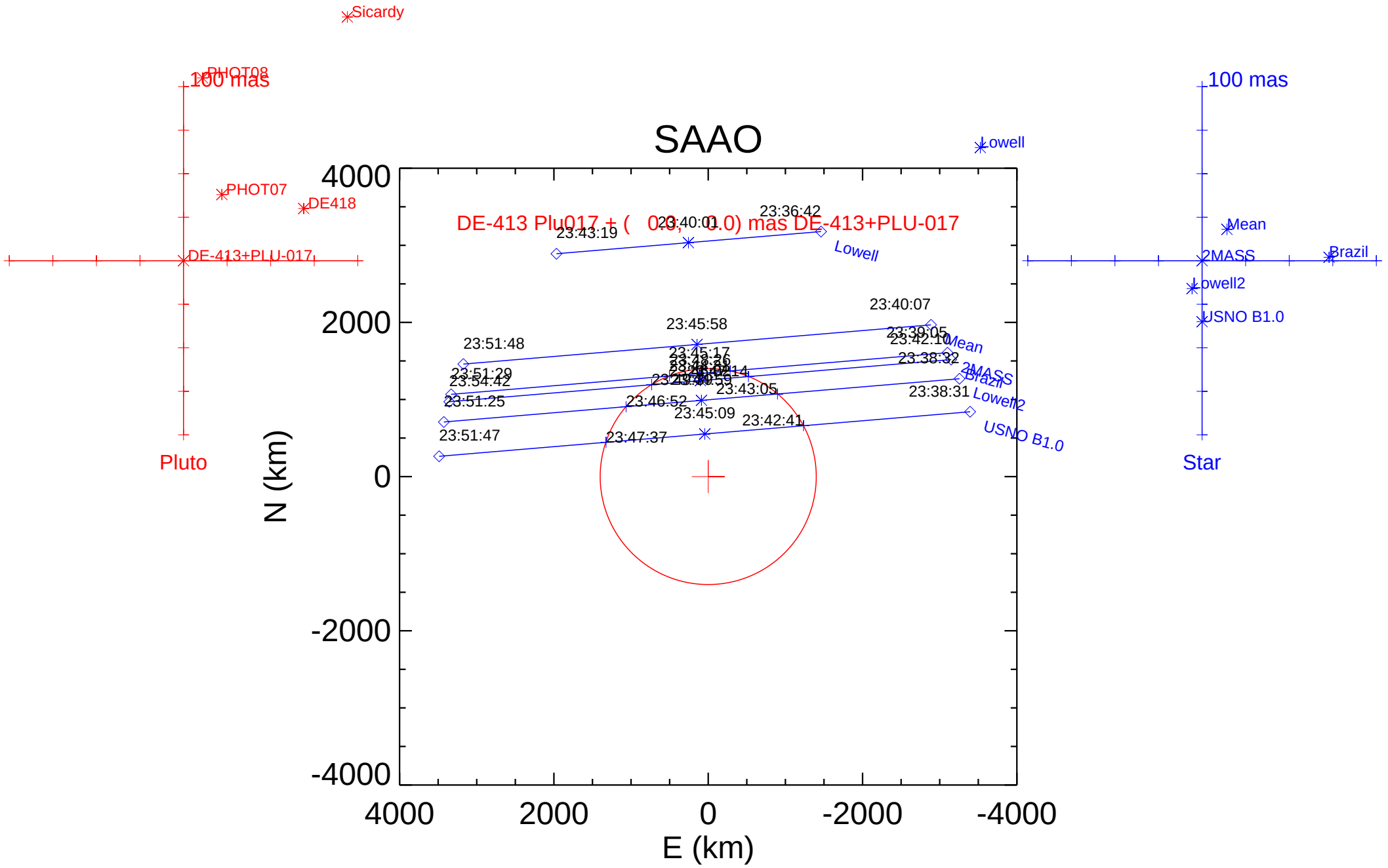
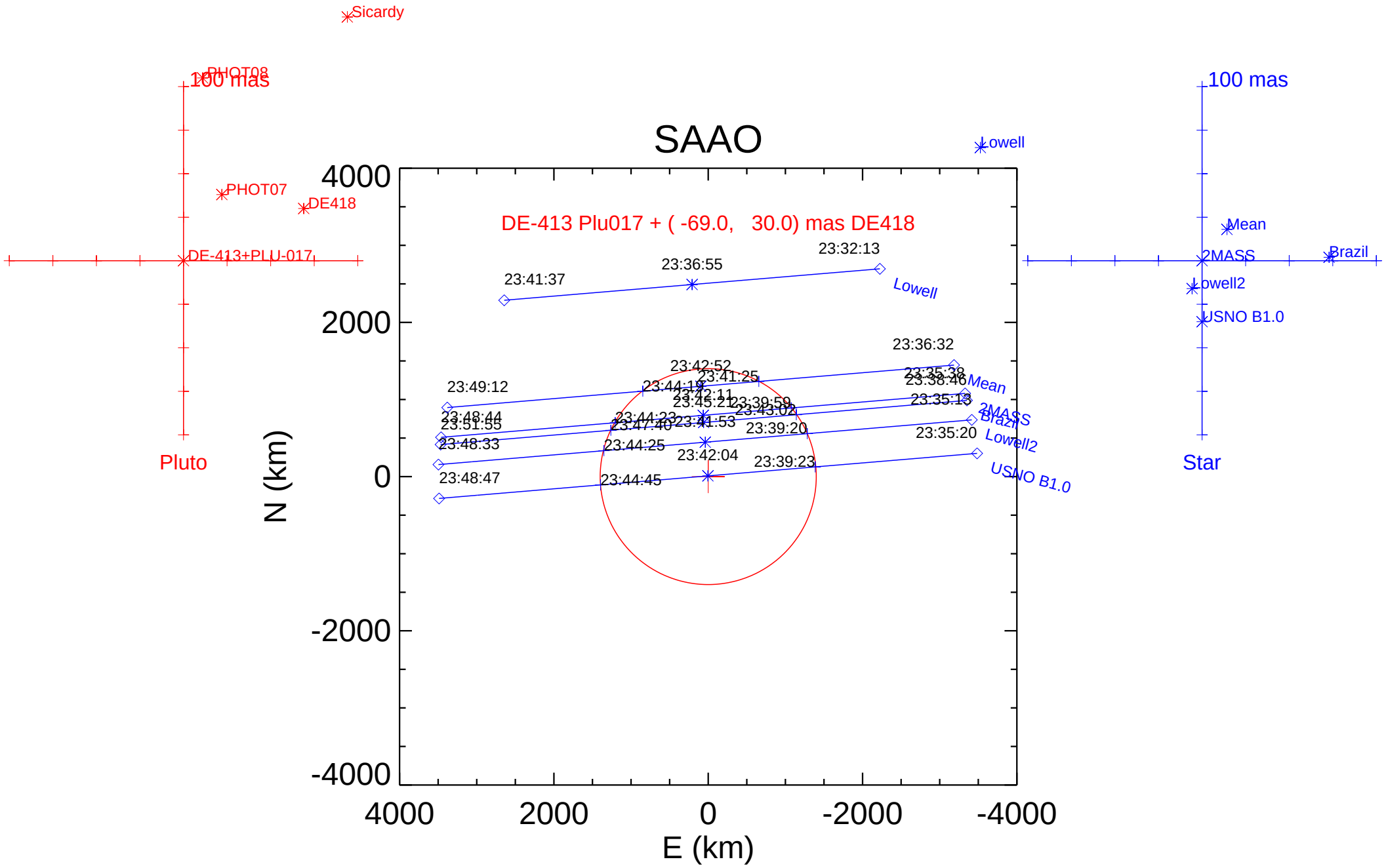

Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
SAAO
DE-413 Plu017 + (0.0, 0.0) mas DE-413+PLU-017
Lowell
23:36:42
23:43:19
23:40:01
23:40:07
23:45:58
23:51:48
23:39:05
23:42:10
Mean
23:38:32
2MASS
Brazil
23:51:29
23:54:42
23:51:25
23:43:05
23:46:52
23:38:31
Lowell2
23:45:09
23:42:41
23:51:47
23:47:37
USNO B1.0
N (km)
E (km)
4000
2000
0
-2000
-4000
100 mas
Lowell
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star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100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
SAAO
DE-413 Plu017 + (-69.0, 30.0) mas DE418
Lowell
100 mas
Mean
2MASS
Brazil
lowell2
USNO B1.0
Star
N (km)
E (km)
4000
2000
0
-2000
-4000
23:32:13
23:36:55
23:41:37
23:36:32
23:42:52
23:41:25
23:49:12
23:48:44
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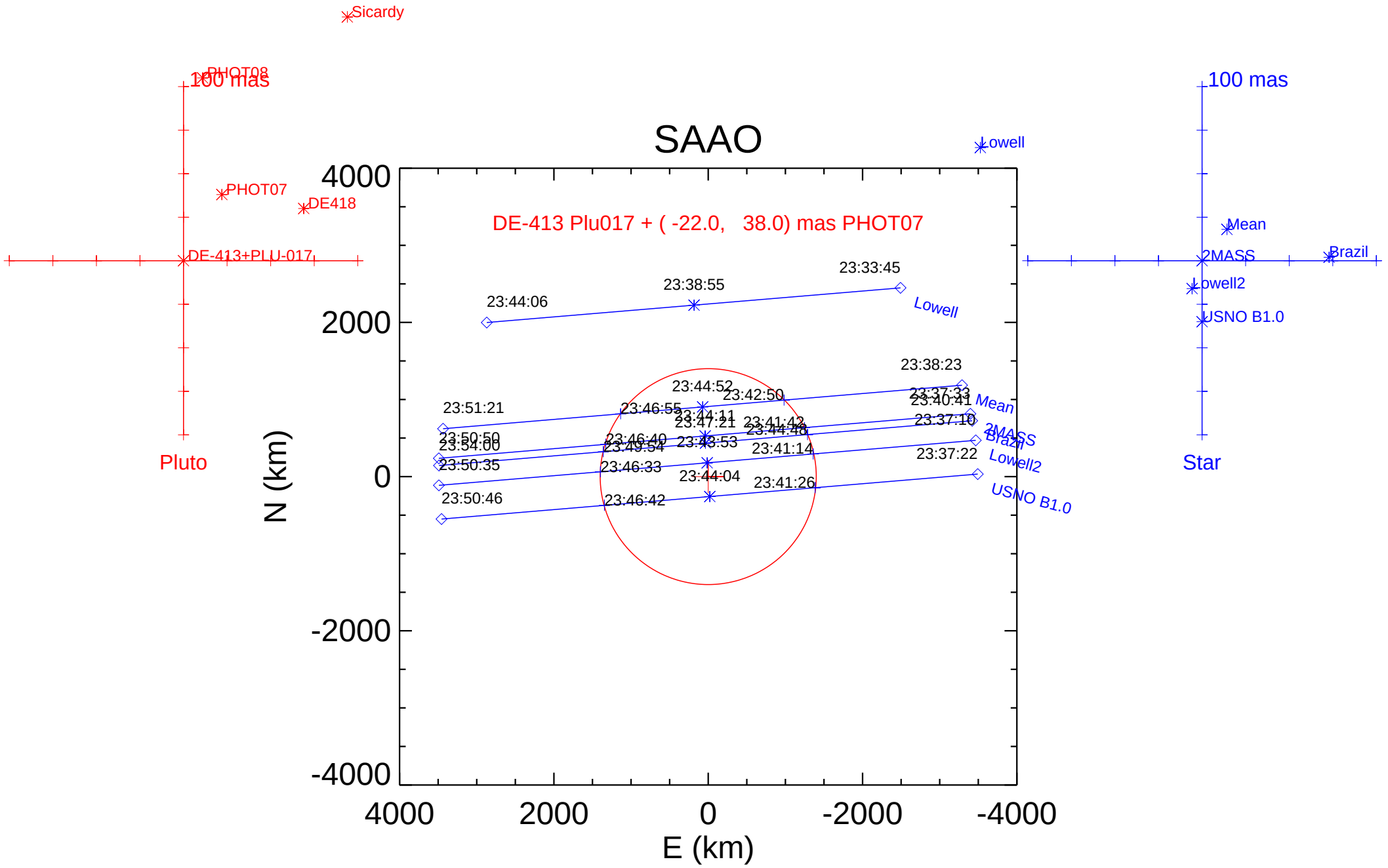
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Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
100 mas
Lowell
Mean
2MASS
Brazil
lowell2
USNO B1.0
Star
DE-413 Plu017 + (-22.0, 38.0) mas PHOT07
23:33:45
23:38:55
23:44:06
Lowell
23:38:23
23:44:52
23:42:50
23:40:41
Mean
23:51:21
23:46:55
23:44:11
23:47:21
23:41:42
23:37:10
2MASS
23:50:50
23:54:00
23:46:40
23:49:54
23:43:53
23:44:48
Brazil
23:50:35
23:46:33
23:41:14
23:37:22
Lowell2
23:44:04
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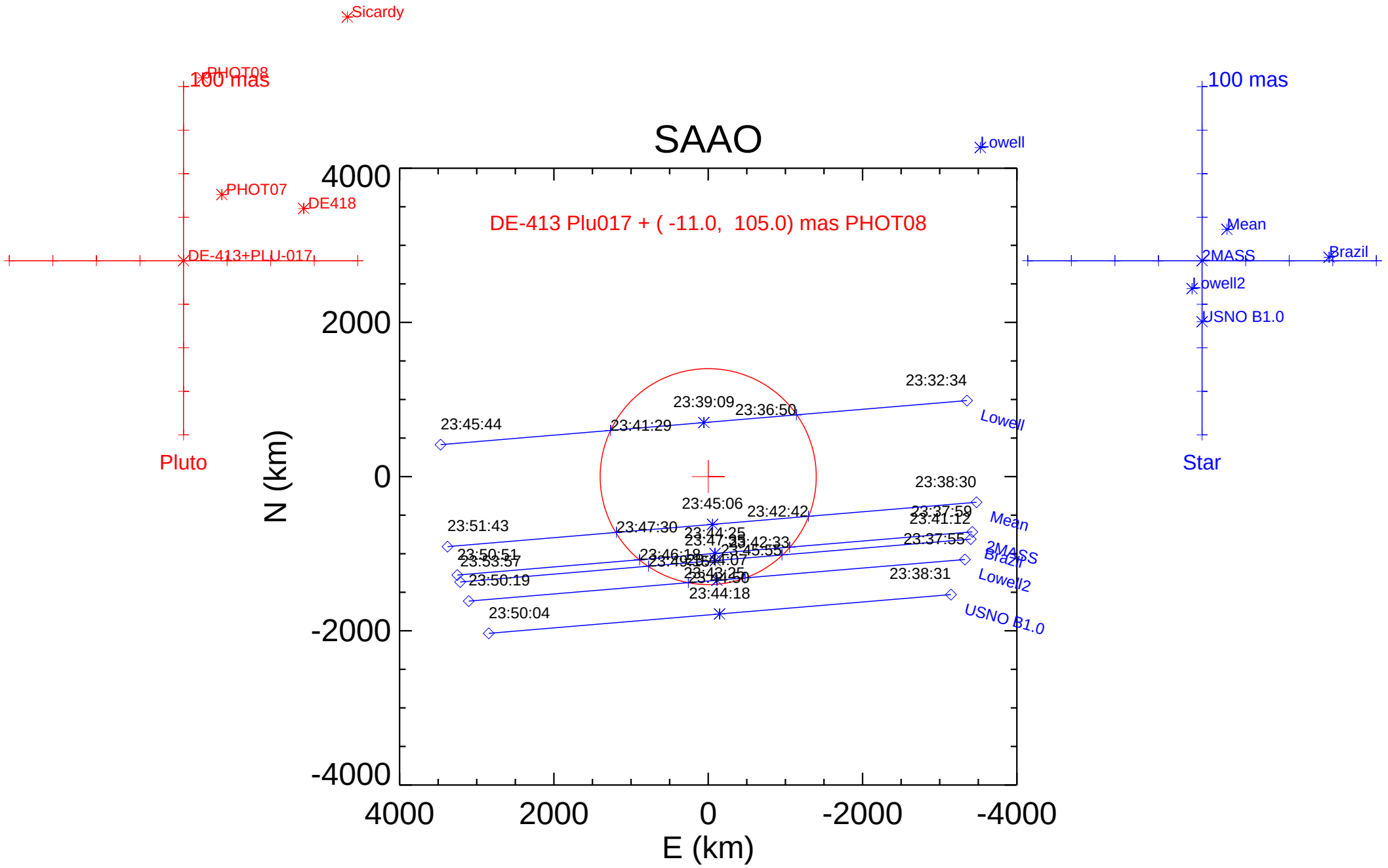
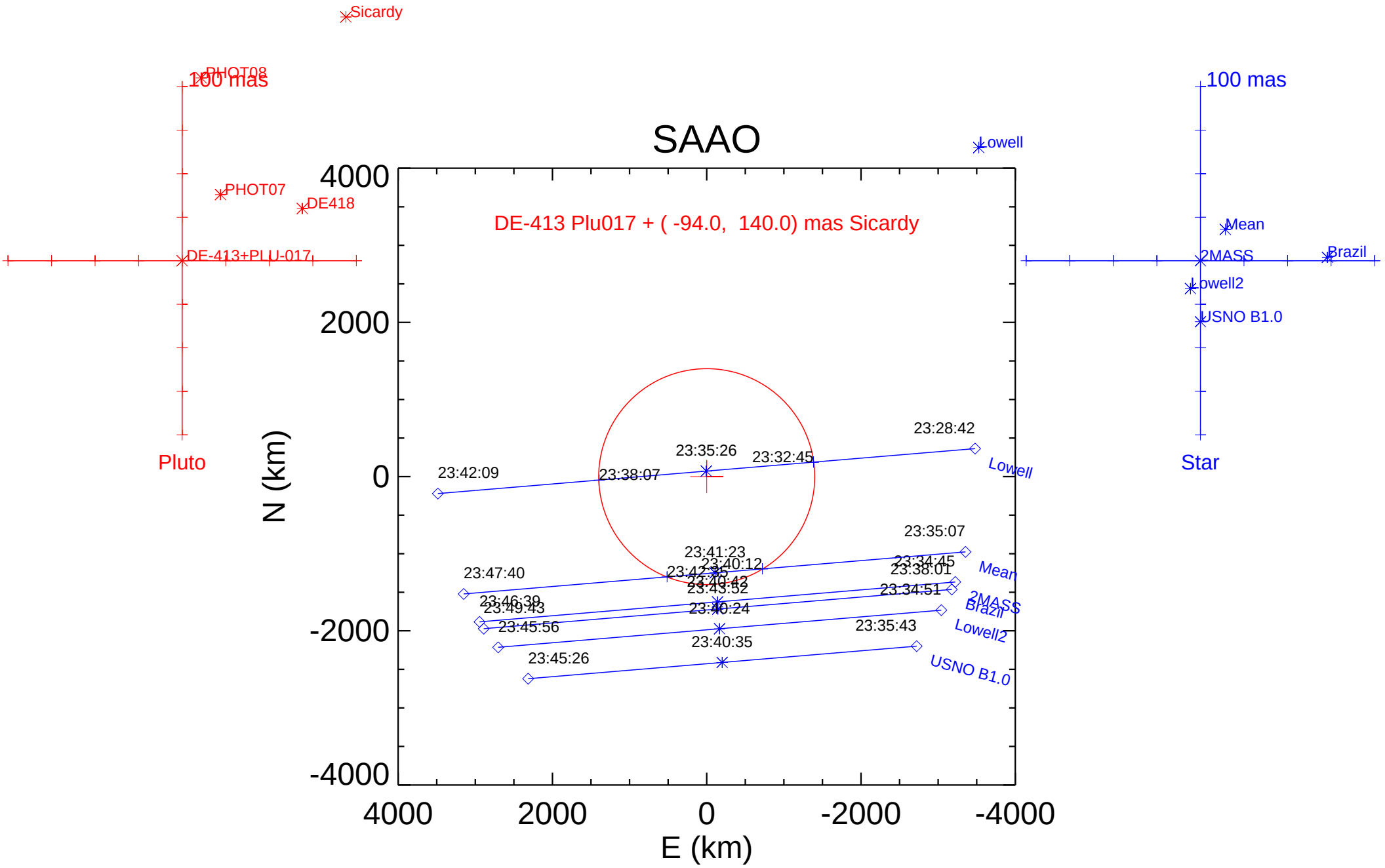
0
-2000
-4000
N (km)
E (km)



rfrench@dione1.wellesley.edu Tue Apr 14 16:28:08 2009 P090421_occpred_v4.pro /Volumes/dione_raid2/Research/PHOT/programs/P090421_occpred_v4.ps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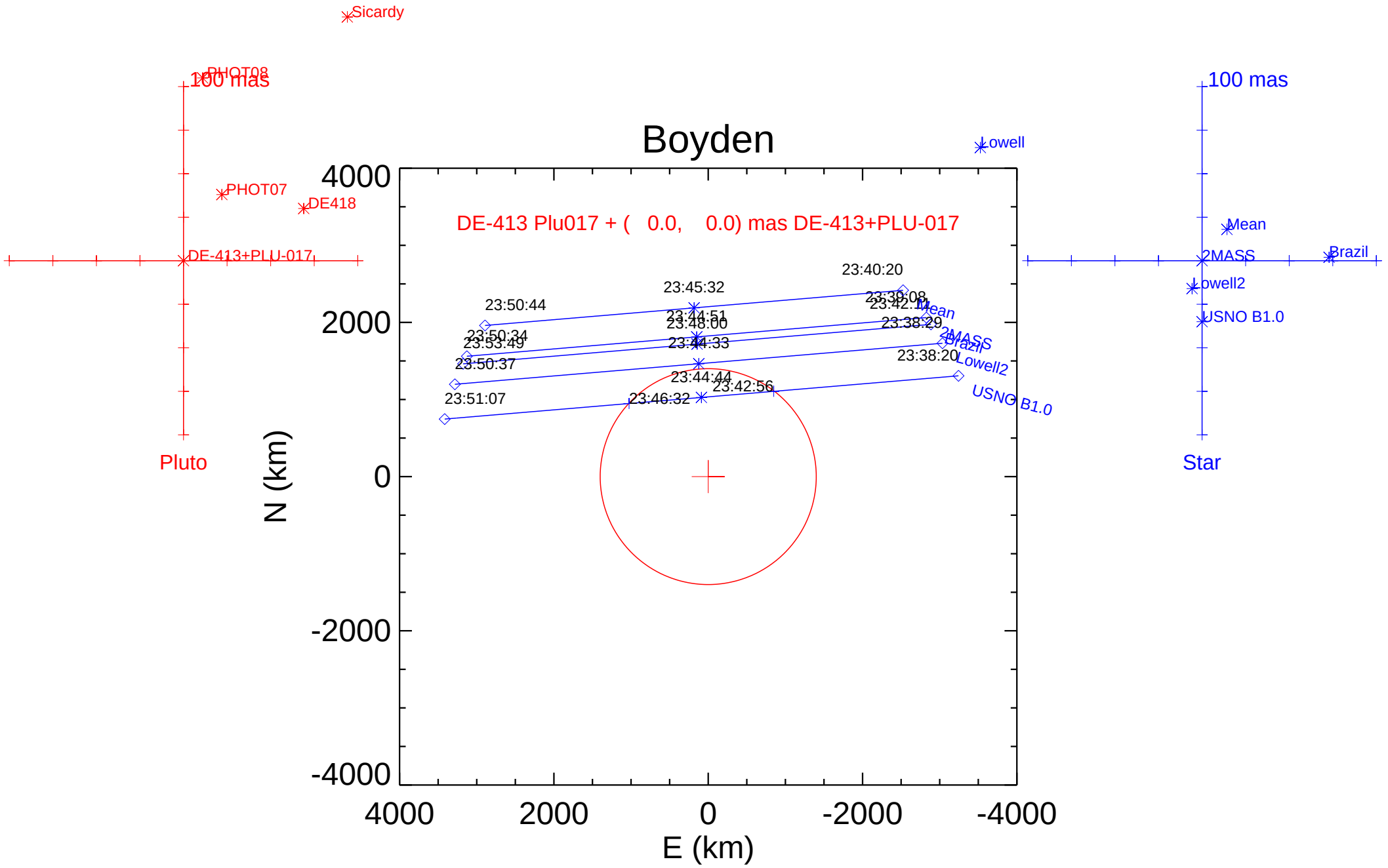
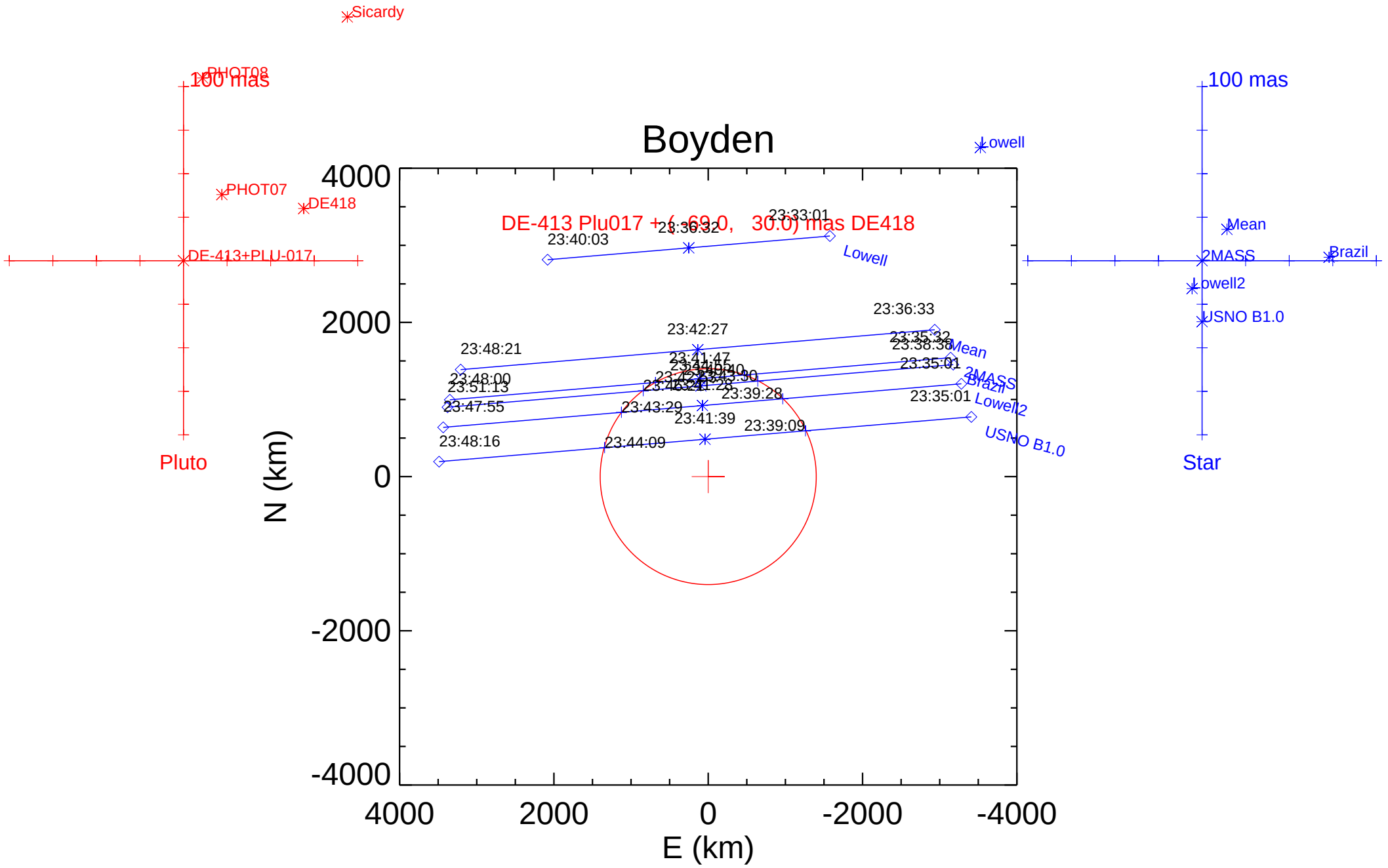
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
SAAO
Lowell
DE-413 Plu017 + (-94.0, 140.0) mas Sicardy
4000
2000
0
-2000
-4000
N (km)
E (km)
23:28:42
23:35:26
23:32:45
23:42:09
23:38:07
Lowell
23:35:07
23:41:23
23:40:12
23:34:45
23:47:40
23:38:01
Mean
23:43:52
23:34:51
23:46:39
23:49:43
23:40:24
2MASS
Brazil
23:45:56
23:35:43
Lowell2
23:40:35
23:45:26
USNO B1.0
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Boyden
Lowell
DE-413 Plu017 + (0.0, 0.0) mas DE-413+PLU-017
23:40:20
23:45:32
23:50:44
23:39:08
23:42:14
23:44:51
23:48:00
23:38:29
23:50:34
23:53:49
23:44:33
23:50:37
23:38:20
23:44:44
23:42:56
23:51:07
23:46:32
Mean
2MASS
Brazil
Lowell2
USNO B1.0
4000
2000
0
-2000
-4000
N (km)
E (km)
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star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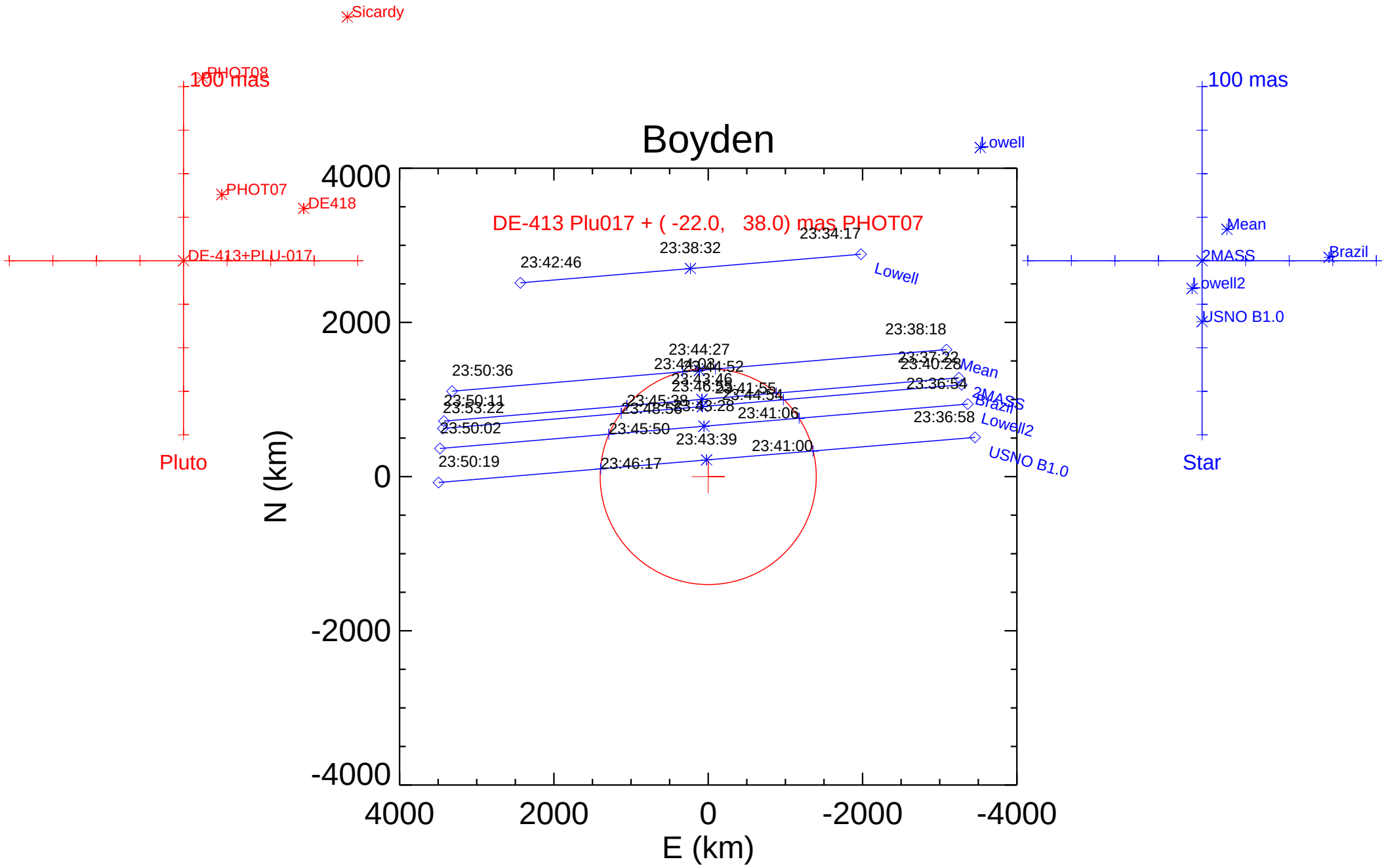
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Boyden
DE-413 Plu017 +(69.0, 30.0) mas DE418
Lowell
23:33:01
23:36:32
23:40:03
23:36:33
23:42:27
23:48:21
23:48:00
23:51:13
23:47:55
23:48:16
23:39:28
23:43:29
23:41:39
23:39:09
23:44:09
23:35:01
Mean
2MASS
Brazil
Lowell2
USNO B1.0
N (km)
E (km)
4000
2000
0
-2000
-4000
100 mas
Mean
2MASS
Brazil
lowell2
USNO B1.0
Star


Sicardy
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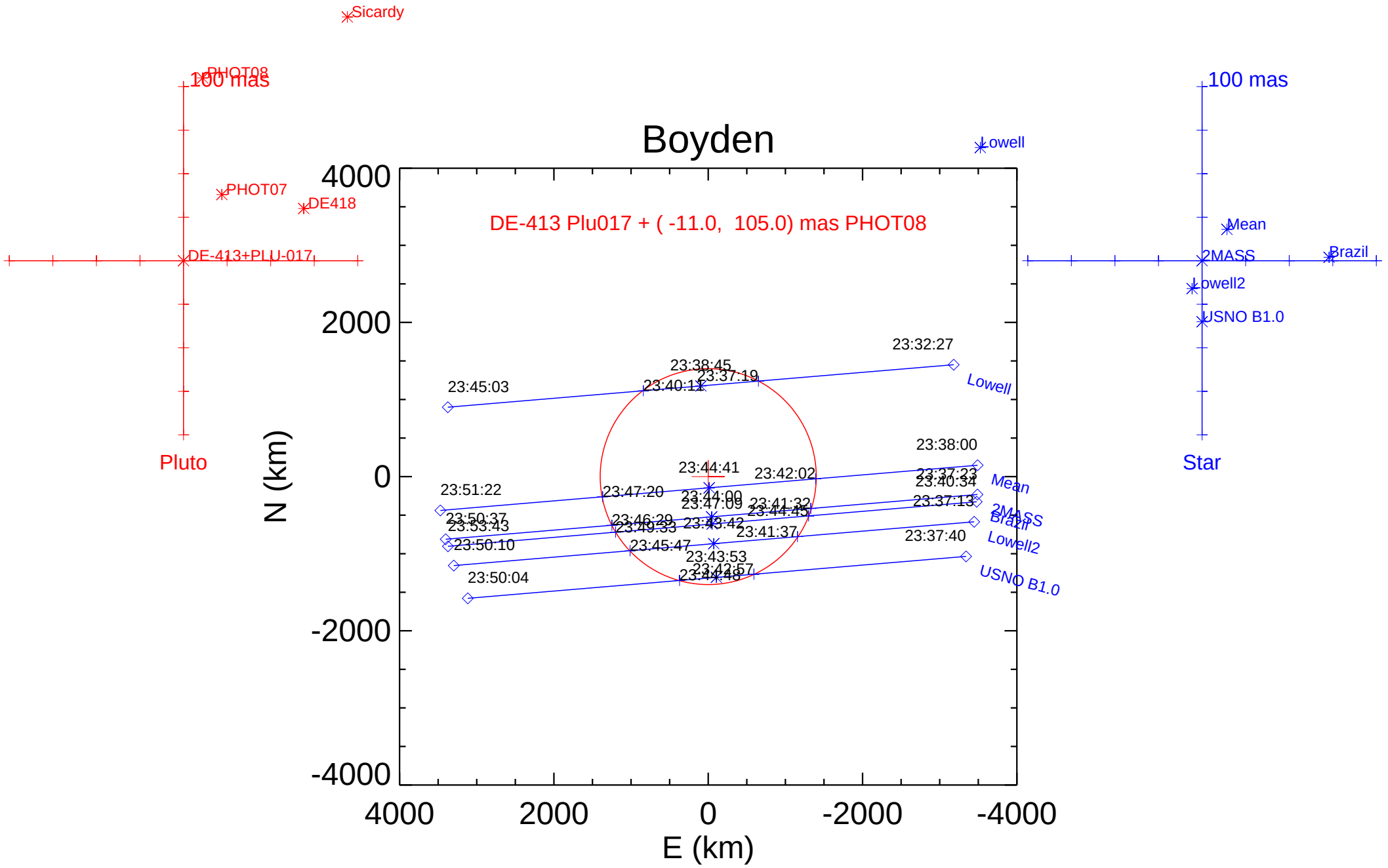
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Boyden
DE-413 Plu017 + (-22.0, 38.0) mas PHOT07
4000
2000
0
-2000
-4000
N (km)
E (km)
23:42:46
23:38:32
23:34:17
Lowell
23:38:18
23:44:27
23:50:36
23:50:11
23:53:22
23:50:02
23:50:19
23:45:50
23:43:39
23:41:06
23:41:00
23:46:17
23:40:28
23:36:54
23:36:58
Mean
2MASS
Brazil
Lowell2
USNO B1.0
100 mas
Star
Mean
2MASS
Brazil
lowell2
USNO B1.0


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Boyden
Lowell
DE-413 Plu017 + (-11.0, 105.0) mas PHOT08
4000
2000
0
-2000
-4000
N (km)
E (km)
23:32:27
23:38:45
23:37:19
23:40:11
23:45:03
Lowell
23:38:00
23:44:41
23:42:02
23:37:23
23:40:34
23:51:22
23:47:20
23:44:00
Mean
23:47:09
23:41:32
23:37:13
2MASS
23:50:37
23:46:29
23:44:45
Brazil
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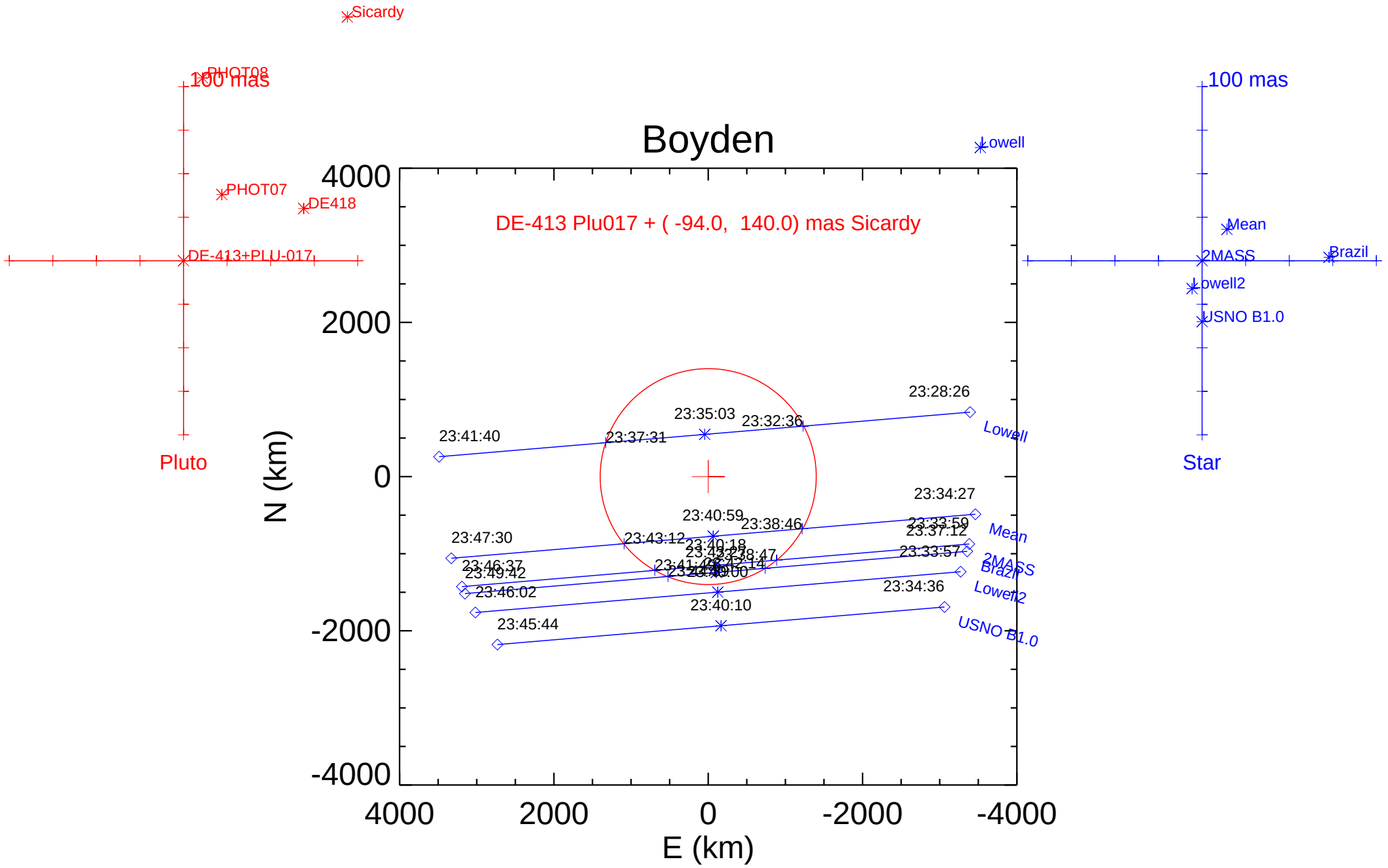
23:43:42
23:41:37
23:37:40
23:50:10
23:45:47
Lowell2
23:43:53
23:42:57
23:50:04
23:44:48
USNO B1.0
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star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100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
100 mas
Lowell
Mean
2MASS
Brazil
lowell2
USNO B1.0
Star
Boyden
DE-413 Plu017 + (-94.0, 140.0) mas Sicardy
4000
2000
0
-2000
-4000
N (km)
E (km)
23:28:26
23:35:03
23:32:36
23:41:40
23:37:31
Lowell
23:34:27
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Mean
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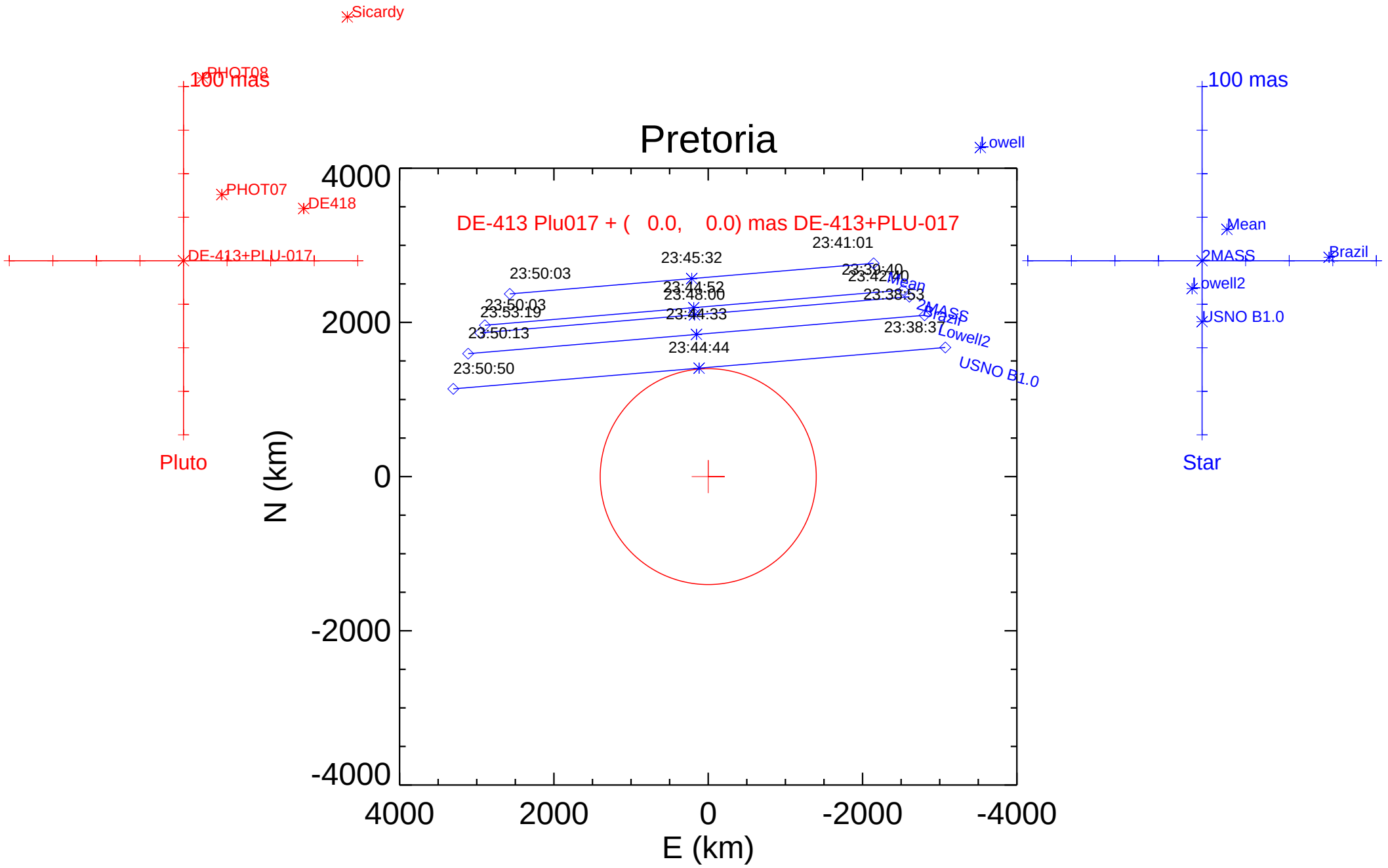
USNO B1.0


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Pretoria
Lowell
DE-413 Plu017 + (0.0, 0.0) mas DE-413+PLU-017
23:41:01
23:45:32
23:50:03
23:44:52
23:48:00
23:50:03
23:53:19
23:44:33
23:50:13
23:44:44
23:50:50
Mean
2MASS
Brazil
Lowell2
USNO B1.0
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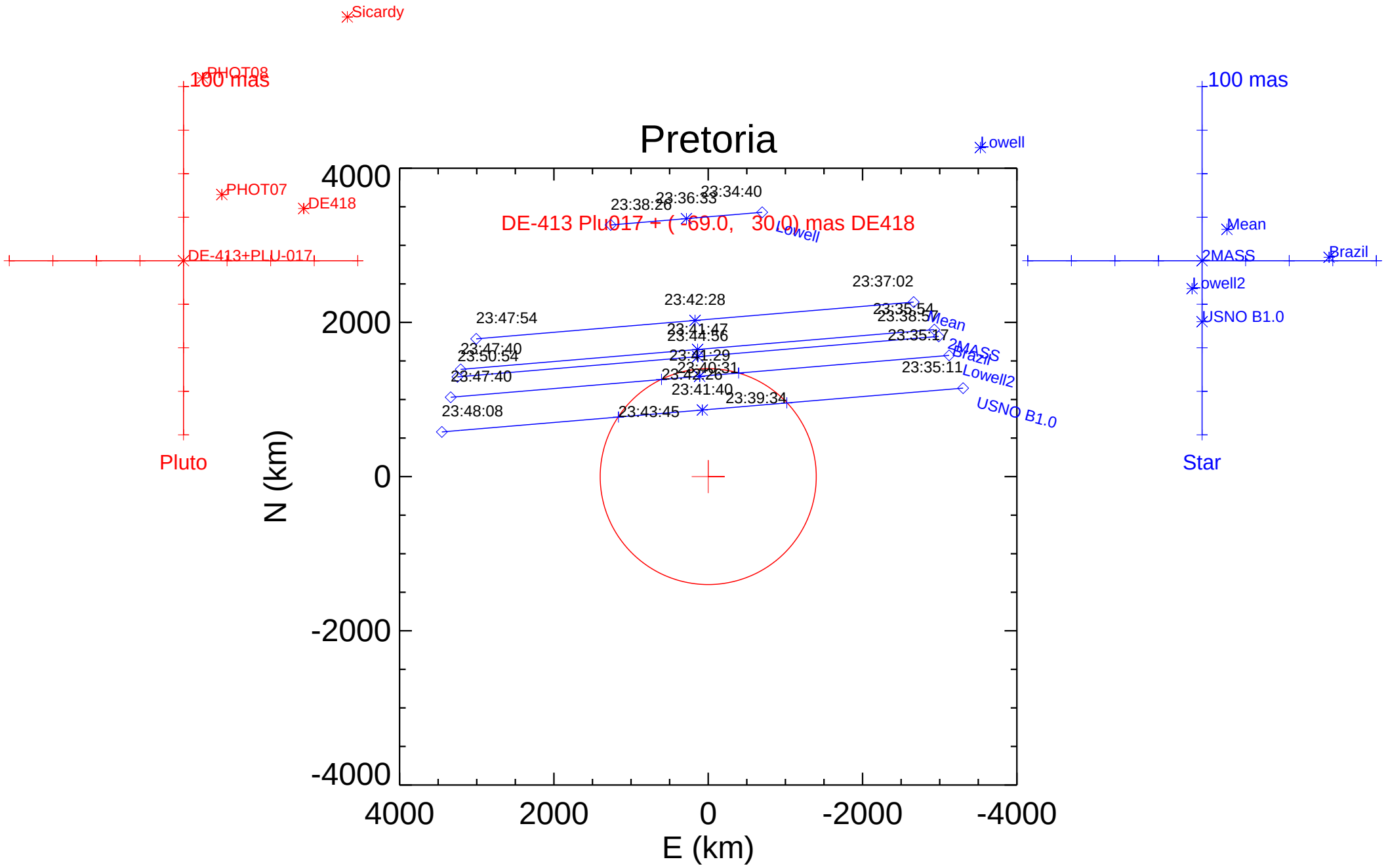
-4000
N (km)
E (km)
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Pretoria
DE-413 Pluto17 + (-69.0, 30.0) mas DE418
Lowell
23:34:40
23:36:33
23:38:26
23:37:02
23:42:28
23:47:54
23:41:47
23:44:56
23:47:40
23:50:54
23:41:29
23:40:31
23:42:26
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23:41:40
23:39:34
23:48:08
23:43:45
23:35:54
23:38:57
23:35:17
23:35:11
Mean
2MASS
Brazil
Lowell2
USNO B1.0
4000
2000
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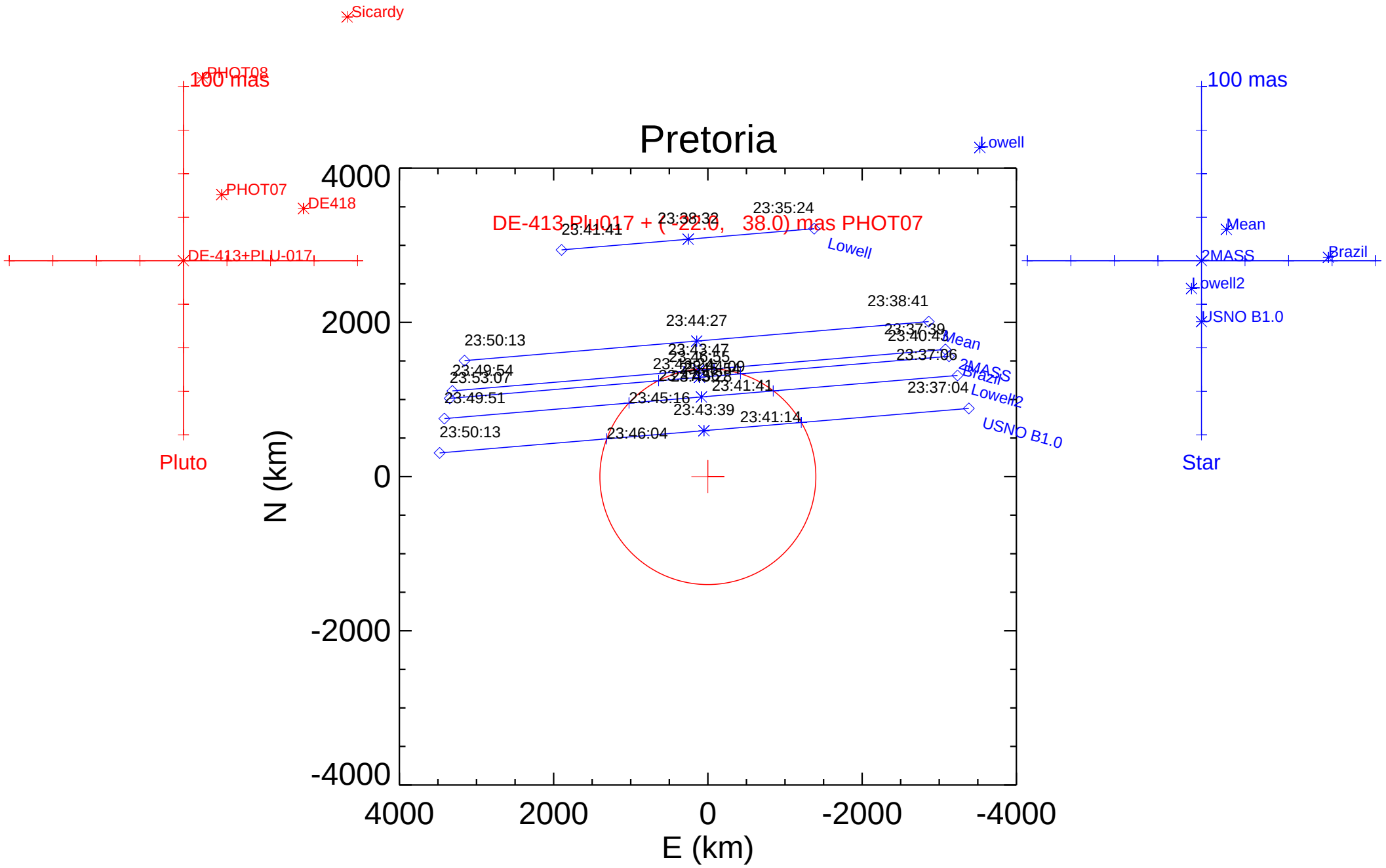
-2000
-4000
N (km)
E (km)
100 mas
Lowell
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star


Pretoria
DE-413+PLU-017 + (-22.0, 38.0) mas PHOT07
Sicardy
PHOT08
100 mas
PHOT07
DE418
DE-413+PLU-017
Pluto
100 mas
Lowell
Mean
2MASS
Brazil
lowell2
USNO B1.0
Star
4000
2000
0
-2000
-4000
N (km)
E (km)
23:41:41
23:38:32
23:35:24
Lowell
23:50:13
23:44:27
23:38:41
23:49:54
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23:50:13
23:45:16
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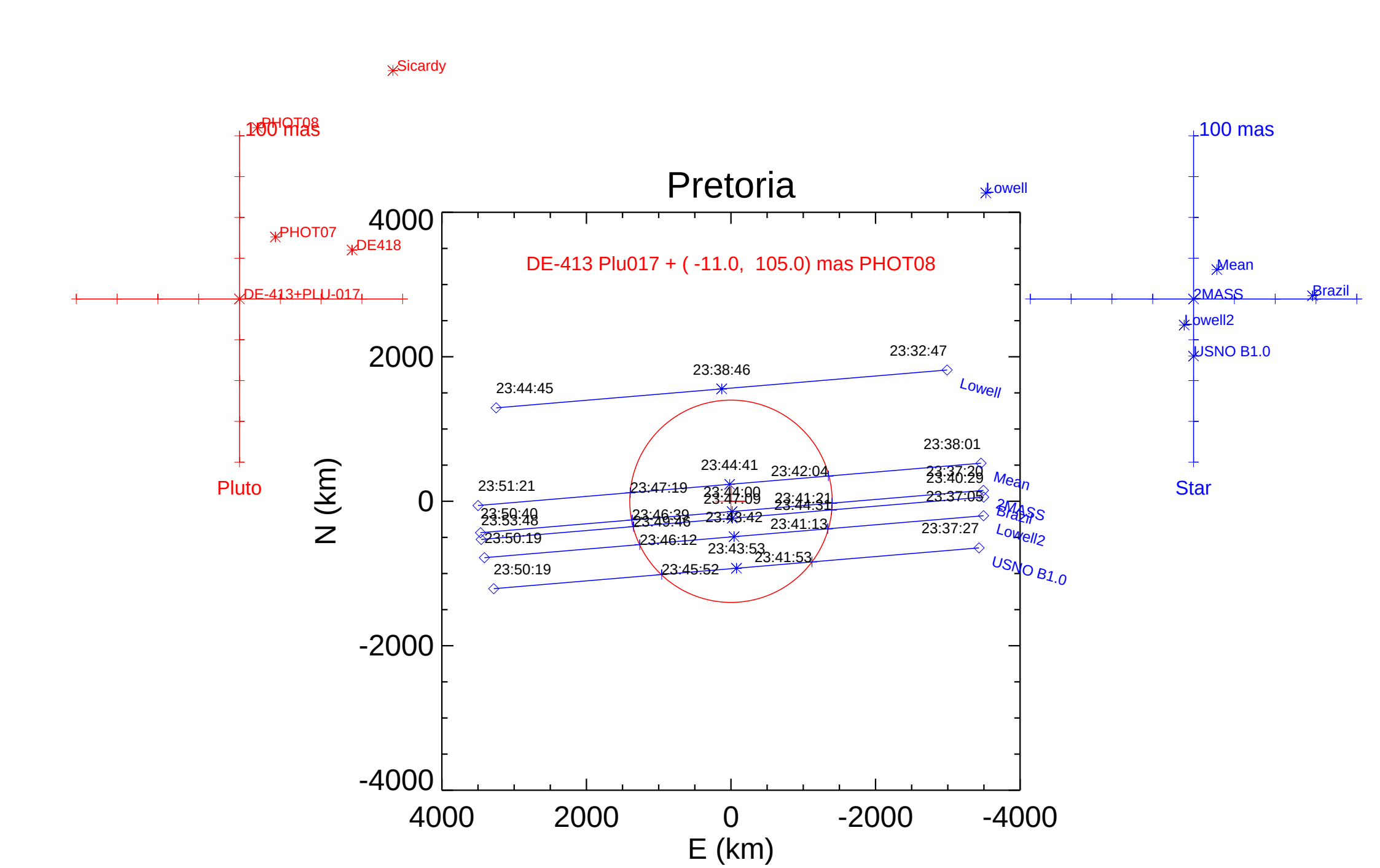
23:46:04
23:41:41
23:37:04
Mean
2MASS
Brazil
Lowell2
USNO B1.0


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
100 mas
Lowell
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star
Pretoria
DE-413 Plu017 + (-11.0, 105.0) mas PHOT08
4000
2000
0
-2000
-4000
N (km)
E (km)
23:44:45
23:38:46
23:32:47
23:51:21
23:47:19
23:44:41
23:42:04
23:38:01
23:50:40
23:46:39
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23:40:29
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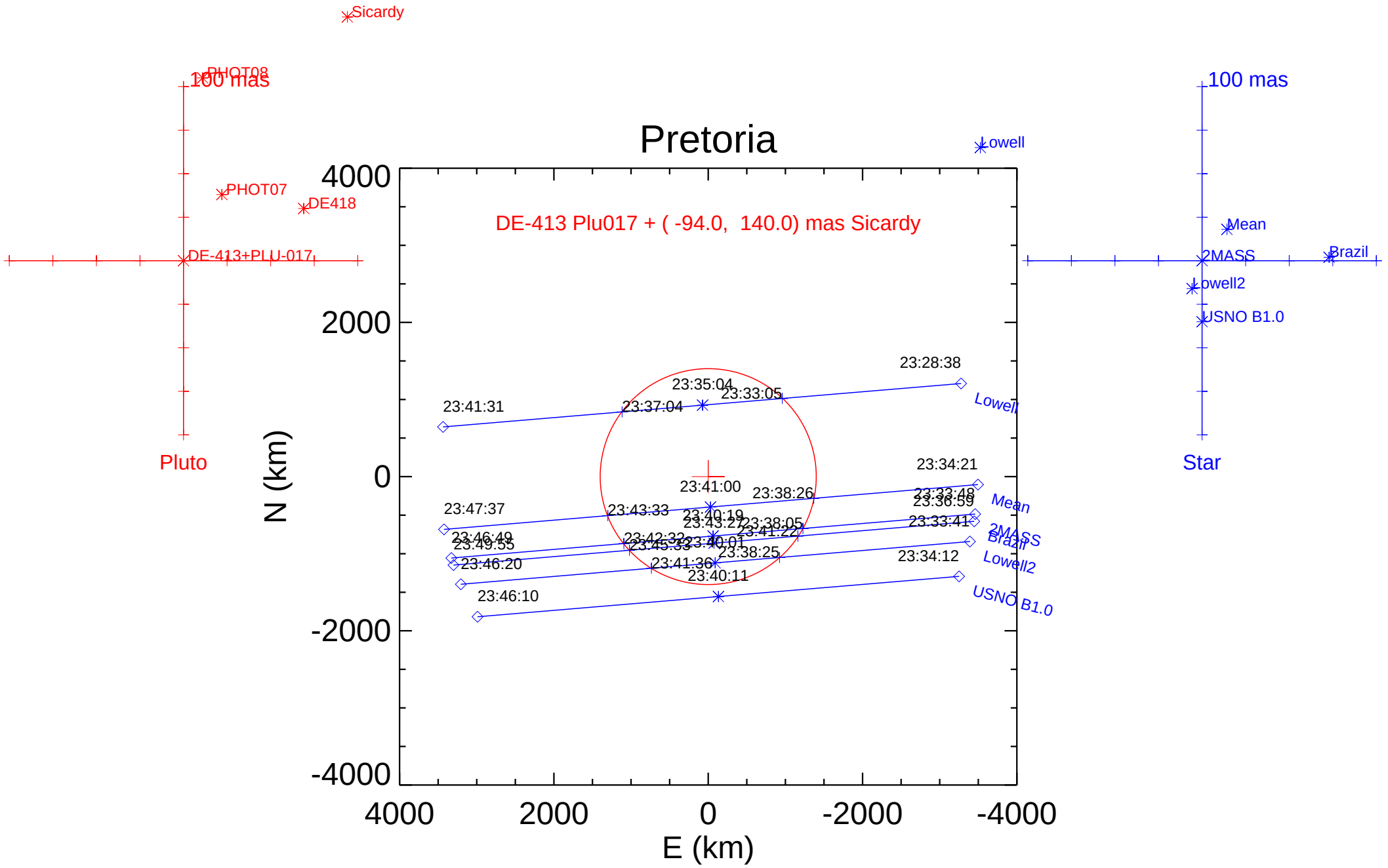
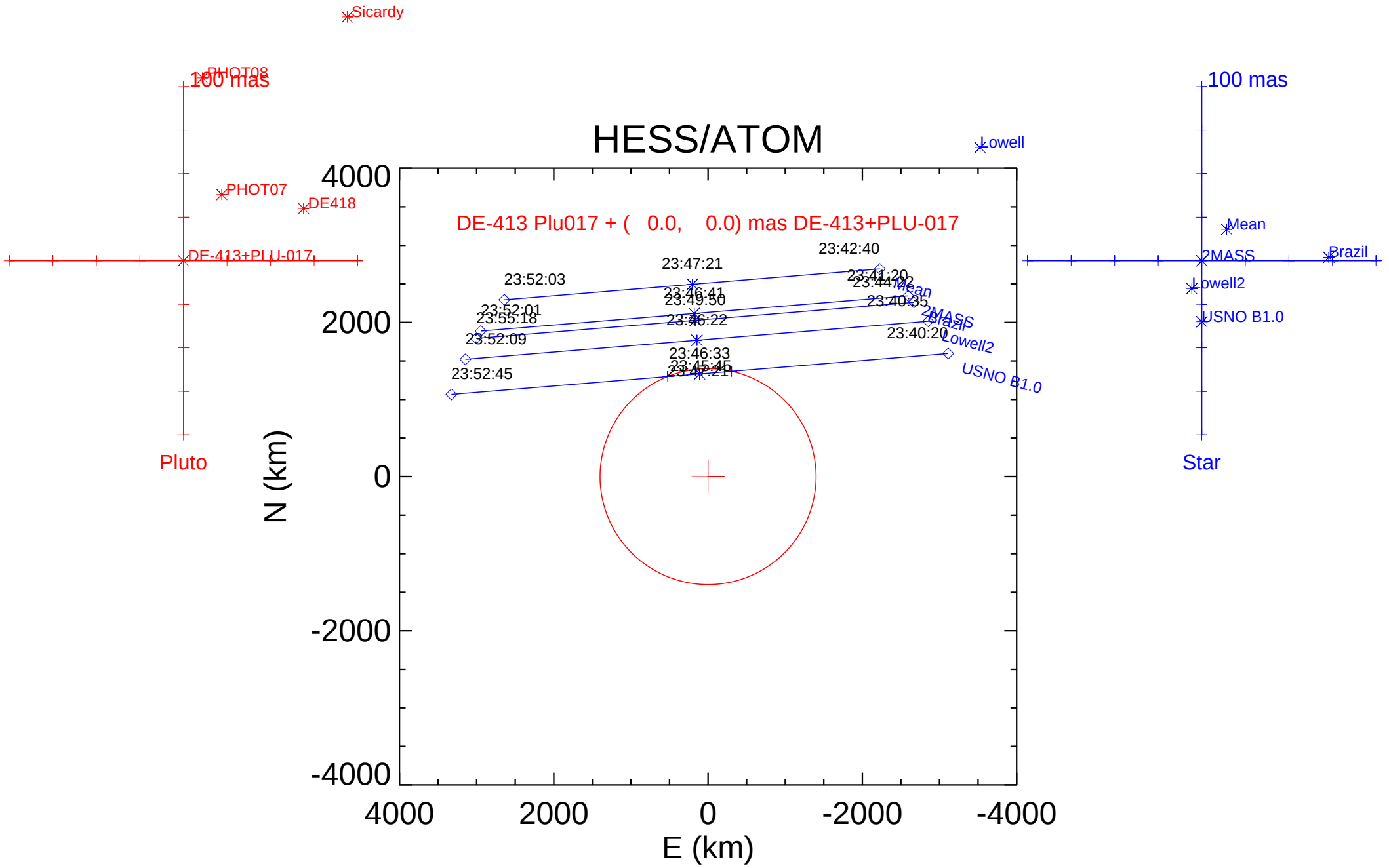
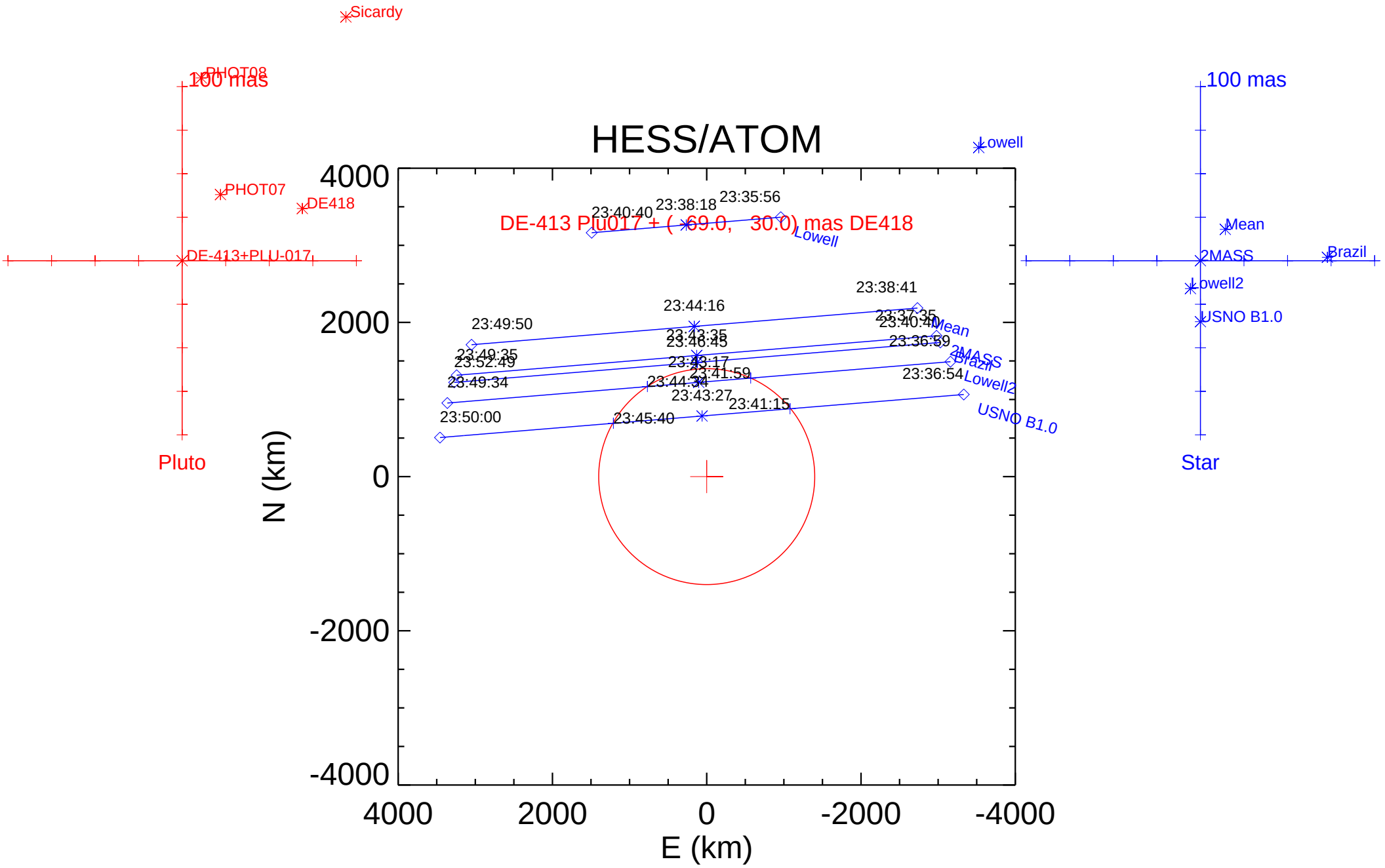
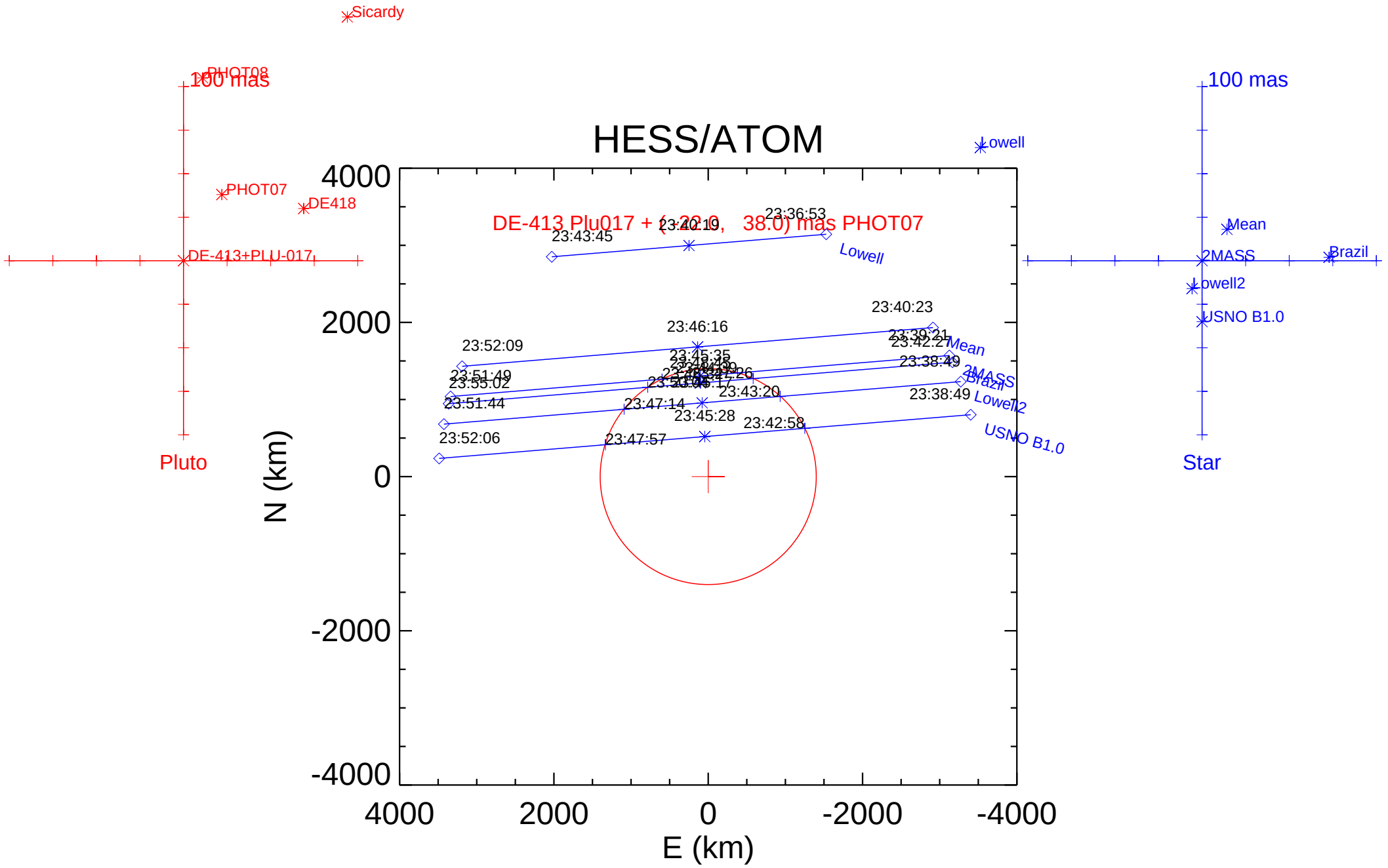
23:37:27

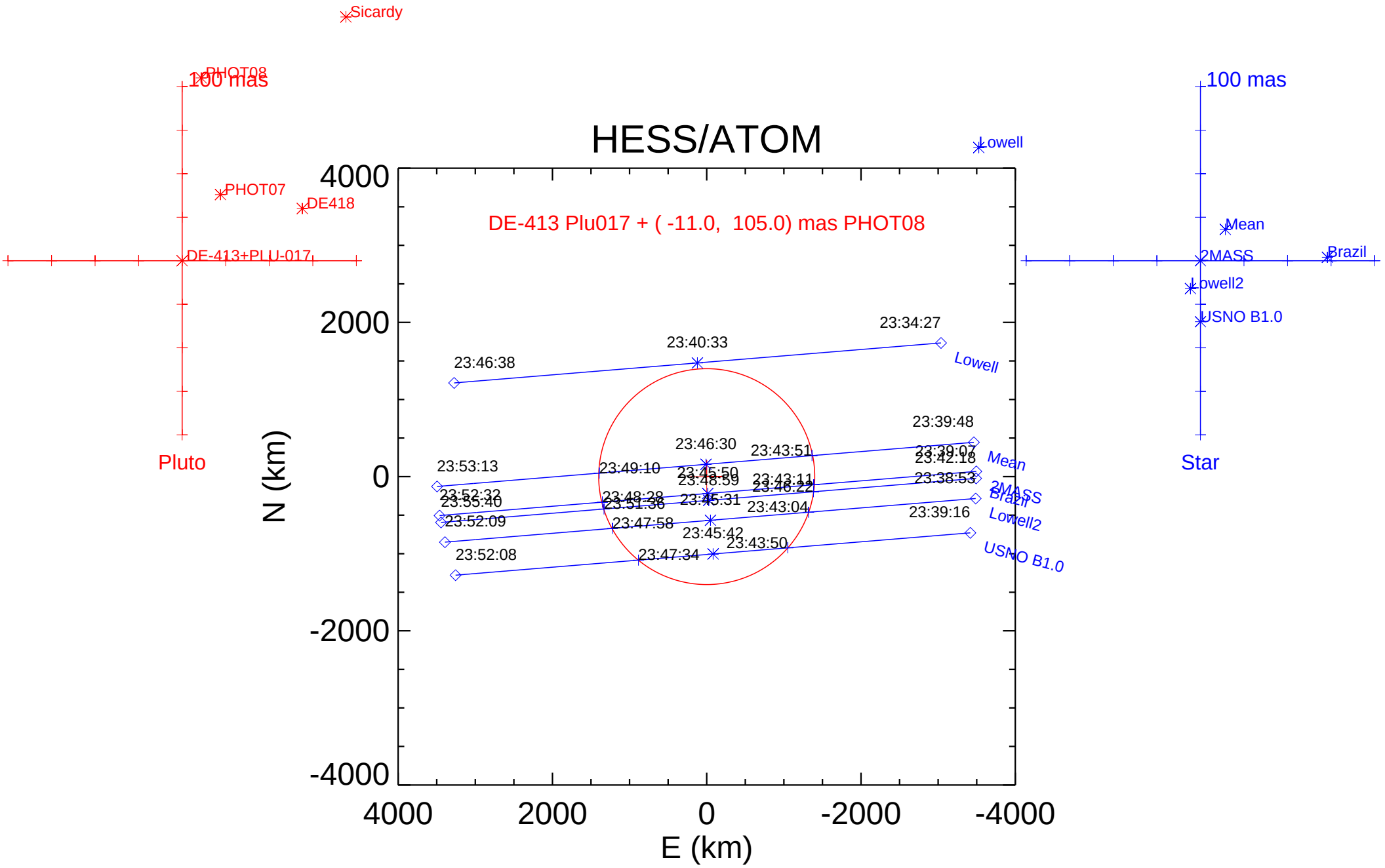


rfrench@dione1.wellesley.edu Tue Apr 14 16:28:09 2009 P090421_occpred_v4.pro /Volumes/dione_raid2/Research/PHOT/programs/P090421_occpred_v4.ps

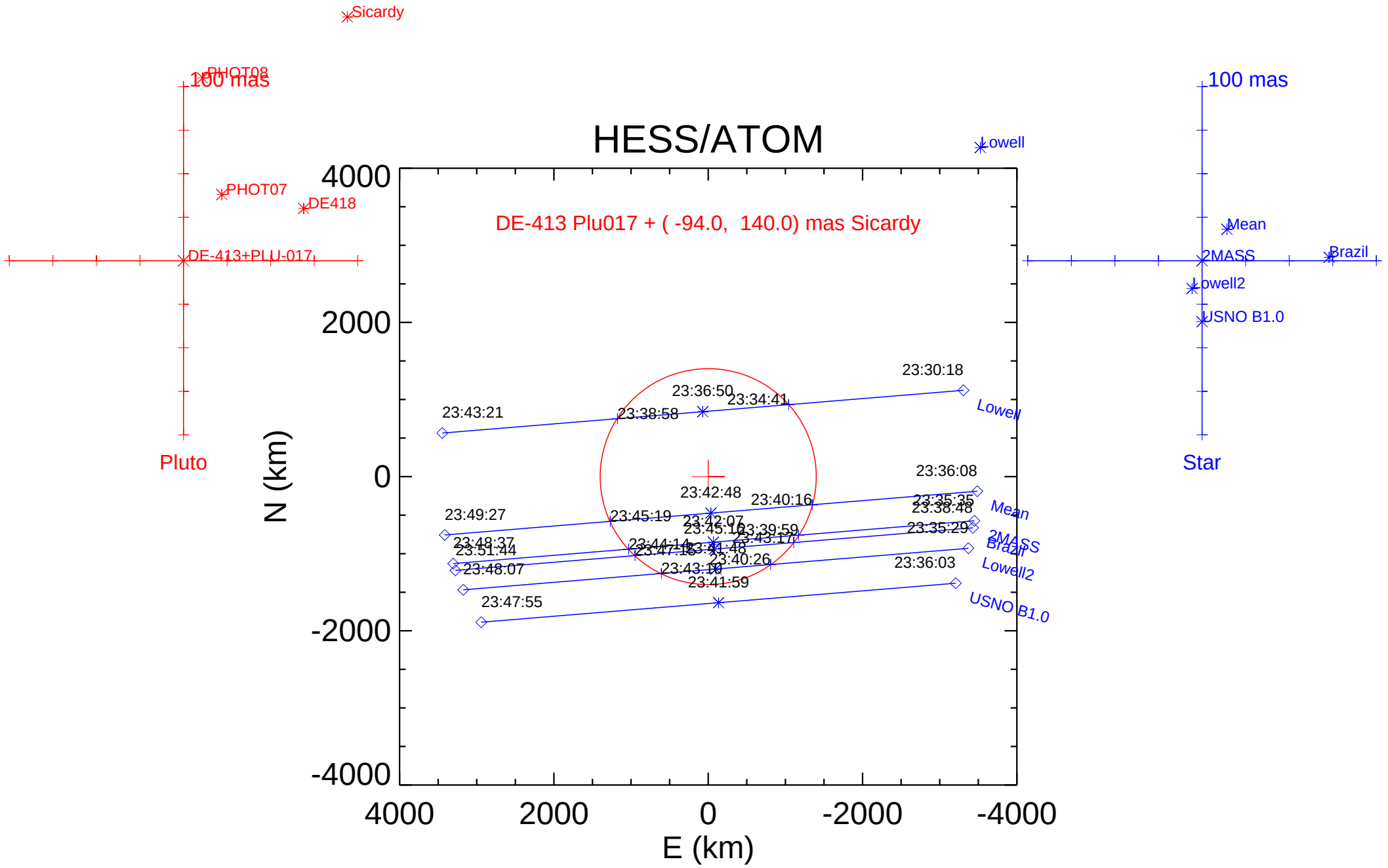

HESS/ATOM
Sicardy
PHOT08
100 mas
PHOT07
DE418
DE-413+PLU-017
Pluto
Lowell
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star
DE-413 Plu017 + (0.0, 0.0) mas DE-413+PLU-017
23:42:40
23:47:21
23:52:03
23:41:20
23:44:12
23:46:41
23:49:50
23:40:35
23:52:01
23:55:18
23:46:22
23:52:09
23:40:20
23:46:33
23:52:45
23:45:45
23:47:21
4000
2000
0
-2000
-4000
N (km)
E (km)


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
HESS/ATOM
DE-413 Plu017 + (-69.0, 30.0) mas DE418
Lowell
23:40:40
23:38:18
23:35:56
23:49:50
23:44:16
23:38:41
23:49:35
23:52.49
23:49:34
23:50:00
23:45:40
23:43:27
23:41:15
23:40:40
23:36:59
23:36:54
Mean
2MASS
Brazil
Lowell2
USNO B1.0
N (km)
E (km)
4000
2000
0
-2000
-4000
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star

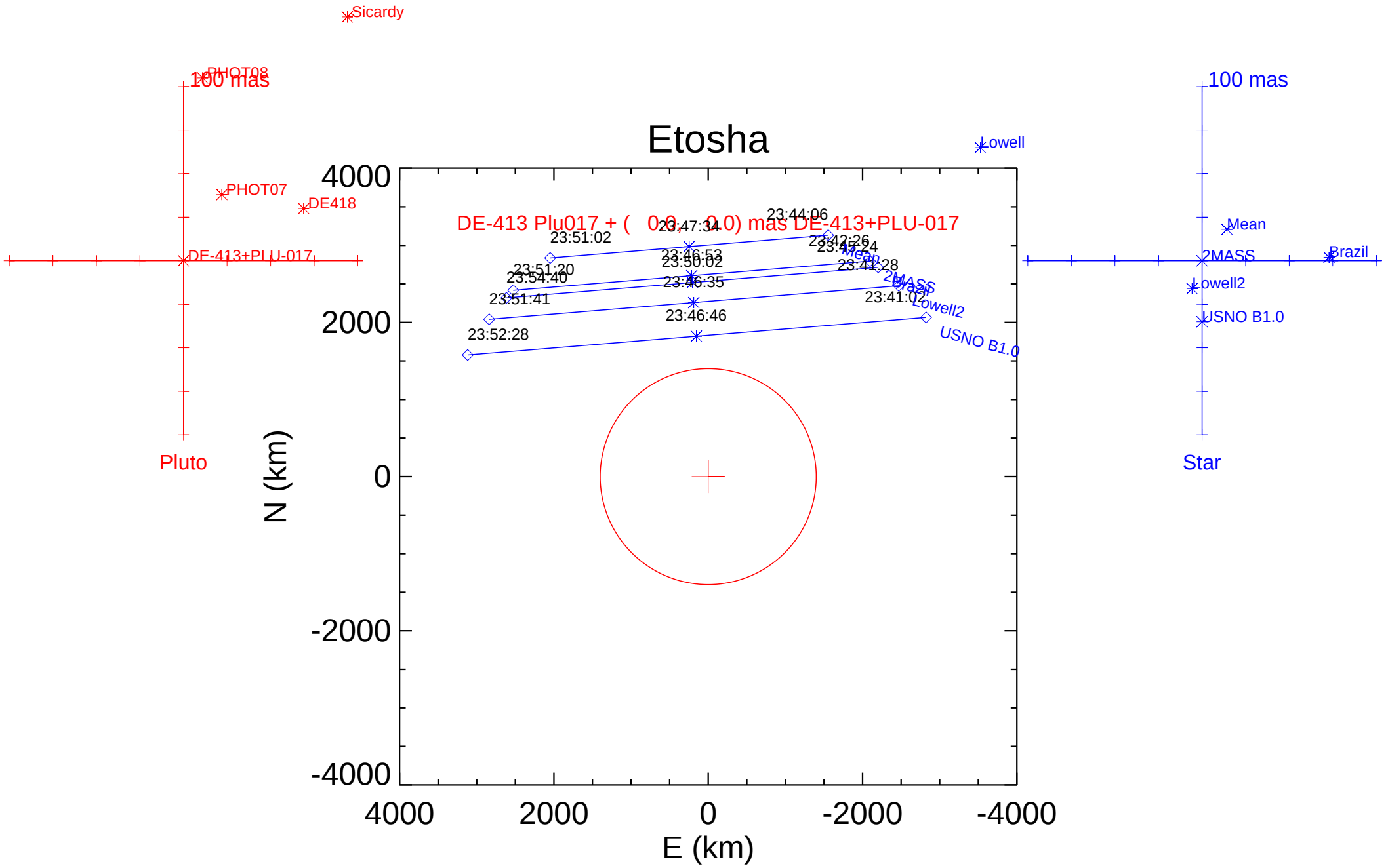

Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
HESS/ATOM
DE-413 Plu017 + (20.0, 38.0) mas PHOT07
Lowell
23:36:53
23:43:45
23:40:19
23:40:23
23:46:16
23:52:09
23:39:21
23:42:27
23:51:49
23:55:02
23:38:49
23:51:44
23:43:20
23:47:14
23:45:28
23:42:58
23:52:06
23:47:57
Mean
2MASS
Brazil
Lowell2
USNO B1.0
N (km)
E (km)
4000
2000
0
-2000
-4000
100 mas
Star



rfrench@dione1.wellesley.edu Tue Apr 14 16:28:10 2009 P090421_occpred_v4.pro /Volumes/dione_raid2/Research/PHOT/programs/P090421_occpred_v4.ps



rfrench@dione1.wellesley.edu Tue Apr 14 16:28:10 2009 P090421_occpred_v4.pro /Volumes/dione_raid2/Research/PHOT/programs/P090421_occpred_v4.ps


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Etosha
Lowell
DE-413 Plu017 + (0.0, 0.0) mas DE-413+PLU-017
23:44:06
23:47:34
23:51:02
23:42:26
23:45:24
23:46:53
23:50:02
23:41:28
23:51:20
23:54:40
23:46:35
23:51:41
23:41:02
23:46:46
23:52:28
Mean
2MASS
Brazil
Lowell2
USNO B1.0
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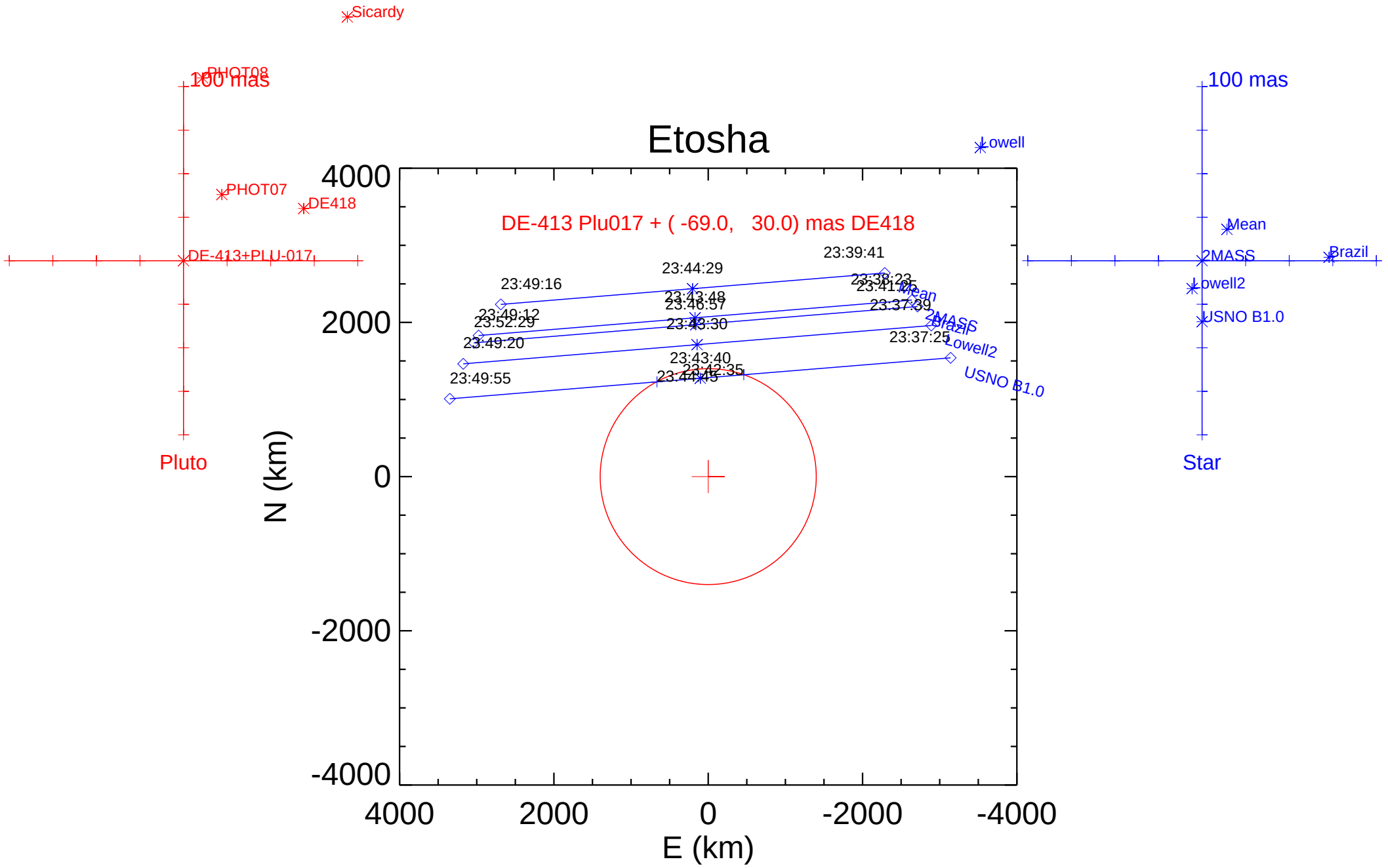
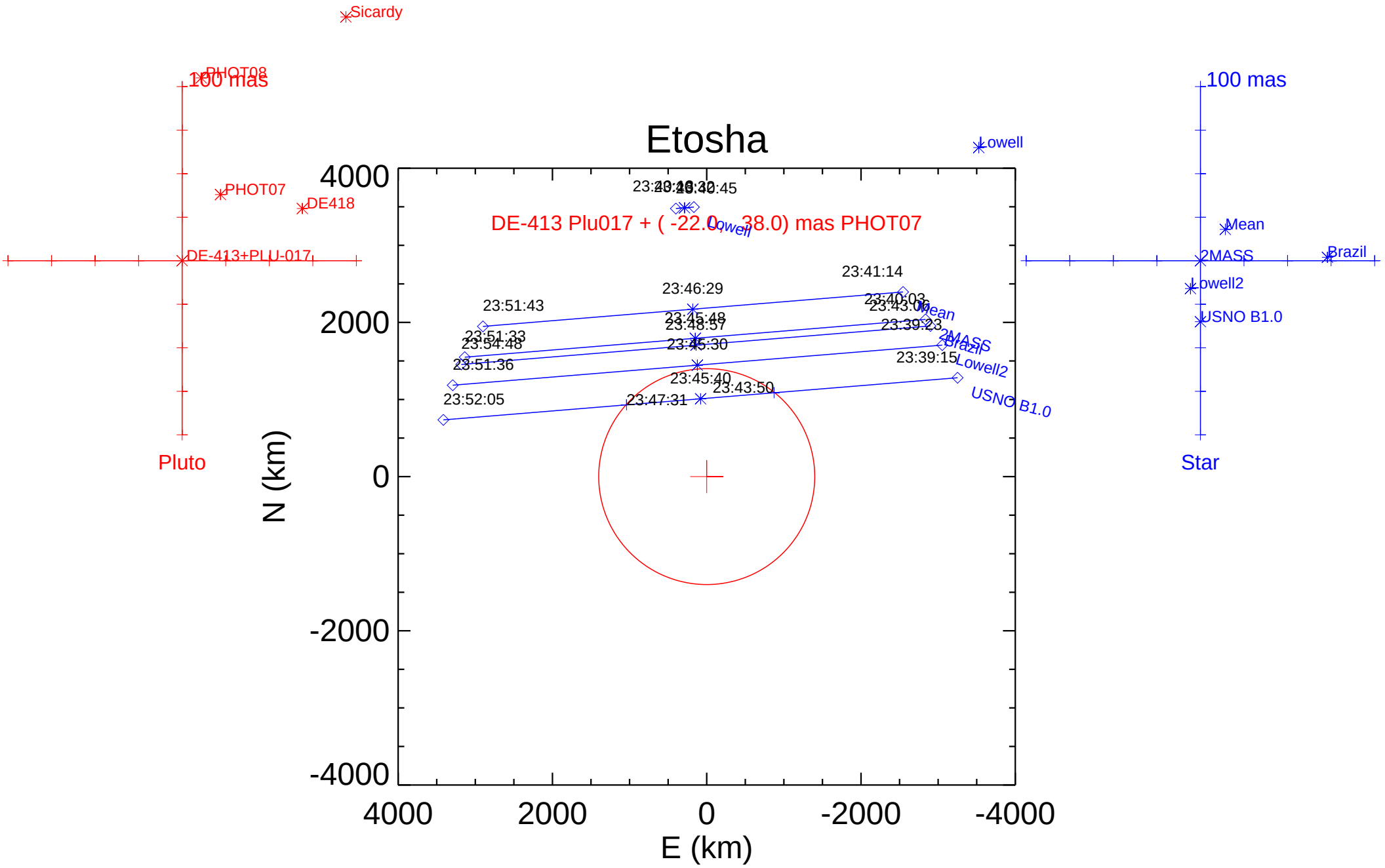
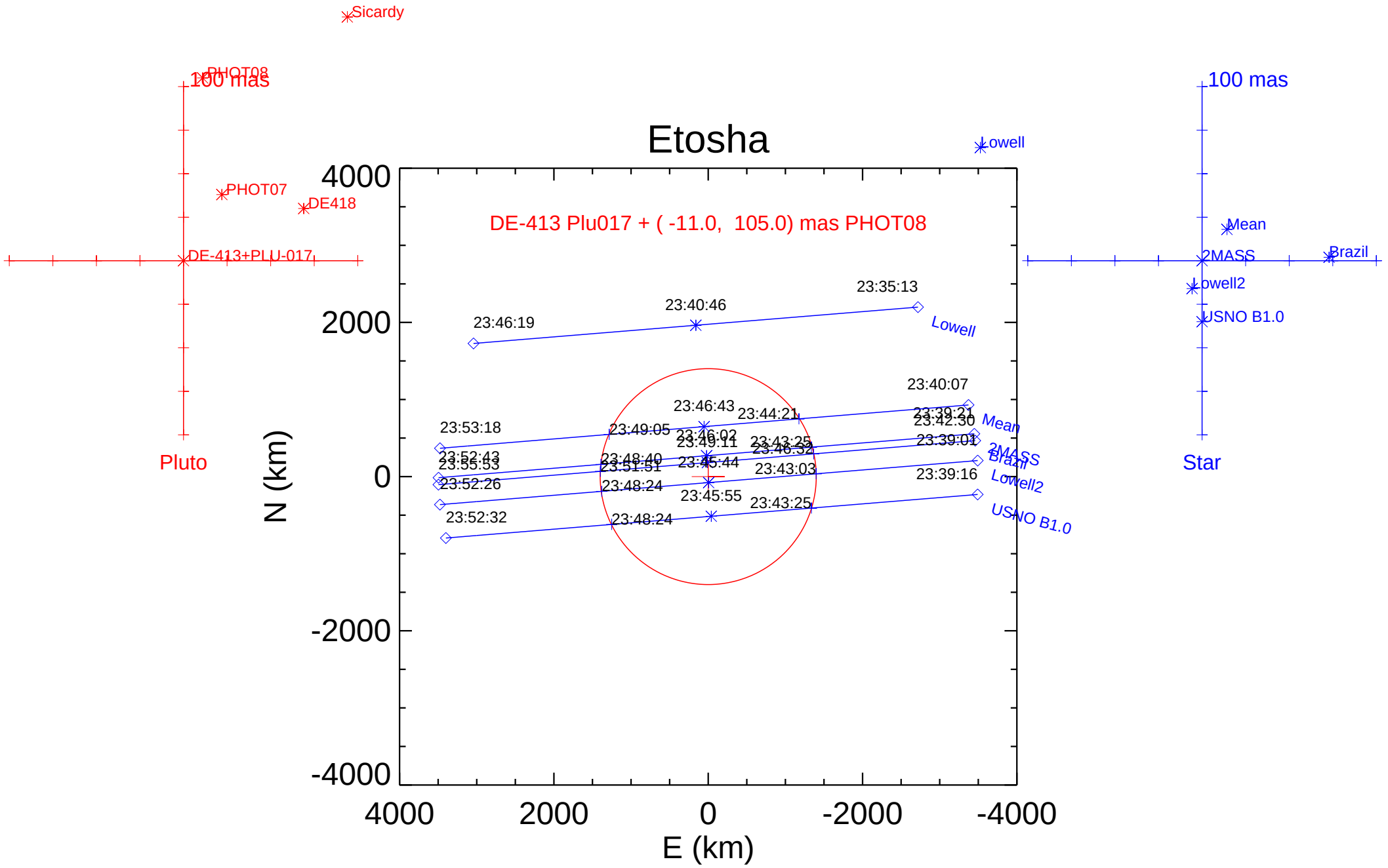
-2000
-4000
N (km)
E (km)
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Etosha
DE-413 Plu017 + (-69.0, 30.0) mas DE418
Lowell
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star
23:39:41
23:44:29
23:49:16
23:43:48
23:46:57
23:49:12
23:52:29
23:43:30
23:49:20
23:37:39
23:37:25
23:43:40
23:42:35
23:49:55
23:44:45
4000
2000
0
-2000
-4000
N (km)
E (km)



rfrench@dione1.wellesley.edu Tue Apr 14 16:28:10 2009 P090421_occpred_v4.pro /Volumes/dione_raid2/Research/PHOT/programs/P090421_occpred_v4.ps



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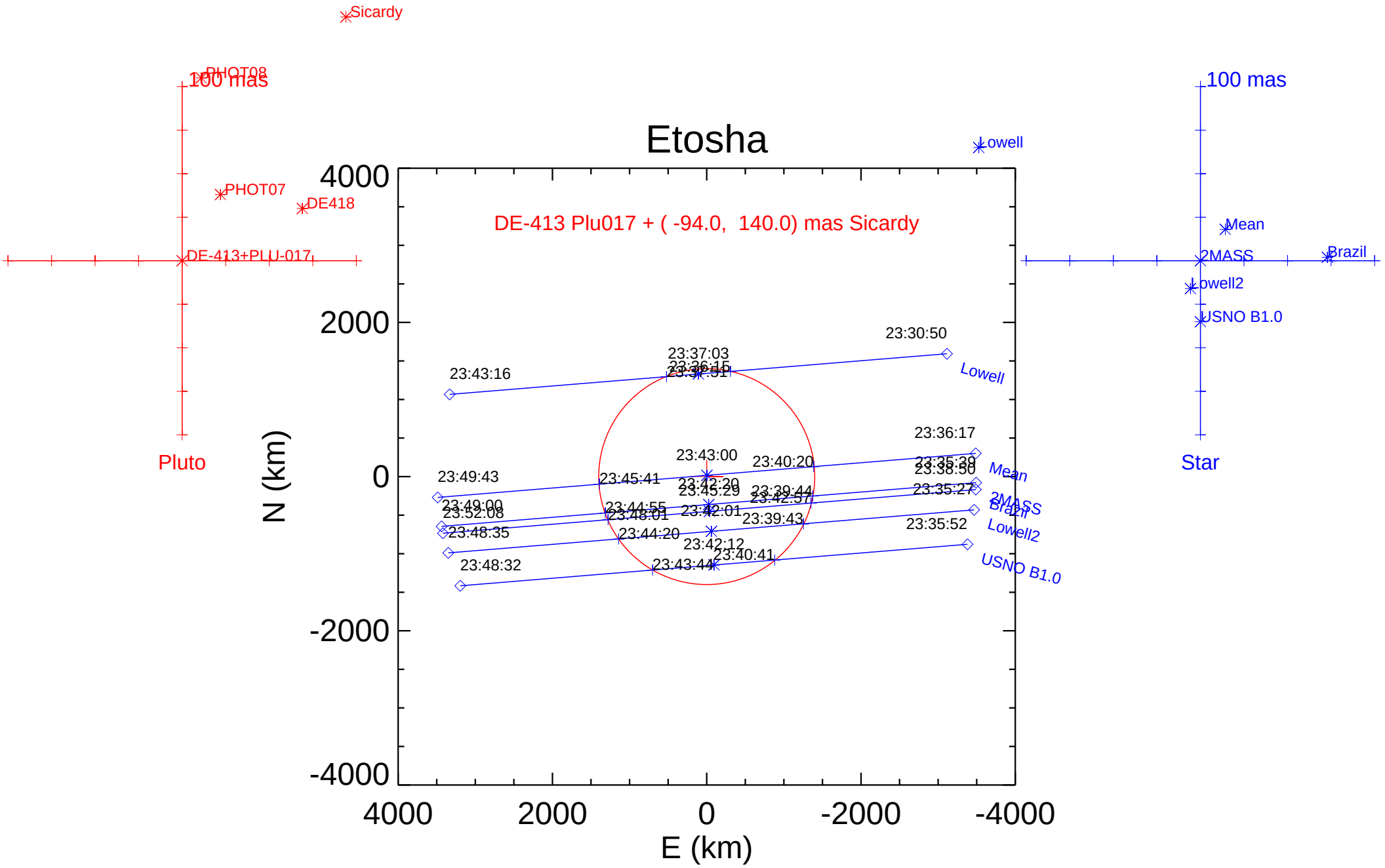

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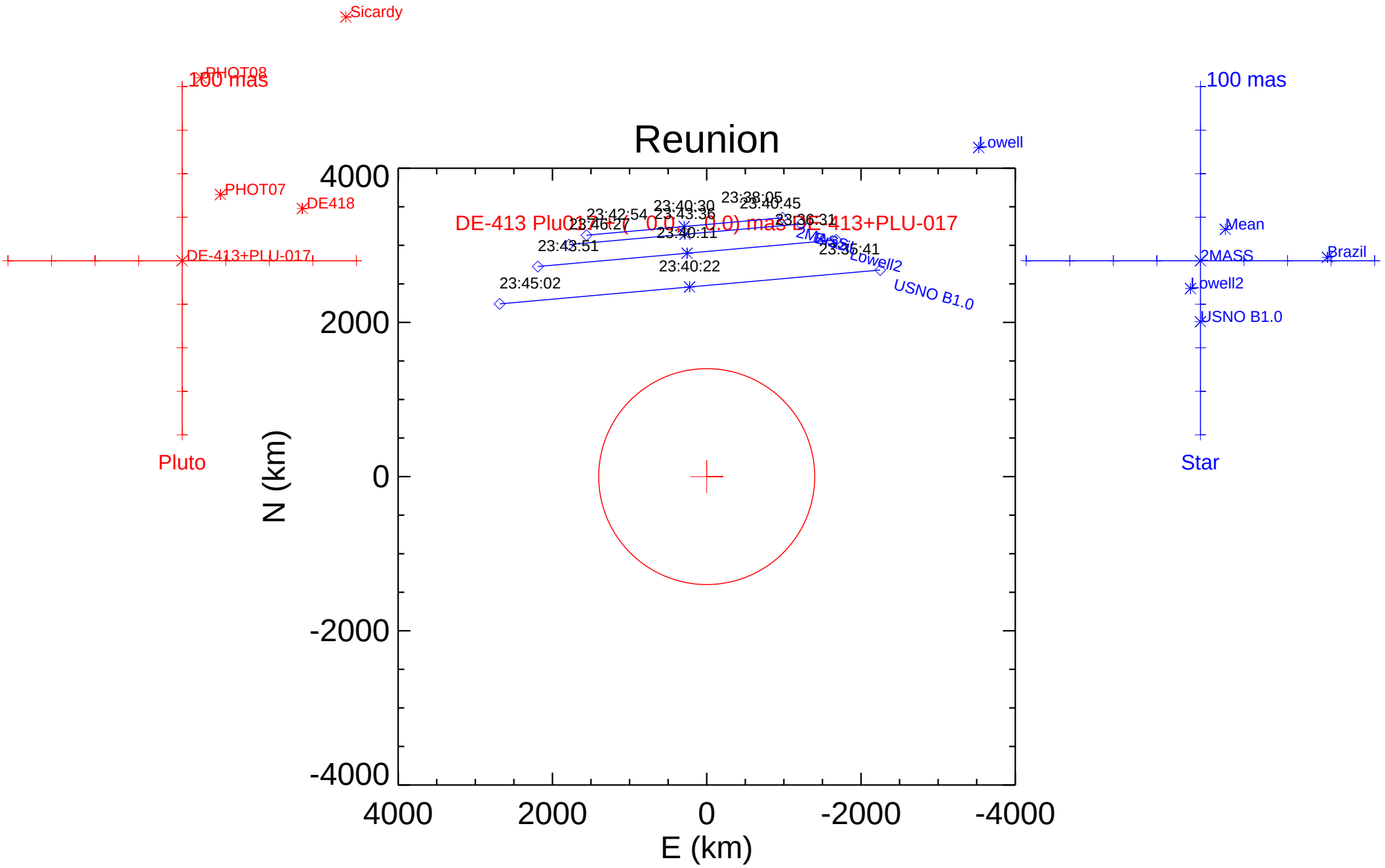
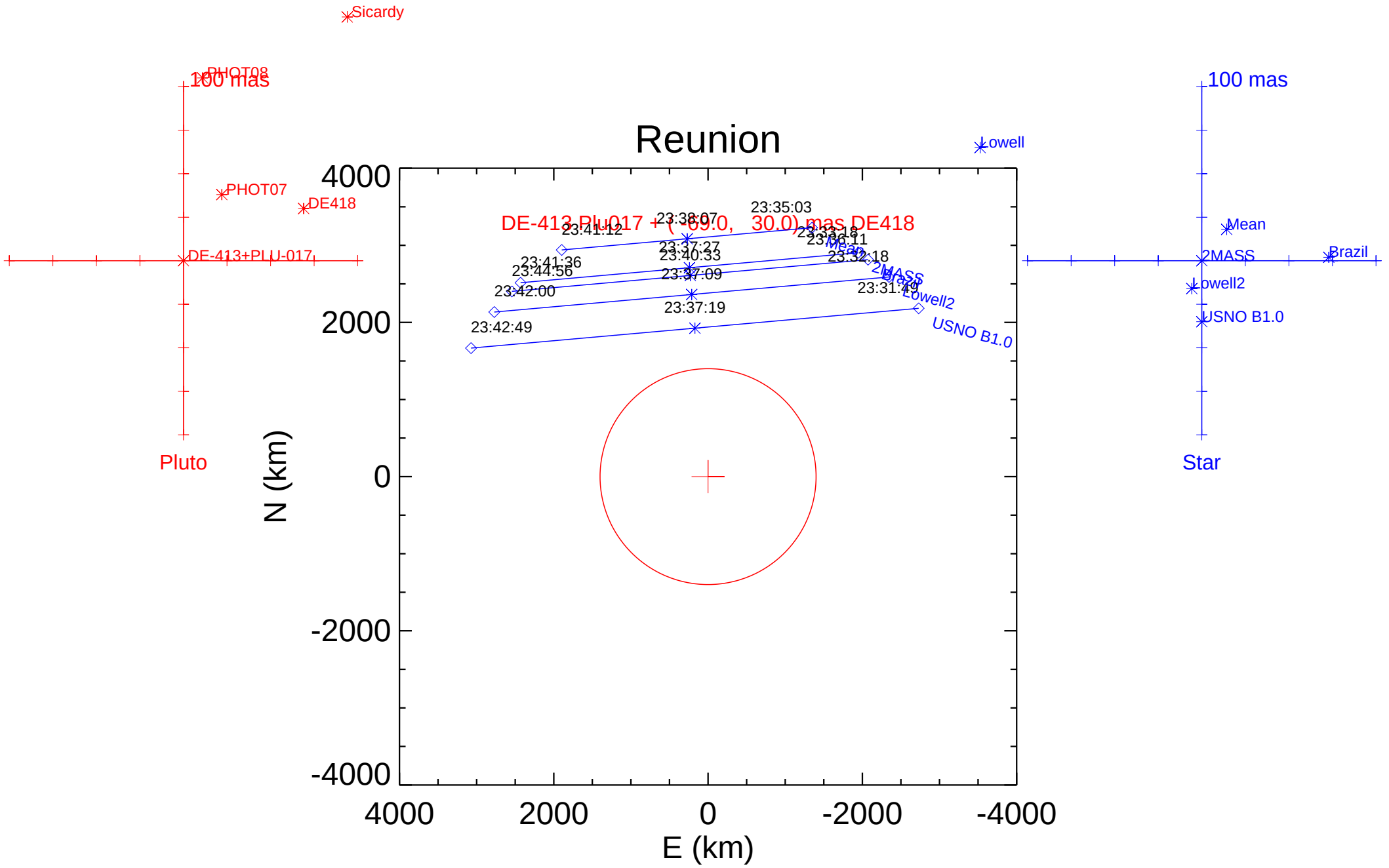
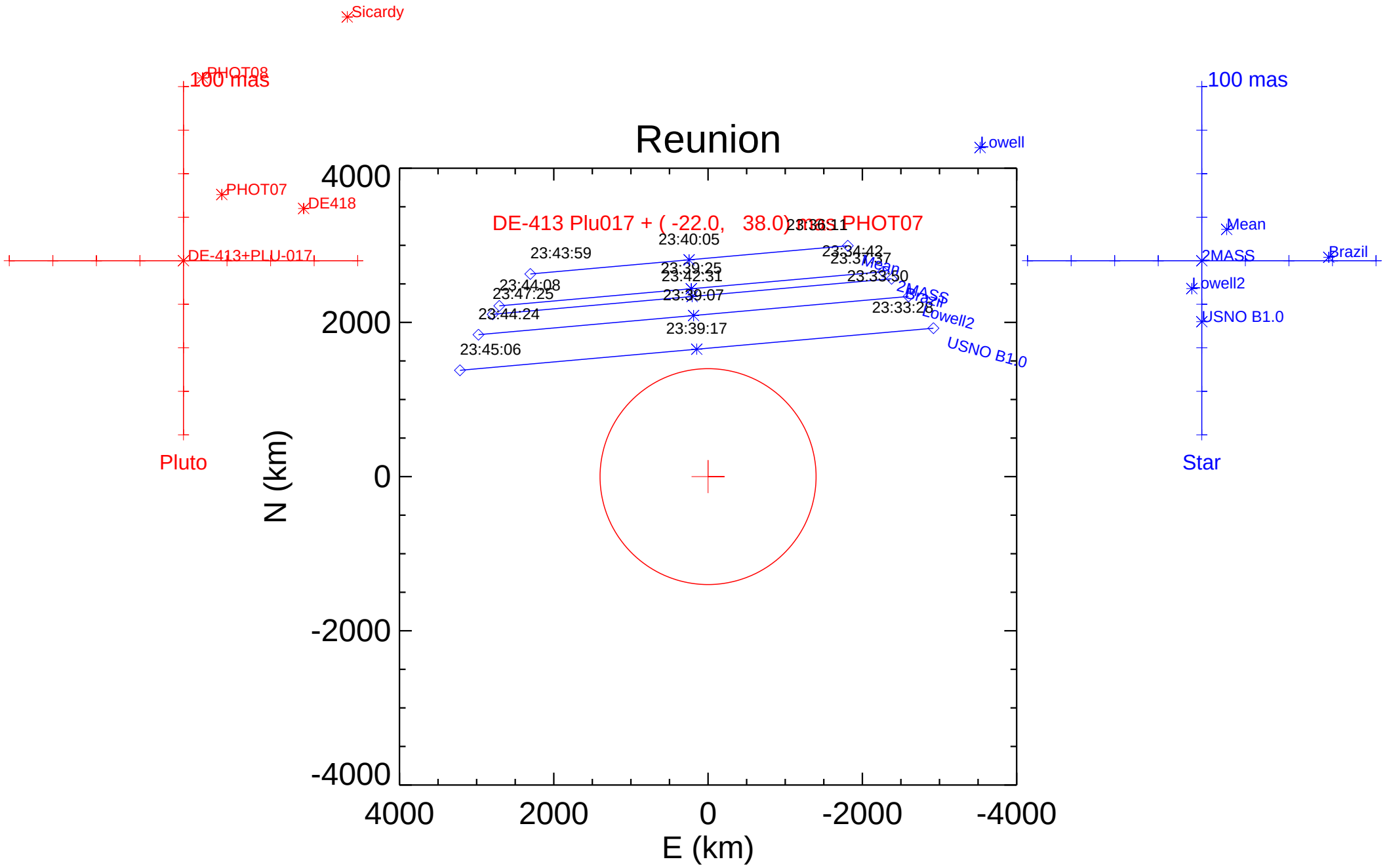
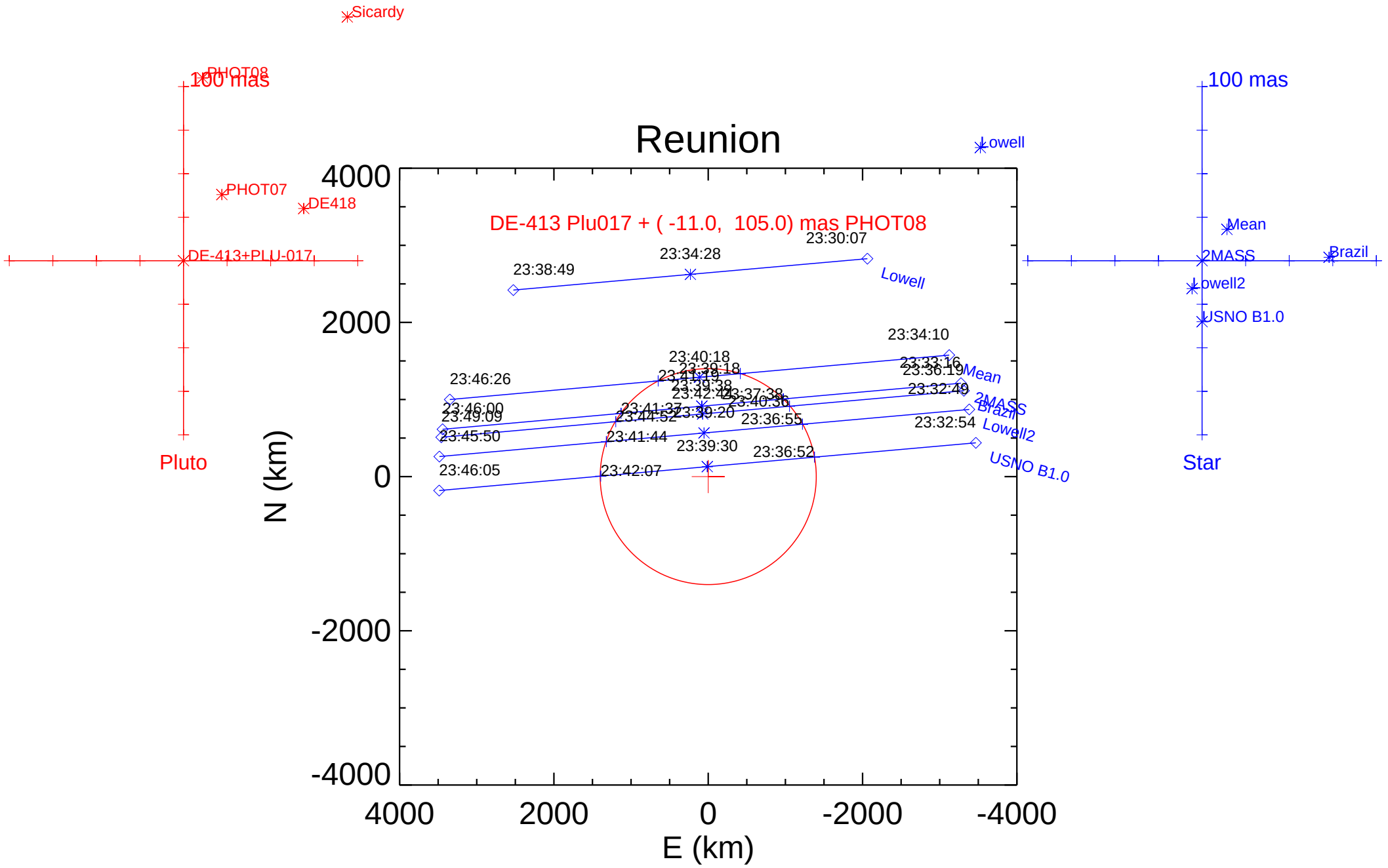
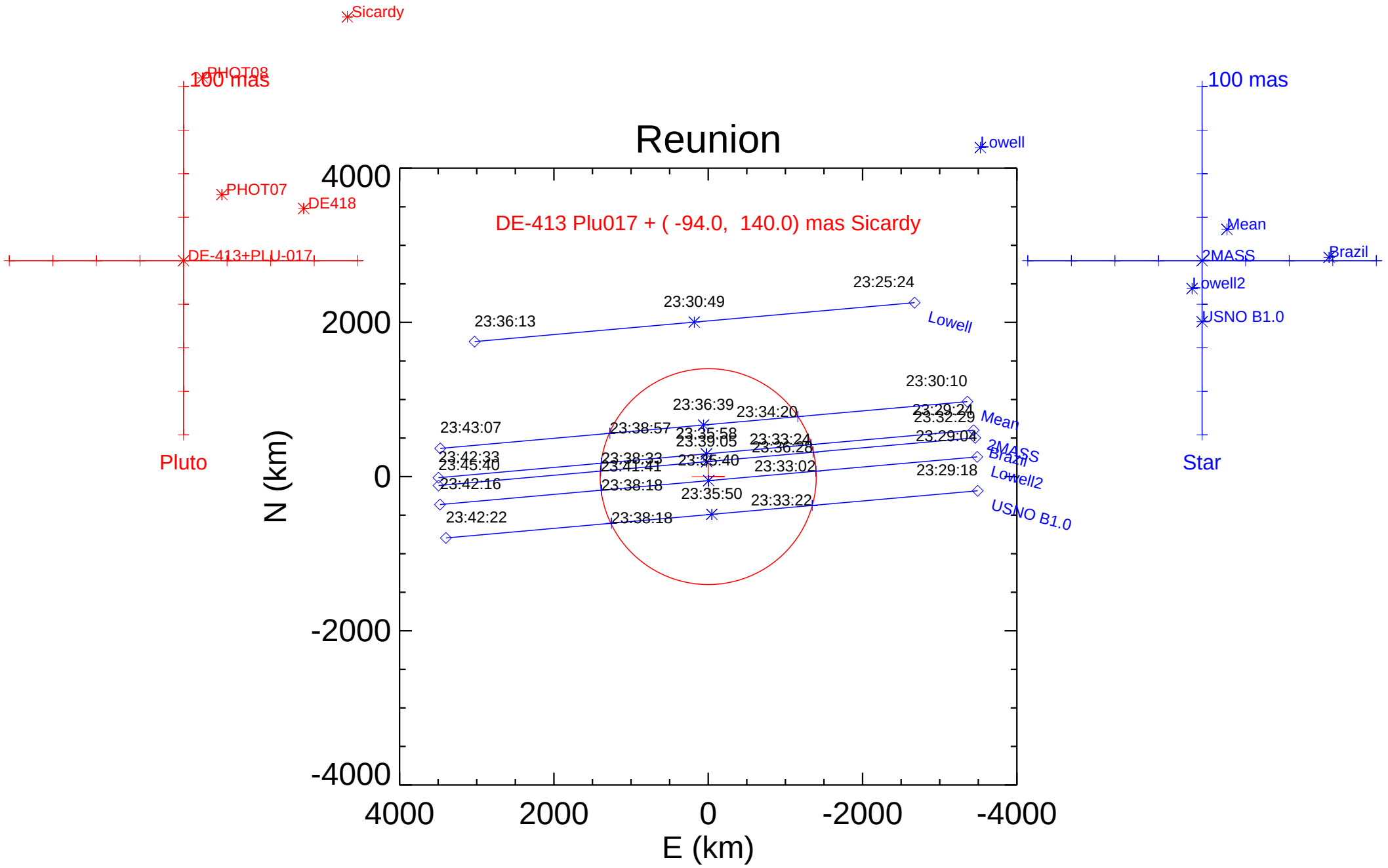

Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Reunion
Lowell
DE-413 Plu017+(0.0, 0.0) mas DE413+PLU-017
23:38:05
23:40:45
23:40:30
23:42:54
23:43:36
23:36:31
23:46:27
23:40:11
23:43:51
23:36:41
23:40:22
23:45:02
2MASS
Lowell2
USNO B1.0
4000
2000
0
-2000
-4000
N (km)
E (km)
100 mas
Mean
2MASS
Brazil
lowell2
USNO B1.0
Star


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Reunion
DE-413 Plu017 + (-69.0, 30.0) mas DE418
Lowell
4000
2000
0
-2000
-4000
N (km)
E (km)
23:41:12
23:38:07
23:35:03
23:33:18
23:36:11
23:32:18
23:31:49
23:41:36
23:44:56
23:40:33
23:37:09
23:42:00
23:37:27
23:37:19
23:42:49
Mean
2MASS
Brazil
Lowell2
USNO B1.0
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star


Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Reunion
DE-413 Plu017 + (-22.0, 38.0) mas PHOT07
23:43:59
23:40:05
23:44:08
23:42:31
23:47:25
23:39:07
23:44:24
23:39:17
23:45:06
Lowell
Mean
2MASS
Brazil
Lowell2
USNO B1.0
4000
2000
0
-2000
-4000
N (km)
E (km)
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star



rfrench@dione1.wellesley.edu Tue Apr 14 16:28:11 2009 P090421_occpred_v4.pro /Volumes/dione_raid2/Research/PHOT/programs/P090421_occpred_v4.ps


Reunion
DE-413 Plu017 + (-94.0, 140.0) mas Sicardy
Sicardy
100 mas
PHOT08
PHOT07
DE418
DE-413+PLU-017
Pluto
Lowell
100 mas
Mean
2MASS
Brazil
Lowell2
USNO B1.0
Star
23:25:24
23:30:49
23:36:13
Lowell
23:30:10
23:36:39
23:34:20
23:43:07
23:38:57
23:35:58
23:39:05
23:33:24
23:36:28
23:42:33
23:38:33
23:35:40
23:45:40
23:41:41
23:33:02
23:42:16
23:38:18
23:35:50
23:33:22
23:42:22
23:38:18
23:29:24
23:32:29
Mean
23:29:04
2MASS
Brazil
23:29:18
Lowell2
USNO B1.0
4000
2000
0
-2000
-4000
N (km)
E (km)