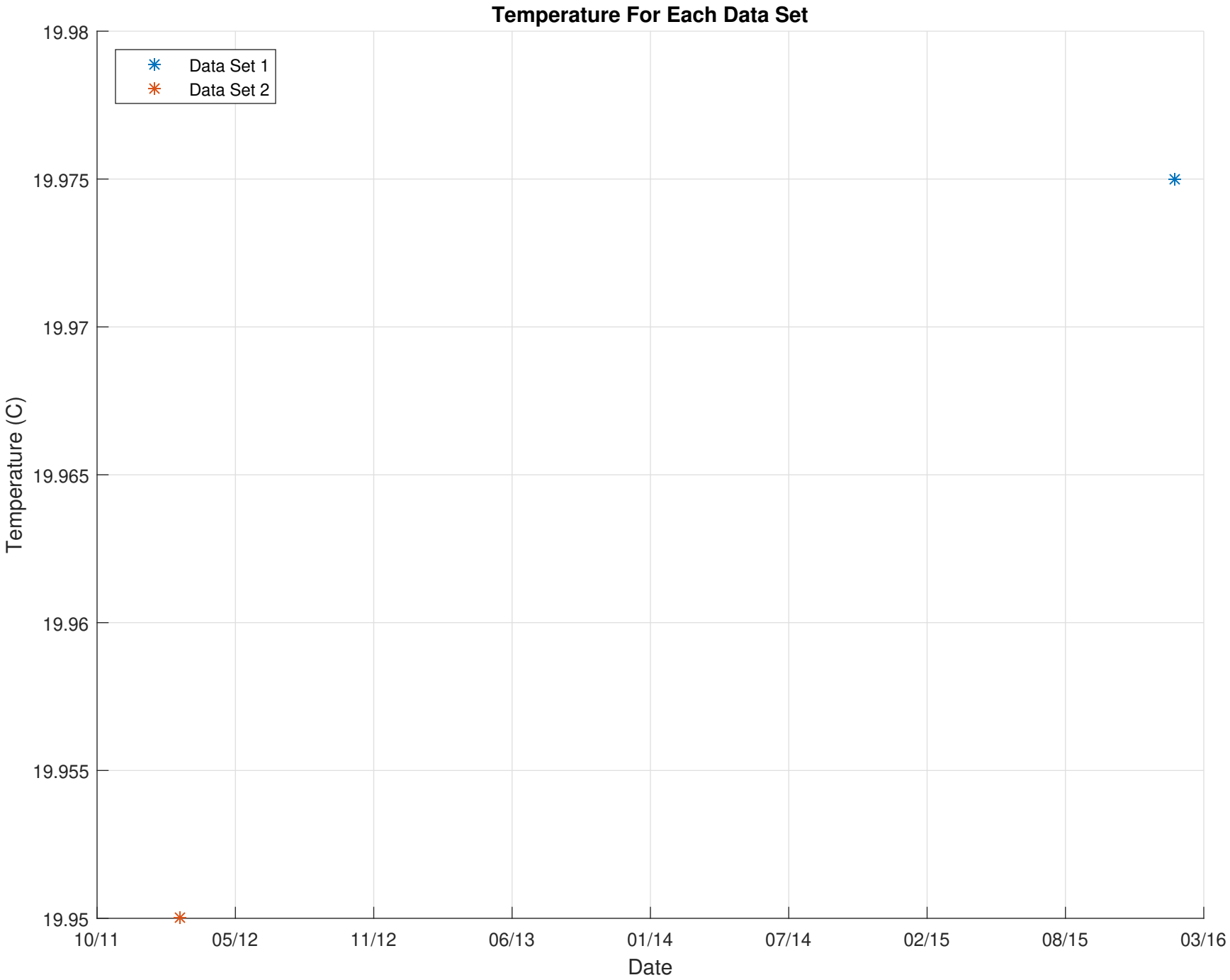

Y Trajectory
10^-7
Data Set 1
Data Set 2
8
6
4
2
0
-2
-4
-6
-8
Y (m)
-2.5
-2
-1.5
-1
-0.5
0
0.5
1
1.5
2
2.5
Z (m)


Phase Relative To The Phase Of The First Data Set
Data Set 1
Data Set 2
Phase Difference (deg)
Peak Number
0.8
0.6
0.4
0.2
0
-0.2
-0.4
-0.6
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
1.6
1.4
1.2
1
0.8
0.6
0.4
0.2
0
-0.2
-0.4
0
50
100
150
200
250


Relative Change In K-effective Compared To The First Data Set
10^-5
Data Set 1
Data Set 2
Delta K / K
Date
1
0.9
0.8
0.7
0.6
0.5
0.4
0.3
0.2
0.1
0
10/11
05/12
11/12
06/13
01/14
07/14
02/15
08/15
03/16


Change In Cell Phase Relative To The Nominal Wave Compared To The First Data Set
Data Set 1
Data Set 2
Change In Cell Phase Relative To Nominal Wave (deg)
1.4
1.2
1
0.8
0.6
0.4
0.2
0
10/11
05/12
11/12
06/13
01/14
07/14
02/15
08/15
03/16
Date


Temperature For Each Data Set
Data Set 1
Data Set 2
19.98
19.975
19.97
19.965
19.96
19.955
19.95
Temperature (C)
10/11
05/12
11/12
06/13
01/14
07/14
02/15
08/15
03/16
Date