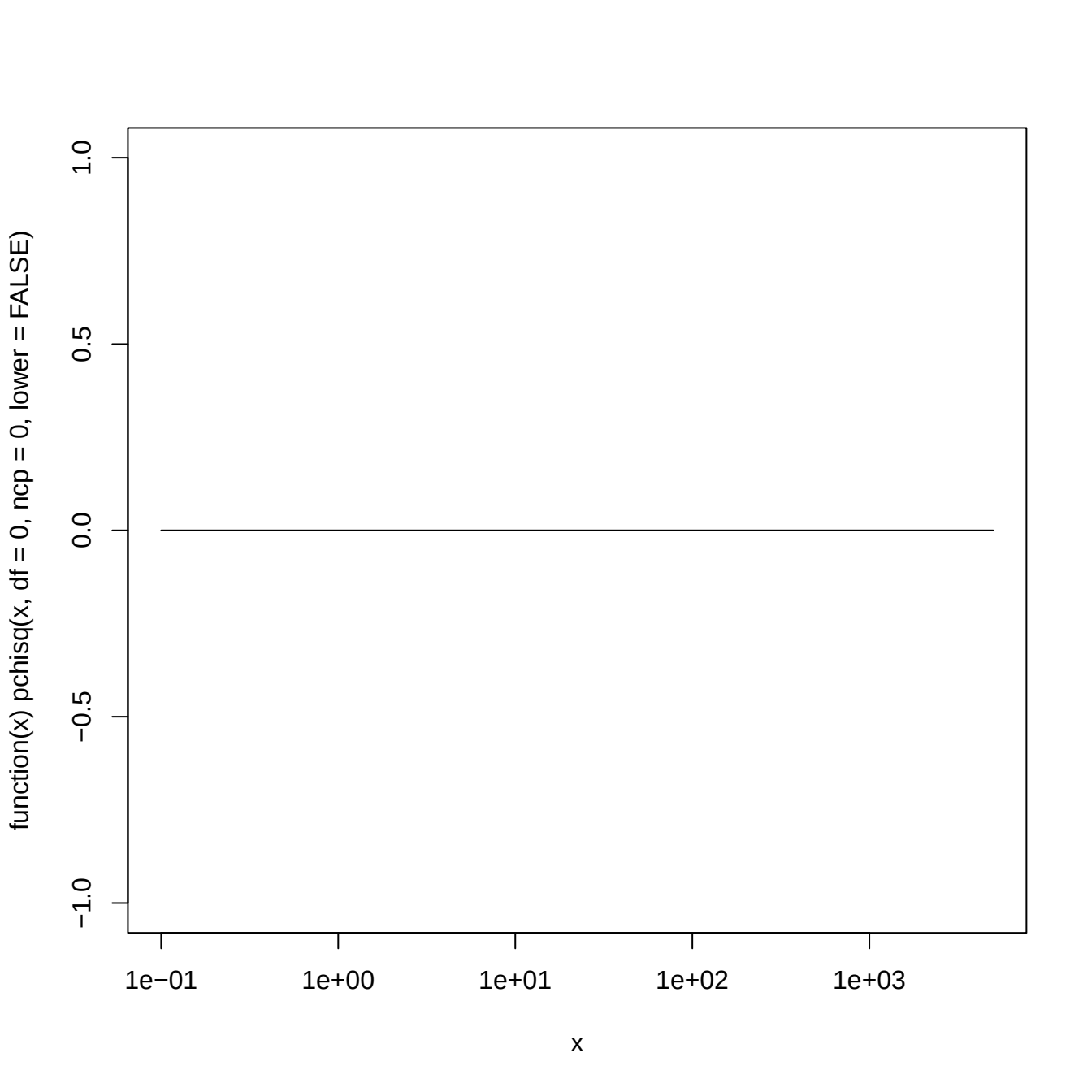
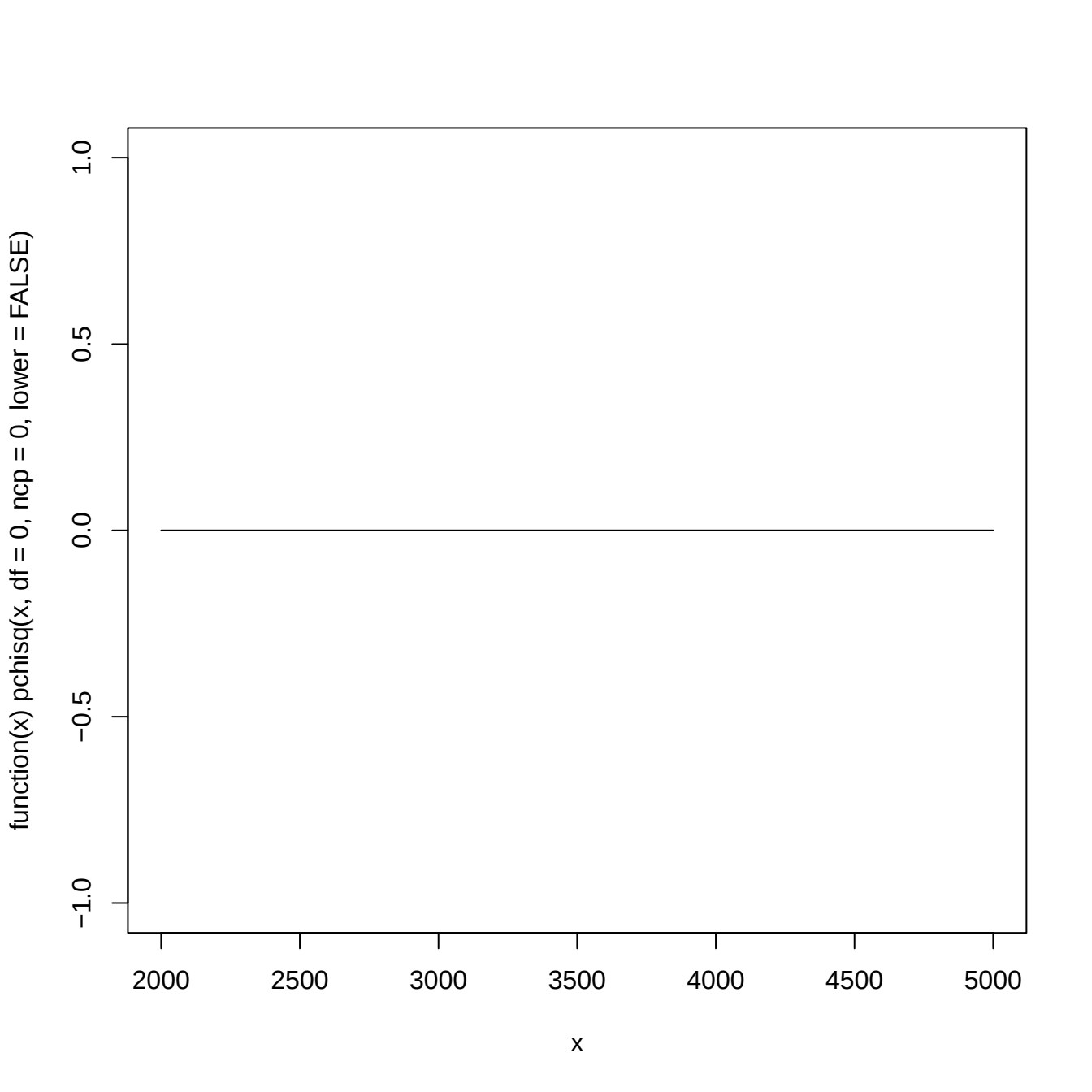
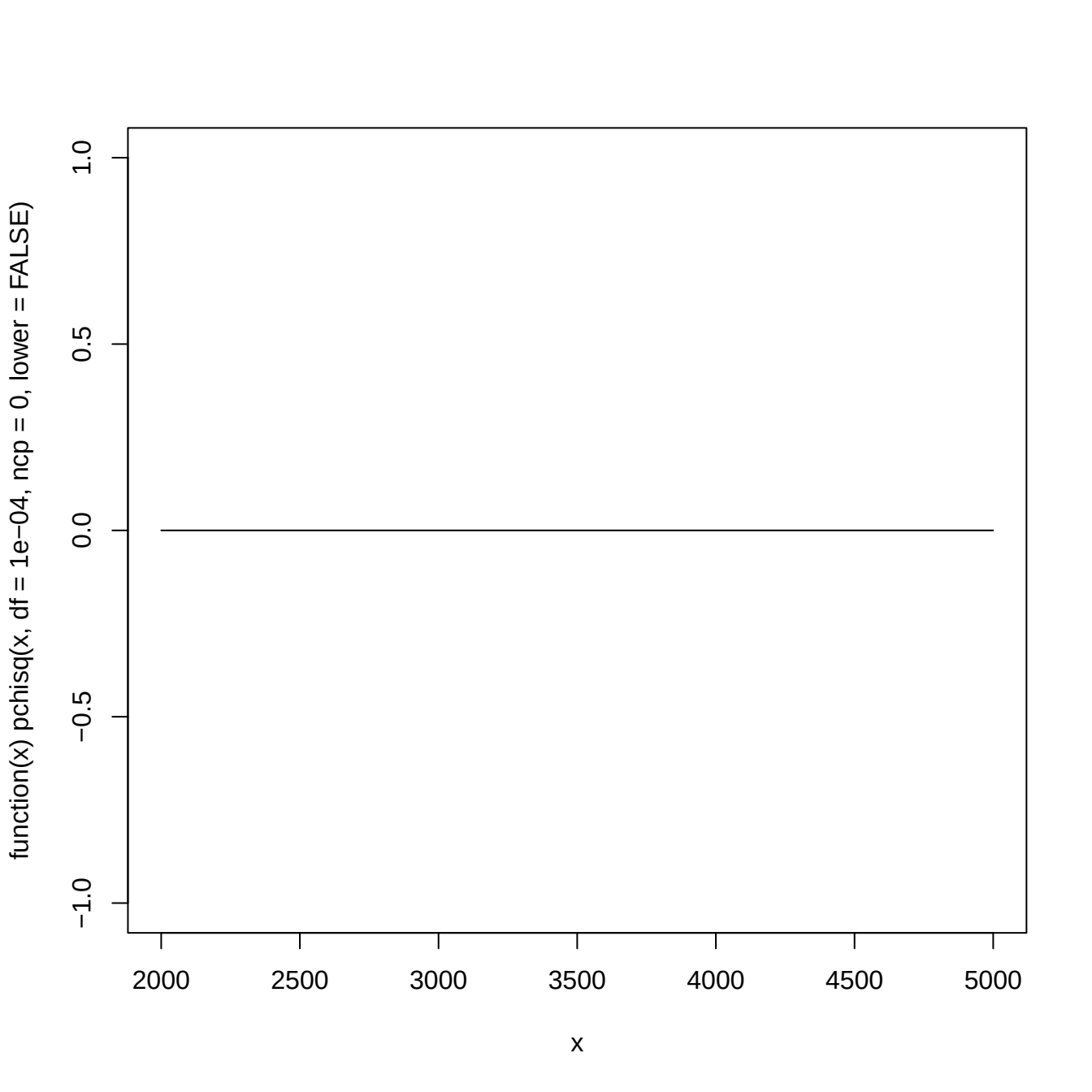
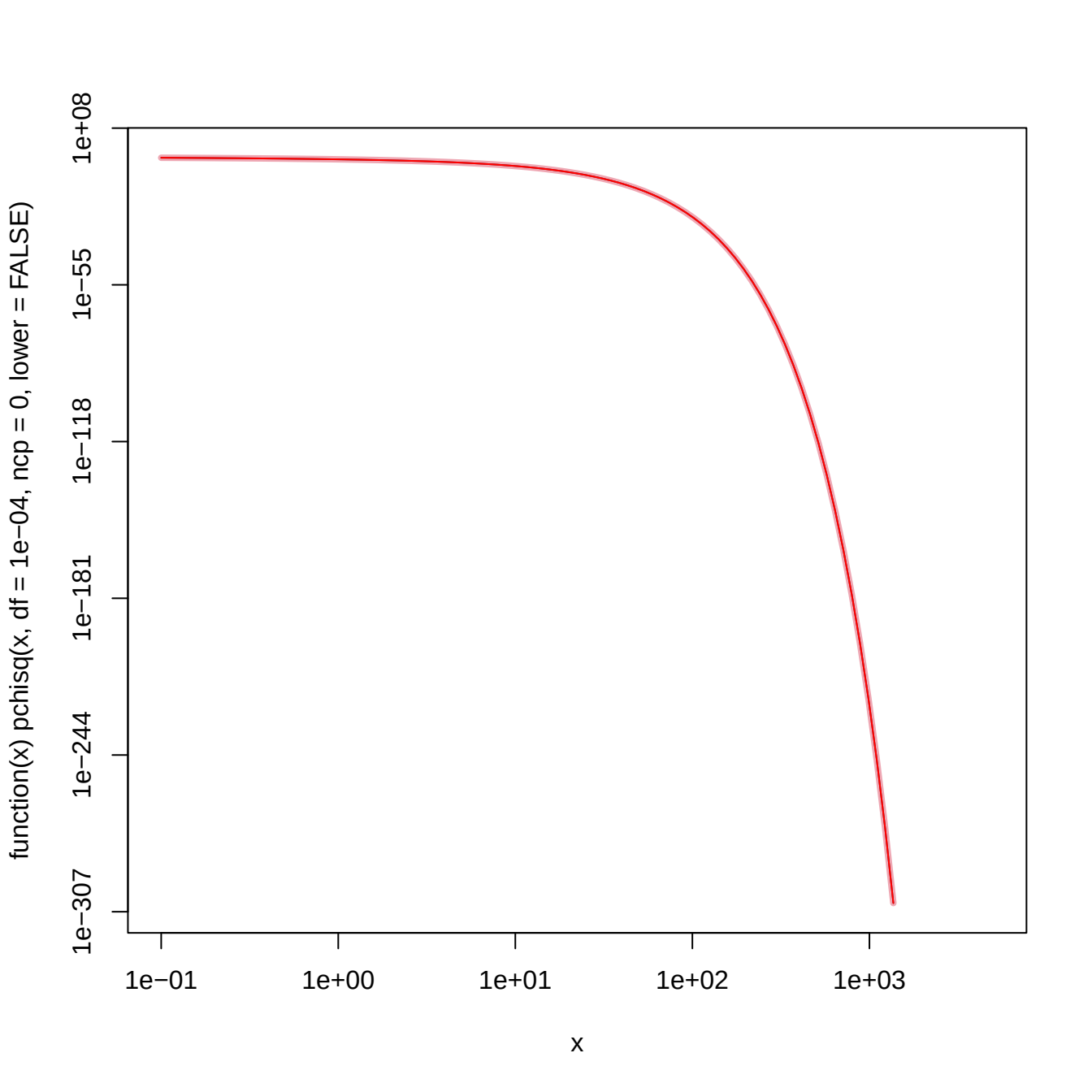
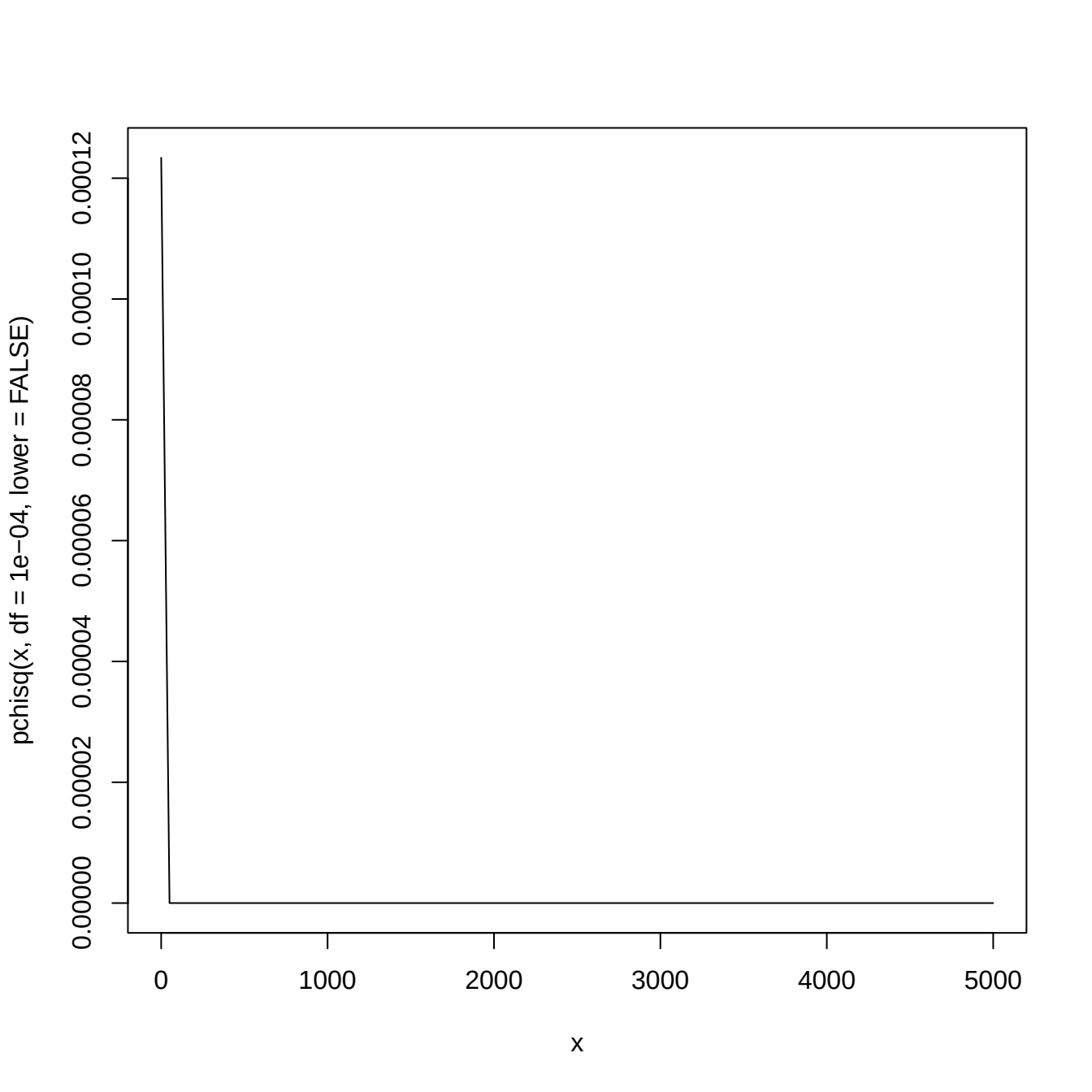
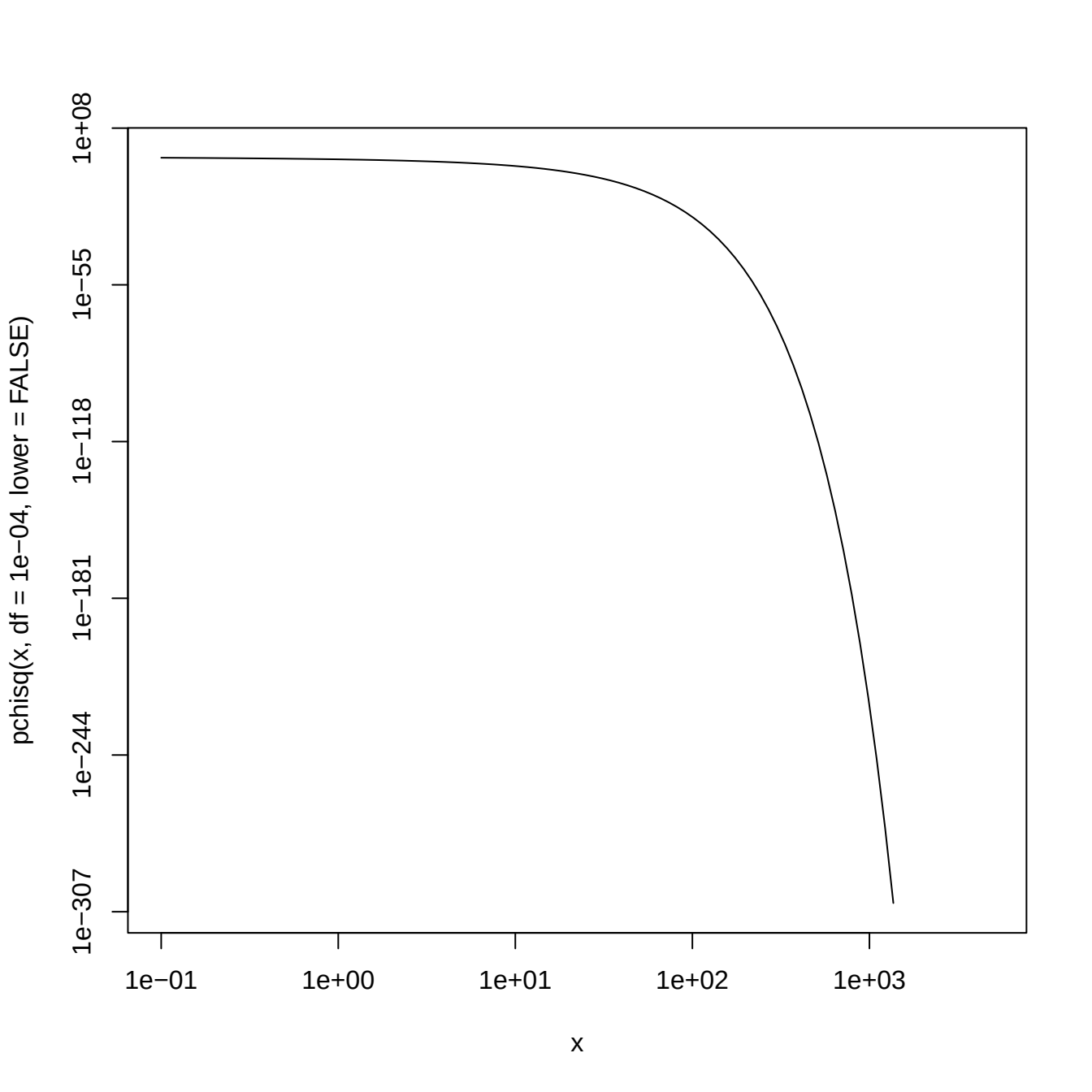

function(x) pchisq(x, df = 0, ncp = 0, lower = FALSE)
1.0
0.5
0.0
−0.5
−1.0
1e−01
1e+00
1e+01
1e+02
1e+03
x

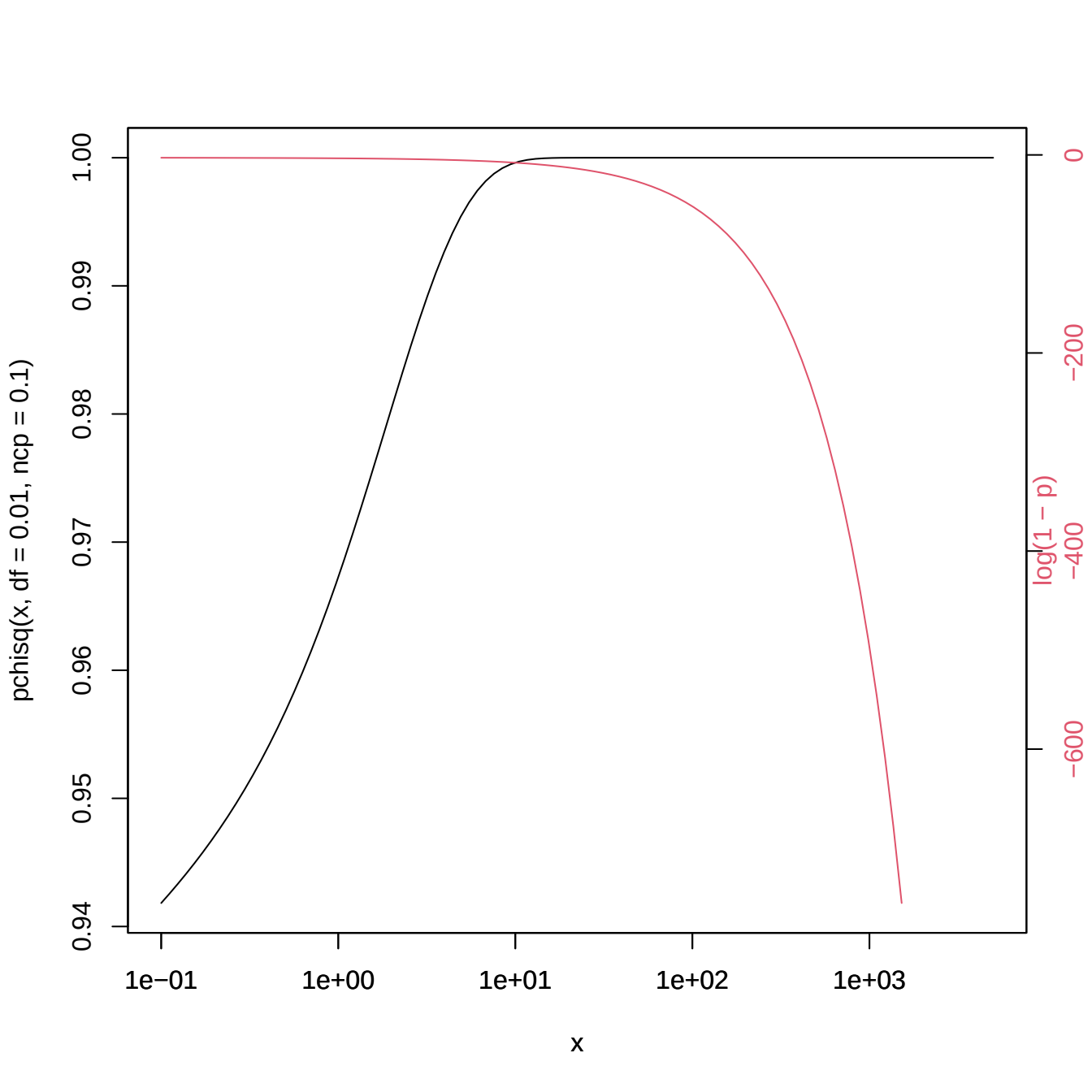

function(x) pchisq(x, df = 0, ncp = 0, lower = FALSE)
1.0
0.5
0.0
−0.5
−1.0
2000
2500
3000
3500
4000
4500
5000
x

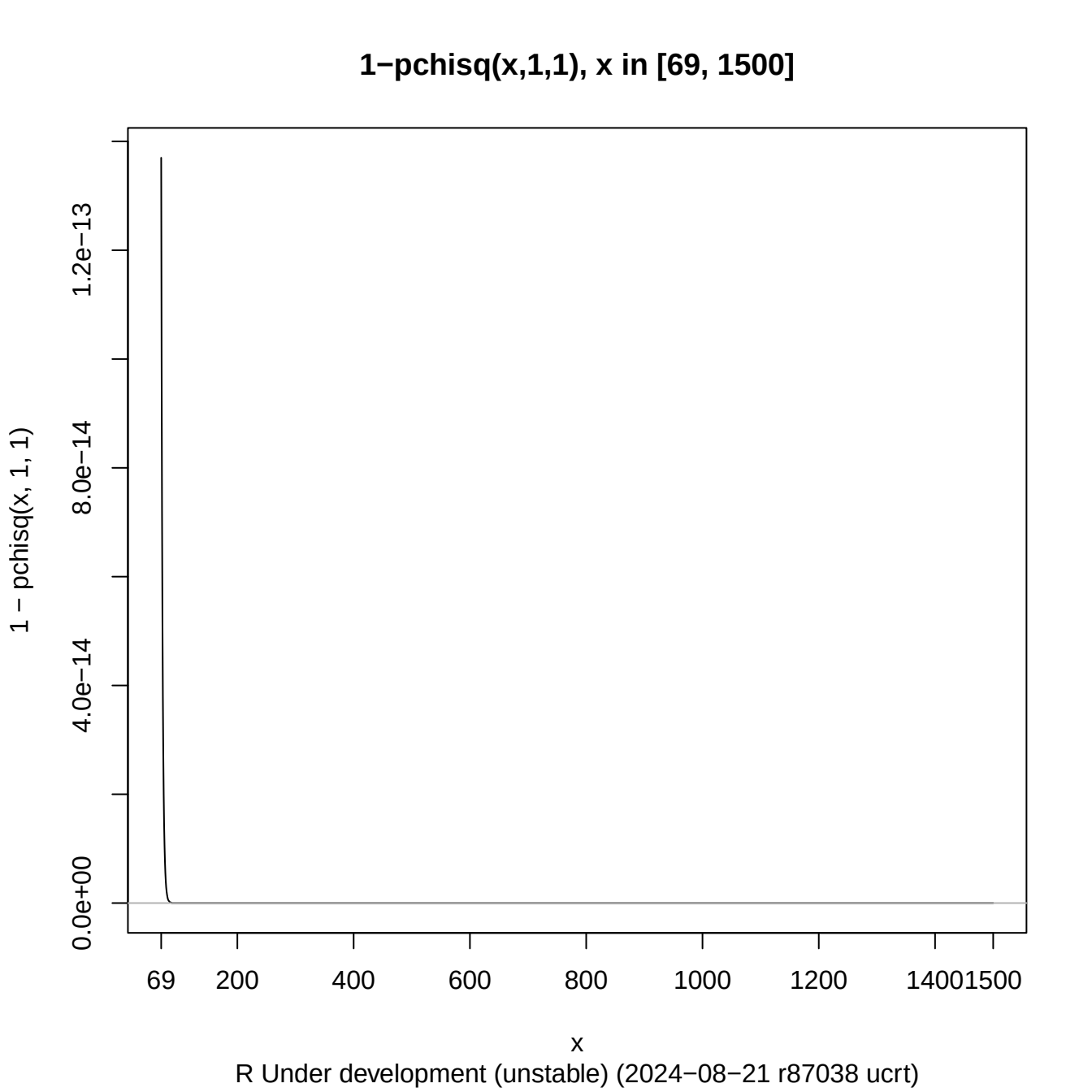

function(x) pchisq(x, df = 1e−04, ncp = 0, lower = FALSE)
1.0
0.5
0.0
−0.5
−1.0
2000
2500
3000
3500
4000
4500
5000
x

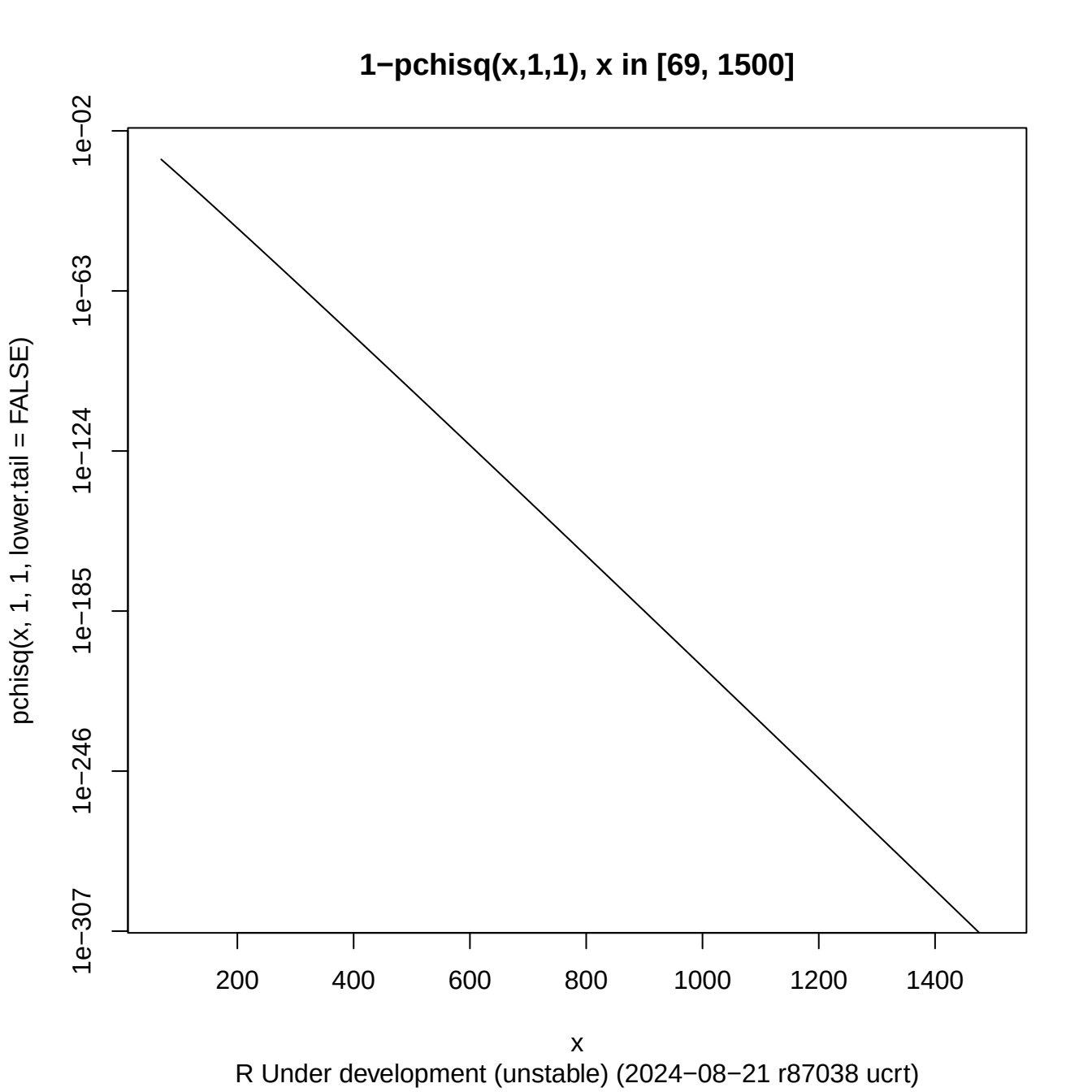

function(x) pchisq(x, df = 1e−04, ncp = 0, lower = FALSE)
1e+08
1e−55
1e−118
1e−181
1e−244
1e−307
1e−01
1e+00
1e+01
1e+02
1e+03
x

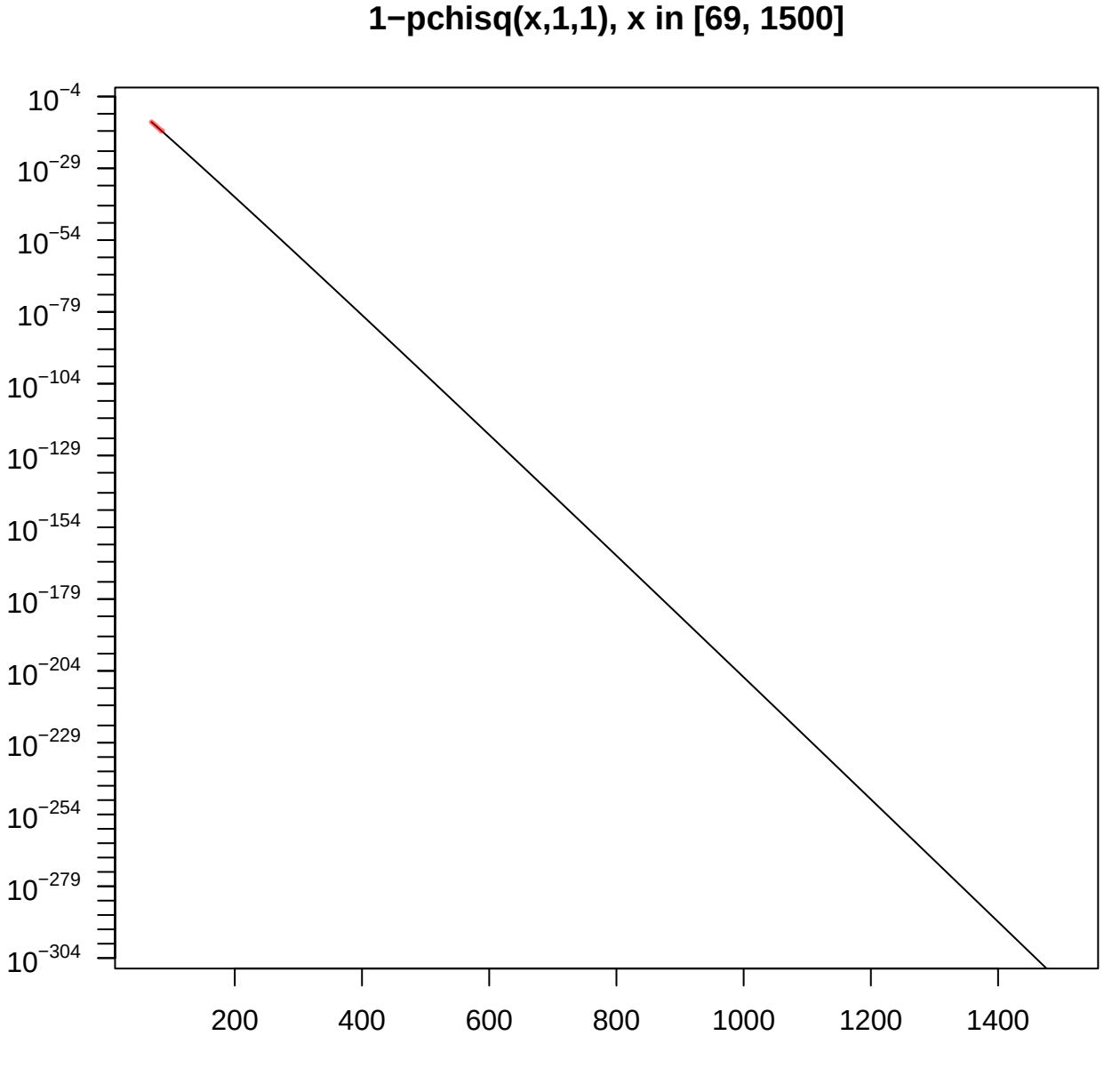

pchisq(x, df = 1e−04, lower = FALSE)
0.00000
0.00002
0.00004
0.00006
0.00008
0.00010
0.00012
0
1000
2000
3000
4000
5000
x

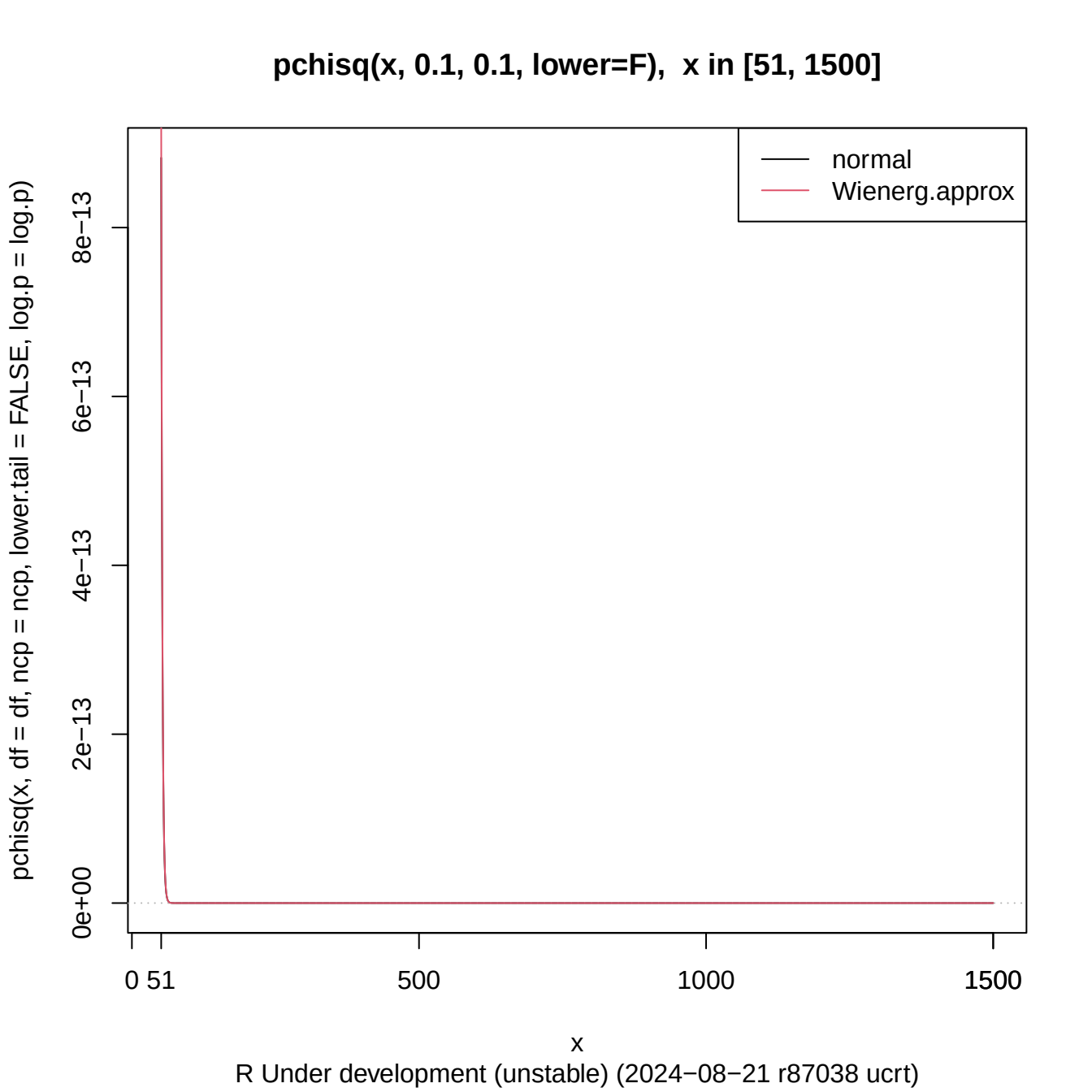

pchisq(x, df = 1e−04, lower = FALSE)
1e+08
1e−55
1e−118
1e−181
1e−244
1e−307
1e−01
1e+00
1e+01
1e+02
1e+03
x

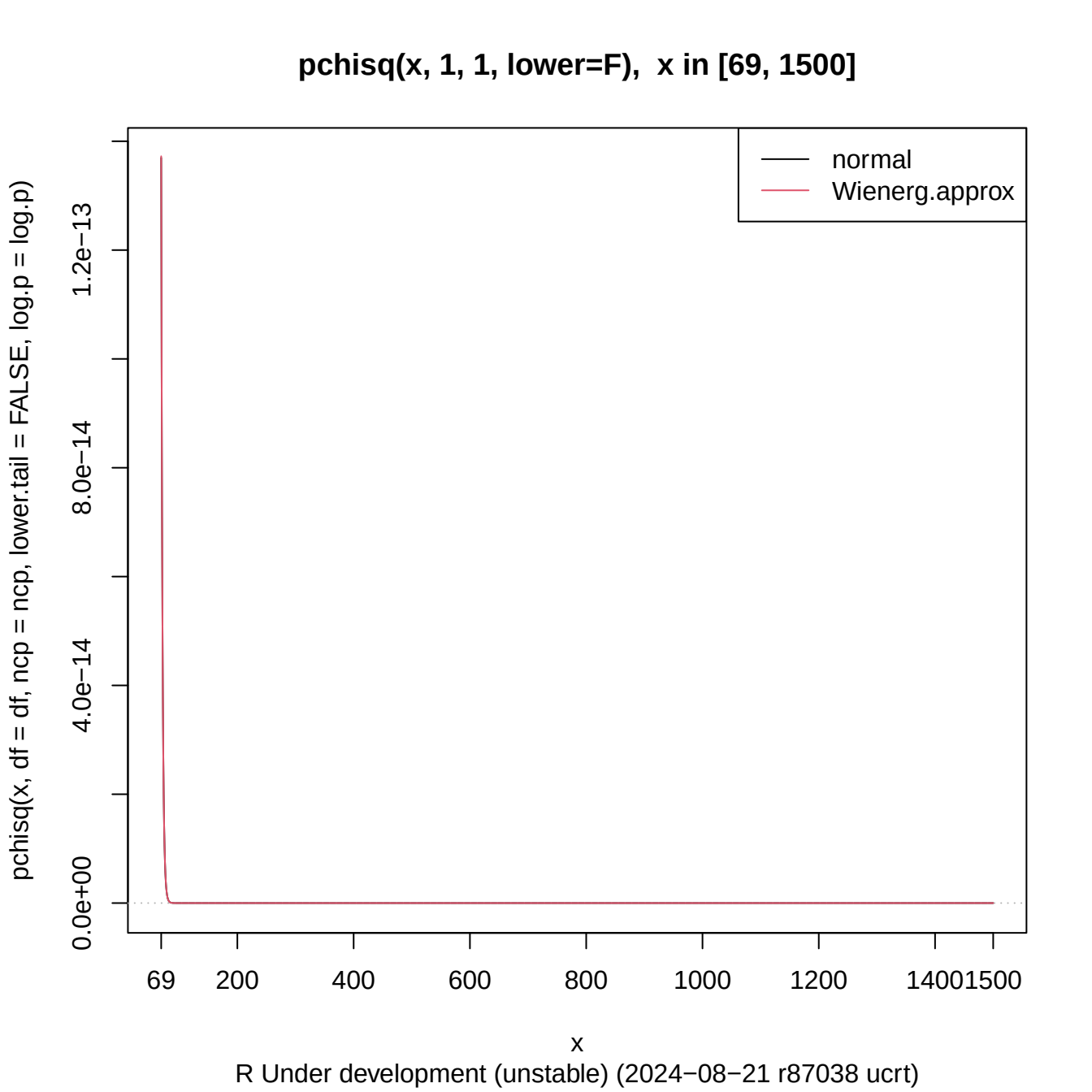

pchisq(x, df = 0.01, ncp = 0.1)
1.00
0.99
0.98
0.97
0.96
0.95
0.94
log(1 − p)
0
−200
−400
−600
1e−01
1e+00
1e+01
1e+02
1e+03
x

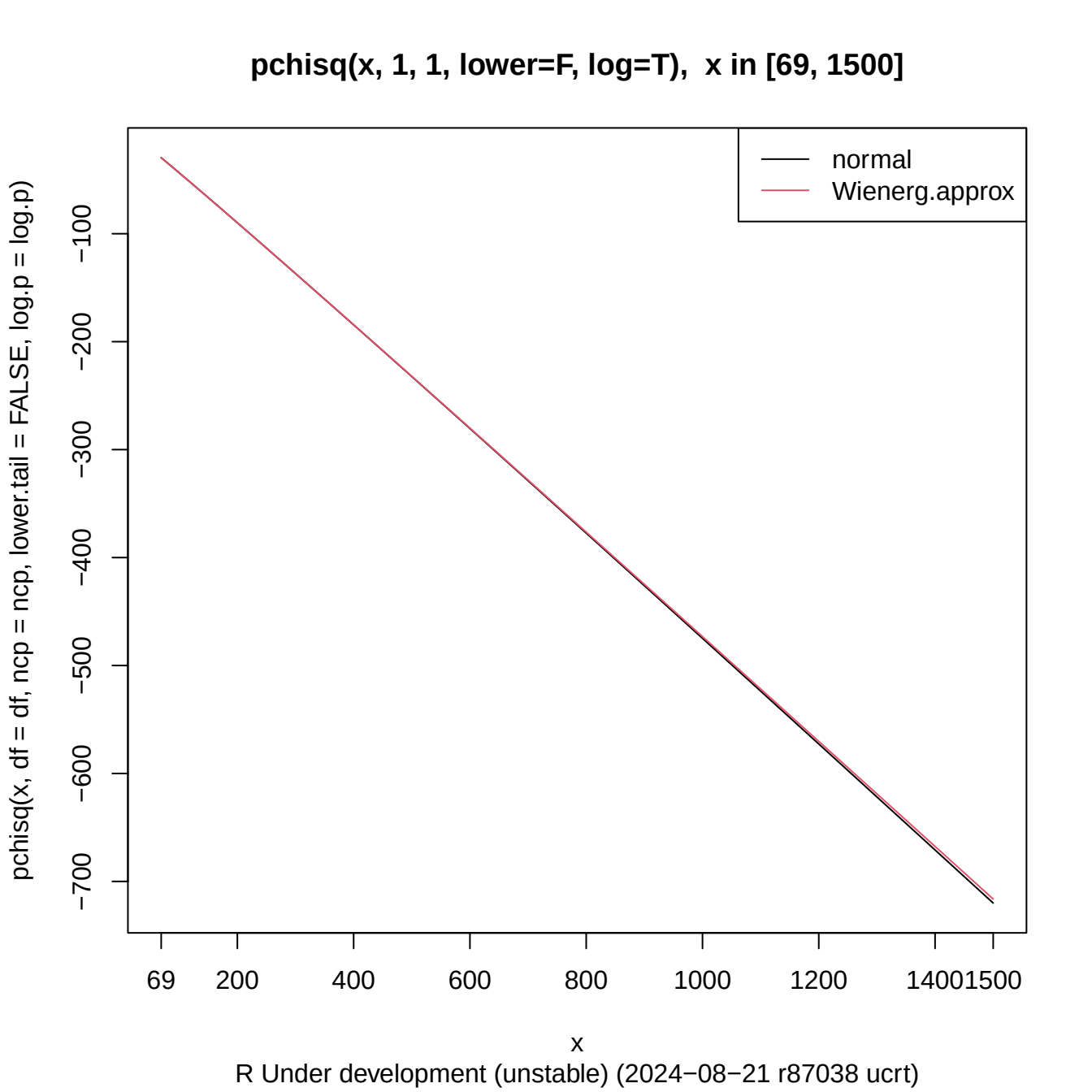

1−pchisq(x,1,1), x in [69, 1500]
1 − pchisq(x, 1, 1)
0.0e+00
4.0e−14
8.0e−14
1.2e−13
69
200
400
600
800
1000
1200
1400
1500
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

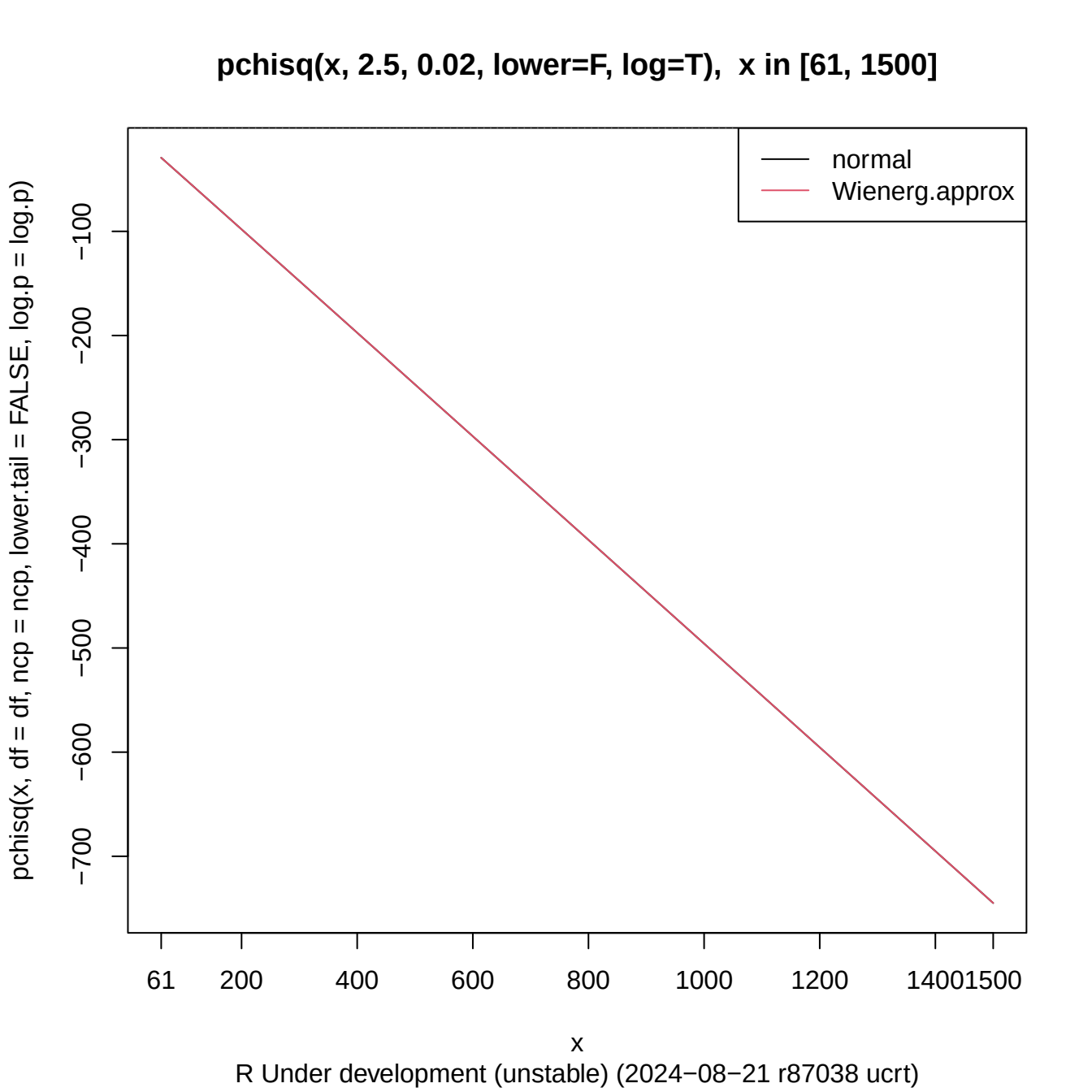

1−pchisq(x,1,1), x in [69, 1500]
pchisq(x, 1, 1, lower.tail = FALSE)
1e−02
1e−63
1e−124
1e−185
1e−246
1e−307
200
400
600
800
1000
1200
1400
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

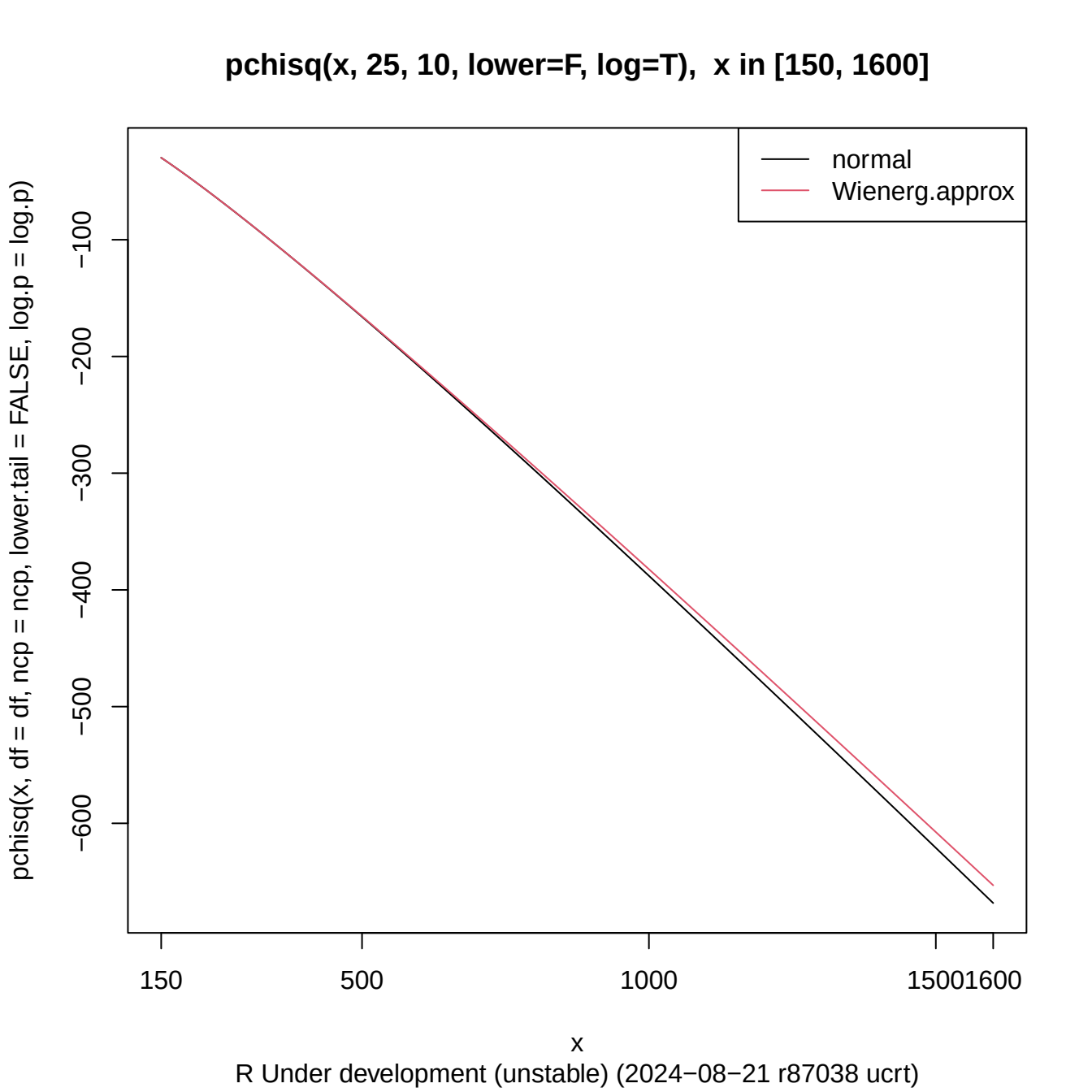

1−pchisq(x,1,1), x in [69, 1500]
10−4
10−29
10−54
10−79
10−104
10−129
10−154
10−179
10−204
10−229
10−254
10−279
10−304
200
400
600
800
1000
1200
1400
pc1$x
R Under development (unstable) (2024−08−21 r87038 ucrt)

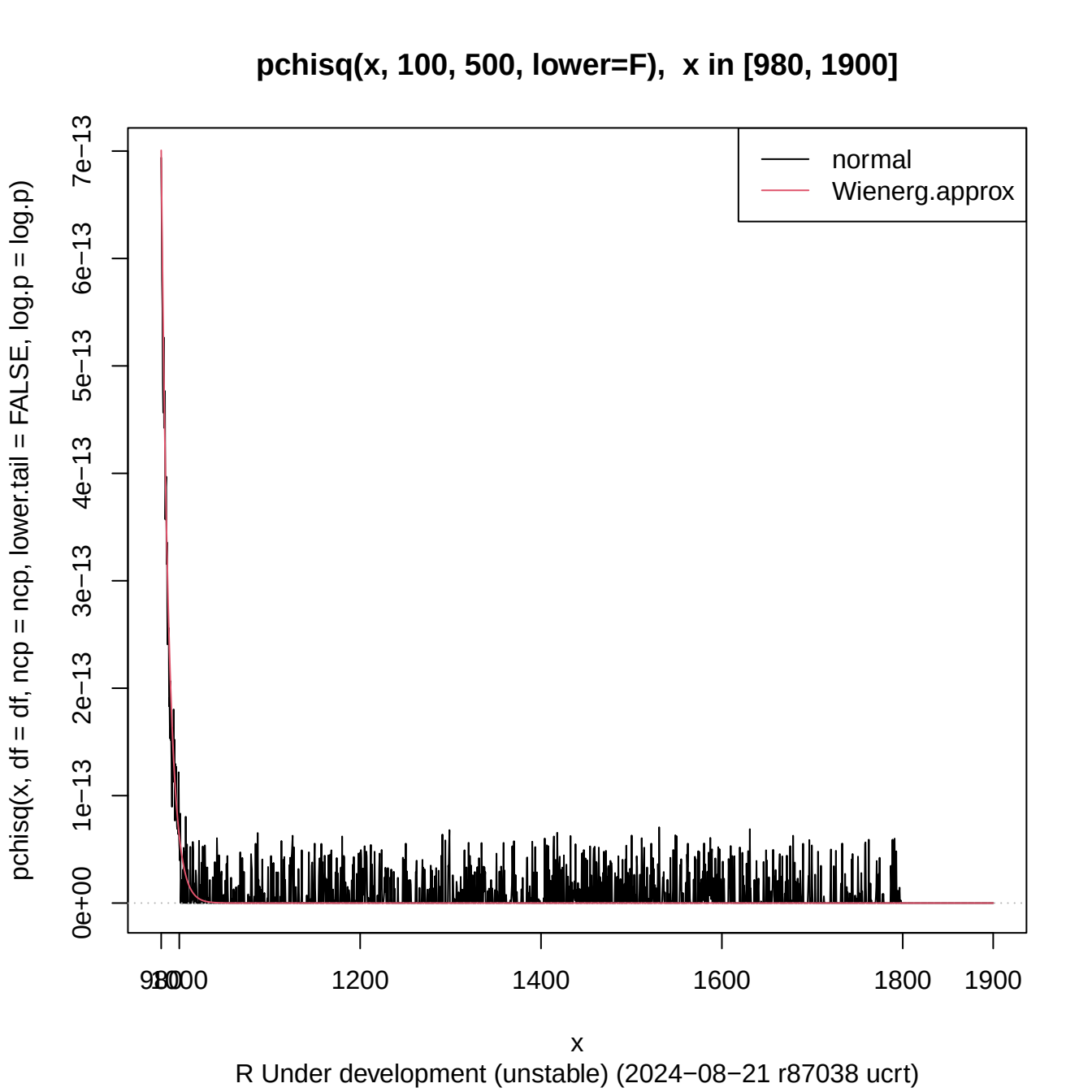

pchisq(x, 0.1, 0.1, lower=F), x in [51, 1500]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
0e+00
2e−13
4e−13
6e−13
8e−13
0
51
500
1000
1500
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

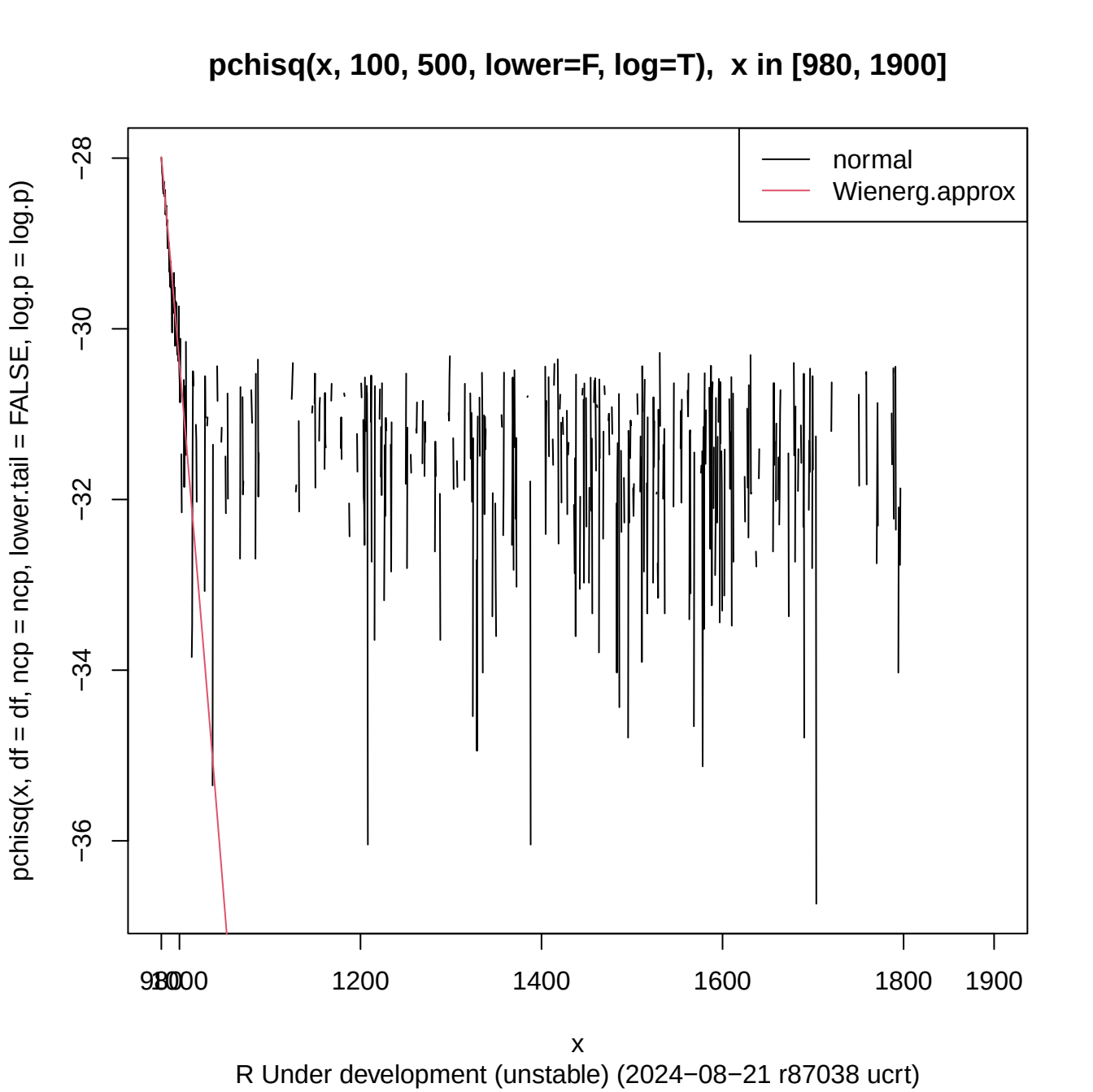

pchisq(x, 1, 1, lower=F), x in [69, 1500]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
0.0e+00
4.0e−14
8.0e−14
1.2e−13
69
200
400
600
800
1000
1200
1400
1500
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

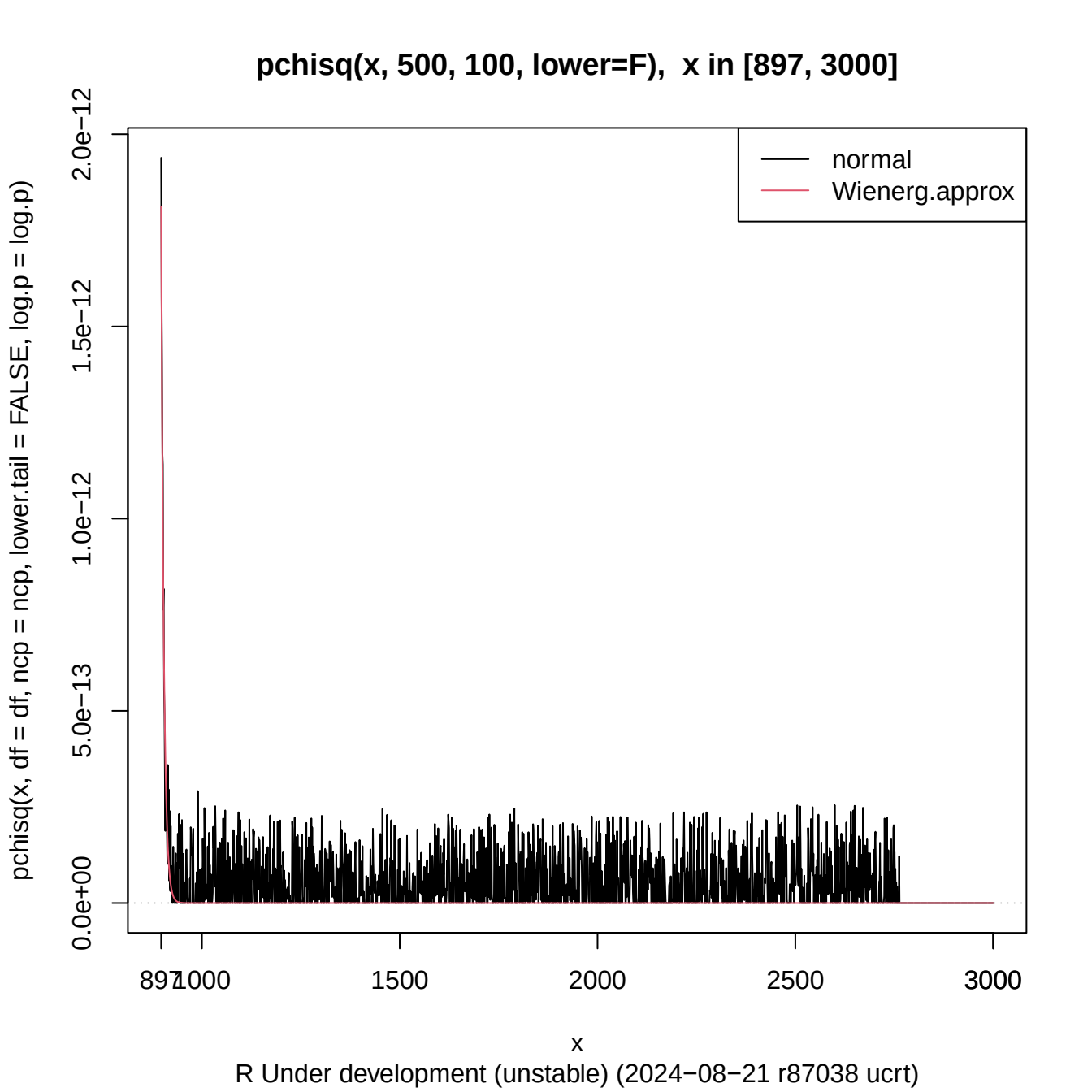

pchisq(x, 1, 1, lower=F, log=T), x in [69, 1500]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
−100
−200
−300
−400
−500
−600
−700
69
200
400
600
800
1000
1200
1400
1500
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

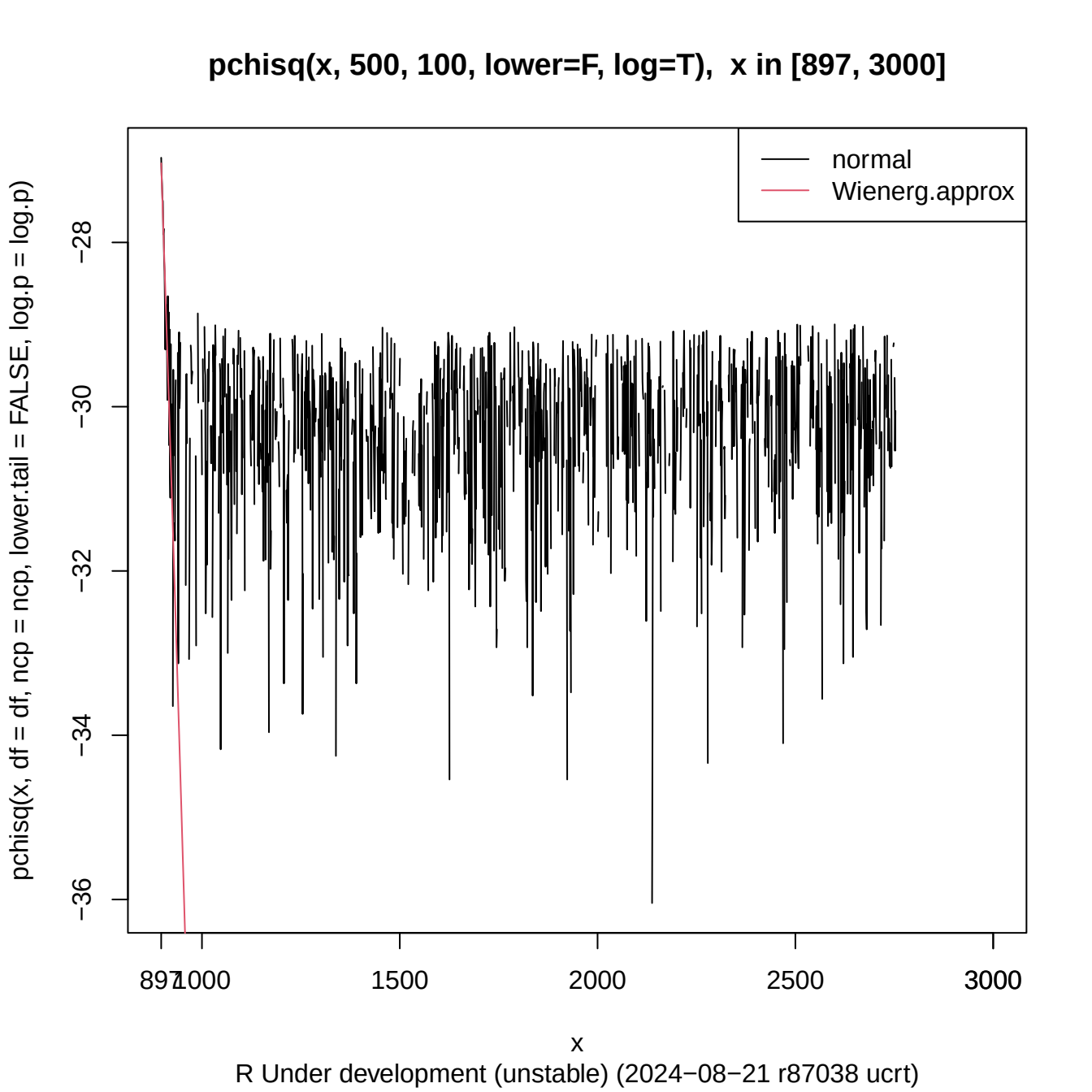

pchisq(x, 2.5, 0.02, lower=F, log=T), x in [61, 1500]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
−100
−200
−300
−400
−500
−600
−700
61
200
400
600
800
1000
1200
1400
1500
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

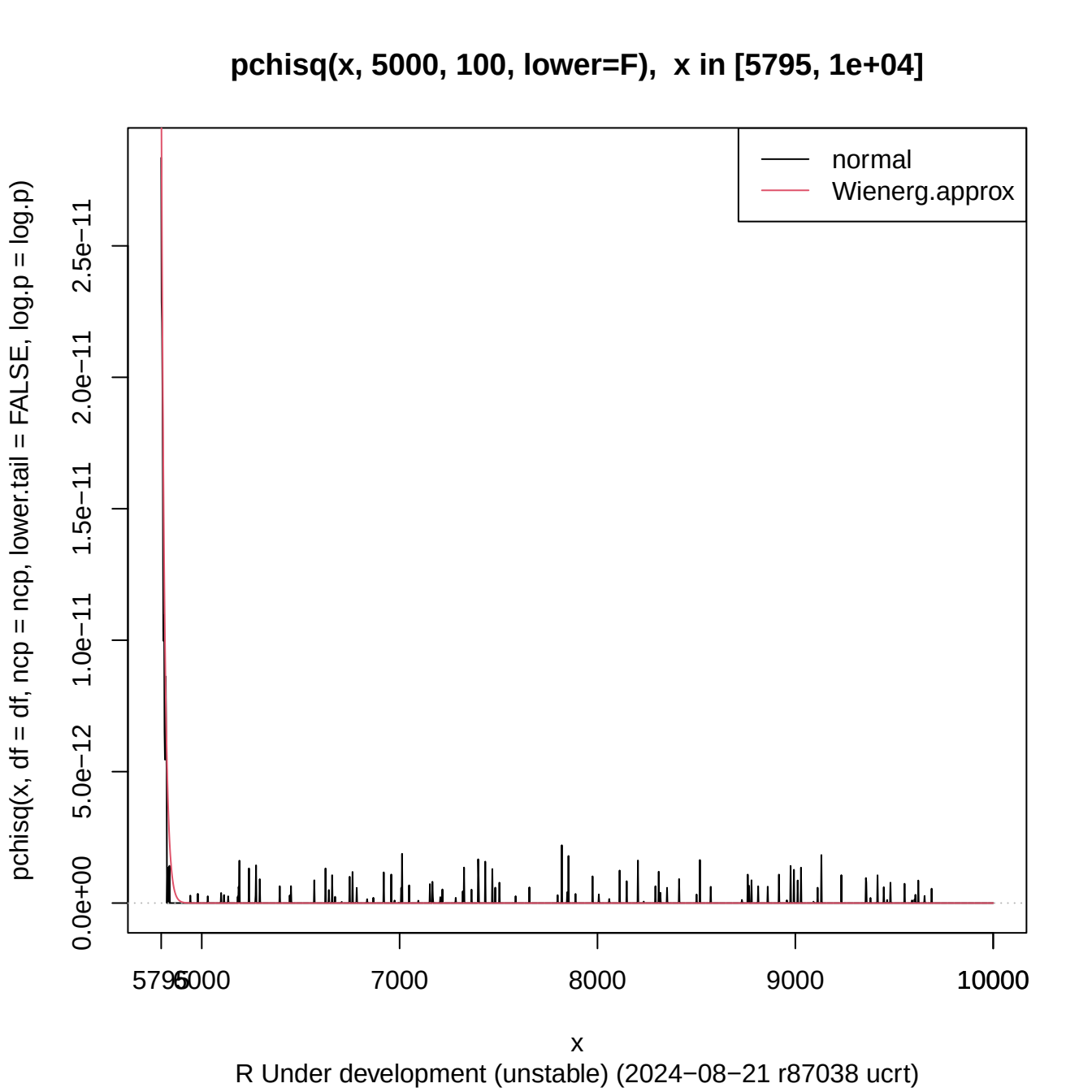

pchisq(x, 25, 10, lower=F, log=T), x in [150, 1600]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
−100
−200
−300
−400
−500
−600
150
500
1000
1500
1600
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

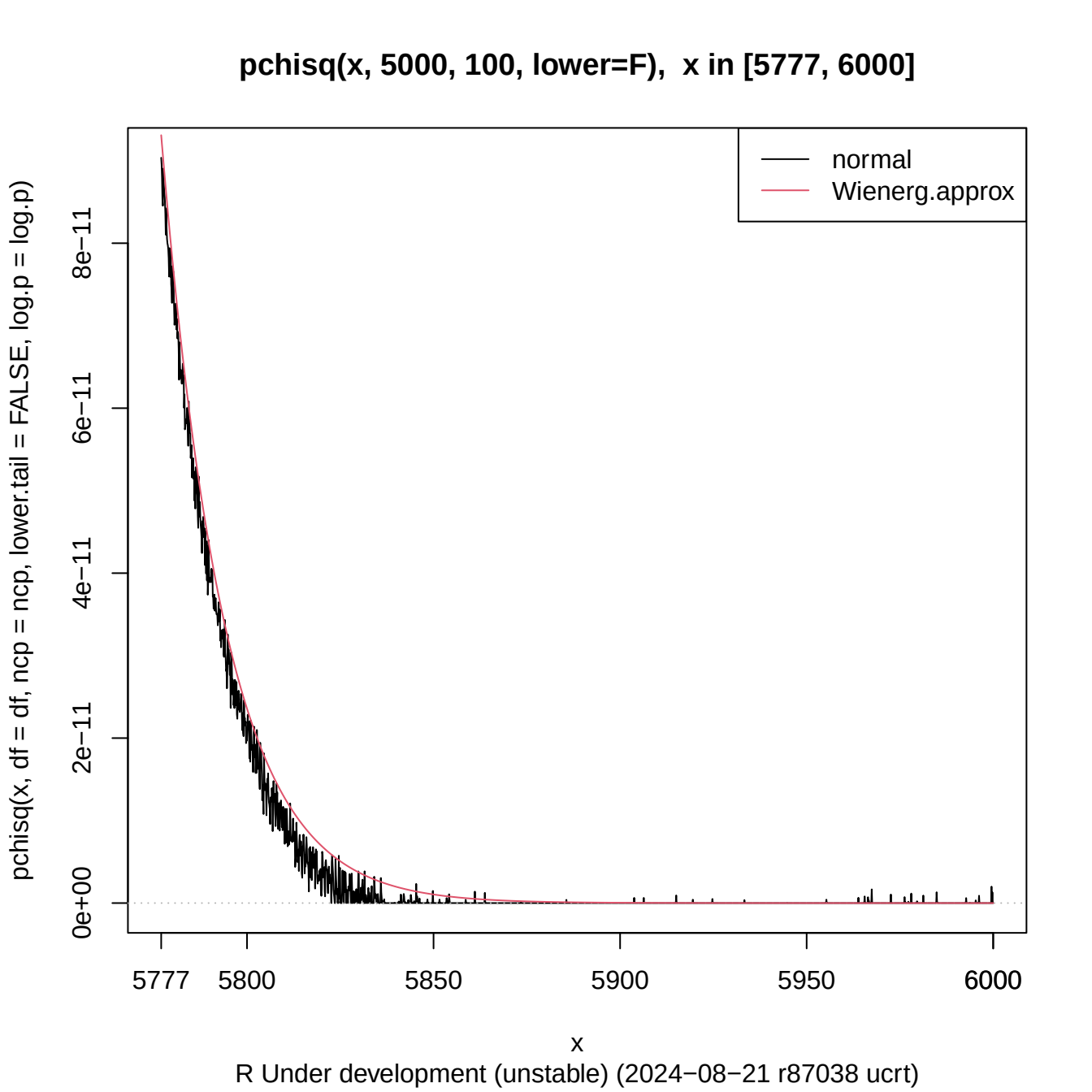

pchisq(x, 100, 500, lower=F), x in [980, 1900]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
0e+00
1e−13
2e−13
3e−13
4e−13
5e−13
6e−13
7e−13
980
1000
1200
1400
1600
1800
1900
x
R Under development (unstable) (2024−08−21 r87038 ucrt)


pchisq(x, 100, 500, lower=F, log=T), x in [980, 1900]
normal
Wienerg.approx
−28
−30
−32
−34
−36
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
980
1000
1200
1400
1600
1800
1900
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

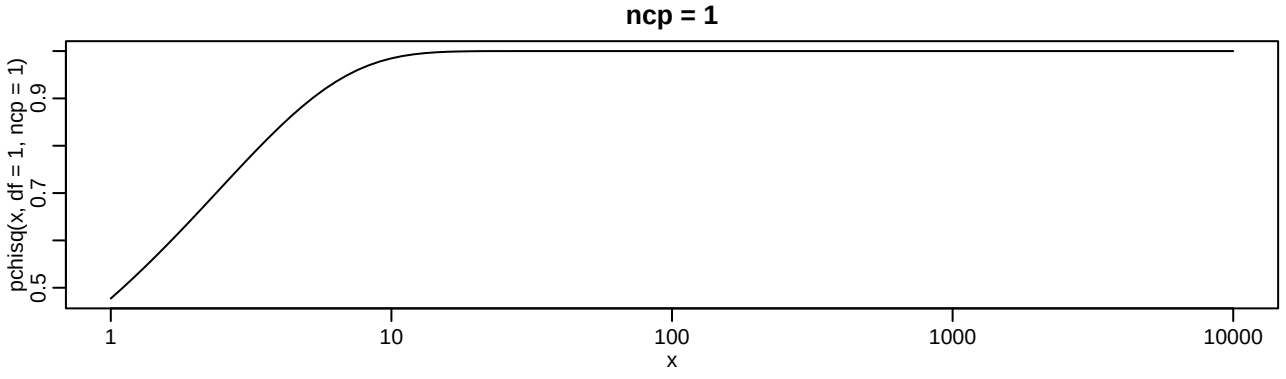

pchisq(x, 500, 100, lower=F), x in [897, 3000]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
0.0e+00
5.0e−13
1.0e−12
1.5e−12
2.0e−12
897
1000
1500
2000
2500
3000
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

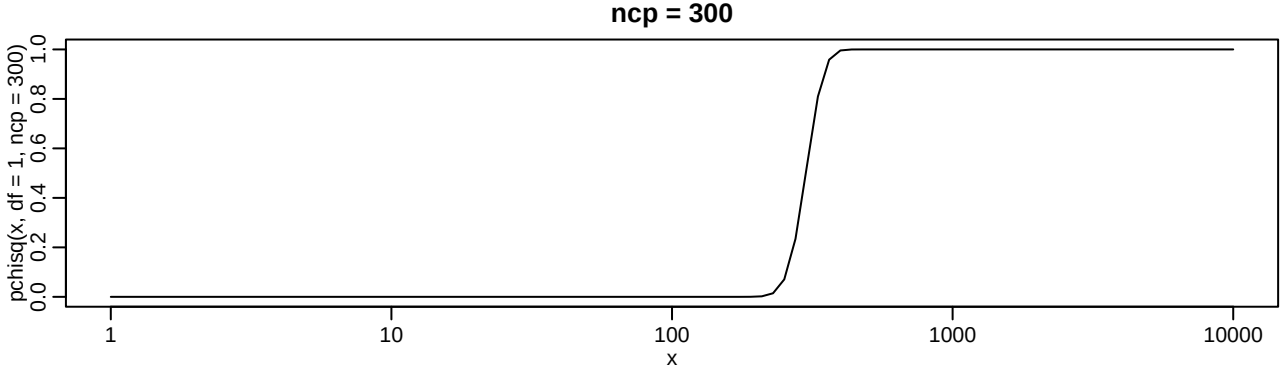

pchisq(x, 500, 100, lower=F, log=T), x in [897, 3000]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
−28
−30
−32
−34
−36
897
1000
1500
2000
2500
3000
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

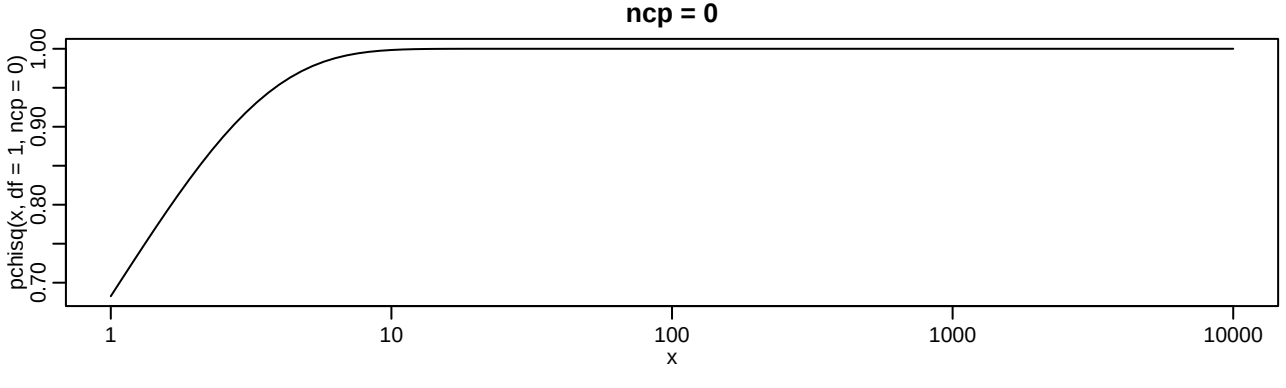

pchisq(x, 5000, 100, lower=F), x in [5795, 1e+04]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
0.0e+00
5.0e−12
1.0e−11
1.5e−11
2.0e−11
2.5e−11
5795
6000
7000
8000
9000
10000
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

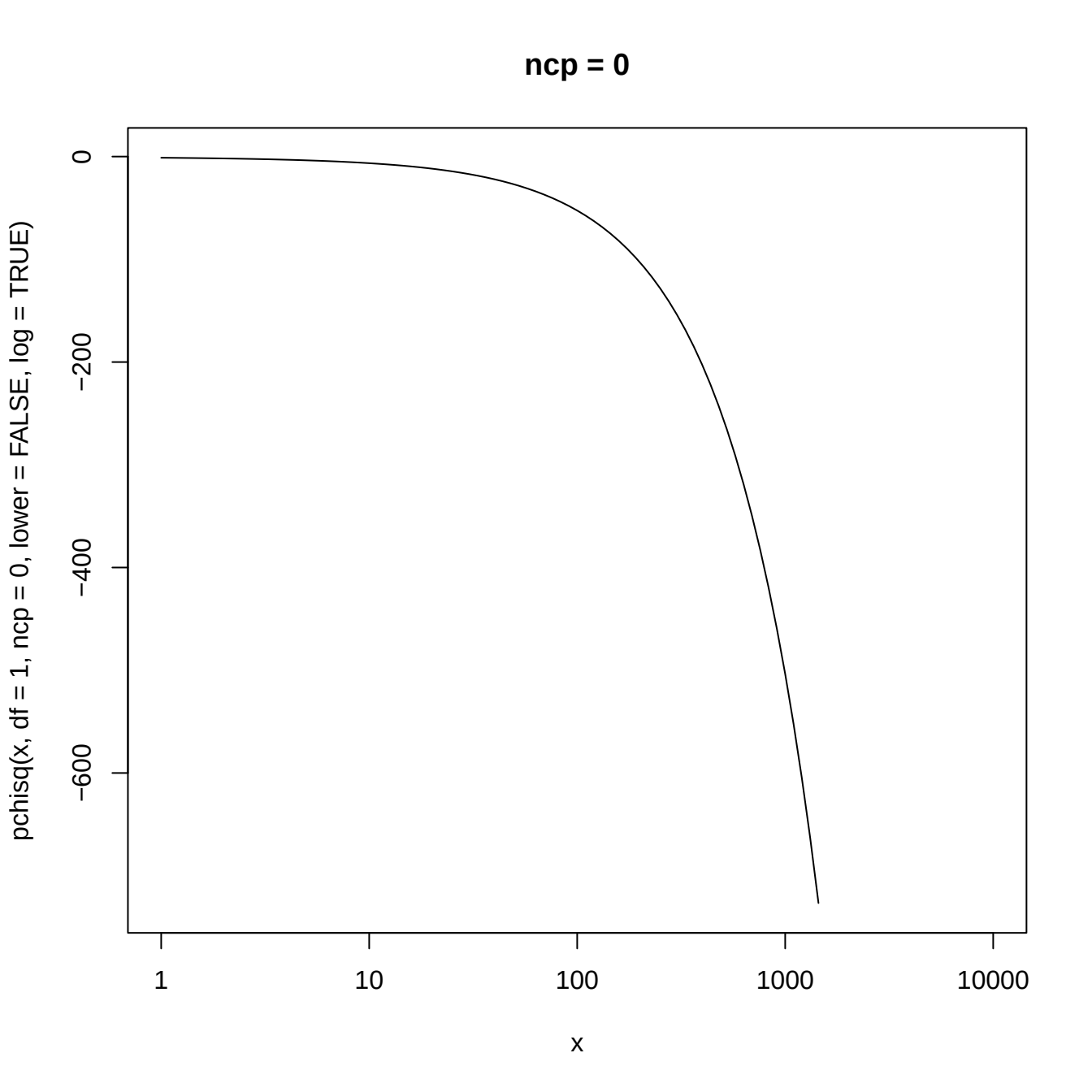

pchisq(x, 5000, 100, lower=F), x in [5777, 6000]
normal
Wienerg.approx
pchisq(x, df = df, ncp = ncp, lower.tail = FALSE, log.p = log.p)
0e+00
2e−11
4e−11
6e−11
8e−11
5777
5800
5850
5900
5950
6000
x
R Under development (unstable) (2024−08−21 r87038 ucrt)

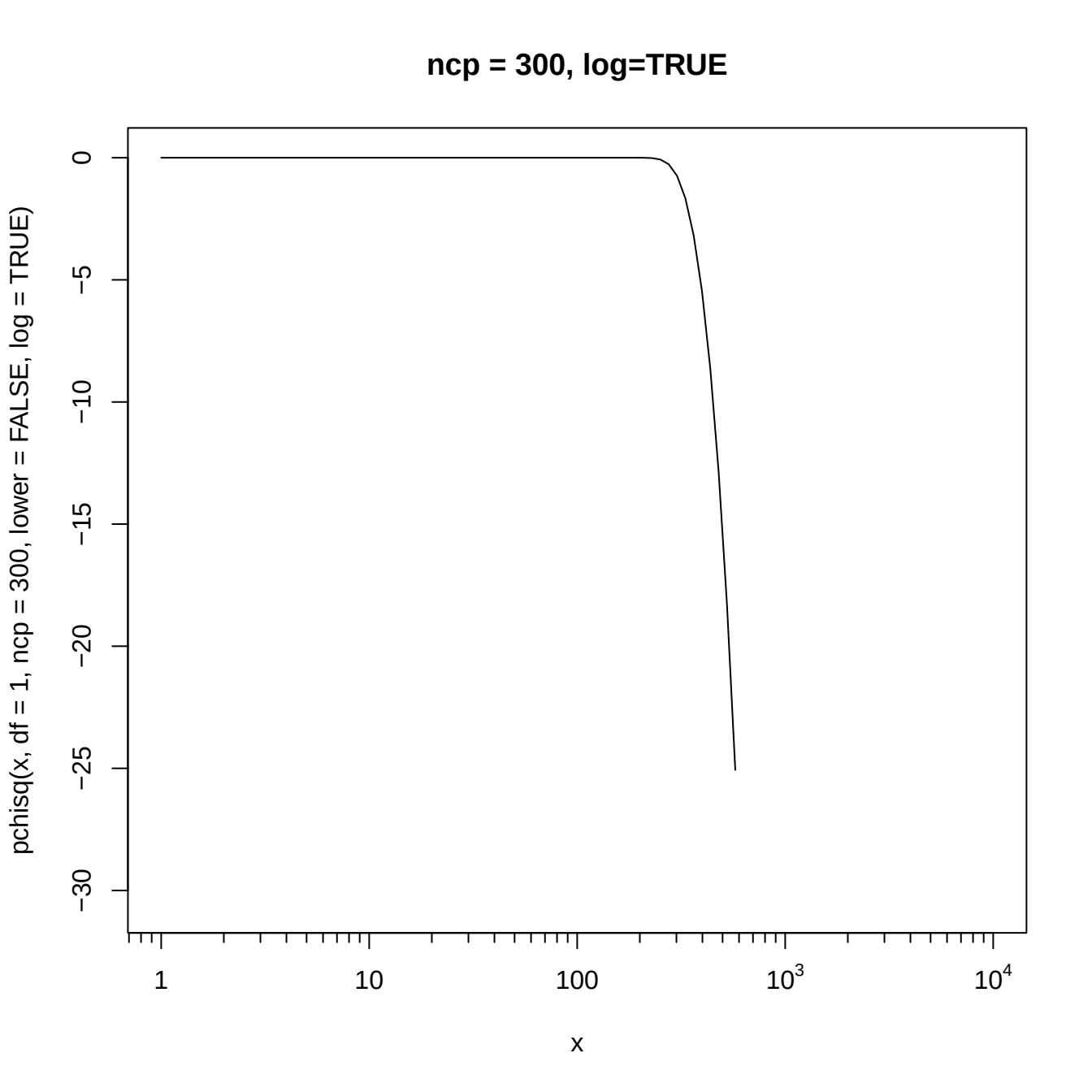
pchisq(x >= 1497,*, ncp=) BUG (no longer!)

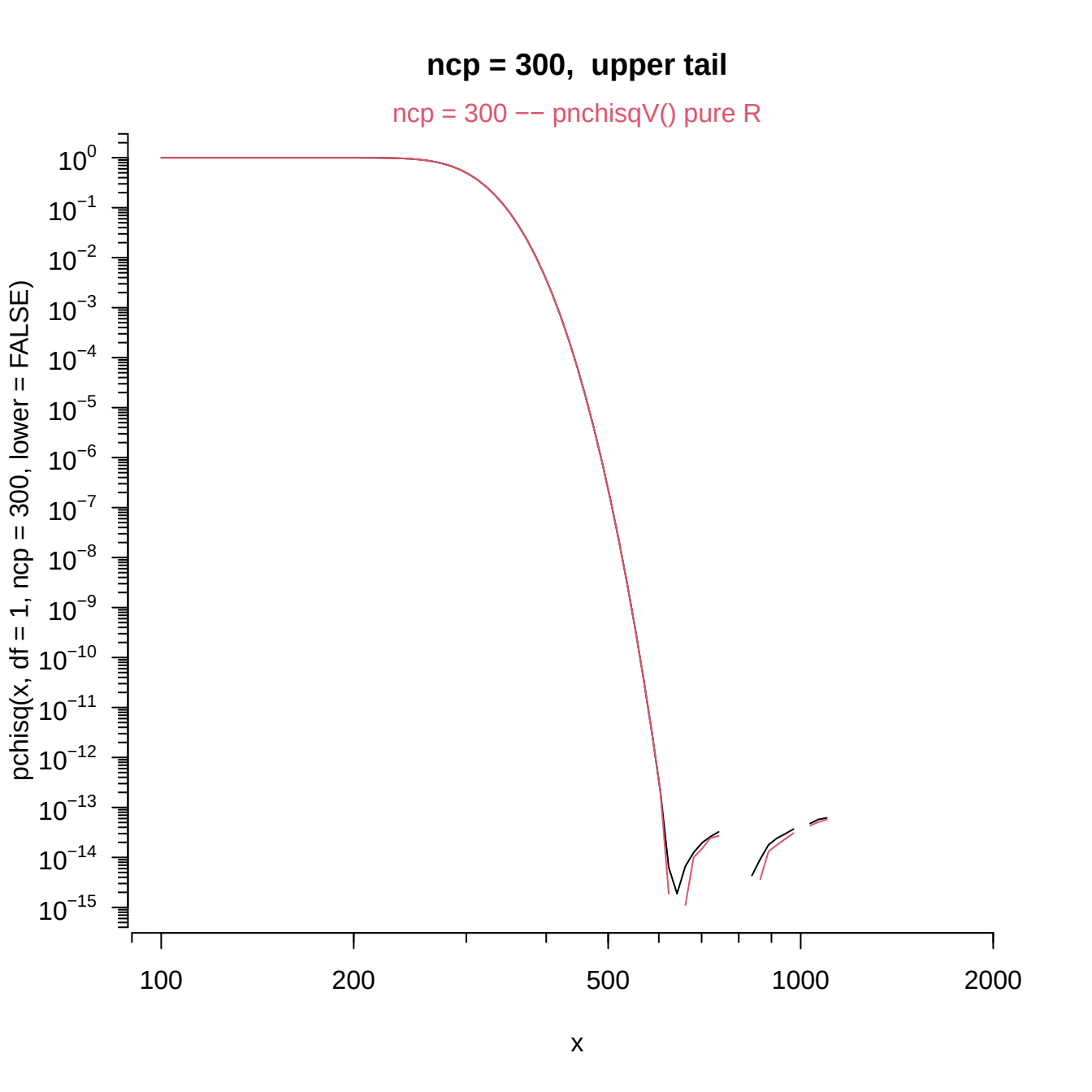


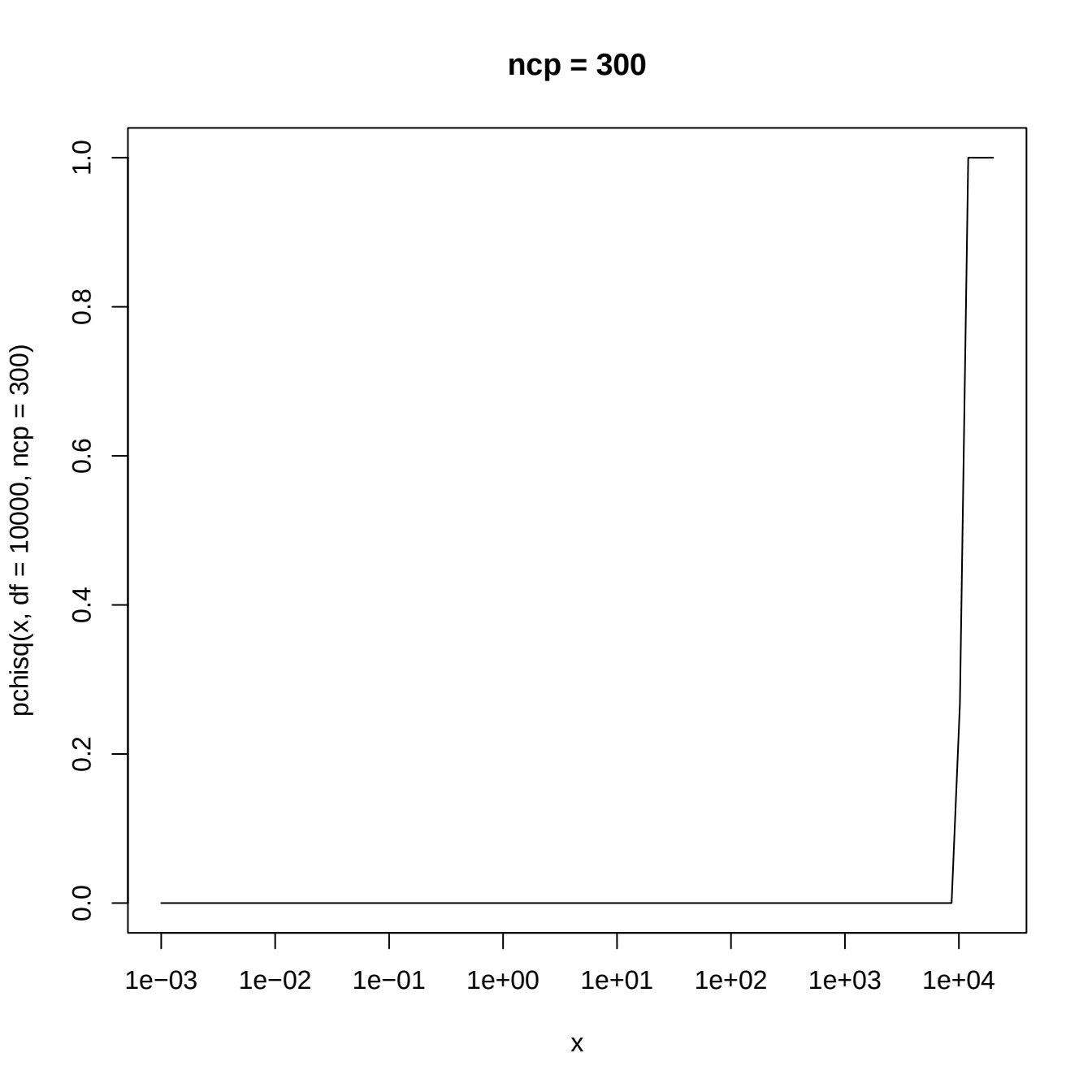


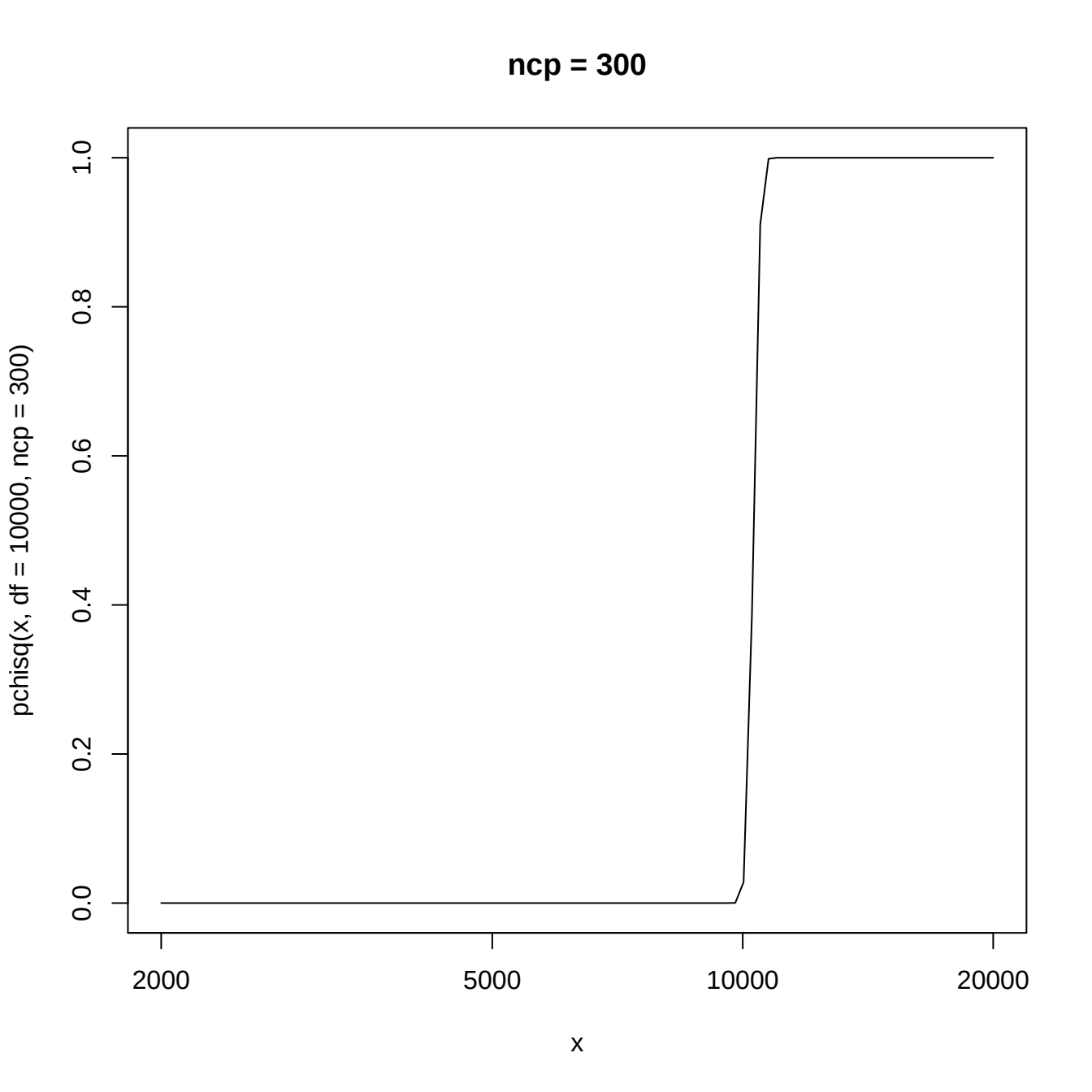


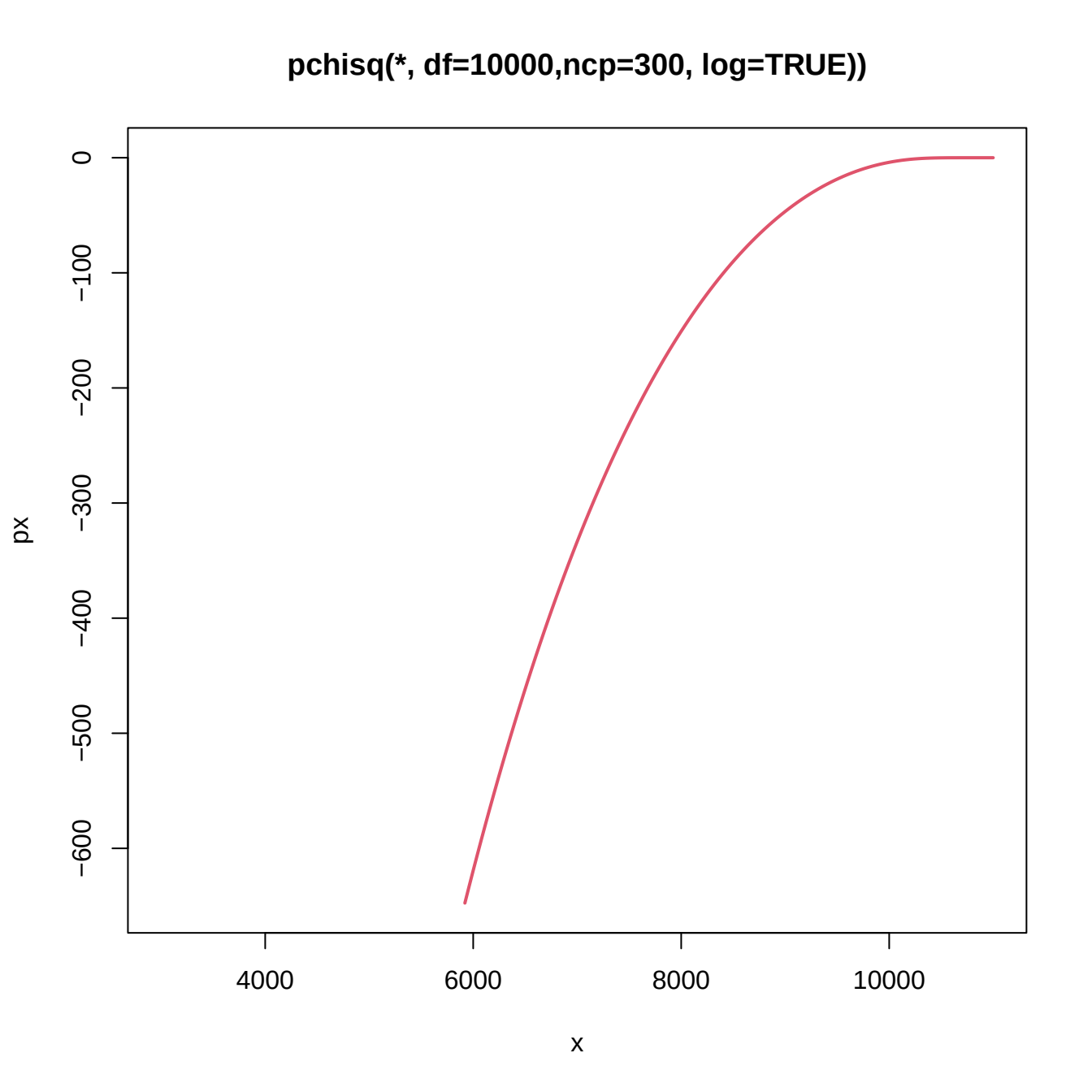

ncp = 0
pchisq(x, df = 1, ncp = 0, lower = FALSE, log = TRUE)
0
−200
−400
−600
1
10
100
1000
10000
x

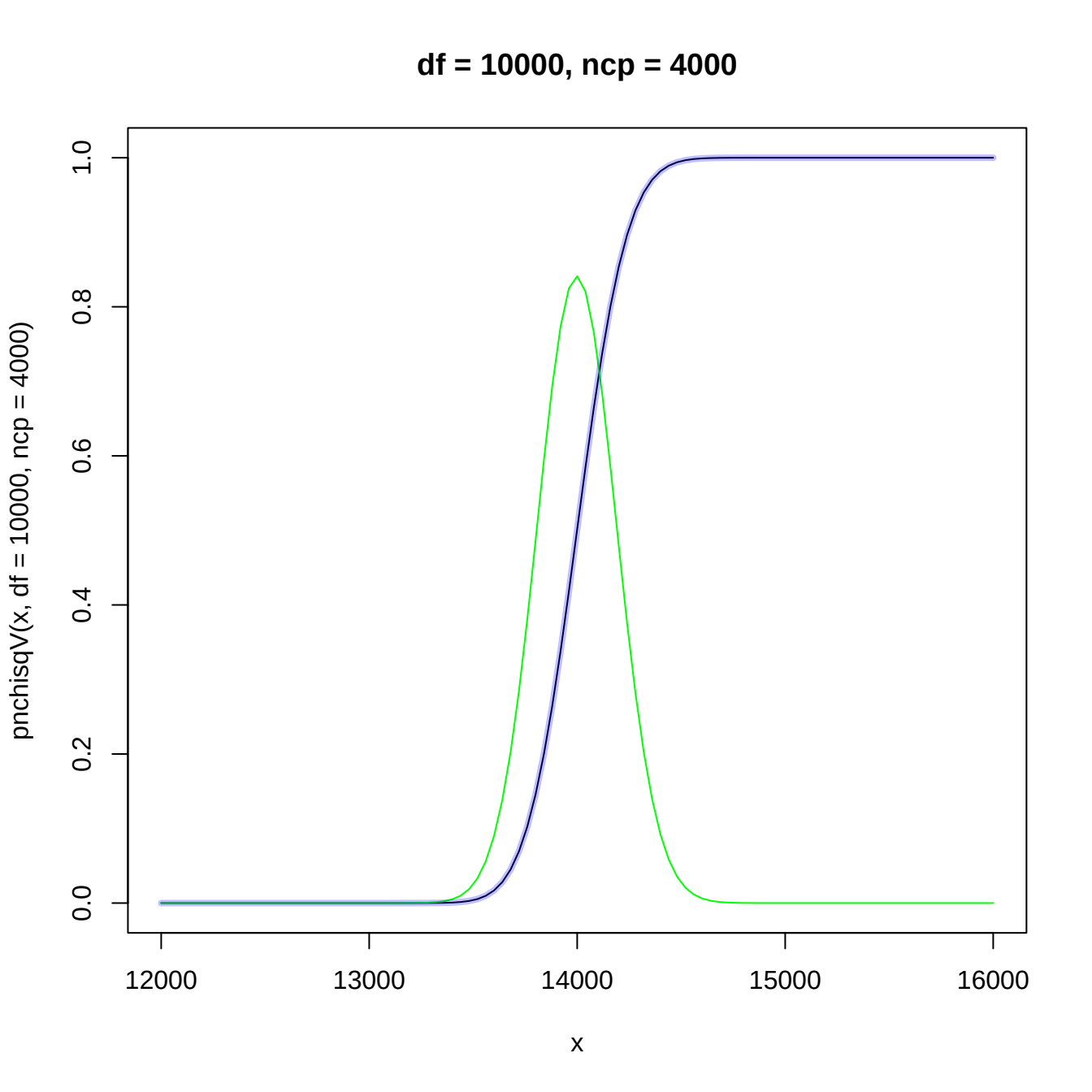

ncp = 300, log=TRUE
pchisq(x, df = 1, ncp = 300, lower = FALSE, log = TRUE)
0
−5
−10
−15
−20
−25
−30
1
10
100
10^3
10^4
x

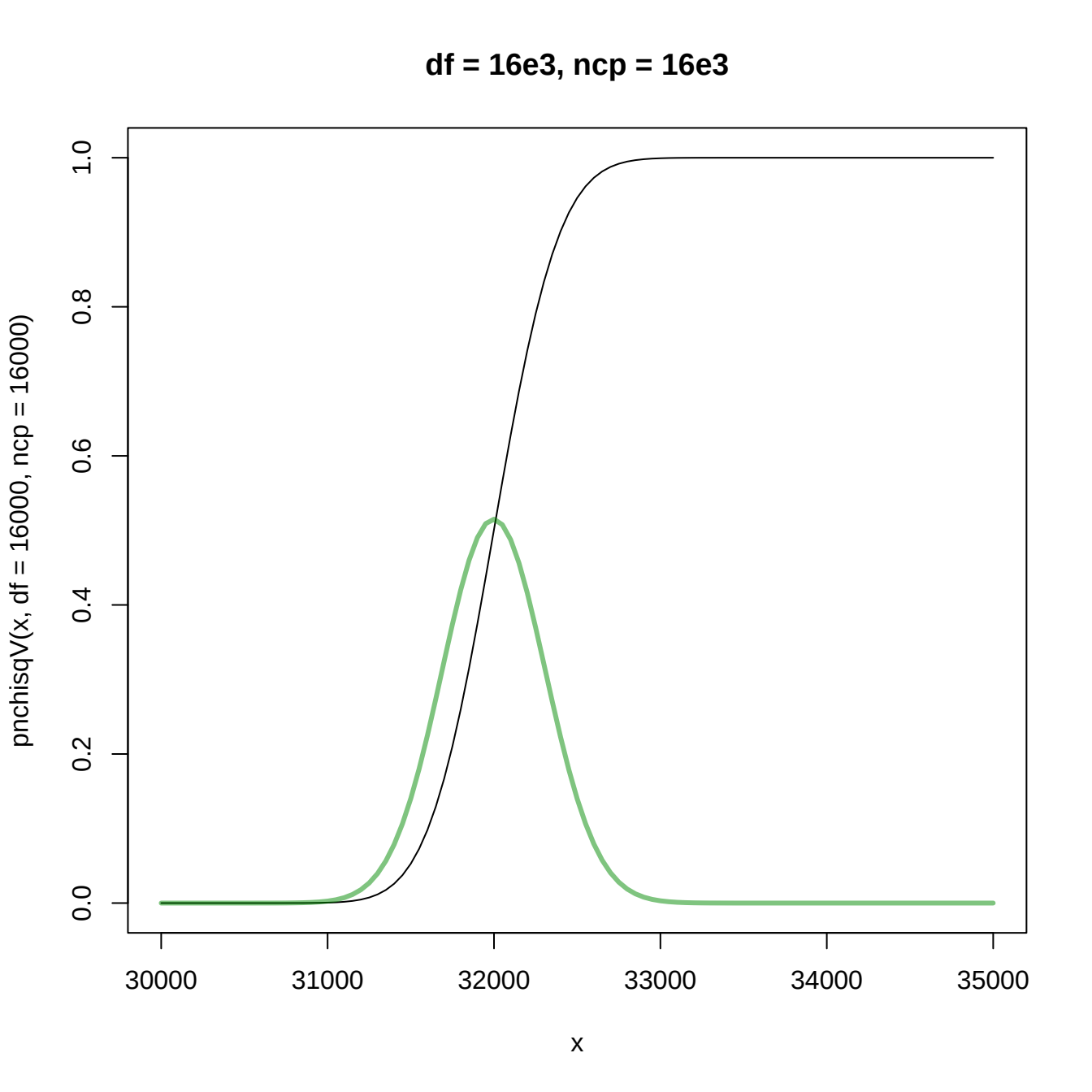

ncp = 300, upper tail
ncp = 300 −− pnchisqV() pure R
pchisq(x, df = 1, ncp = 300, lower = FALSE)
10^{0}
10^{-1}
10^{-2}
10^{-3}
10^{-4}
10^{-5}
10^{-6}
10^{-7}
10^{-8}
10^{-9}
10^{-10}
10^{-11}
10^{-12}
10^{-13}
10^{-14}
10^{-15}
100
200
500
1000
2000
x


ncp = 300
pchisq(x, df = 10000, ncp = 300)
0.0
0.2
0.4
0.6
0.8
1.0
1e−03
1e−02
1e−01
1e+00
1e+01
1e+02
1e+03
1e+04
x

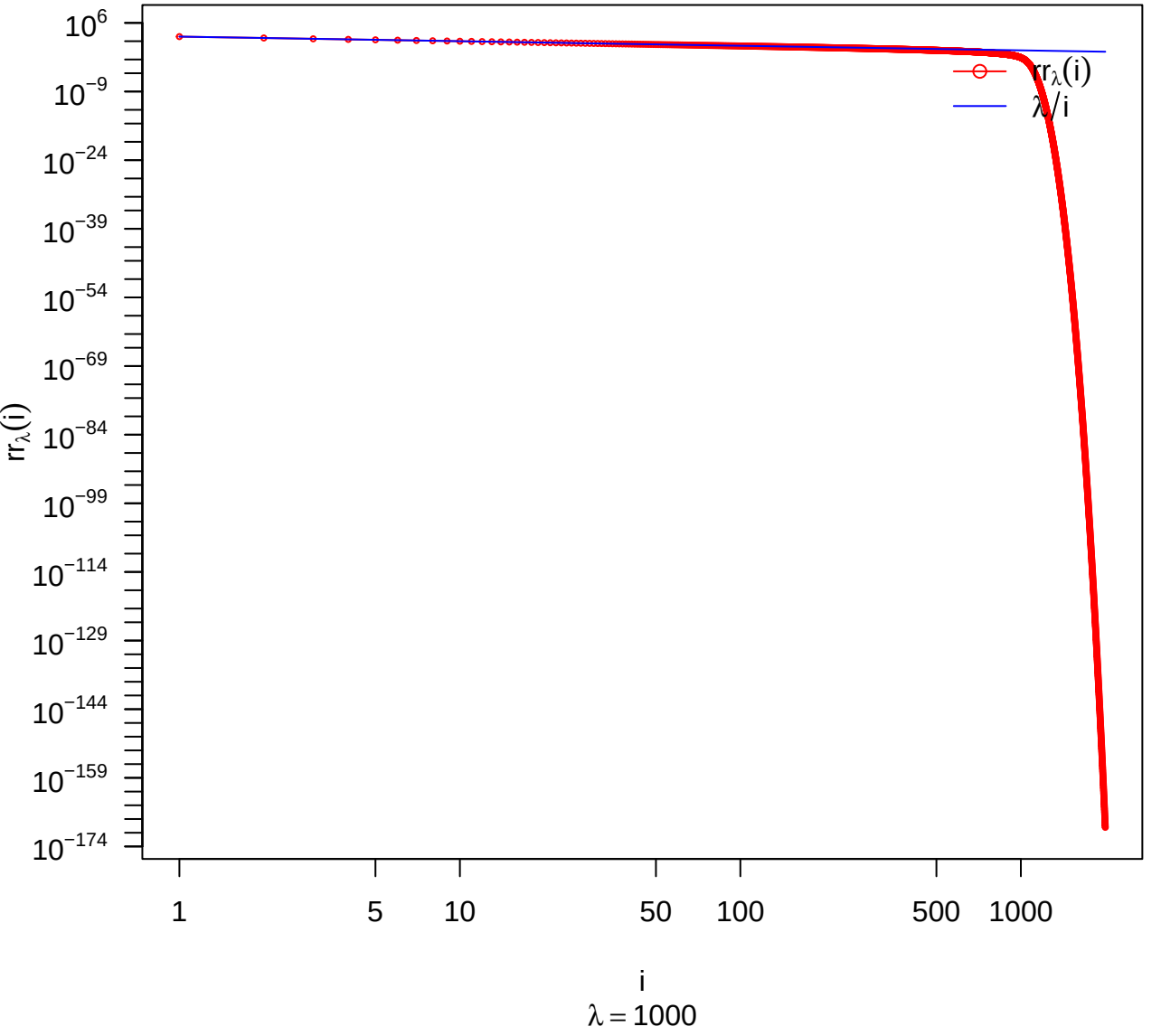

ncp = 300
pchisq(x, df = 10000, ncp = 300)
0.0
0.2
0.4
0.6
0.8
1.0
2000
5000
10000
20000
x


pchisq(*, df=10000,ncp=300, log=TRUE))
px
0
−100
−200
−300
−400
−500
−600
4000
6000
8000
10000
x

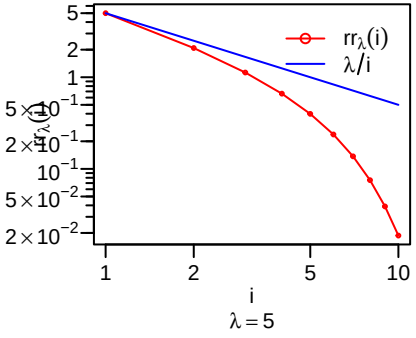

df = 10000, ncp = 4000
pnchisqV(x, df = 10000, ncp = 4000)
0.0
0.2
0.4
0.6
0.8
1.0
12000
13000
14000
15000
16000
x

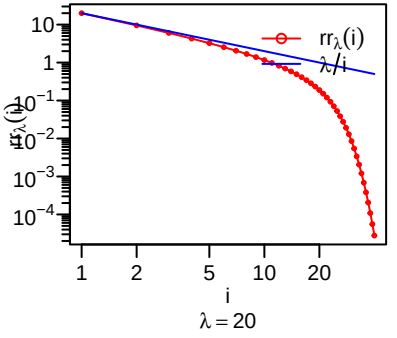

df = 16e3, ncp = 16e3
pnchisqV(x, df = 16000, ncp = 16000)
0.0
0.2
0.4
0.6
0.8
1.0
30000
31000
32000
33000
34000
35000
x

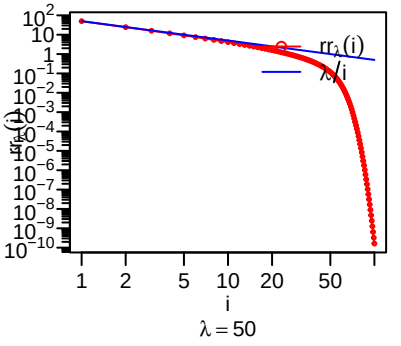
$$rr_\lambda(i) = \frac{\lambda^i/i!}{1+\lambda+\lambda^2/2!+\cdots+\lambda^{i-1}/(i-1)!}$$

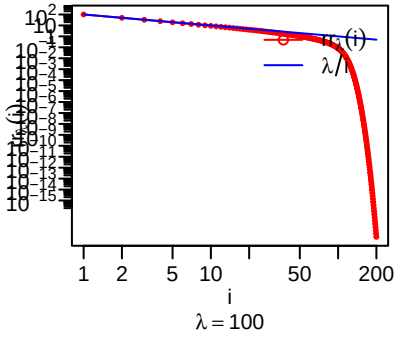


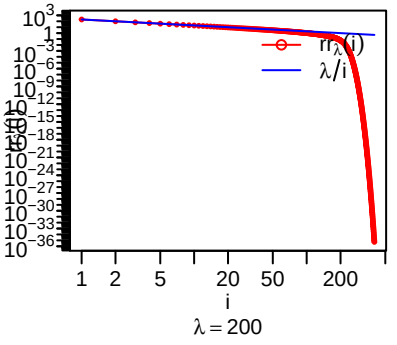
$$rr_\lambda(i) = \frac{\lambda^i / i!}{1 + \lambda + \lambda^2/2! + \cdots + \lambda^{i-1}/(i-1)!}$$

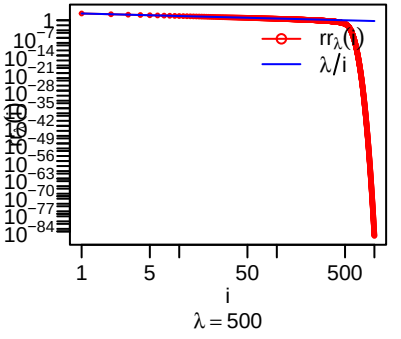


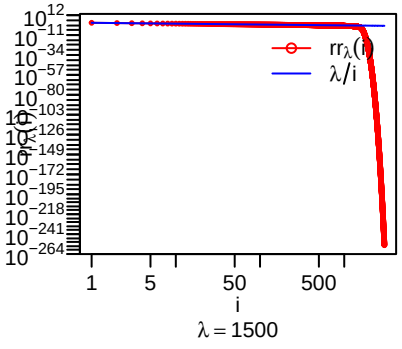


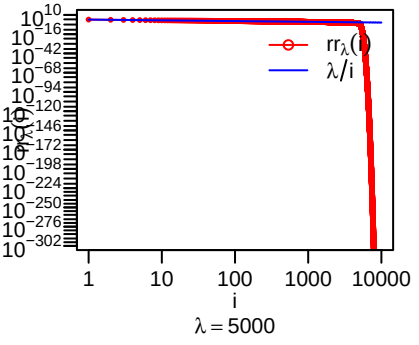


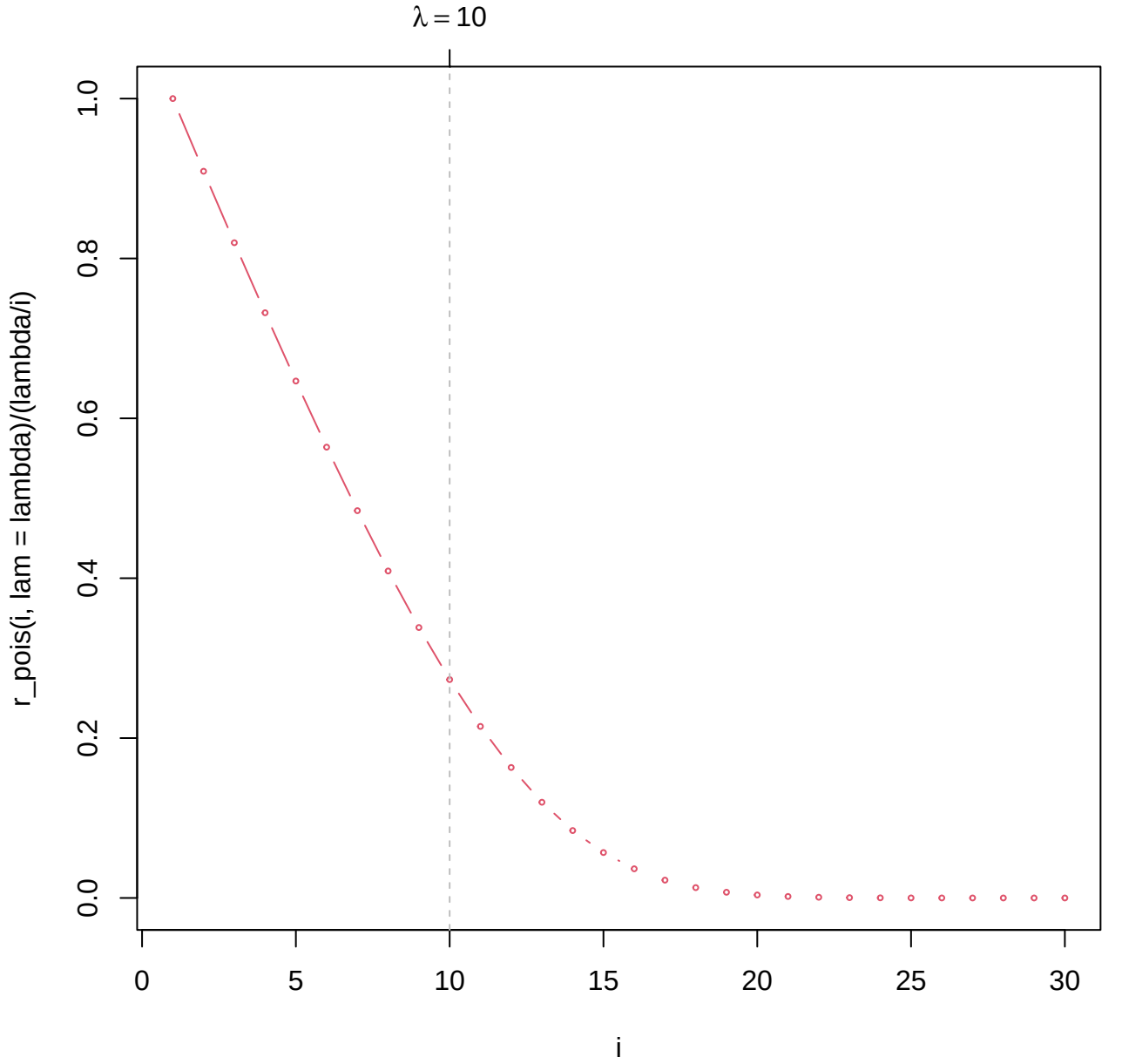




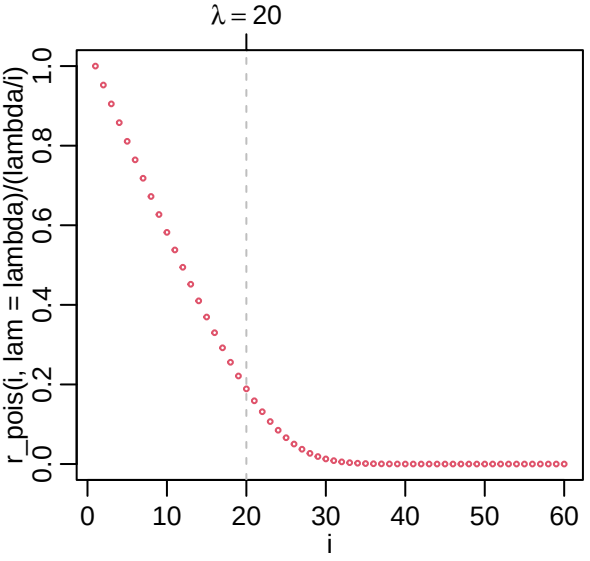


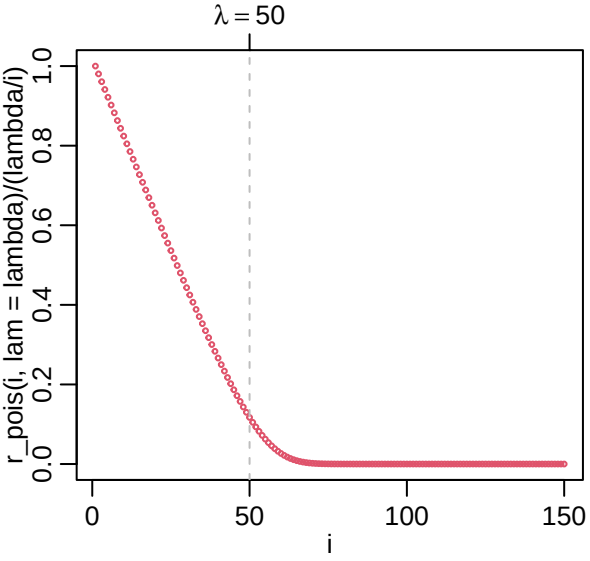


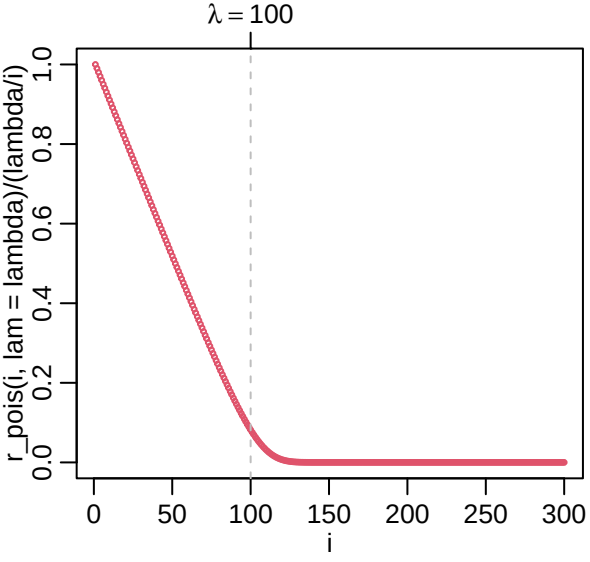


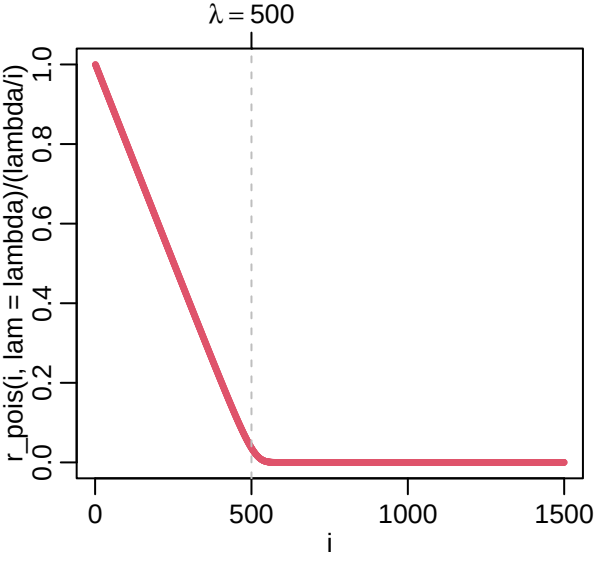

λ = 10
r_pois(i, lam = lambda)/(lambda/i)
1.0
0.8
0.6
0.4
0.2
0.0
0
5
10
15
20
25
30
i

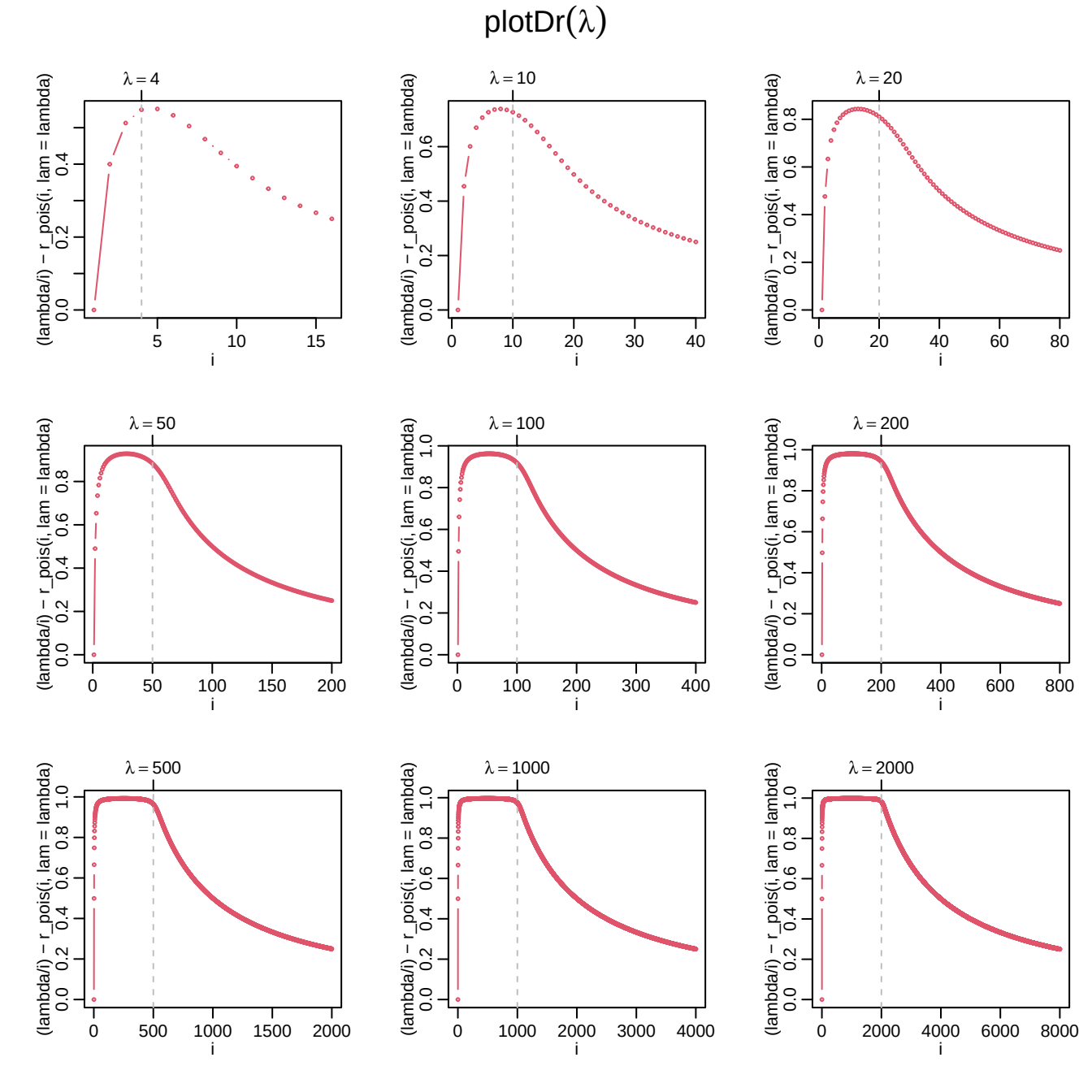
r_pois(i) / (lambda/i)

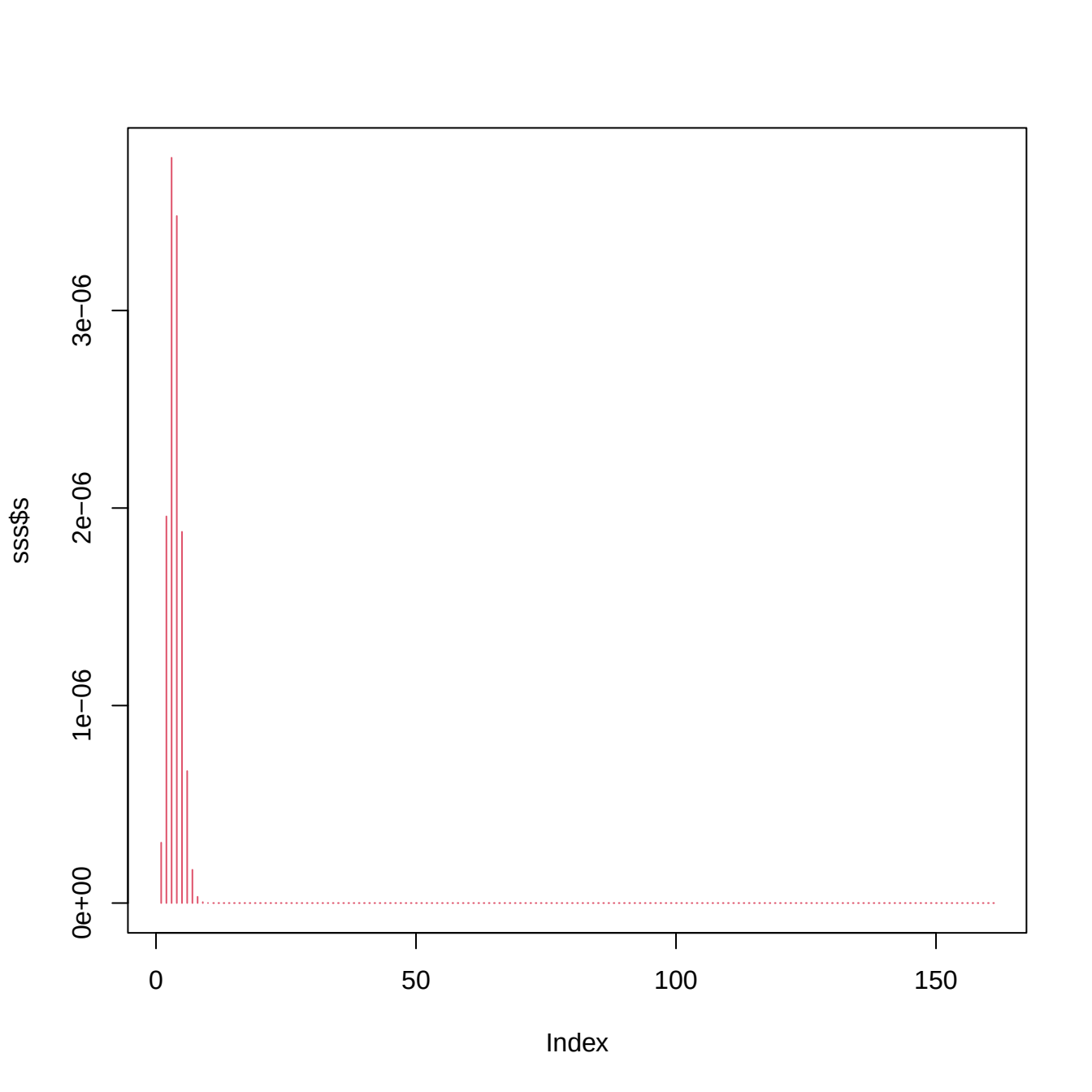


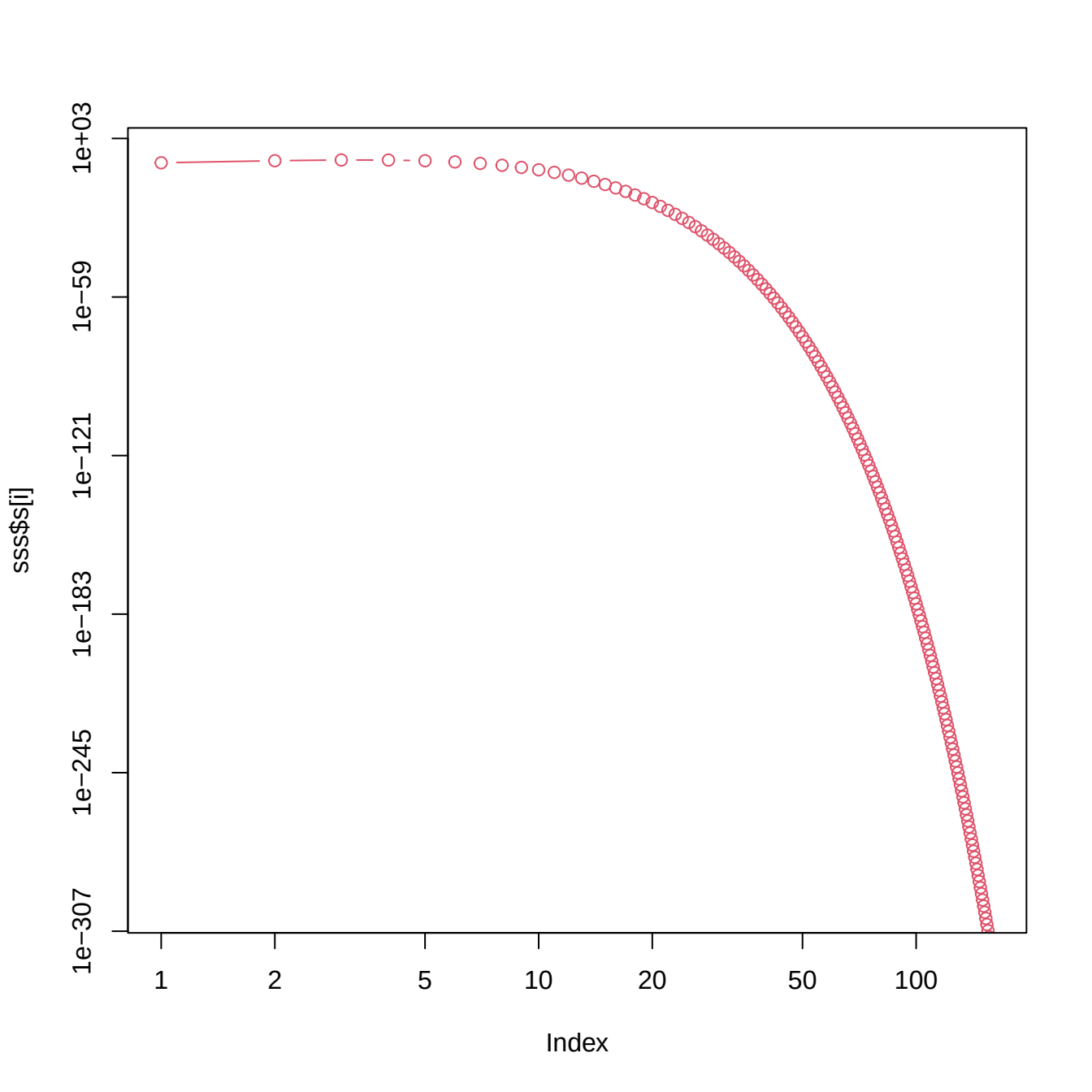


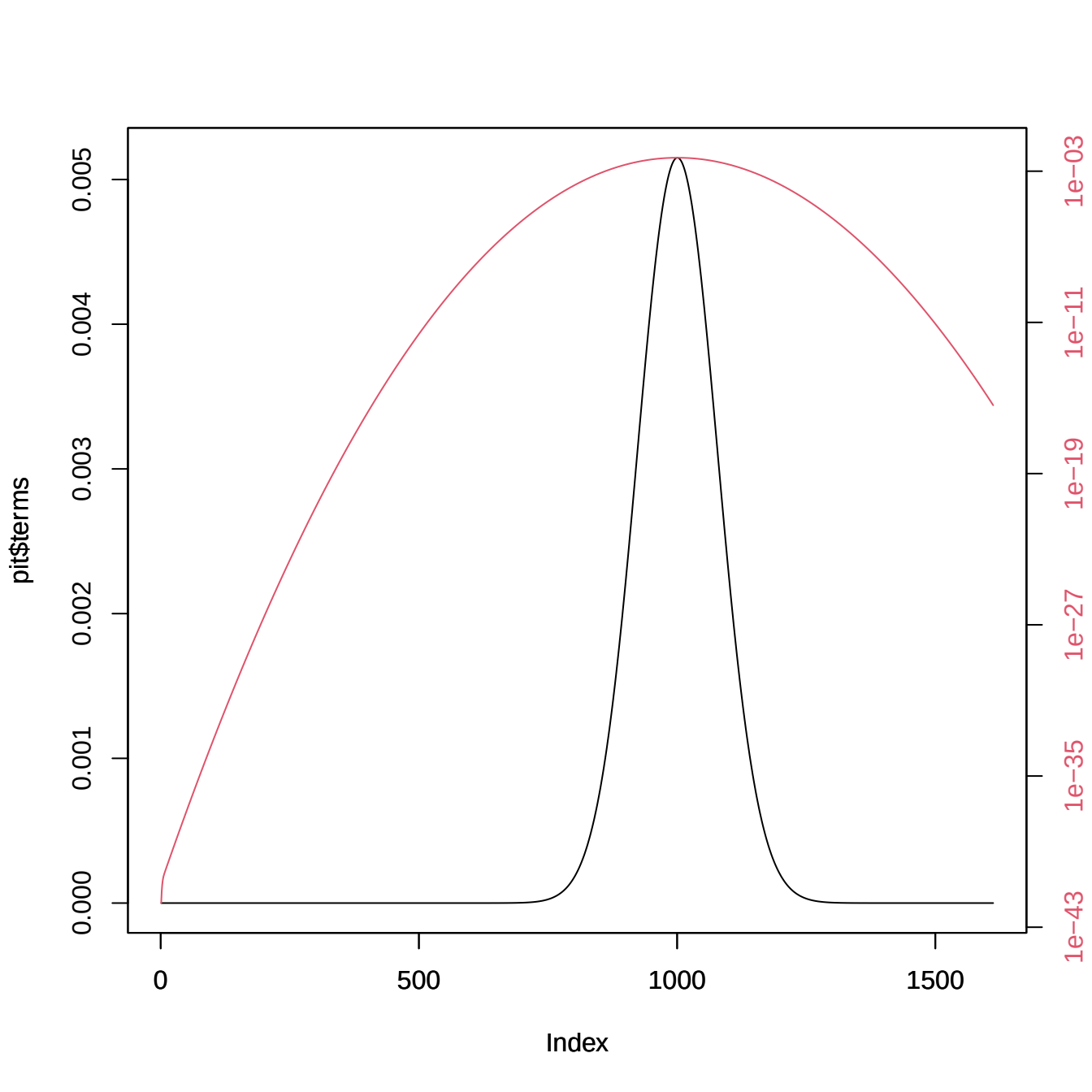


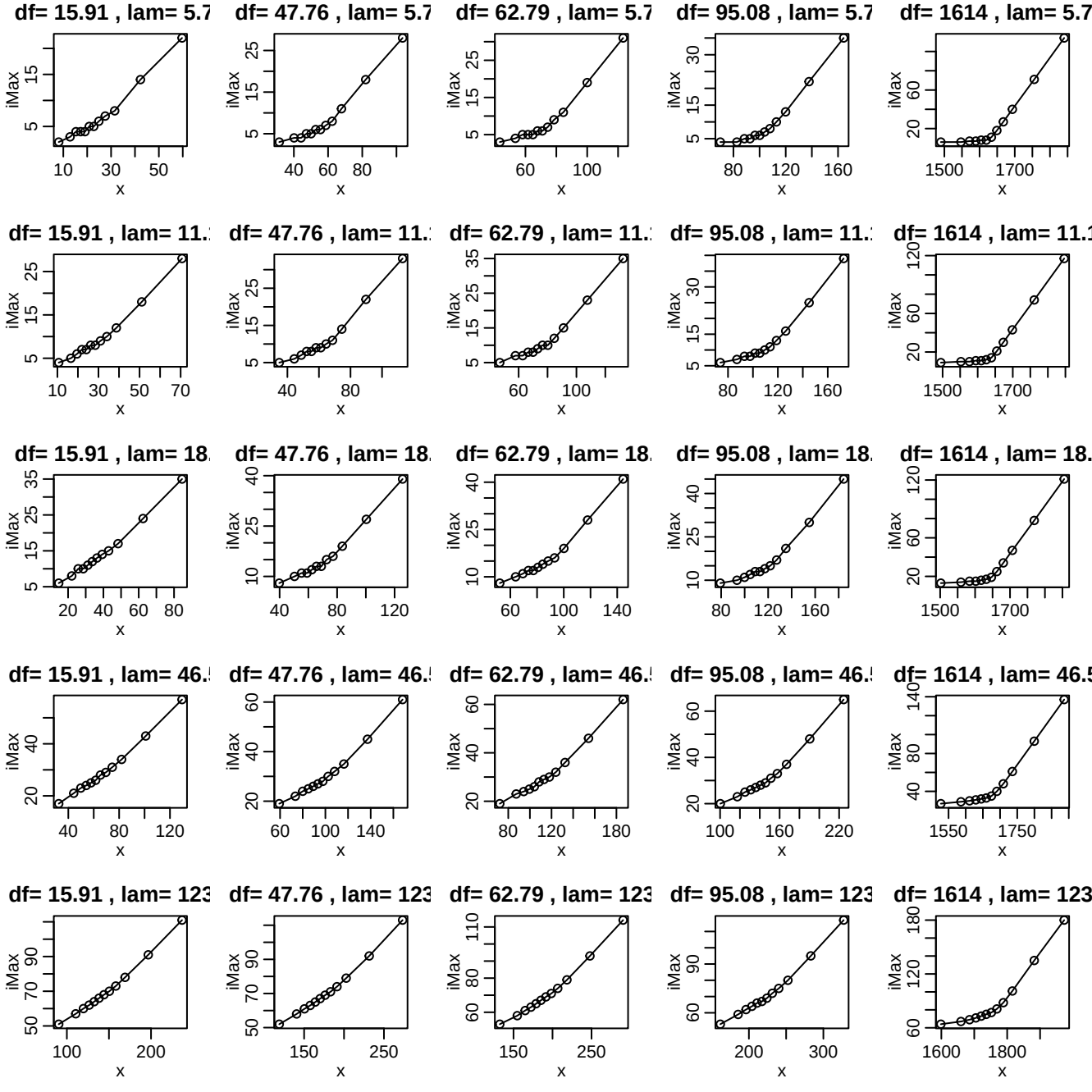



plotDr(λ)
λ = 4
λ = 10
λ = 20
λ = 50
λ = 100
λ = 200
λ = 500
λ = 1000
λ = 2000
(lambda/i) − r_pois(i, lam = lambda)
i

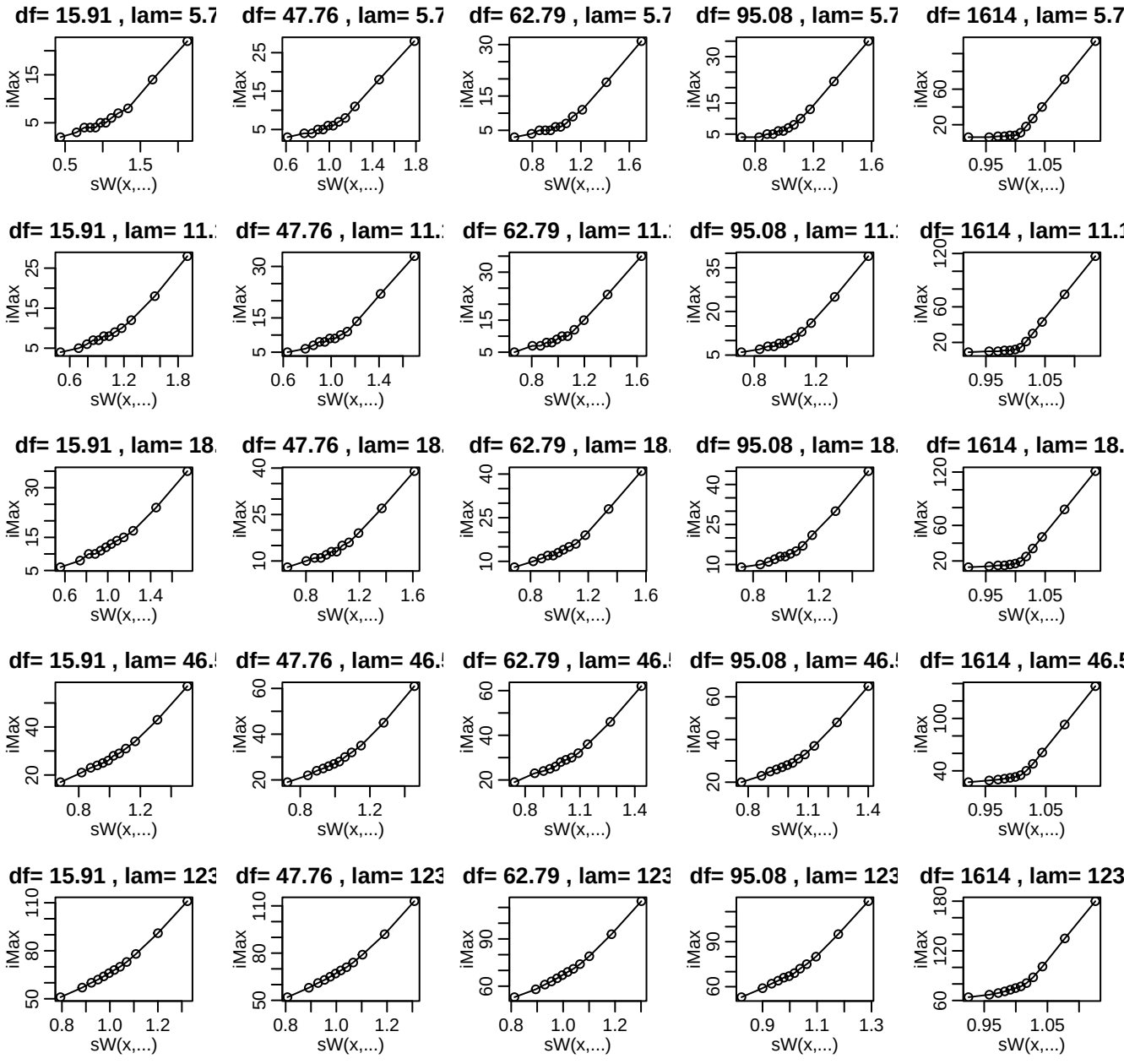

sss$s
0e+00
1e−06
2e−06
3e−06
0
50
100
150
Index

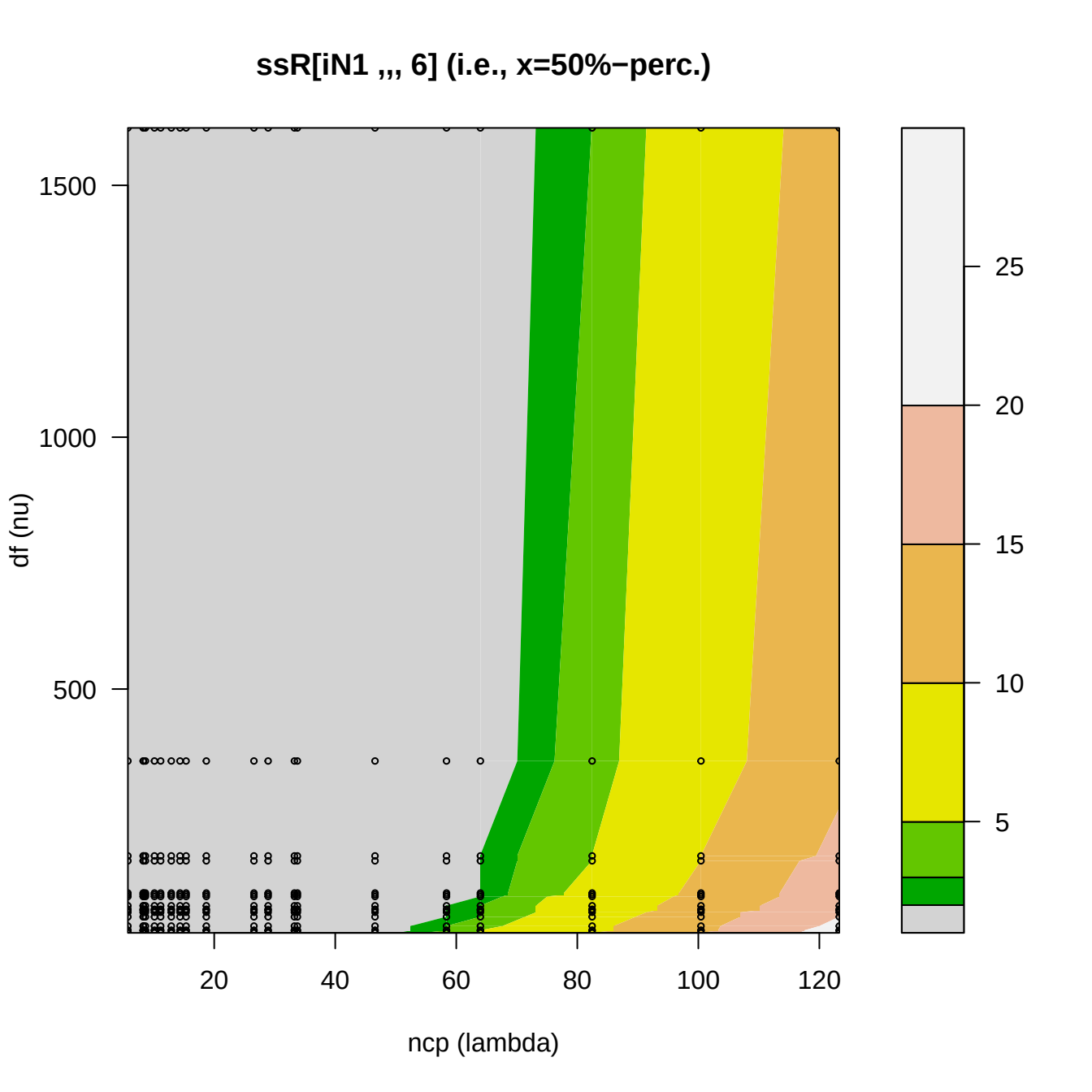

sss$s[i]
1e+03
1e−59
1e−121
1e−183
1e−245
1e−307
1
2
5
10
20
50
100
Index

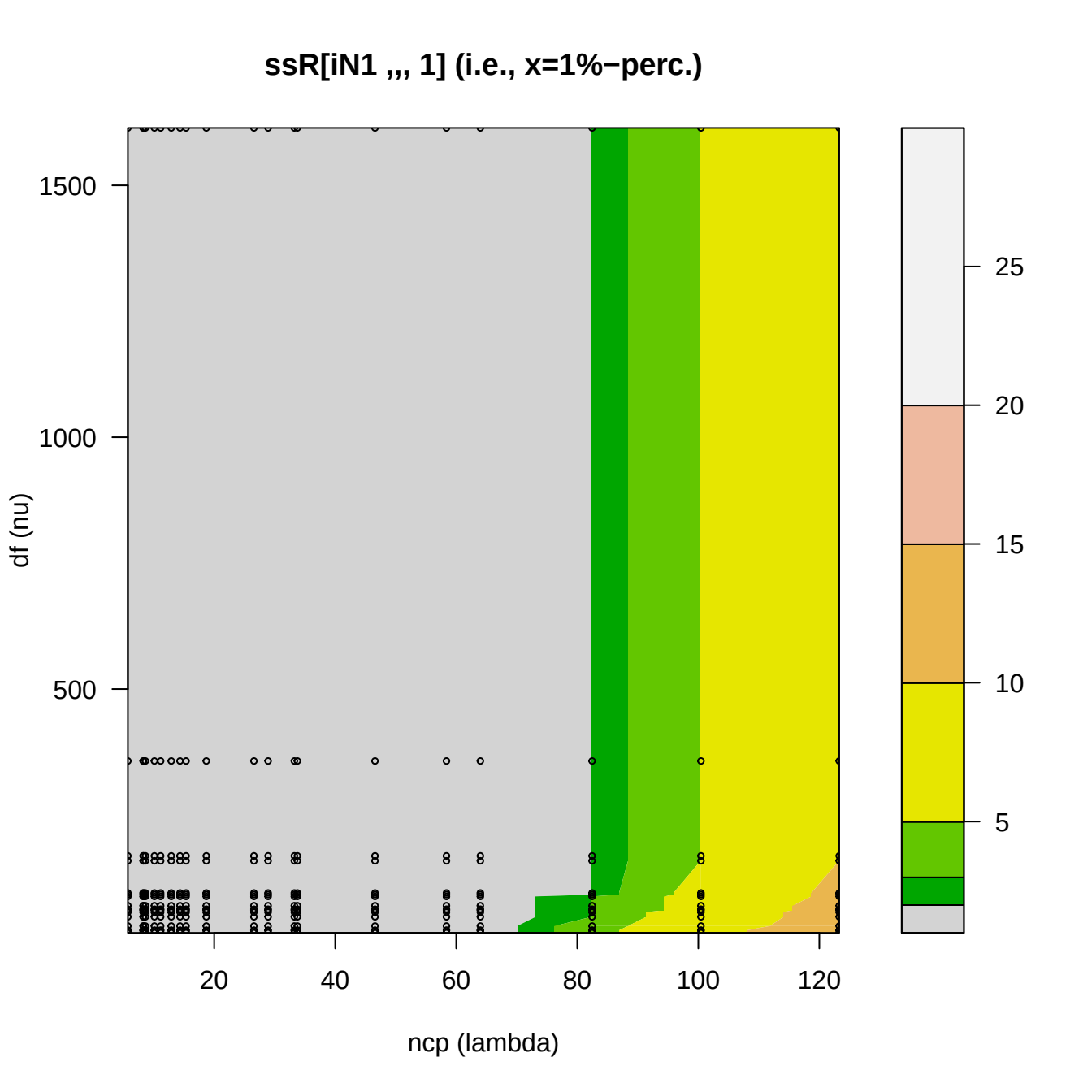

pit$terms
0.000
0.001
0.002
0.003
0.004
0.005
1e−43
1e−35
1e−27
1e−19
1e−11
1e−03
0
500
1000
1500
Index

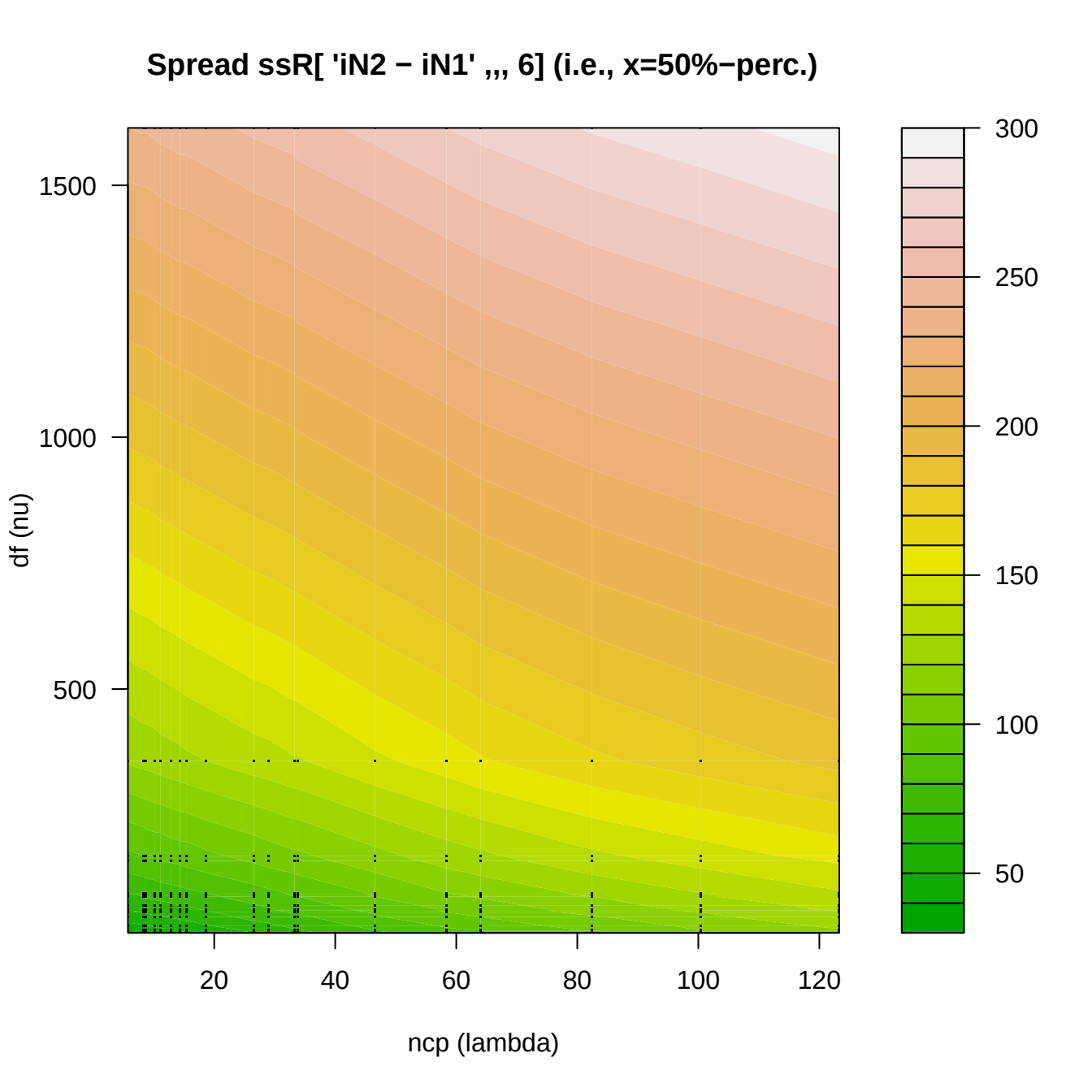

df= 15.91 , lam= 5.7
df= 47.76 , lam= 5.7
df= 62.79 , lam= 5.7
df= 95.08 , lam= 5.7
df= 1614 , lam= 5.7
df= 15.91 , lam= 11.
df= 47.76 , lam= 11.
df= 62.79 , lam= 11.
df= 95.08 , lam= 11.
df= 1614 , lam= 11.
df= 15.91 , lam= 18.
df= 47.76 , lam= 18.
df= 62.79 , lam= 18.
df= 95.08 , lam= 18.
df= 1614 , lam= 18.
df= 15.91 , lam= 46.
df= 47.76 , lam= 46.
df= 62.79 , lam= 46.
df= 95.08 , lam= 46.
df= 1614 , lam= 46.
df= 15.91 , lam= 123
df= 47.76 , lam= 123
df= 62.79 , lam= 123
df= 95.08 , lam= 123
df= 1614 , lam= 123
iMax
x

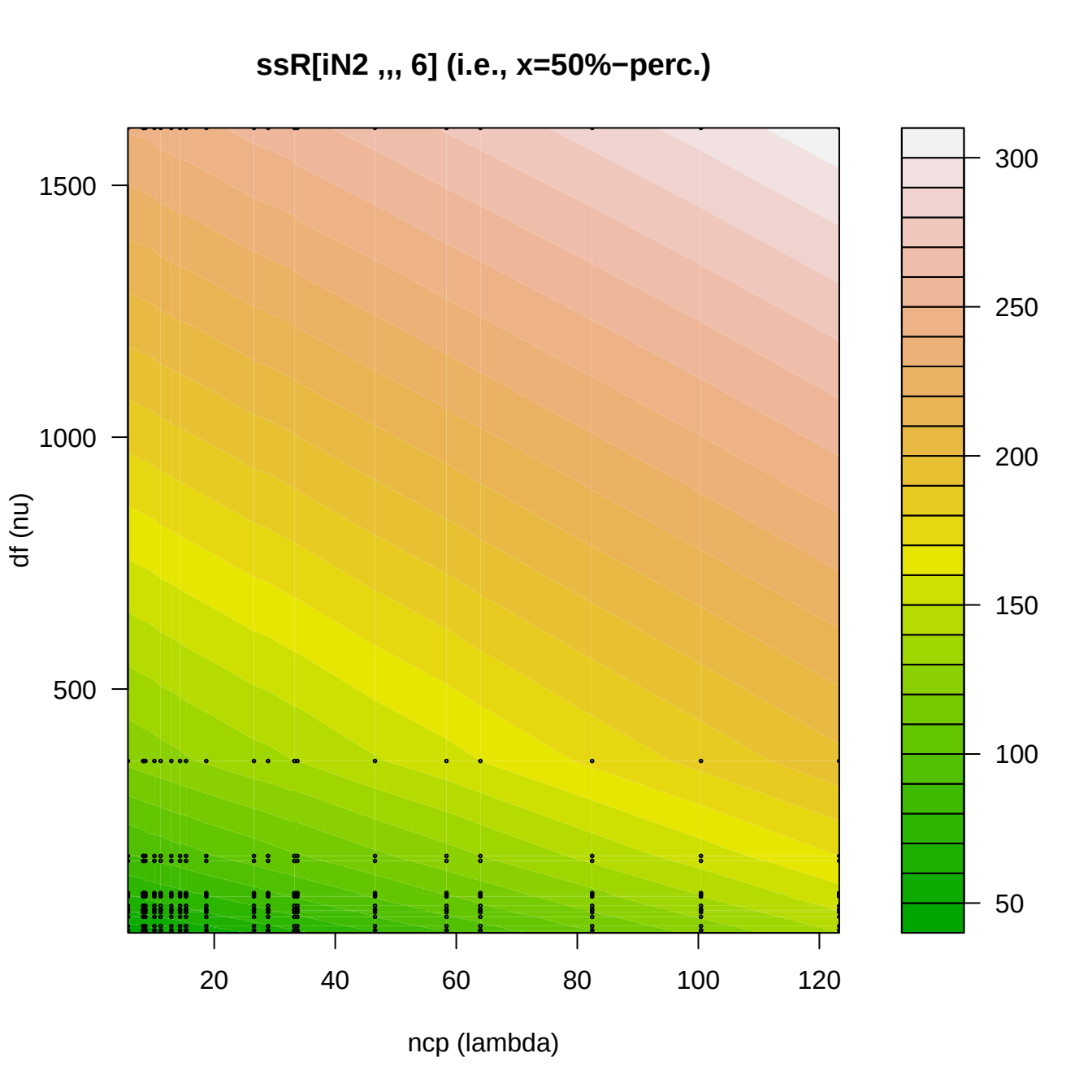
iMax vs. sW()

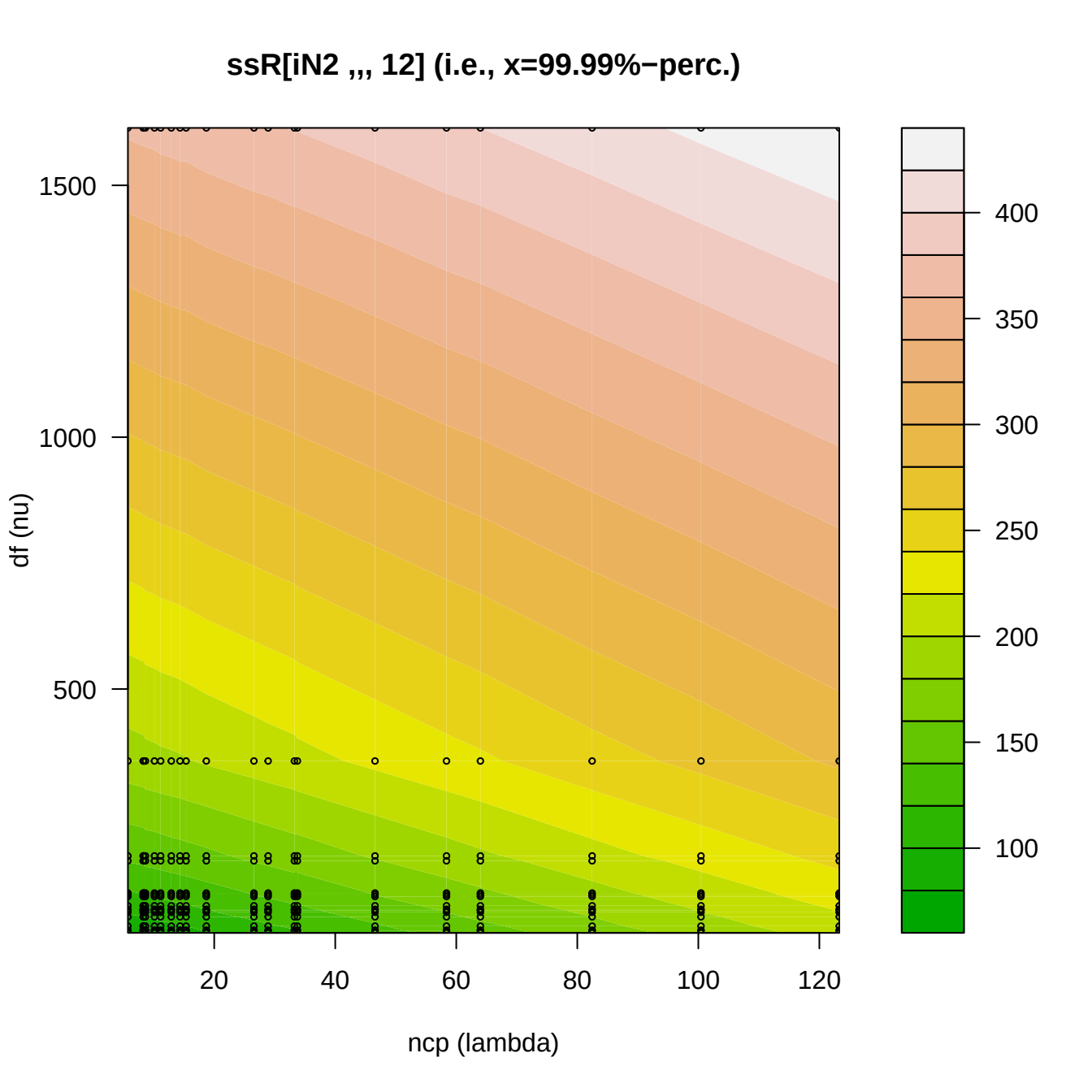

df= 15.91 , lam= 5.7
df= 47.76 , lam= 5.7
df= 62.79 , lam= 5.7
df= 95.08 , lam= 5.7
df= 1614 , lam= 5.7
df= 15.91 , lam= 11.
df= 47.76 , lam= 11.
df= 62.79 , lam= 11.
df= 95.08 , lam= 11.
df= 1614 , lam= 11.
df= 15.91 , lam= 18.
df= 47.76 , lam= 18.
df= 62.79 , lam= 18.
df= 95.08 , lam= 18.
df= 1614 , lam= 18.
df= 15.91 , lam= 46.
df= 47.76 , lam= 46.
df= 62.79 , lam= 46.
df= 95.08 , lam= 46.
df= 1614 , lam= 46.5
df= 15.91 , lam= 123
df= 47.76 , lam= 123
df= 62.79 , lam= 123
df= 95.08 , lam= 123
df= 1614 , lam= 123
iMax
sW(x,...)

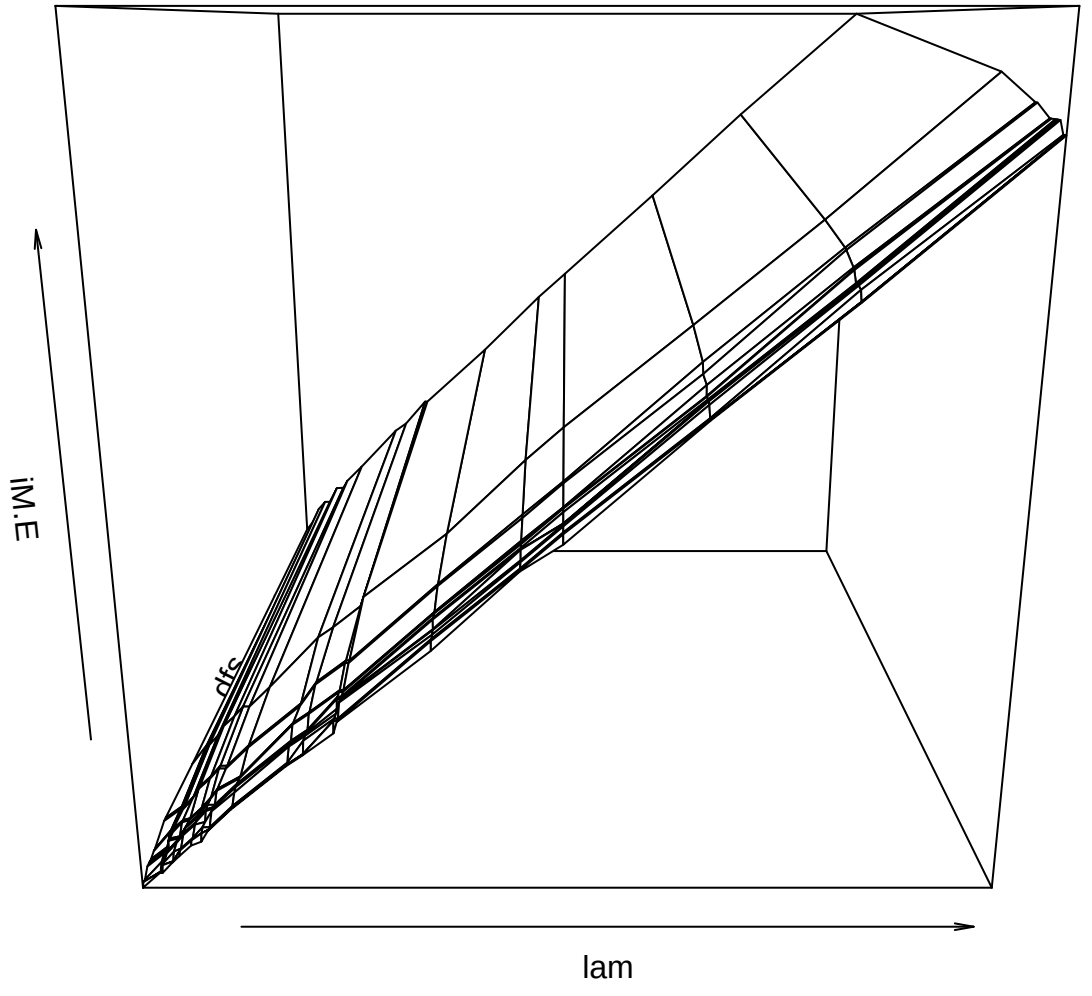

ssR[iN1 ,,, 6] (i.e., x=50%−perc.)
1500
1000
500
df (nu)
20
40
60
80
100
120
ncp (lambda)
25
20
15
10
5

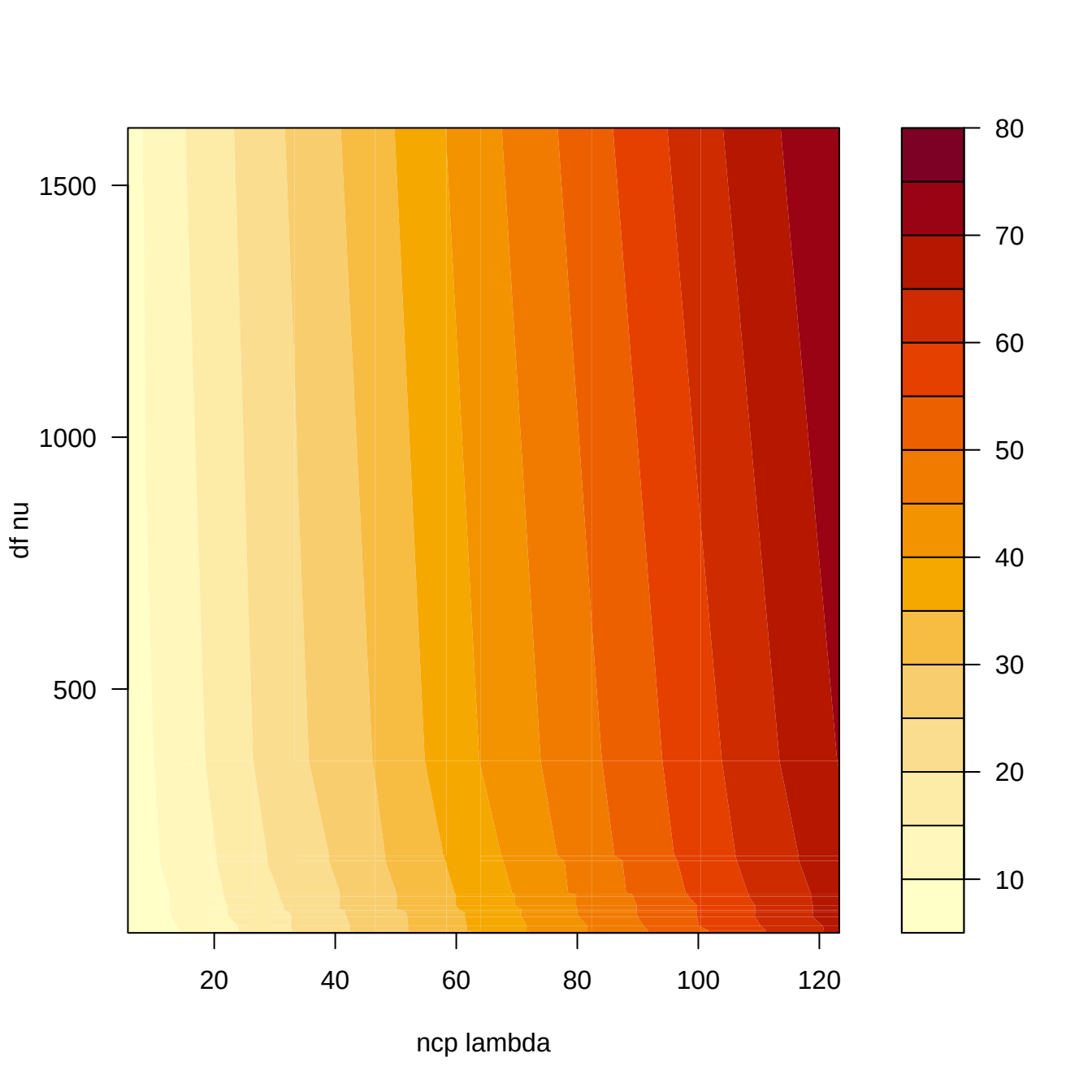

ssR[iN1 ,,, 1] (i.e., x=1%−perc.)
1500
1000
500
df (nu)
20
40
60
80
100
120
ncp (lambda)
25
20
15
10
5

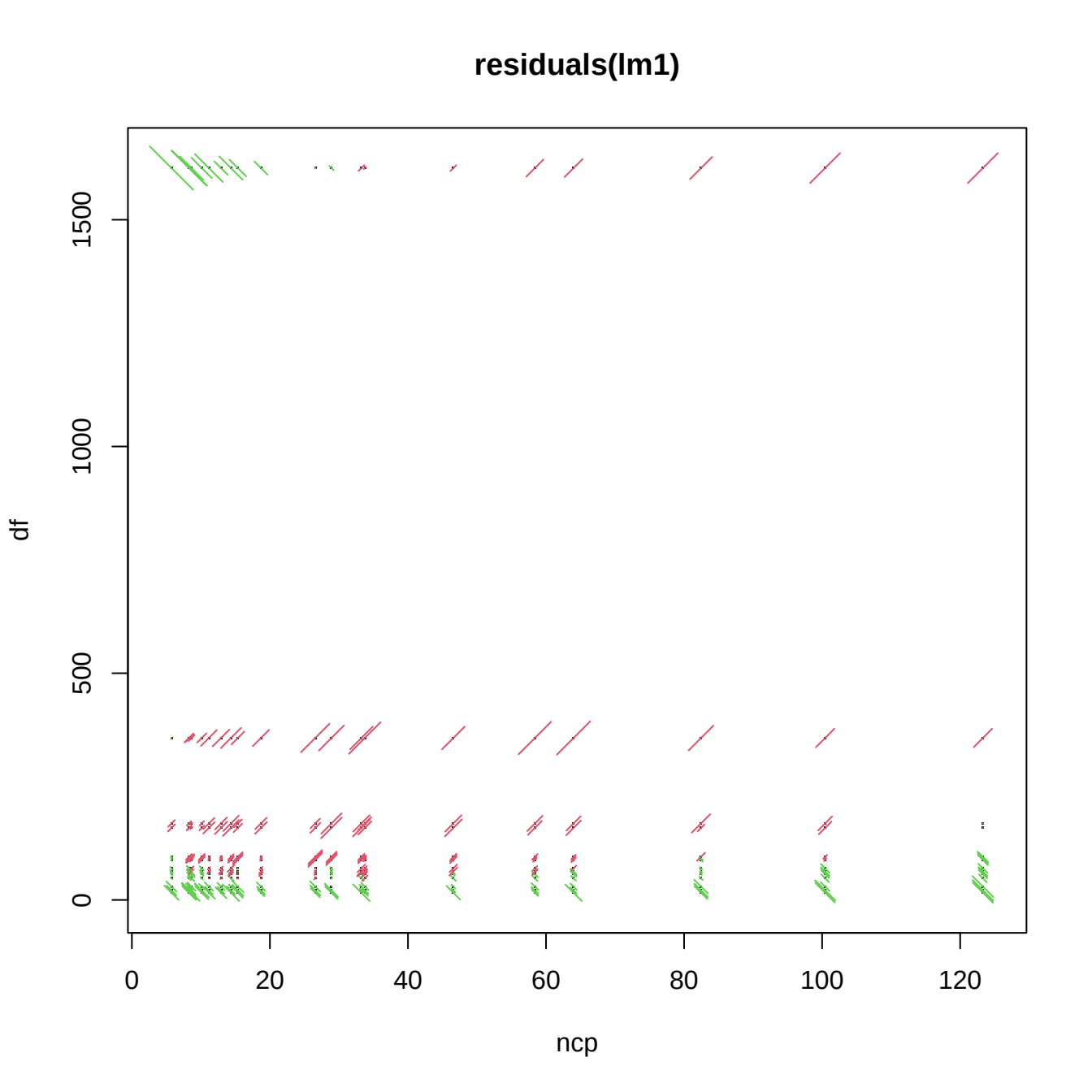

Spread ssR['iN2 − iN1' ,,, 6] (i.e., x=50%−perc.)
df (nu)
1500
1000
500
20
40
60
80
100
120
ncp (lambda)
300
250
200
150
100
50

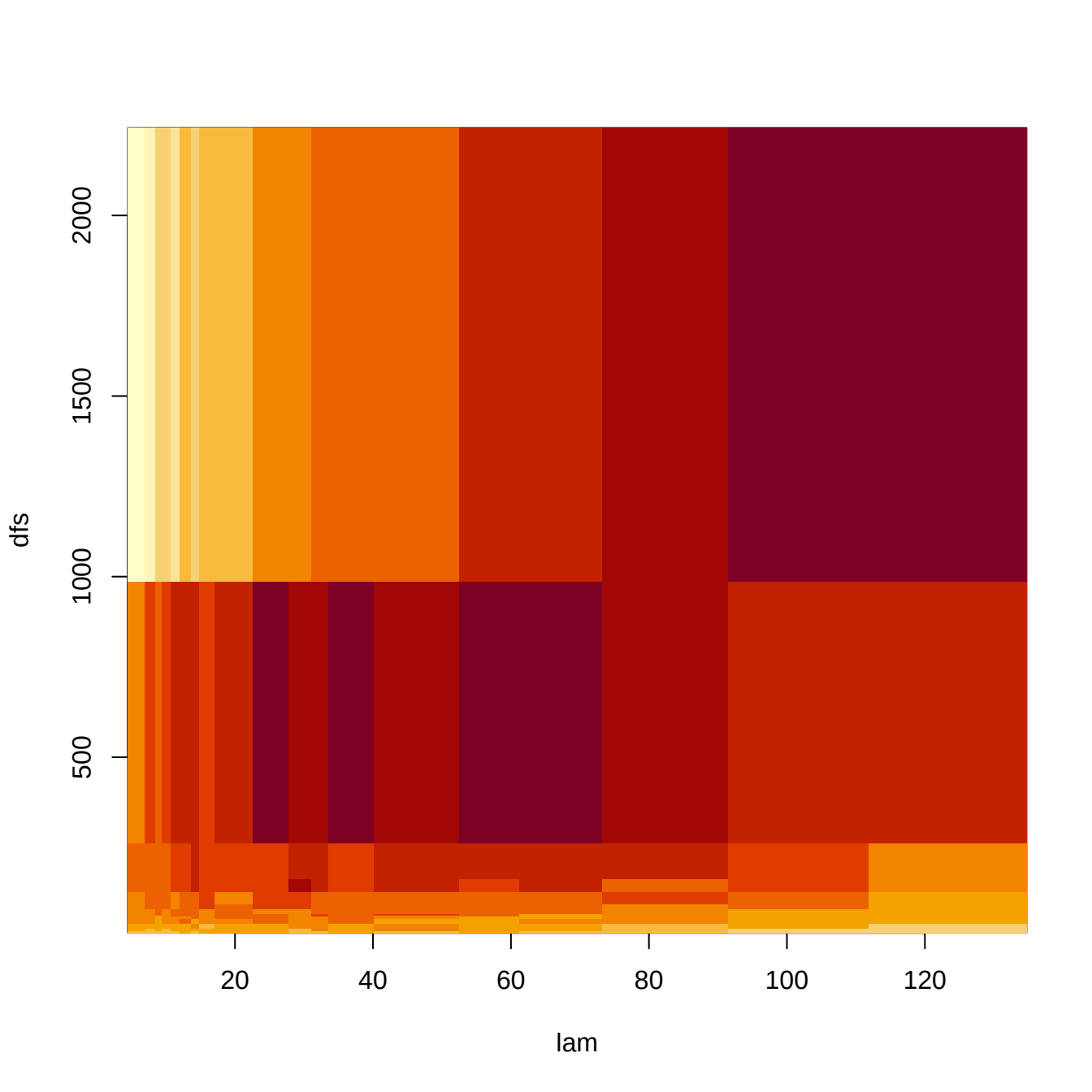

ssR[iN2 ,,, 6] (i.e., x=50%−perc.)
df (nu)
1500
1000
500
20
40
60
80
100
120
ncp (lambda)
300
250
200
150
100
50

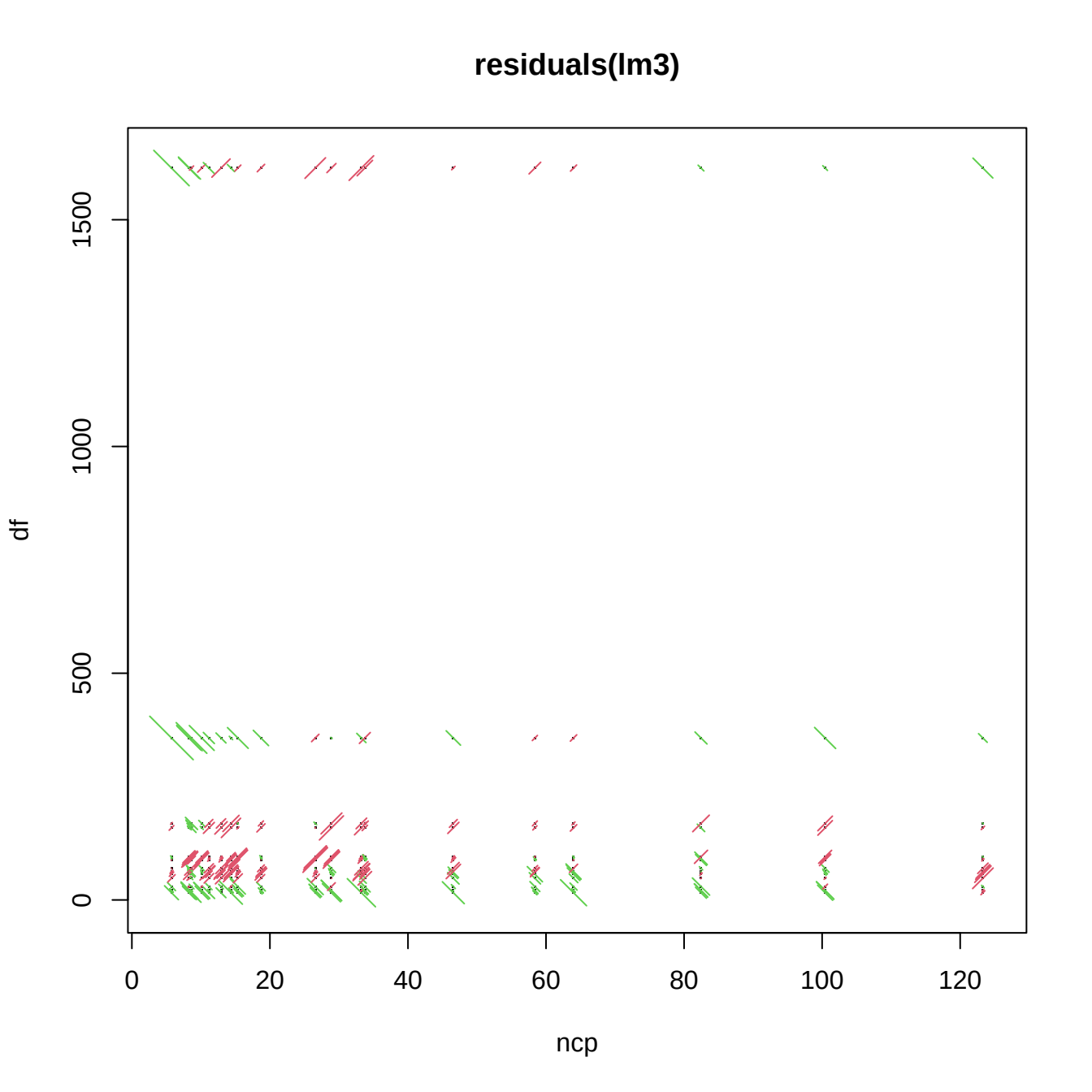

ssR[iN2 ,,, 12] (i.e., x=99.99%−perc.)
df (nu)
1500
1000
500
20
40
60
80
100
120
ncp (lambda)
400
350
300
250
200
150
100

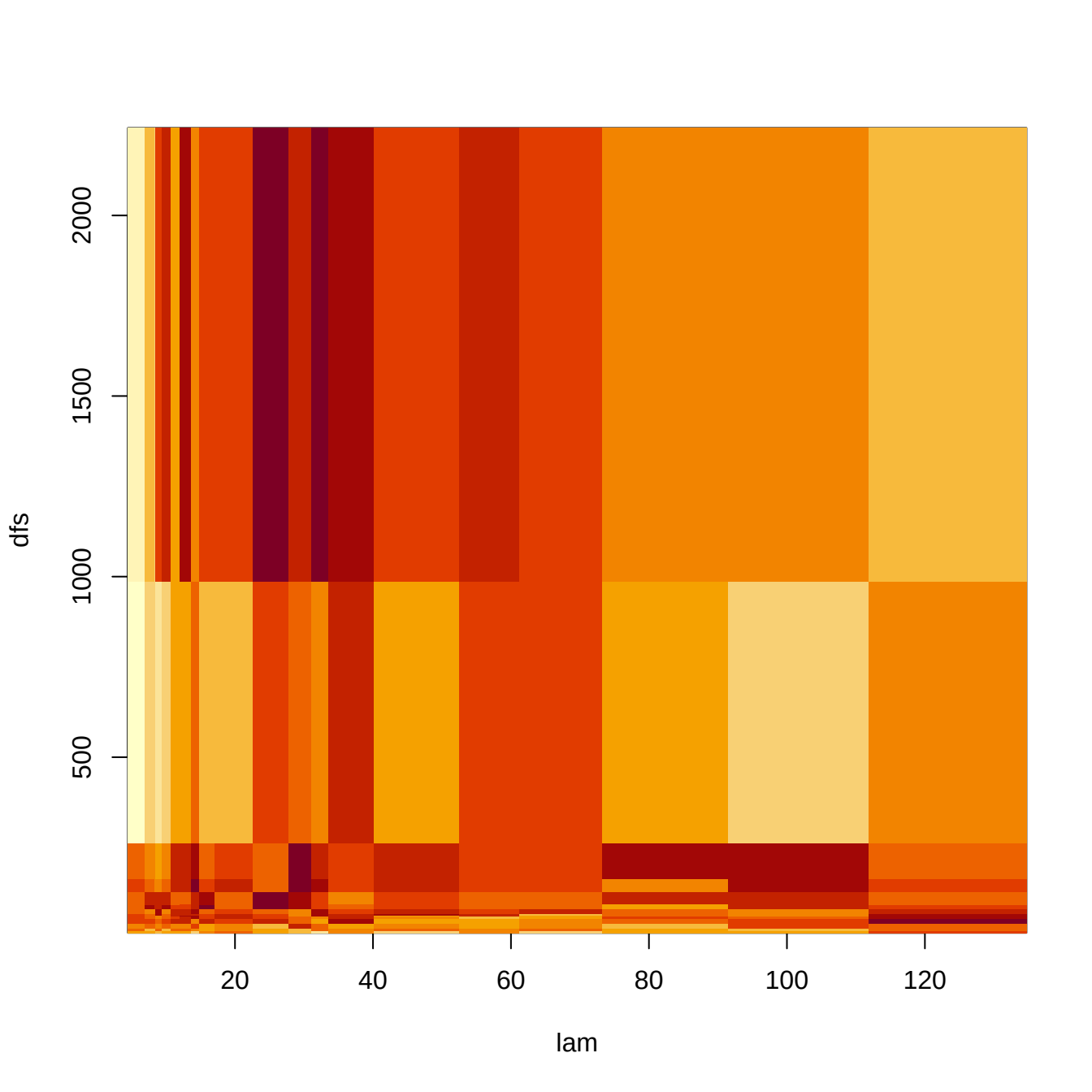

iM.E
dfc
lam

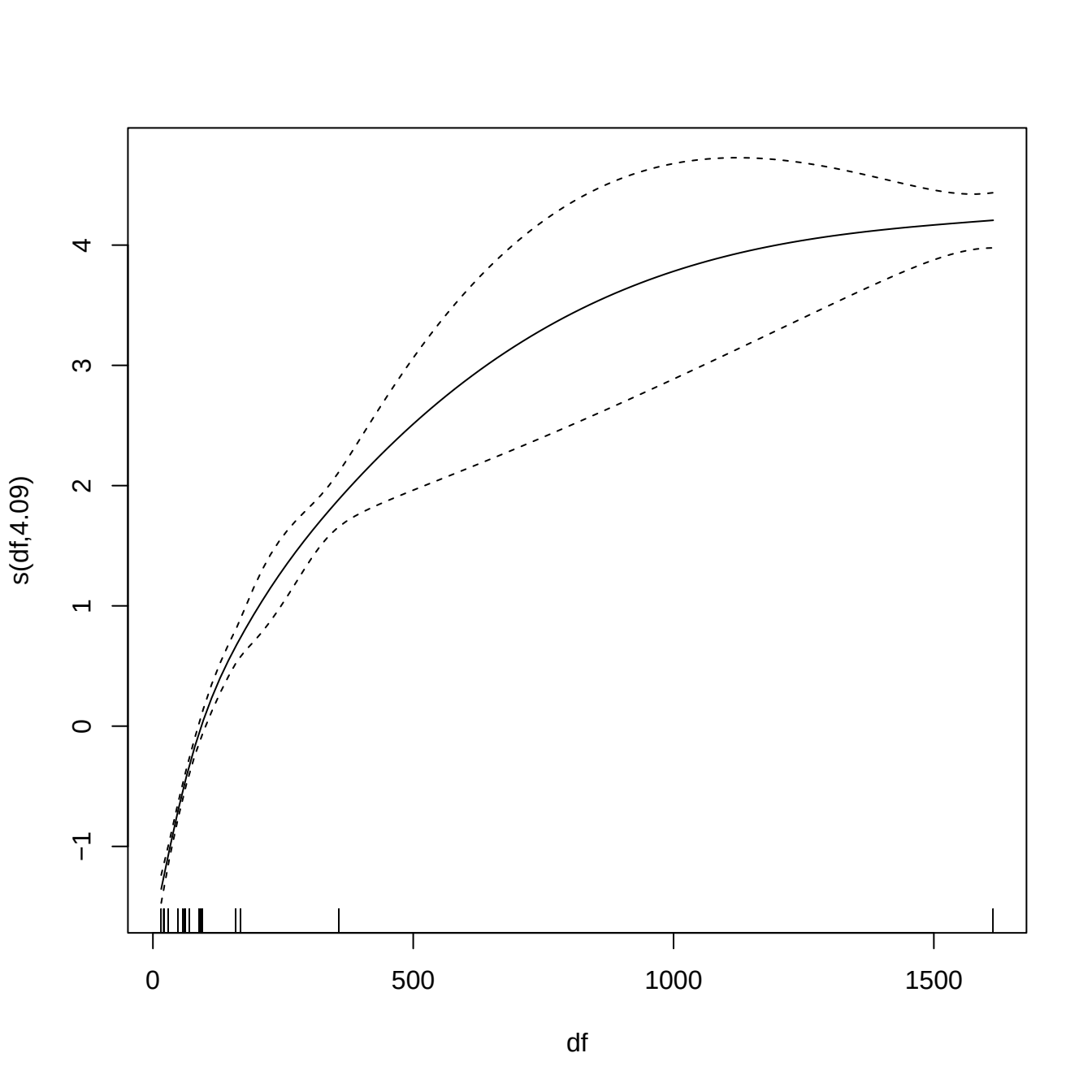

1500
1000
500
df nu
20
40
60
80
100
120
ncp lambda
80
70
60
50
40
30
20
10

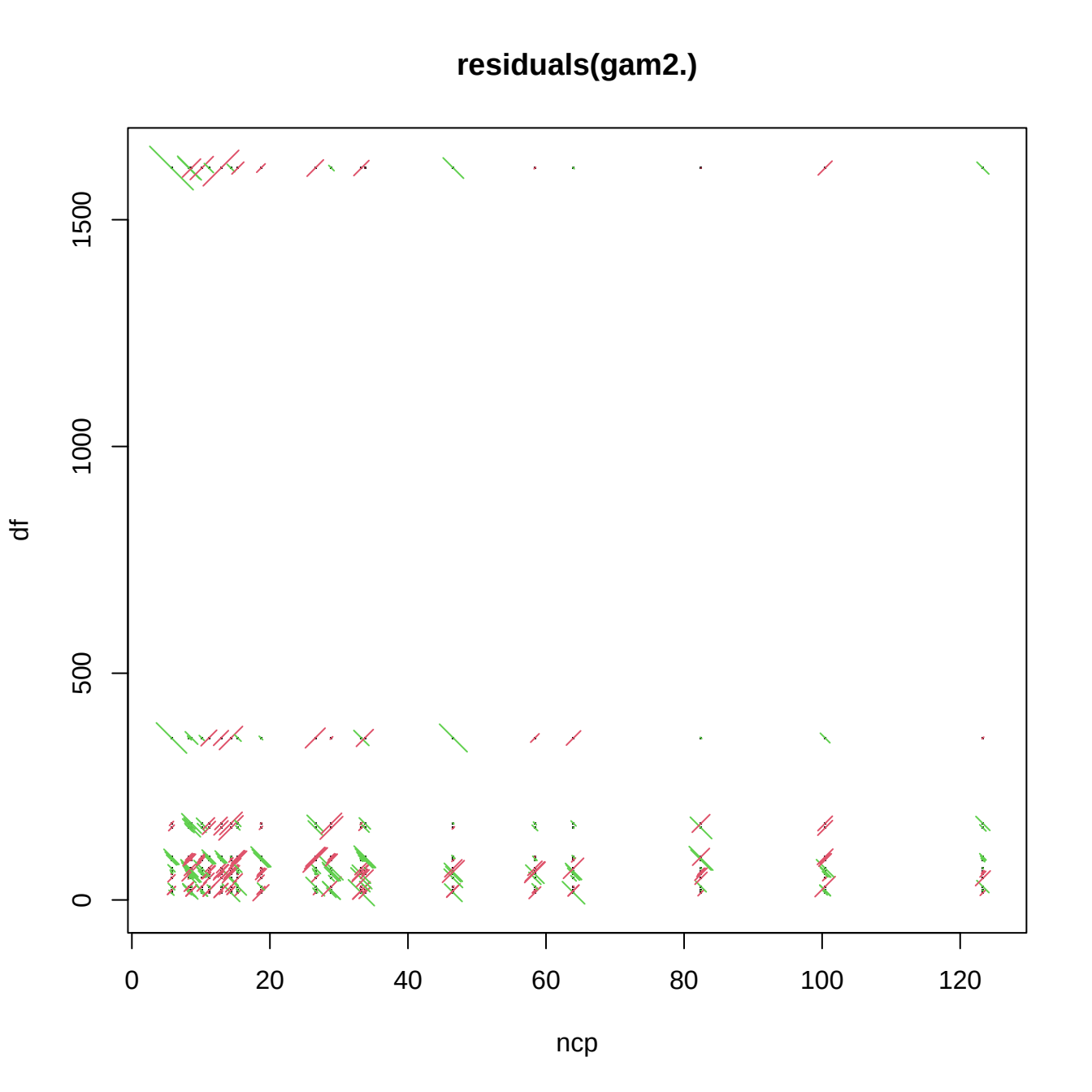

residuals(lm1)
df
0
500
1000
1500
0
20
40
60
80
100
120
ncp

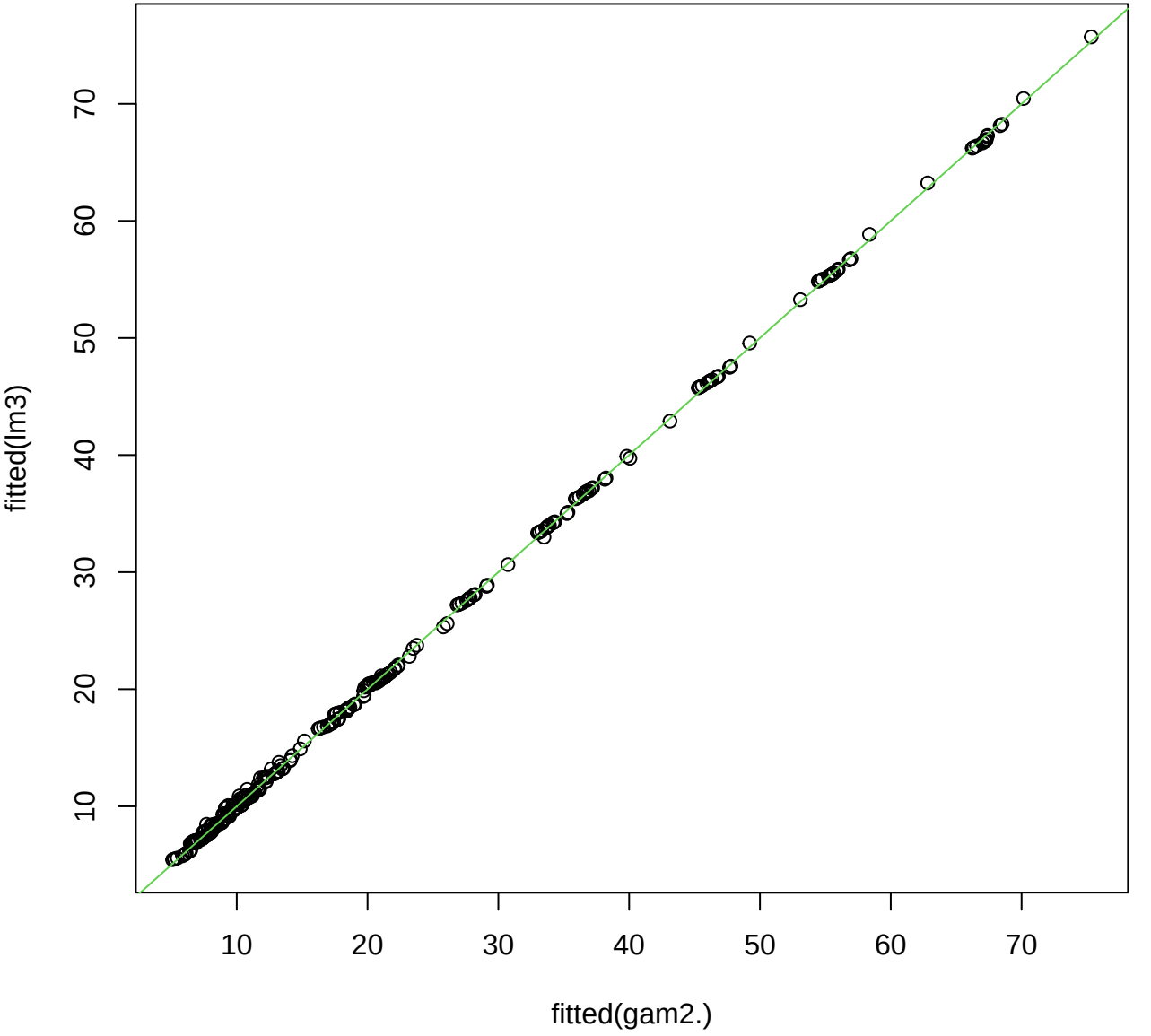

dfs
2000
1500
1000
500
20
40
60
80
100
120
lam

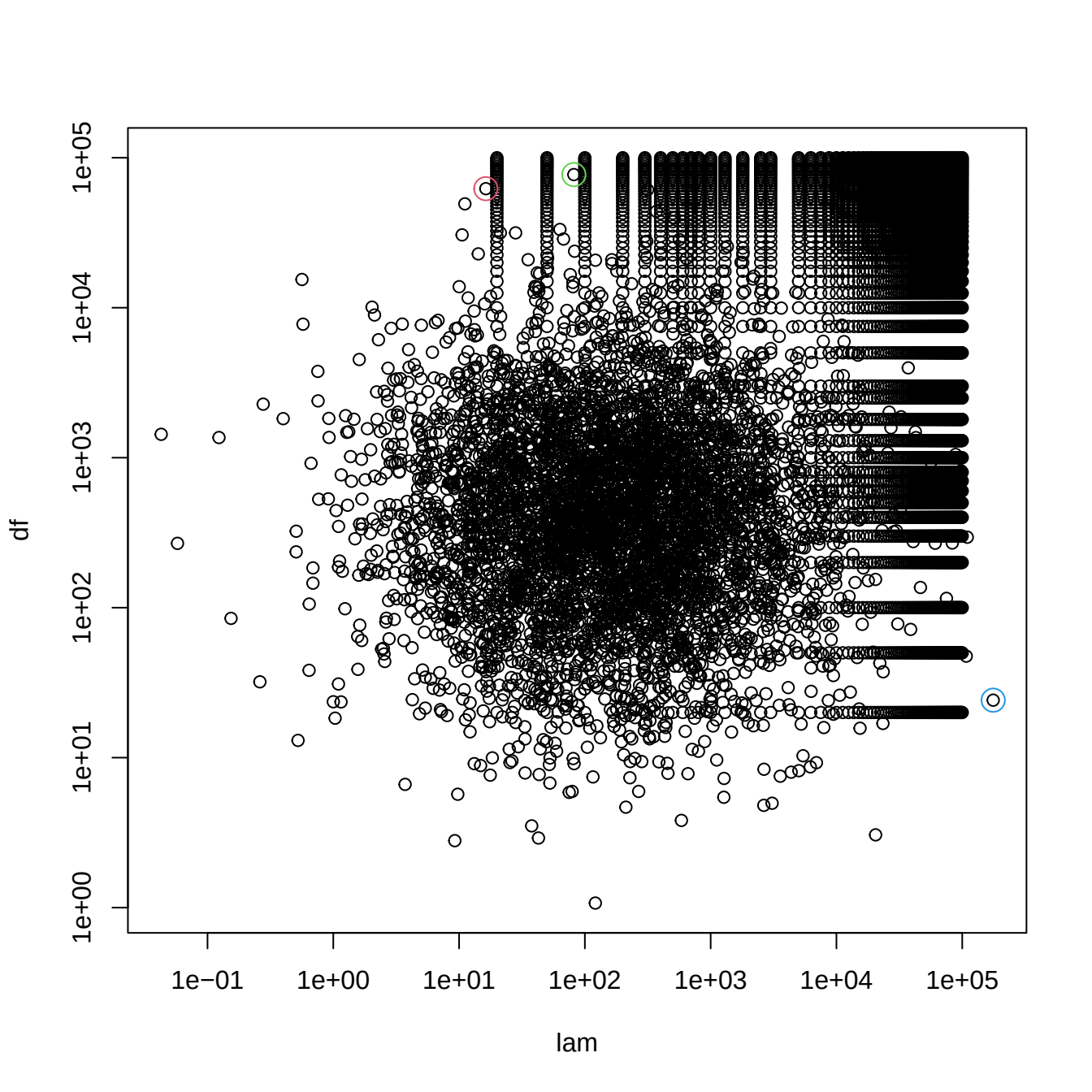

residuals(lm3)
df
0
500
1000
1500
0
20
40
60
80
100
120
ncp

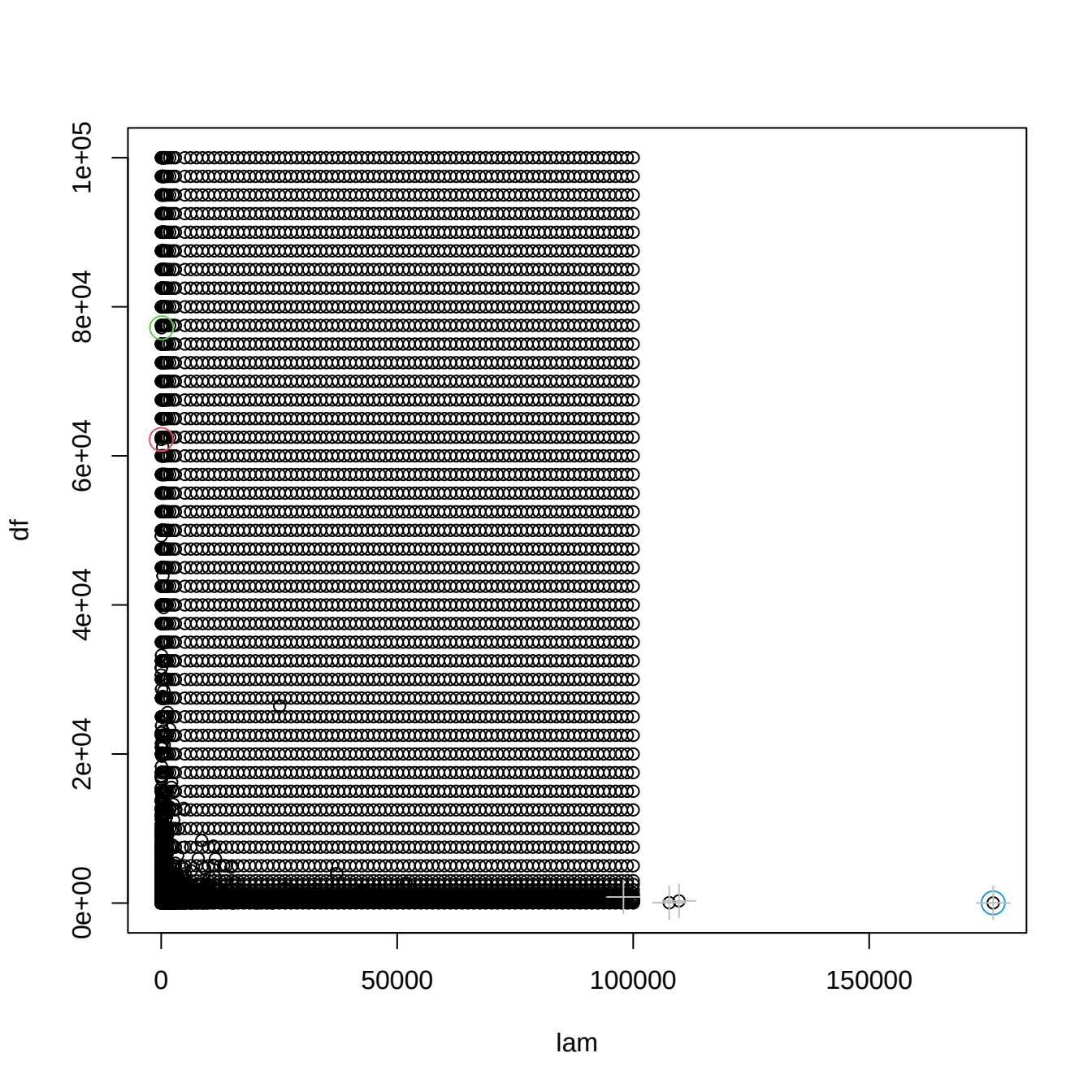

dfs
2000
1500
1000
500
20
40
60
80
100
120
lam

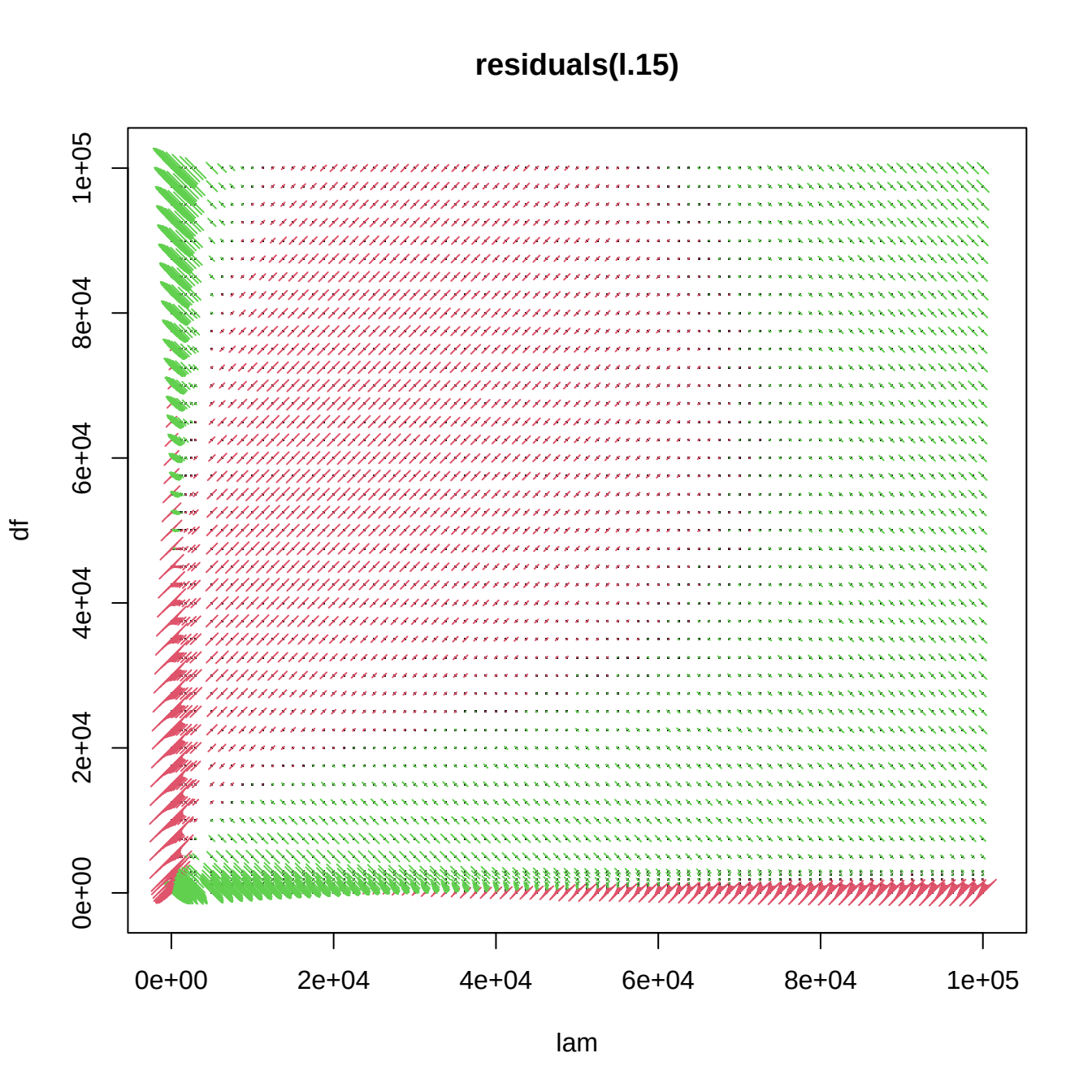

s(df,4.09)
4
3
2
1
0
−1
0
500
1000
1500
df

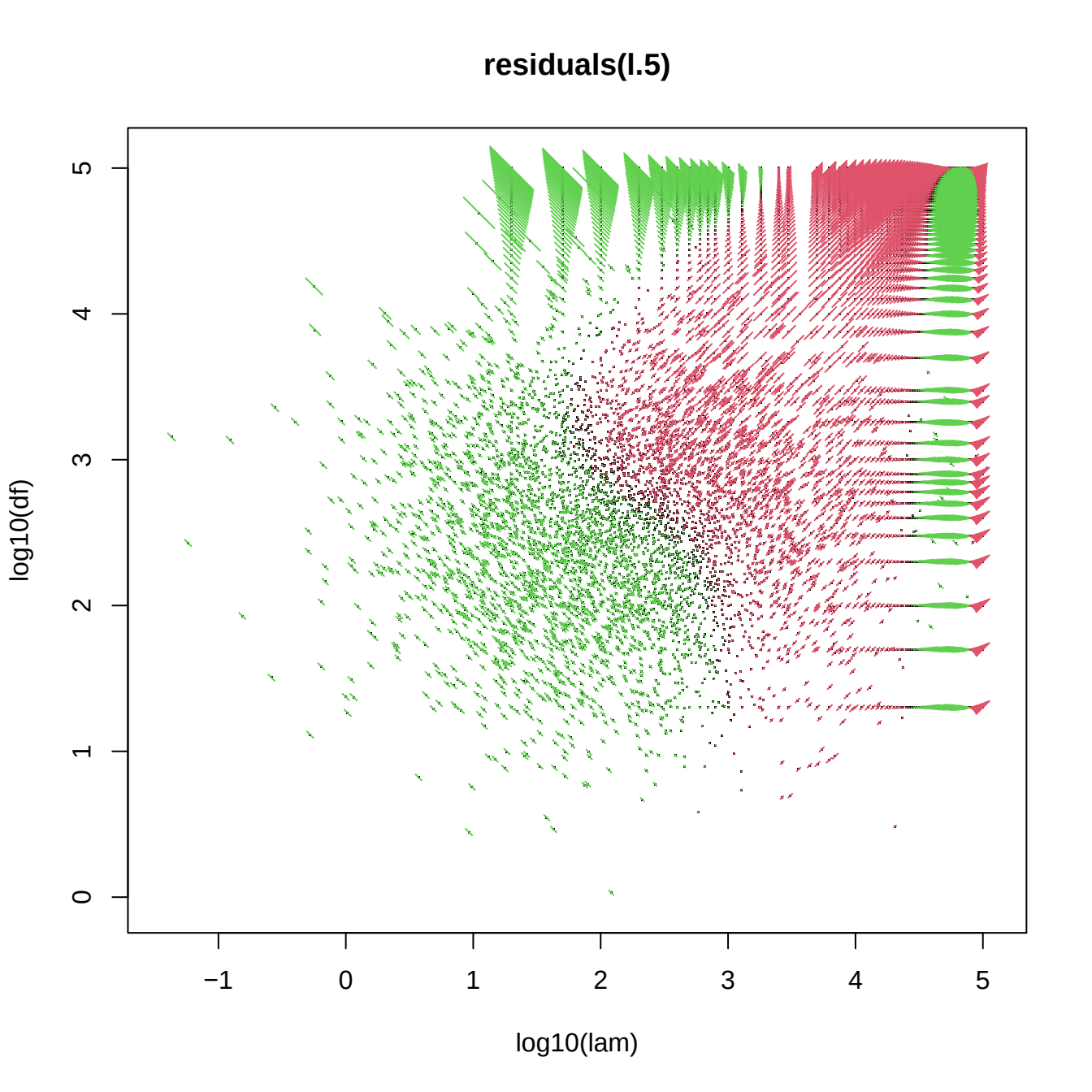

residuals(gam2.)
df
0
500
1000
1500
0
20
40
60
80
100
120
ncp

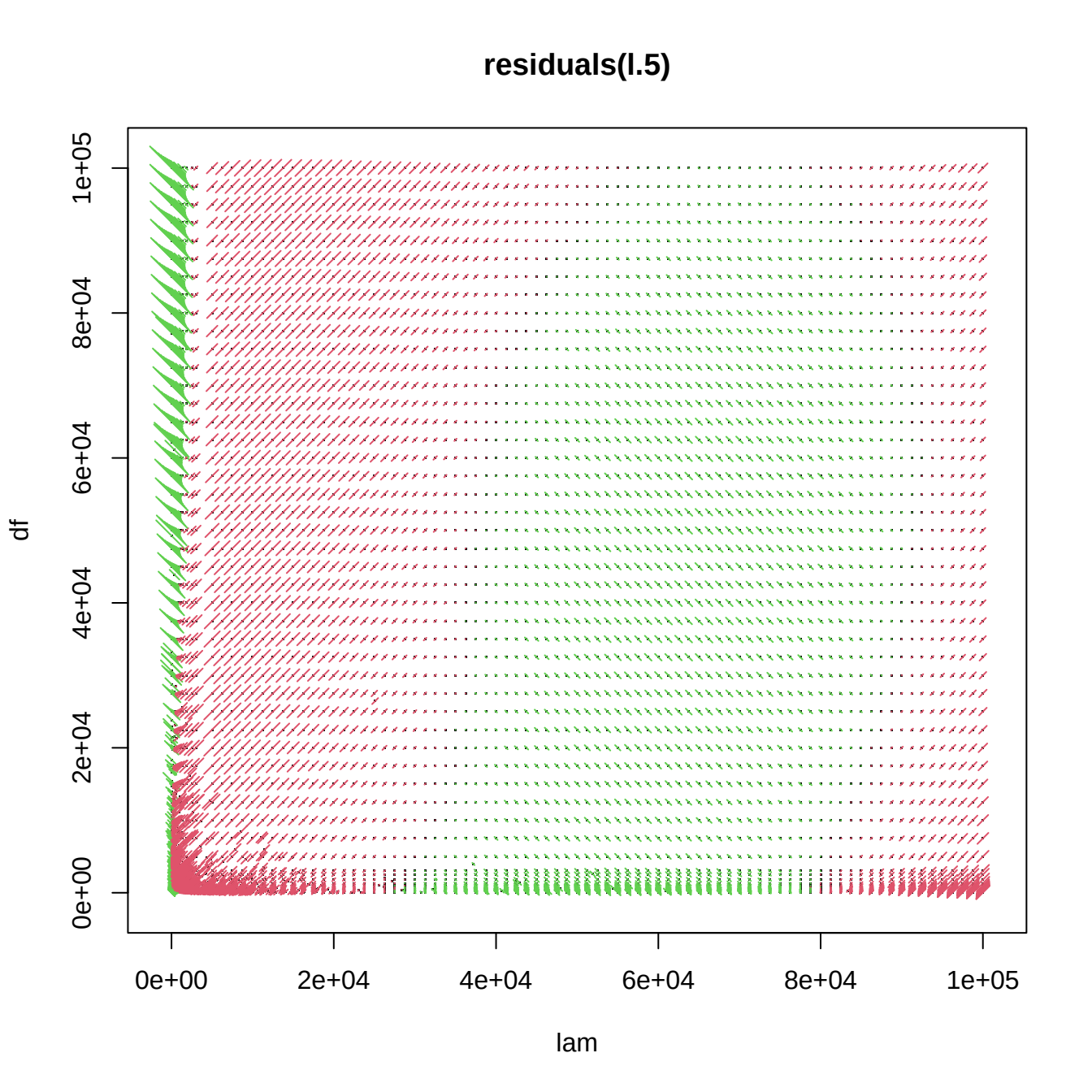

fitted(lm3)
fitted(gam2.)
10
20
30
40
50
60
70

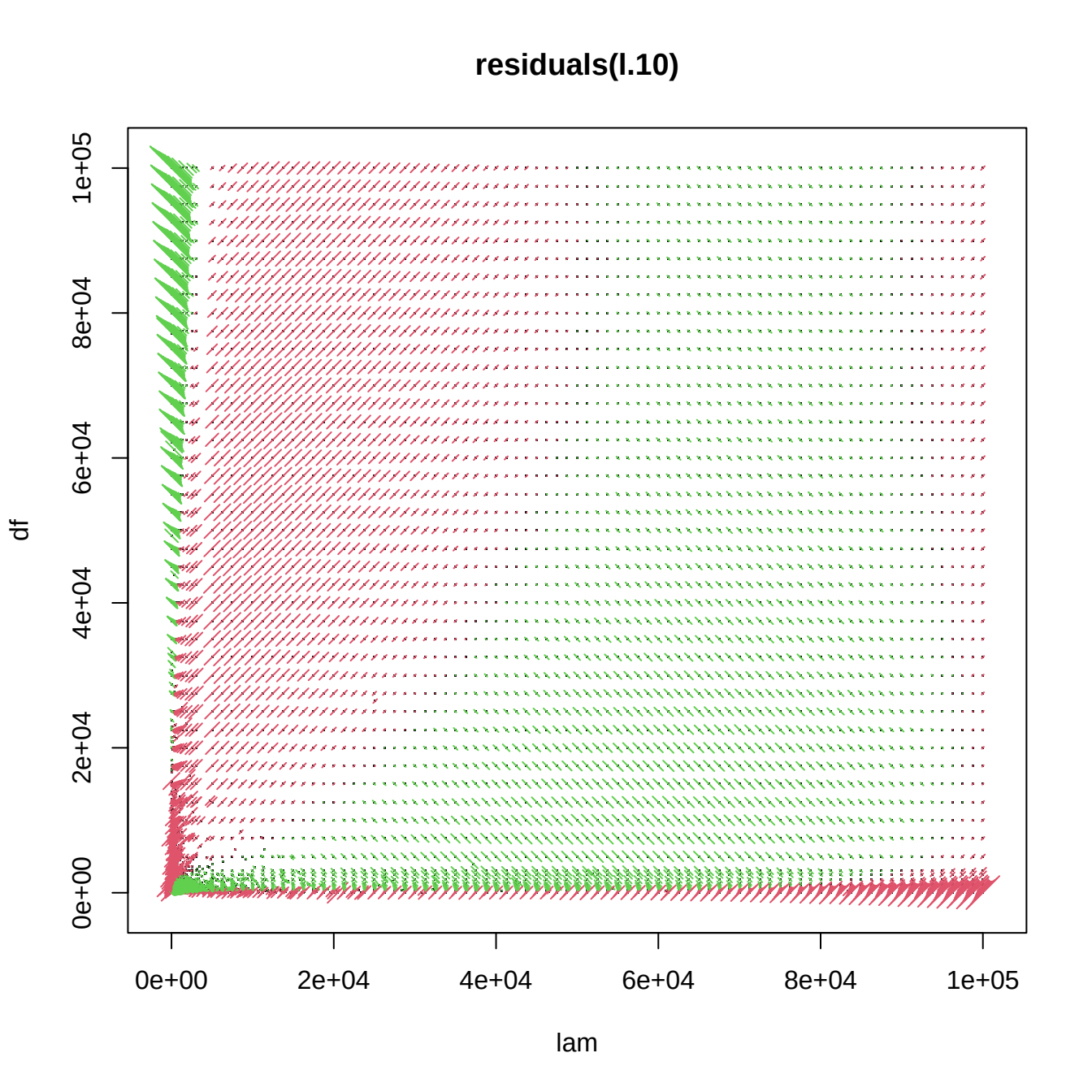

df
1e+00
1e+01
1e+02
1e+03
1e+04
1e+05
1e−01
1e+00
1e+01
1e+02
1e+03
1e+04
1e+05
lam

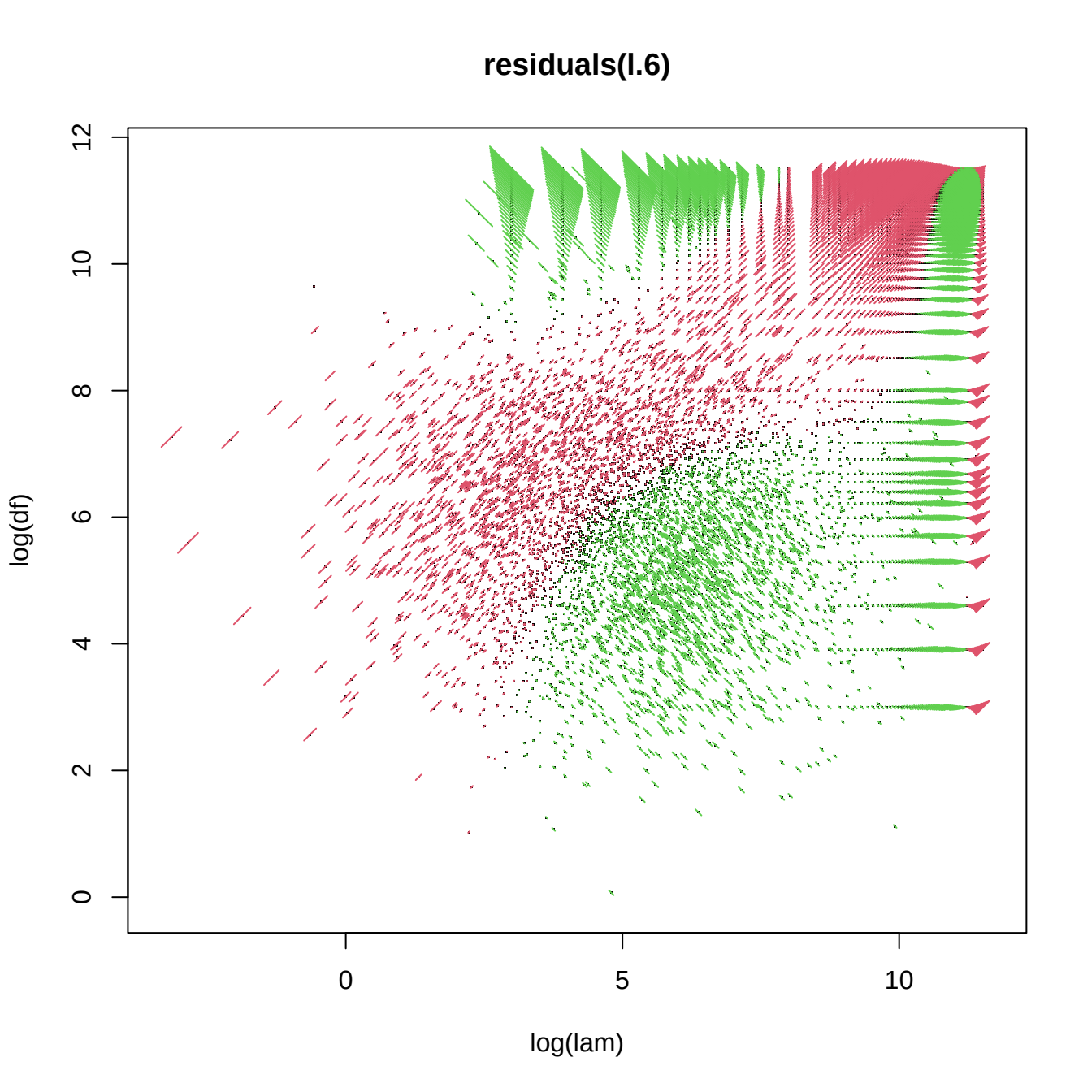

df
lam
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
0
50000
100000
150000

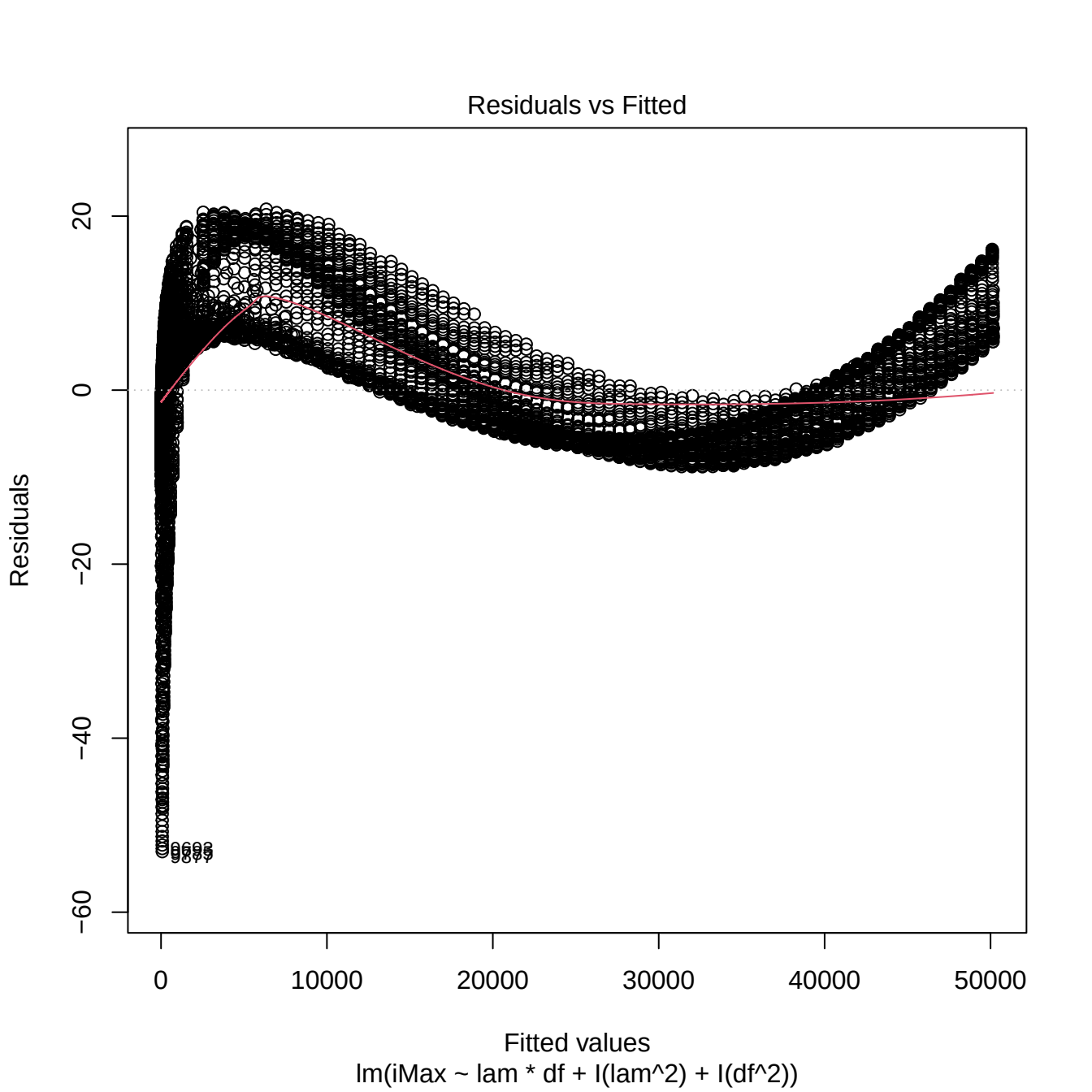

residuals(l.15)
df
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
lam
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05

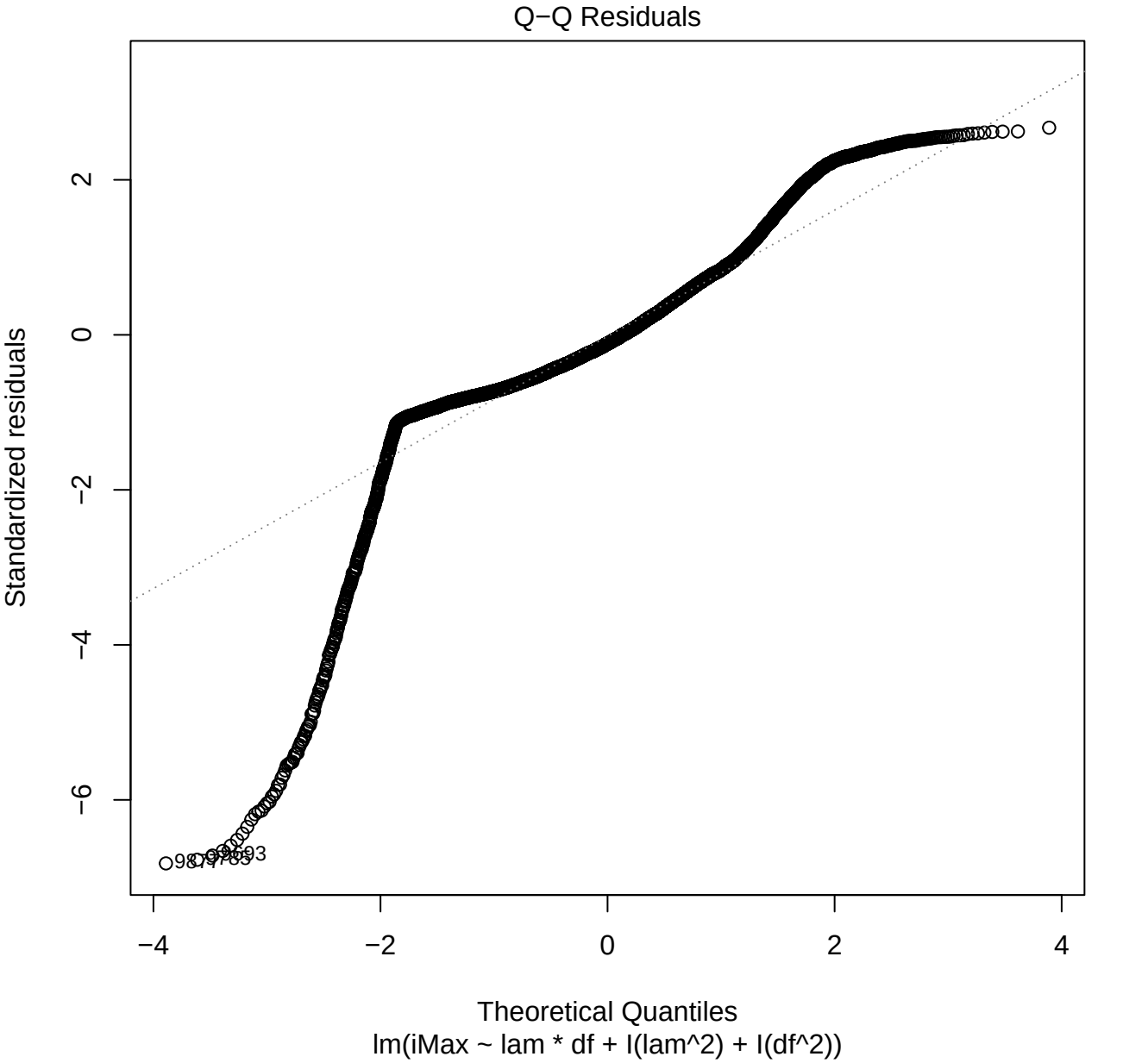

residuals(l.5)
log10(df)
log10(lam)
0
1
2
3
4
5
−1
0
1
2
3
4
5

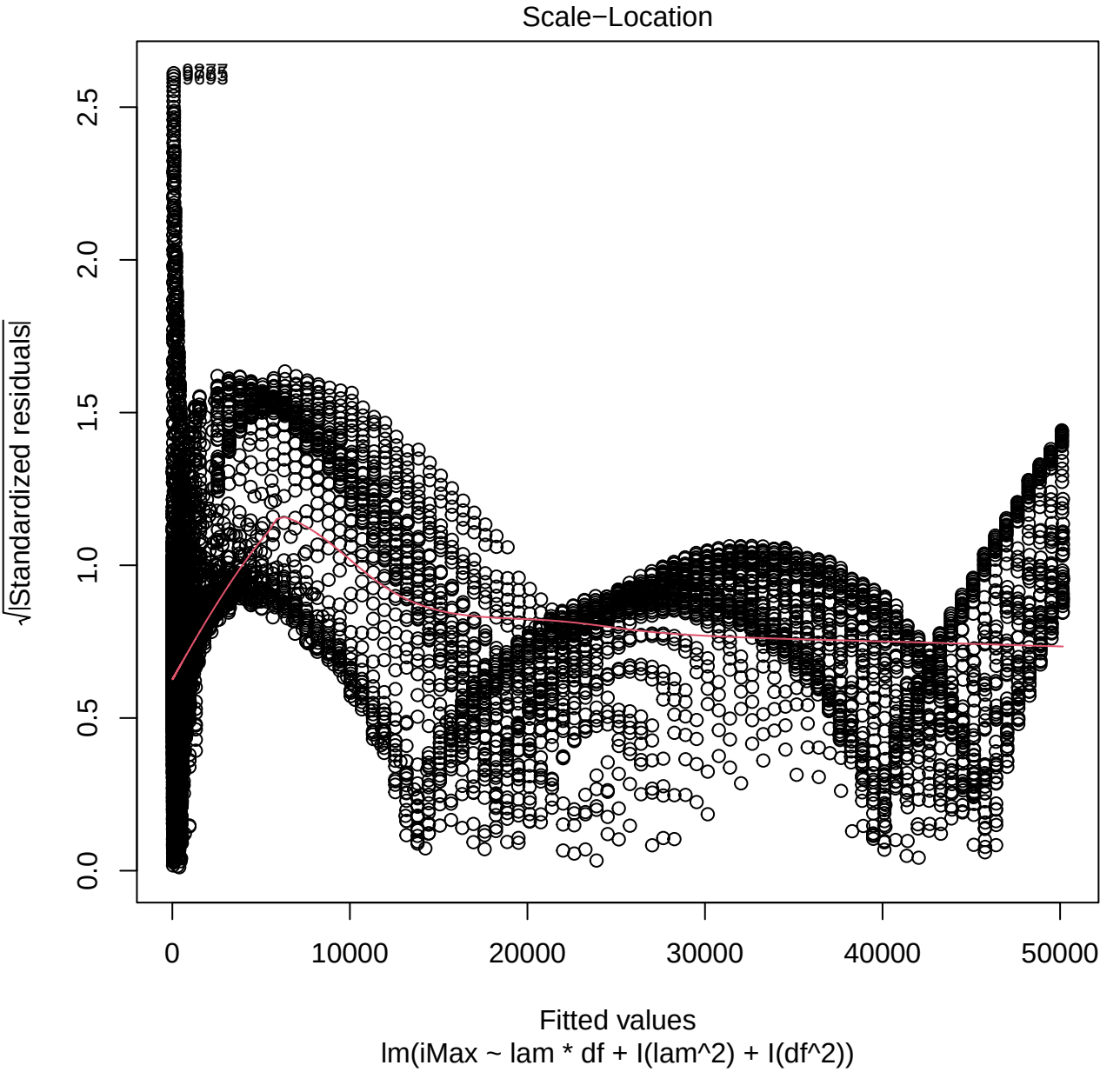

residuals(l.5)
df
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
lam
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05

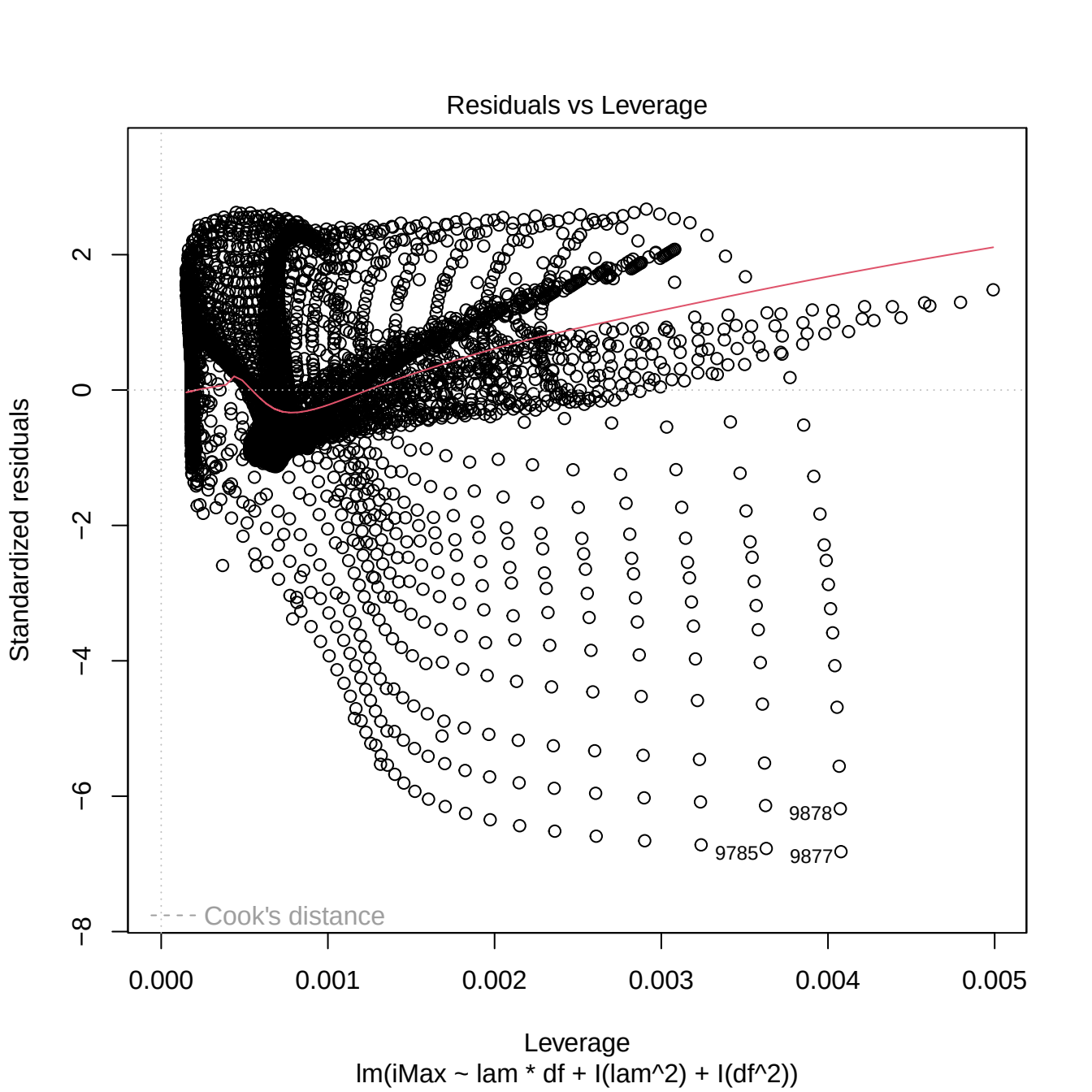

residuals(l.10)
df
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
lam
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05

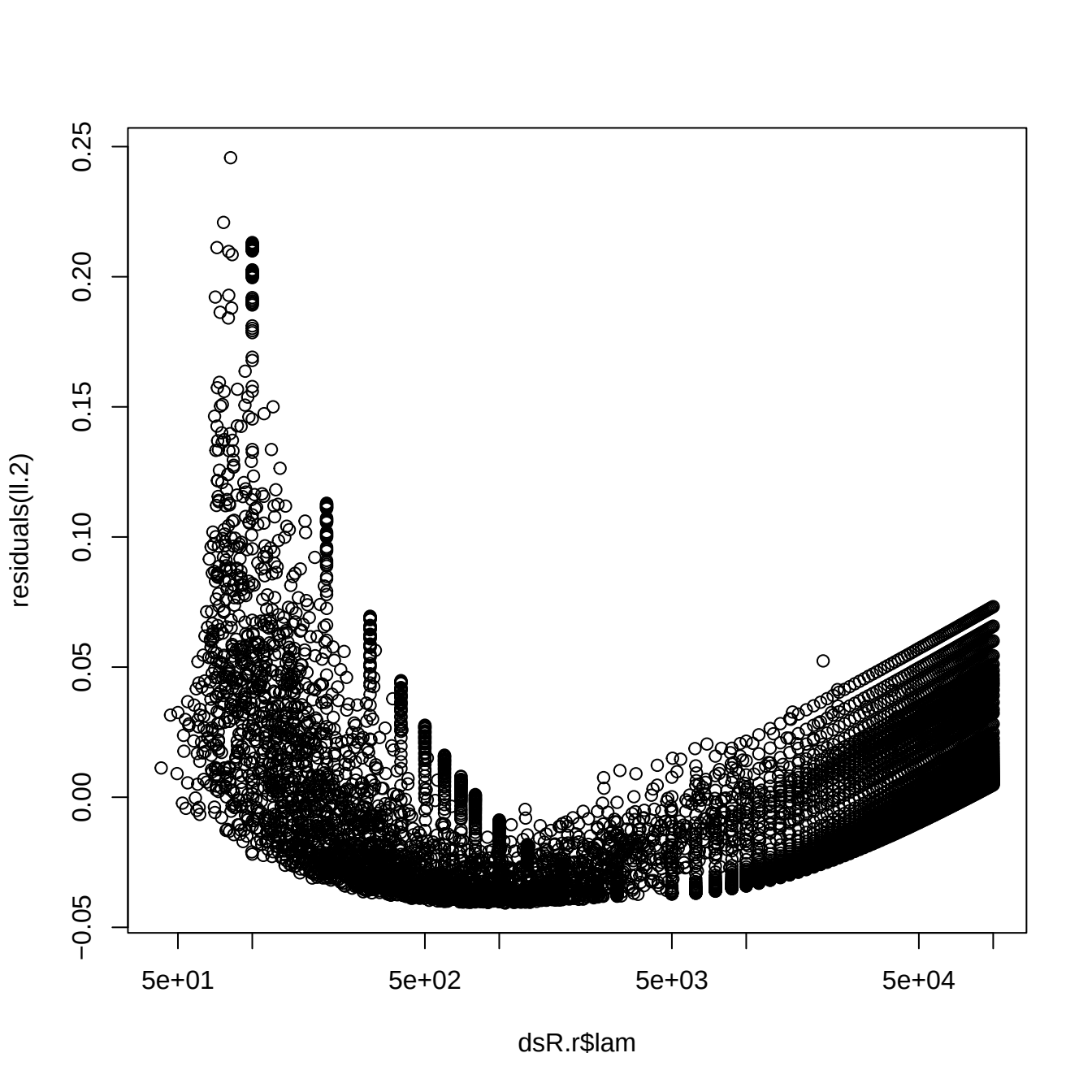

residuals(l.6)
log(df)
log(lam)
0
2
4
6
8
10
12
0
5
10

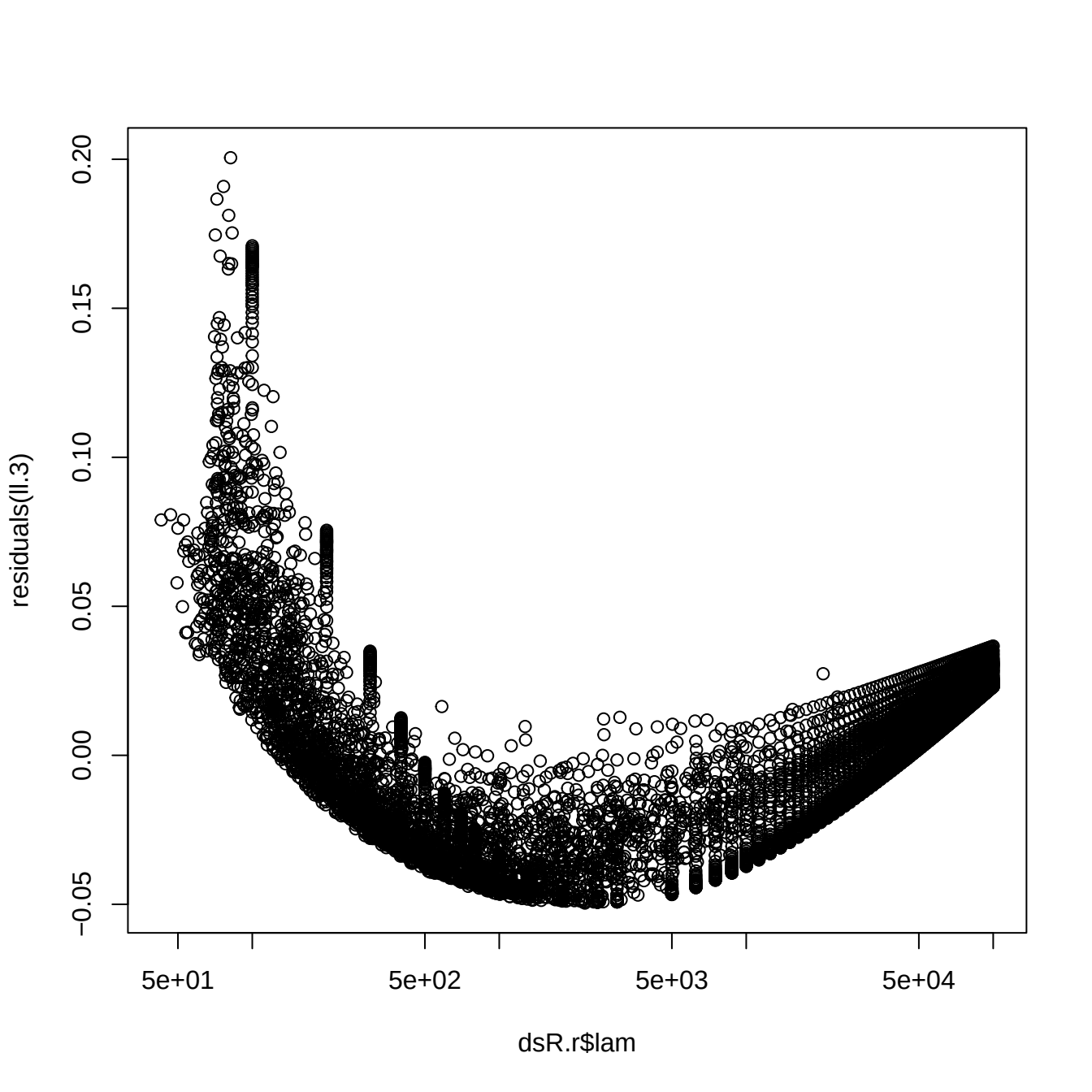

Residuals vs Fitted
Residuals
20
0
−20
−40
−60
0
10000
20000
30000
40000
50000
Fitted values
lm(iMax ~ lam * df + I(lam^2) + I(df^2))

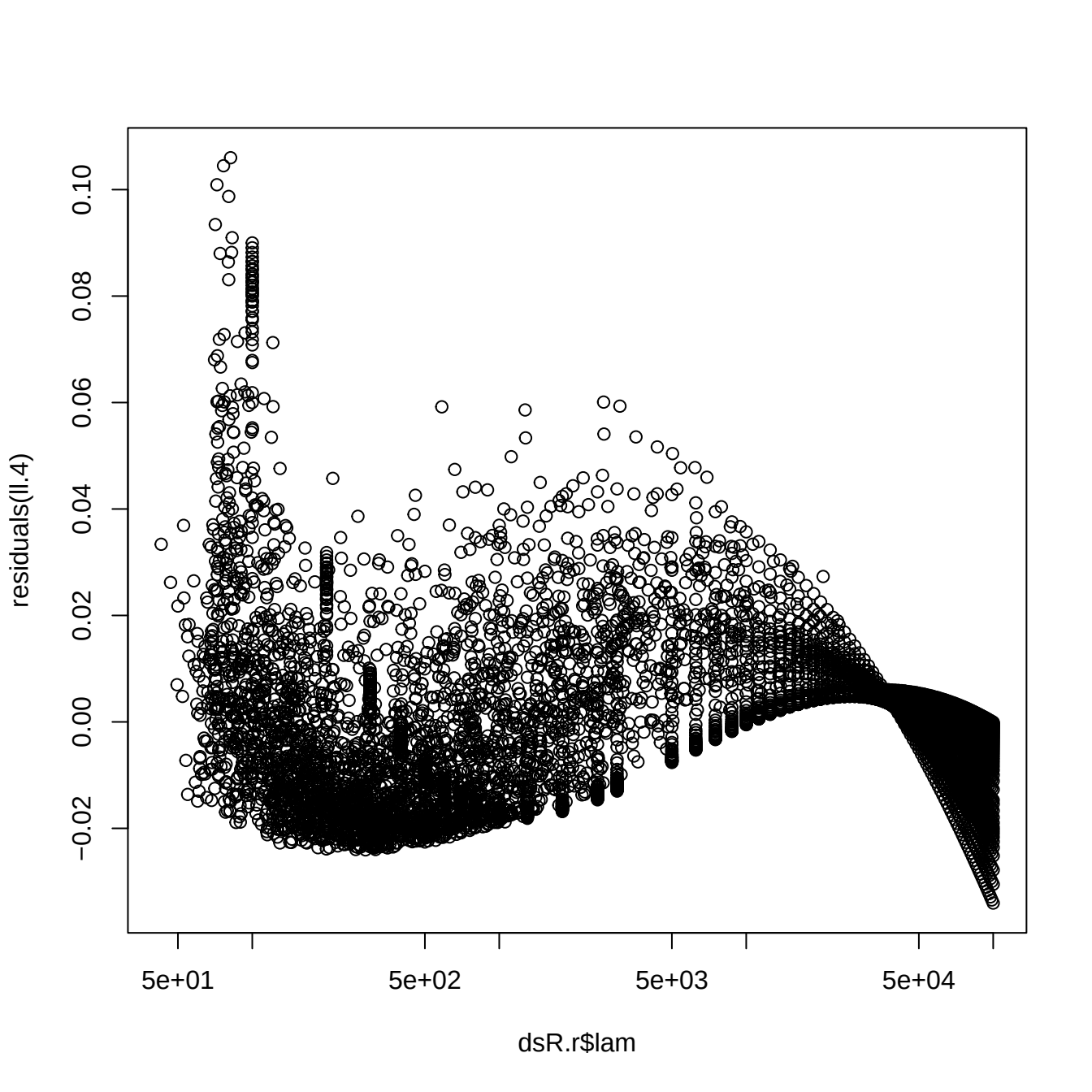

Q−Q Residuals
Standardized residuals
2
0
−2
−4
−6
−4
−2
0
2
4
Theoretical Quantiles
lm(iMax ~ lam * df + I(lam^2) + I(df^2))

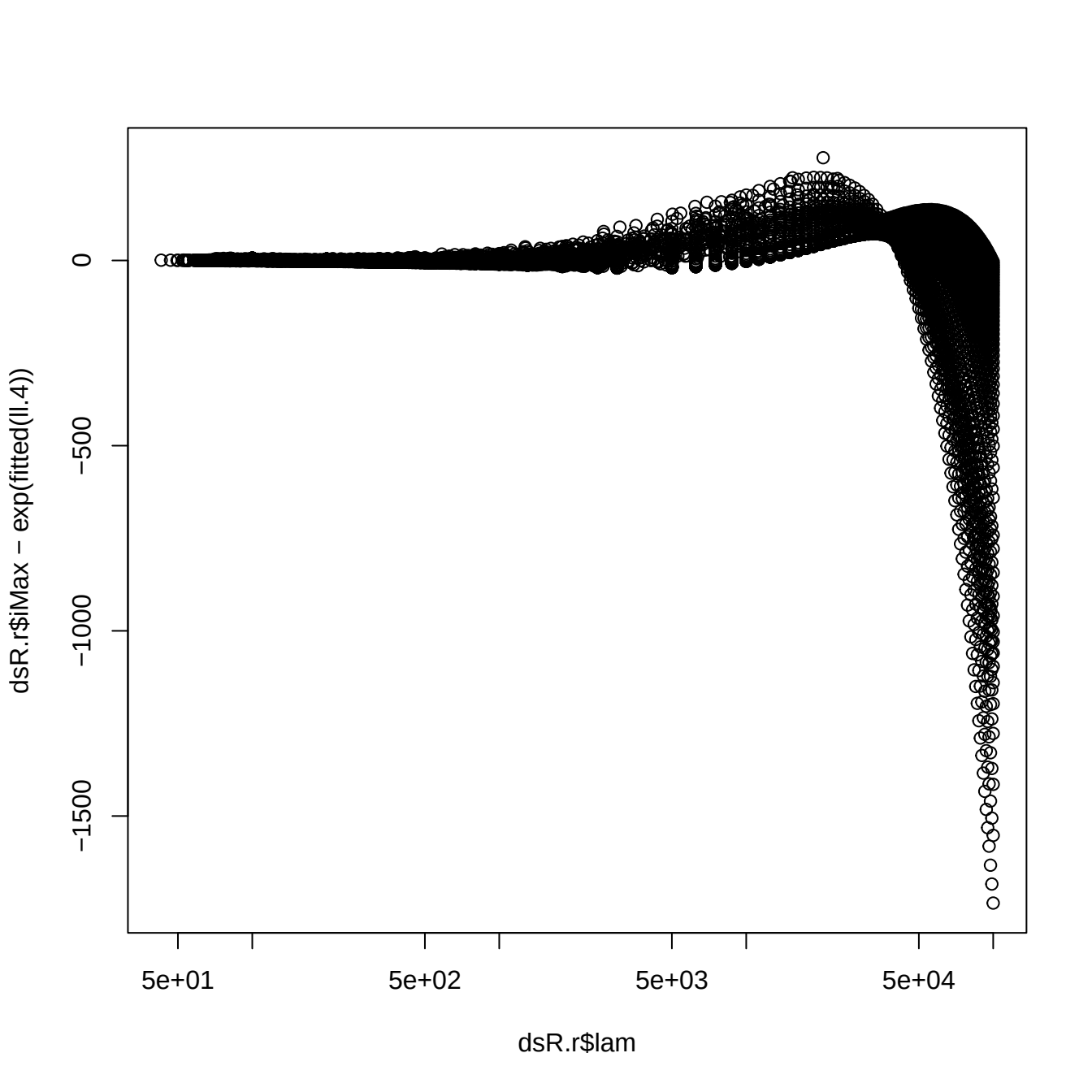

Scale−Location
√|Standardized residuals|
0.0
0.5
1.0
1.5
2.0
2.5
0
10000
20000
30000
40000
50000
Fitted values
lm(iMax ~ lam * df + I(lam^2) + I(df^2))

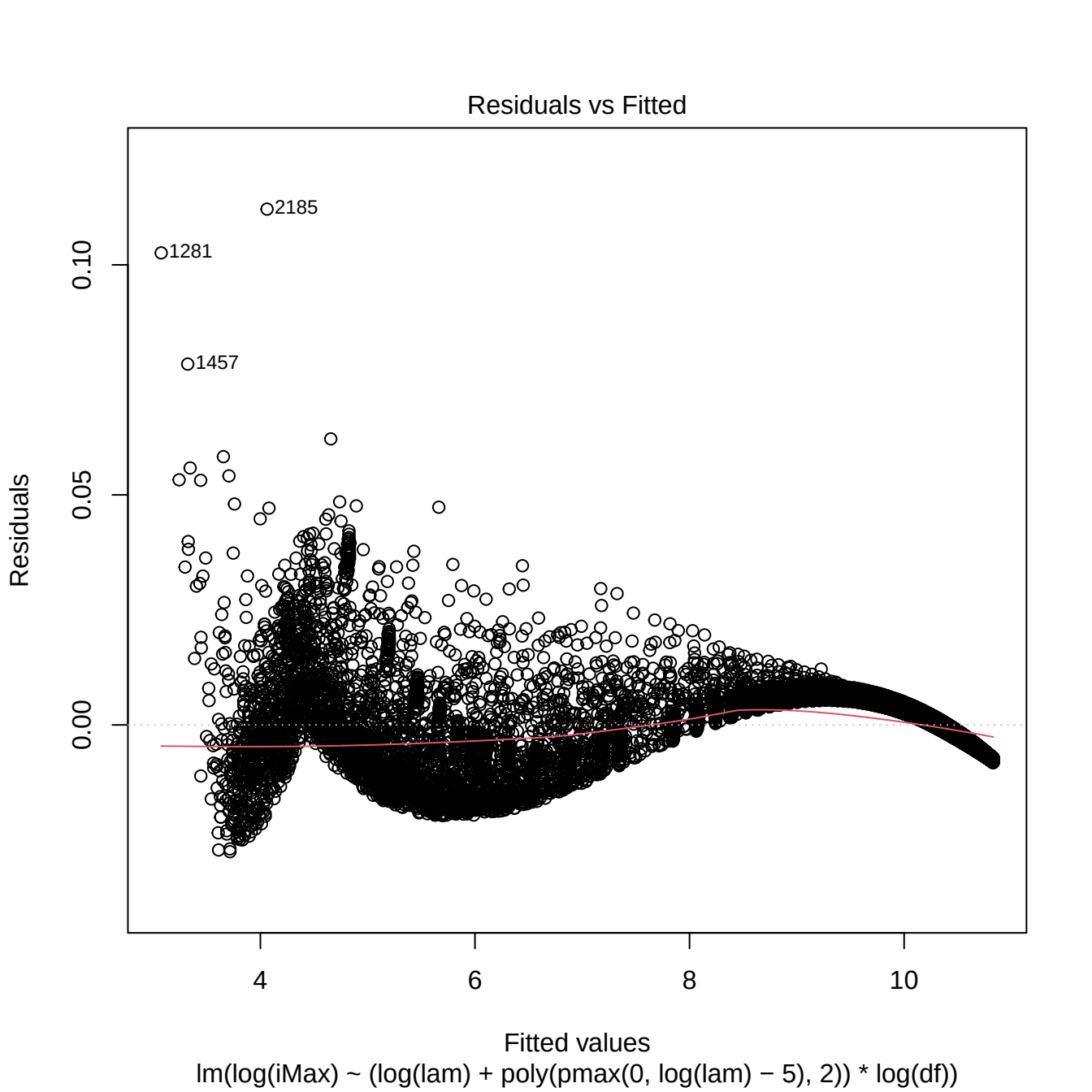

Residuals vs Leverage
Standardized residuals
2
0
−2
−4
−6
−8
0.000
0.001
0.002
0.003
0.004
0.005
9878
9785
9877
Cook's distance
Leverage
lm(iMax ~ lam * df + I(lam^2) + I(df^2))

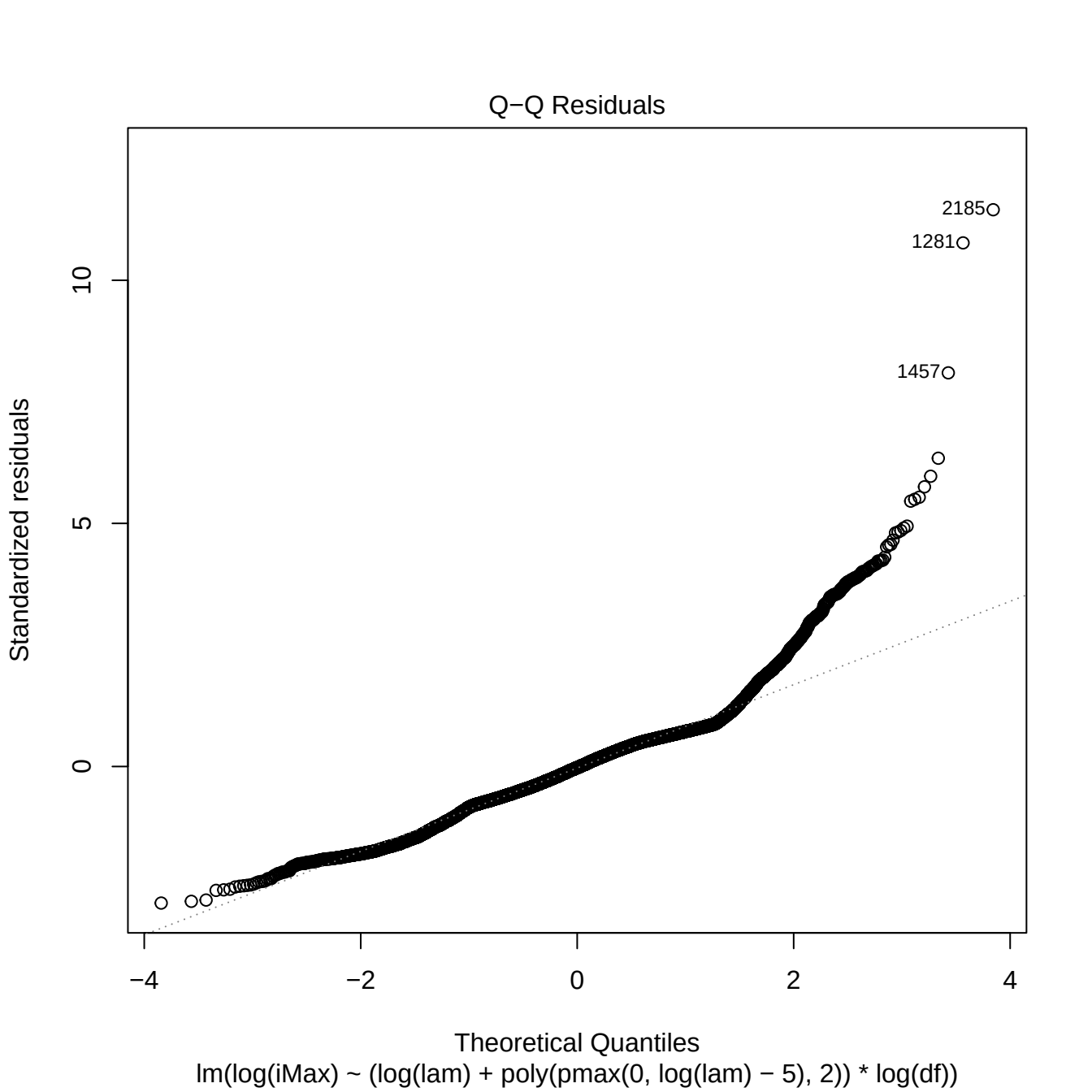

residuals(ll.2)
0.25
0.20
0.15
0.10
0.05
0.00
−0.05
5e+01
5e+02
5e+03
5e+04
dsR.r$lam

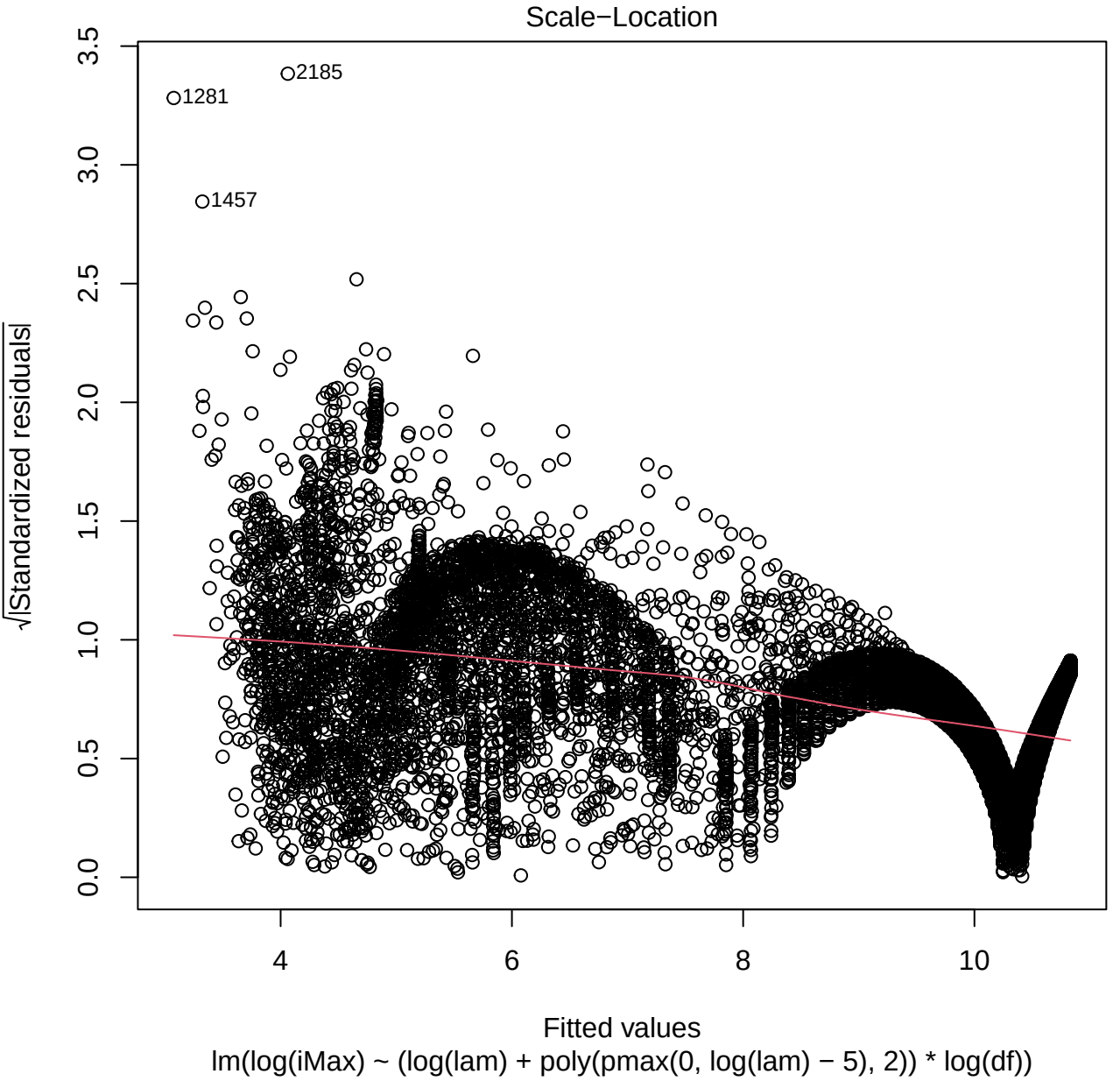

residuals(ll.3)
0.20
0.15
0.10
0.05
0.00
−0.05
5e+01
5e+02
5e+03
5e+04
dsR.r$lam

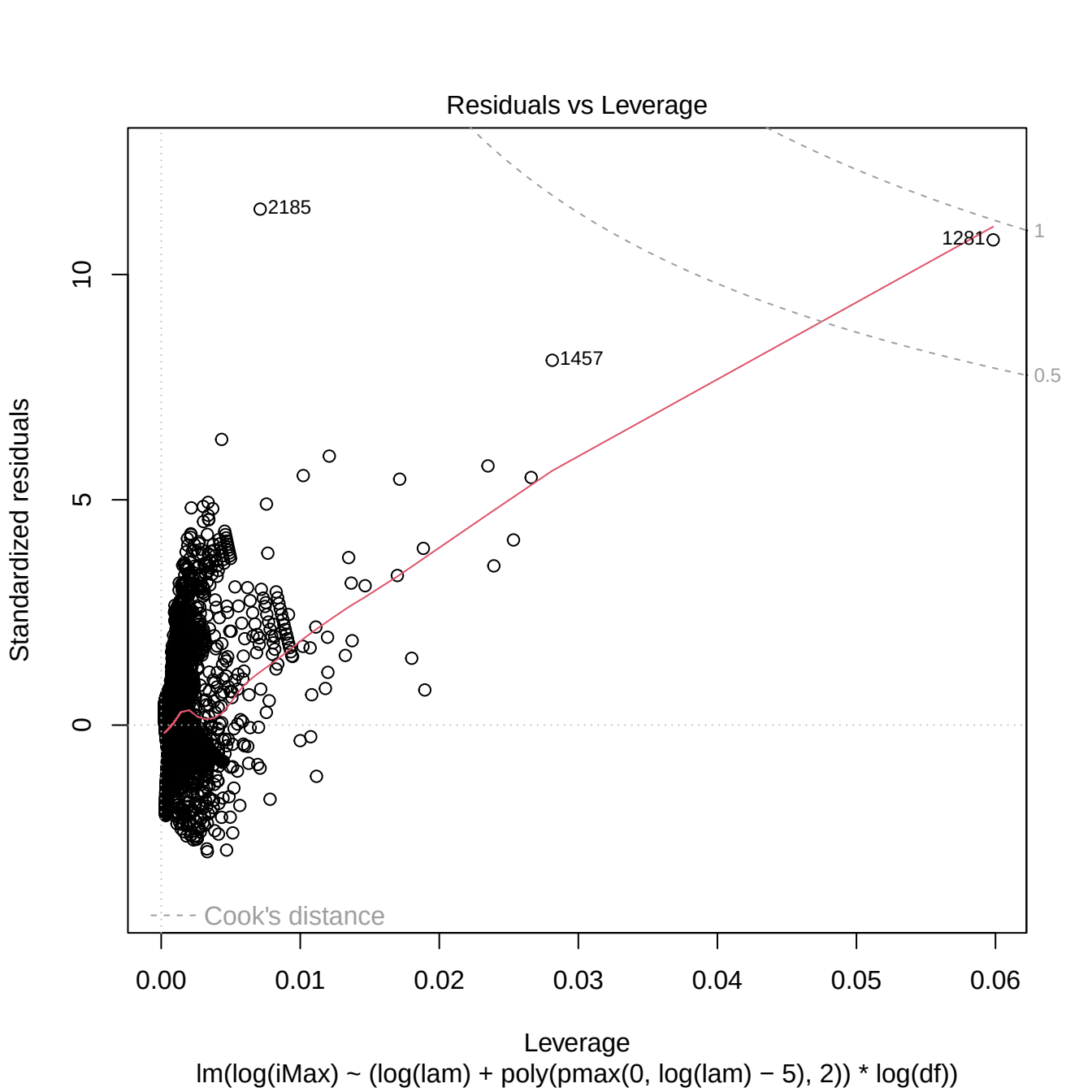

residuals(ll.4)
0.10
0.08
0.06
0.04
0.02
0.00
−0.02
5e+01
5e+02
5e+03
5e+04
dsR.r$lam

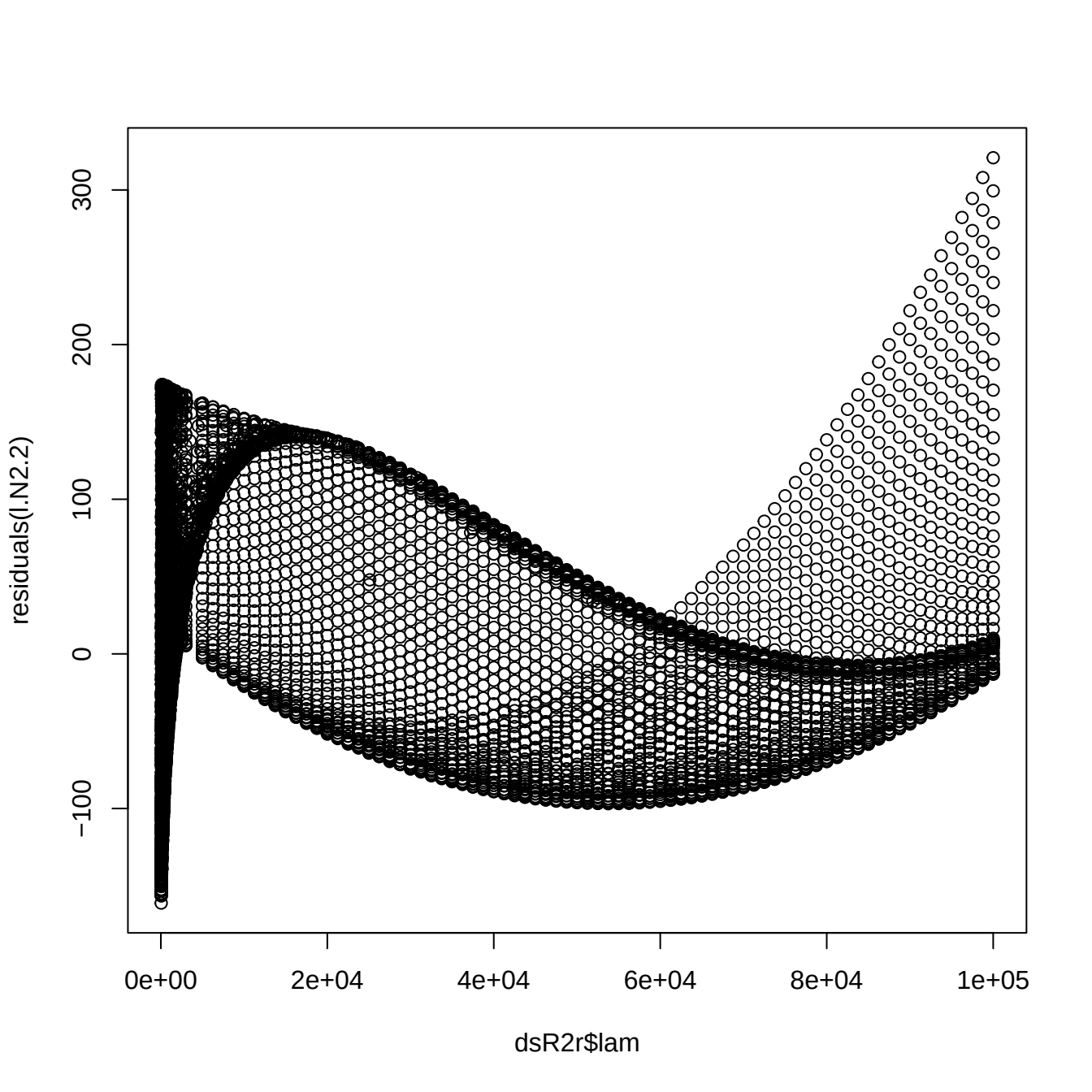

dsR.r$iMax − exp(fitted(ll.4))
0
−500
−1000
−1500
5e+01
5e+02
5e+03
5e+04
dsR.r$lam

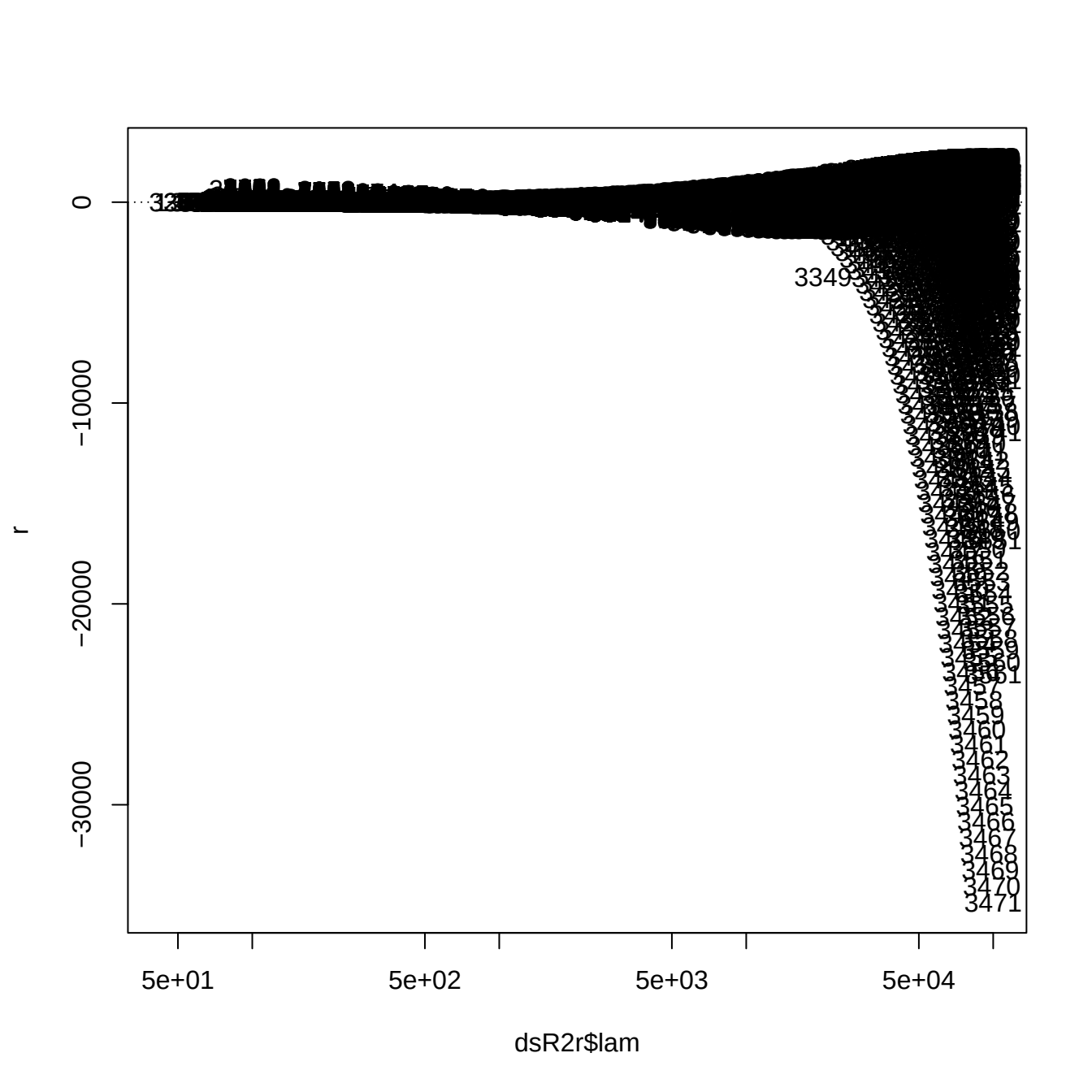

Residuals vs Fitted
2185
1281
1457
0.10
0.05
0.00
Residuals
4
6
8
10
Fitted values
lm(log(iMax) ~ (log(lam) + poly(pmax(0, log(lam) − 5), 2)) * log(df))

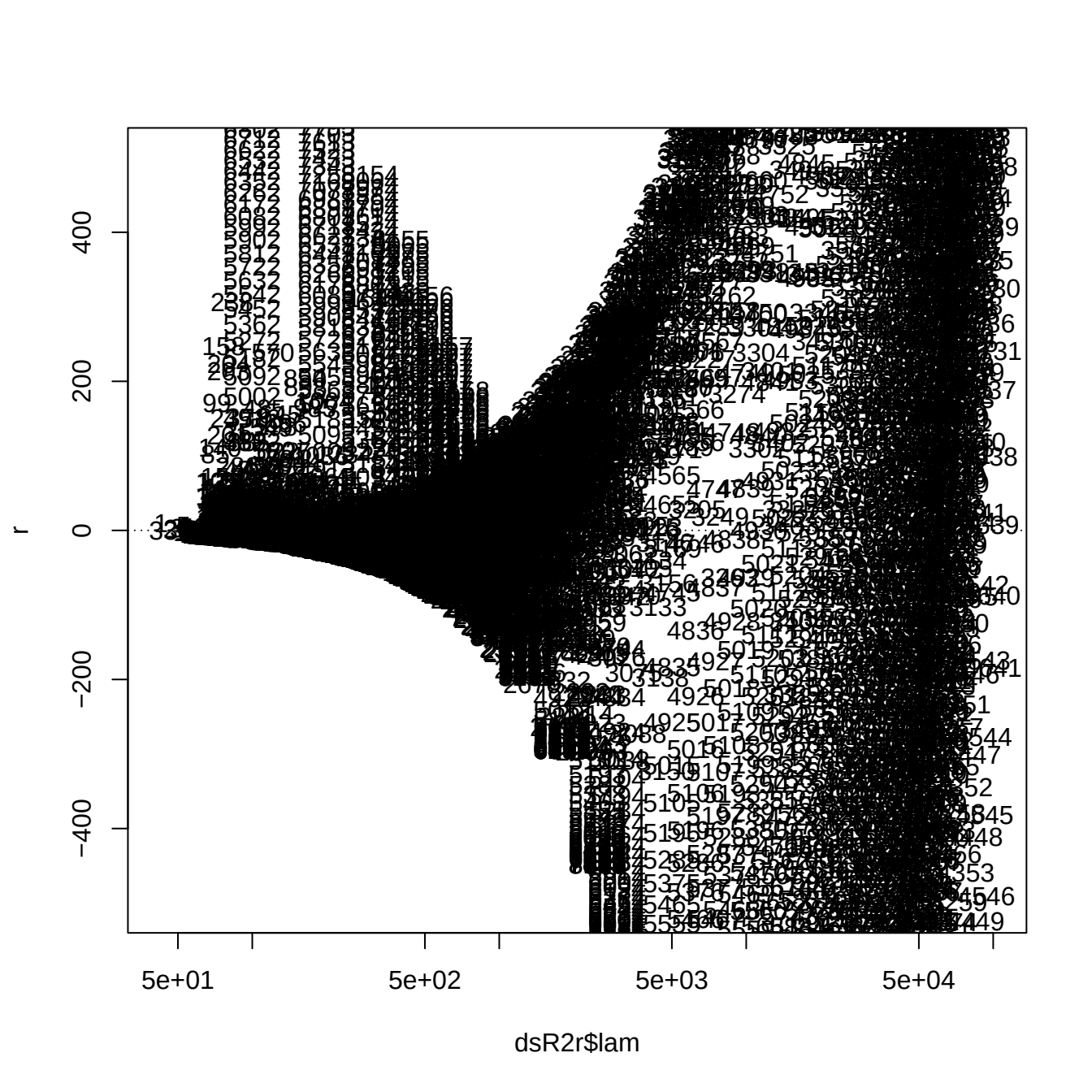

Q−Q Residuals
2185
1281
1457
Standardized residuals
10
5
0
−4
−2
0
2
4
Theoretical Quantiles
lm(log(iMax) ~ (log(lam) + poly(pmax(0, log(lam) − 5), 2)) * log(df))

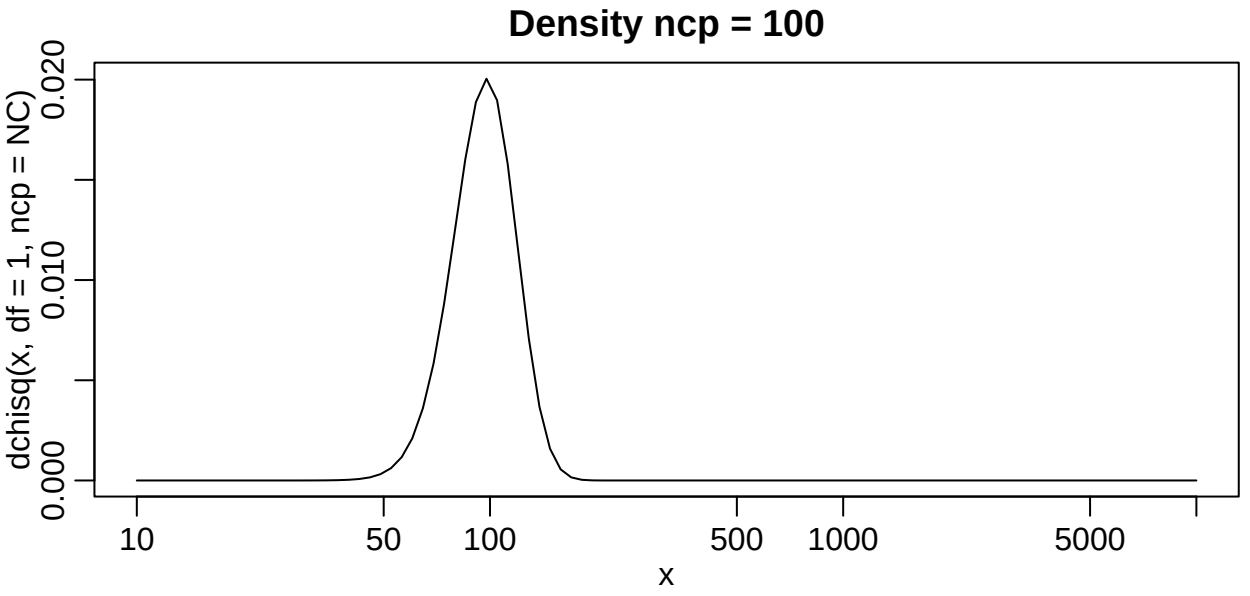

Scale−Location
2185
1281
1457
√|Standardized residuals|
0.0
0.5
1.0
1.5
2.0
2.5
3.0
3.5
4
6
8
10
Fitted values
lm(log(iMax) ~ (log(lam) + poly(pmax(0, log(lam) − 5), 2)) * log(df))

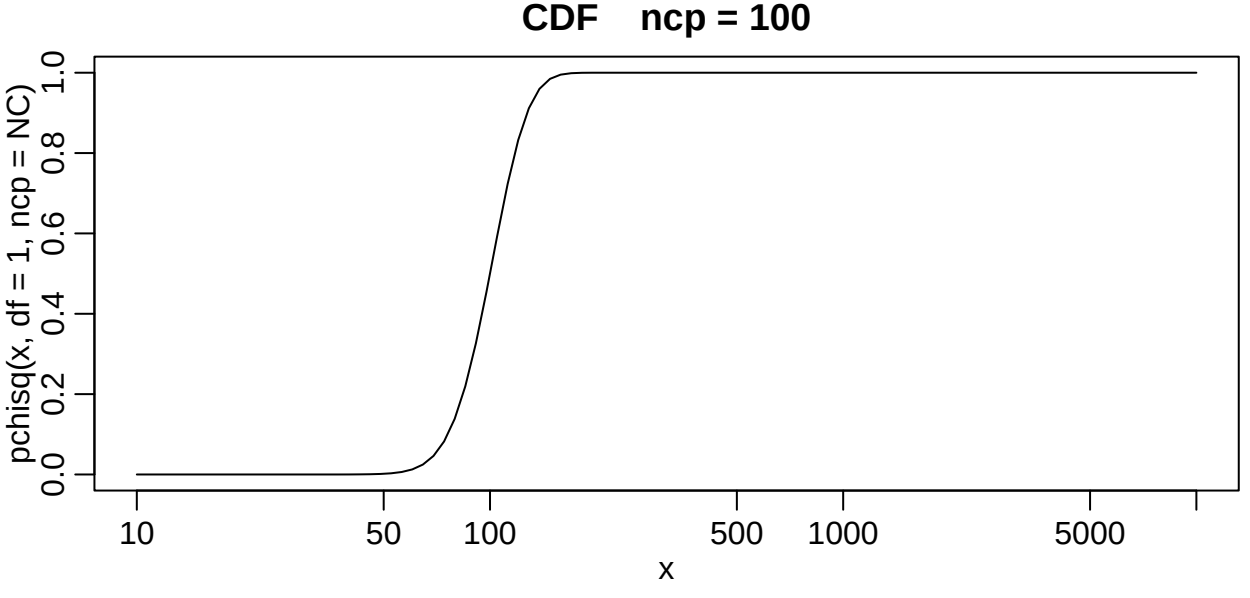

Residuals vs Leverage
2185
1281
1457
1
0.5
Cook's distance
Standardized residuals
10
5
0
0.00
0.01
0.02
0.03
0.04
0.05
0.06
Leverage
lm(log(iMax) ~ (log(lam) + poly(pmax(0, log(lam) − 5), 2)) * log(df))

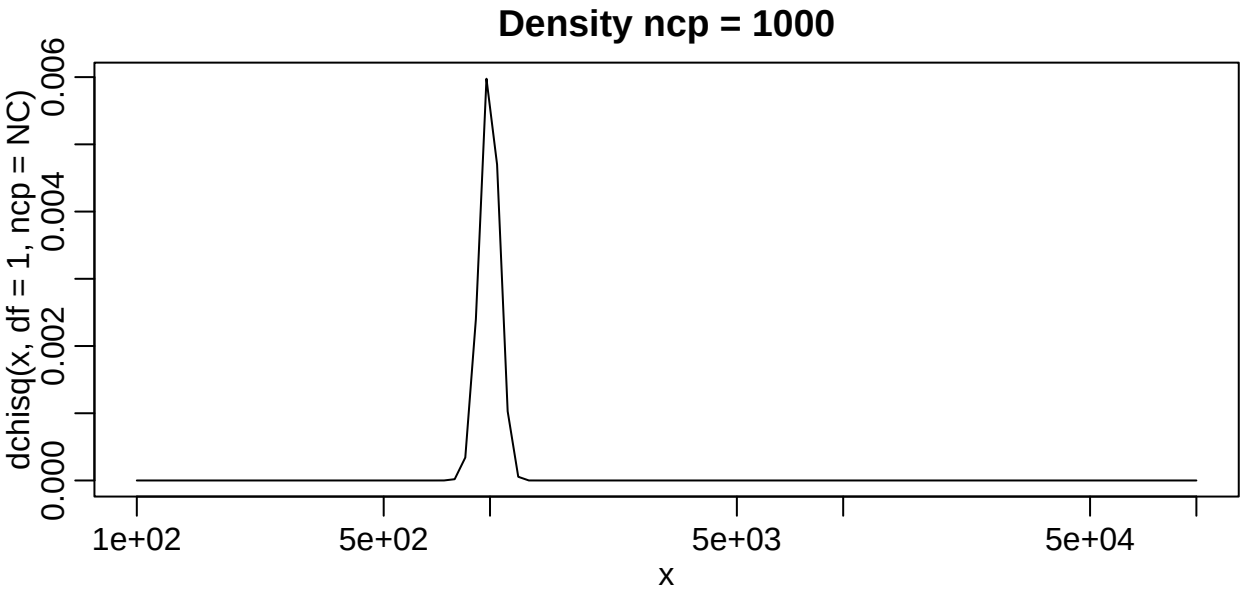

residuals(l.N2.2)
300
200
100
0
−100
0e+00
2e+04
4e+04
6e+04
8e+04
1e+05
dsR2r$lam

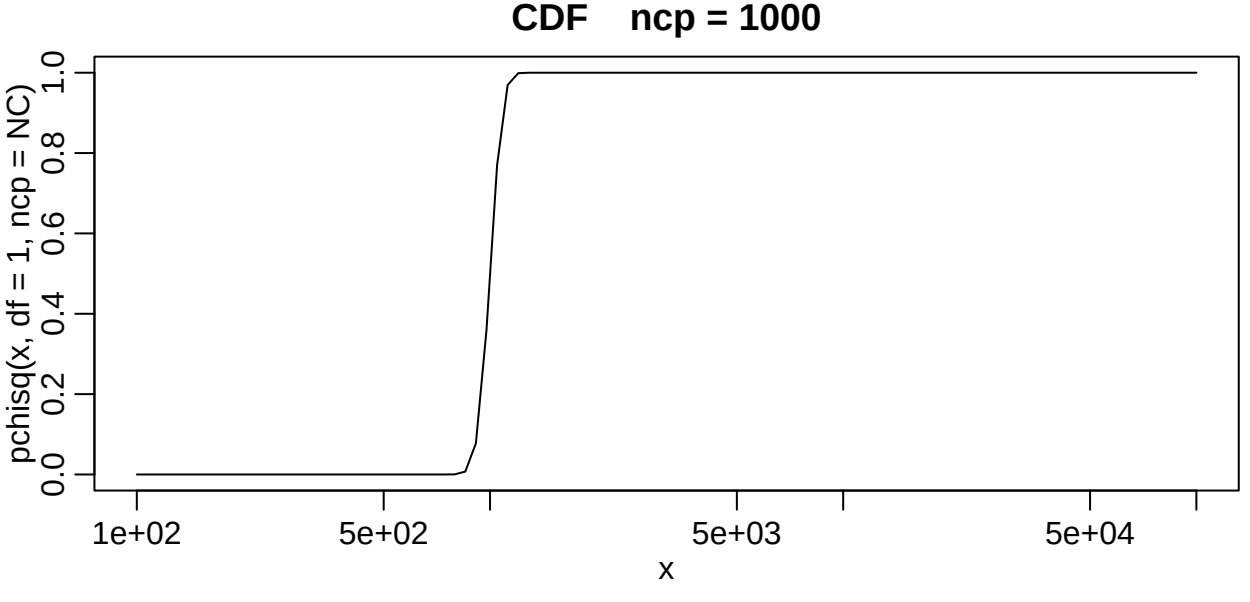

r
0
−10000
−20000
−30000
5e+01
5e+02
5e+03
5e+04
dsR2r$lam

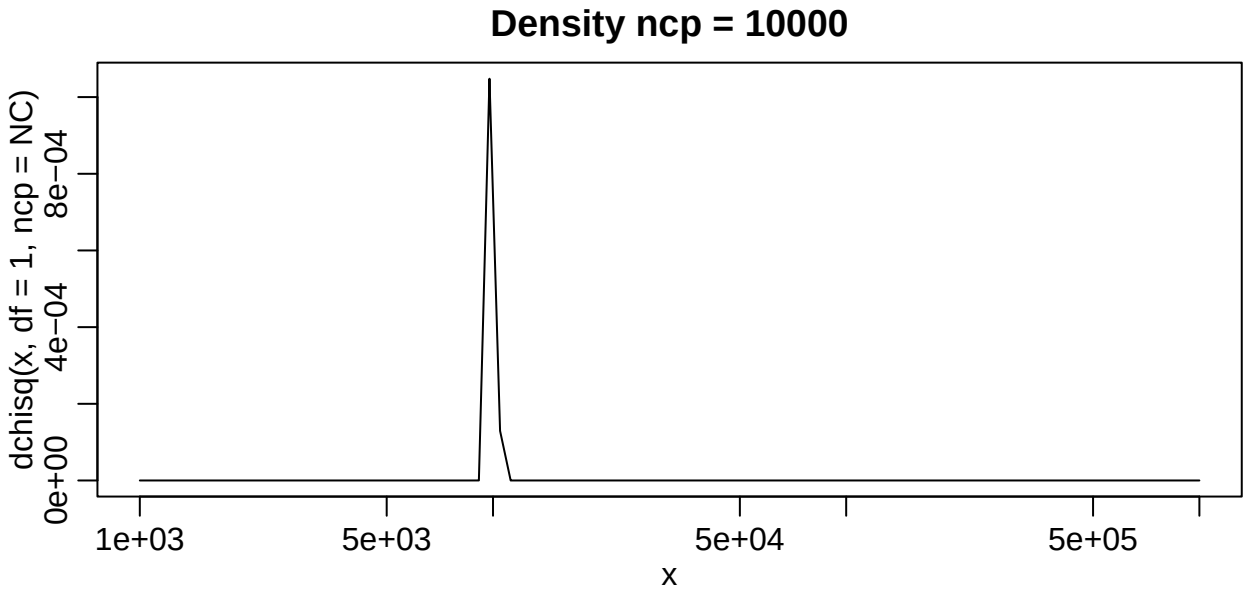

r
400
200
0
−200
−400
5e+01
5e+02
5e+03
5e+04
dsR2r$lam

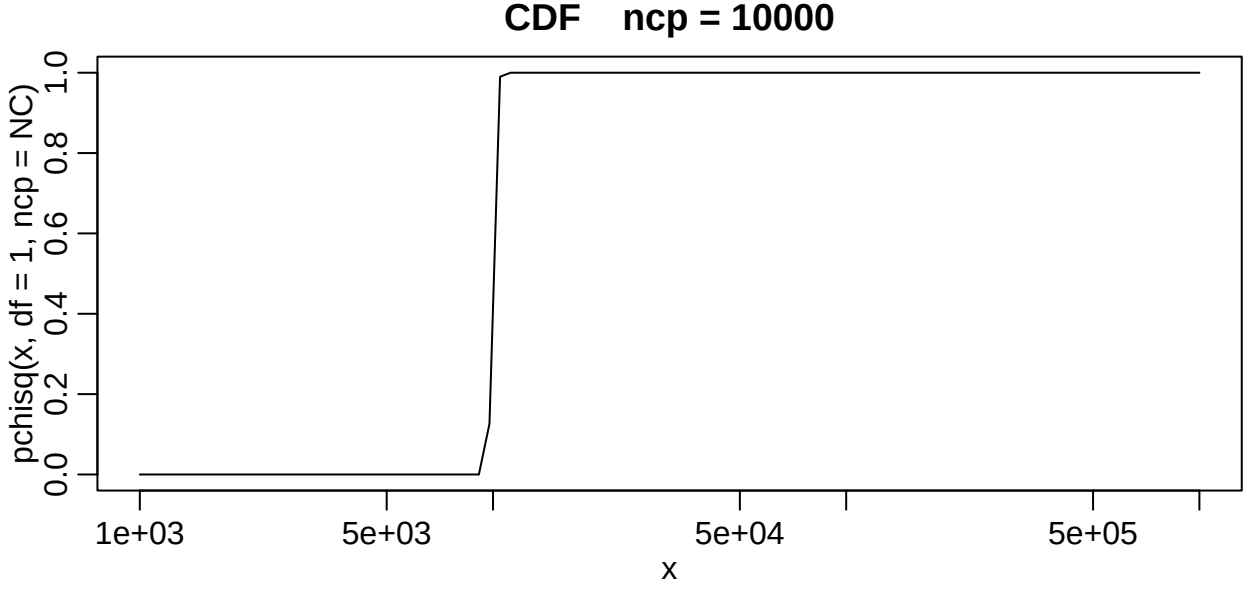

Density ncp = 100
dchisq(x, df = 1, ncp = NC)
0.000
0.010
0.020
10
50
100
500
1000
5000
x

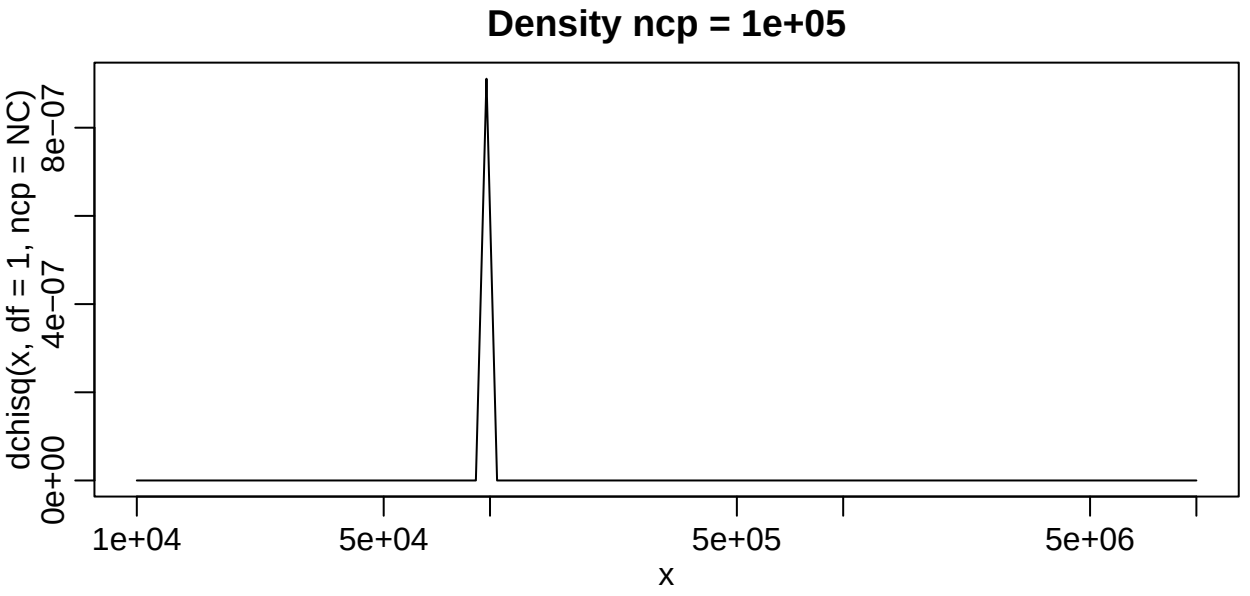

CDF ncp = 100
pchisq(x, df = 1, ncp = NC)
0.0
0.2
0.4
0.6
0.8
1.0
10
50
100
500
1000
5000
x

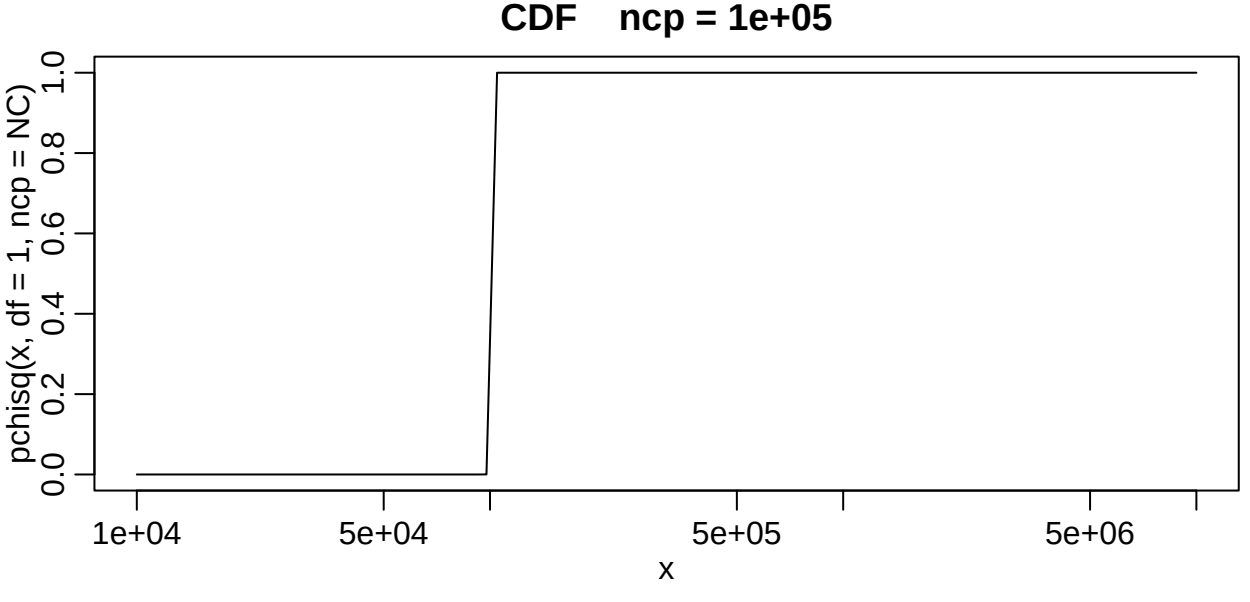

Density ncp = 1000
dchisq(x, df = 1, ncp = NC)
0.000
0.002
0.004
0.006
1e+02
5e+02
5e+03
5e+04
x

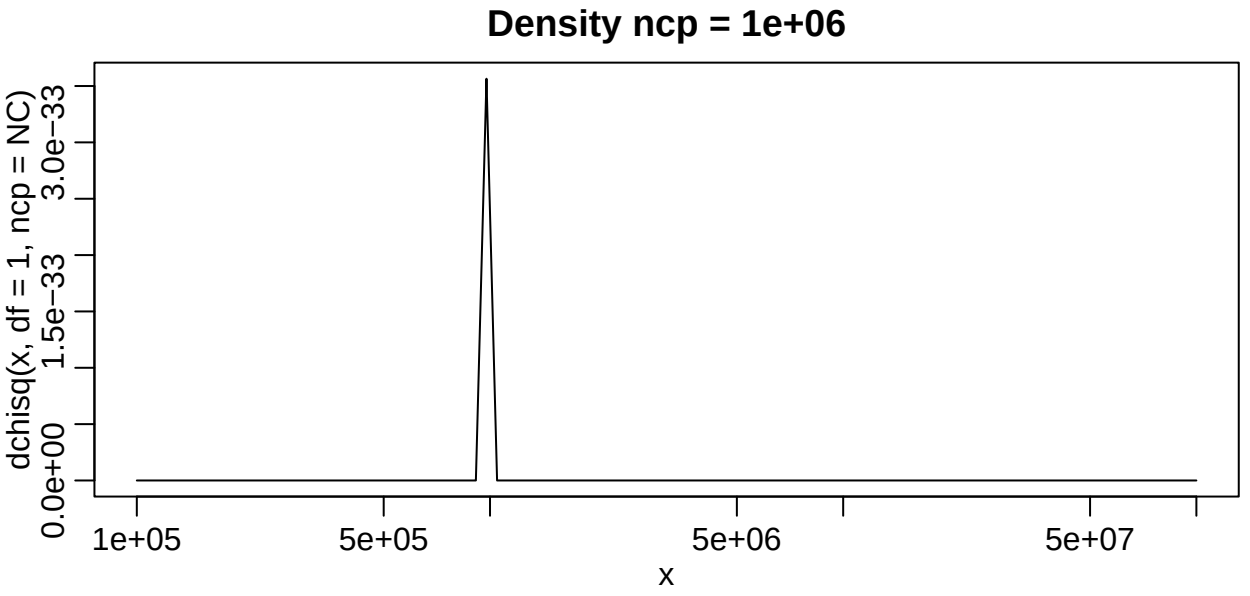

CDF ncp = 1000
pchisq(x, df = 1, ncp = NC)
0.0
0.2
0.4
0.6
0.8
1.0
1e+02
5e+02
5e+03
5e+04
x

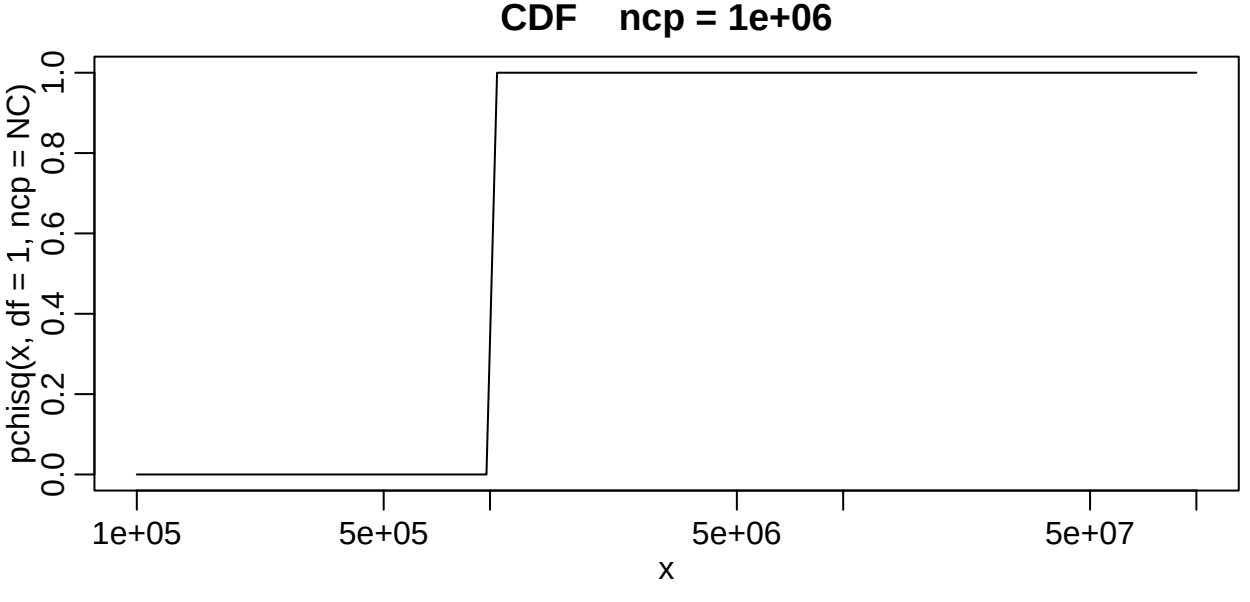

Density ncp = 10000
dchisq(x, df = 1, ncp = NC)
0e+00
4e−04
8e−04
1e+03
5e+03
5e+04
5e+05
x

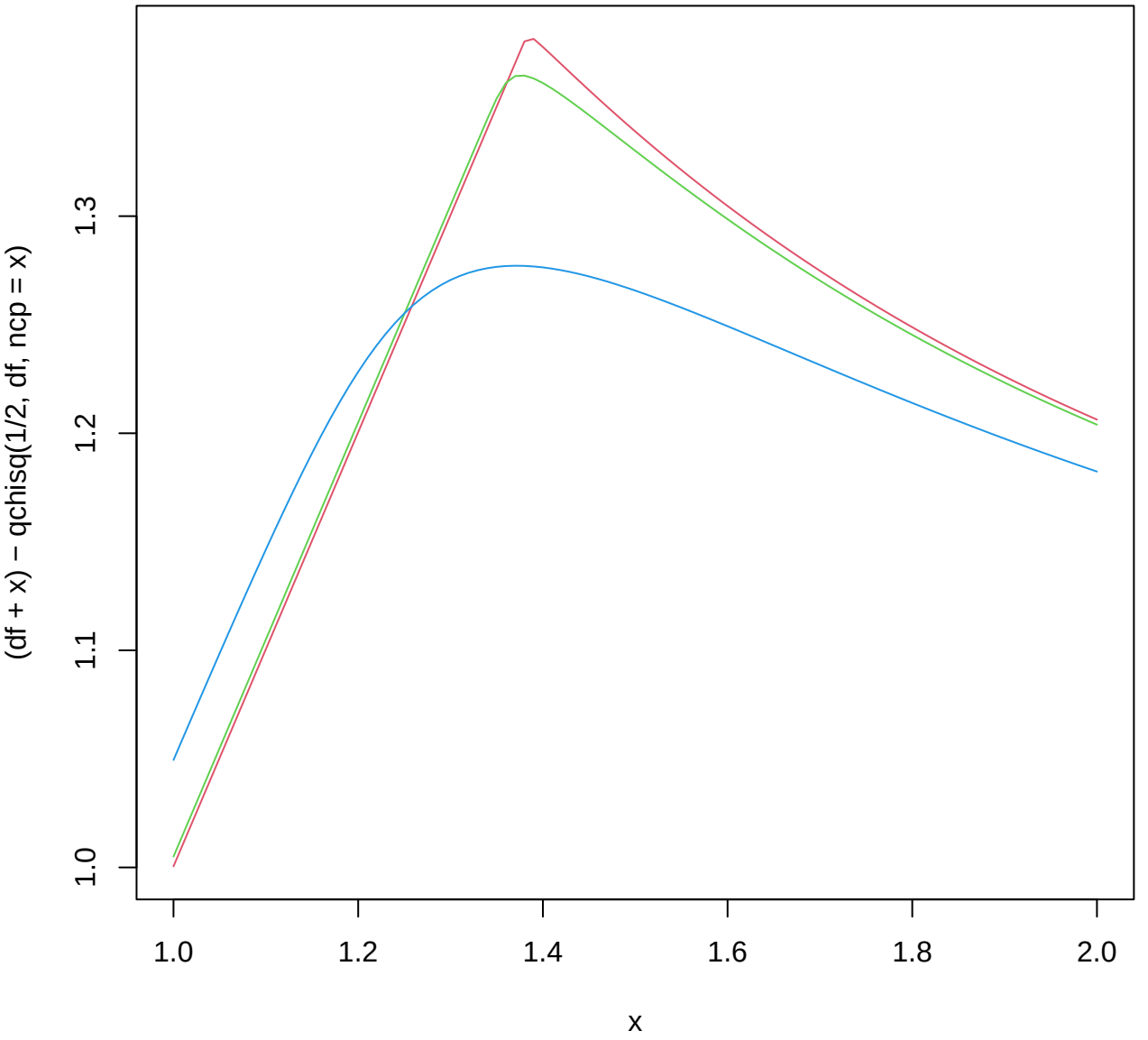

CDF ncp = 10000
pchisq(x, df = 1, ncp = NC)
0.0
0.2
0.4
0.6
0.8
1.0
1e+03
5e+03
5e+04
5e+05
x

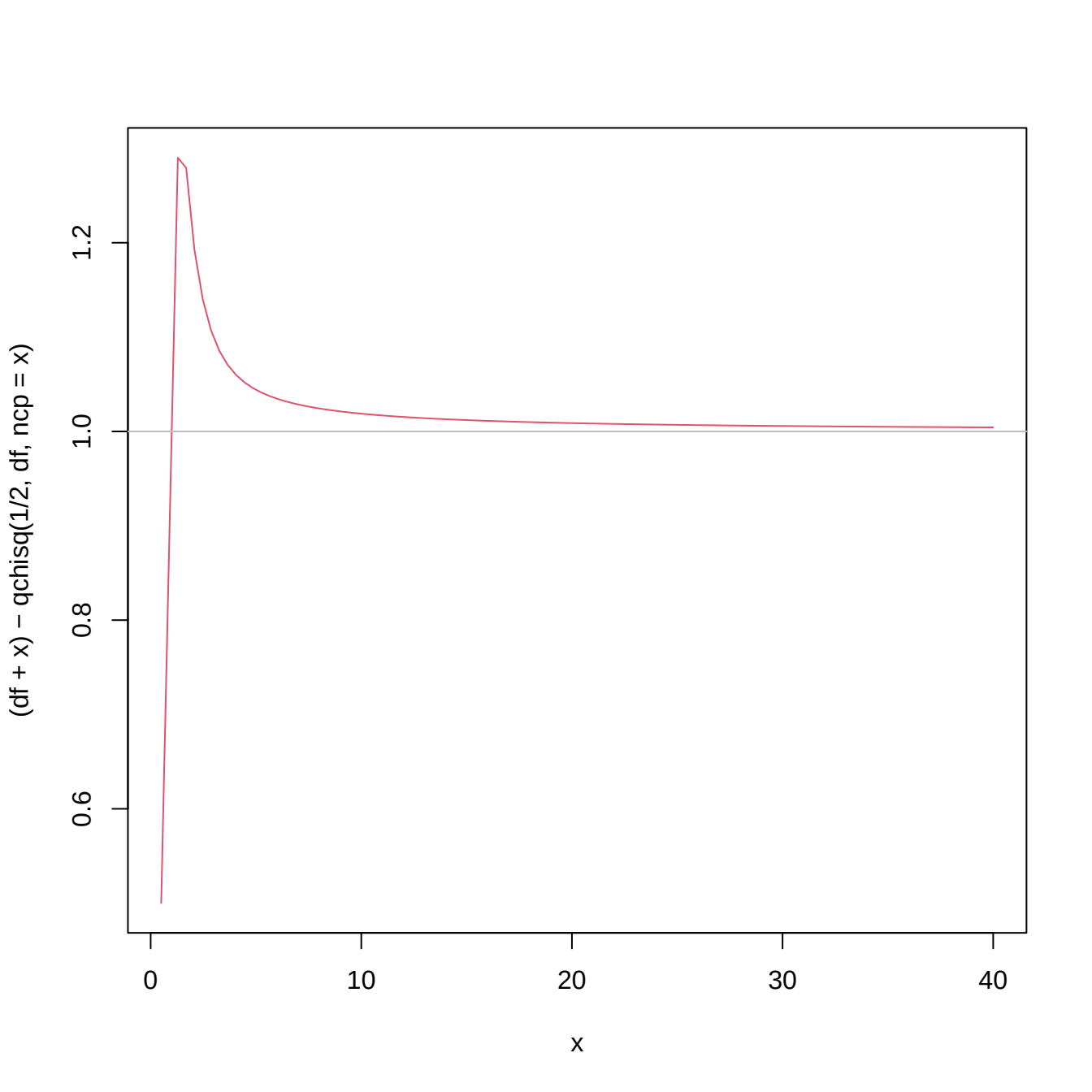

Density ncp = 1e+05
dchisq(x, df = 1, ncp = NC)
0e+00
4e−07
8e−07
1e+04
5e+04
5e+05
5e+06
x

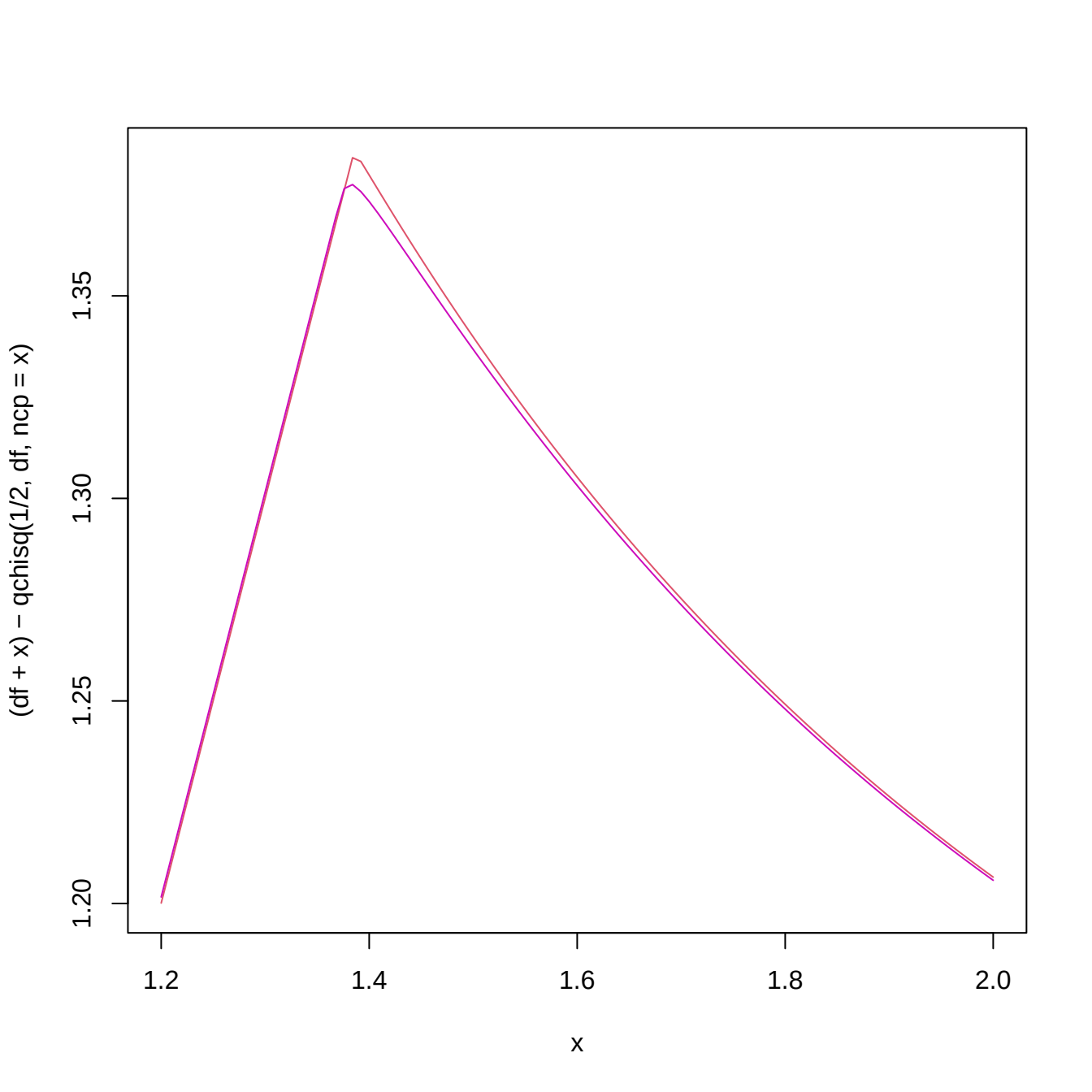

CDF ncp = 1e+05
pchisq(x, df = 1, ncp = NC)
0.0
0.2
0.4
0.6
0.8
1.0
1e+04
5e+04
5e+05
5e+06
x

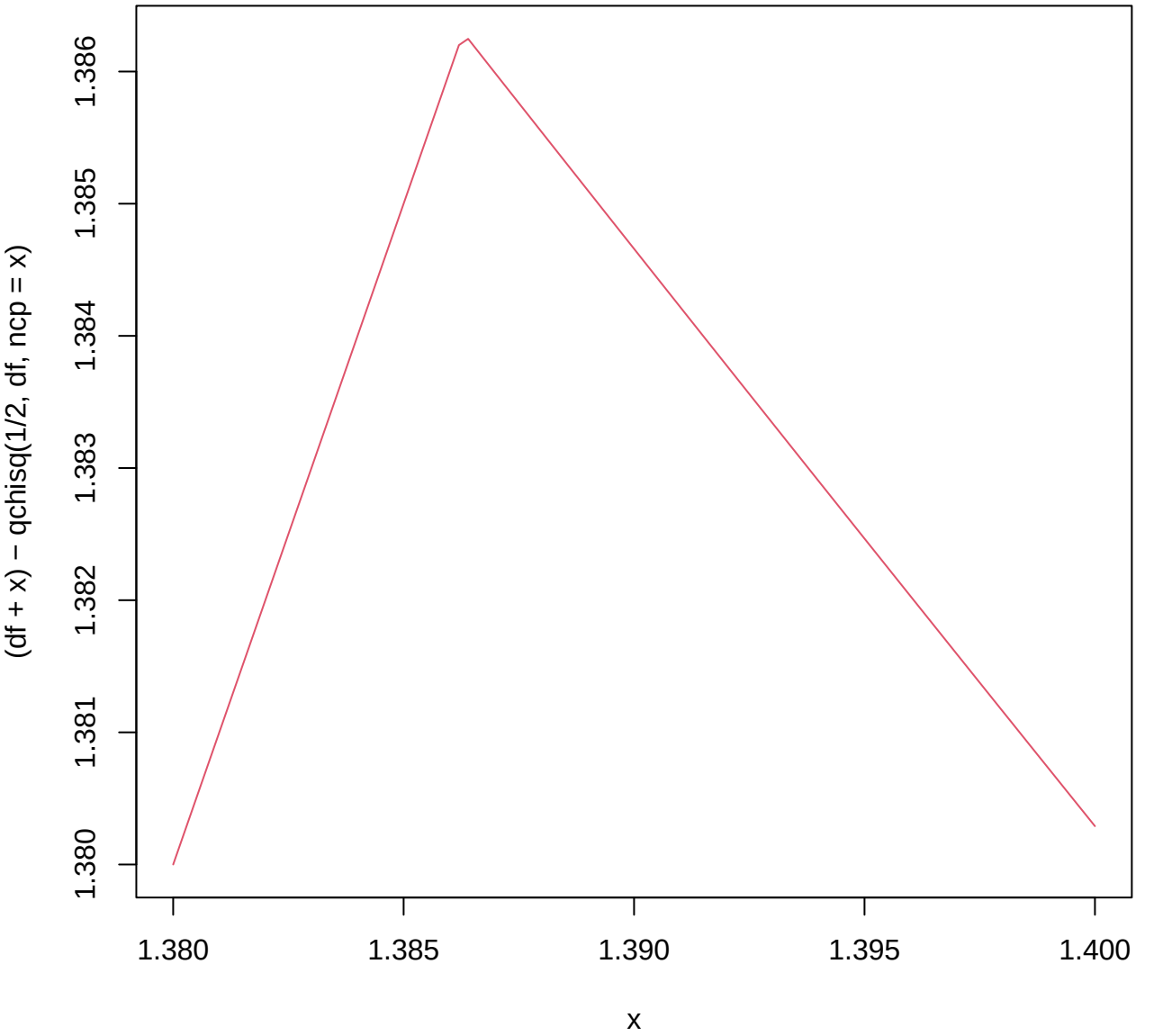

Density ncp = 1e+06
dchisq(x, df = 1, ncp = NC)
0.0e+00
1.5e−33
3.0e−33
1e+05
5e+05
5e+06
5e+07
x

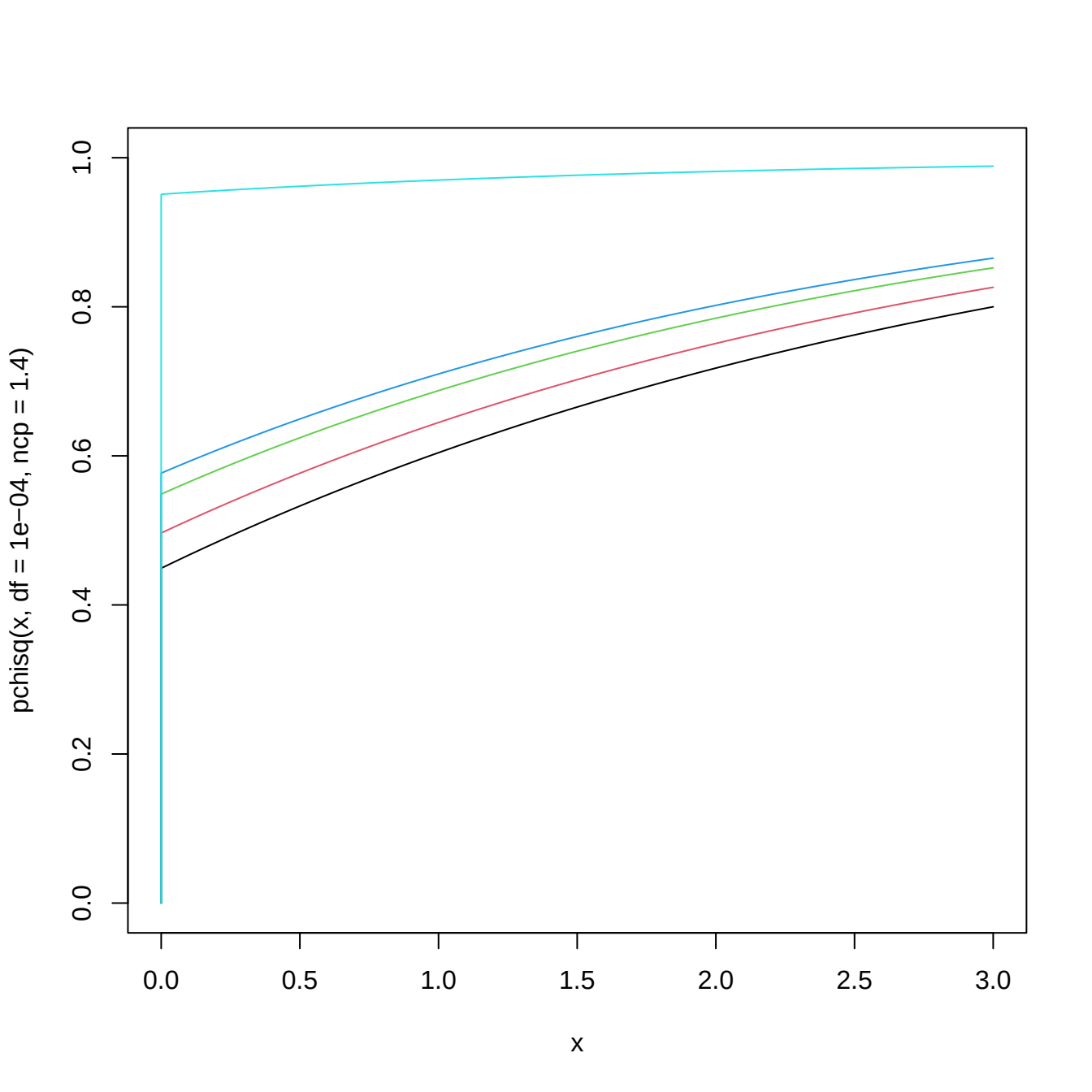

CDF ncp = 1e+06
pchisq(x, df = 1, ncp = NC)
0.0
0.2
0.4
0.6
0.8
1.0
1e+05
5e+05
5e+06
5e+07
x

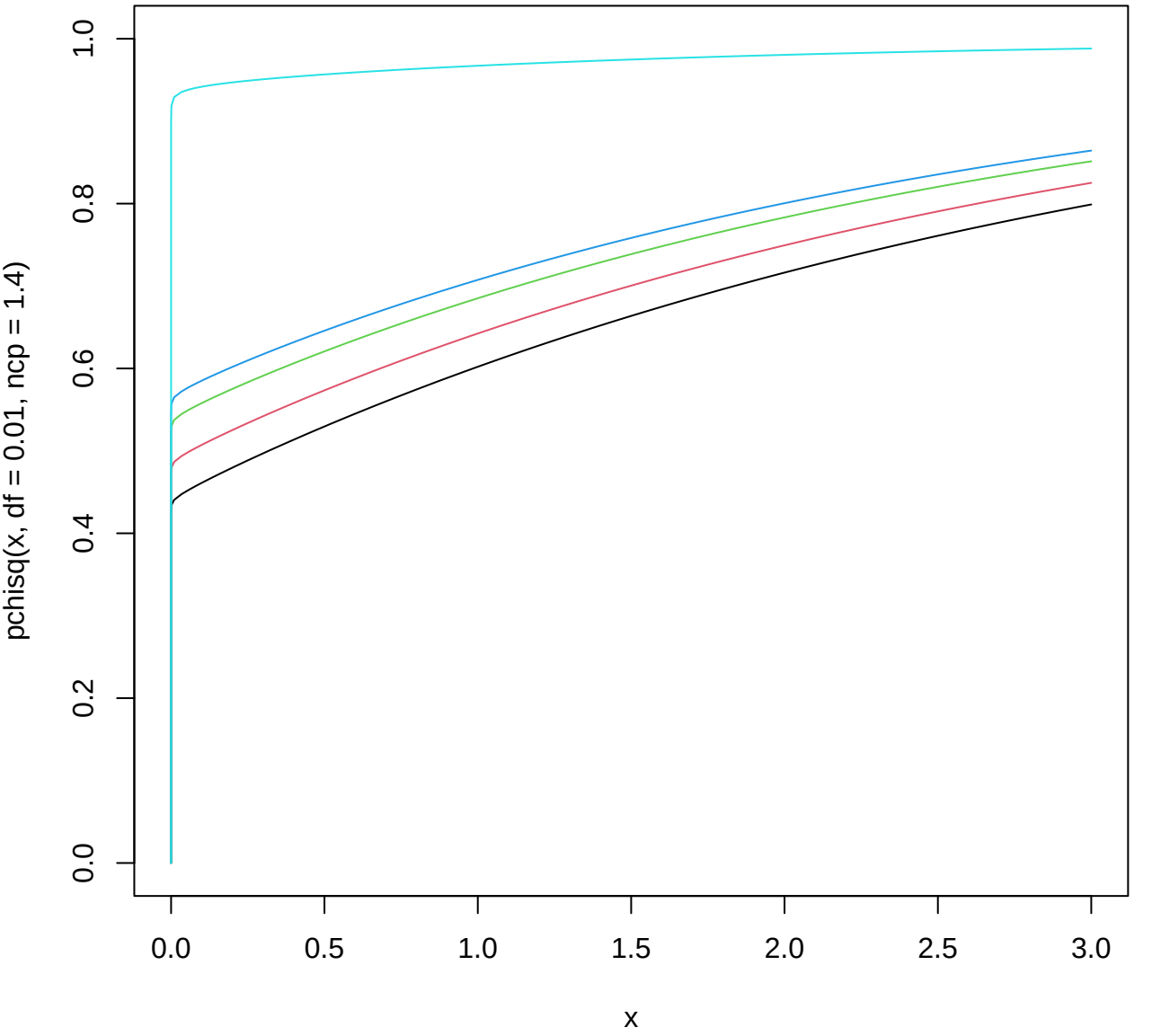

(df + x) − qchisq(1/2, df, ncp = x)
1.0
1.1
1.2
1.3
1.0
1.2
1.4
1.6
1.8
2.0
x

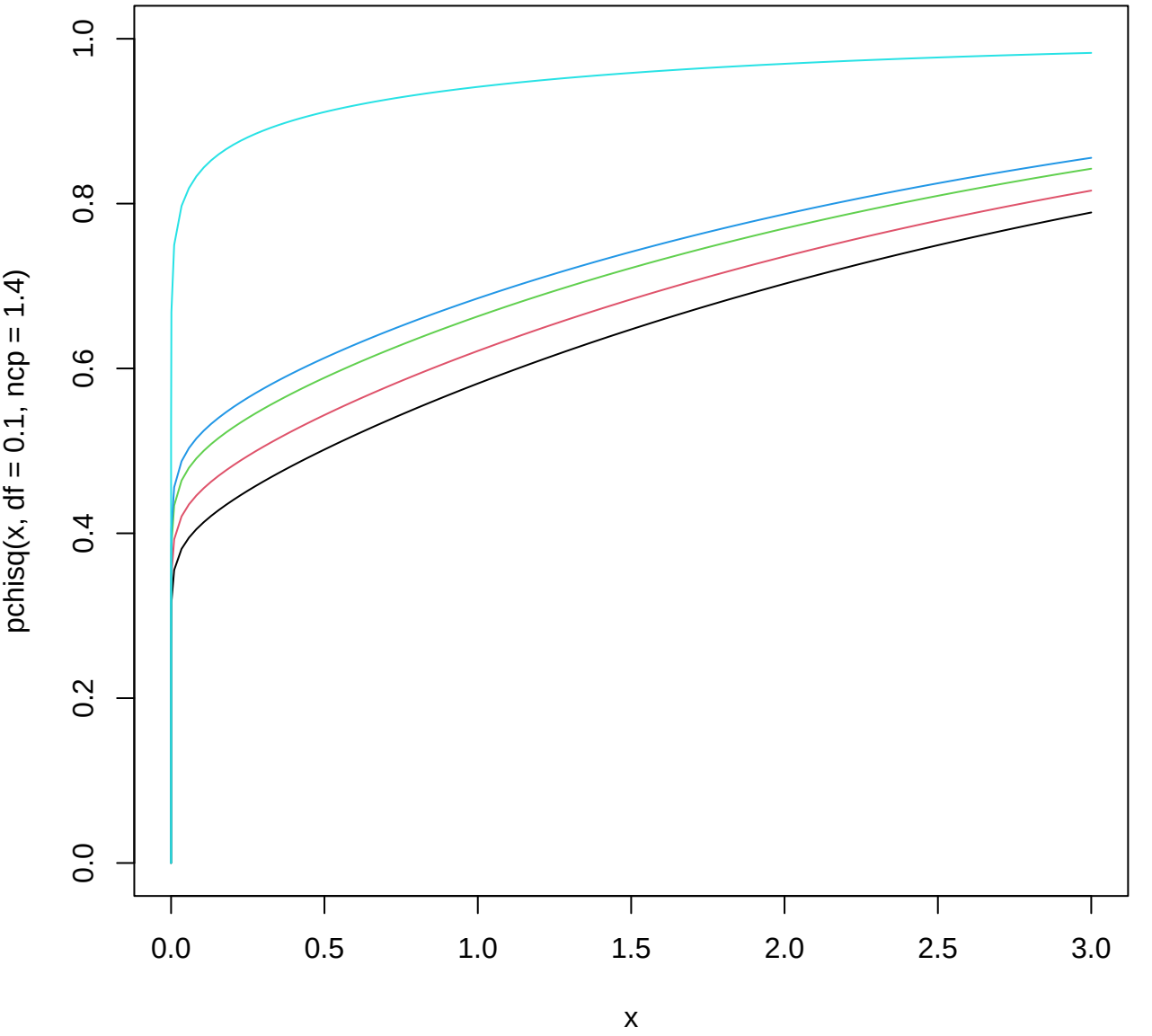

(df + x) − qchisq(1/2, df, ncp = x)
0.6
0.8
1.0
1.2
0
10
20
30
40
x

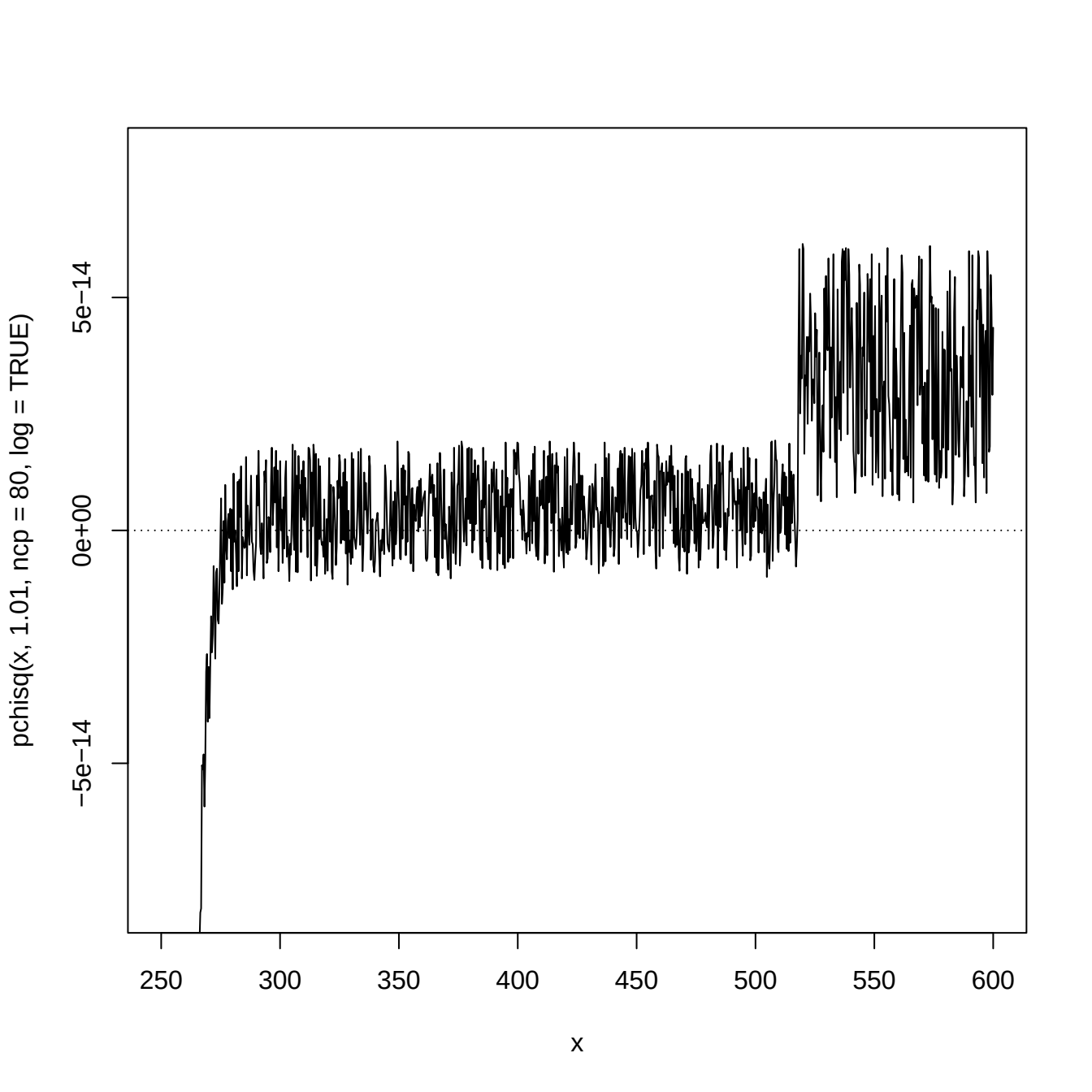

(df + x) − qchisq(1/2, df, ncp = x)
1.20
1.25
1.30
1.35
1.2
1.4
1.6
1.8
2.0
x

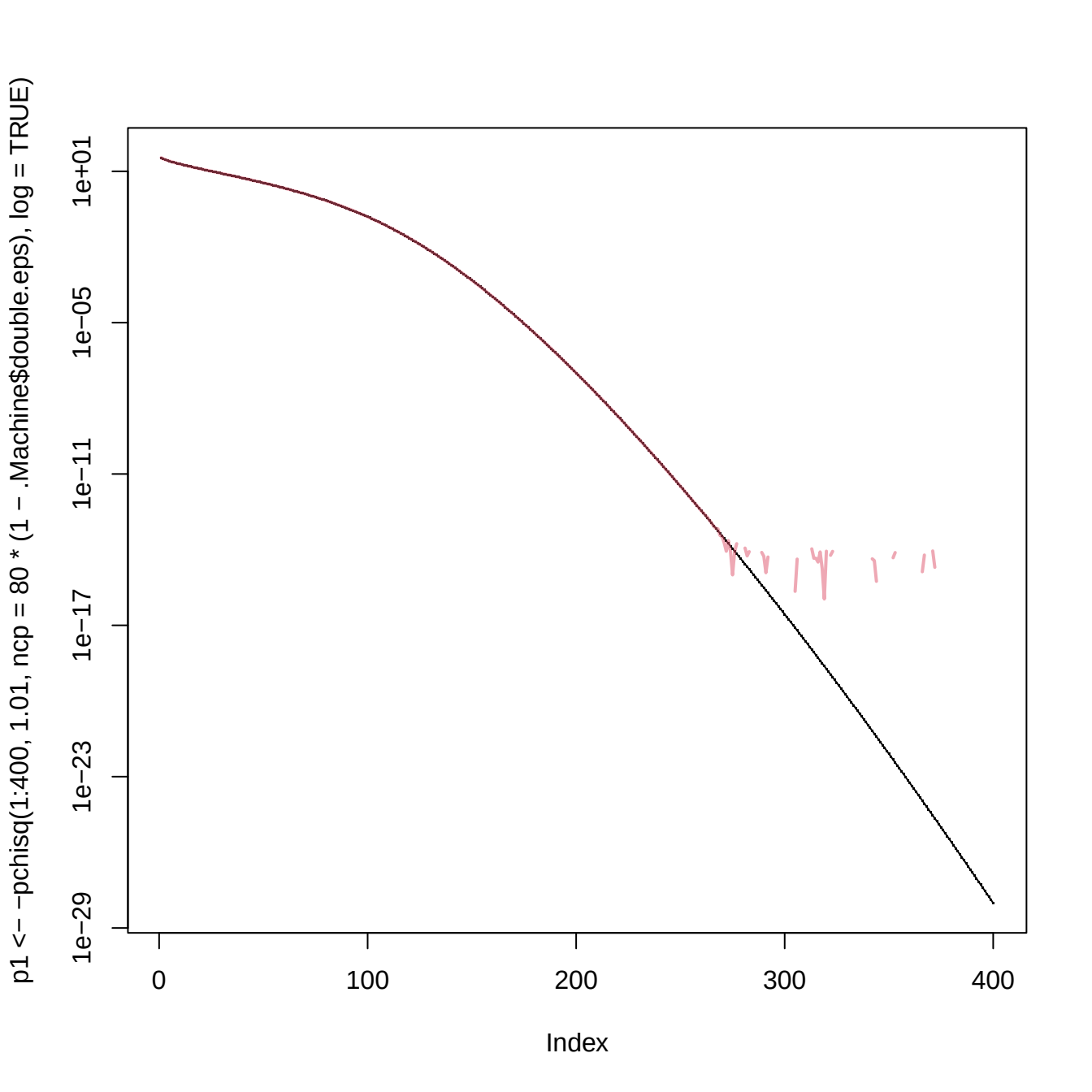

(df + x) − qchisq(1/2, df, ncp = x)
1.380
1.381
1.382
1.383
1.384
1.385
1.386
1.380
1.385
1.390
1.395
1.400
x

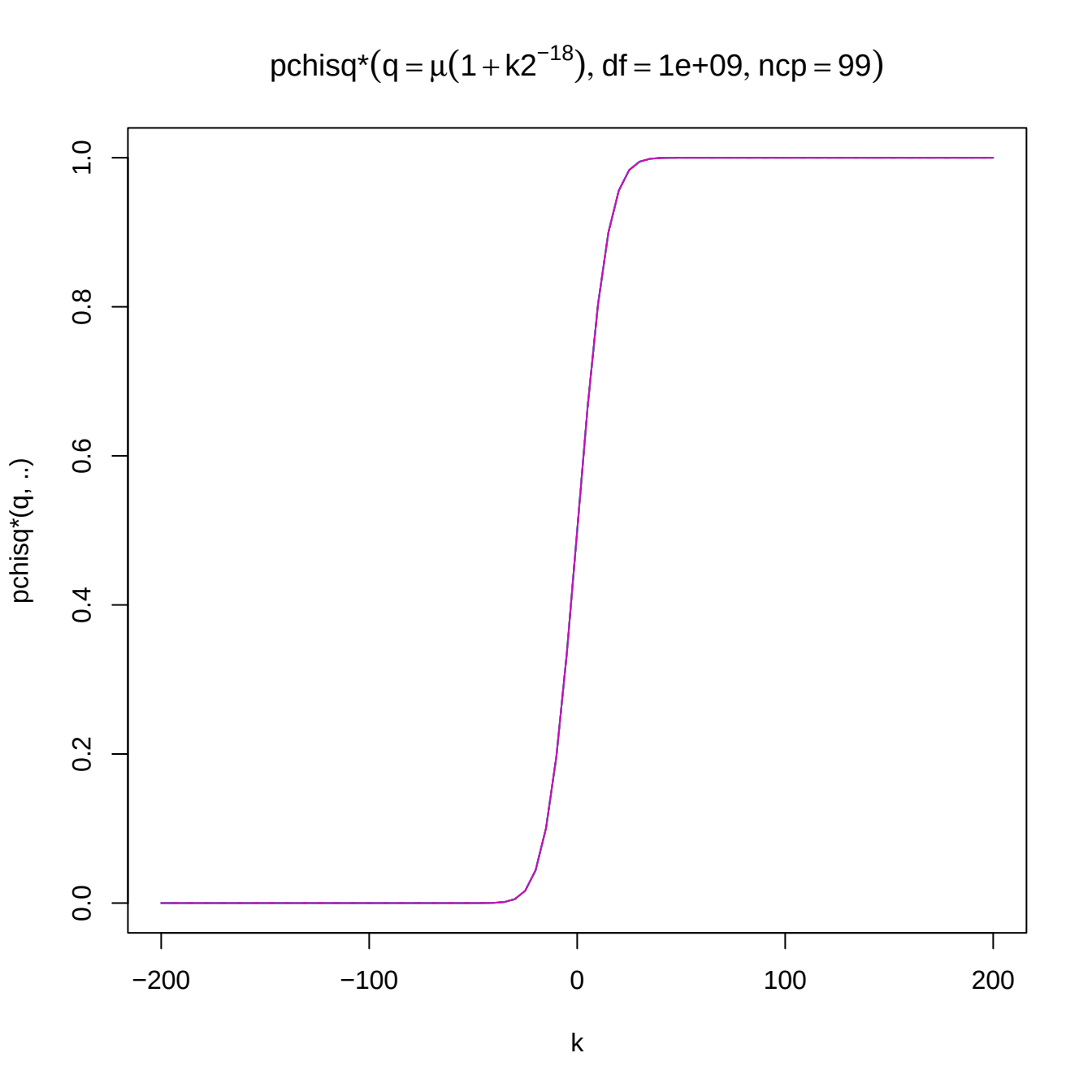

pchisq(x, df = 1e−04, ncp = 1.4)
0.0
0.2
0.4
0.6
0.8
1.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
x

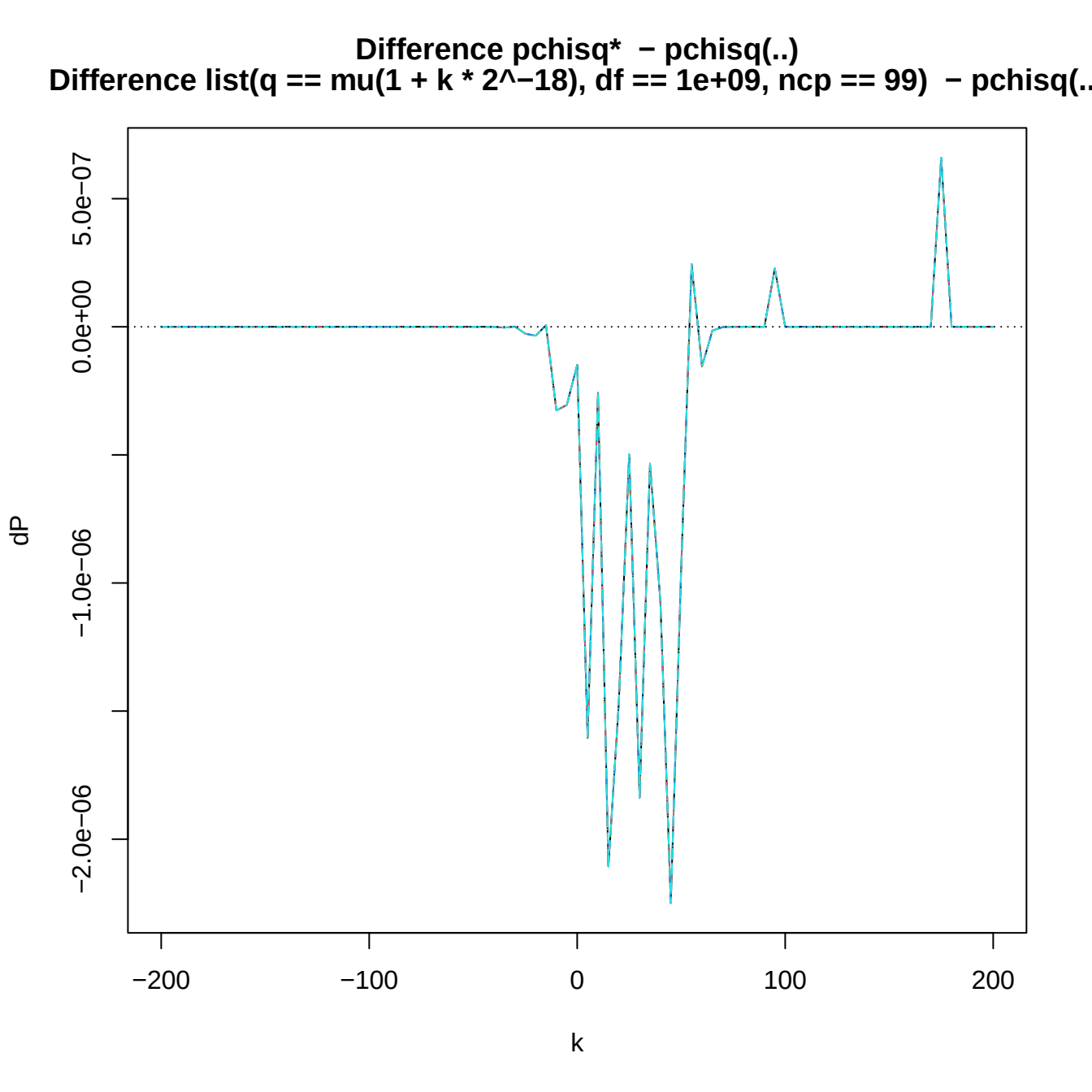

pchisq(x, df = 0.01, ncp = 1.4)
0.0
0.2
0.4
0.6
0.8
1.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
x

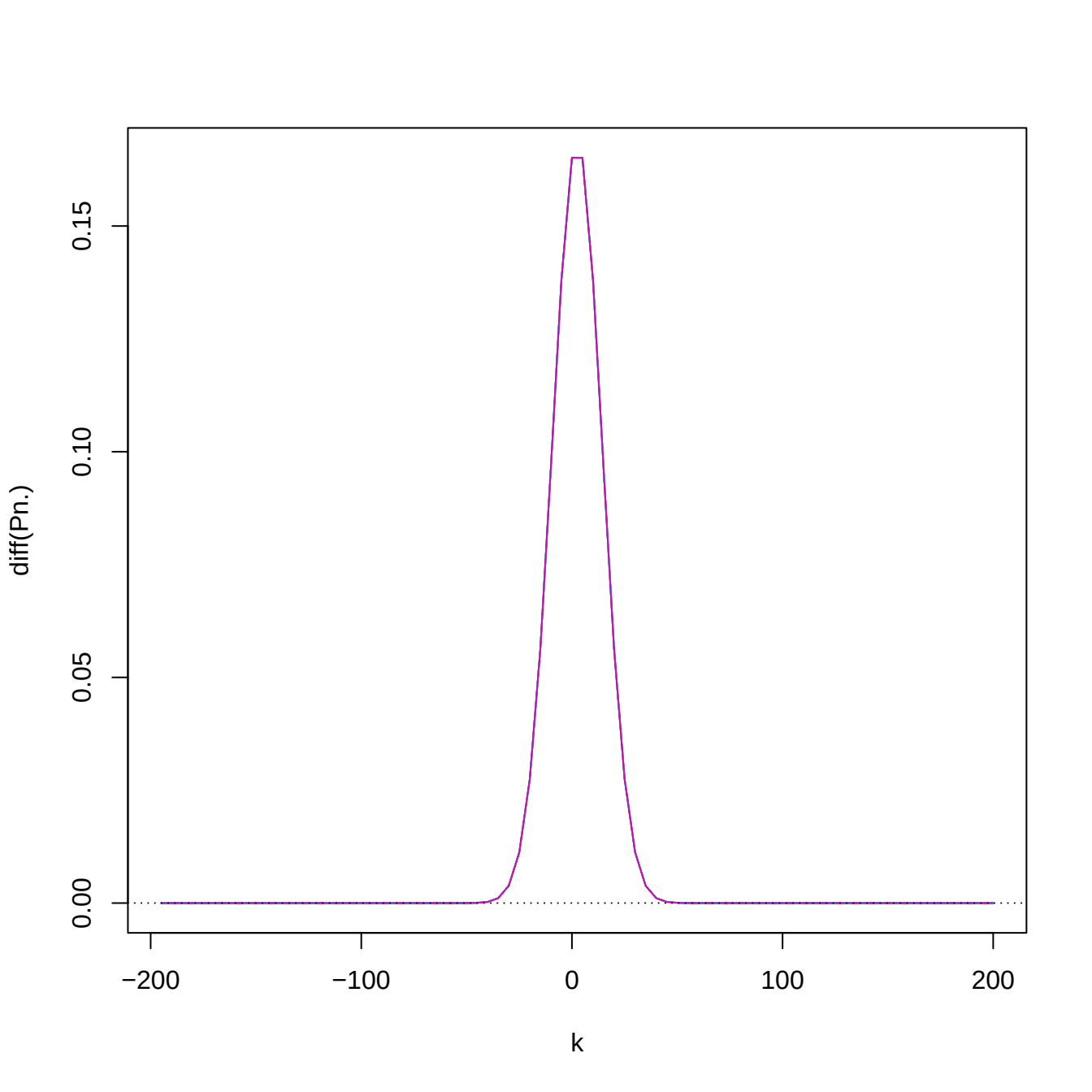

pchisq(x, df = 0.1, ncp = 1.4)
0.0
0.2
0.4
0.6
0.8
1.0
0.0
0.5
1.0
1.5
2.0
2.5
3.0
x

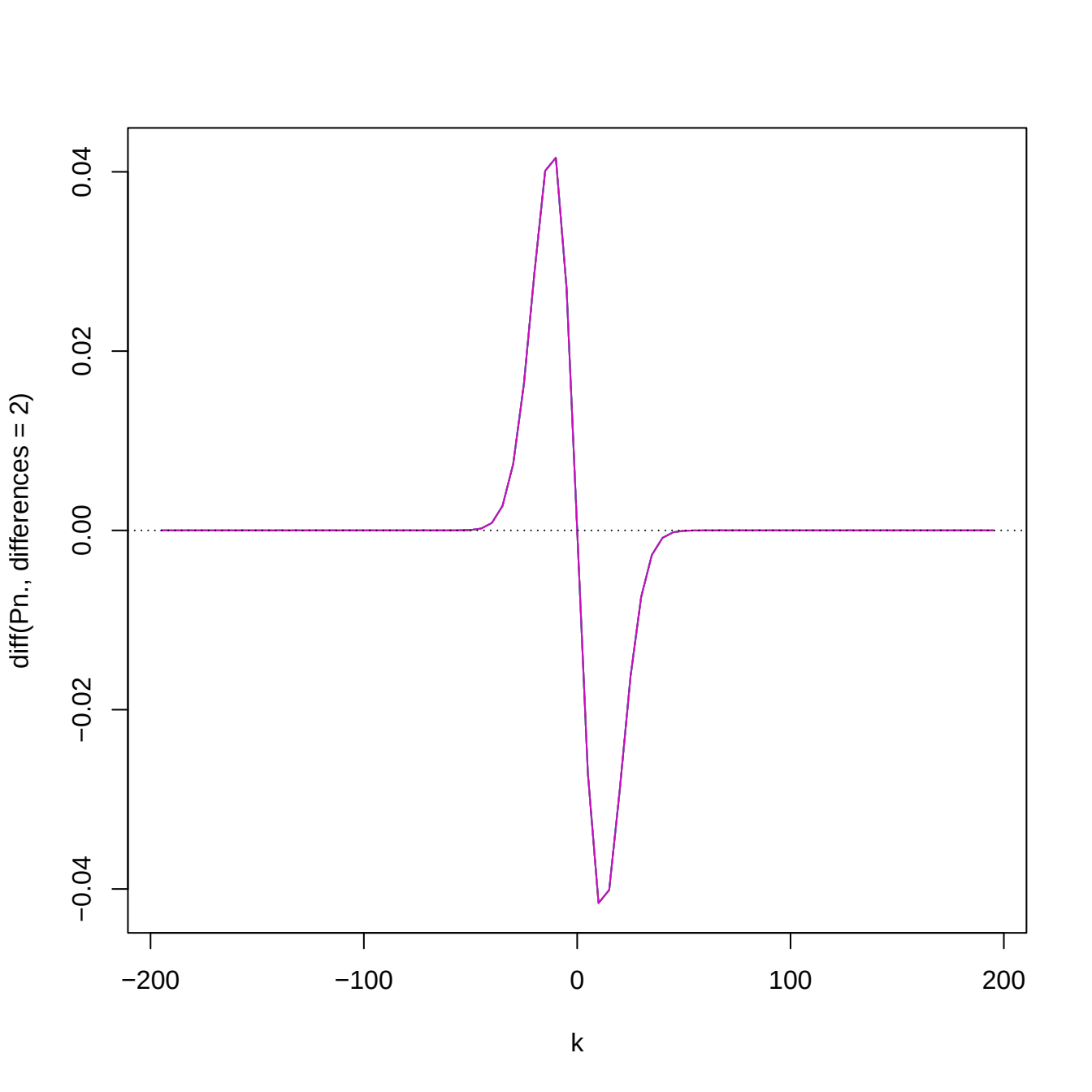

pchisq(x, 1.01, ncp = 80, log = TRUE)
5e−14
0e+00
−5e−14
250
300
350
400
450
500
550
600
x

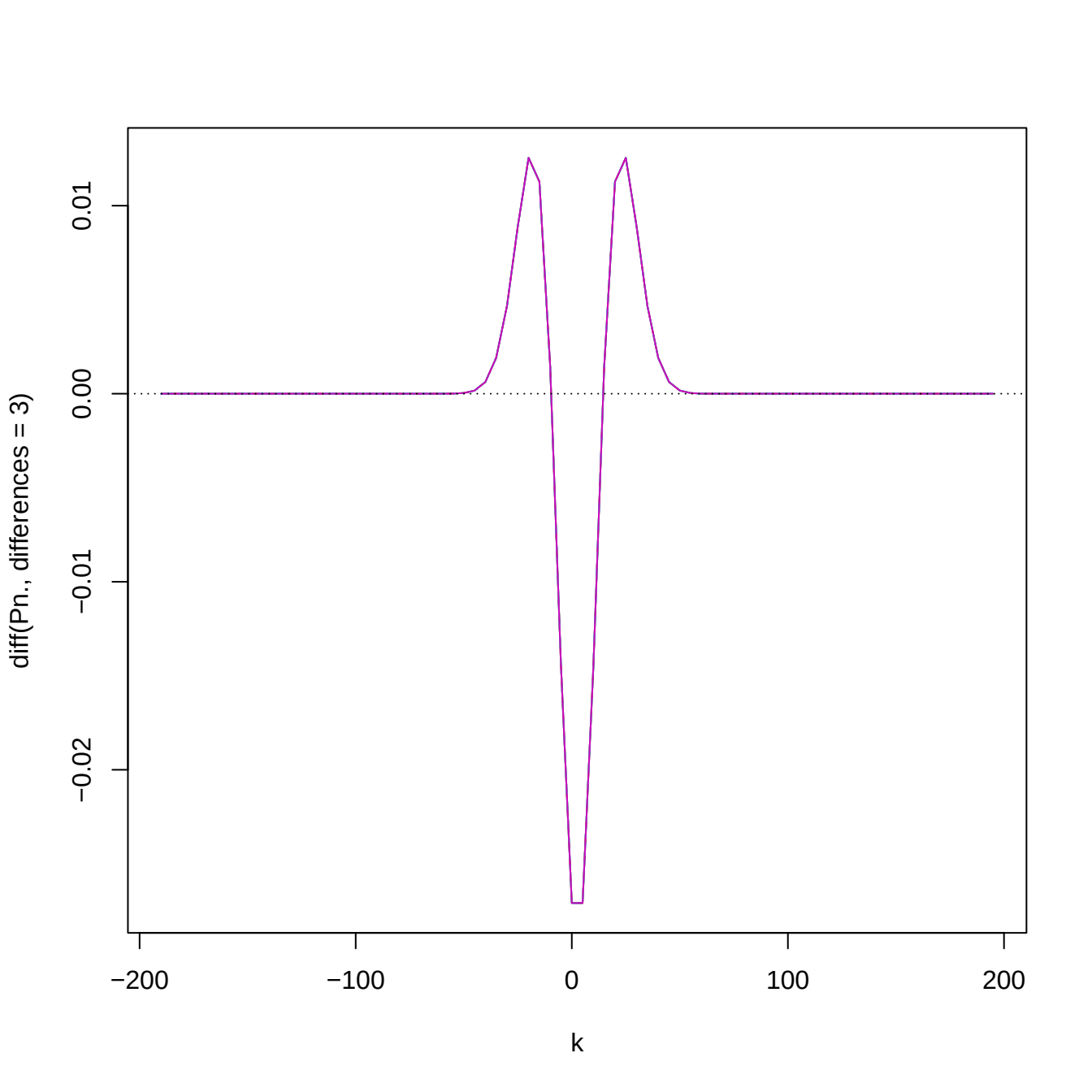

p1 <- -pchisq(1:400, 1.01, ncp = 80 * (1 - .Machine$double.eps), log = TRUE)
1e+01
1e-05
1e-11
1e-17
1e-23
1e-29
0
100
200
300
400
Index

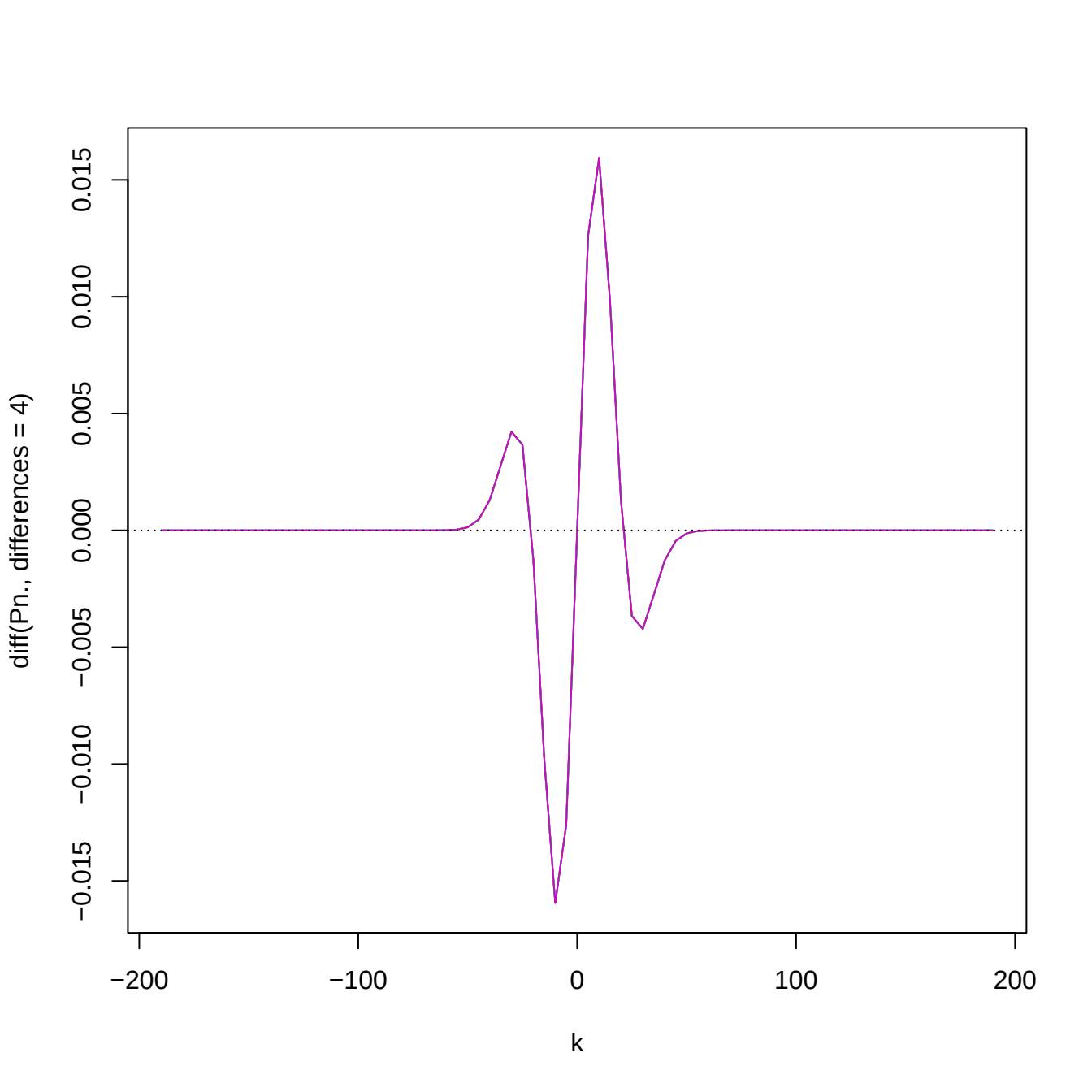

pchisq*(q = μ(1 + k2^−18), df = 1e+09, ncp = 99)
pchisq*(q, ..)
0.0
0.2
0.4
0.6
0.8
1.0
−200
−100
0
100
200
k

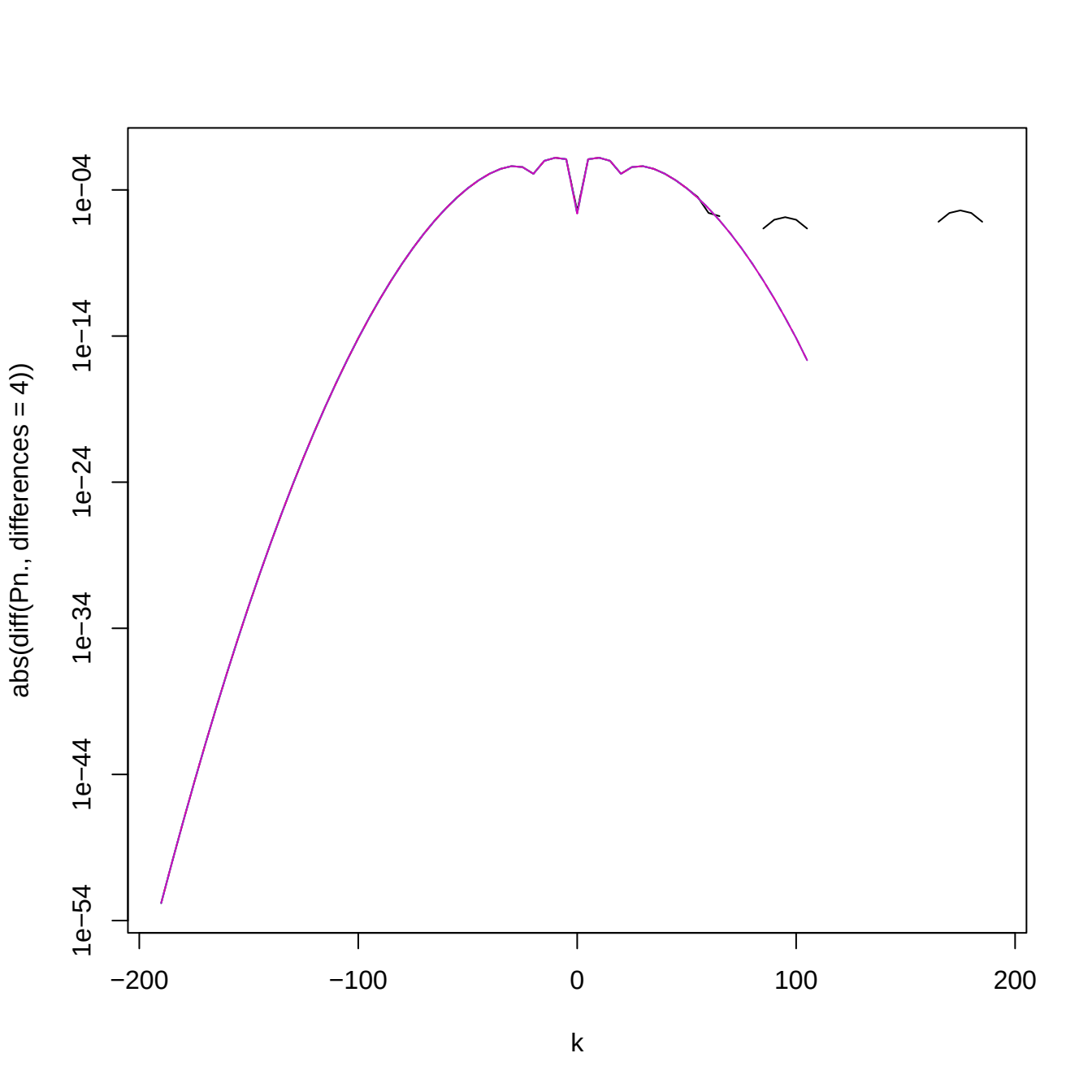

Difference pchisq* − pchisq(..)
Difference list(q == mu(1 + k * 2^−18), df == 1e+09, ncp == 99) − pchisq(..
dP
5.0e−07
0.0e+00
−1.0e−06
−2.0e−06
−200
−100
0
100
200
k

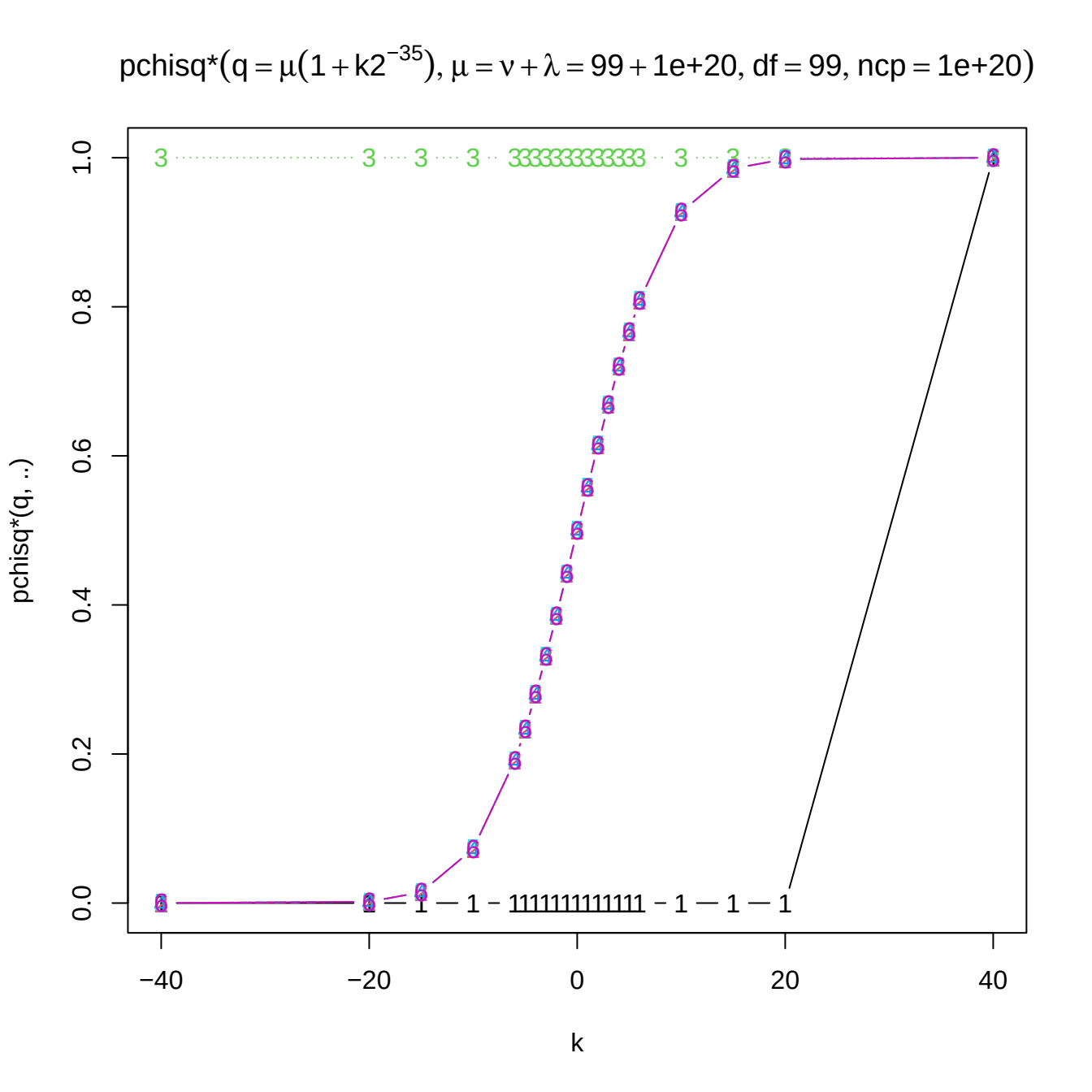

diff(Pn.)
0.00
0.05
0.10
0.15
−200
−100
0
100
200
k

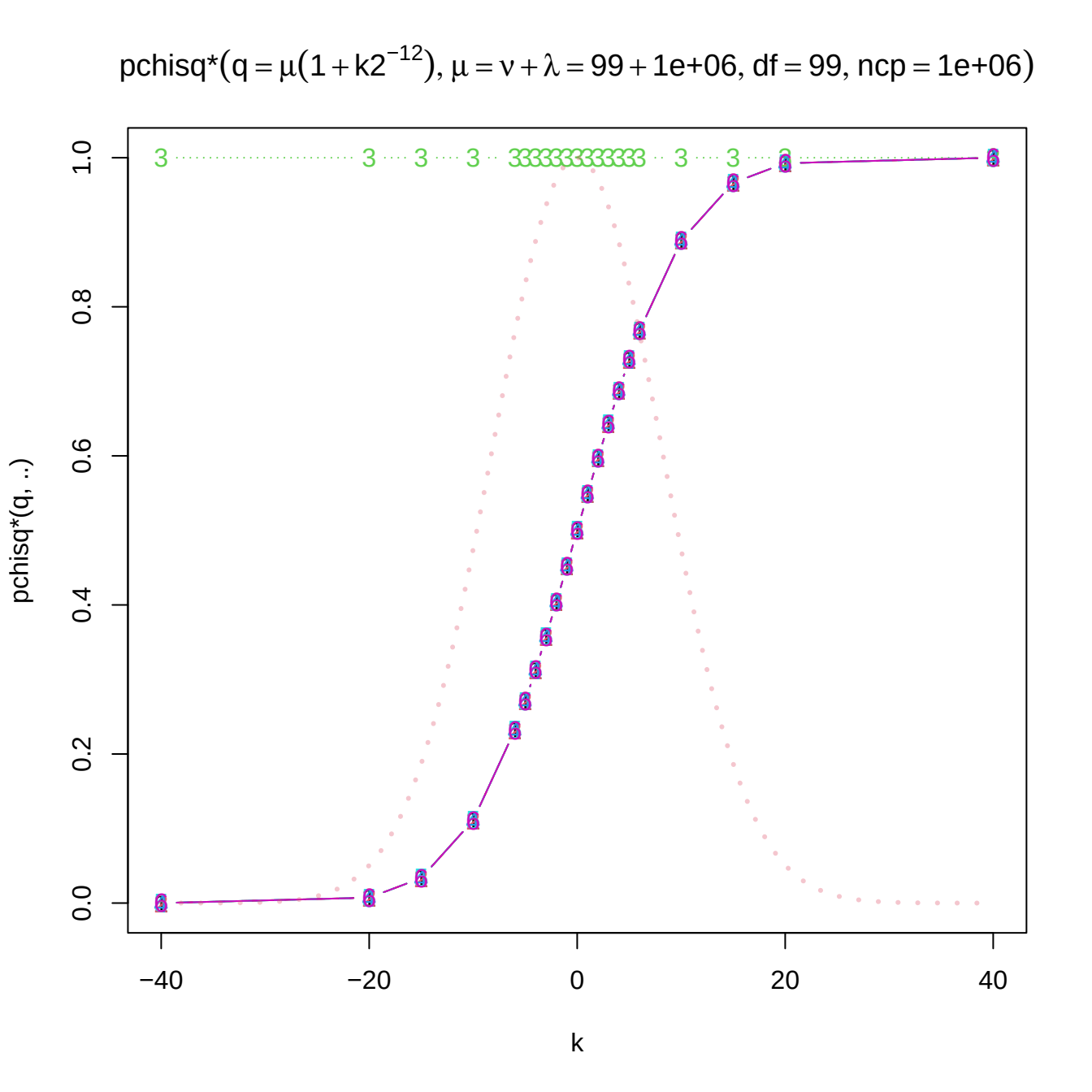

diff(Pn., differences = 2)
0.04
0.02
0.00
−0.02
−0.04
−200
−100
0
100
200
k

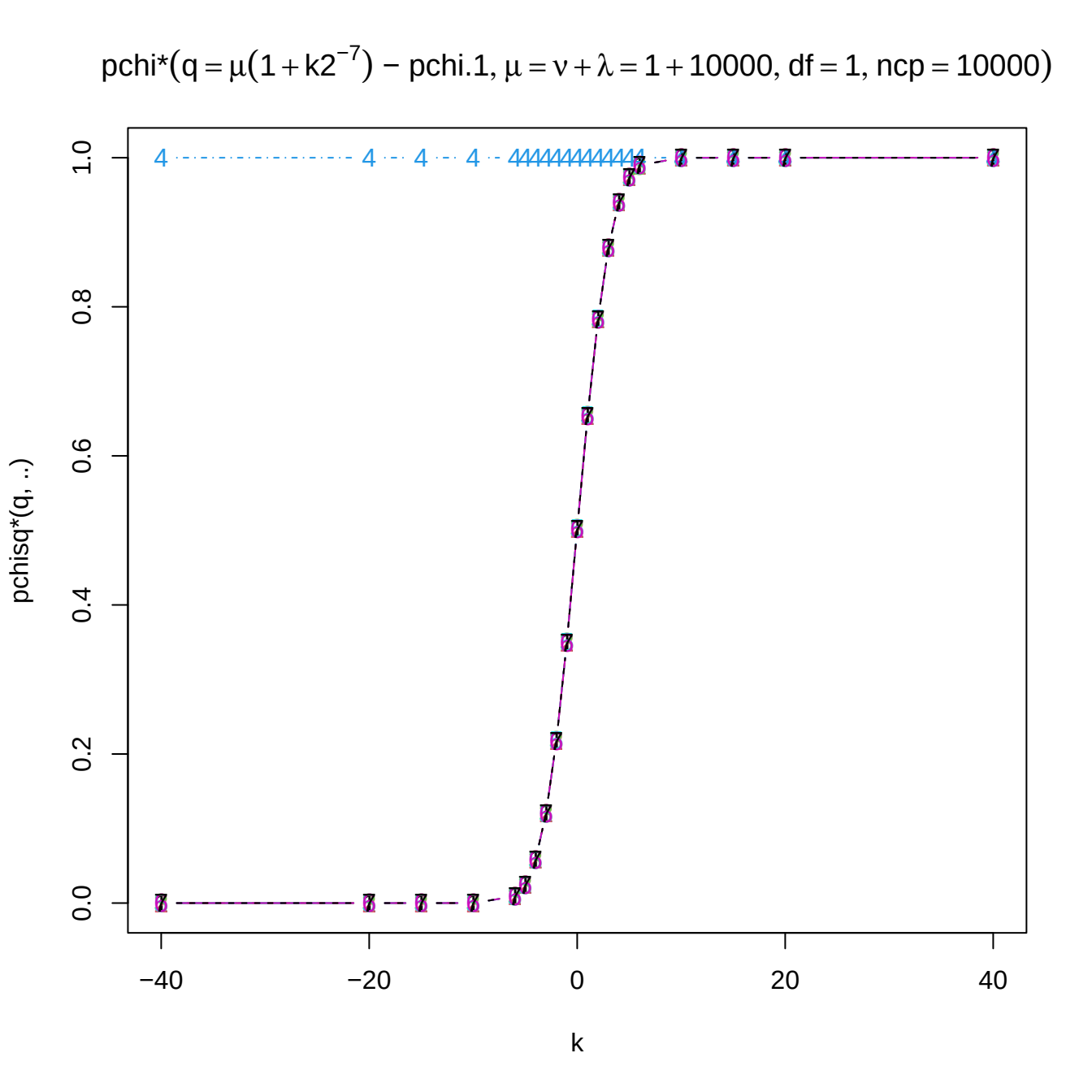

diff(Pn., differences = 3)
0.01
0.00
−0.01
−0.02
−200
−100
0
100
200
k

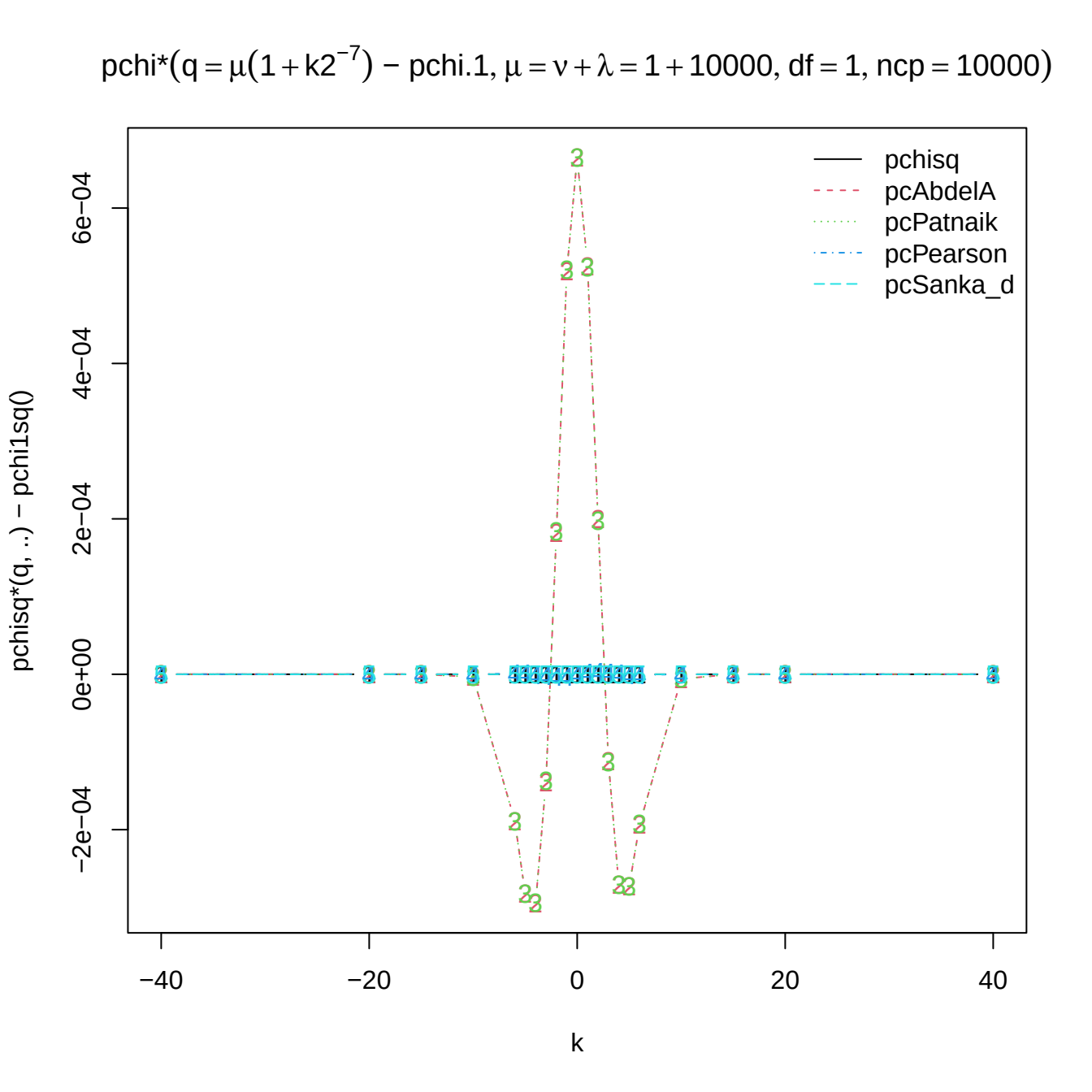

diff(Pn., differences = 4)
0.015
0.010
0.005
0.000
−0.005
−0.010
−0.015
−200
−100
0
100
200
k

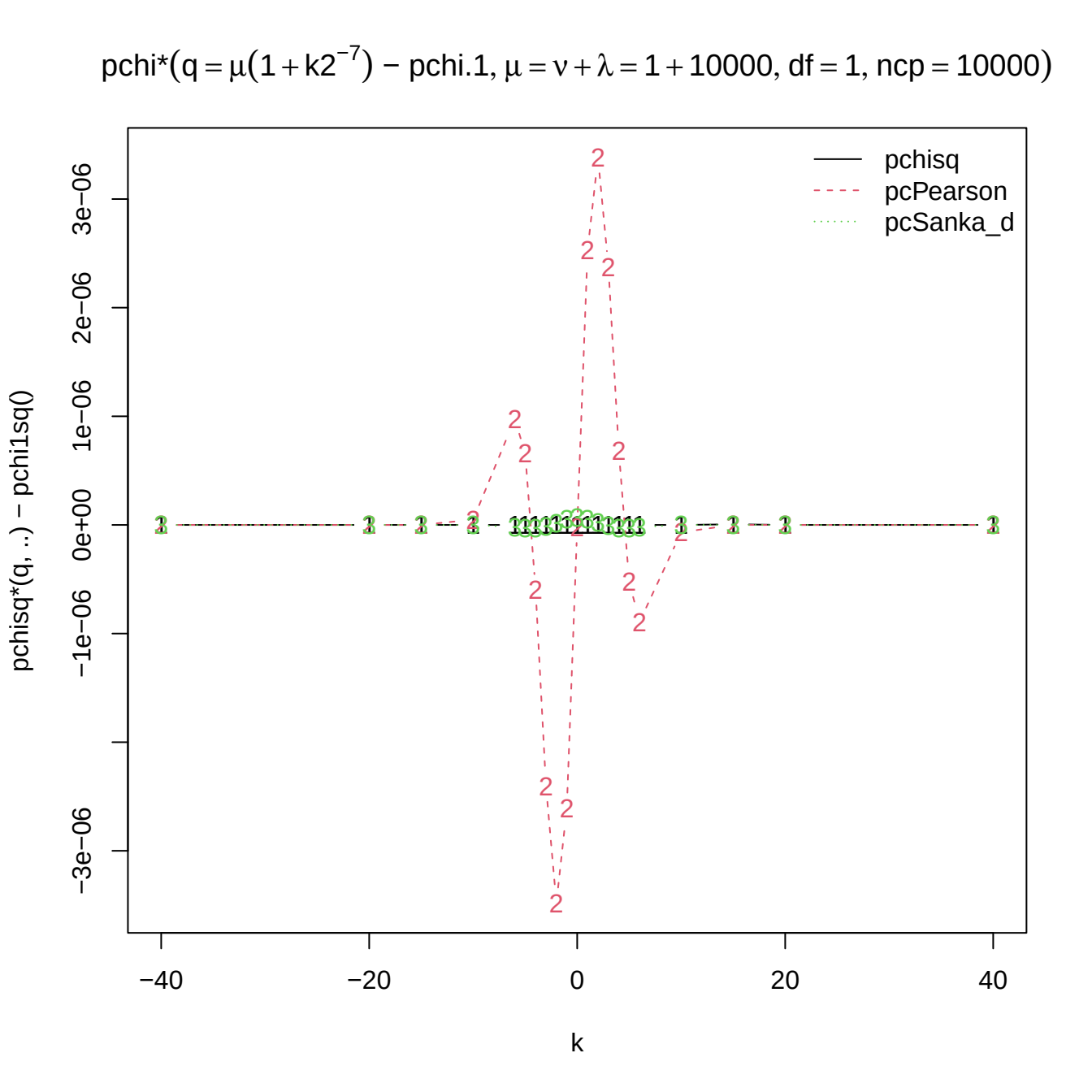

abs(diff(Pn., differences = 4))
1e−04
1e−14
1e−24
1e−34
1e−44
1e−54
−200
−100
0
100
200
k

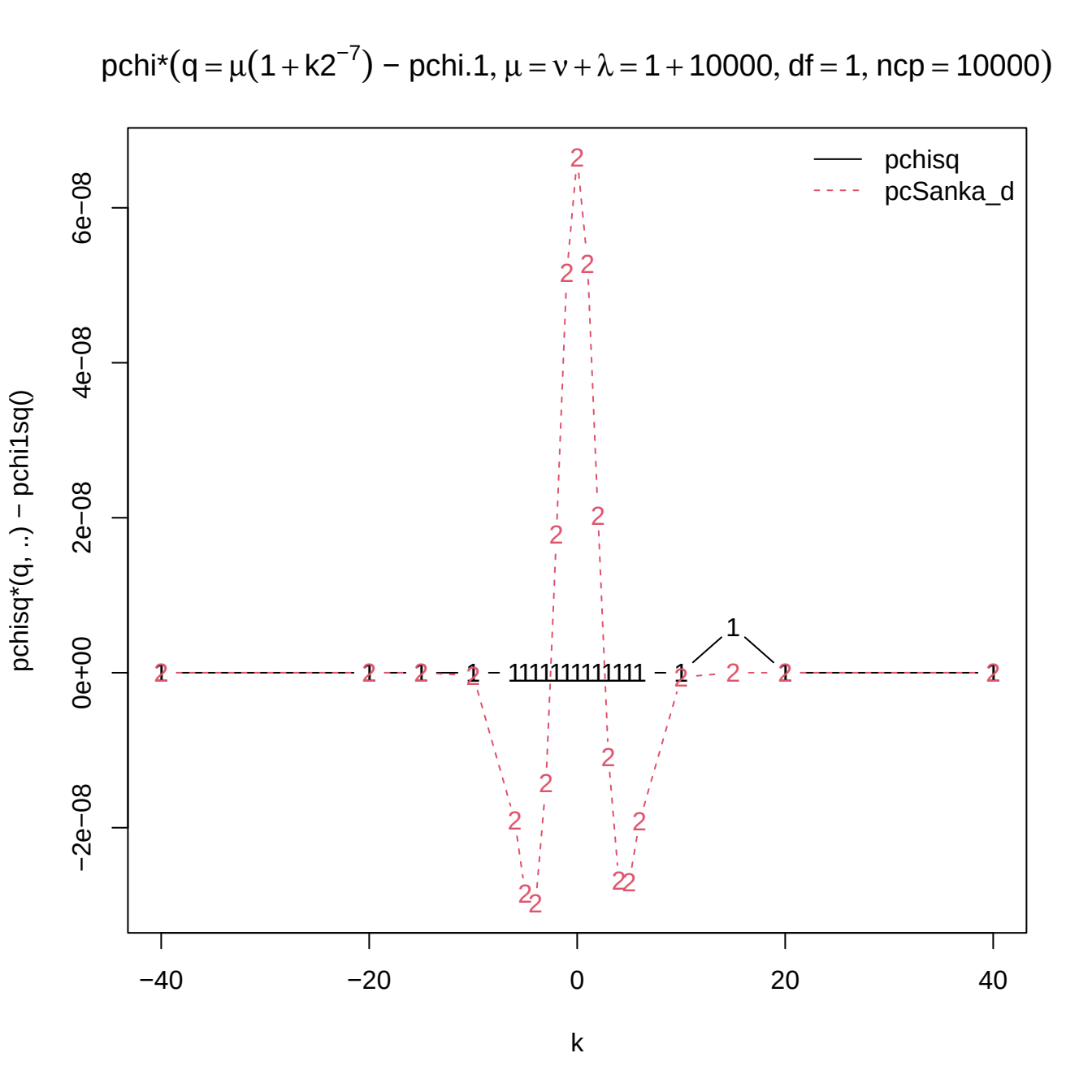

pchisq*(q = μ(1 + k2^−35), μ = ν + λ = 99 + 1e+20, df = 99, ncp = 1e+20)
pchisq*(q, ..)
k
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40

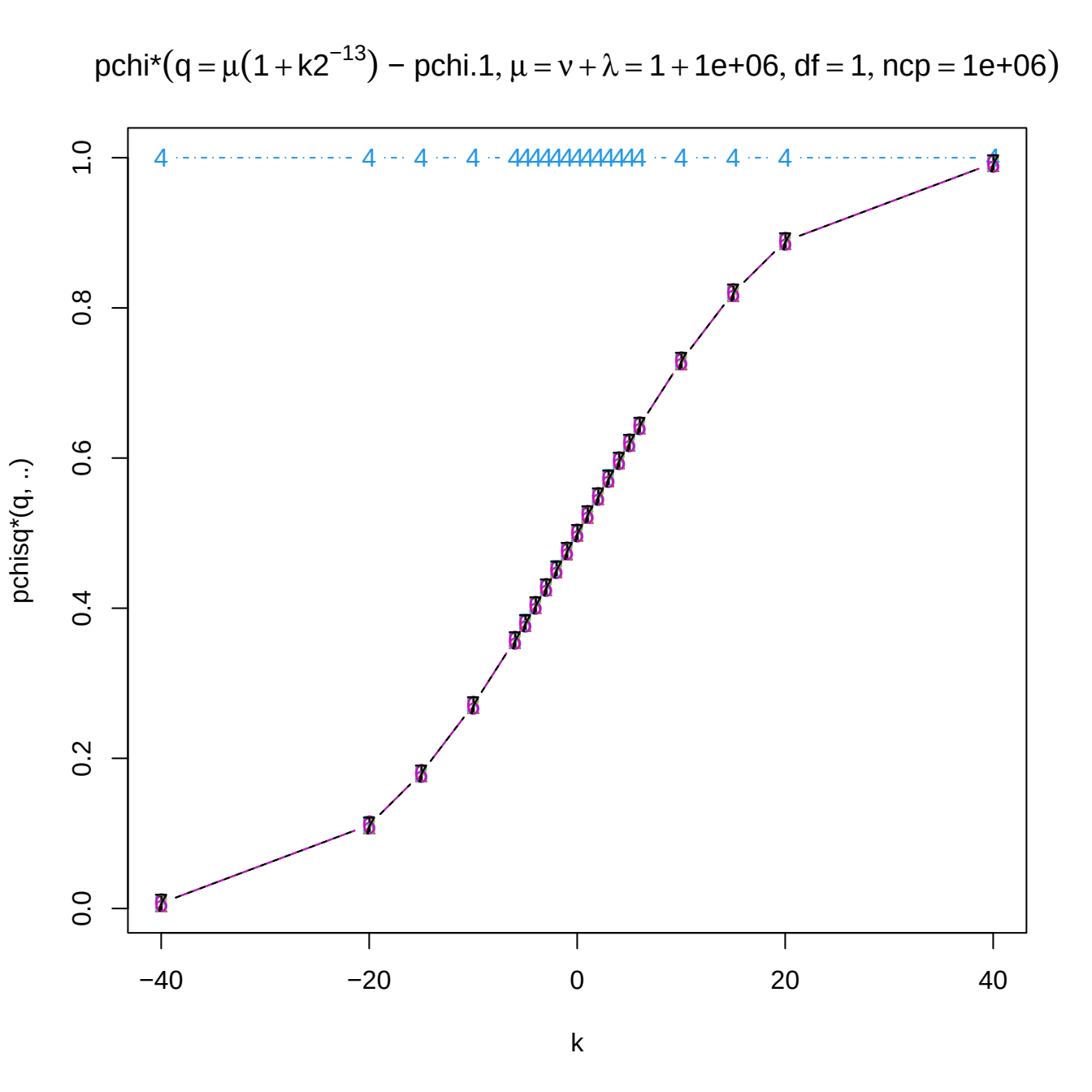

pchisq*(q = μ(1 + k2^−12), μ = ν + λ = 99 + 1e+06, df = 99, ncp = 1e+06)
pchisq*(q, ..)
k
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40

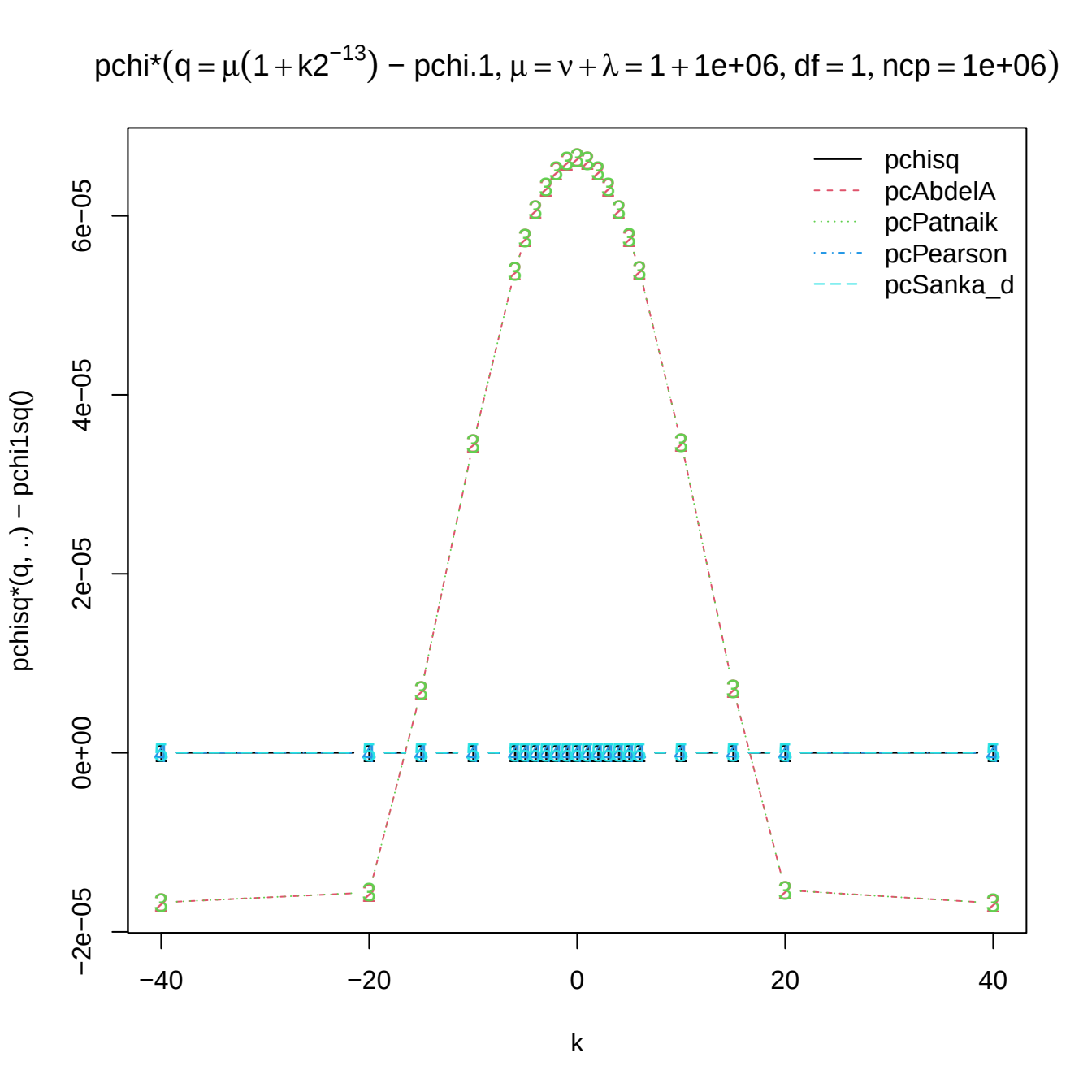

pchi*(q = μ(1 + k2^−7) − pchi.1, μ = ν + λ = 1 + 10000, df = 1, ncp = 10000)
pchisq*(q, ..)
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40
k

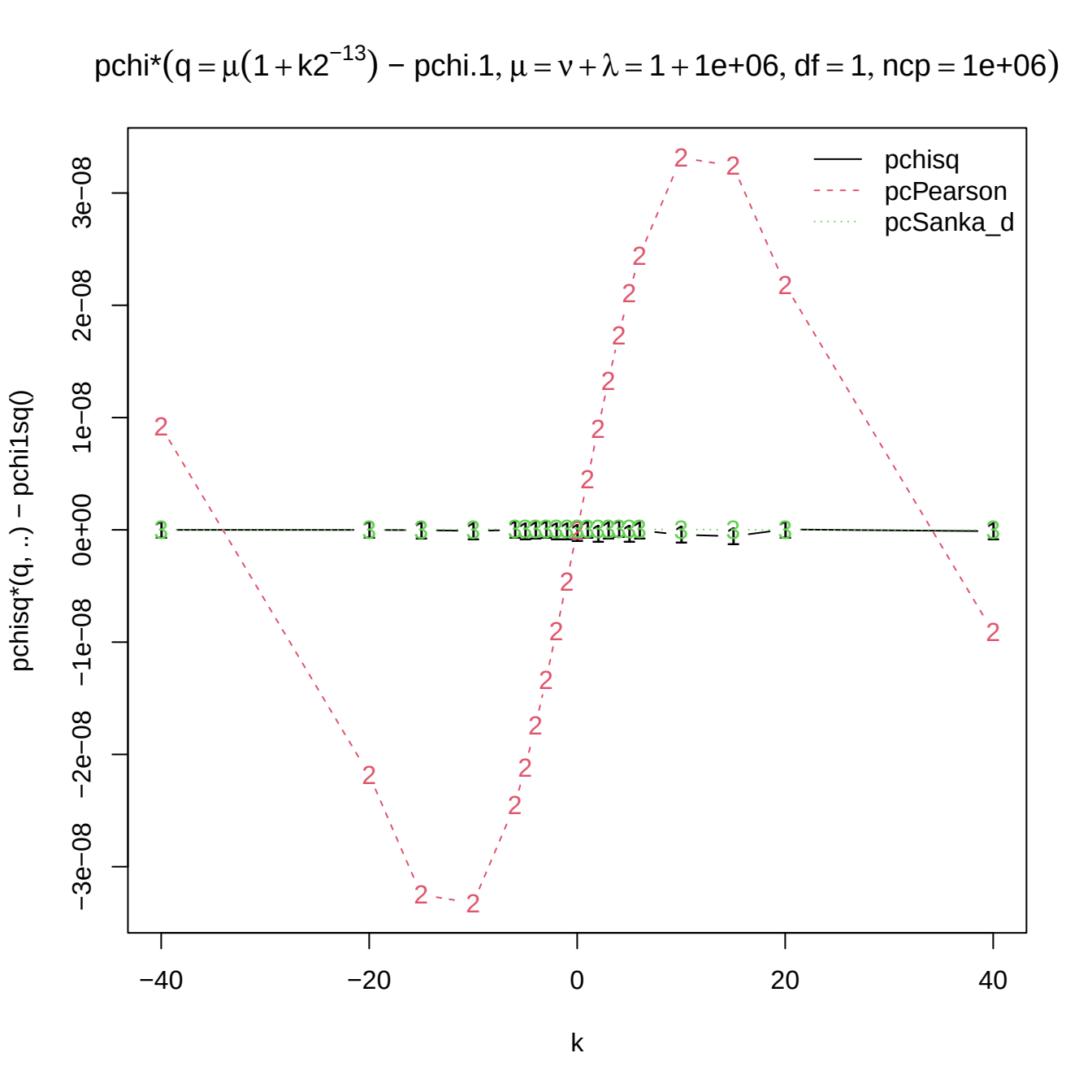

pchi*(q = μ(1 + k2^−7) − pchi.1, μ = ν + λ = 1 + 10000, df = 1, ncp = 10000)
pchisq
pcAbdelA
pcPatnaik
pcPearson
pcSanka_d
pchisq*(q, ..) − pchi1sq()
6e−04
4e−04
2e−04
0e+00
−2e−04
−40
−20
0
20
40
k

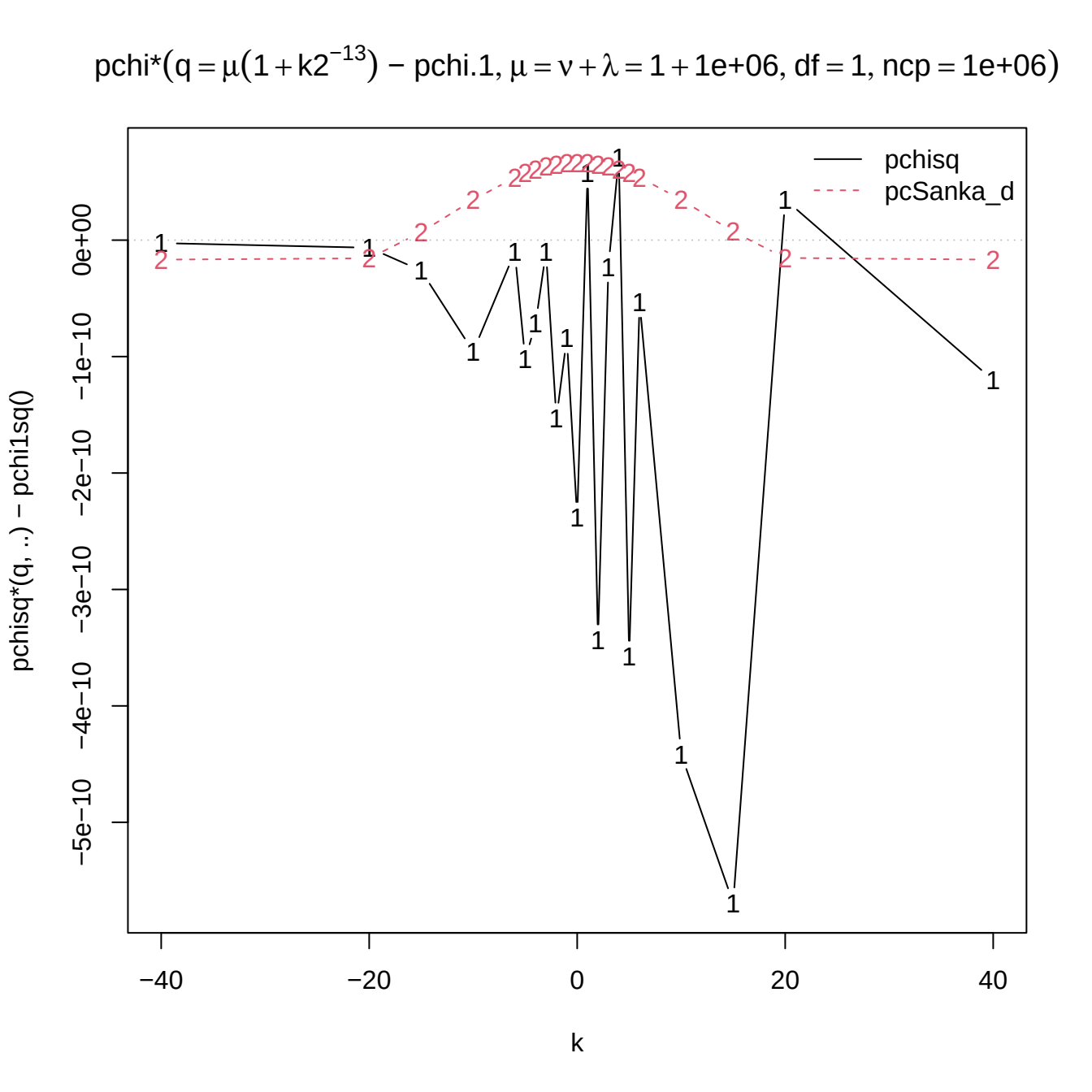

pchi*(q = μ(1 + k2^−7) − pchi.1, μ = ν + λ = 1 + 10000, df = 1, ncp = 10000)
pchisq
pcPearson
pcSanka_d
pchisq*(q, ..) − pchi1sq()
3e−06
2e−06
1e−06
0e+00
−1e−06
−3e−06
−40
−20
0
20
40
k

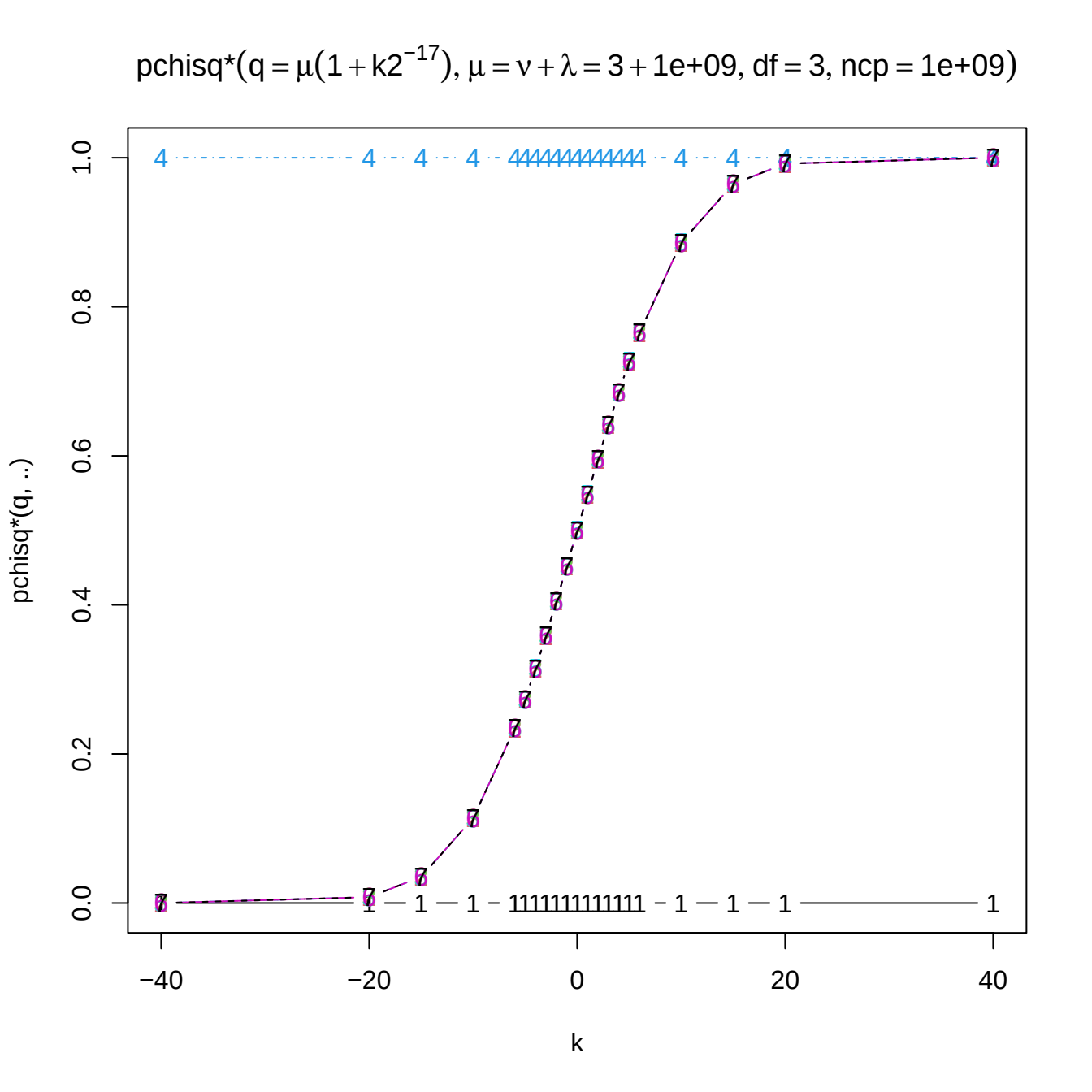

pchi*(q = μ(1 + k2^−7) − pchi.1, μ = ν + λ = 1 + 10000, df = 1, ncp = 10000)
pchisq
pcSanka_d
pchisq*(q, ..) − pchi1sq()
6e−08
4e−08
2e−08
0e+00
−2e−08
−40
−20
0
20
40
k

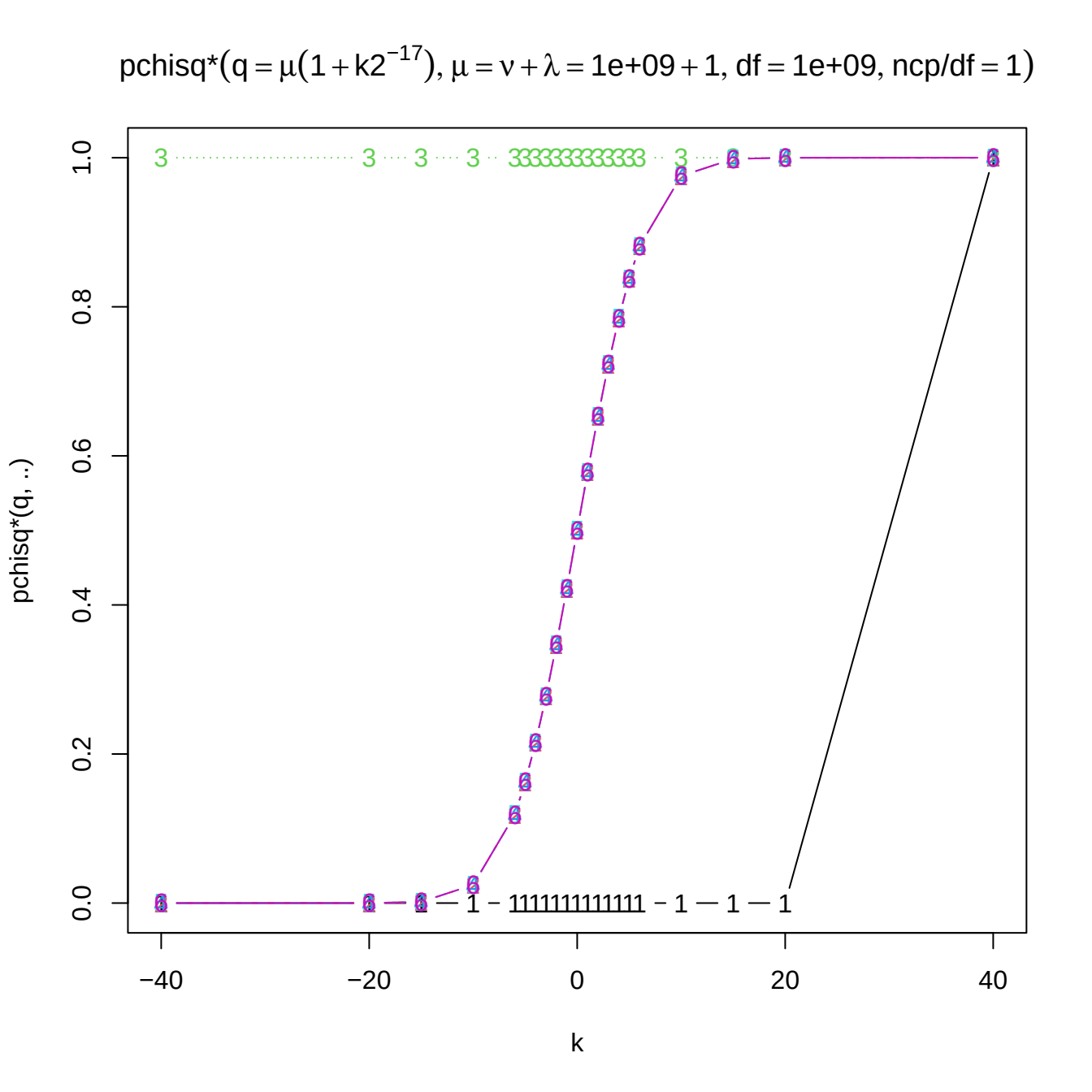

pchi*(q = μ(1 + k2^−13) − pchi.1, μ = ν + λ = 1 + 1e+06, df = 1, ncp = 1e+06)
pchisq*(q, ..)
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40
k

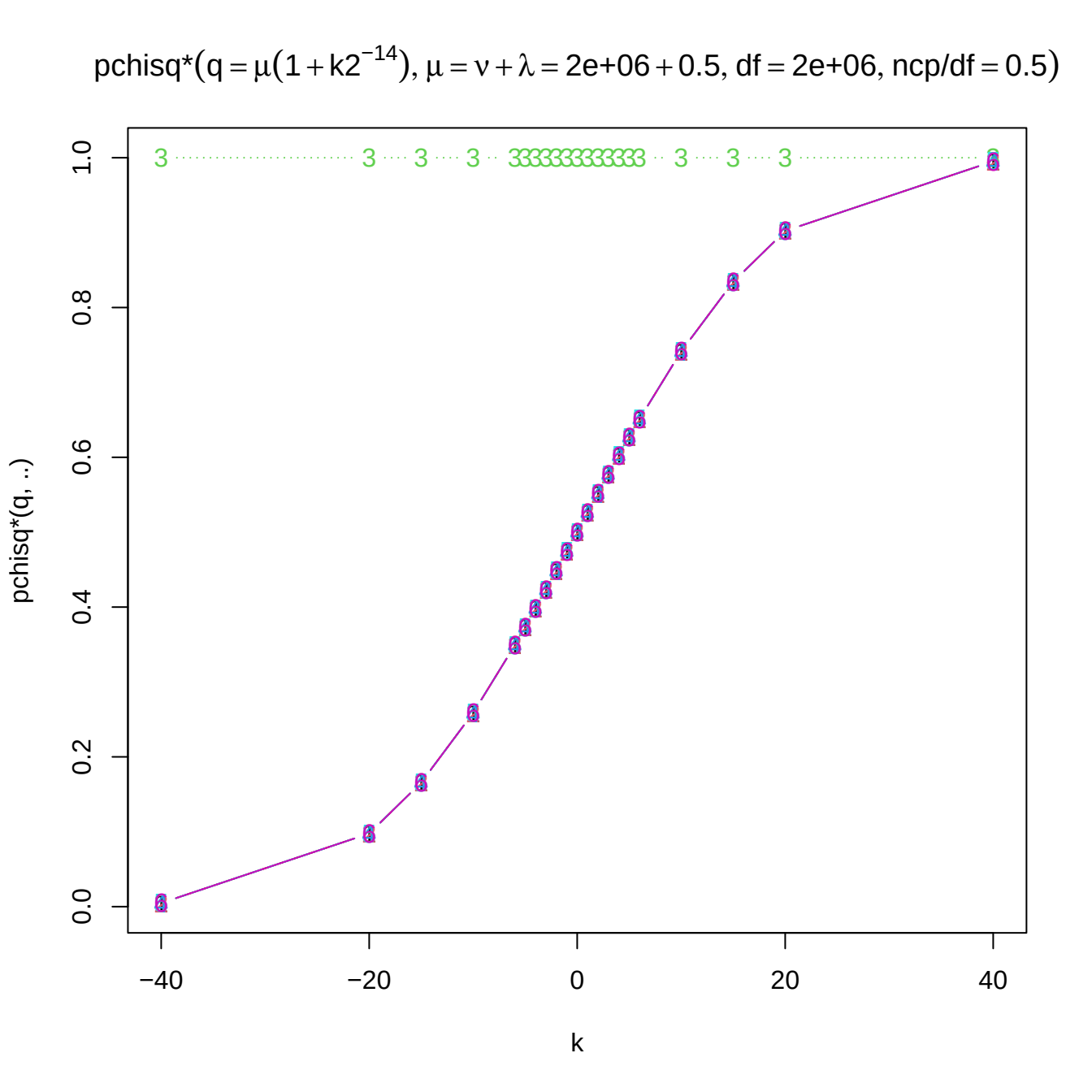

pchi*(q = μ(1 + k2^−13) − pchi.1, μ = ν + λ = 1 + 1e+06, df = 1, ncp = 1e+06)
pchisq
pcAbdelA
pcPatnaik
pcPearson
pcSanka_d
pchisq*(q, ..) − pchi1sq()
6e−05
4e−05
2e−05
0e+00
−2e−05
−40
−20
0
20
40
k


pchi*(q = μ(1 + k2^−13) − pchi.1, μ = ν + λ = 1 + 1e+06, df = 1, ncp = 1e+06)
pchisq*(q, ..) − pchi1sq()
k
pchisq
pcPearson
pcSanka_d
3e−08
2e−08
1e−08
0e+00
−1e−08
−2e−08
−3e−08
−40
−20
0
20
40


pchi*(q = μ(1 + k2^−13) − pchi.1, μ = ν + λ = 1 + 1e+06, df = 1, ncp = 1e+06)
pchisq
pcSanka_d
pchisq*(q, ..) − pchi1sq()
0e+00
−1e−10
−2e−10
−3e−10
−4e−10
−5e−10
−40
−20
0
20
40
k


pchisq*(q = μ(1 + k2^−17), μ = ν + λ = 3 + 1e+09, df = 3, ncp = 1e+09)
pchisq*(q, ..)
k
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40


pchisq*(q = μ(1 + k2^−17), μ = ν + λ = 1e+09 + 1, df = 1e+09, ncp/df = 1)
pchisq*(q, ..)
k
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40


pchisq*(q = μ(1 + k2^−14), μ = ν + λ = 2e+06 + 0.5, df = 2e+06, ncp/df = 0.5)
pchisq*(q, ..)
k
0.0
0.2
0.4
0.6
0.8
1.0
−40
−20
0
20
40