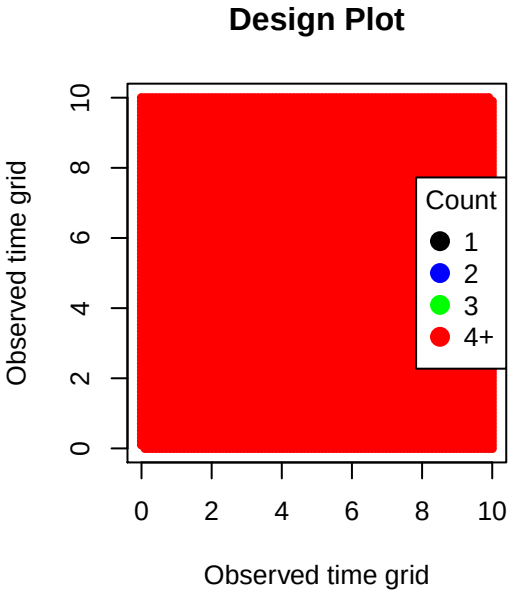
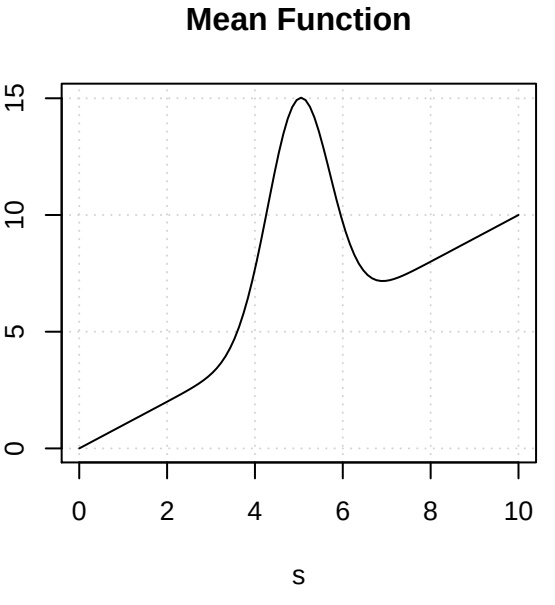
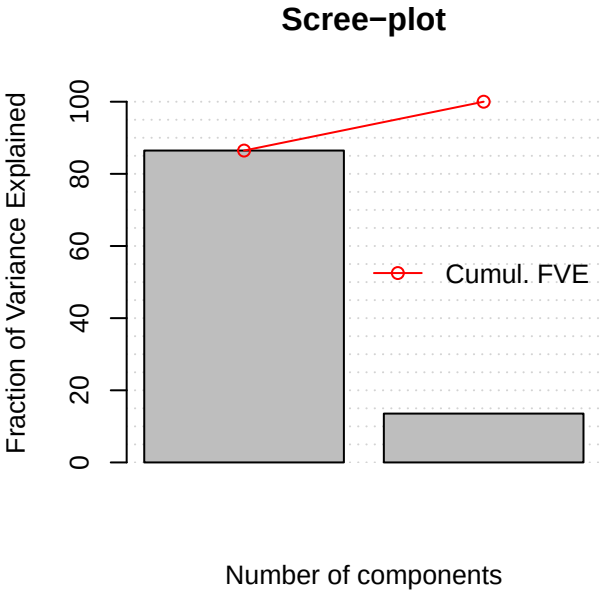
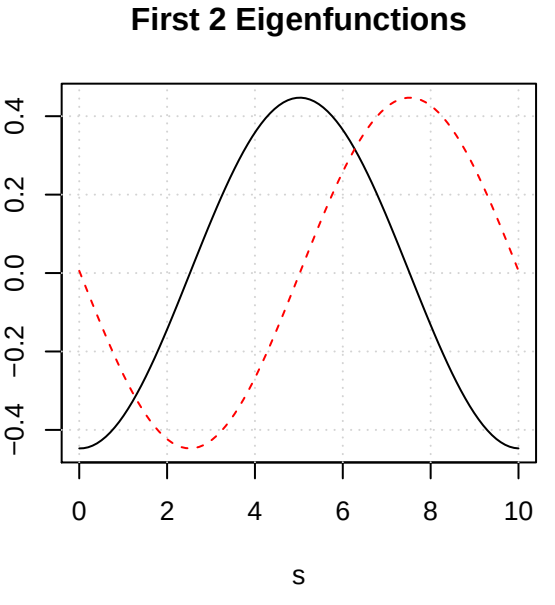
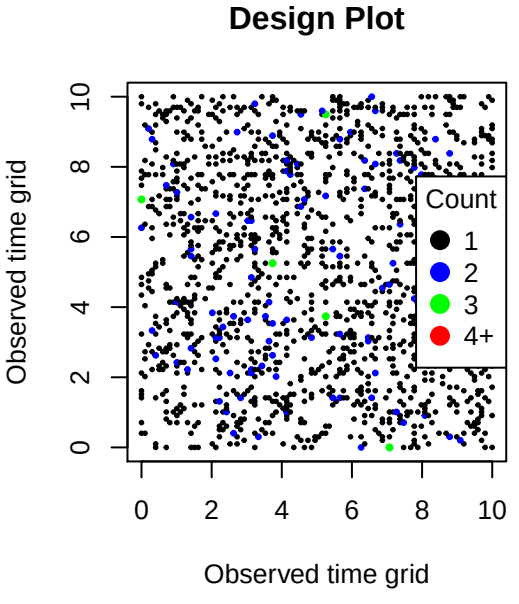
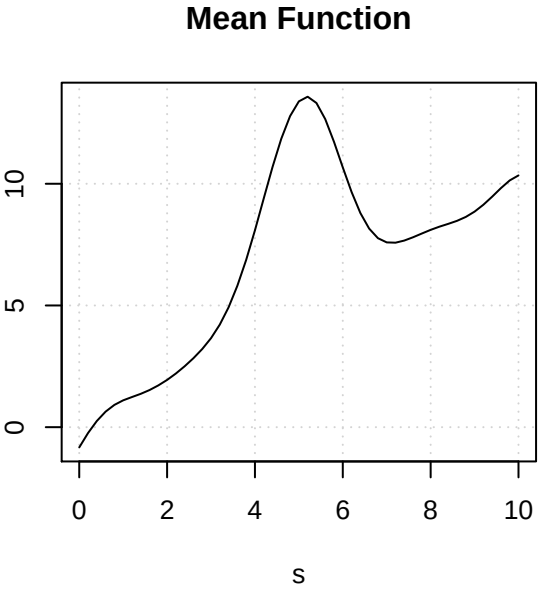

Design Plot
Observed time grid
Observed time grid
Count
1
2
3
4+
0
2
4
6
8
10

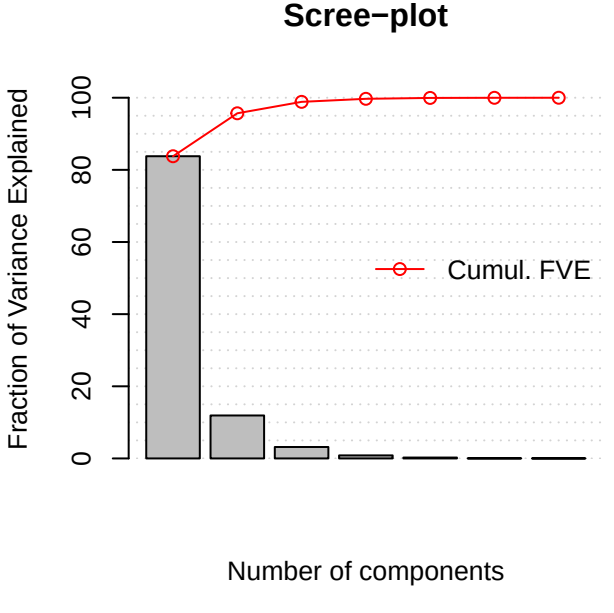

Mean Function
s
0
5
10
15
0
2
4
6
8
10

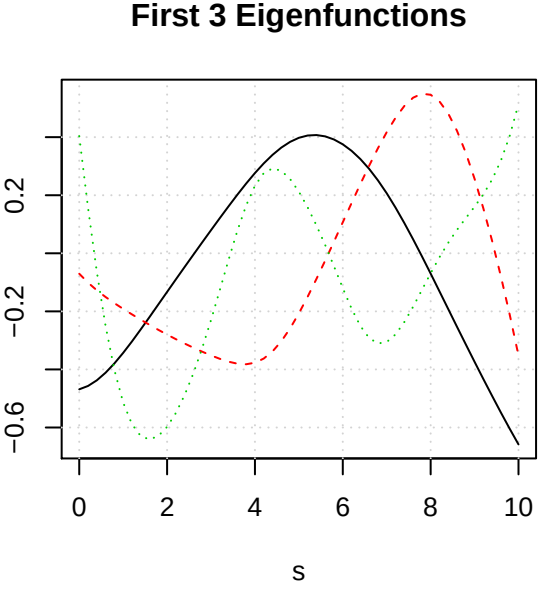

Scree−plot
Fraction of Variance Explained
Number of components
Cumul. FVE
0
20
40
60
80
100

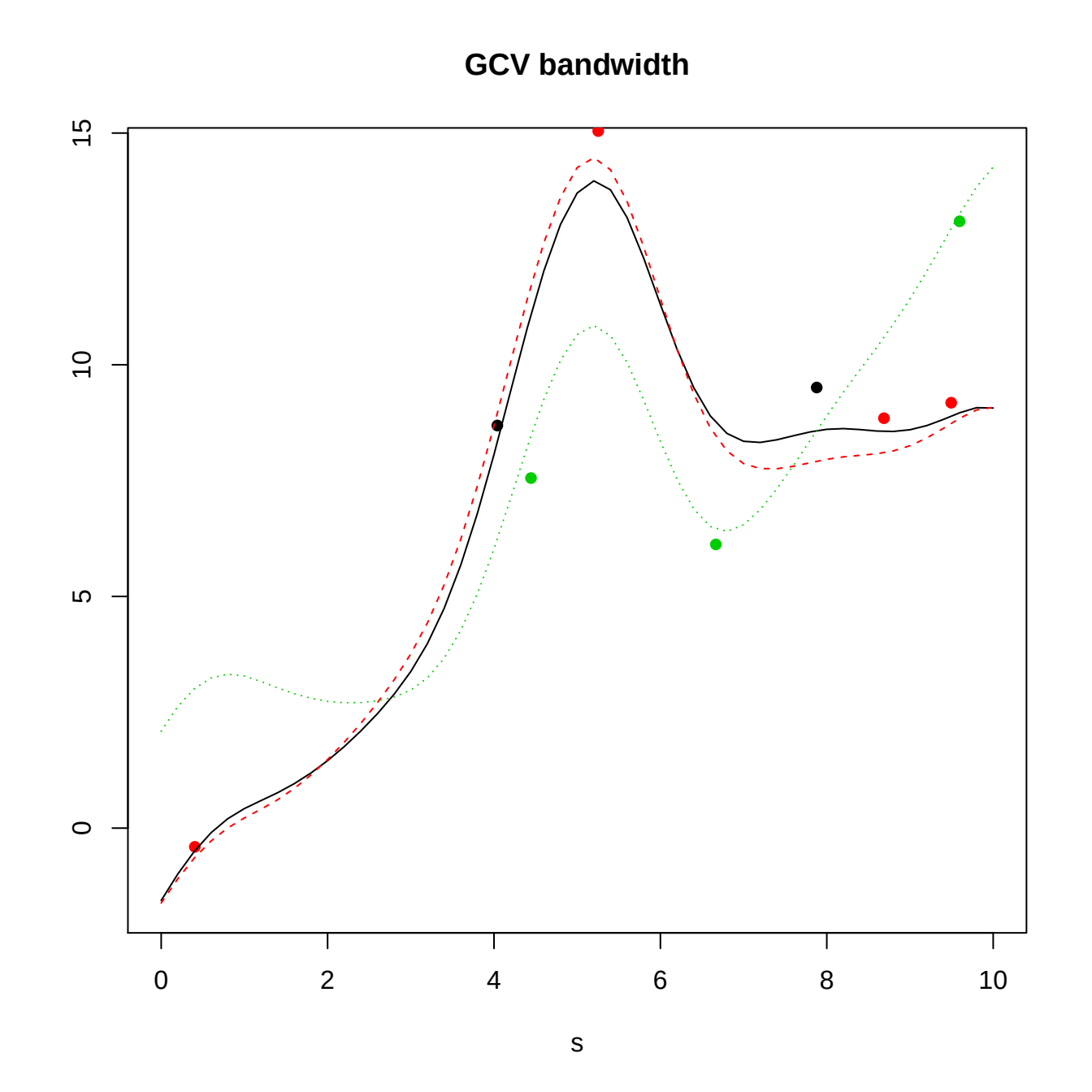

First 2 Eigenfunctions
s
−0.4
−0.2
0.0
0.2
0.4
0
2
4
6
8
10

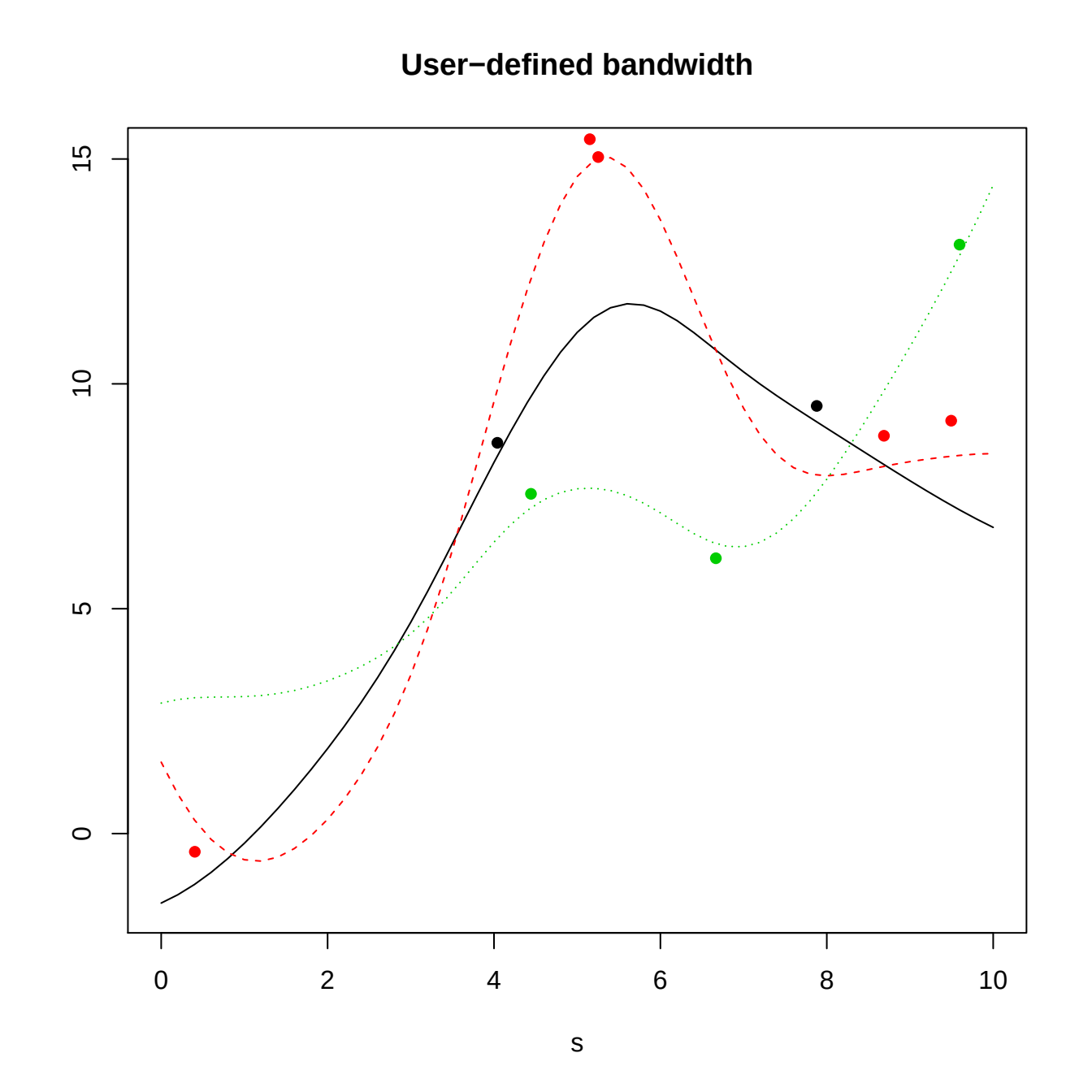

Design Plot
Observed time grid
Observed time grid
Count
1
2
3
4+
0
2
4
6
8
10

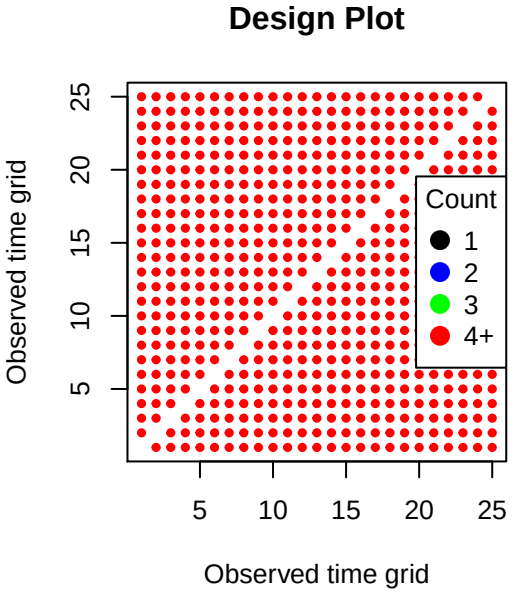

Mean Function
s
0
5
10
0
2
4
6
8
10

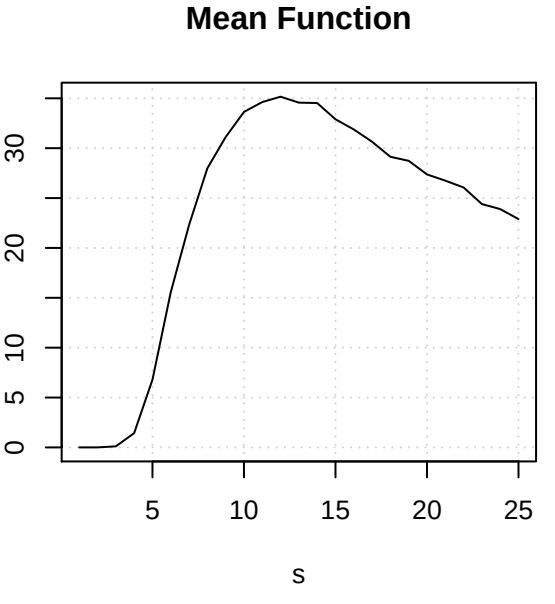

Scree−plot
Fraction of Variance Explained
Number of components
Cumul. FVE
0
20
40
60
80
100

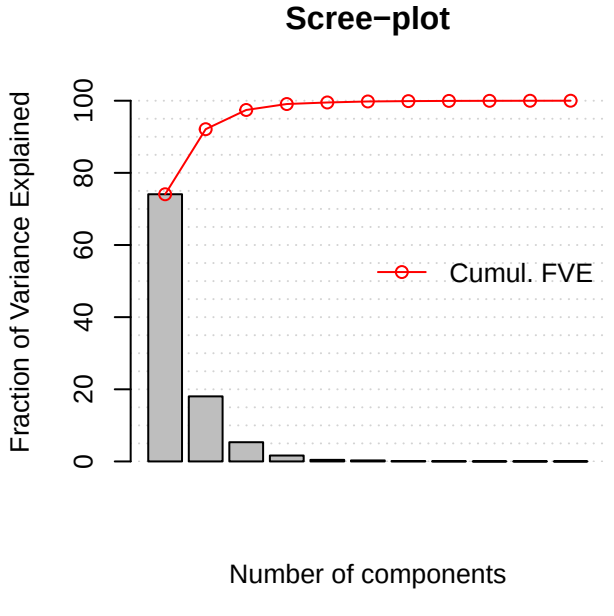

First 3 Eigenfunctions
s
−0.6
−0.2
0.2
0
2
4
6
8
10

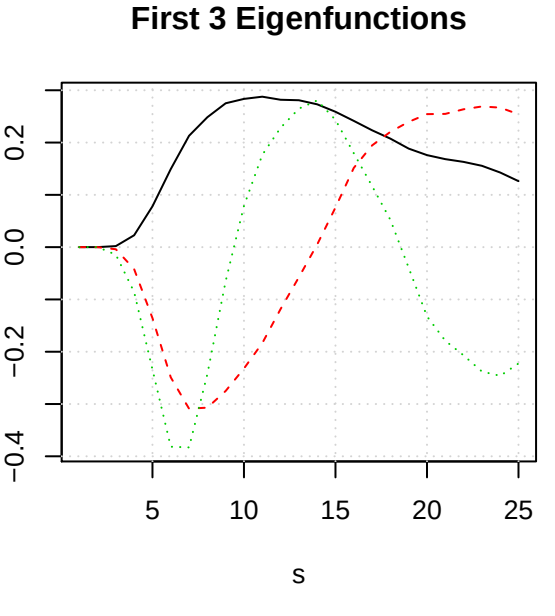

GCV bandwidth
15
10
5
0
0
2
4
6
8
10
s

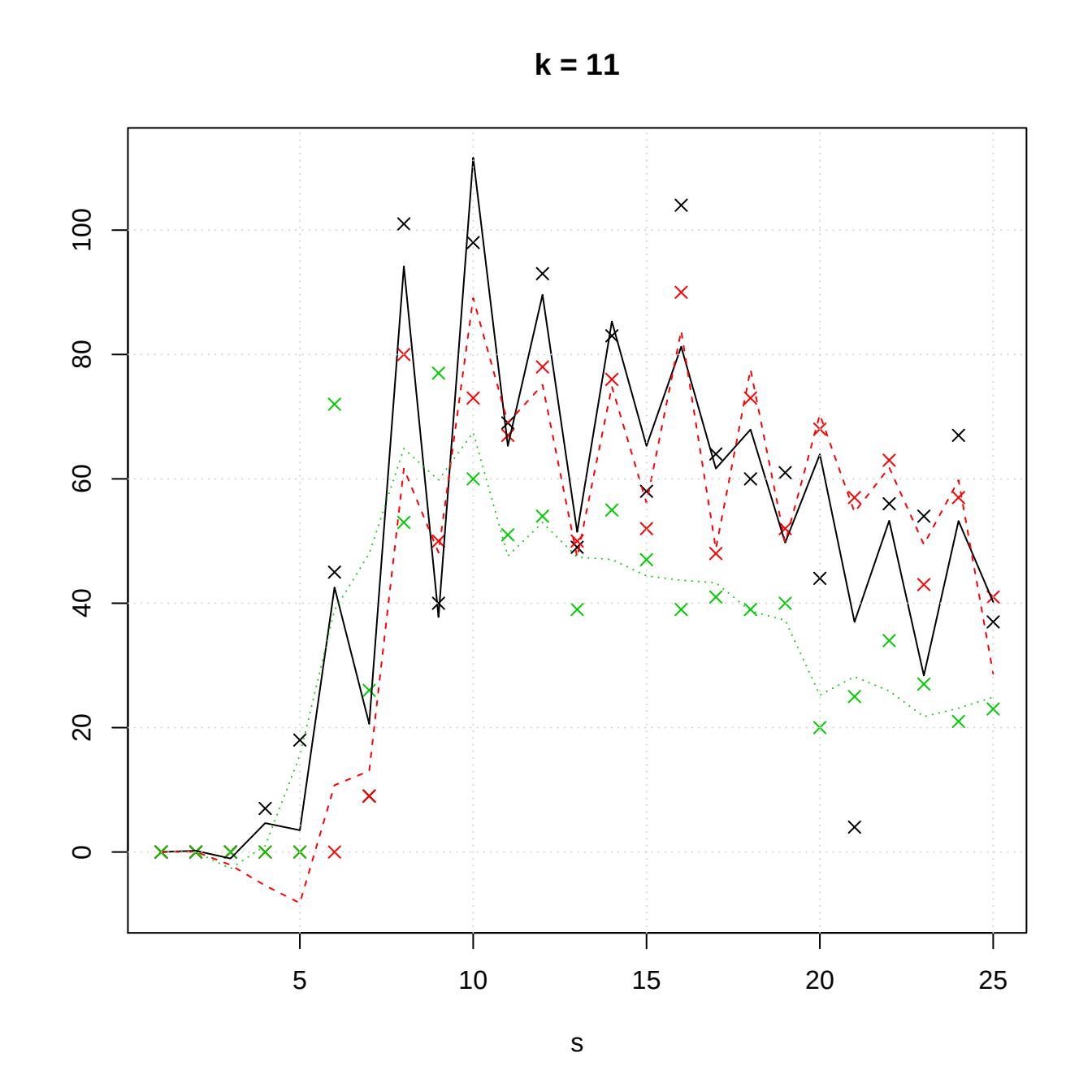

User−defined bandwidth
15
10
5
0
0
2
4
6
8
10
s

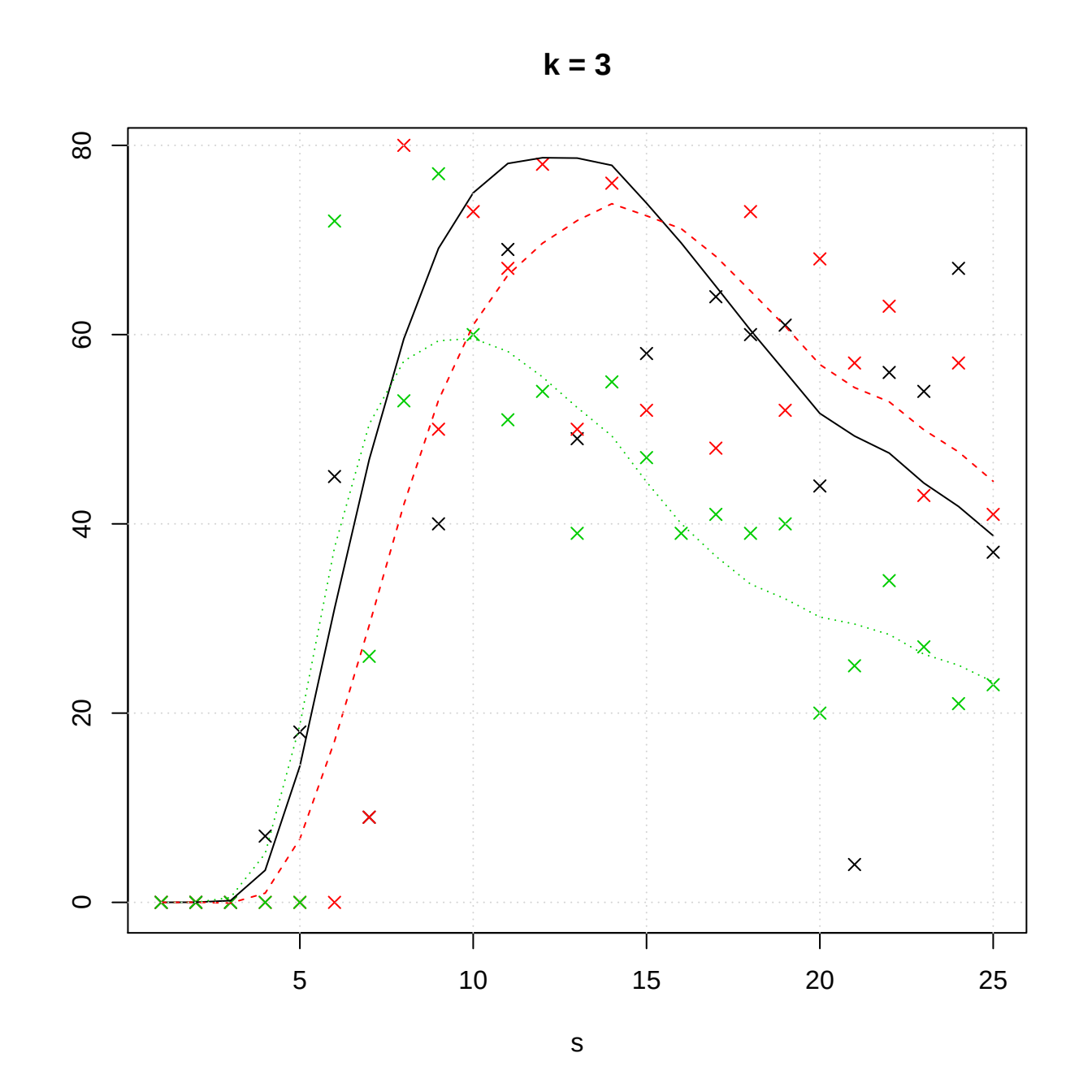

Design Plot
Observed time grid
Observed time grid
Count
1
2
3
4+
5
10
15
20
25

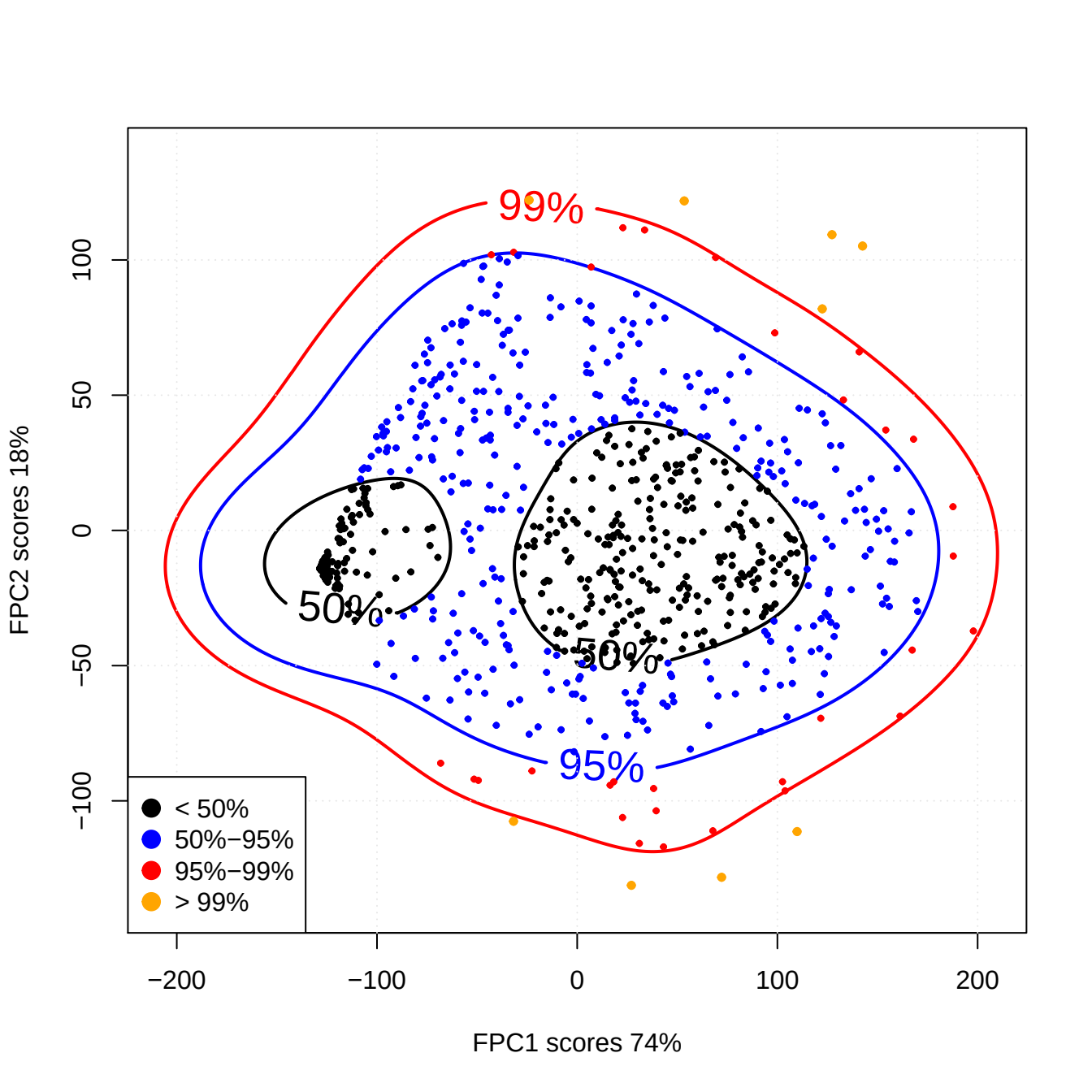

Mean Function
s
0
5
10
20
30
5
10
15
20
25

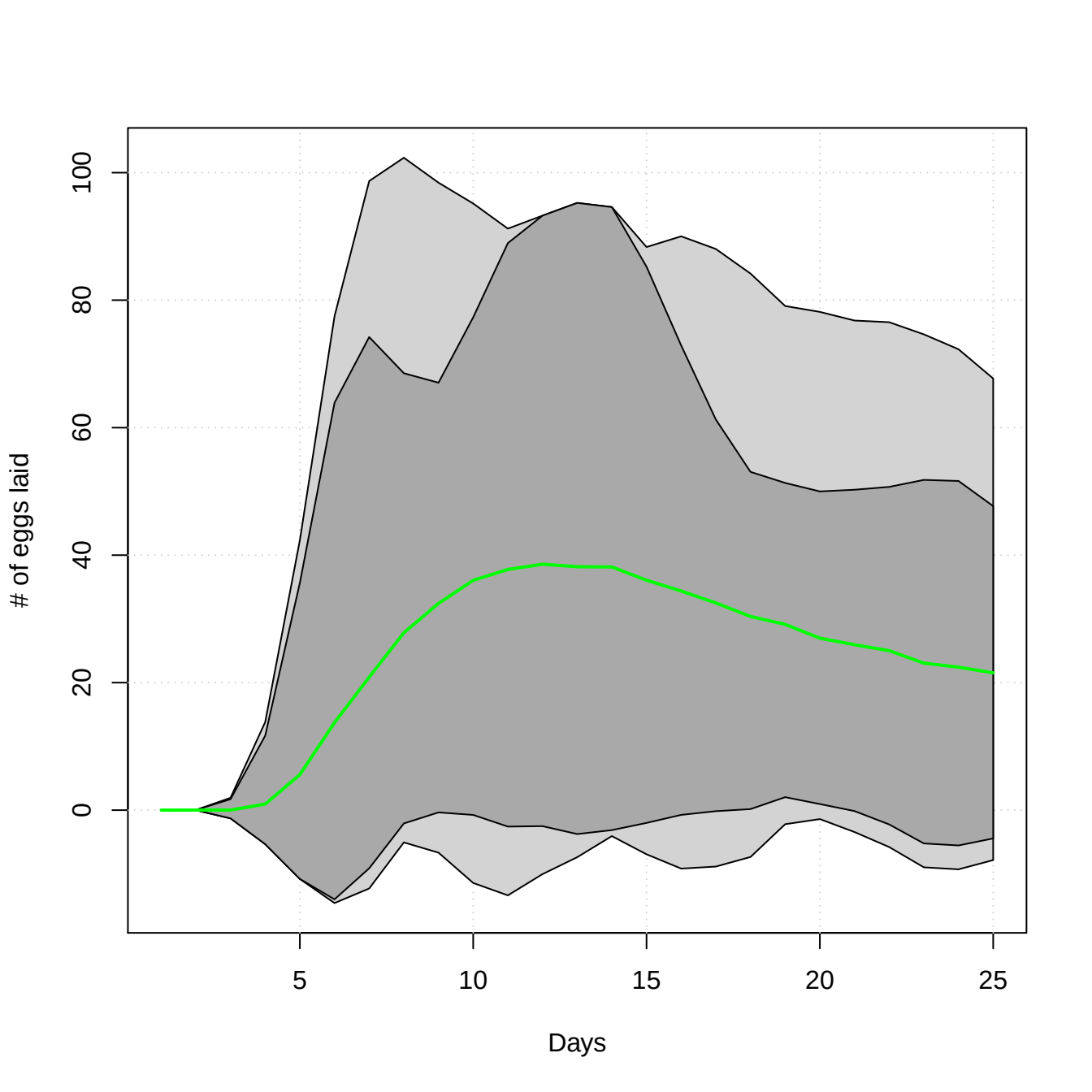

Scree−plot
Fraction of Variance Explained
Number of components
Cumul. FVE
0
20
40
60
80
100

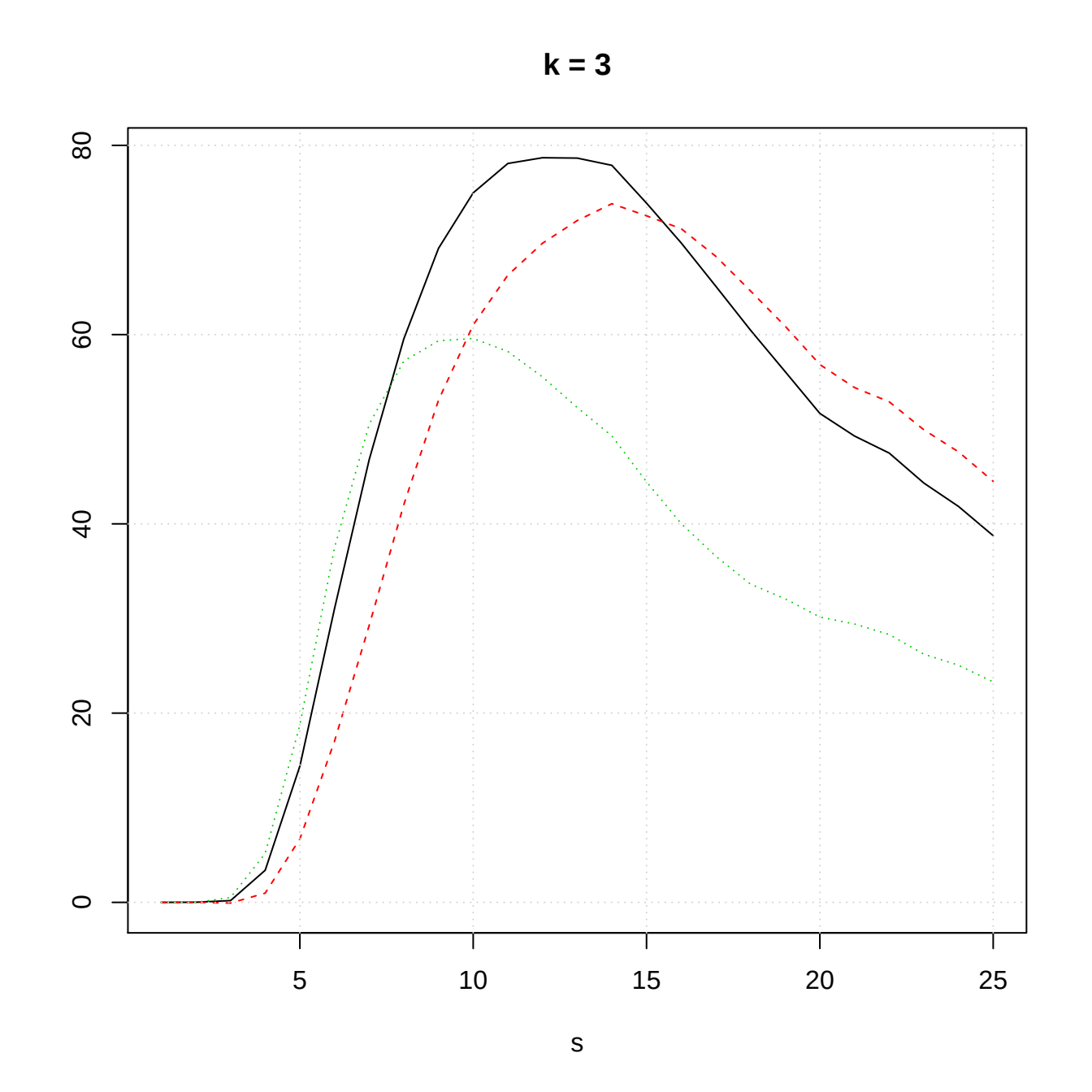

First 3 Eigenfunctions
s
−0.4
−0.2
0.0
0.2
5
10
15
20
25

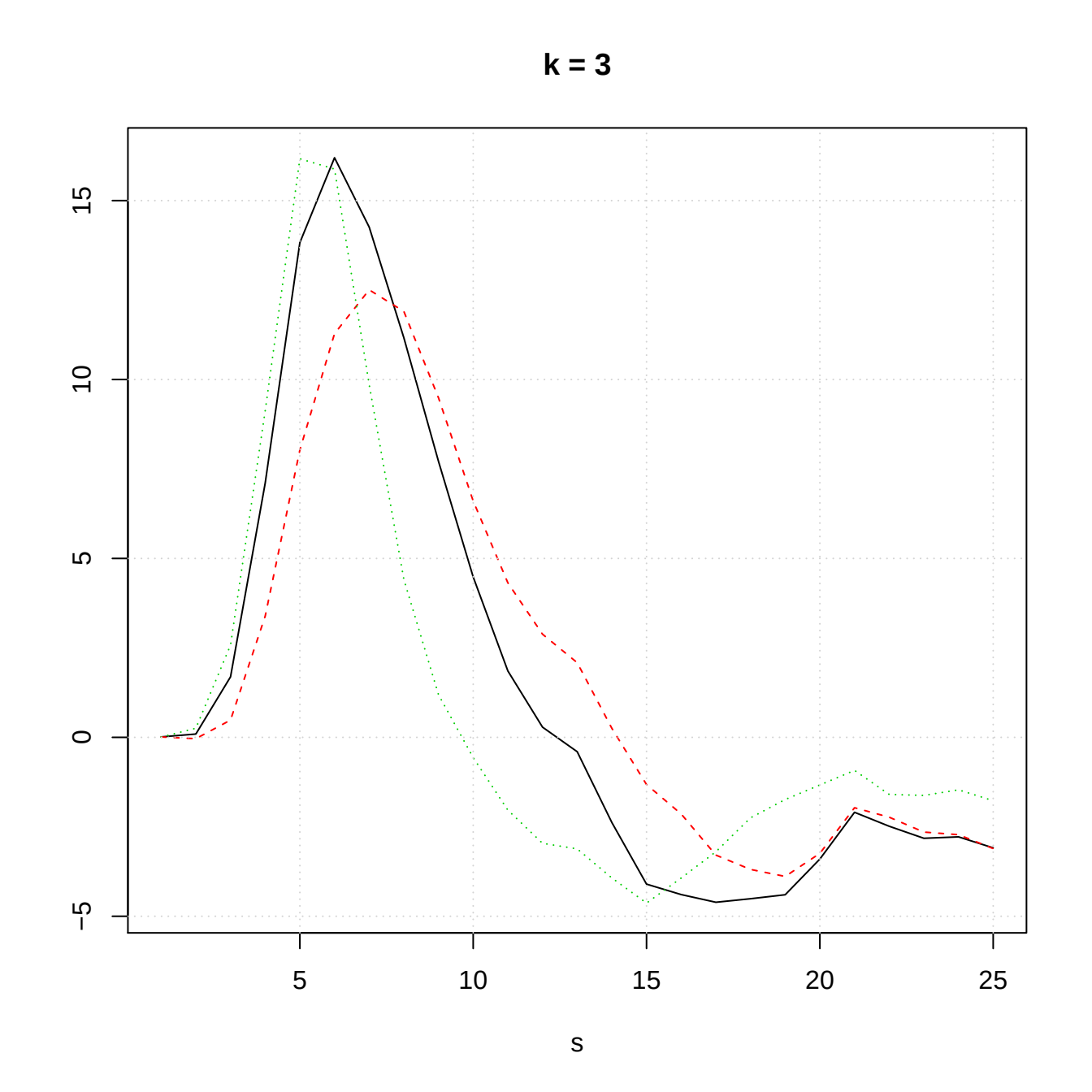

k = 11
0
20
40
60
80
100
5
10
15
20
25
s

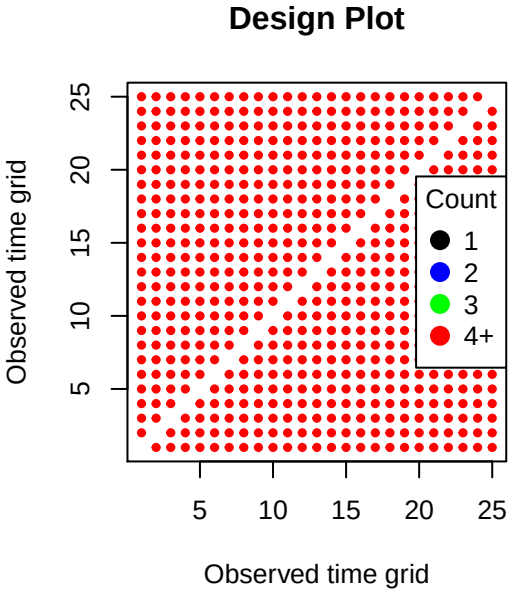

k = 3
0
20
40
60
80
5
10
15
20
25
s

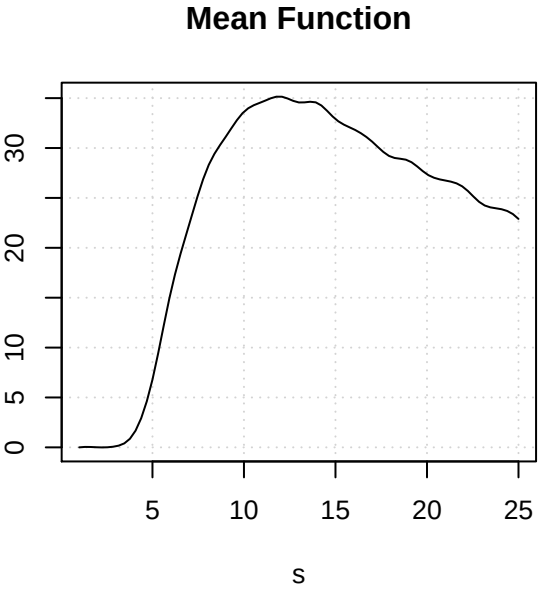

99%
95%
50%
50%
< 50%
50%−95%
95%−99%
> 99%
FPC2 scores 18%
FPC1 scores 74%
100
50
0
−50
−100
−200
−100
0
100
200

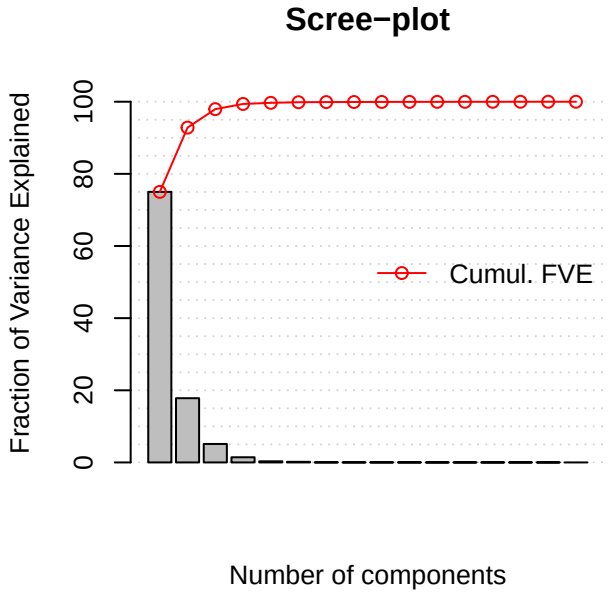

100
80
60
40
20
0
# of eggs laid
5
10
15
20
25
Days

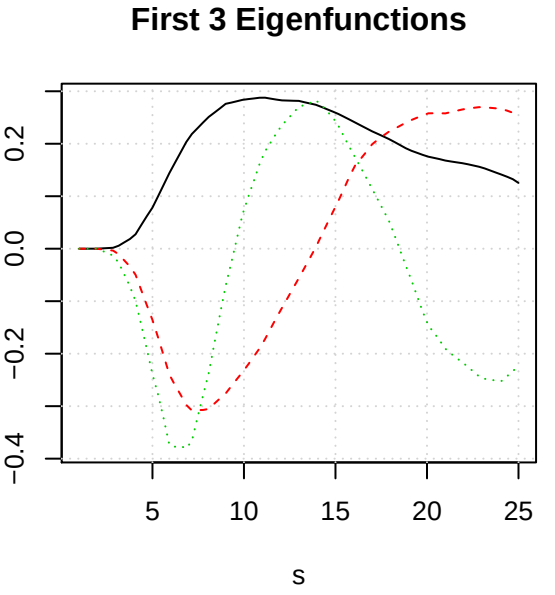

k = 3
0
20
40
60
80
5
10
15
20
25
s

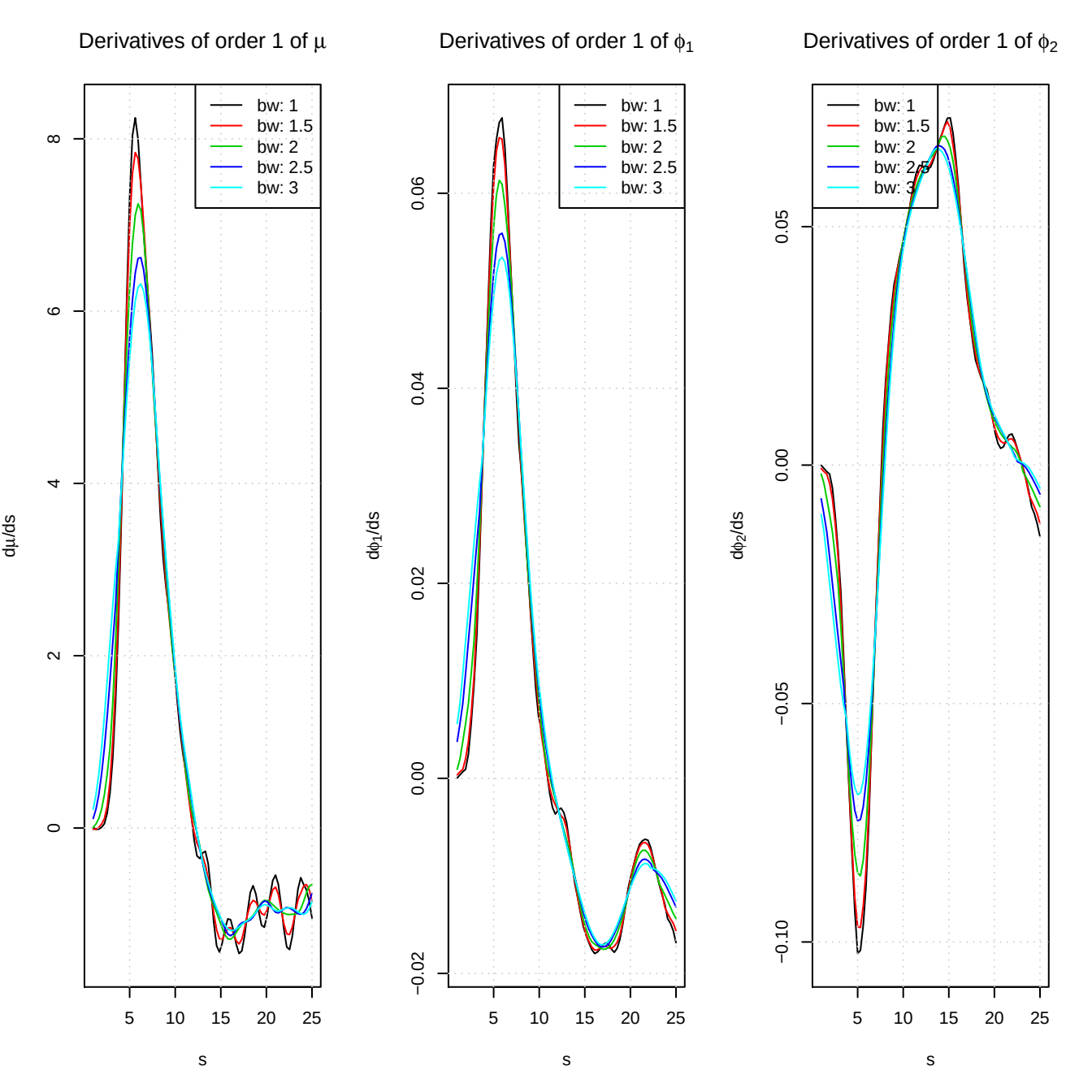

k = 3
15
10
5
0
−5
5
10
15
20
25
s


Design Plot
Observed time grid
Observed time grid
Count
1
2
3
4+
5
10
15
20
25


Mean Function
s
0
5
10
20
30
5
10
15
20
25


Scree−plot
Fraction of Variance Explained
Number of components
Cumul. FVE
0
20
40
60
80
100


First 3 Eigenfunctions
s
−0.4
−0.2
0.0
0.2
5
10
15
20
25


Derivatives of order 1 of μ
Derivatives of order 1 of ϕ_1
Derivatives of order 1 of ϕ_2
bw: 1
bw: 1.5
bw: 2
bw: 2.5
bw: 3
dμ/ds
$d\phi_1/ds$
$d\phi_2/ds$
s
0
2
4
6
8
−0.02
0.00
0.02
0.04
0.06
−0.10
−0.05
0.00
0.05
5
10
15
20
25