freq=1, start=1, circles=10, rep=2

140 150

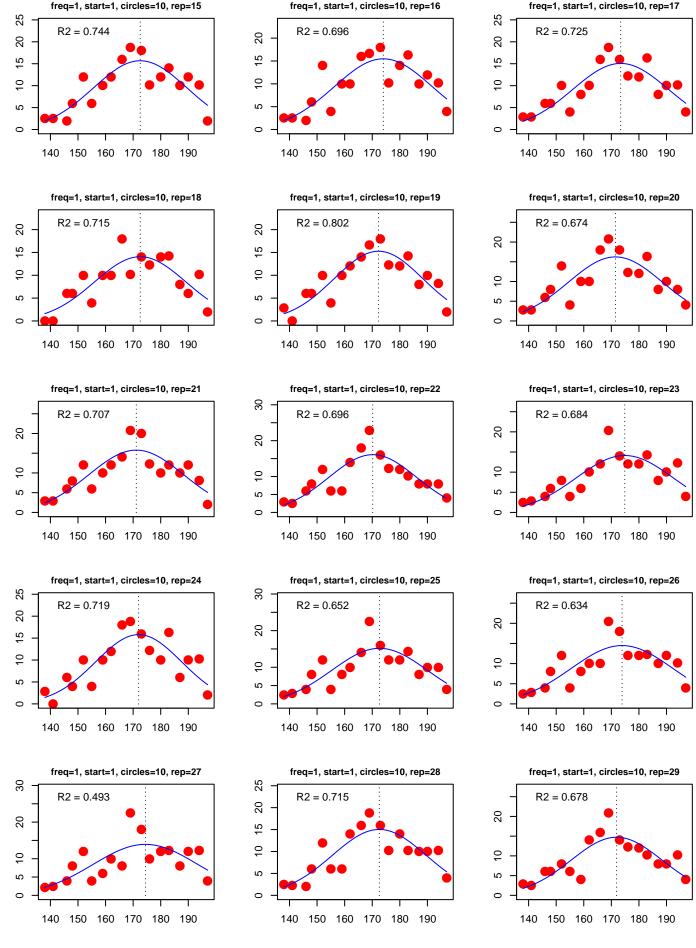
170 180

freq=1, start=1, circles=12, rep=1

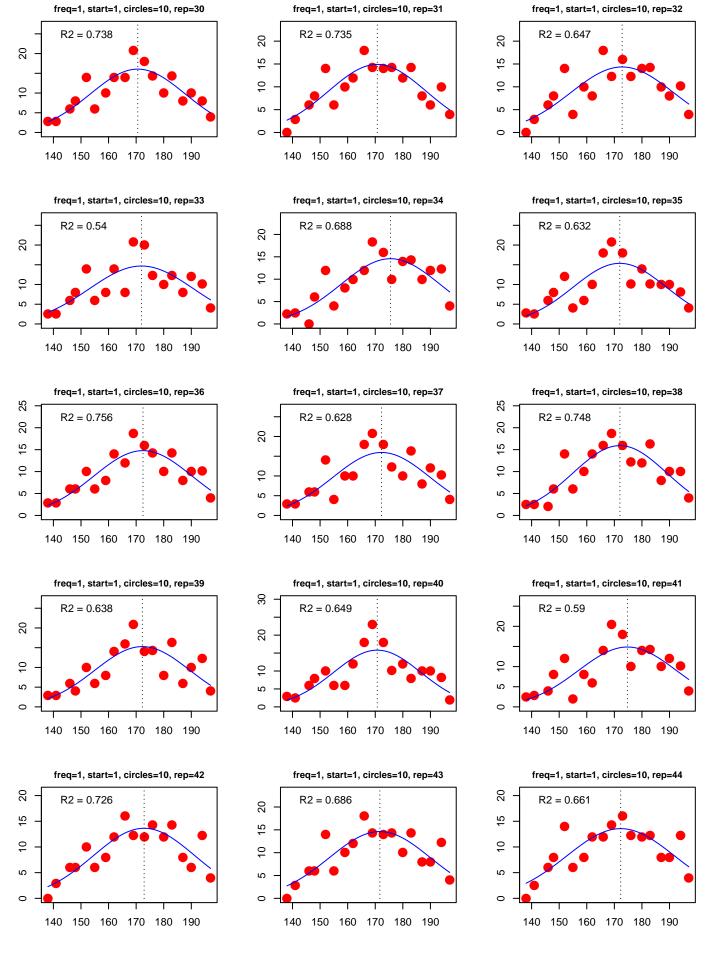
150 160 170 180

Julian day

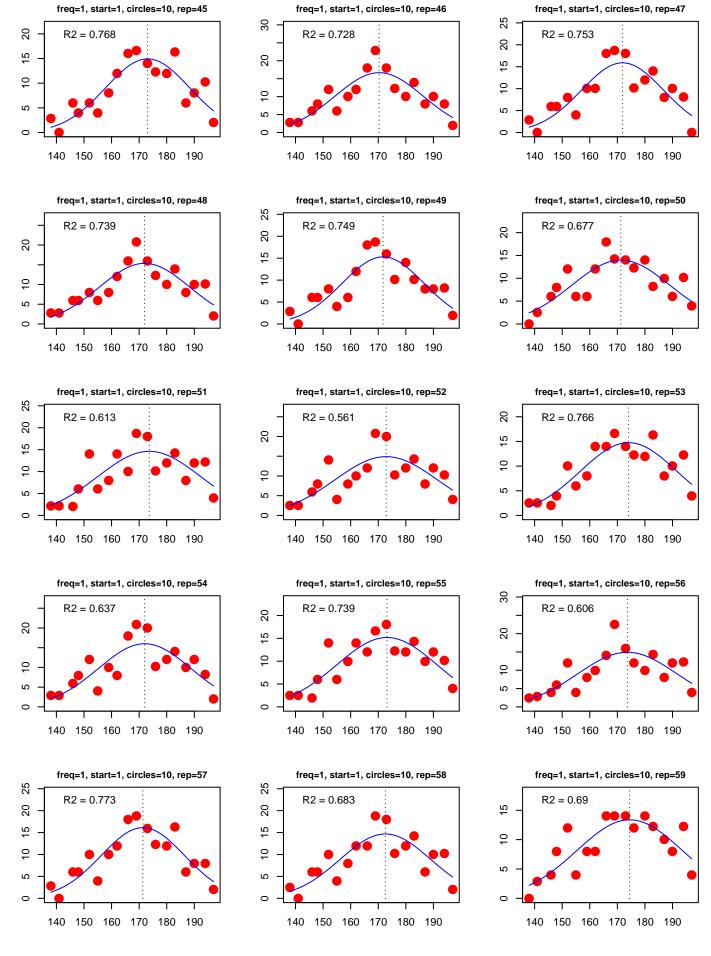
150 160 170 180



Julian day



Julian day



Julian day

freq=1, start=1, circles=8, rep=2

freq=1, start=1, circles=10, rep=60

150 160 170 180 190

Julian day

150 160 170 180

140 150

170 180 190

freq=1, start=1, circles=8, rep=17

150 160 170 180

freq=1, start=1, circles=8, rep=15

150 160 170

180 190

Julian day

150 160 170 180

freq=1, start=1, circles=8, rep=32

150 160

180 190

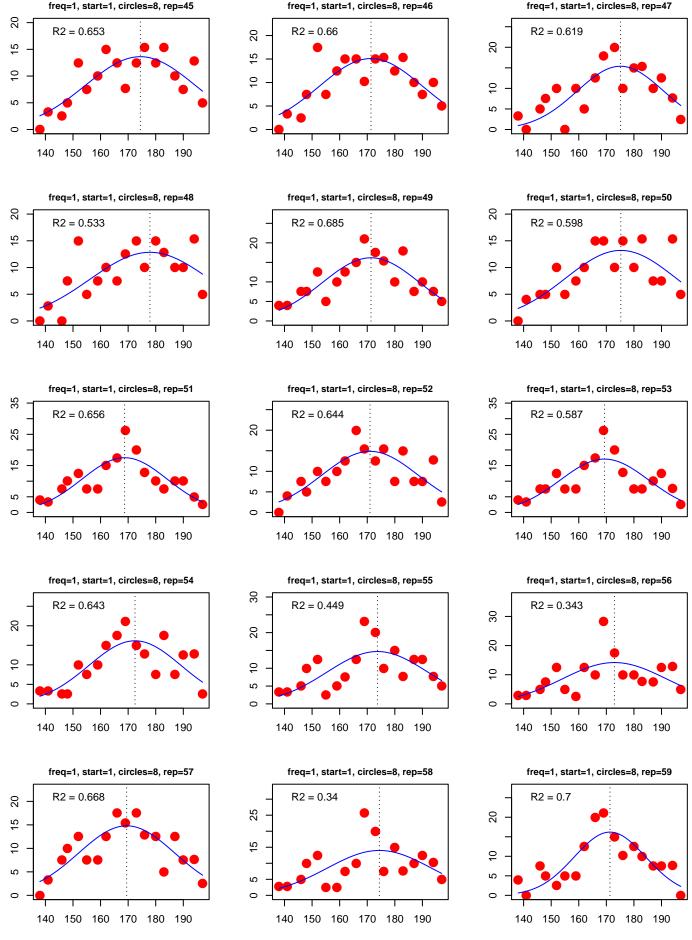
180 190

freq=1, start=1, circles=8, rep=30

150 160 170 180

Julian day

150 160 170 180



Julian day

freq=1, start=1, circles=6, rep=2

freq=1, start=1, circles=8, rep=60

Julian day

freq=1, start=1, circles=6, rep=17

 170 180

freq=1, start=1, circles=6, rep=15

150 160 170 180 190

Julian day

150 160 170 180 190

freq=1, start=1, circles=6, rep=32

180 190

170 180

150 160

freq=1, start=1, circles=6, rep=30

150 160 170 180 190

Julian day

140 150 160 170 180

freq=1, start=1, circles=6, rep=47

freq=1, start=1, circles=6, rep=45

150 160 170 180 190

Julian day

150 160 170 180

160 170 180

freq=1, start=1, circles=4, rep=2

freq=1, start=1, circles=6, rep=60

140 150

160 170 180

Julian day

170 180

140 150

180 190

150 160

freq=1, start=1, circles=4, rep=17

freq=1, start=1, circles=4, rep=15

150 160 170 180 190

Julian day

150 160 170 180

150 160

freq=1, start=1, circles=4, rep=32

freq=1, start=1, circles=4, rep=30

Julian day

freq=1, start=1, circles=4, rep=47

160 170

freq=1, start=1, circles=4, rep=45

Julian day

170 180

140 150

140 150 160

180 190

150 160 170

freq=1, start=1, circles=2, rep=2

160 170 180

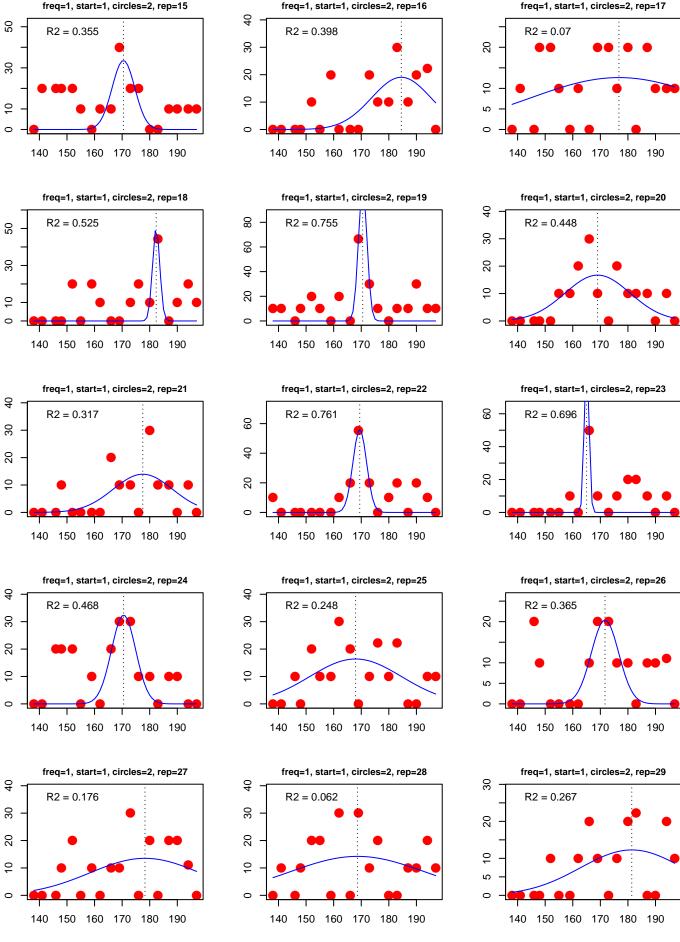
140 150

freq=1, start=1, circles=4, rep=60

Julian day

170 180

150 160 170



Julian day

freq=1, start=1, circles=2, rep=31

freq=1, start=1, circles=2, rep=32

180 190

180 190

freq=1, start=1, circles=2, rep=30

160 170 180

Julian day

140 150 160 170 180

freq=1, start=1, circles=2, rep=46

freq=1, start=1, circles=2, rep=47

180 190

freq=1, start=1, circles=2, rep=45

160 170 180

Julian day

140 150 160 170 180

freq=2, start=1, circles=10, rep=1

freq=1, start=1, circles=2, rep=60

Julian day

140 150

170 180

140 150

170 180

160 170 180

freq=2, start=1, circles=10, rep=16

freq=2, start=1, circles=10, rep=14

150 160 170

170 180 Julian day

freq=2, start=1, circles=8, rep=1

freq=2, start=1, circles=10, rep=29

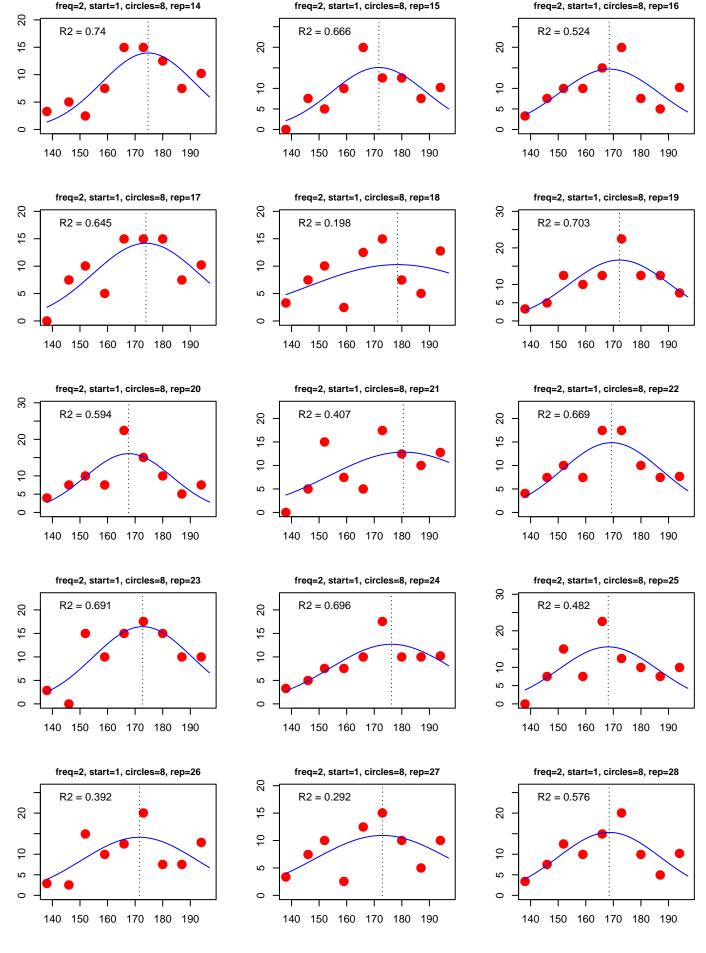
150 160 170 180 190

Julian day

170 180

140 150

150 160



Julian day

freq=2, start=1, circles=6, rep=1

140 150

freq=2, start=1, circles=8, rep=29

140 150

180 190

Julian day

140 150 160 170 180

freq=2, start=1, circles=6, rep=16

freq=2, start=1, circles=6, rep=14

Julian day

140 150 160 170 180

140 150

170 180

180 190

150 160 170

freq=2, start=1, circles=4, rep=1

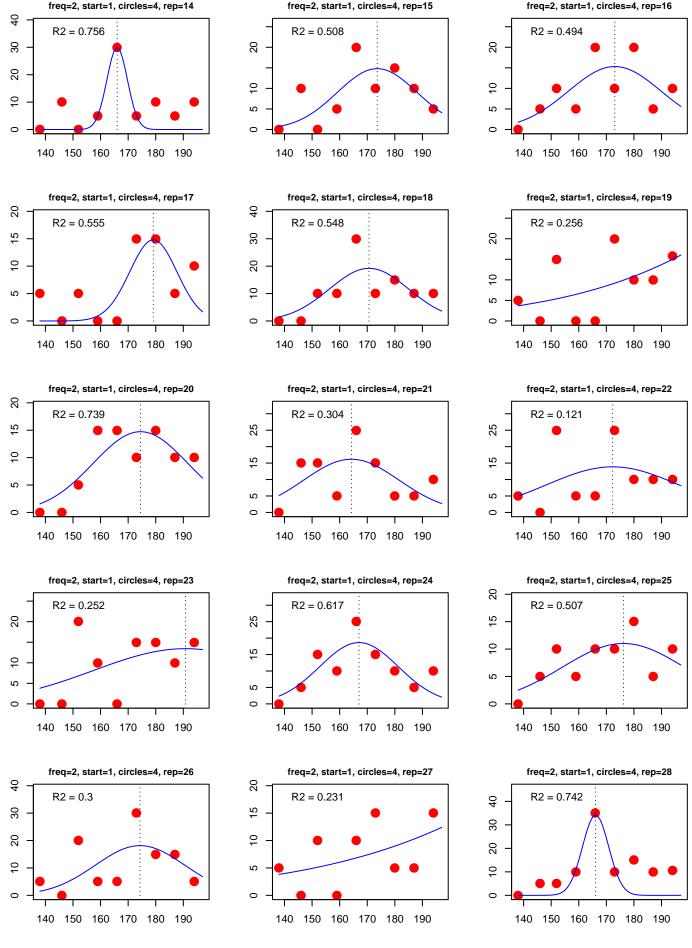
freq=2, start=1, circles=6, rep=29

Julian day

170 180

180 190

150 160 170



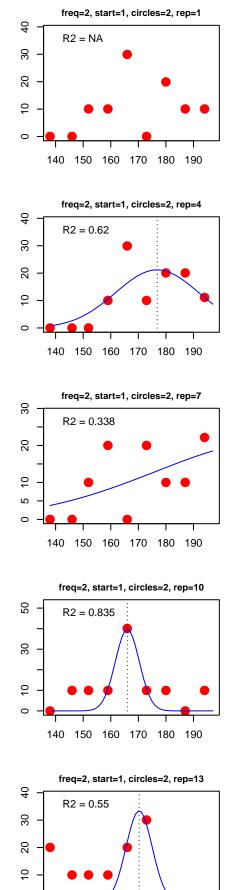
Julian day

freq=2, start=1, circles=4, rep=29

140 150

160 170

180 190



Julian day

150 160 170 180

140 150

160 170

freq=2, start=1, circles=2, rep=16

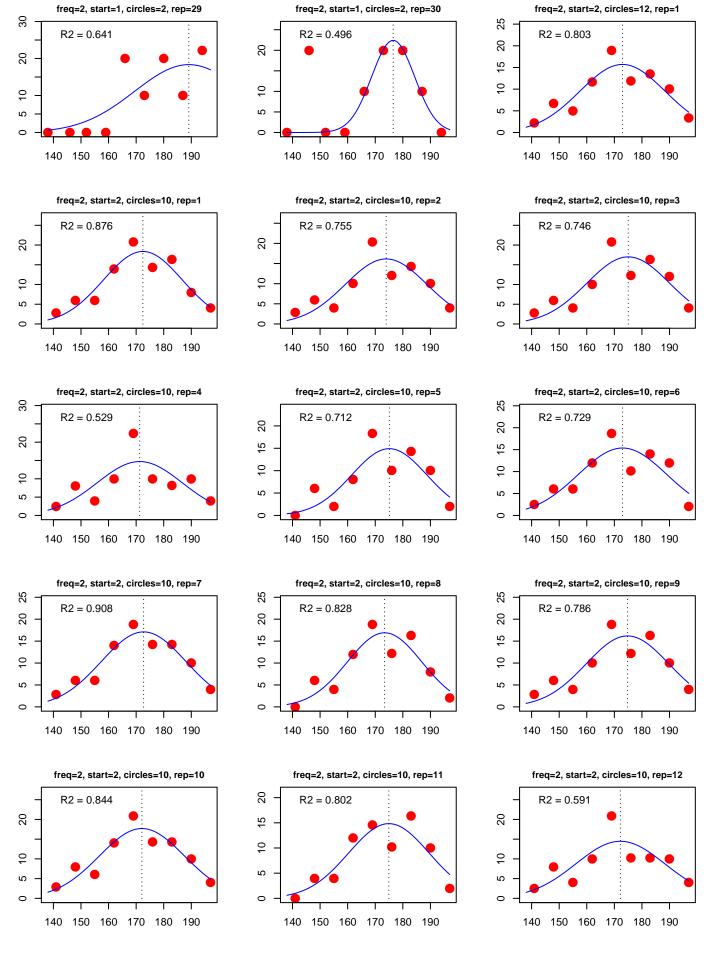
180 190

freq=2, start=1, circles=2, rep=14

 Julian day

 170 180

150 160



Julian day

freq=2, start=2, circles=10, rep=13

150 160 170 180

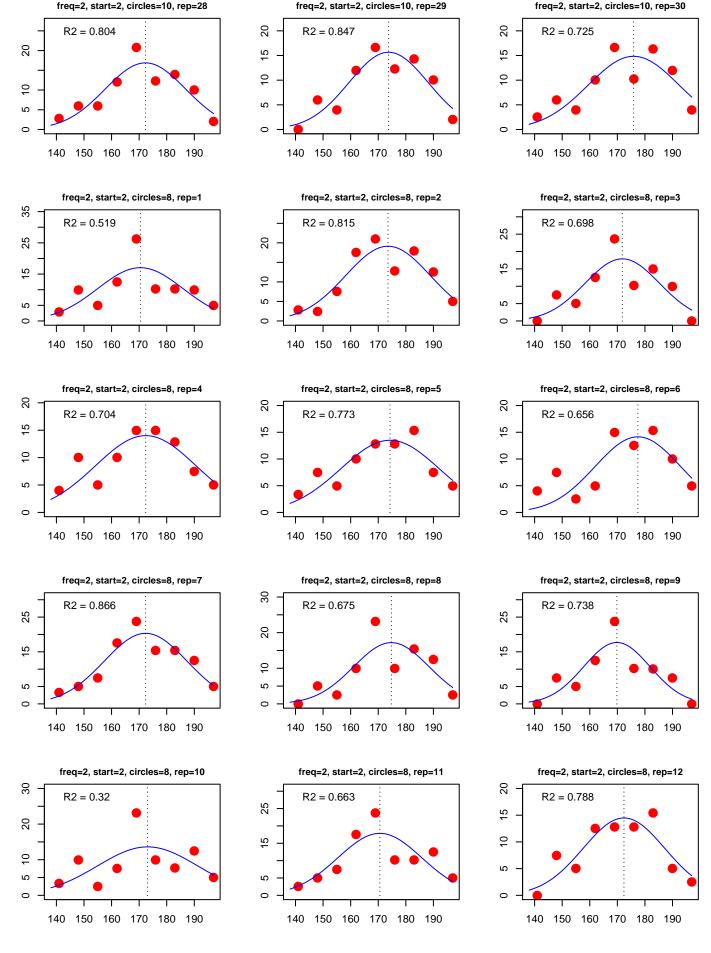
140 150 160 170 180 Julian day

freq=2, start=2, circles=10, rep=14

freq=2, start=2, circles=10, rep=15

150 160

170 180

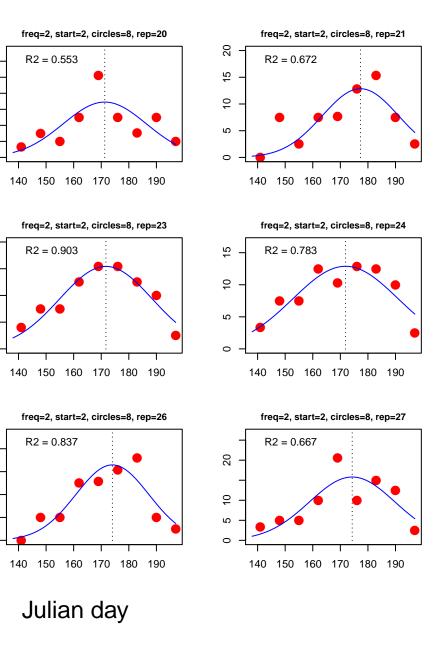


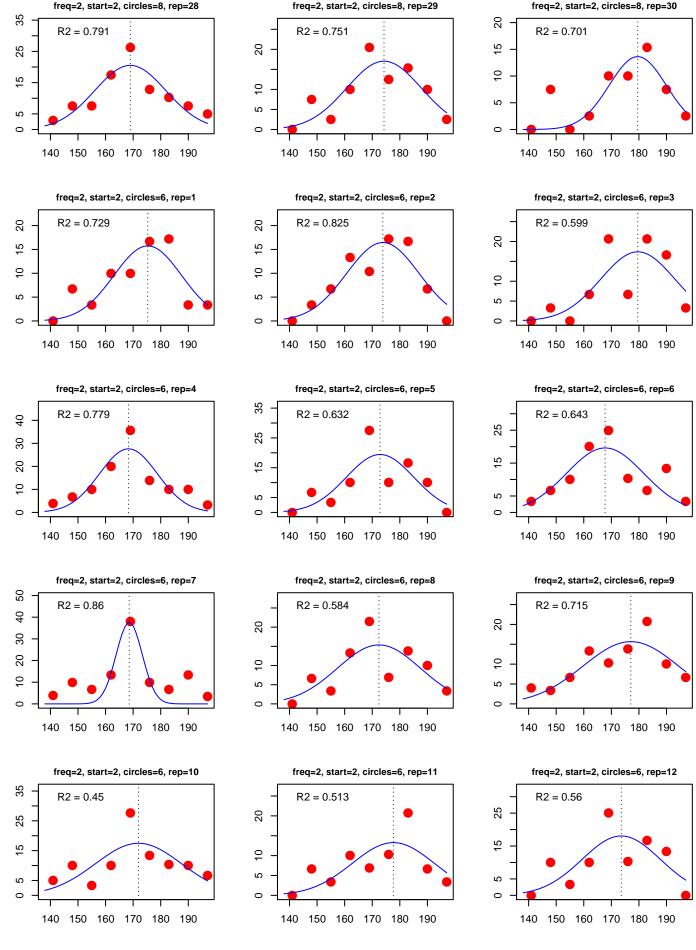
Julian day

freq=2, start=2, circles=8, rep=15

 freq=2, start=2, circles=8, rep=13

150 160 170





Julian day

freq=2, start=2, circles=6, rep=15

180 190

180 190

freq=2, start=2, circles=6, rep=13

 160 170 180

Julian day

140 150 160 170 180

freq=2, start=2, circles=6, rep=29

freq=2, start=2, circles=6, rep=30

freq=2, start=2, circles=6, rep=28

140 150

Julian day

160 170 180

140 150

170 180

150 160 170 180

freq=2, start=2, circles=4, rep=14

freq=2, start=2, circles=4, rep=15

180 190

170 180

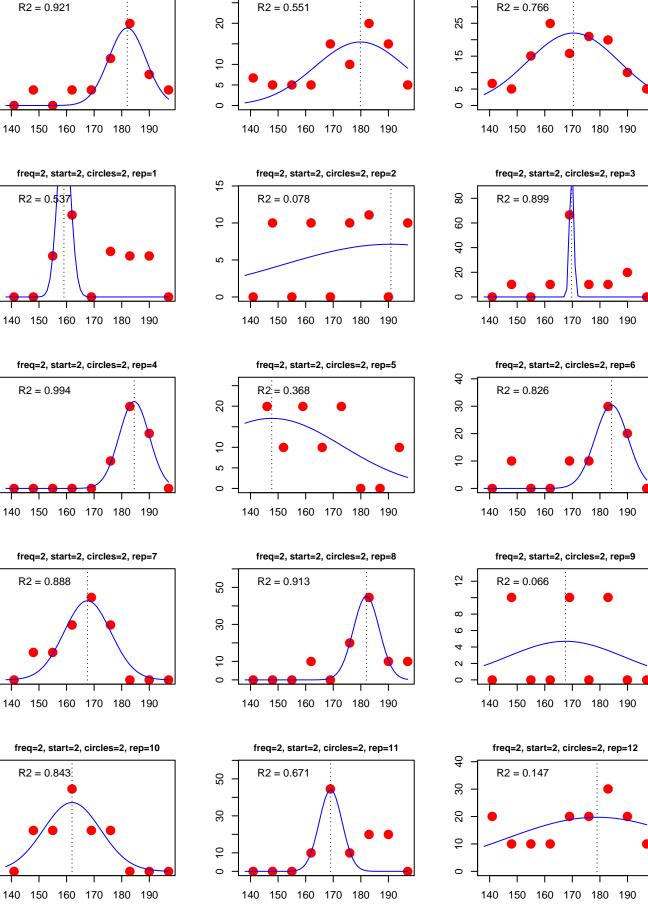
freq=2, start=2, circles=4, rep=13

Julian day

170 180

150 160

freq=2, start=2, circles=4, rep=28



freq=2, start=2, circles=4, rep=29

freq=2, start=2, circles=4, rep=30

Julian day

freq=2, start=2, circles=2, rep=14

freq=2, start=2, circles=2, rep=15

freq=2, start=2, circles=2, rep=13

150 160 170

Julian day

170 180

170 180

150 160

180 190

140 150 160

freq=2, start=2, circles=2, rep=29

freq=2, start=2, circles=2, rep=30

R2 = 0.571

180 190

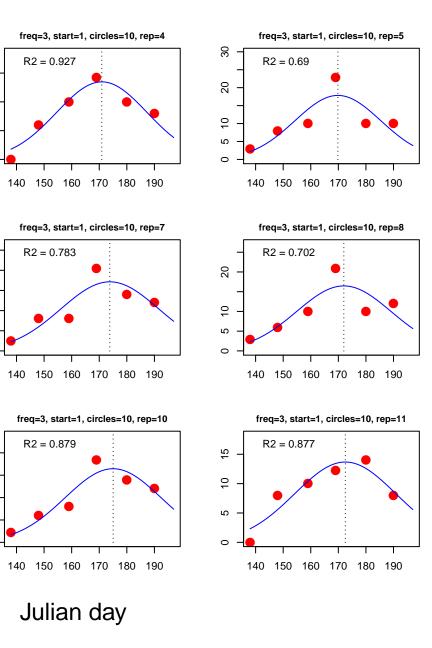
R2 = 0.667

freq=3, start=1, circles=10, rep=2

140 150

140 150

freq=2, start=2, circles=2, rep=28



freq=3, start=1, circles=10, rep=13

freq=3, start=1, circles=10, rep=14

freq=3, start=1, circles=10, rep=12

140 150

160 170

180 190

Julian day

170 180

150 160

170 180

freq=3, start=1, circles=8, rep=8

freq=3, start=1, circles=8, rep=9

freq=3, start=1, circles=8, rep=7

150 160 170

Julian day

170 180

140 150

160 170

140 150 160

freq=3, start=1, circles=6, rep=3

freq=3, start=1, circles=6, rep=4

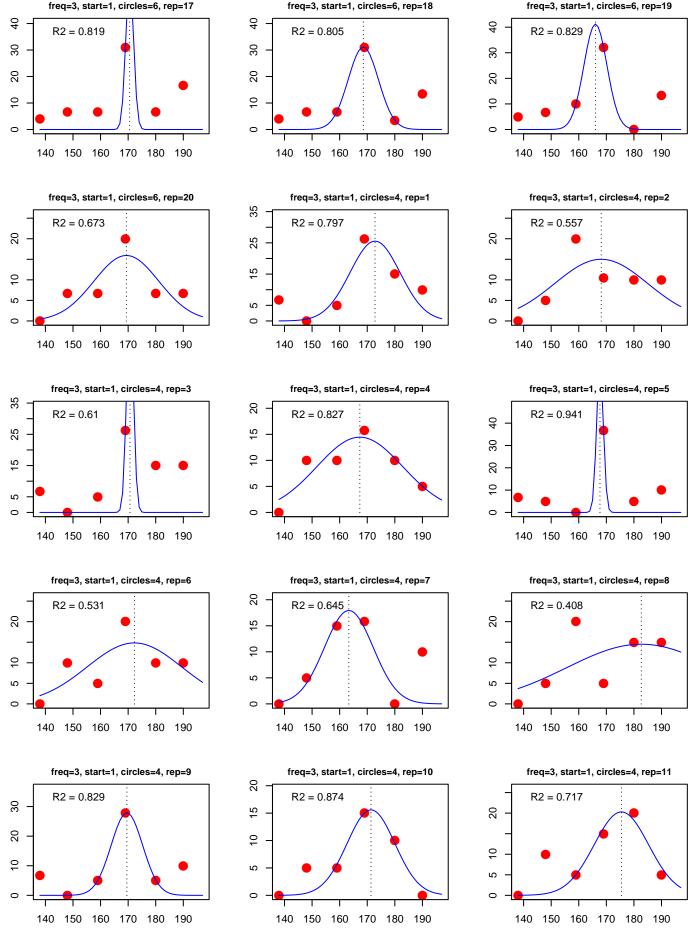
freq=3, start=1, circles=6, rep=2

150 160 170 180

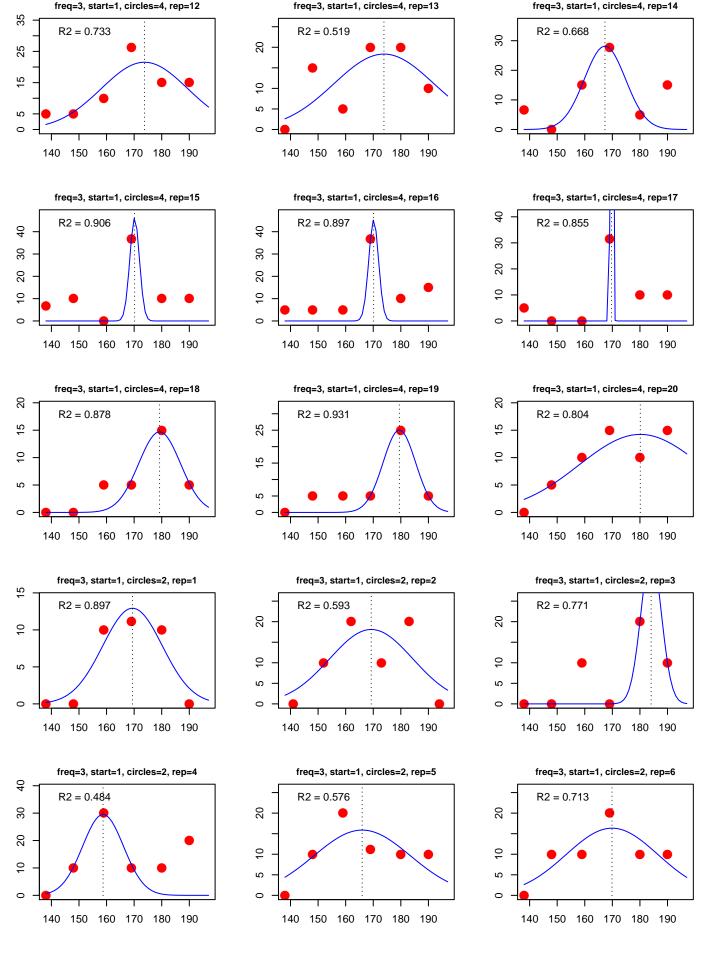
Julian day

150 160

170 180



Julian day



Julian day

freq=3, start=1, circles=2, rep=8

freq=3, start=1, circles=2, rep=9

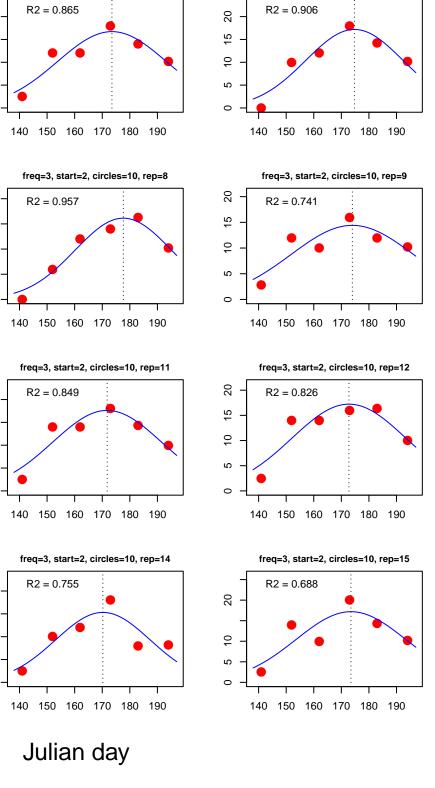
freq=3, start=1, circles=2, rep=7

Julian day

freq=3, start=2, circles=10, rep=2

freq=3, start=2, circles=10, rep=1

160 170



freq=3, start=2, circles=10, rep=3

R2 = 0.853

freq=3, start=2, circles=10, rep=6

freq=3, start=2, circles=10, rep=17

freq=3, start=2, circles=10, rep=18

freq=3, start=2, circles=10, rep=16

140 150

160 170 180

Julian day

170 180

140 150

160 170

freq=3, start=2, circles=8, rep=12

freq=3, start=2, circles=8, rep=13

freq=3, start=2, circles=8, rep=11

140 150

160 170

Julian day

150 160

170 180

freq=3, start=2, circles=6, rep=7

freq=3, start=2, circles=6, rep=8

freq=3, start=2, circles=6, rep=6

160 170

Julian day

140 150 160 170 180

 freq=3, start=2, circles=4, rep=2

freq=3, start=2, circles=4, rep=3

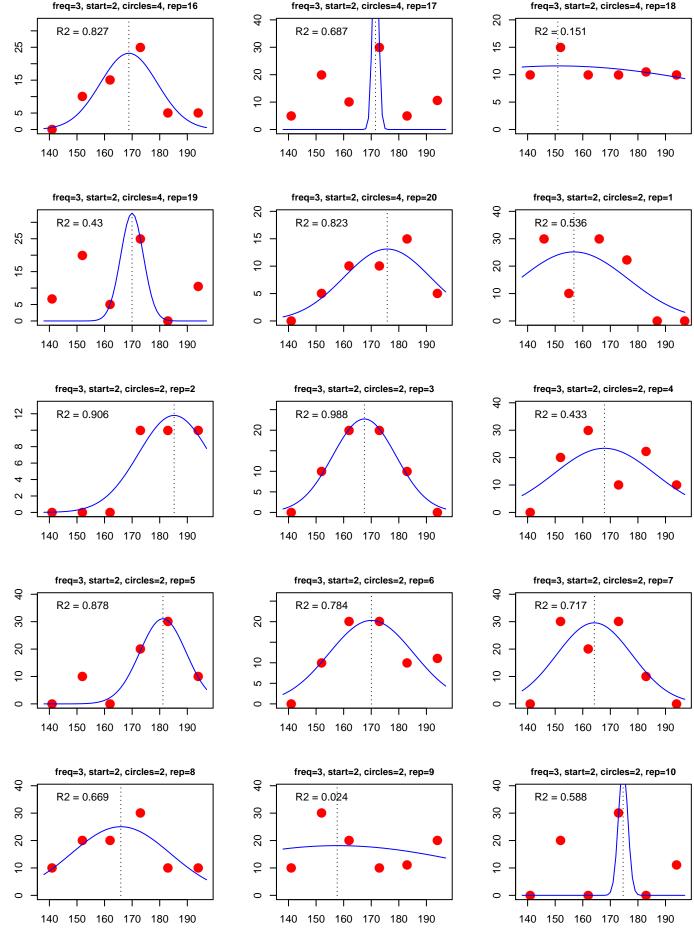
freq=3, start=2, circles=4, rep=1

140 150

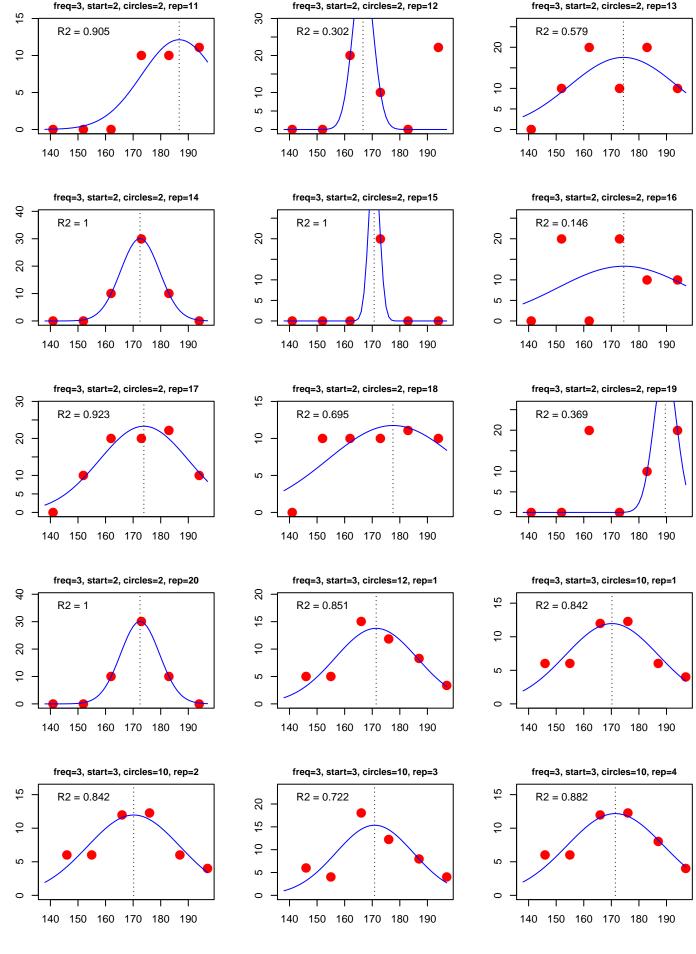
Julian day

170 180

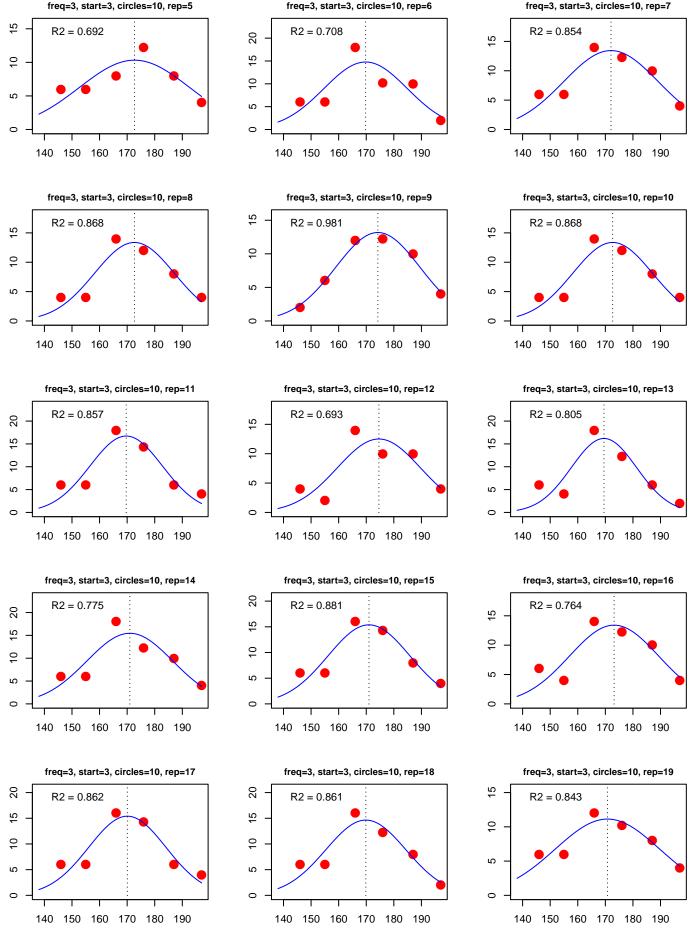
140 150



Julian day



Julian day



Julian day

freq=3, start=3, circles=8, rep=1

freq=3, start=3, circles=8, rep=2

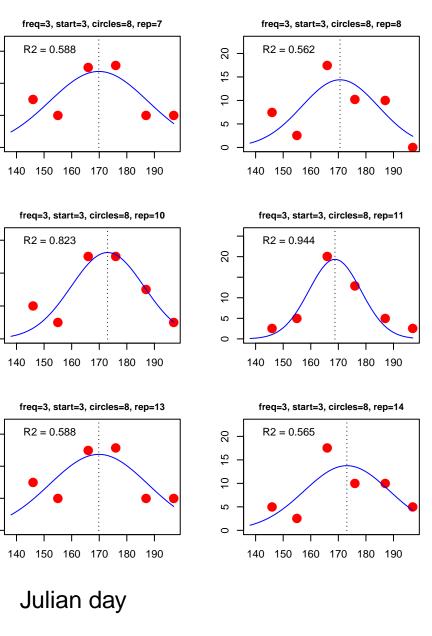
R2 = 0.931

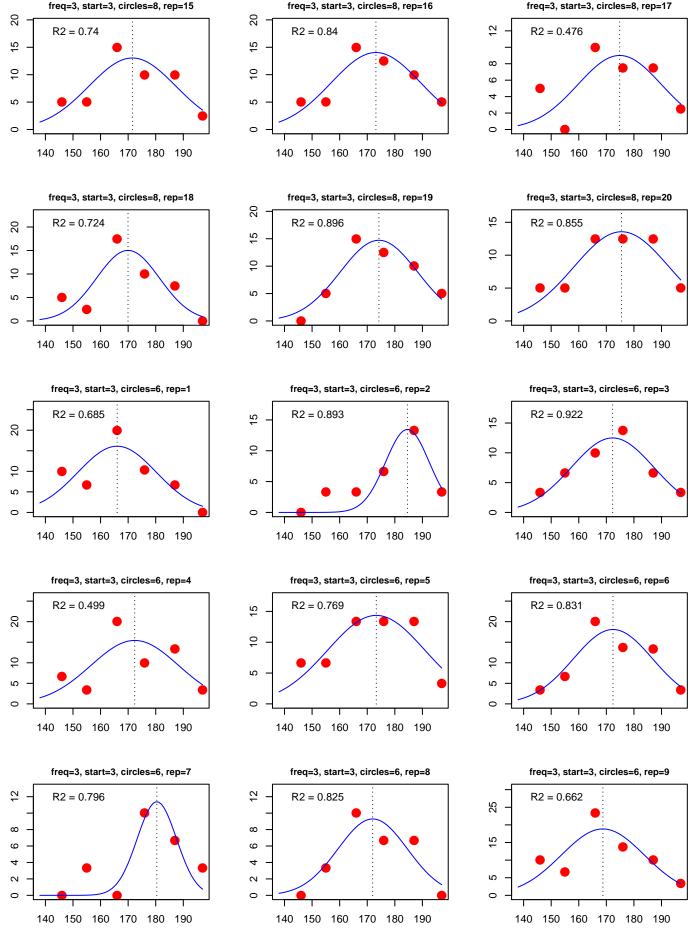
freq=3, start=3, circles=8, rep=5

R2 = 0.705

freq=3, start=3, circles=10, rep=20

150 160 170 180





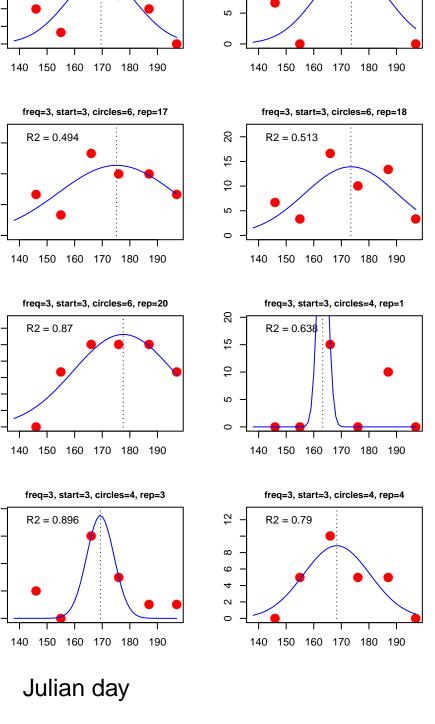
Julian day

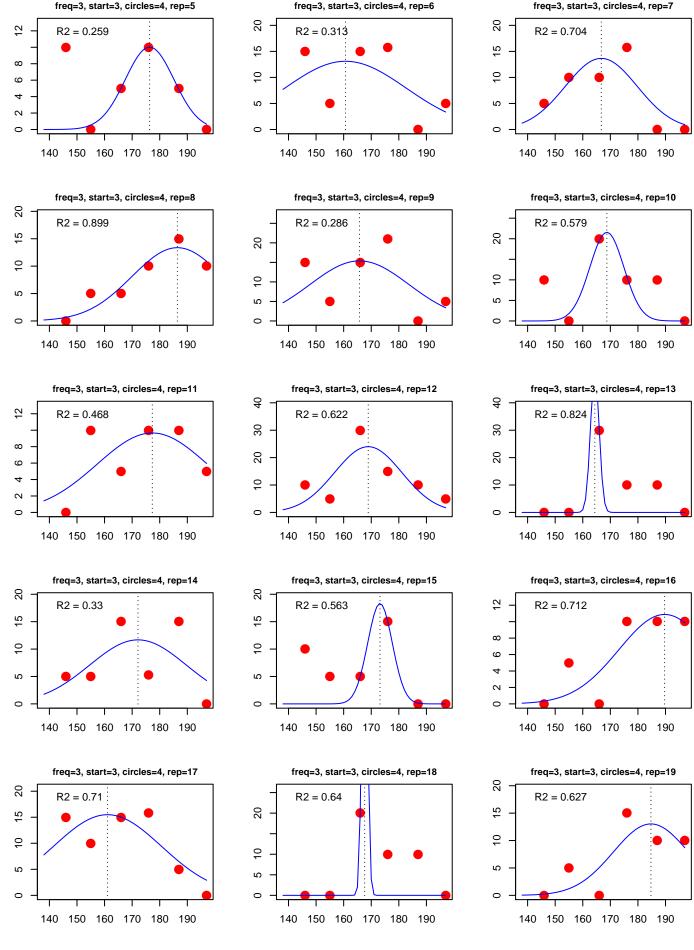
freq=3, start=3, circles=6, rep=11

freq=3, start=3, circles=6, rep=12

freq=3, start=3, circles=6, rep=10

160 170





Julian day

freq=3, start=3, circles=2, rep=1

freq=3, start=3, circles=2, rep=2

freq=3, start=3, circles=4, rep=20

140 150

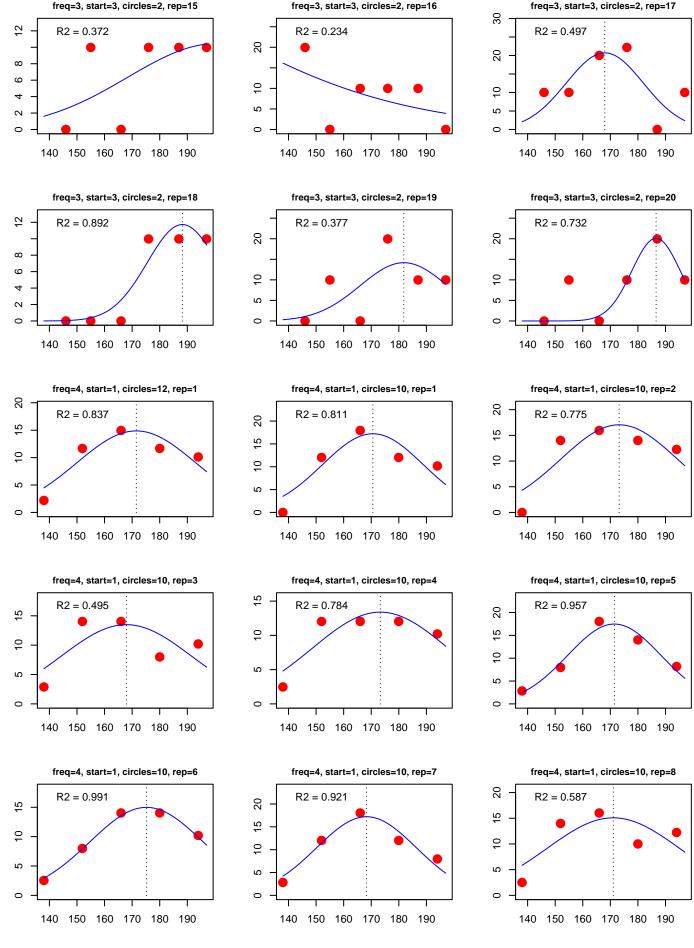
170 180

Julian day

140 150

170 180

140 150 160

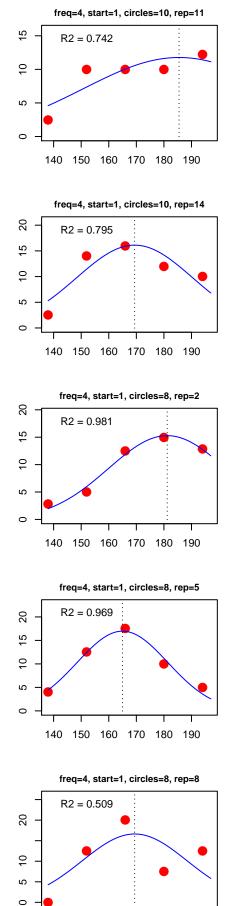


Julian day

180 190

150 160

freq=4, start=1, circles=10, rep=9



Julian day

170 180

140 150

160 170

150 160

freq=4, start=1, circles=10, rep=10

freq=4, start=1, circles=8, rep=10

freq=4, start=1, circles=8, rep=11

freq=4, start=1, circles=8, rep=9

140 150

160 170

180 190

Julian day

170 180

140 150 160

freq=4, start=1, circles=6, rep=10

freq=4, start=1, circles=6, rep=11

freq=4, start=1, circles=6, rep=9

Julian day

freq=4, start=1, circles=4, rep=10

freq=4, start=1, circles=4, rep=11

freq=4, start=1, circles=4, rep=9

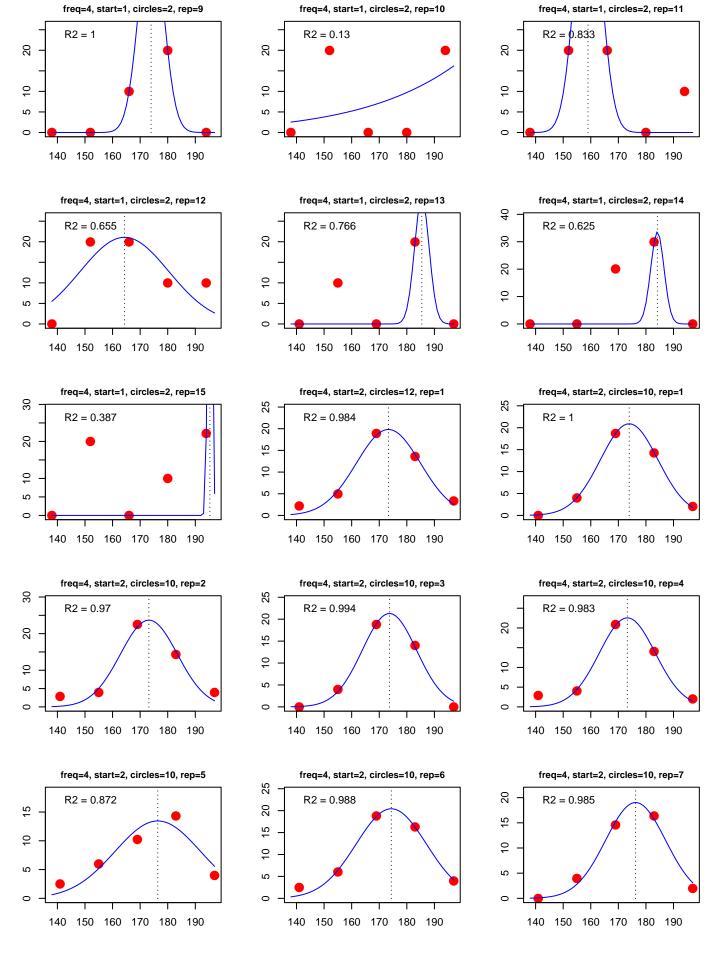
140 150

160 170 180

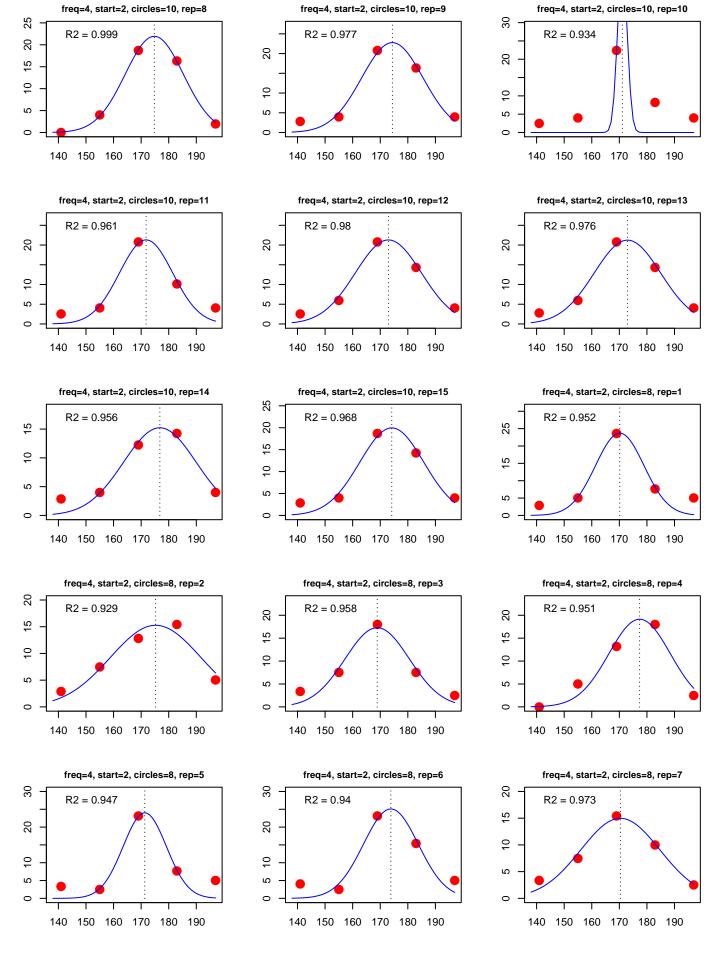
Julian day

150 160 170 180

160 170



Julian day



Julian day

freq=4, start=2, circles=8, rep=9

freq=4, start=2, circles=8, rep=10

180 190

freq=4, start=2, circles=8, rep=8

180 190

170 180 150 160 Julian day

 170 180

freq=4, start=2, circles=6, rep=9

freq=4, start=2, circles=6, rep=10

 180 190

freq=4, start=2, circles=6, rep=8

150 160 170

180 190

Julian day

170 180

freq=4, start=2, circles=4, rep=9

freq=4, start=2, circles=4, rep=10

freq=4, start=2, circles=4, rep=8

Julian day

freq=4, start=2, circles=2, rep=9

freq=4, start=2, circles=2, rep=10

180 190

freq=4, start=2, circles=2, rep=8

180 190

Julian day

170 180

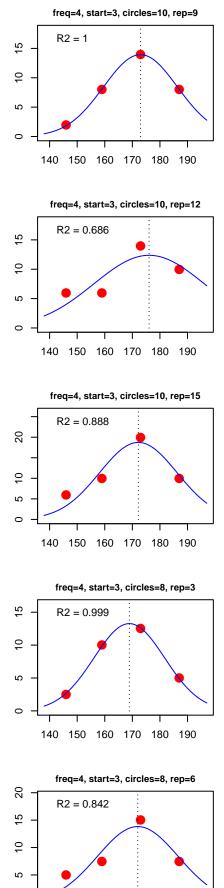
150 160

freq=4, start=3, circles=10, rep=7

140 150

160 170

180 190



Julian day

150 160 170 180

140 150

170 180

freq=4, start=3, circles=10, rep=8

freq=4, start=3, circles=8, rep=8

freq=4, start=3, circles=8, rep=9

freq=4, start=3, circles=8, rep=7

140 150

160 170

Julian day

170 180

140 150

160 170

freq=4, start=3, circles=6, rep=8

freq=4, start=3, circles=6, rep=9

freq=4, start=3, circles=6, rep=7

180 190

140 150

Julian day

170 180

140 150

160 170

150 160

freq=4, start=3, circles=4, rep=8

freq=4, start=3, circles=4, rep=9

freq=4, start=3, circles=4, rep=7

170 180

Julian day

170 180

freq=4, start=3, circles=2, rep=8

freq=4, start=3, circles=2, rep=9

freq=4, start=3, circles=2, rep=7

140 150

160 170

Julian day

170 180

140 150

140 150 160

freq=4, start=4, circles=10, rep=7

freq=4, start=4, circles=10, rep=8

freq=4, start=4, circles=10, rep=6

Julian day

170 180

 170 180

freq=4, start=4, circles=8, rep=7

freq=4, start=4, circles=8, rep=8

freq=4, start=4, circles=8, rep=6

140 150

160 170

180 190

Julian day

150 160 170 180

140 150

170 180

freq=4, start=4, circles=6, rep=7

freq=4, start=4, circles=6, rep=8

freq=4, start=4, circles=6, rep=6

140 150

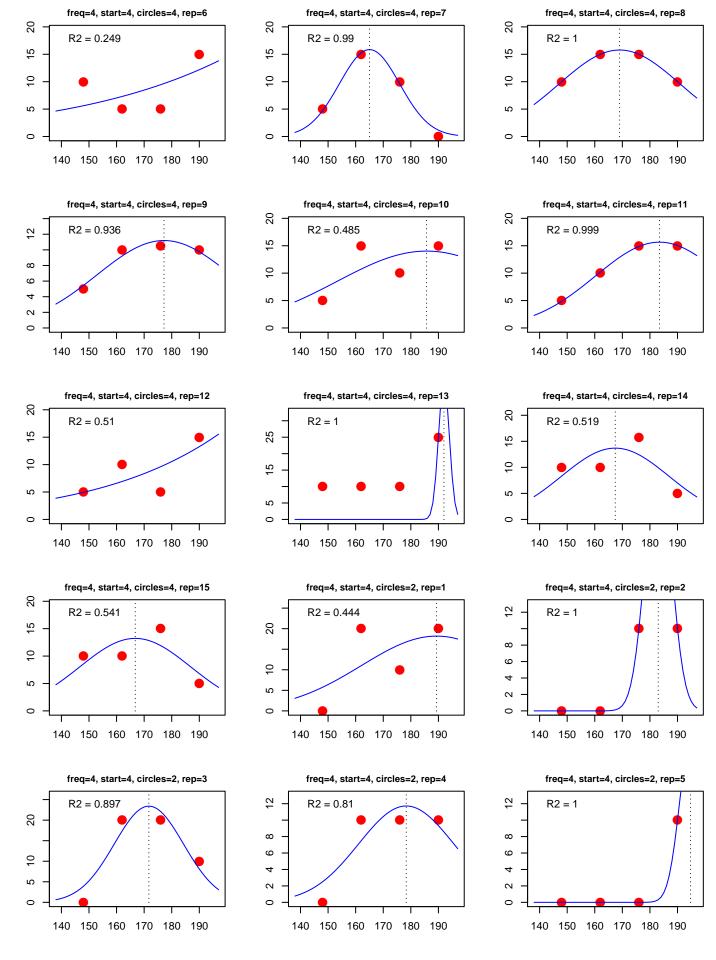
160 170

Julian day

170 180

140 150

170 180



Julian day

freq=4, start=4, circles=2, rep=7

freq=4, start=4, circles=2, rep=8

freq=4, start=4, circles=2, rep=6

Julian day

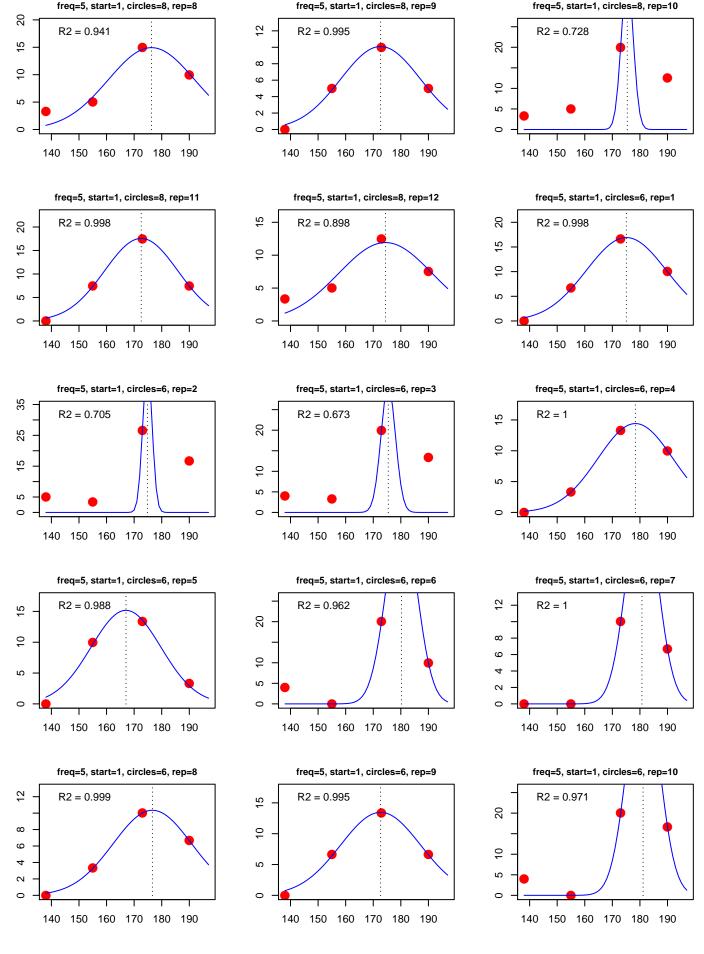
freq=5, start=1, circles=10, rep=6

freq=5, start=1, circles=10, rep=7

freq=5, start=1, circles=10, rep=5

Julian day

150 160

Julian day

freq=5, start=1, circles=6, rep=12

freq=5, start=1, circles=4, rep=1

freq=5, start=1, circles=6, rep=11

150 160 170 180

Julian day

170 180

140 150

170 180

freq=5, start=1, circles=2, rep=3

freq=5, start=1, circles=2, rep=4

freq=5, start=1, circles=2, rep=2

Julian day

freq=5, start=2, circles=10, rep=5

freq=5, start=2, circles=10, rep=6

freq=5, start=2, circles=10, rep=4

140 150

Julian day

160 170 180

160 170

freq=5, start=2, circles=8, rep=8

freq=5, start=2, circles=8, rep=9

freq=5, start=2, circles=8, rep=7

140 150 160

Julian day

150 160

170 180

freq=5, start=2, circles=6, rep=11

freq=5, start=2, circles=6, rep=12

freq=5, start=2, circles=6, rep=10

150 160 170

180 190

Julian day

150 160

140 150

freq=5, start=2, circles=2, rep=2

freq=5, start=2, circles=2, rep=3

freq=5, start=2, circles=2, rep=1

150 160 170

180 190

Julian day

170 180

140 150

170 180

freq=5, start=3, circles=10, rep=4

freq=5, start=3, circles=10, rep=5

170 180

freq=5, start=3, circles=10, rep=3

160 170

Julian day

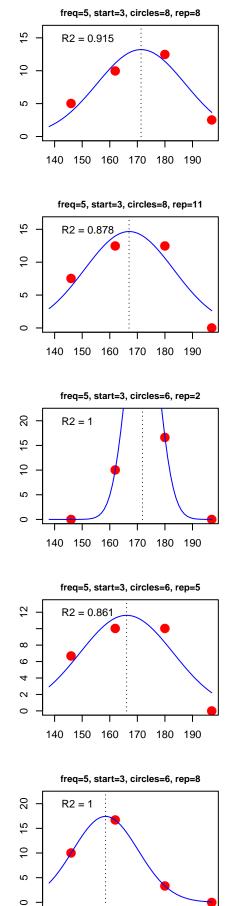
140 150

170 180

140 150

160 170

freq=5, start=3, circles=8, rep=6



Julian day

150 160

140 150

160 170

170 180

freq=5, start=3, circles=8, rep=7

freq=5, start=3, circles=6, rep=10

freq=5, start=3, circles=6, rep=11

 freq=5, start=3, circles=6, rep=9

 Julian day

 170 180

freq=5, start=3, circles=2, rep=1

freq=5, start=3, circles=2, rep=2

 freq=5, start=3, circles=4, rep=12

 160 170

140 150 160 170 180 Julian day

freq=5, start=4, circles=10, rep=3

freq=5, start=4, circles=10, rep=4

freq=5, start=4, circles=10, rep=2

140 150

Julian day

170 180

140 150

freq=5, start=4, circles=8, rep=6

freq=5, start=4, circles=8, rep=7

freq=5, start=4, circles=8, rep=5

140 150

160 170

180 190

Julian day

170 180

140 150

170 180

freq=5, start=4, circles=6, rep=9

freq=5, start=4, circles=6, rep=10

freq=5, start=4, circles=6, rep=8

140 150

160 170

180 190

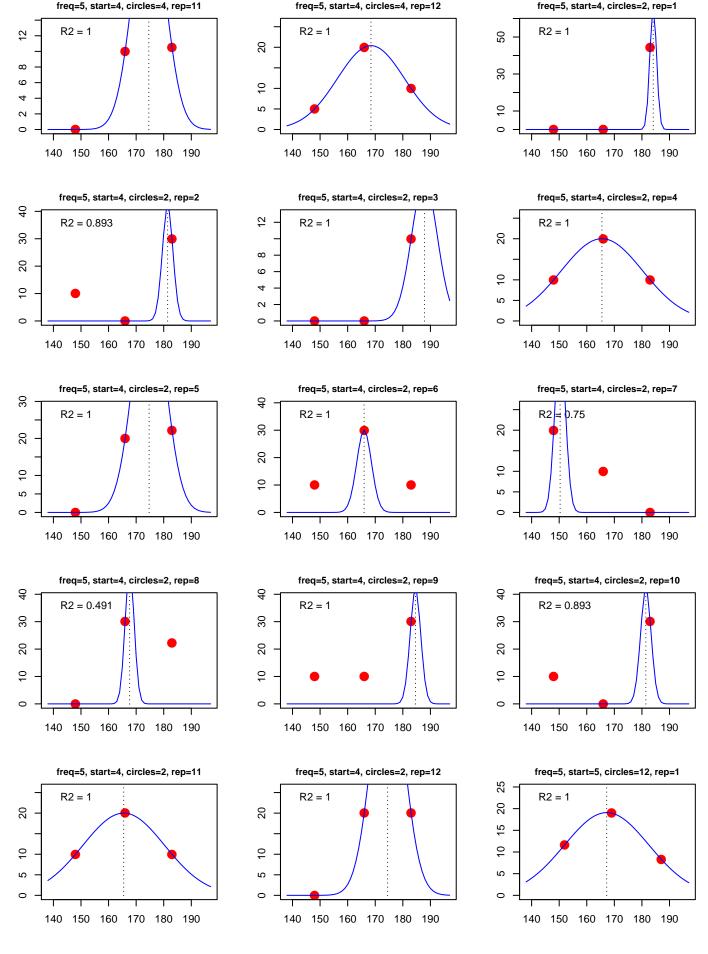
Julian day

170 180

140 150

160 170

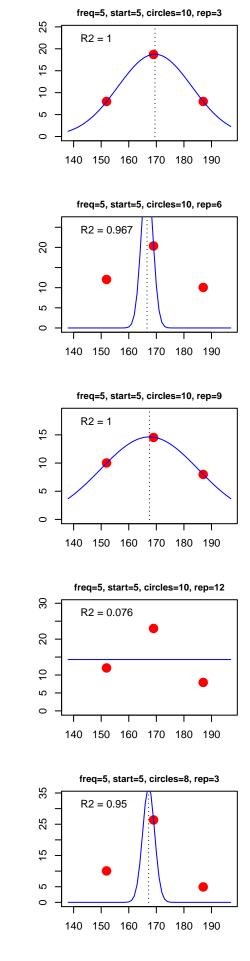
150 160



Julian day

150 160

freq=5, start=5, circles=10, rep=1



Julian day

 170 180

freq=5, start=5, circles=10, rep=2

freq=5, start=5, circles=8, rep=5

freq=5, start=5, circles=8, rep=6

180 190

freq=5, start=5, circles=8, rep=4

160 170

180 190

Julian day

160 170 180

 freq=5, start=5, circles=6, rep=8

freq=5, start=5, circles=6, rep=9

freq=5, start=5, circles=6, rep=7

180 190

140 150

Julian day

160 170 180

160 170

freq=5, start=5, circles=4, rep=11

freq=5, start=5, circles=4, rep=12

freq=5, start=5, circles=4, rep=10

140 150 160

180 190

Julian day

140 150 160

170 180

140 150

160 170