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Supplement of

Lunar periodicity in the shell flux of planktonic foraminifera in the Gulf of Mexico

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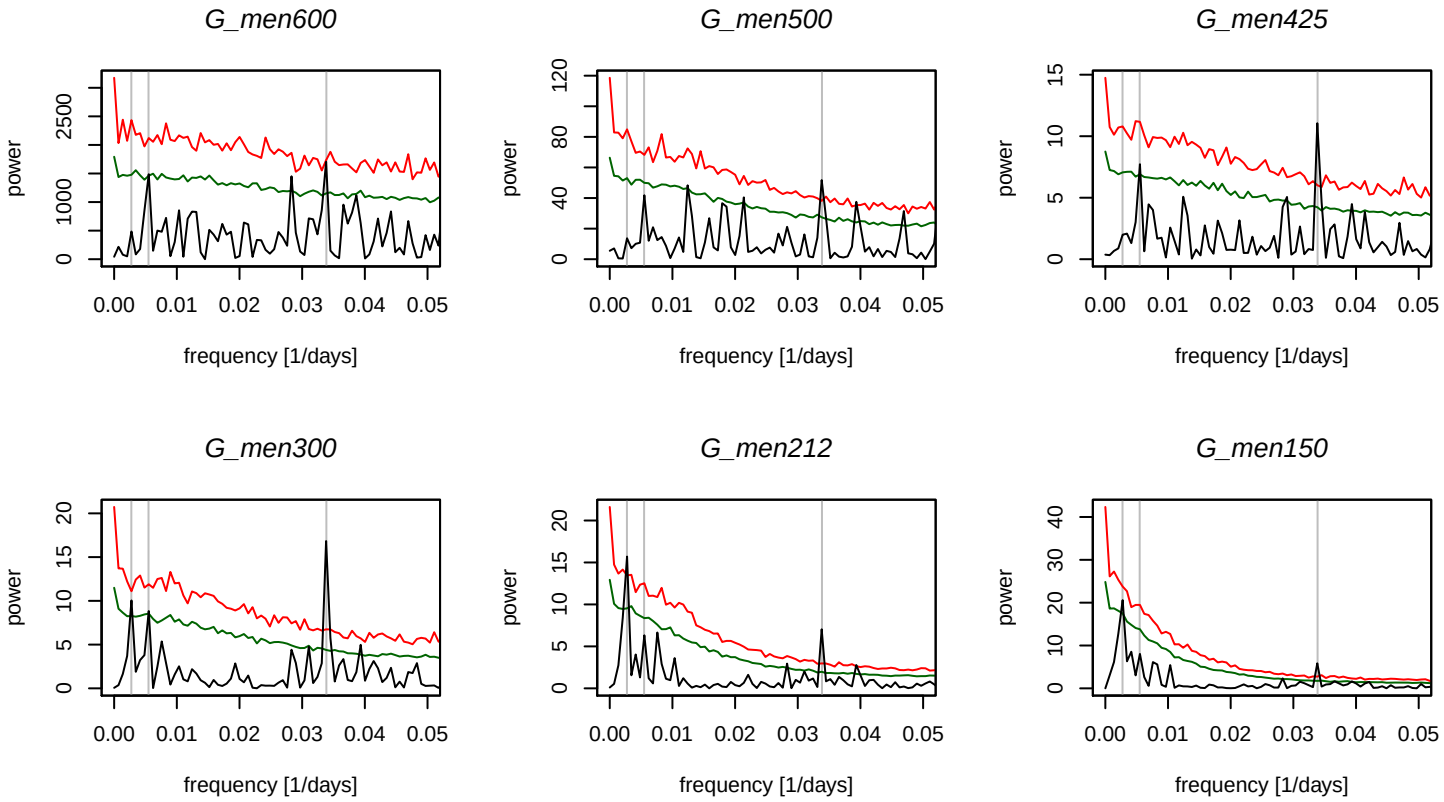
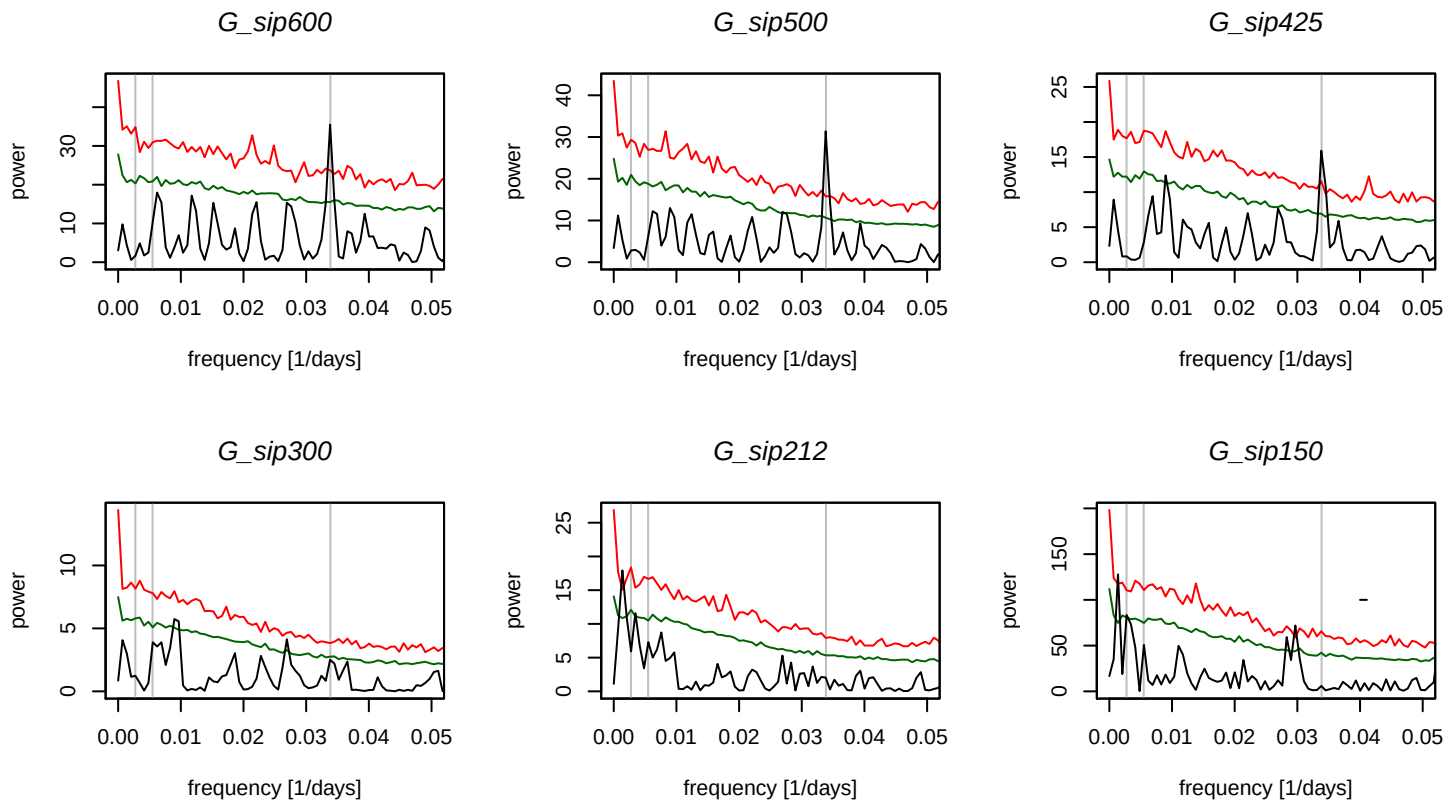
Figure captions:

S1 (page 3-13): periodograms of the size-fractionated fluxes of 11 species of planktonic Foraminifera in the Gulf of Mexico. See Fig. 2 for more details.

S2 (page 14-24): temporal expression of lunar periodicity in the shell flux of 11 species of planktonic Foraminifera in the Gulf of Mexico. See Fig. 3 for more details.

S3 (page 25-26): phasing of the lunar cycle in the shell fluxes of 11 species of planktonic Foraminifera in the Gulf of Mexico. Only size fractions that showed significant spectral power at the lunar frequency are shown. See Fig. 4 for more details.


G_men600
G_men500
G_men425
G_men300
G_men212
G_men150
power
frequency [1/days]
0.00
0.01
0.02
0.03
0.04
0.05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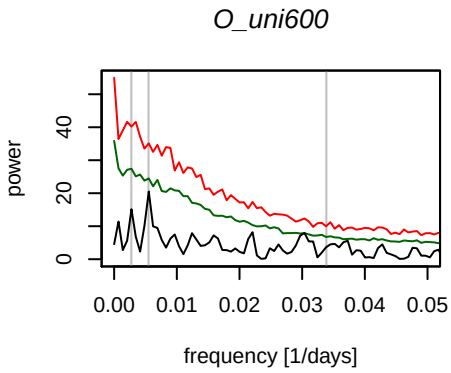
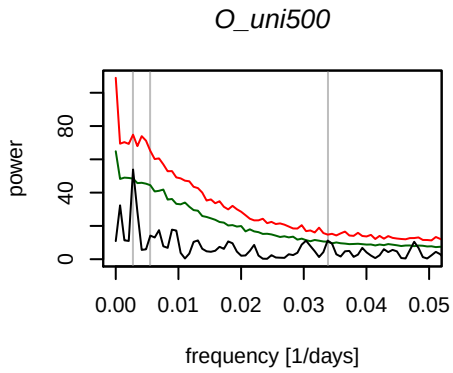
G_sip500
G_sip425
G_sip300
G_sip212
G_sip150
power
frequency [1/days]
0.00
0.01
0.02
0.03
0.04
0.05


O_uni600
power
0
20
40
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]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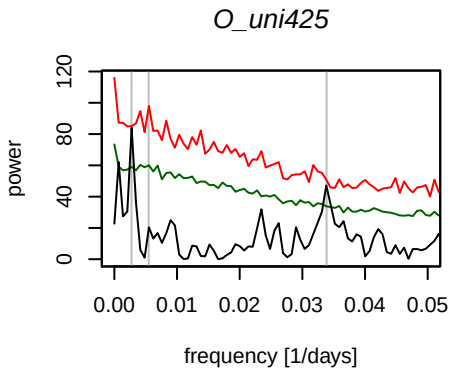
power
0
40
80
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]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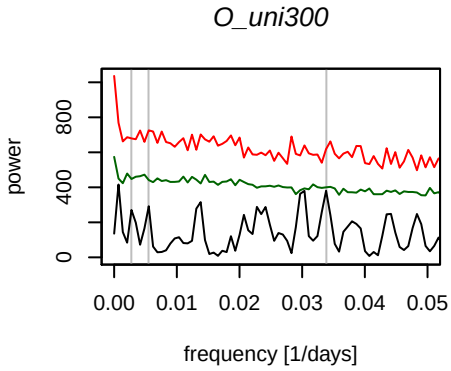
power
0
40
80
120
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]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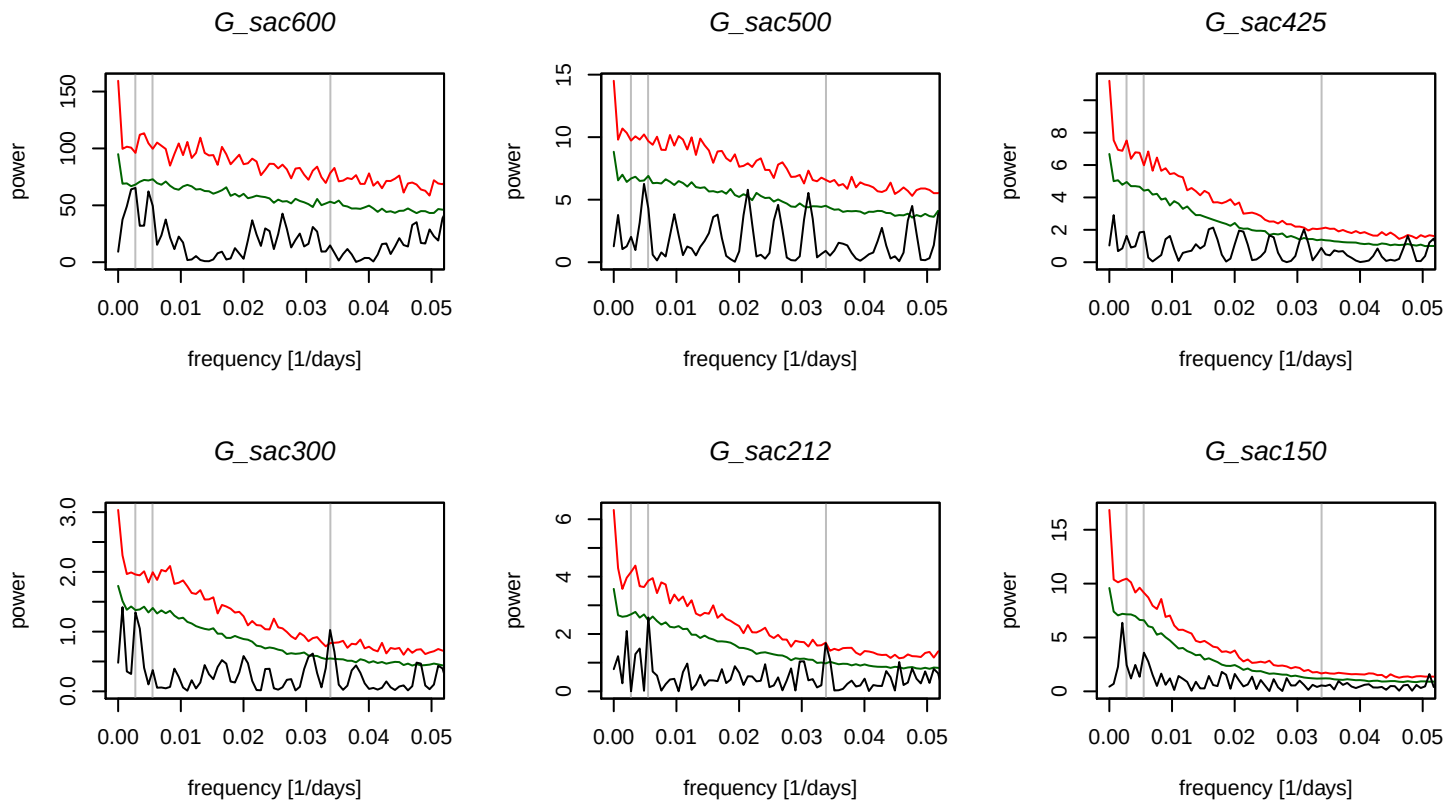
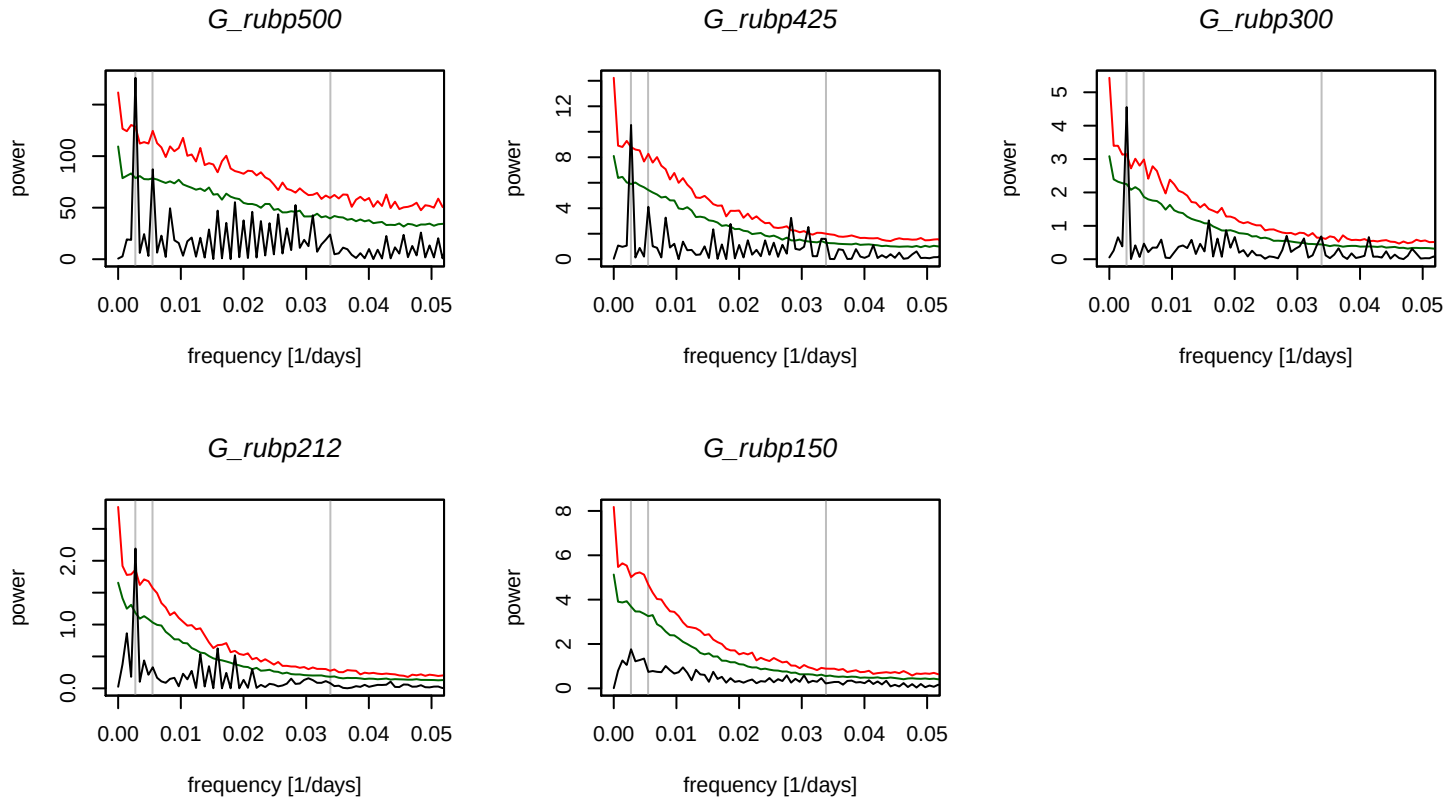
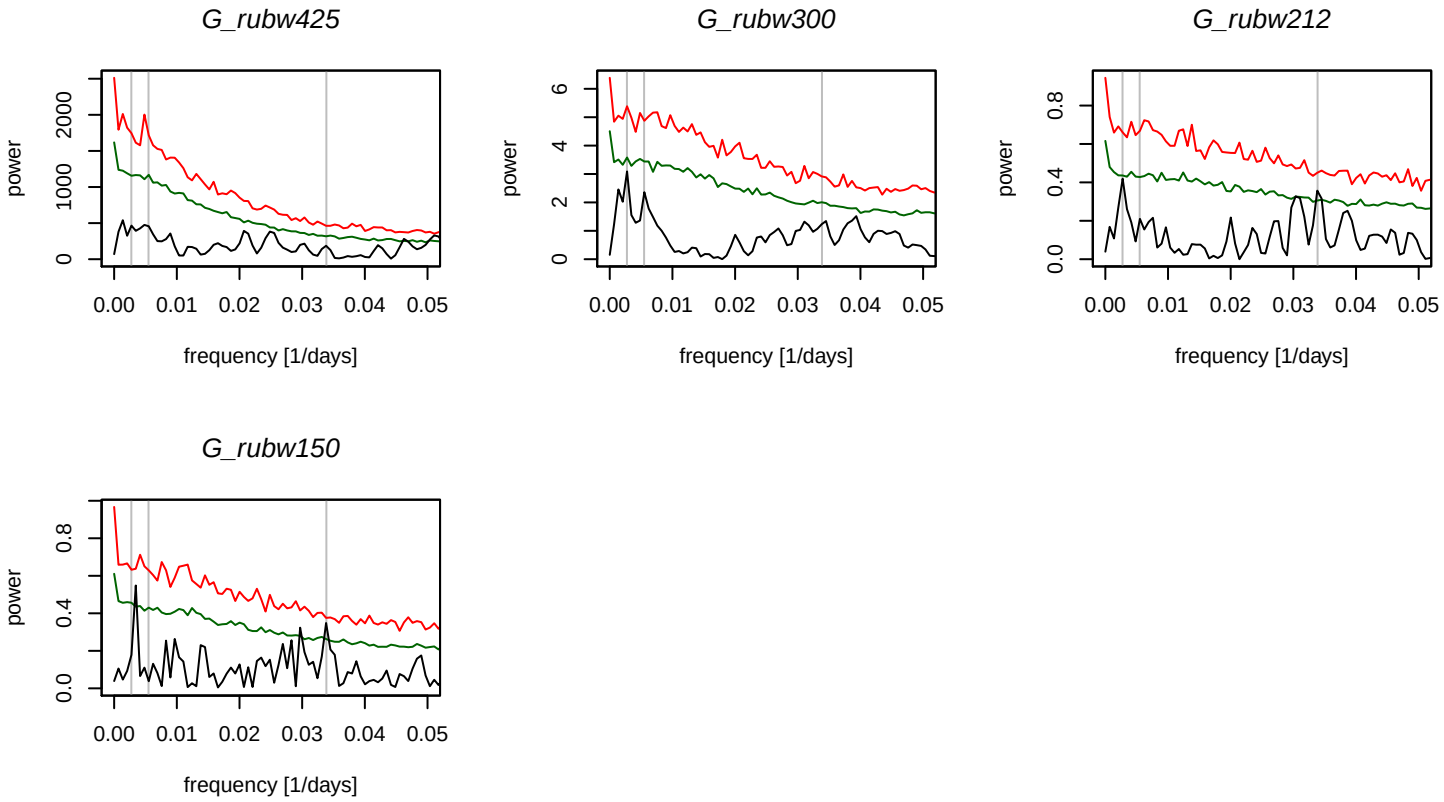
power
0
400
800
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]


G_sac600
G_sac500
G_sac425
G_sac300
G_sac212
G_sac150
power
frequency [1/days]
0.00
0.01
0.02
0.03
0.04
0.05


G_rubp500
G_rubp425
G_rubp300
G_rubp212
G_rubp150
power
frequency [1/days]
0.00
0.01
0.02
0.03
0.04
0.05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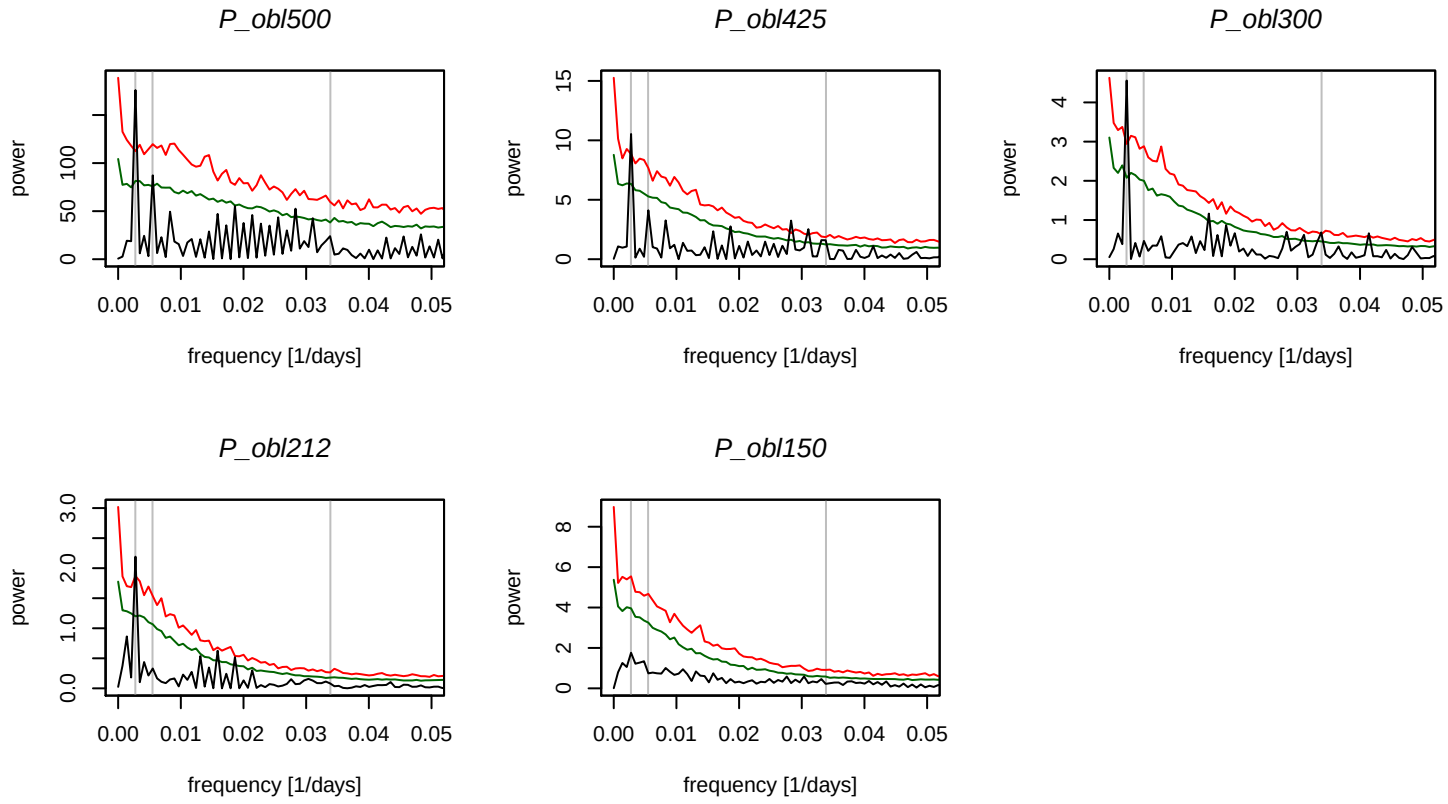
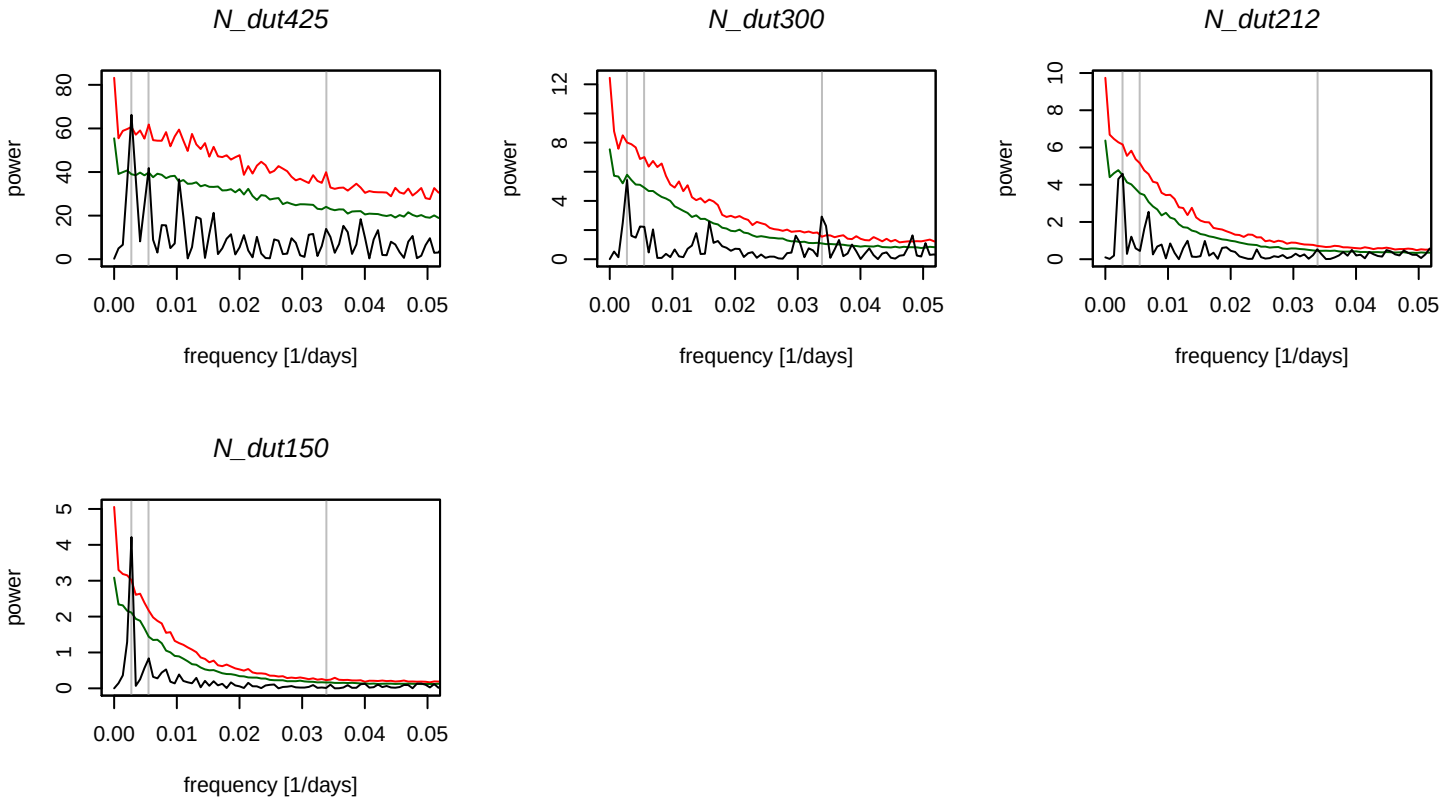
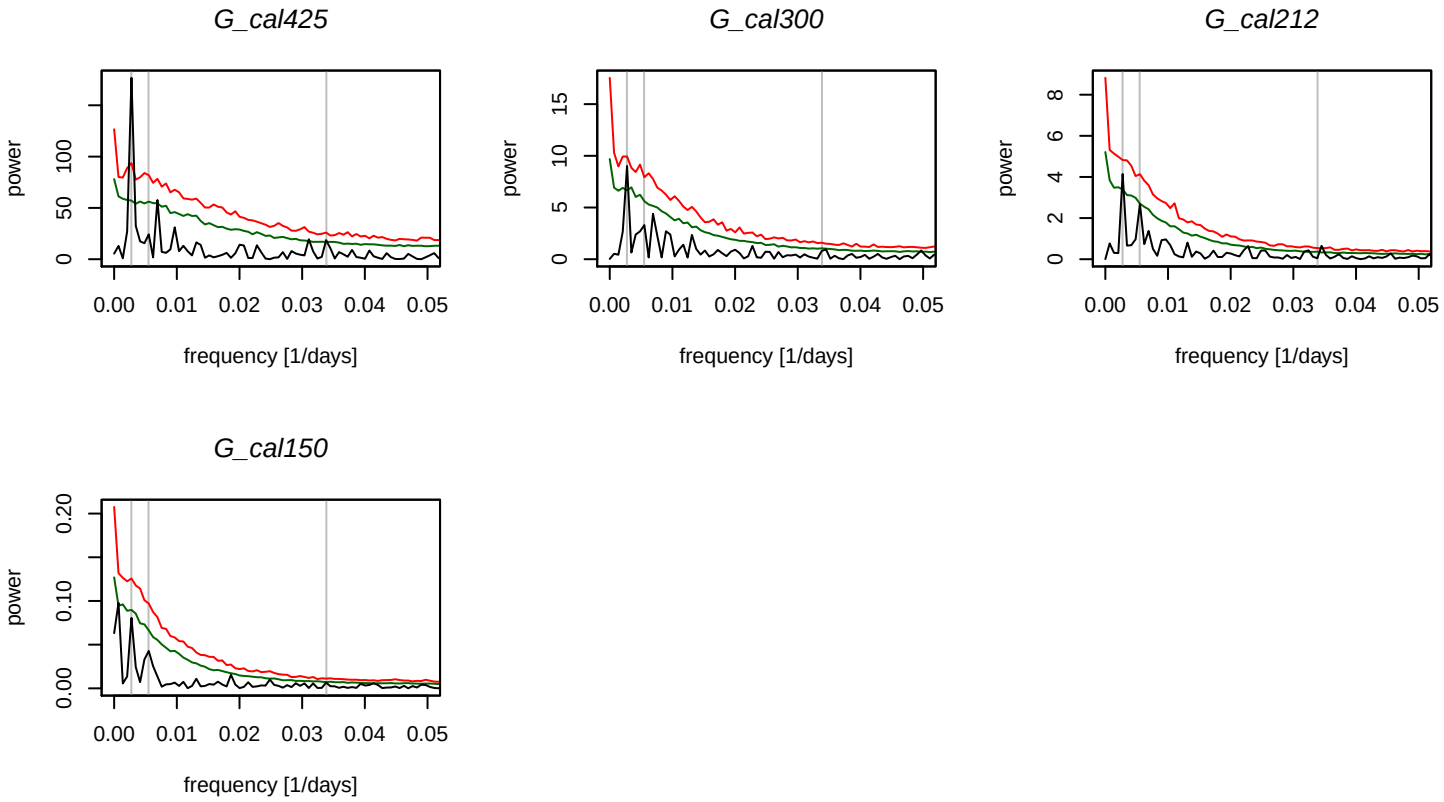
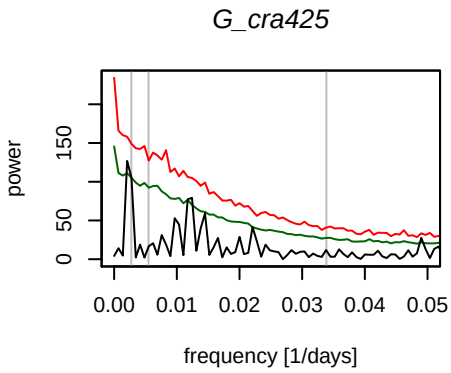
power
0
1000
2000
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]
G_rubw300
power
0
2
4
6
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]
G_rubw212
power
0.0
0.4
0.8
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]
G_rubw150
power
0.0
0.4
0.8
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]


P_obl500
P_obl425
P_obl300
P_obl212
P_obl150
power
frequency [1/days]
0.00
0.01
0.02
0.03
0.04
0.05


N_dut425
N_dut300
N_dut212
N_dut150
power
frequency [1/days]
0.00
0.01
0.02
0.03
0.04
0.05


G_cal425
power
0
50
100
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]
G_cal300
power
0
5
10
15
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]
G_cal212
power
0
2
4
6
8
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]
G_cal150
power
0.00
0.10
0.20
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]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power
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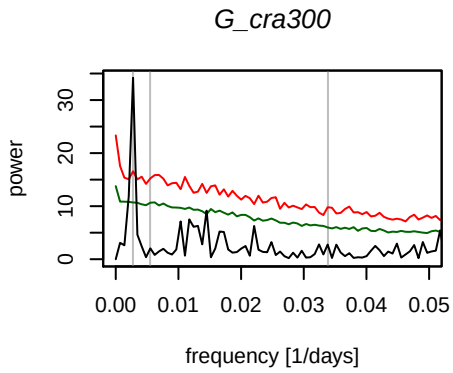
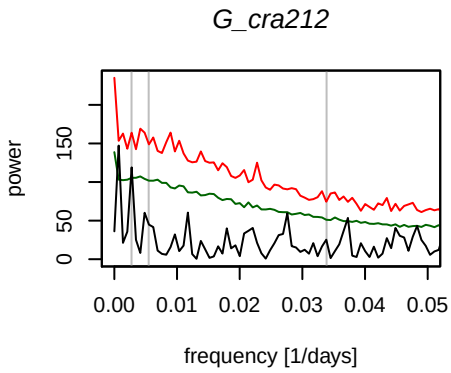
50
150
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]


G_cra300
power
0
10
20
30
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]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power
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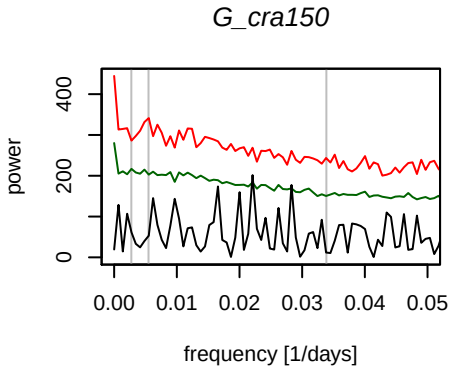
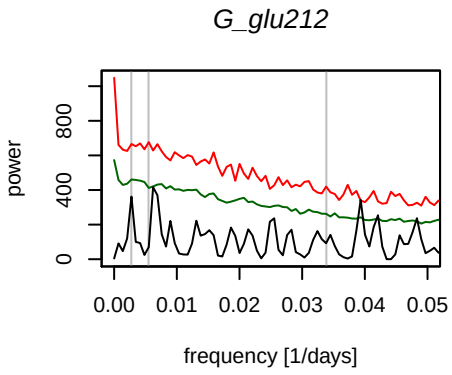
50
150
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]


G_cra150
power
0
200
400
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]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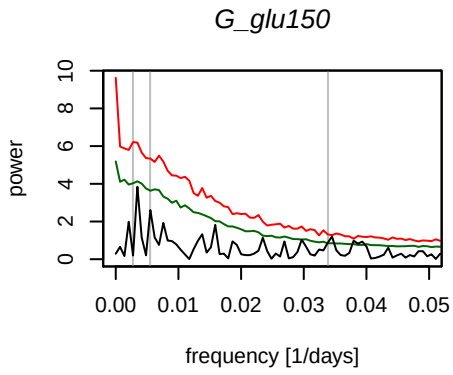
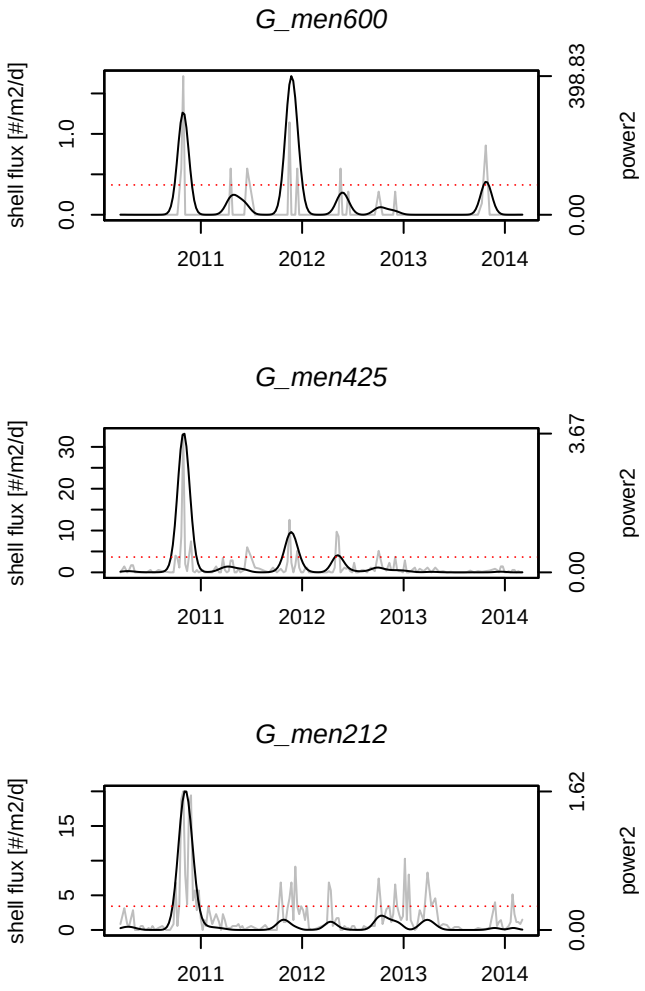
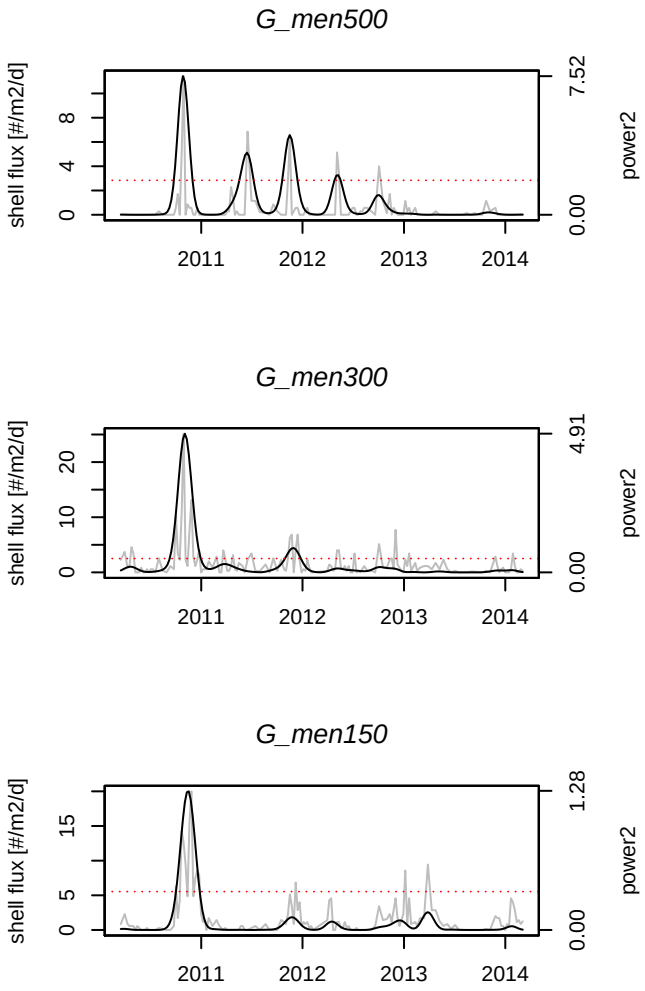
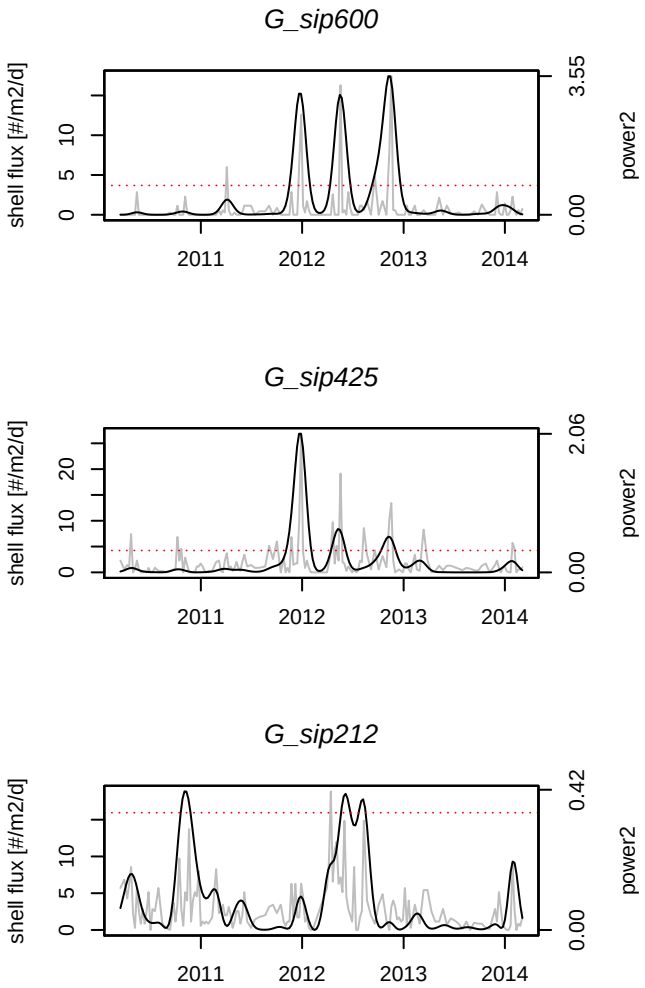
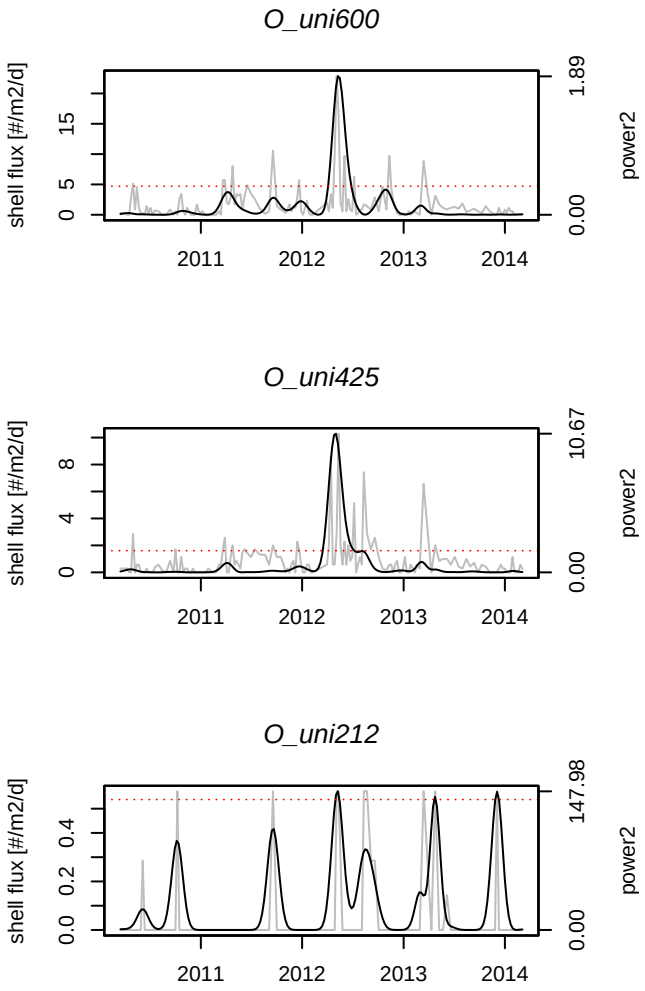
power
0
400
800
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]


G_glu150
power
0
2
4
6
8
10
0.00
0.01
0.02
0.03
0.04
0.05
frequency [1/days]


G_men600
shell flux [#/m2/d]
0.0
1.0
398.83
0.00
power2
2011
2012
2013
2014
G_men425
shell flux [#/m2/d]
0
10
20
30
3.67
0.00
power2
2011
2012
2013
2014
G_men212
shell flux [#/m2/d]
0
5
15
1.62
0.00
power2
2011
2012
2013
2014


G_men500
shell flux [#/m2/d]
0
4
8
7.52
0.00
power2
2011
2012
2013
2014
G_men300
shell flux [#/m2/d]
0
10
20
4.91
0.00
power2
2011
2012
2013
2014
G_men150
shell flux [#/m2/d]
0
5
15
1.28
0.00
power2
2011
2012
2013
2014


G_sip600
G_sip500
G_sip425
G_sip300
G_sip212
G_sip150
shell flux [#/m2/d]
power2
2011
2012
2013
2014
3.55
3.32
2.06
0.31
0.42
2.95
0.00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5
15
1.89
0.00
power2
2011
2012
2013
2014
O_uni425
shell flux [#/m2/d]
0
4
8
10.67
0.00
power2
2011
2012
2013
2014
O_uni212
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0.4
147.98
0.00
power2
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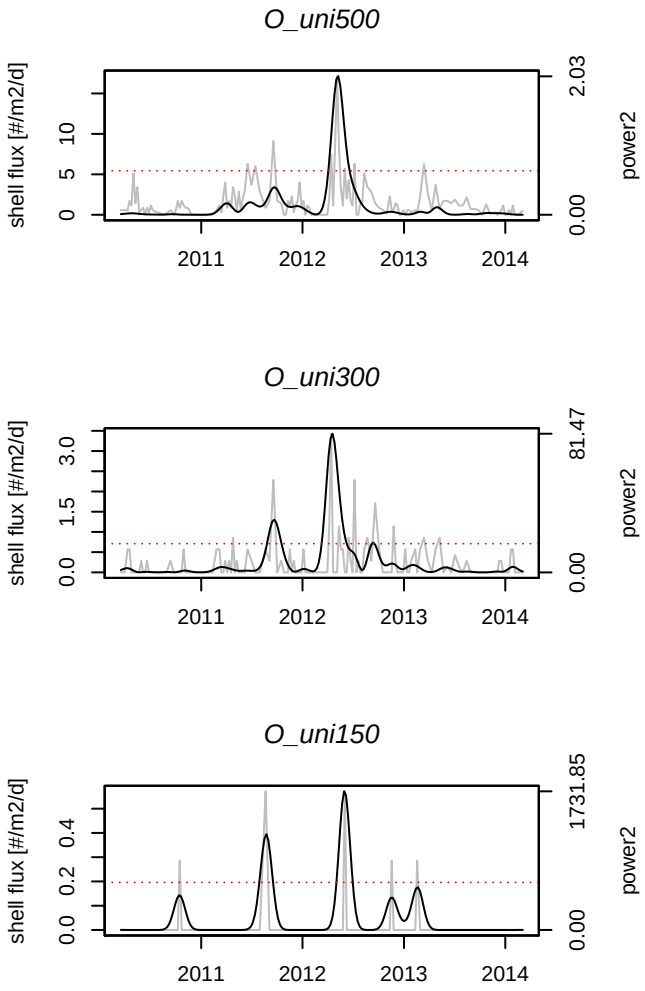
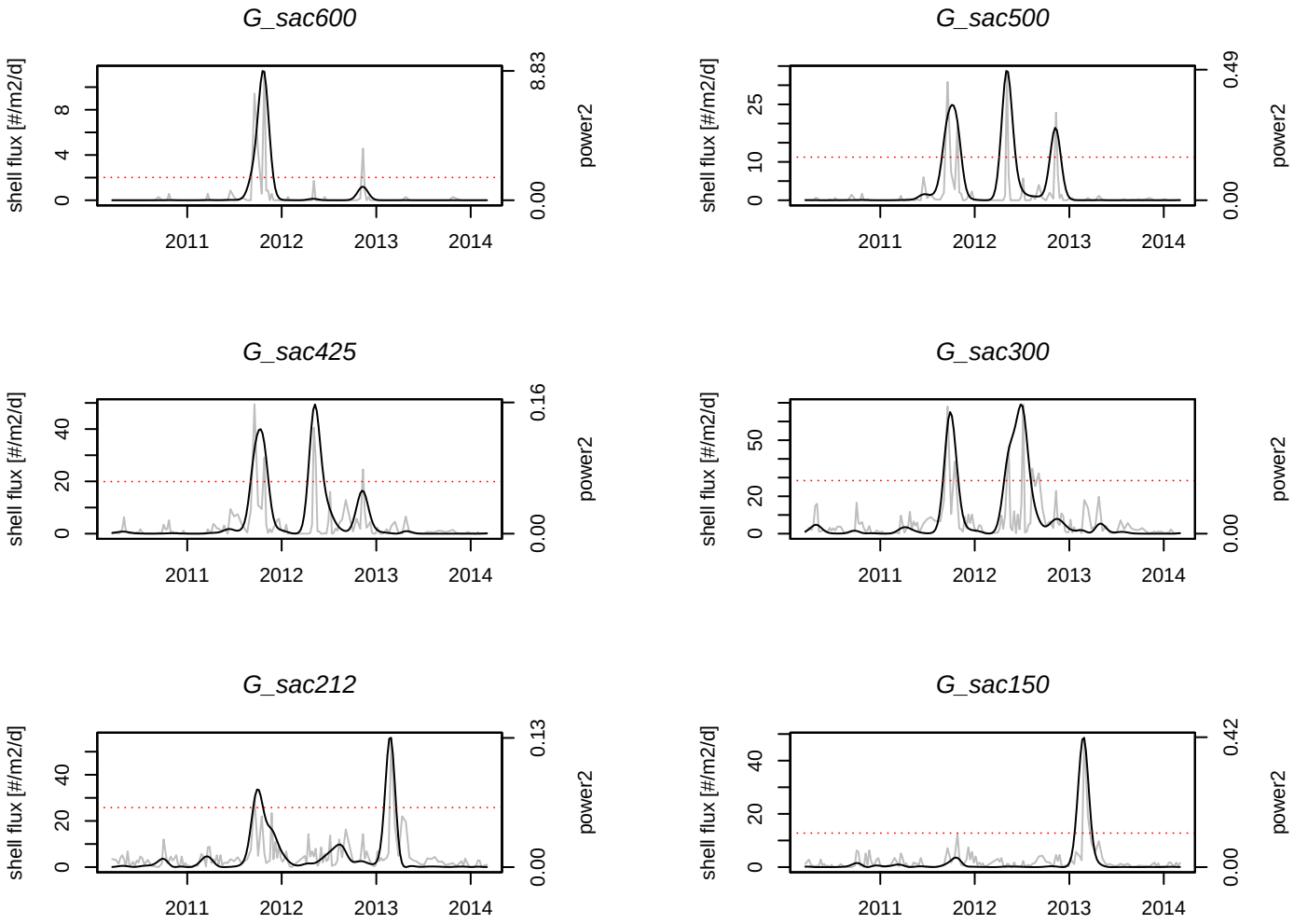
2012
2013
2014


O_uni500
shell flux [#/m2/d]
0
5
10
2.03
0.00
power2
2011
2012
2013
2014
O_uni300
shell flux [#/m2/d]
0.0
1.5
3.0
81.47
0.00
power2
2011
2012
2013
2014
O_uni150
shell flux [#/m2/d]
0.0
0.2
0.4
1731.85
0.00
power2
2011
2012
2013
2014


G_sac600
shell flux [#/m2/d]
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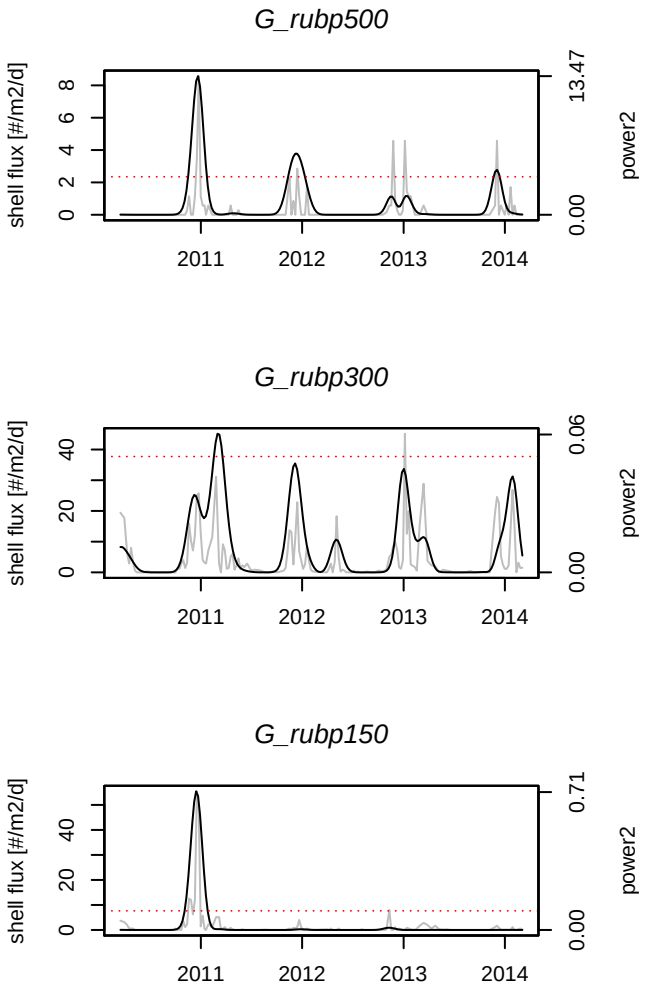
4
8
8.83
0.00
power2
2011
2012
2013
2014
G_sac500
shell flux [#/m2/d]
0
10
25
0.49
0.00
power2
2011
2012
2013
2014
G_sac425
shell flux [#/m2/d]
0
20
40
0.16
0.00
power2
2011
2012
2013
2014
G_sac300
shell flux [#/m2/d]
0
20
50
0.00
power2
2011
2012
2013
2014
G_sac212
shell flux [#/m2/d]
0
20
40
0.13
0.00
power2
2011
2012
2013
2014
G_sac150
shell flux [#/m2/d]
0
20
40
0.42
0.00
power2
2011
2012
2013
2014


G_rubp500
shell flux [#/m2/d]
0
2
4
6
8
13.47
0.00
power2
2011
2012
2013
2014
G_rubp425
shell flux [#/m2/d]
0
10
20
0.31
0.00
power2
2011
2012
2013
2014
G_rubp300
shell flux [#/m2/d]
0
20
40
0.06
0.00
power2
2011
2012
2013
2014
G_rubp212
shell flux [#/m2/d]
0
20
50
0.07
0.00
power2
2011
2012
2013
2014
G_rubp150
shell flux [#/m2/d]
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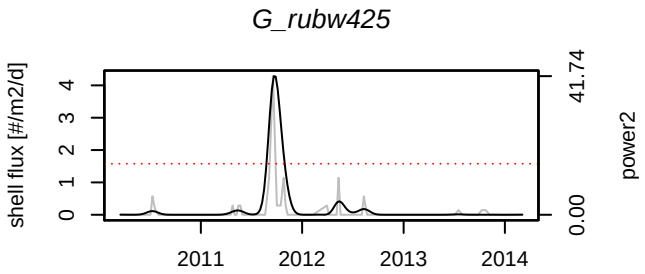
20
40
0.71
0.00
power2
2011
2012
2013
2014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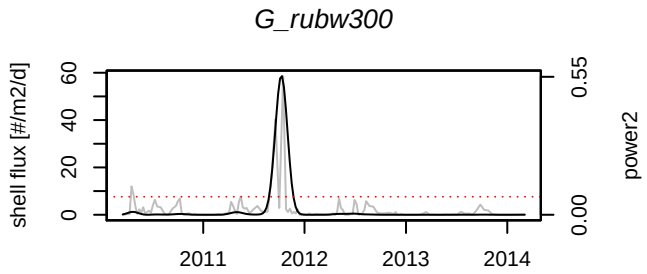
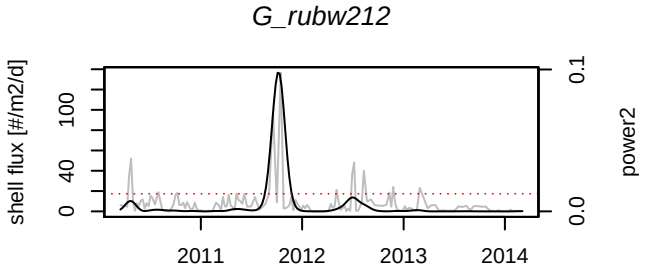
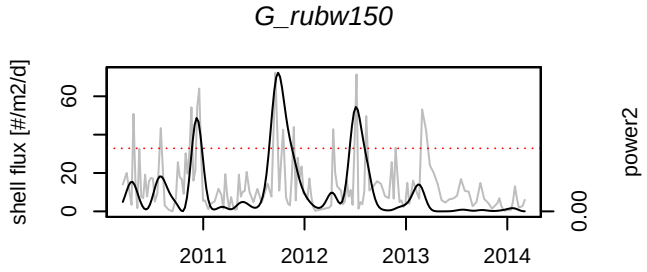
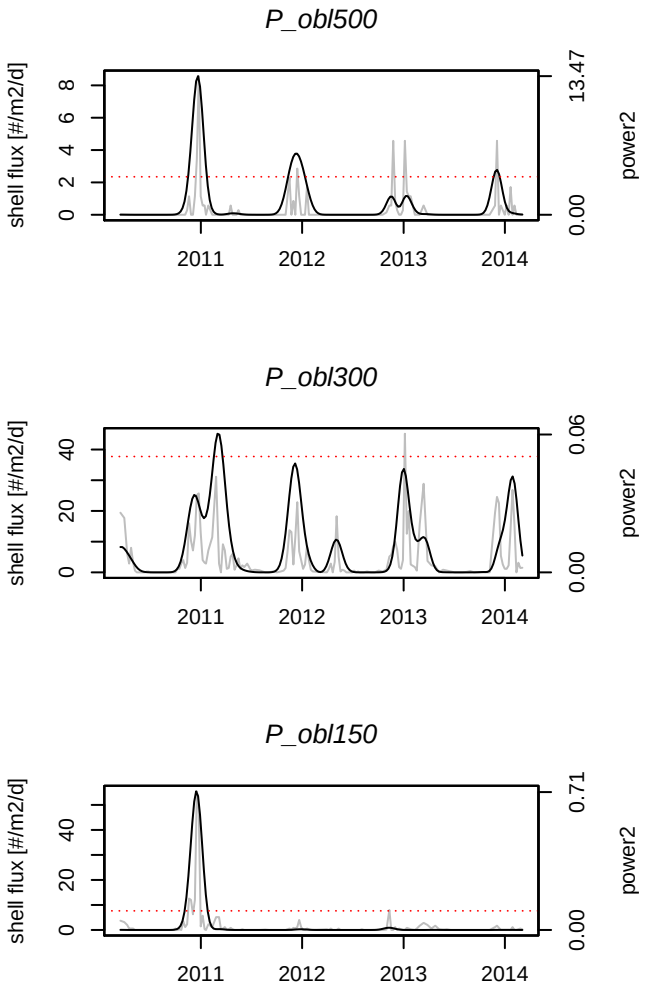
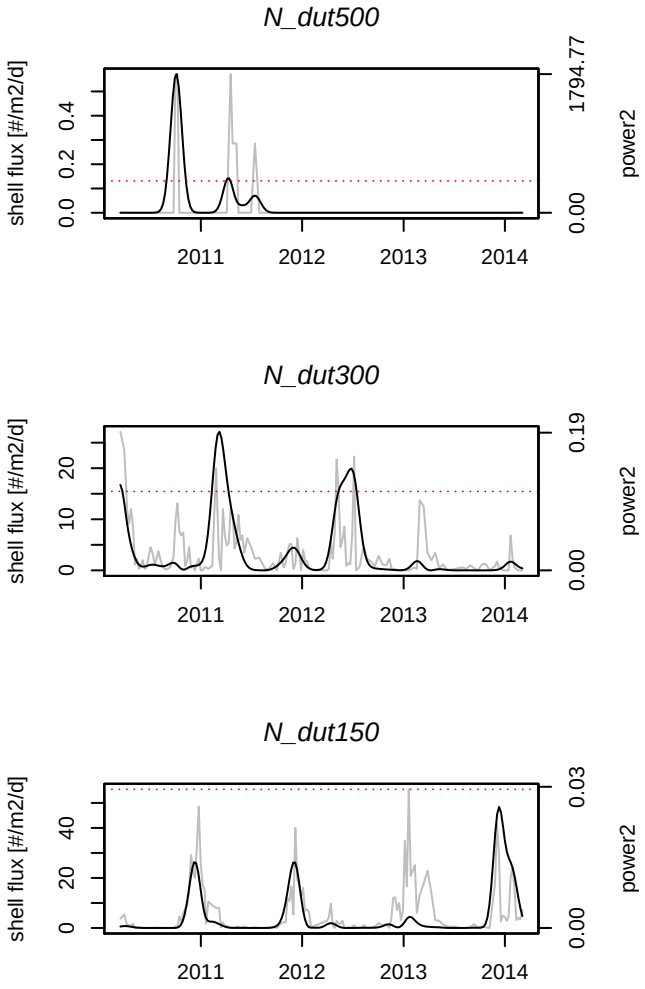
shell flux [#/m2/d]
0
1
2
3
4
41.74
0.00
power2
2011
2012
2013
2014

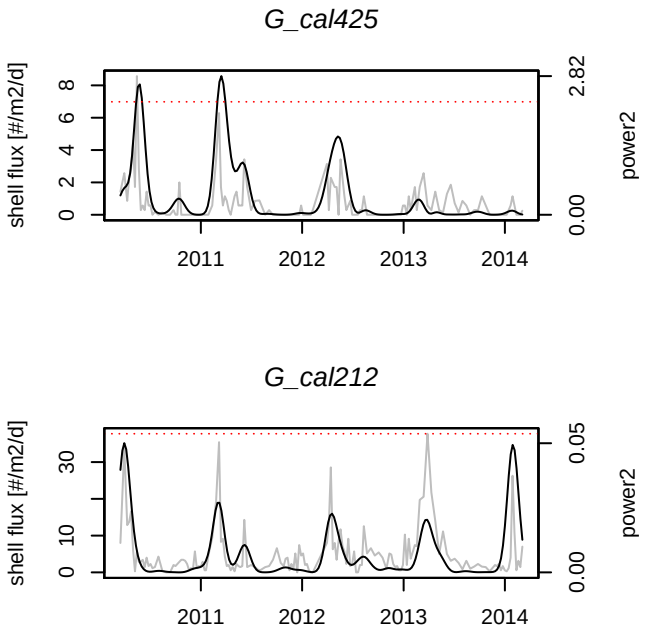

G_rubw300
shell flux [#/m2/d]
0
20
40
60
0.55
0.00
power2
2011
2012
2013
2014

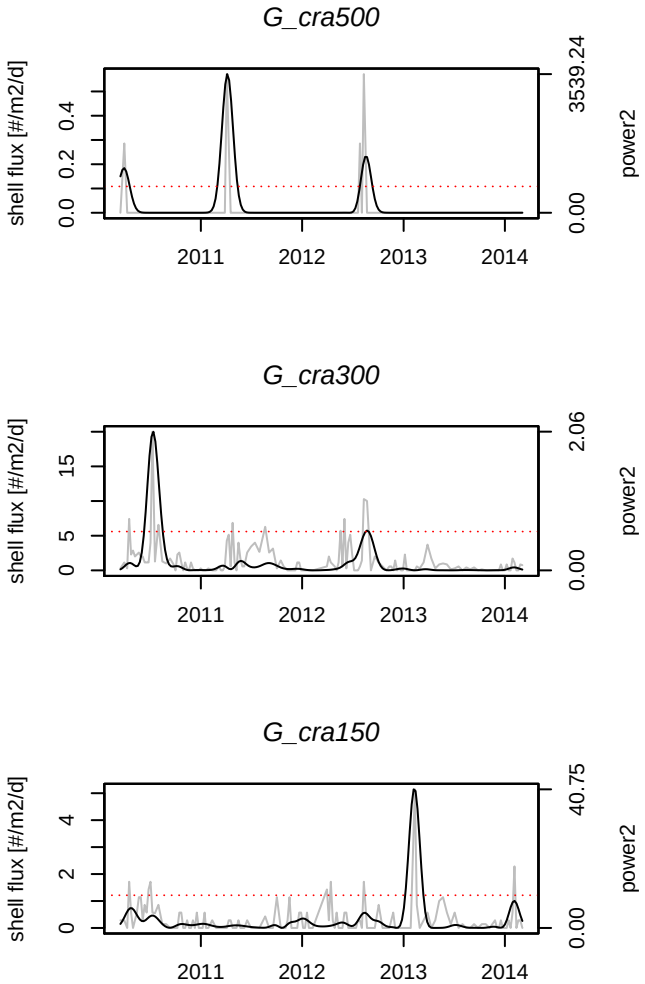

G_rubw212
shell flux [#/m2/d]
0
40
100
0.1
0.0
power2
2011
2012
2013
2014

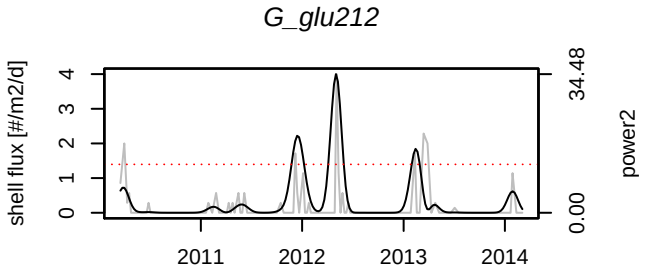

G_rubw150
shell flux [#/m2/d]
0
20
60
0.00
power2
2011
2012
2013
2014

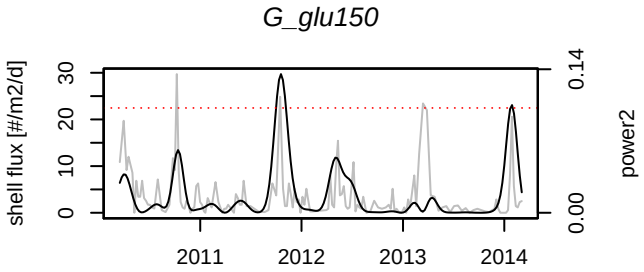

P_obl500
shell flux [#/m2/d]
0
2
4
6
8
13.47
0.00
power2
2011
2012
2013
2014
P_obl425
shell flux [#/m2/d]
0
10
20
0.31
0.00
power2
2011
2012
2013
2014
P_obl300
shell flux [#/m2/d]
0
20
40
0.06
0.00
power2
2011
2012
2013
2014
P_obl212
shell flux [#/m2/d]
0
20
50
0.07
0.00
power2
2011
2012
2013
2014
P_obl150
shell flux [#/m2/d]
0
20
40
0.71
0.00
power2
2011
2012
2013
2014

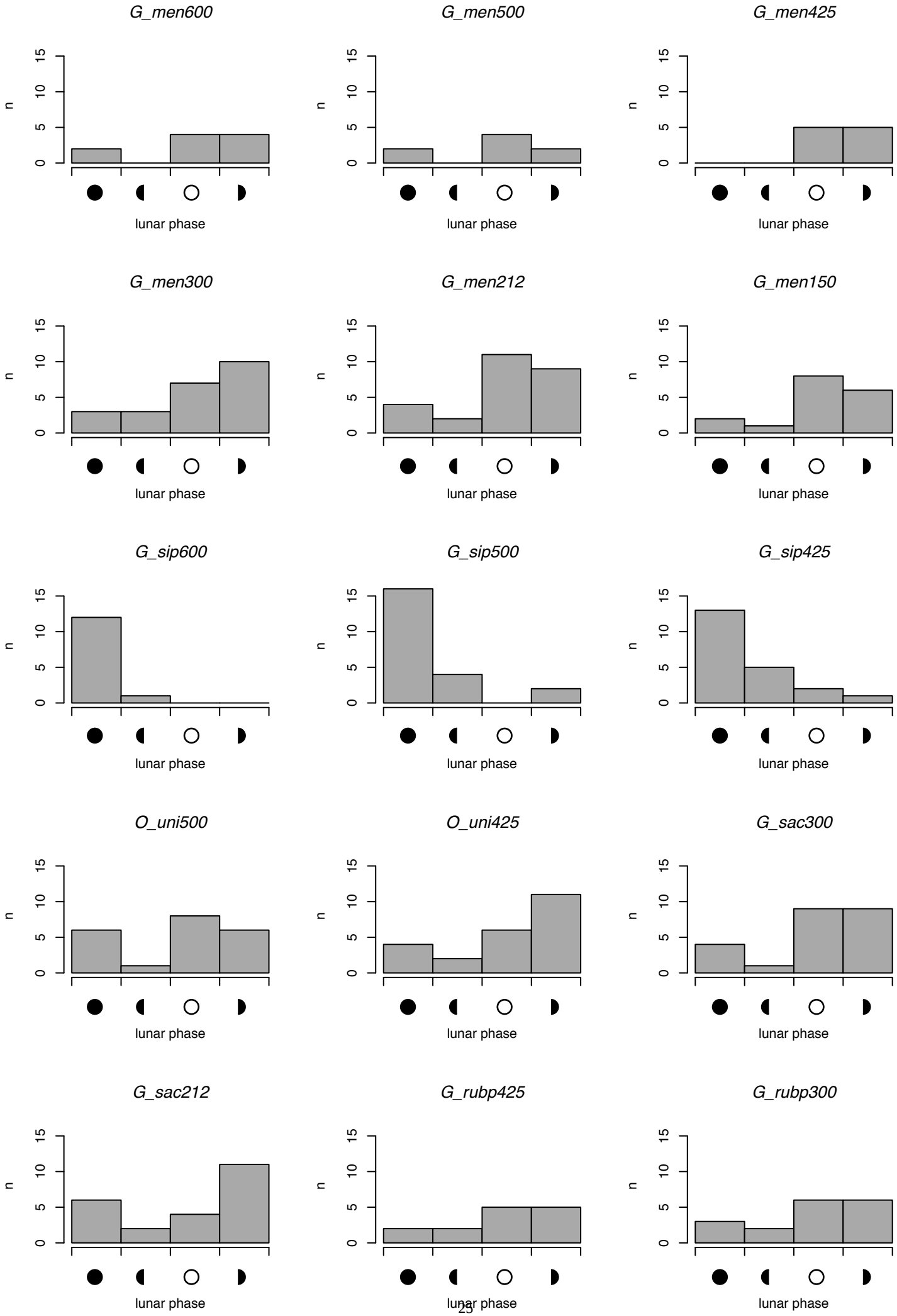

N_dut500
shell flux [#/m2/d]
0.0
0.2
0.4
1794.77
0.00
power2
2011
2012
2013
2014
N_dut425
shell flux [#/m2/d]
0
4
8
12
8.99
0.00
power2
2011
2012
2013
2014
N_dut300
shell flux [#/m2/d]
0
10
20
0.19
0.00
power2
2011
2012
2013
2014
N_dut212
shell flux [#/m2/d]
0
10
20
30
0.21
0.00
power2
2011
2012
2013
2014
N_dut150
shell flux [#/m2/d]
0
20
40
0.03
0.00
power2
2011
2012
2013
2014

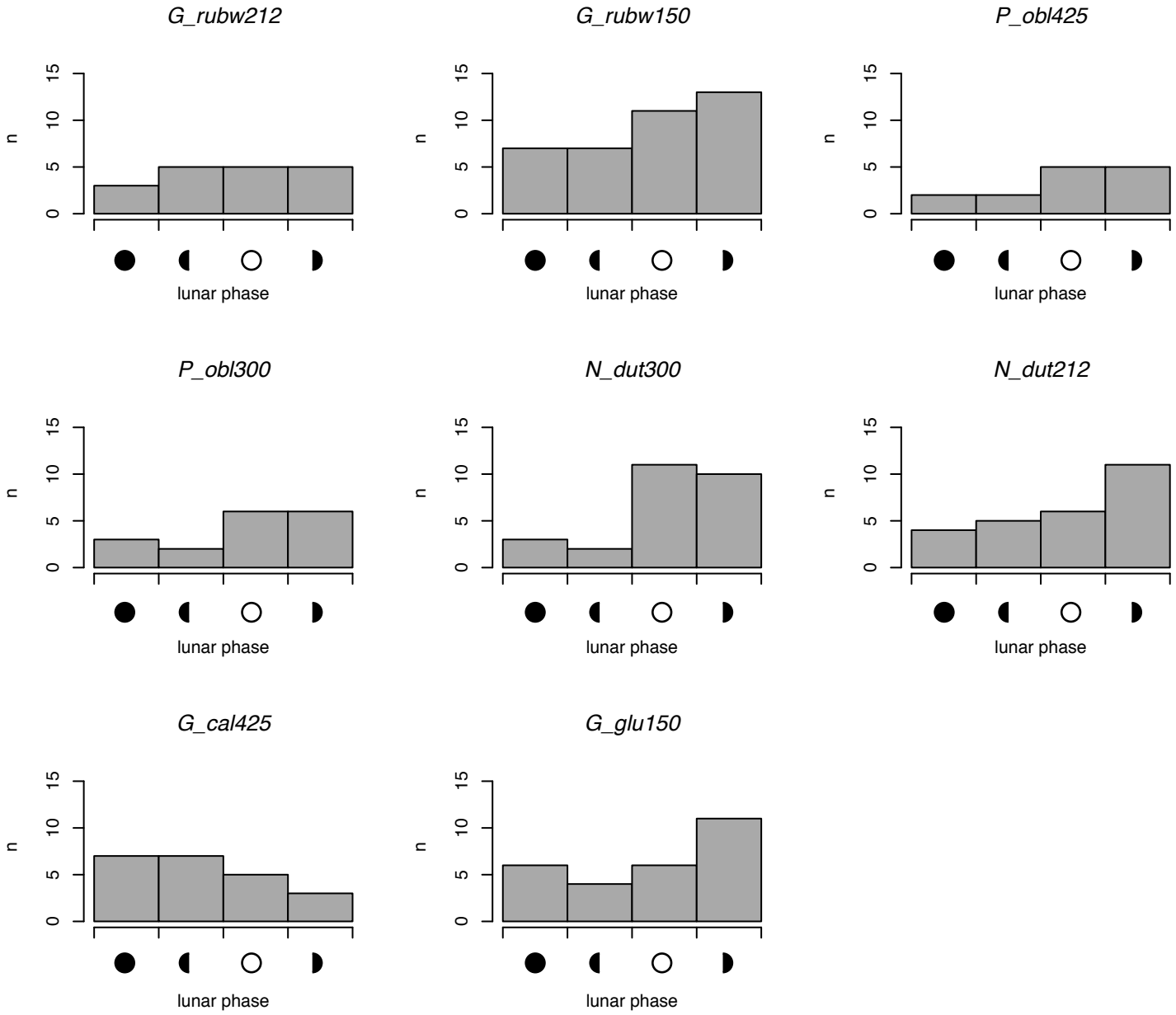

G_cal425
shell flux [#/m2/d]
0
2
4
6
8
2.82
0.00
power2
2011
2012
2013
2014
G_cal300
shell flux [#/m2/d]
0
20
40
0.2
0.0
power2
2011
2012
2013
2014
G_cal212
shell flux [#/m2/d]
0
10
30
0.05
0.00
power2
2011
2012
2013
2014
G_cal150
shell flux [#/m2/d]
0
100
200
0.00
power2
2011
2012
2013
2014


G_cra500
shell flux [#/m2/d]
0.0
0.2
0.4
3539.24
0.00
power2
2011
2012
2013
2014
G_cra425
shell flux [#/m2/d]
0
2
4
6
3.52
0.00
power2
2011
2012
2013
2014
G_cra300
shell flux [#/m2/d]
0
5
15
2.06
0.00
power2
2011
2012
2013
2014
G_cra212
shell flux [#/m2/d]
0
2
4
10.84
0.00
power2
2011
2012
2013
2014
G_cra150
shell flux [#/m2/d]
0
2
4
40.75
0.00
power2
2011
2012
2013
2014


G_glu212
shell flux [#/m2/d]
0
1
2
3
4
34.48
0.00
power2
2011
2012
2013
2014


G_glu150
shell flux [#/m2/d]
0
10
20
30
0.14
0.00
power2
2011
2012
2013
2014


G_men600
G_men500
G_men425
G_men300
G_men212
G_men150
G_sip600
G_sip500
G_sip425
O_uni500
O_uni425
G_sac300
G_sac212
G_rubp425
G_rubp300
n
0
5
10
15
lunar phase


G_rubw212
G_rubw150
P_obl425
P_obl300
N_dut300
N_dut212
G_cal425
G_glu150
n
0
5
10
15
lunar phase