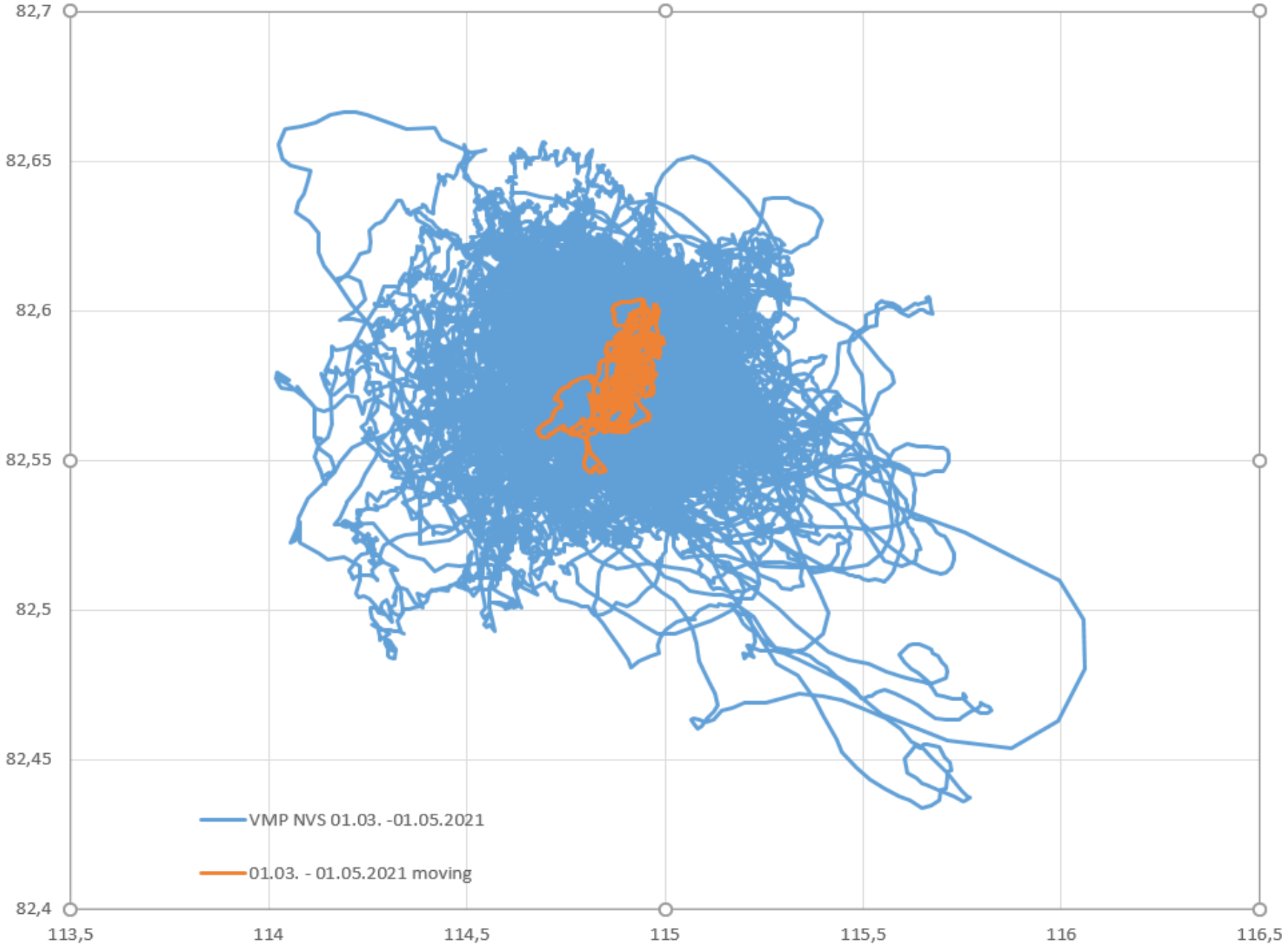
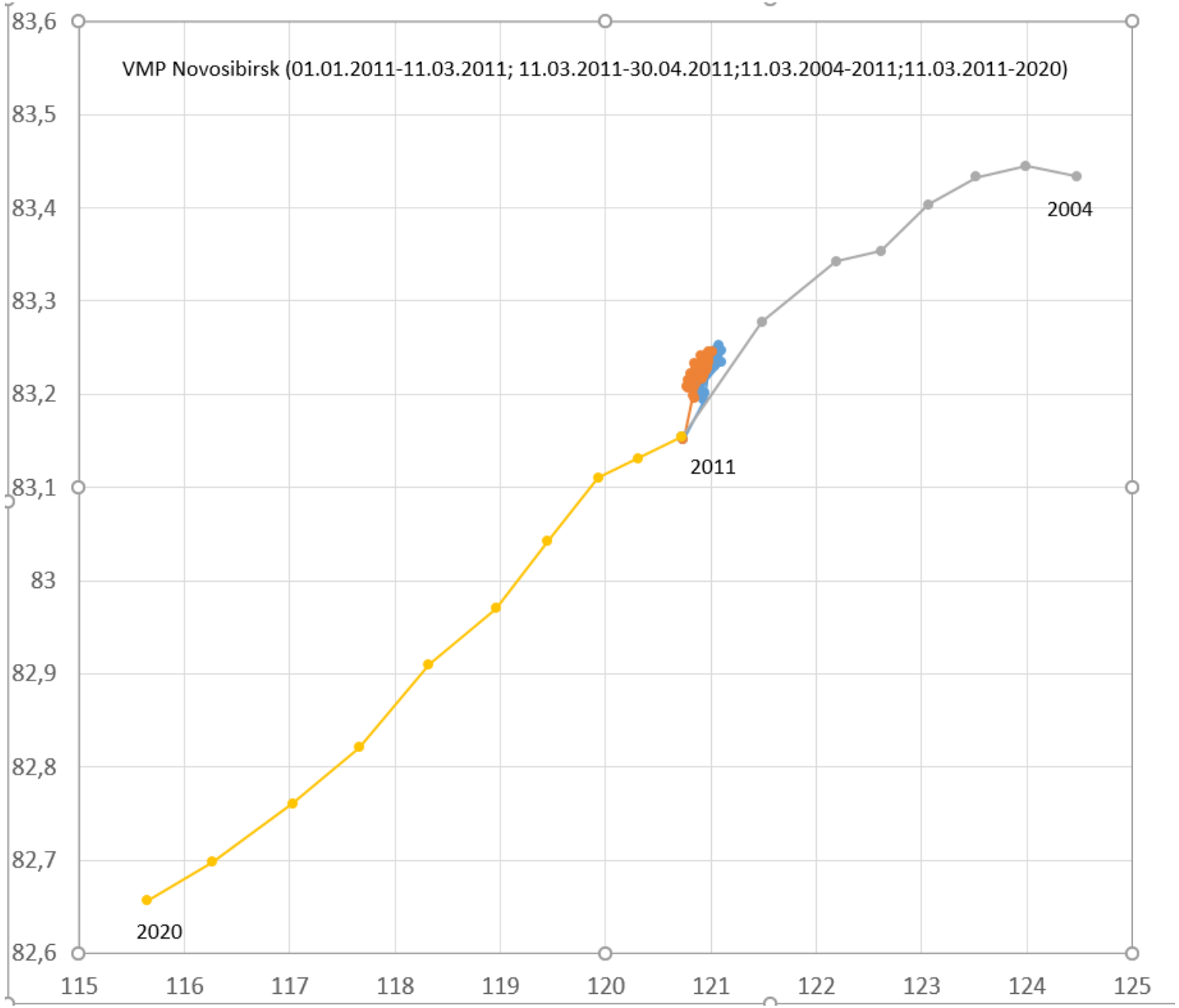
! " $ $ % & " ' $

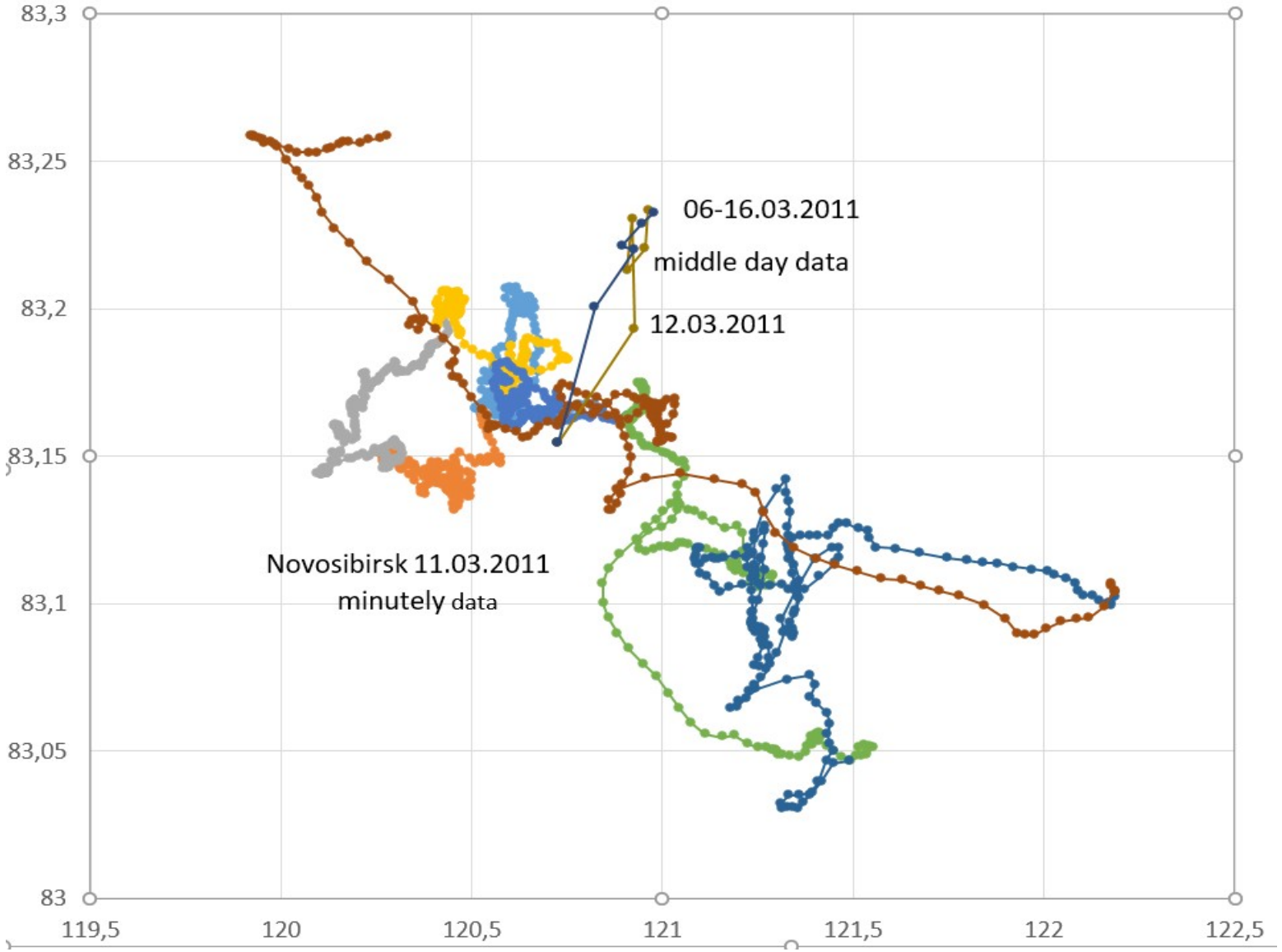

82,7
82,65
82,6
82,55
82,5
82,45
82,4
113,5
114
114,5
115
115,5
116
116,5
VMP NVS 01.03. -01.05.2021
01.03. - 01.05.2021 moving

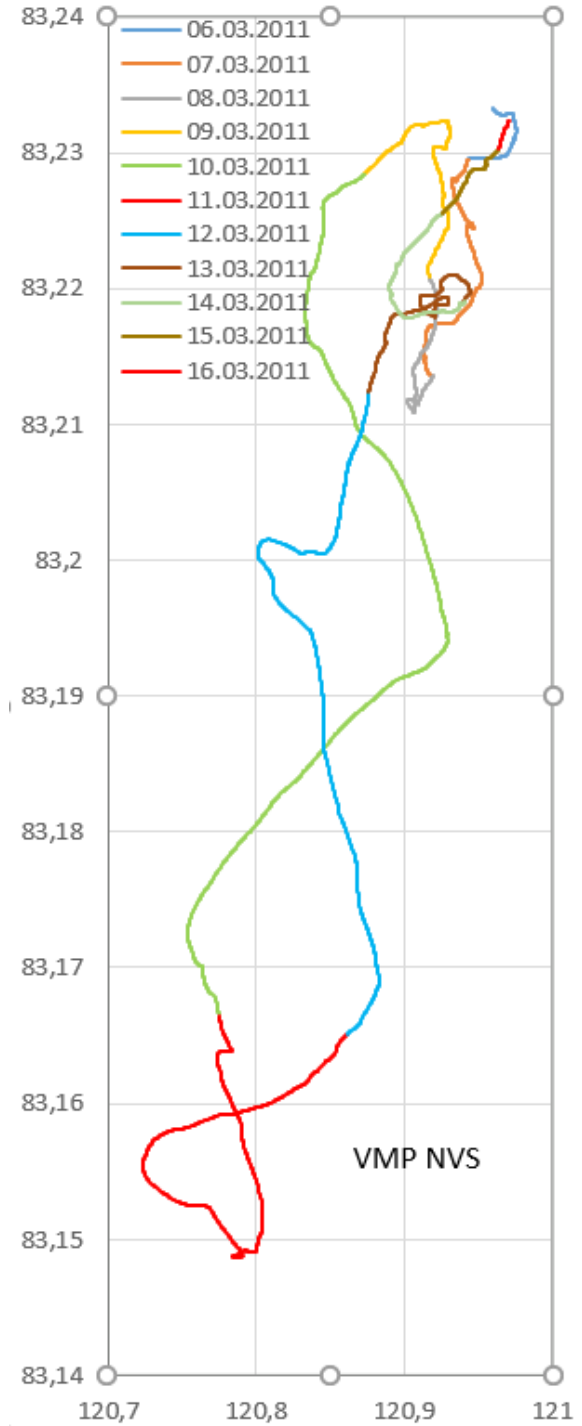

VMP Novosibirsk (01.01.2011-11.03.2011; 11.03.2011-30.04.2011;11.03.2004-2011;11.03.2011-2020)
83,6
83,5
83,4
83,3
83,2
83,1
83
82,9
82,8
82,7
82,6
115
116
117
118
119
120
121
122
123
124
125
2004
2011
2020

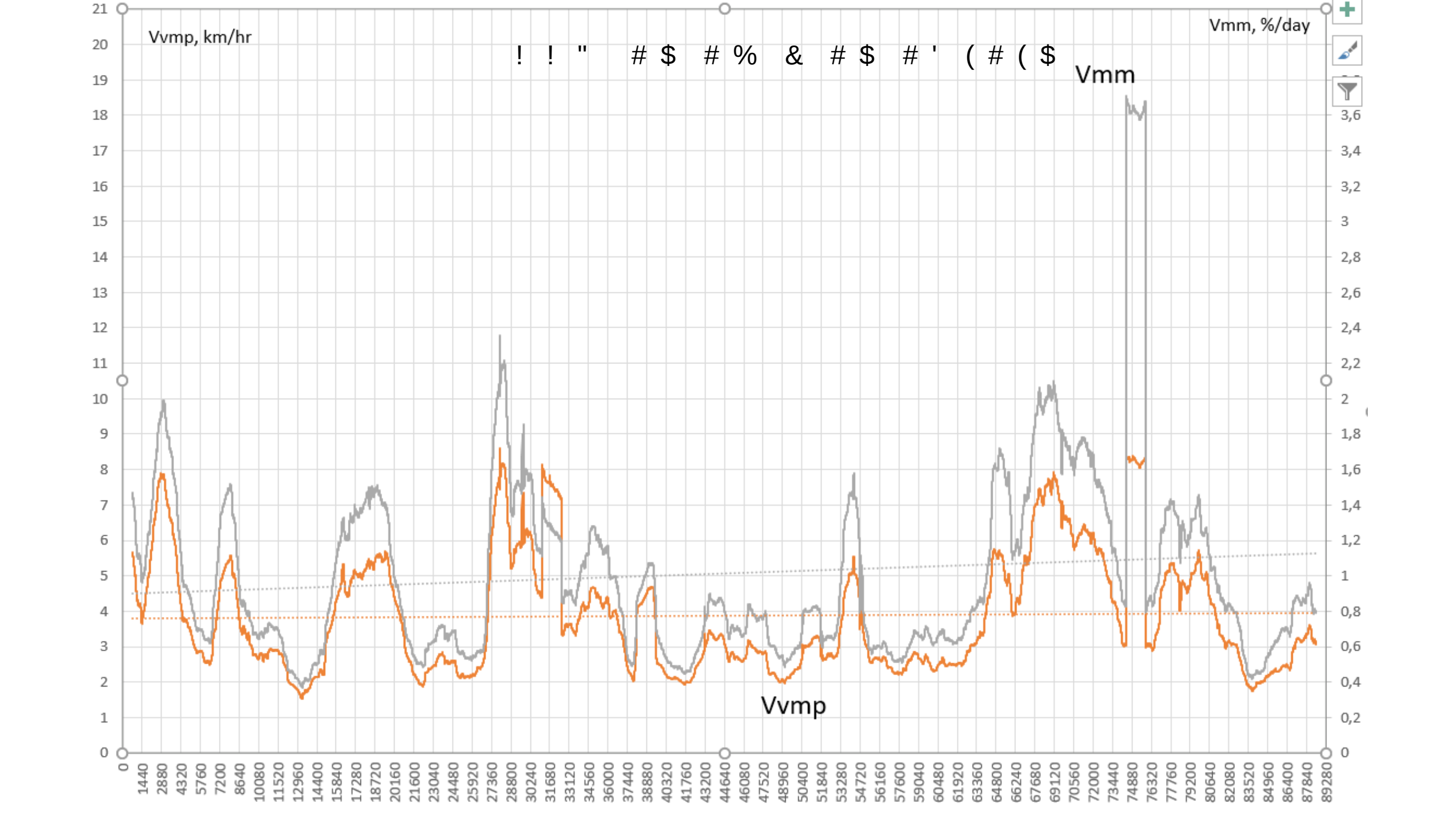
$

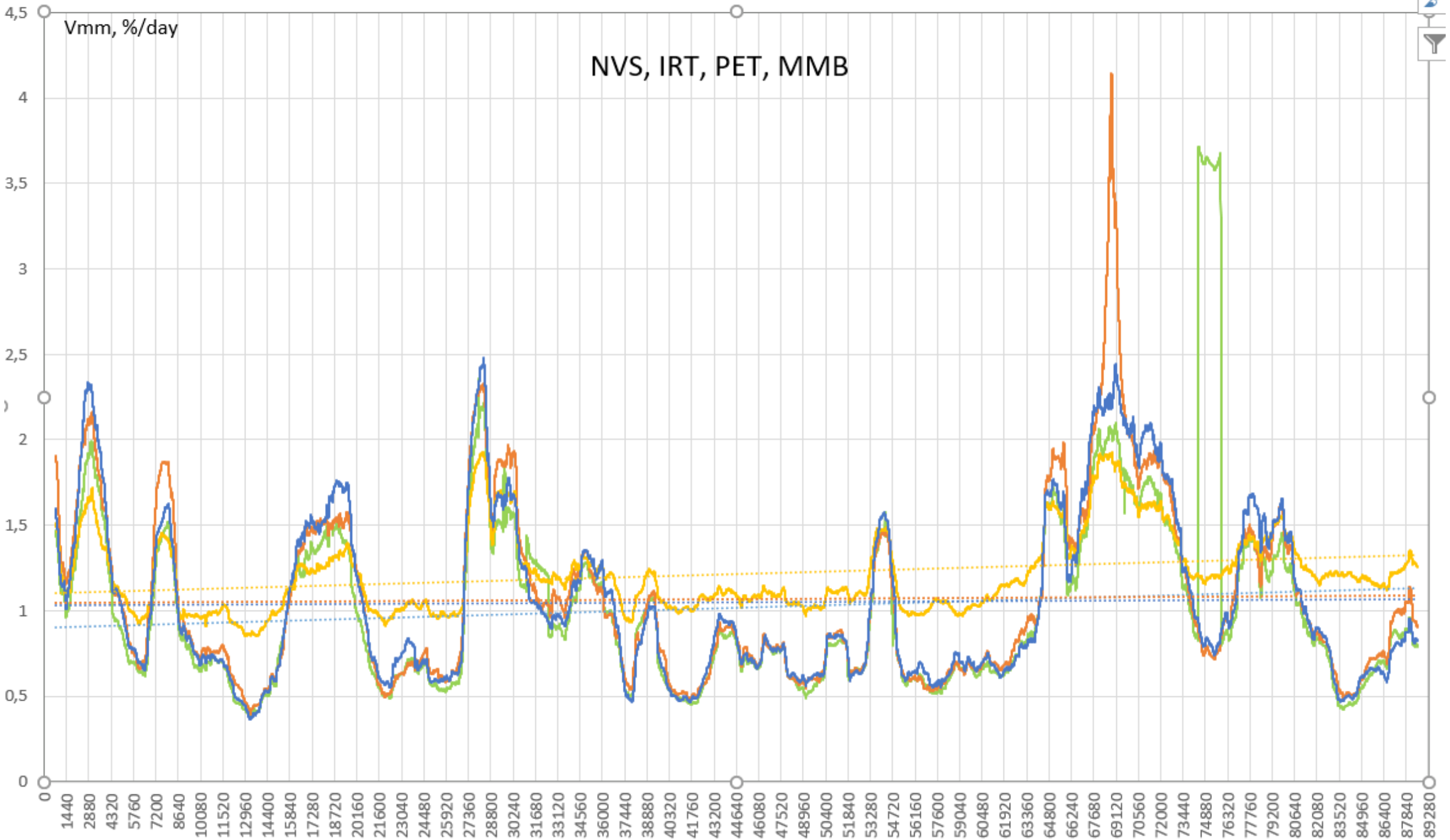
* + + $ % ( )

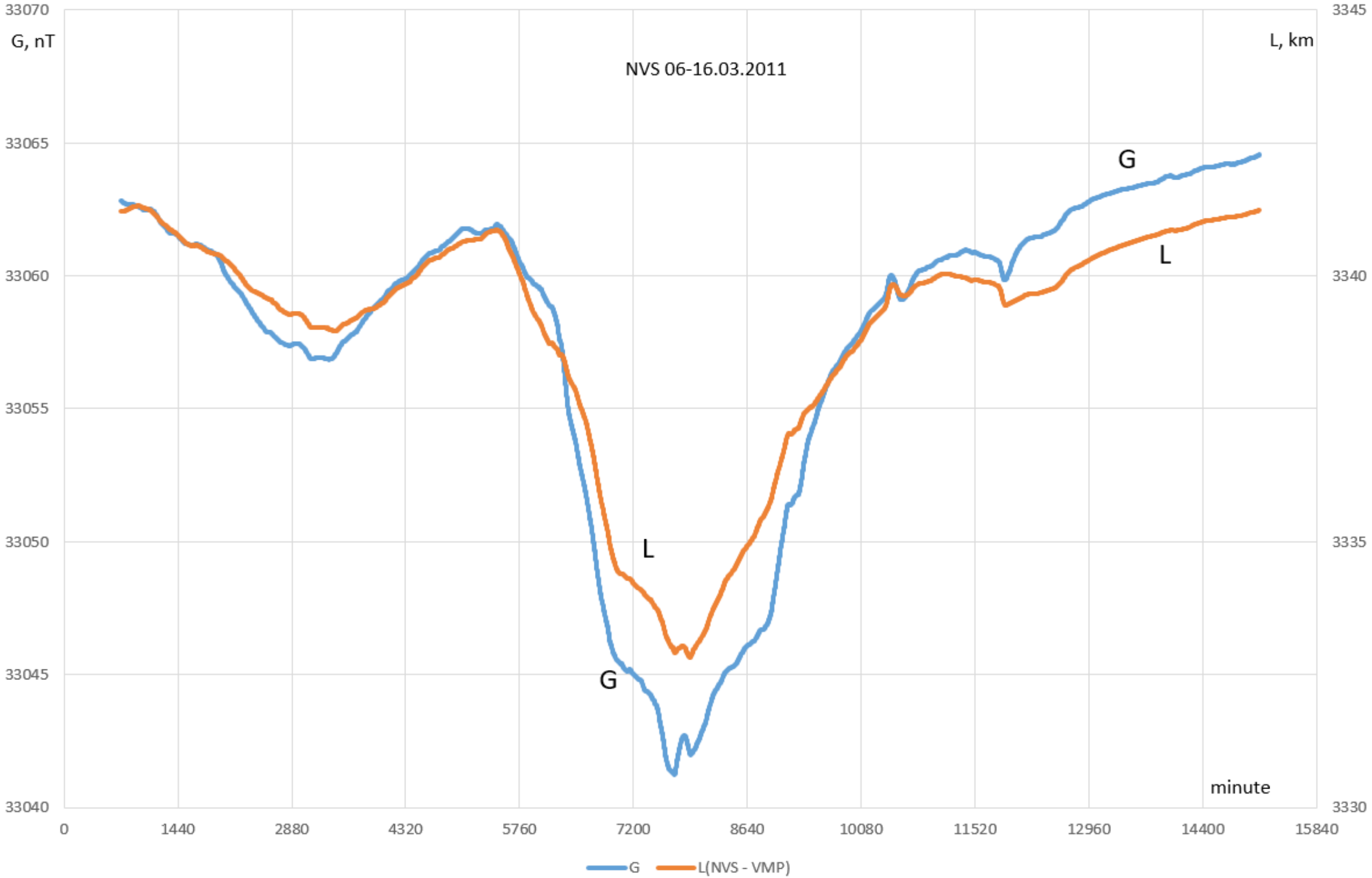
&

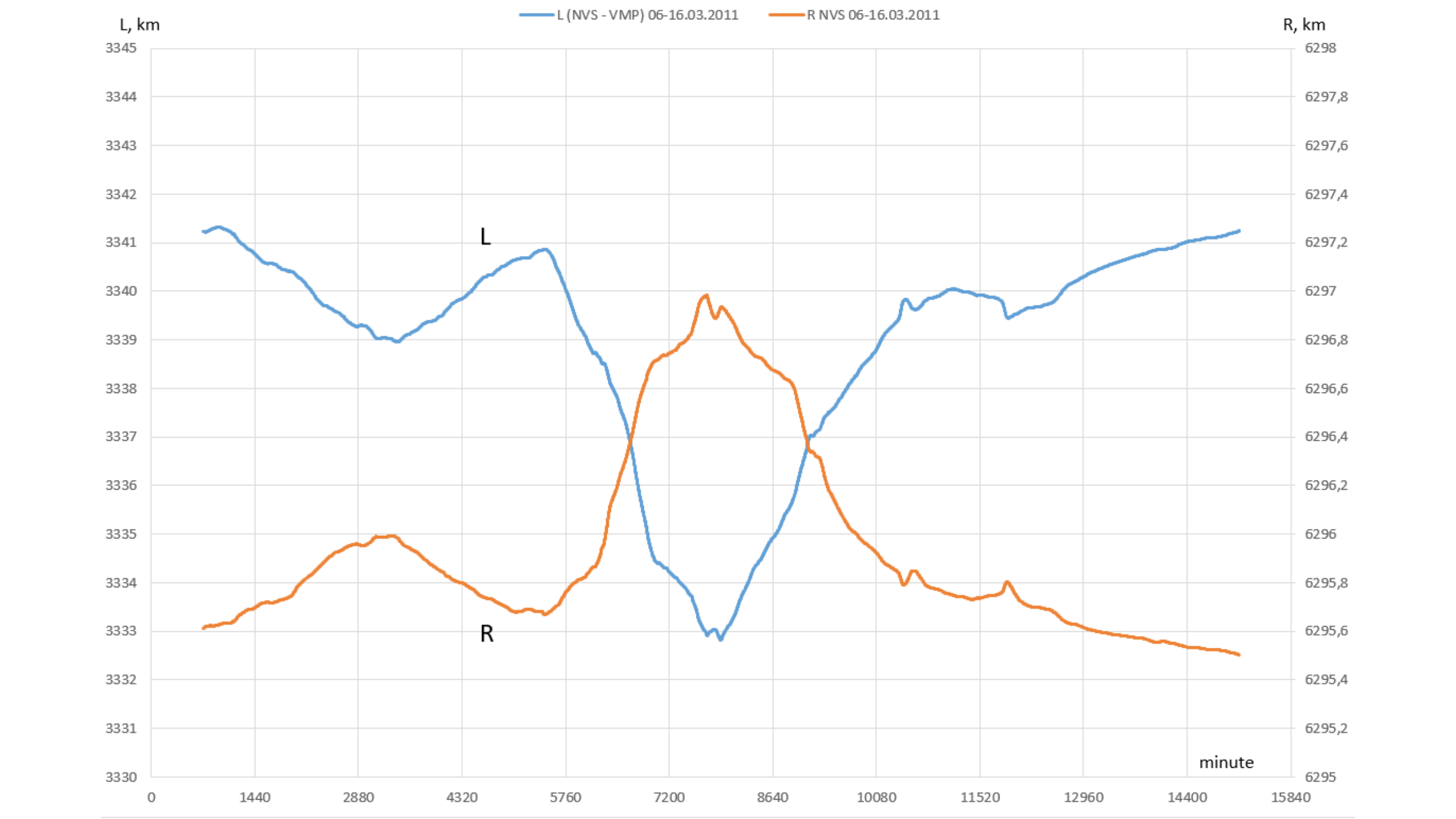

83,3
83,25
83,2
83,15
83,1
83,05
83
119,5
120
120,5
121
121,5
122
122,5
06-16.03.2011
middle day data
12.03.2011
Novosibirsk 11.03.2011
minutely data

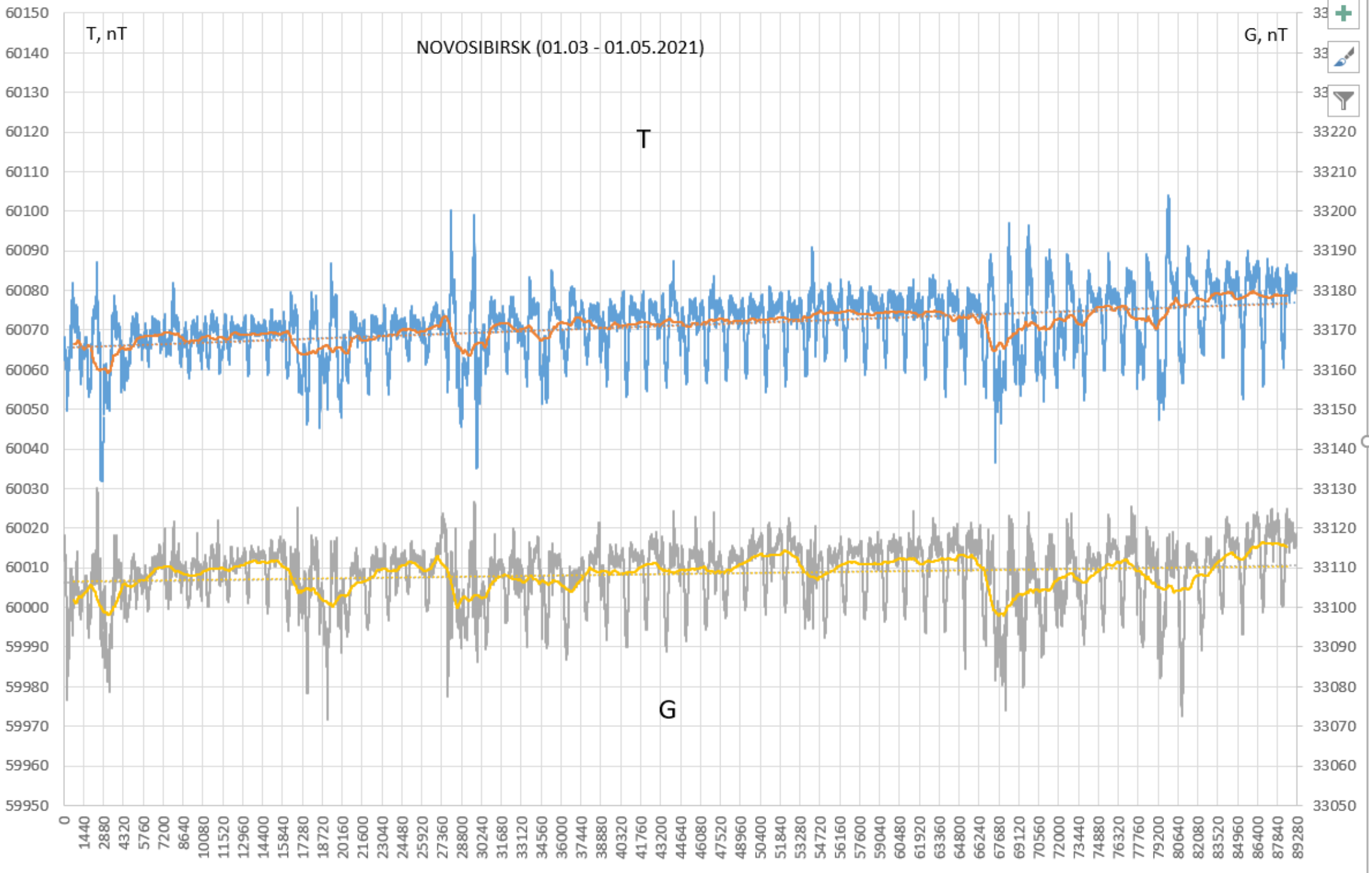

06.03.2011
07.03.2011
08.03.2011
09.03.2011
10.03.2011
11.03.2011
12.03.2011
13.03.2011
14.03.2011
15.03.2011
16.03.2011
83,24
83,23
83,22
83,21
83,2
83,19
83,18
83,17
83,16
83,15
83,14
120,7
120,8
120,9
121
VMP NVS

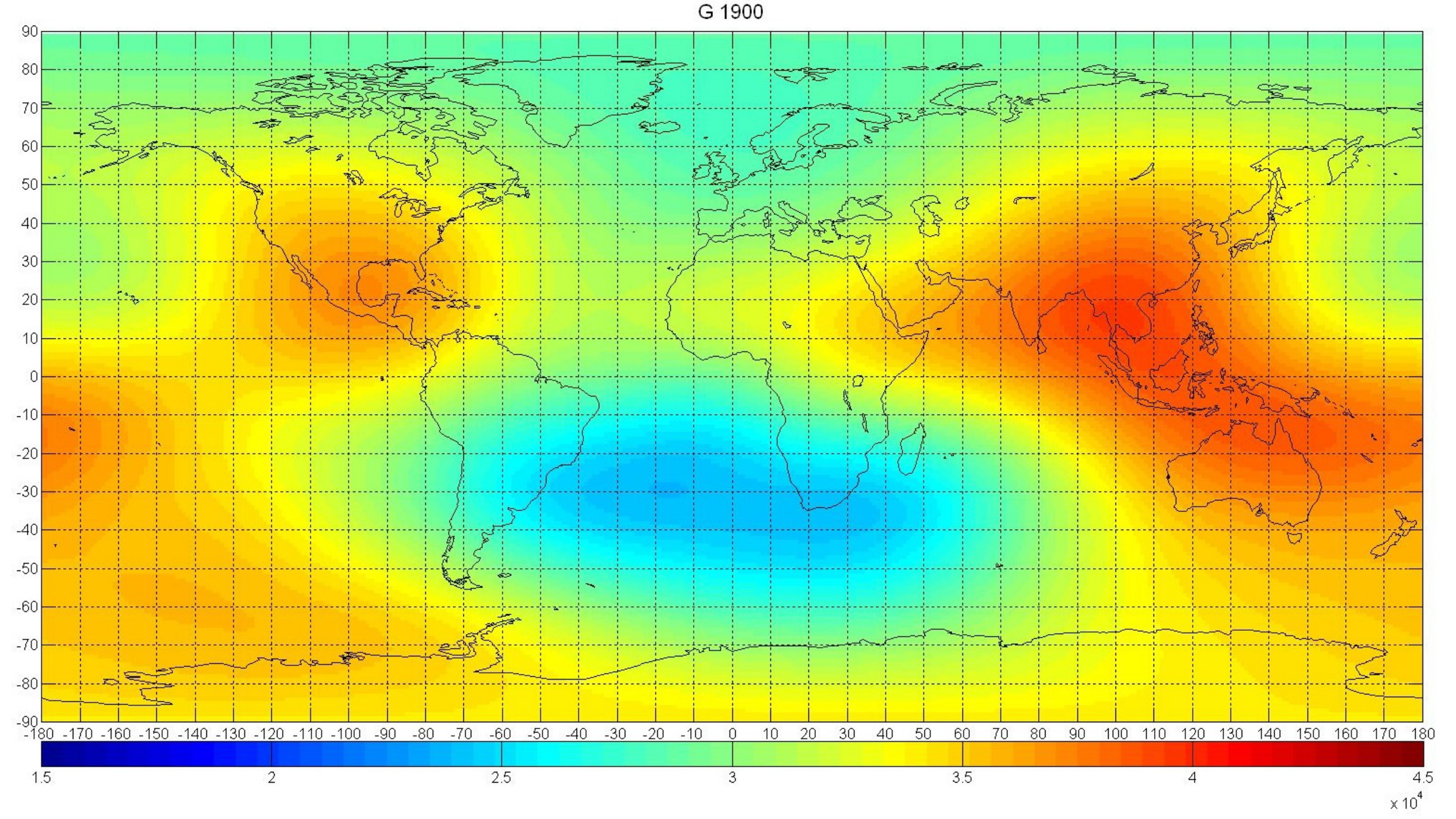

Vvmp, km/hr
Vmm, %/day
! ! " # $ # % & # $ # ' (# ($
Vmm
Vvmp
0
1
2
3
4
5
6
7
8
9
10
11
12
13
14
15
16
17
18
19
20
21
0,2
0,4
0,6
0,8
1
1,2
1,4
1,6
1,8
2
2,2
2,4
2,6
2,8
3
3,2
3,4
3,6
1440
2880
4320
5760
7200
8640
10080
11520
12960
14400
15840
17280
18720
20160
21600
23040
24480
25920
27360
28800
30240
31680
33120
34560
36000
37440
38880
40320
41760
43200
44640
46080
47520
48960
50400
51840
53280
54720
56160
57600
59040
60480
61920
63360
64800
66240
67680
69120
70560
72000
73440
74880
76320
77760
79200
80640
82080
83520
84960
86400
87840
89280

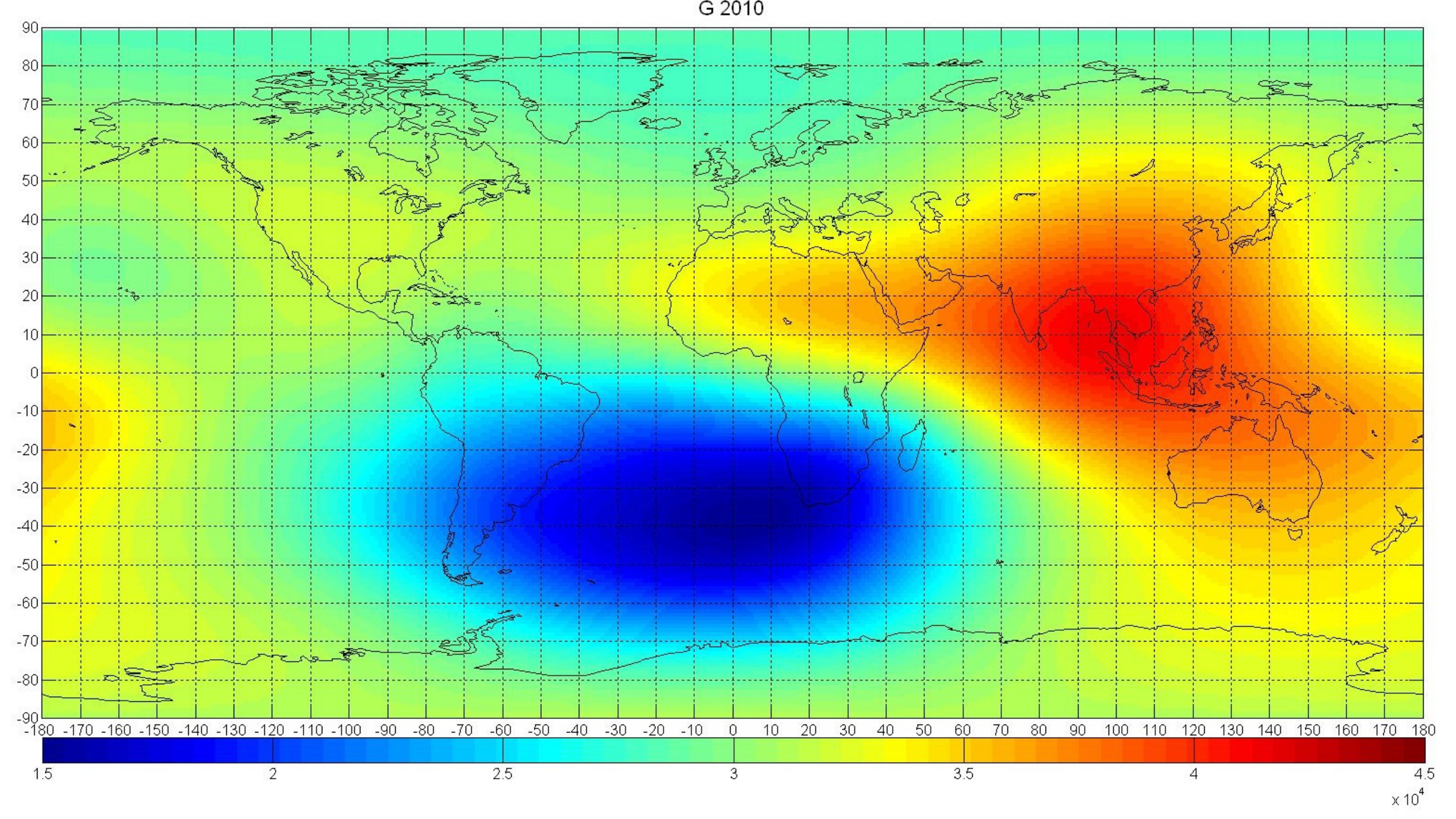

Vmm, %/day
NVS, IRT, PET, MMB
4,5
4
3,5
3
2,5
2
1,5
1
0,5
0
0
1440
2880
4320
5760
7200
8640
10080
11520
12960
14400
15840
17280
18720
20160
21600
23040
24480
25920
27360
28800
30240
31680
33120
34560
36000
37440
38880
40320
41760
43200
44640
46080
47520
48960
50400
51840
53280
54720
56160
57600
59040
60480
61920
63360
64800
66240
67680
69120
70560
72000
73440
74880
76320
77760
79200
80640
82080
83520
84960
86400
87840
89280

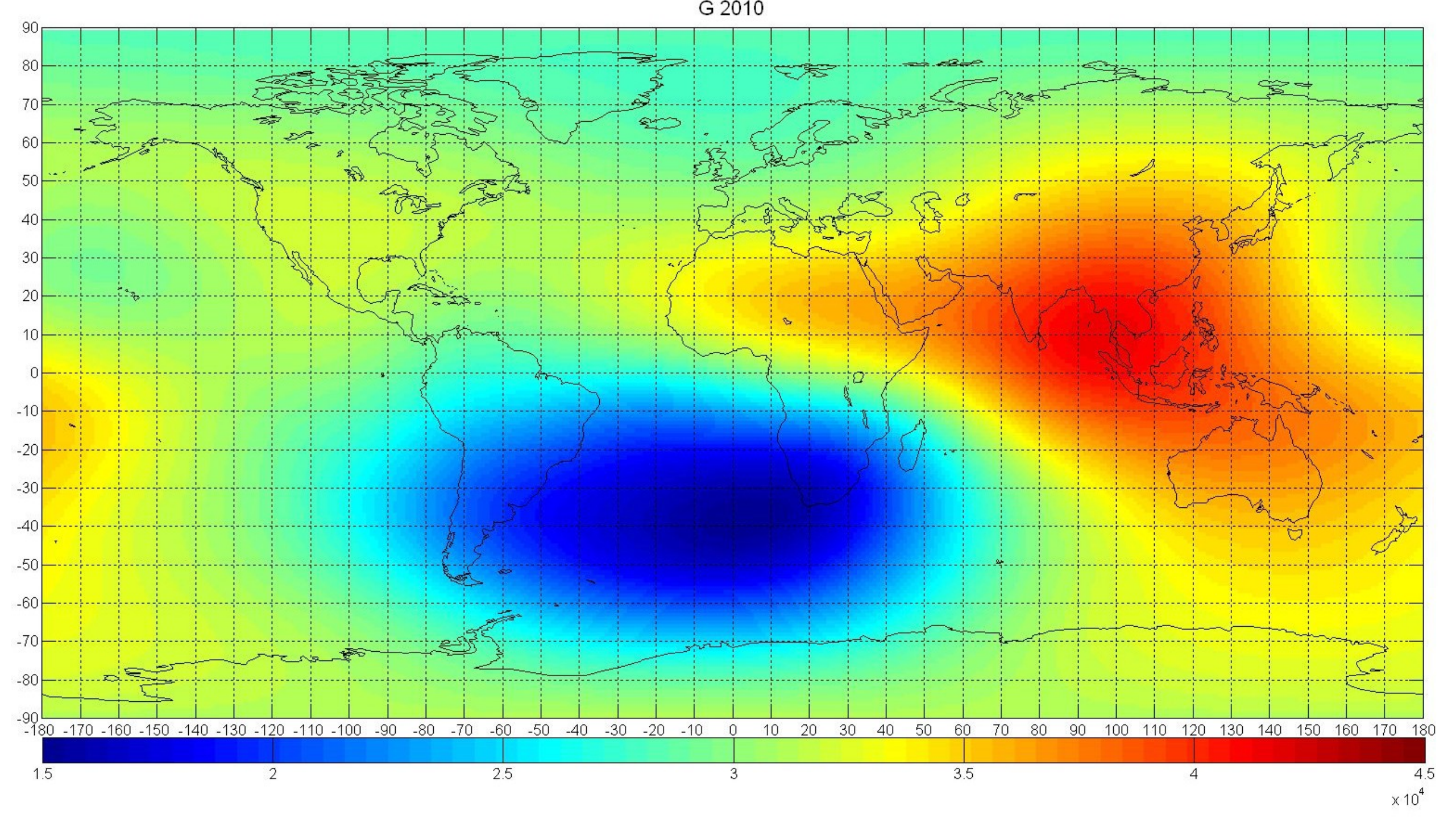

G, nT
L, km
NVS 06-16.03.2011
33070
33065
33060
33055
33050
33045
33040
3345
3340
3335
3330
0
1440
2880
4320
5760
7200
8640
10080
11520
12960
14400
15840
G
L
L
G
minute
G
L(NVS - VMP)

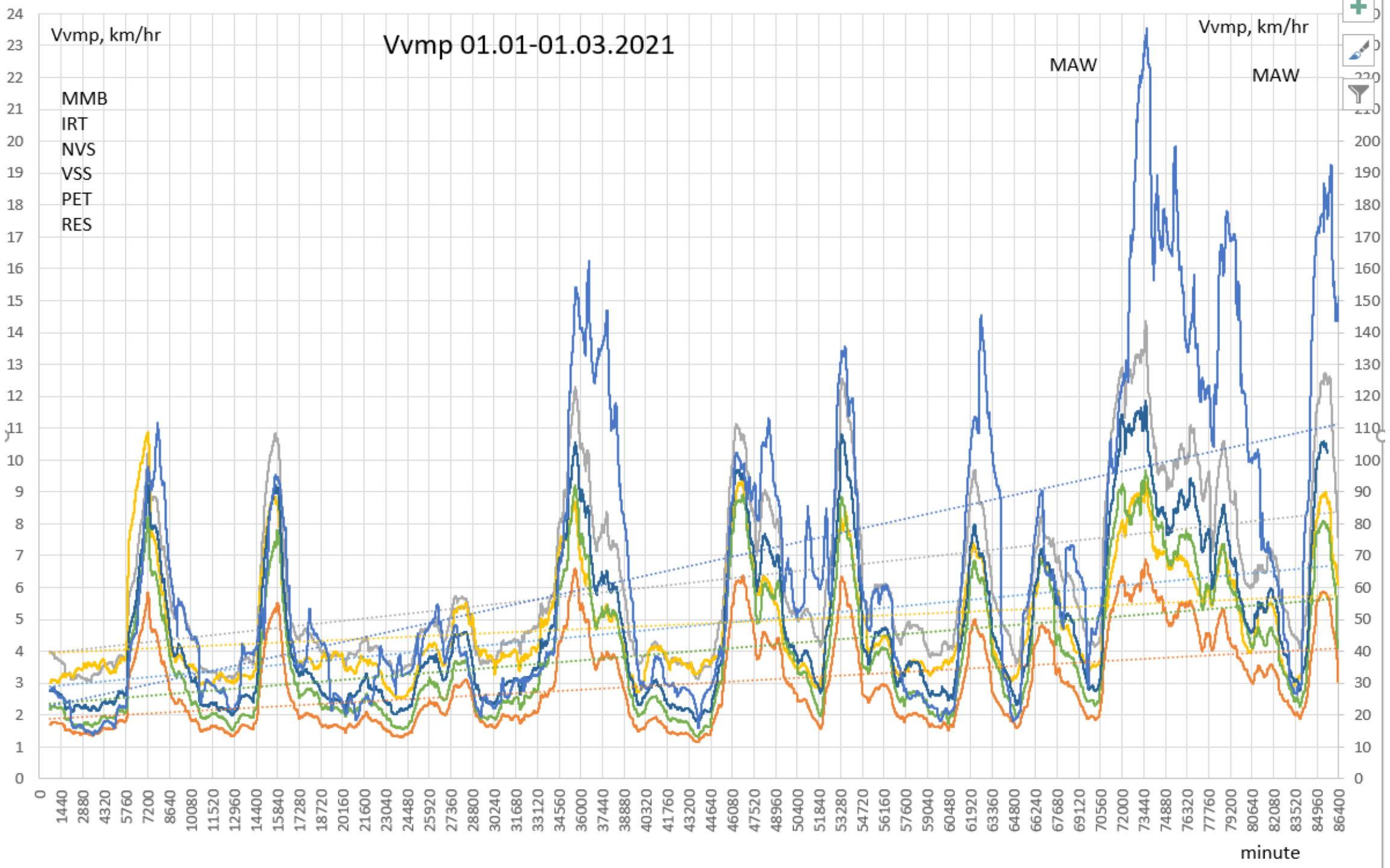

L (NVS - VMP) 06-16.03.2011
R NVS 06-16.03.2011
L, km
R, km
3345
3344
3343
3342
3341
3340
3339
3338
3337
3336
3335
3334
3333
3332
3331
3330
6298
6297,8
6297,6
6297,4
6297,2
6297
6296,8
6296,6
6296,4
6296,2
6296
6295,8
6295,6
6295,4
6295,2
6295
L
R
minute
0
1440
2880
4320
5760
7200
8640
10080
11520
12960
14400
15840

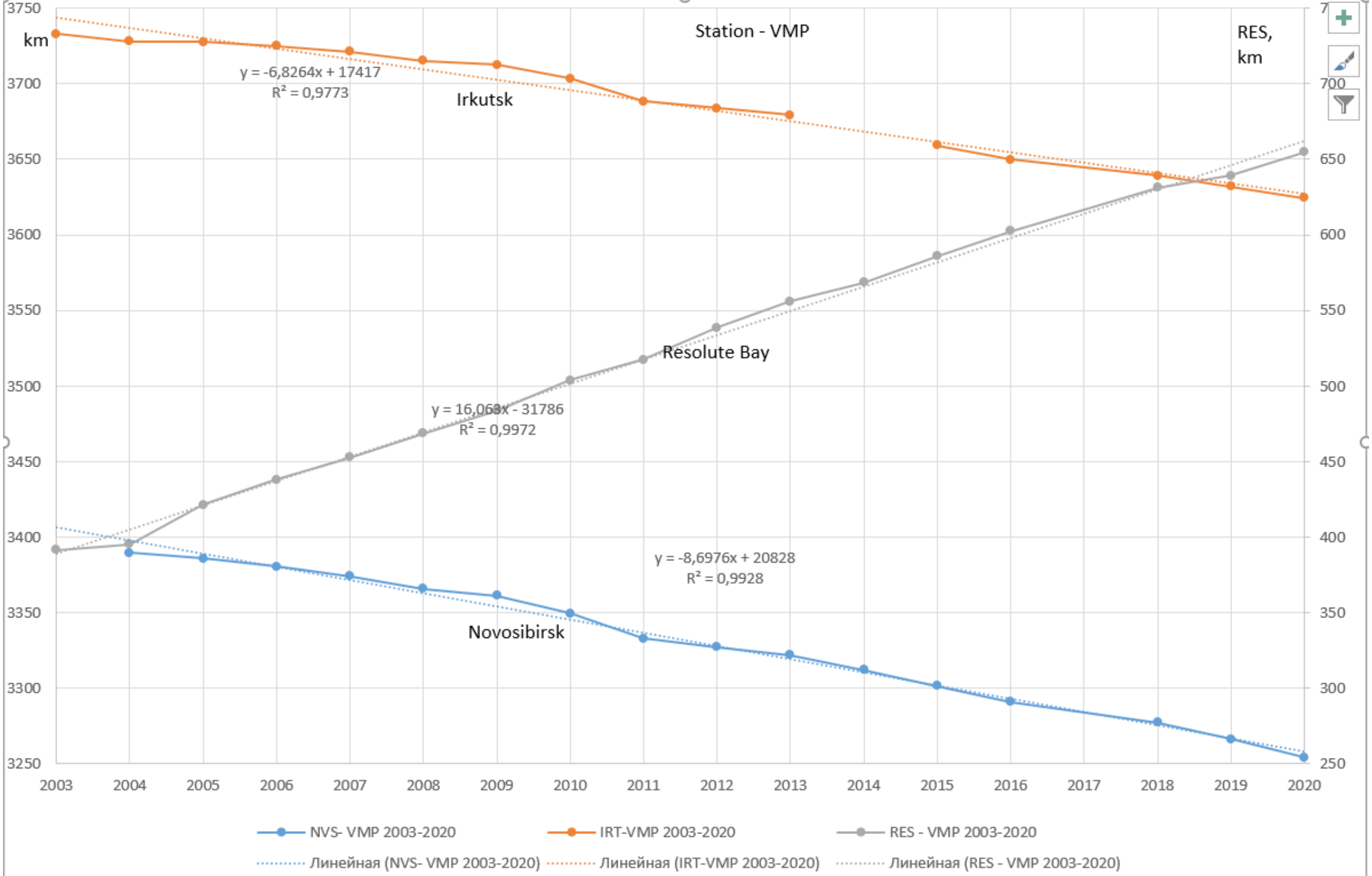

T, nT
NOVOSIBIRSK (01.03 - 01.05.2021)
G, nT
T
G
60150
60140
60130
60120
60110
60100
60090
60080
60070
60060
60050
60040
60030
60020
60010
60000
59990
59980
59970
59960
59950
33220
33210
33200
33190
33180
33170
33160
33150
33140
33130
33120
33110
33100
33090
33080
33070
33060
33050
0
1440
2880
4320
5760
7200
8640
10080
11520
12960
14400
15840
17280
18720
20160
21600
23040
24480
25920
27360
28800
30240
31680
33120
34560
36000
37440
38880
40320
41760
43200
44640
46080
47520
48960
50400
51840
53280
54720
56160
57600
59040
60480
61920
63360
64800
66240
67680
69120
70560
72000
73440
74880
76320
77760
79200
80640
82080
83520
84960
86400
87840
89280


G 1900
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-180 -170 -160 -150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
1.5
2
2.5
3
3.5
4
4.5
x 10^4


G 2010
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-180 -170 -160 -150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
1.5
2
2.5
3
3.5
4
4.5
x 10^4


G 2010
90
80
70
60
50
40
30
20
10
0
-10
-20
-30
-40
-50
-60
-70
-80
-90
-180 -170 -160 -150 -140 -130 -120 -110 -100 -90 -80 -70 -60 -50 -40 -30 -20 -10 0 10 20 30 40 50 60 70 80 90 100 110 120 130 140 150 160 170 180
1.5
2
2.5
3
3.5
4
4.5
x 10^4


Vvmp, km/hr
Vvmp 01.01-01.03.2021
MMB
IRT
NVS
VSS
PET
RES
MAW
Vvmp, km/hr
MAW
minute


Station - VMP
km
RES, km
y = -6,8264x + 17417
R² = 0,9773
Irkutsk
Resolute Bay
y = 16,063x - 31786
R² = 0,9972
y = -8,6976x + 20828
R² = 0,9928
Novosibirsk
3750
3700
3650
3600
3550
3500
3450
3400
3350
3300
3250
700
650
600
550
500
450
400
350
300
250
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
2016
2017
2018
2019
2020
NVS- VMP 2003-2020
IRT-VMP 2003-2020
RES - VMP 2003-2020
Линейная (NVS- VMP 2003-2020)
Линейная (IRT-VMP 2003-2020)
Линейная (RES - VMP 2003-2020)

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