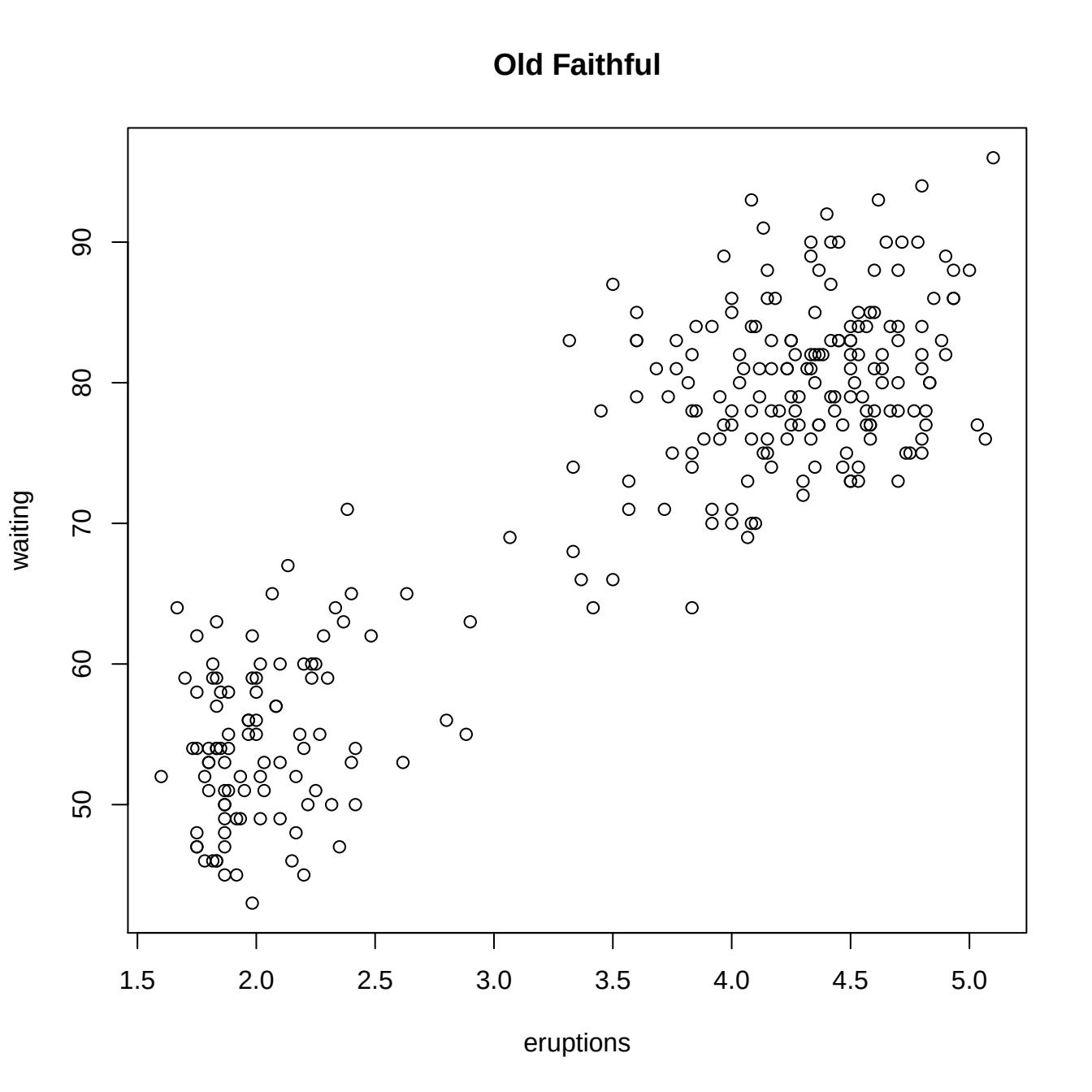
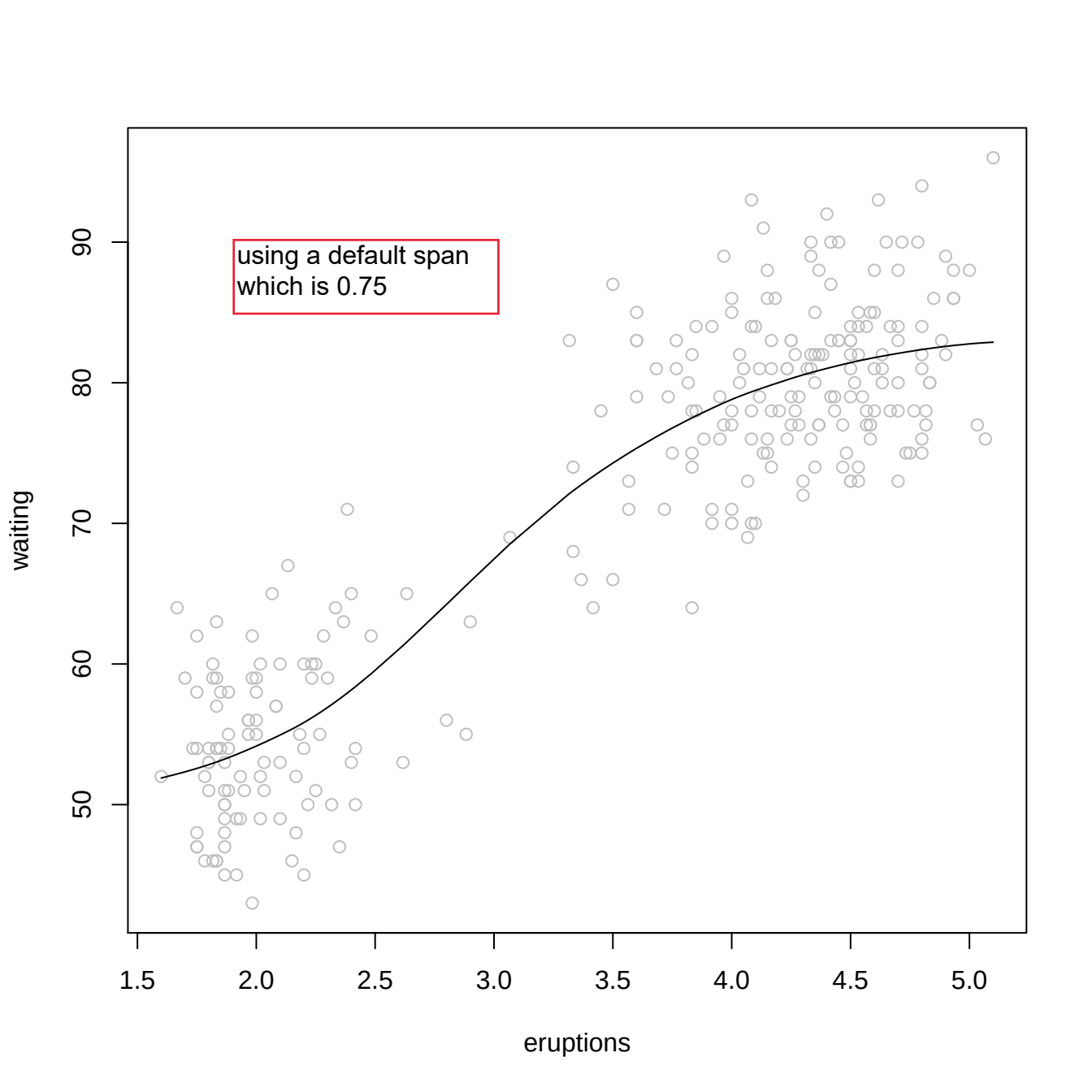
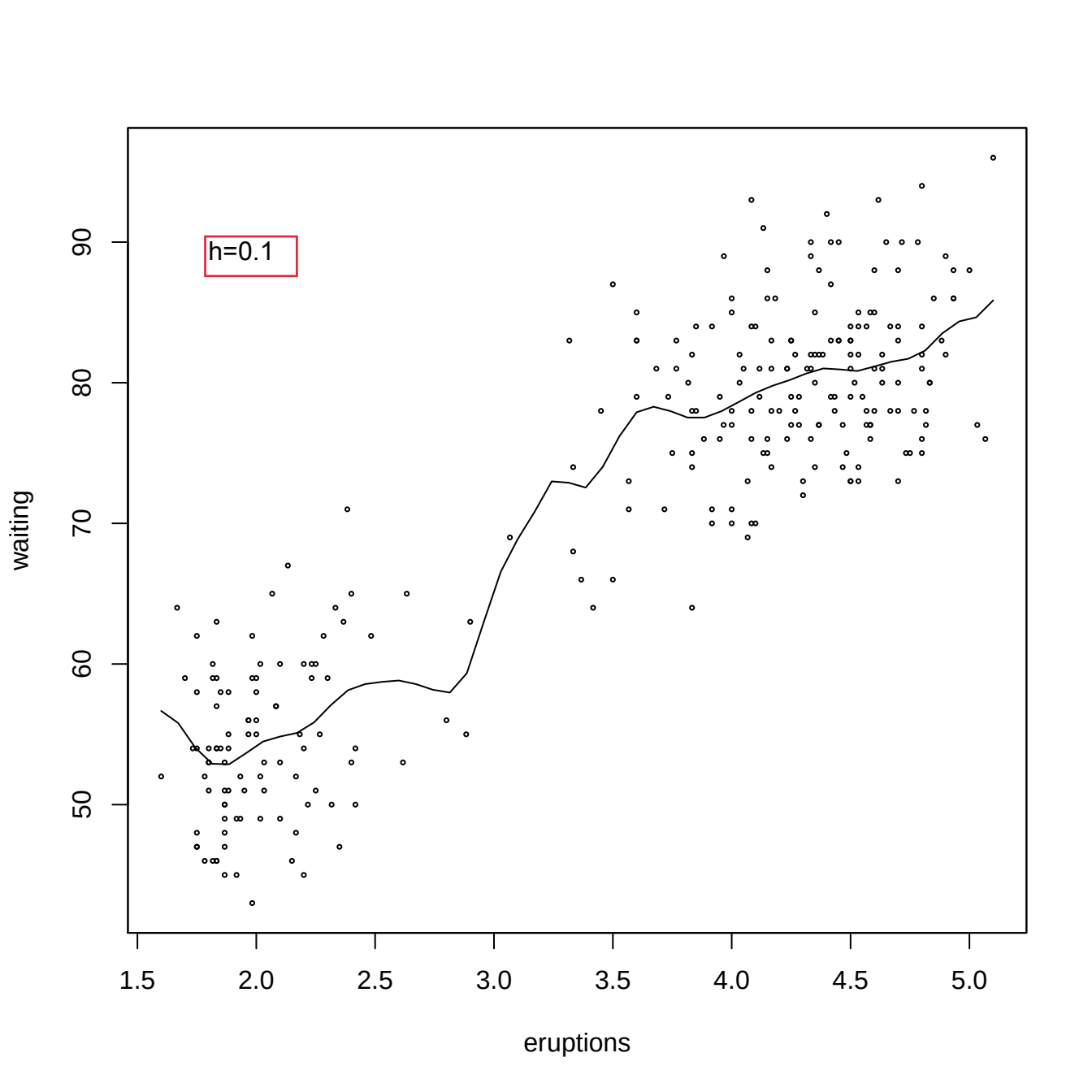
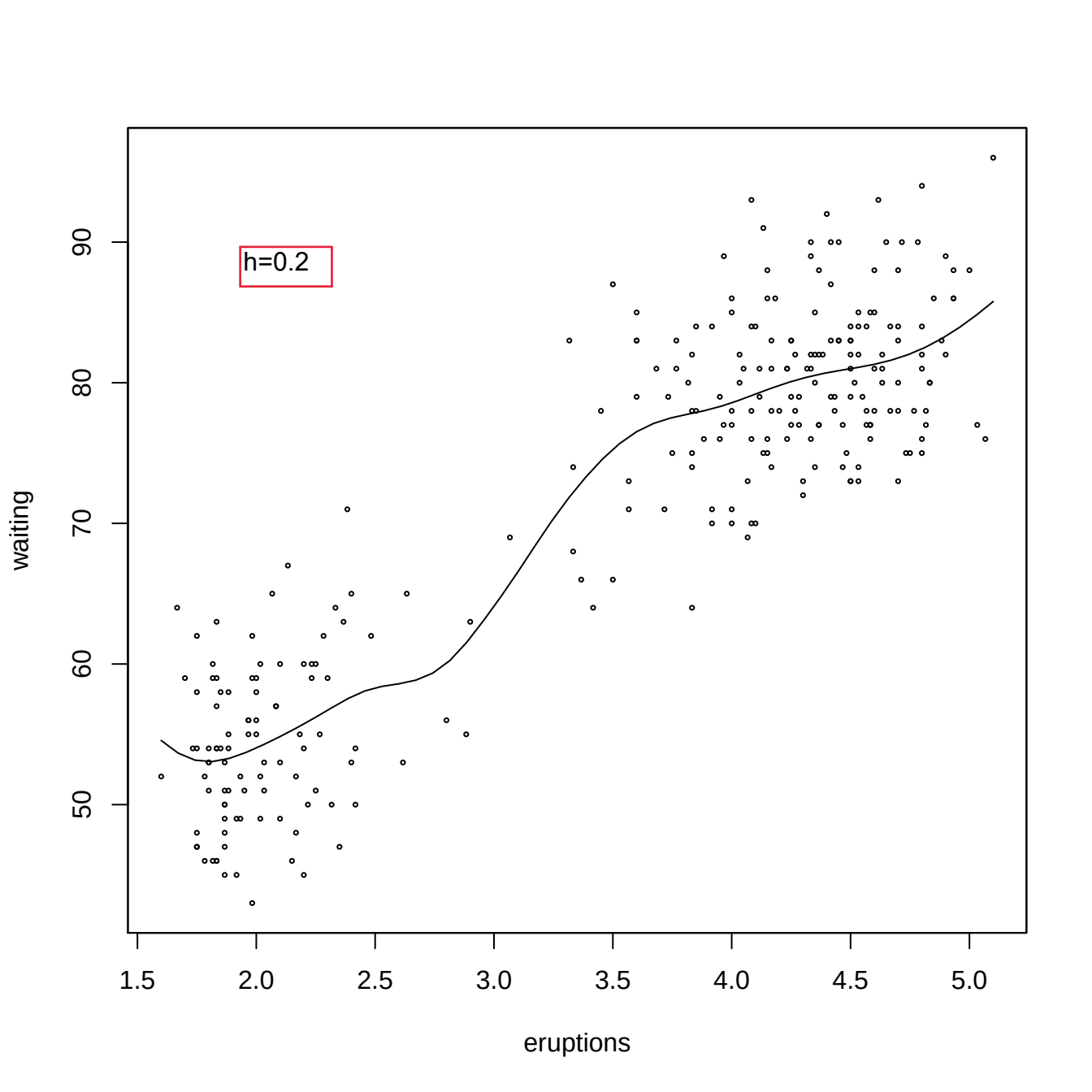
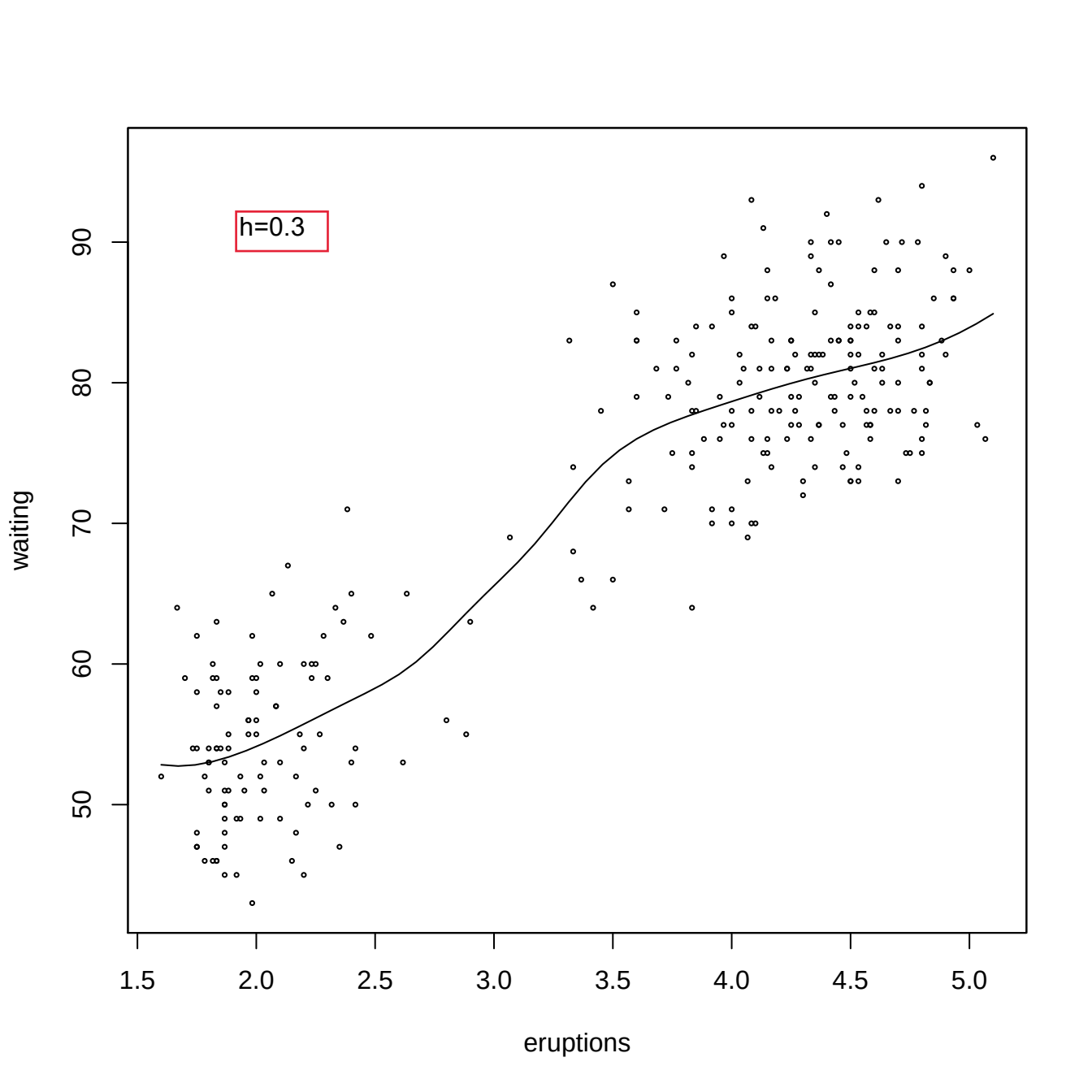
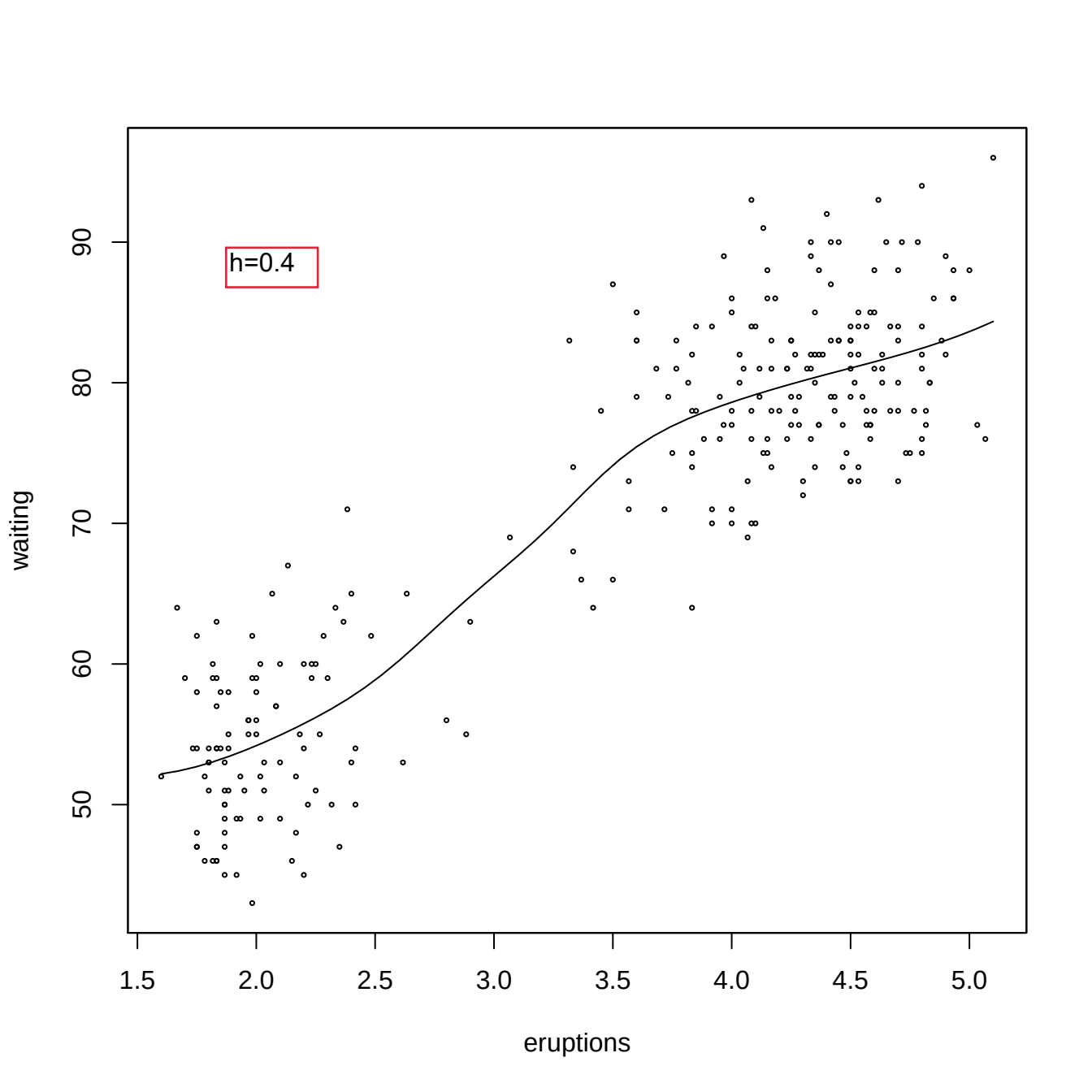

Old Faithful
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

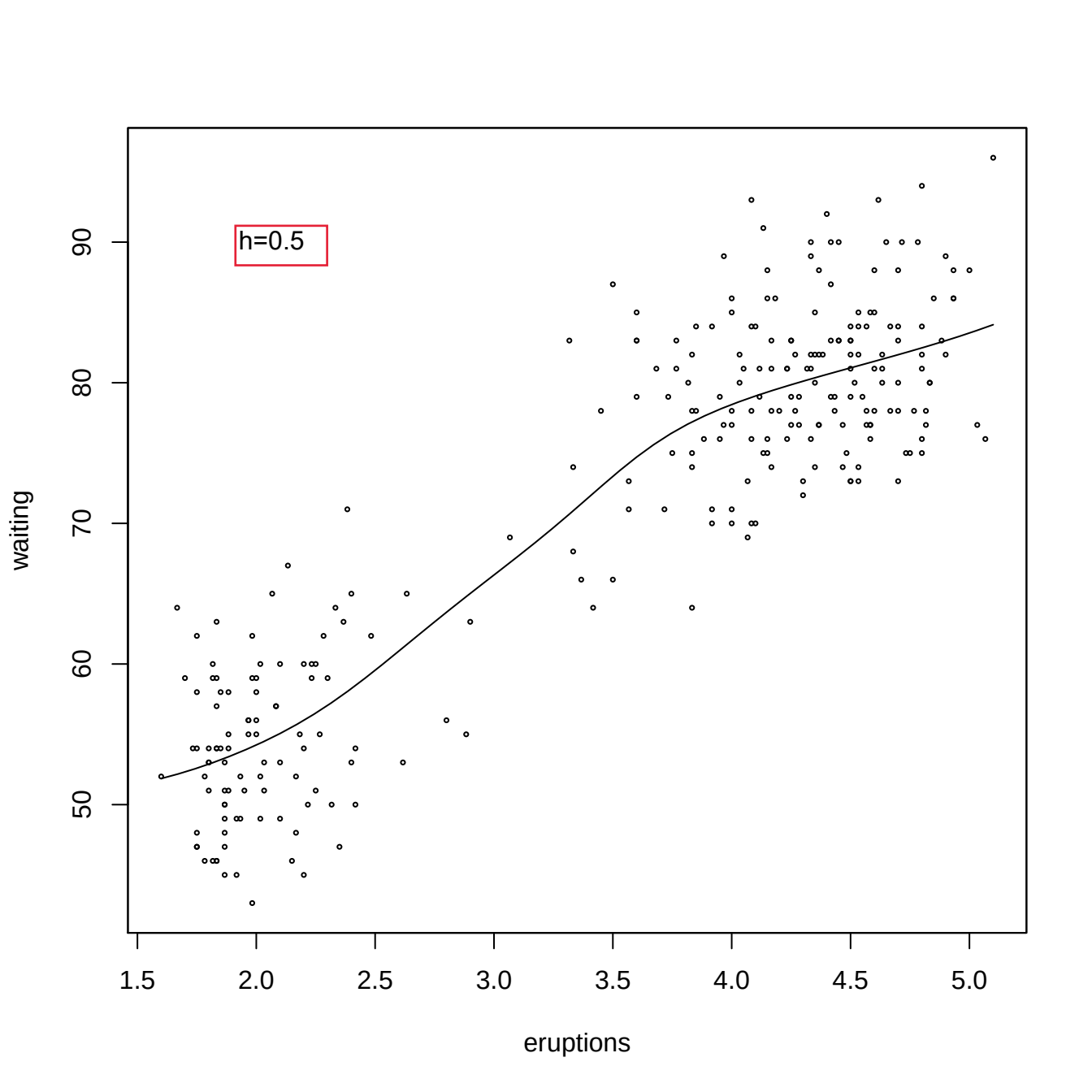

using a default span
which is 0.75
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

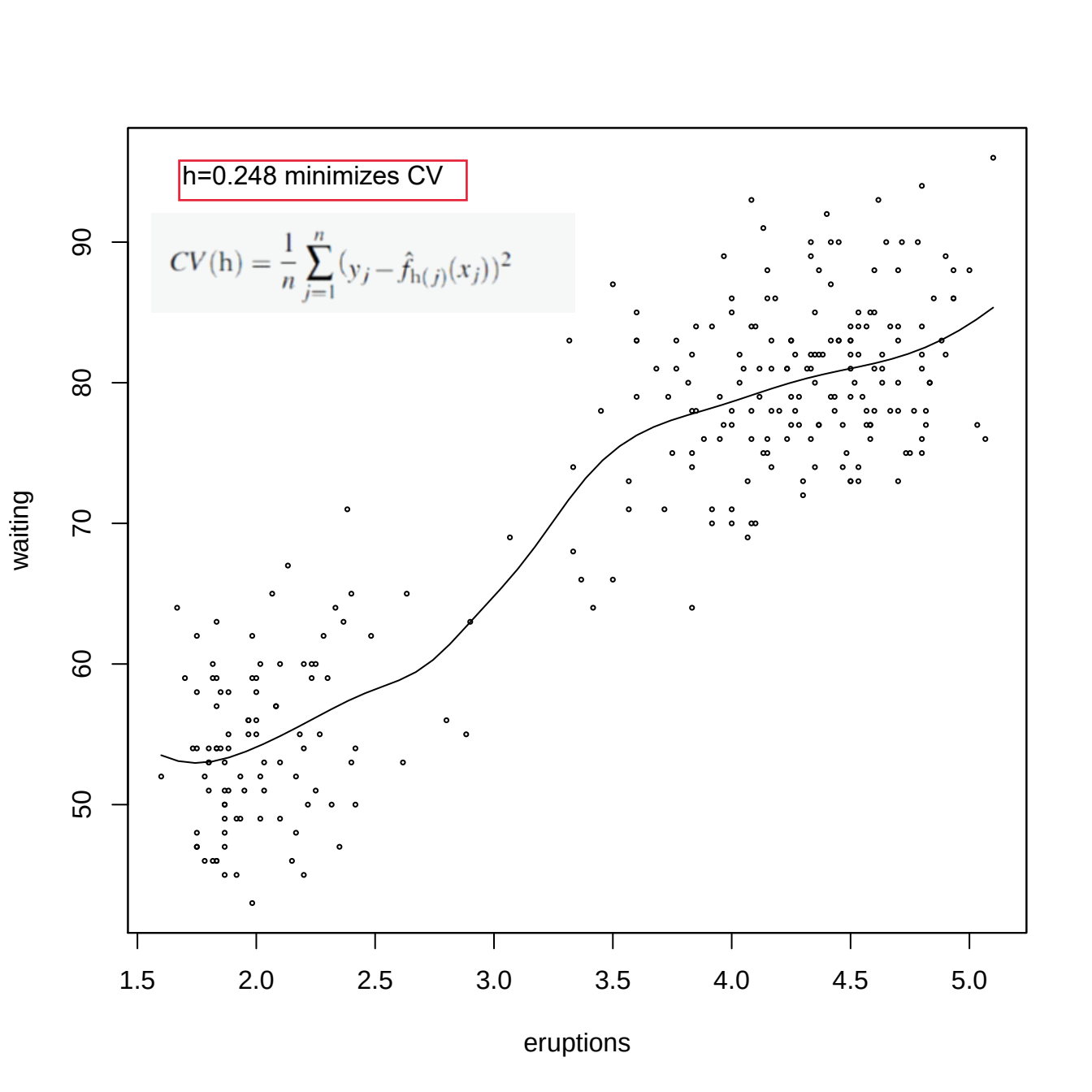

h=0.1
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0

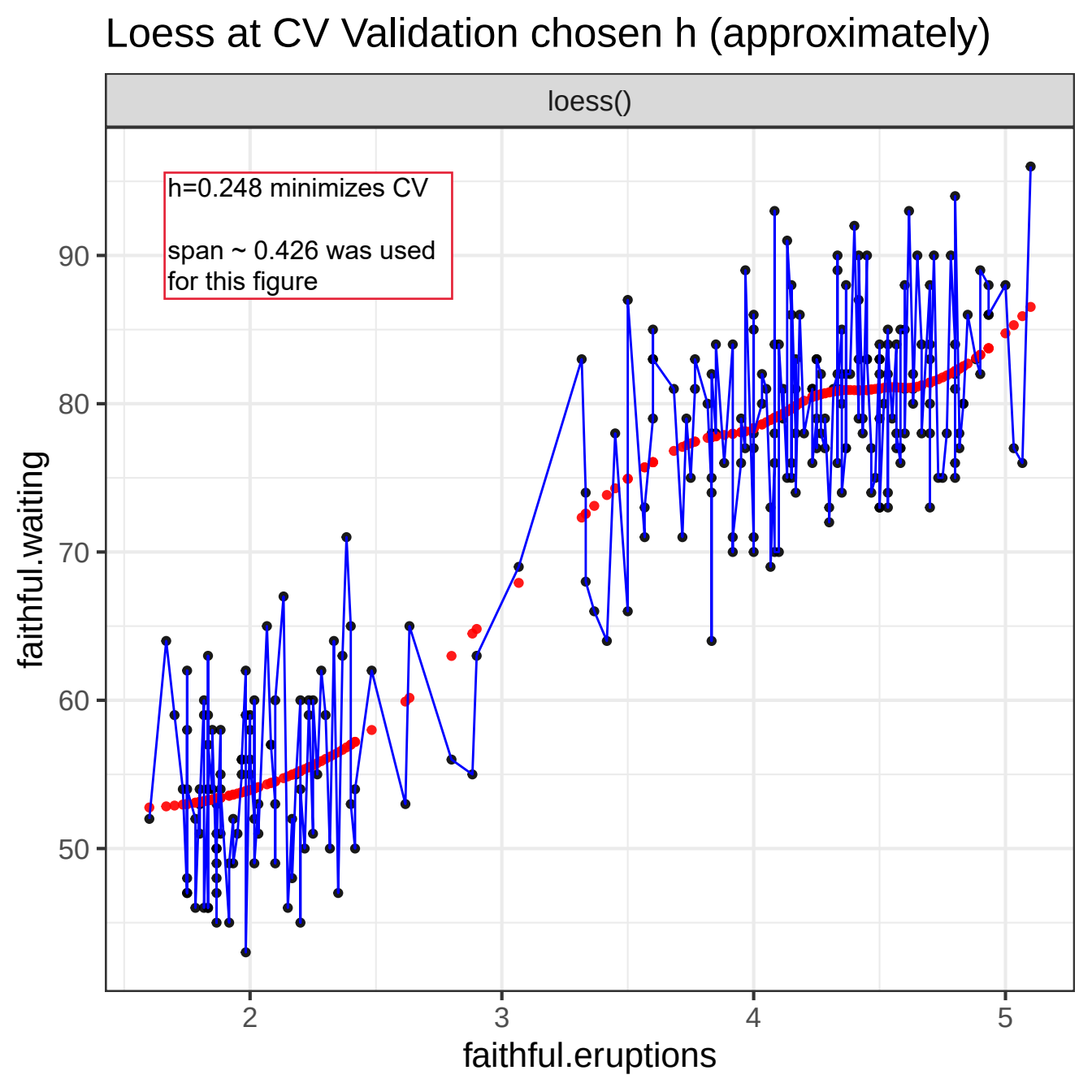

h=0.2
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.3
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.4
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.5
waiting
eruptions
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0


h=0.248 minimizes CV
$CV(\mathrm{h}) = \frac{1}{n}\sum_{j=1}^{n}(y_j - \hat{f}_{\mathrm{h}(j)}(x_j))^2$
waiting
50
60
70
80
90
1.5
2.0
2.5
3.0
3.5
4.0
4.5
5.0
eruptions


Loess at CV Validation chosen h (approximately)
loess()
h=0.248 minimizes CV
span ~ 0.426 was used for this figure
faithful.waiting
faithful.eruptions
90
80
70
60
50
2
3
4
5