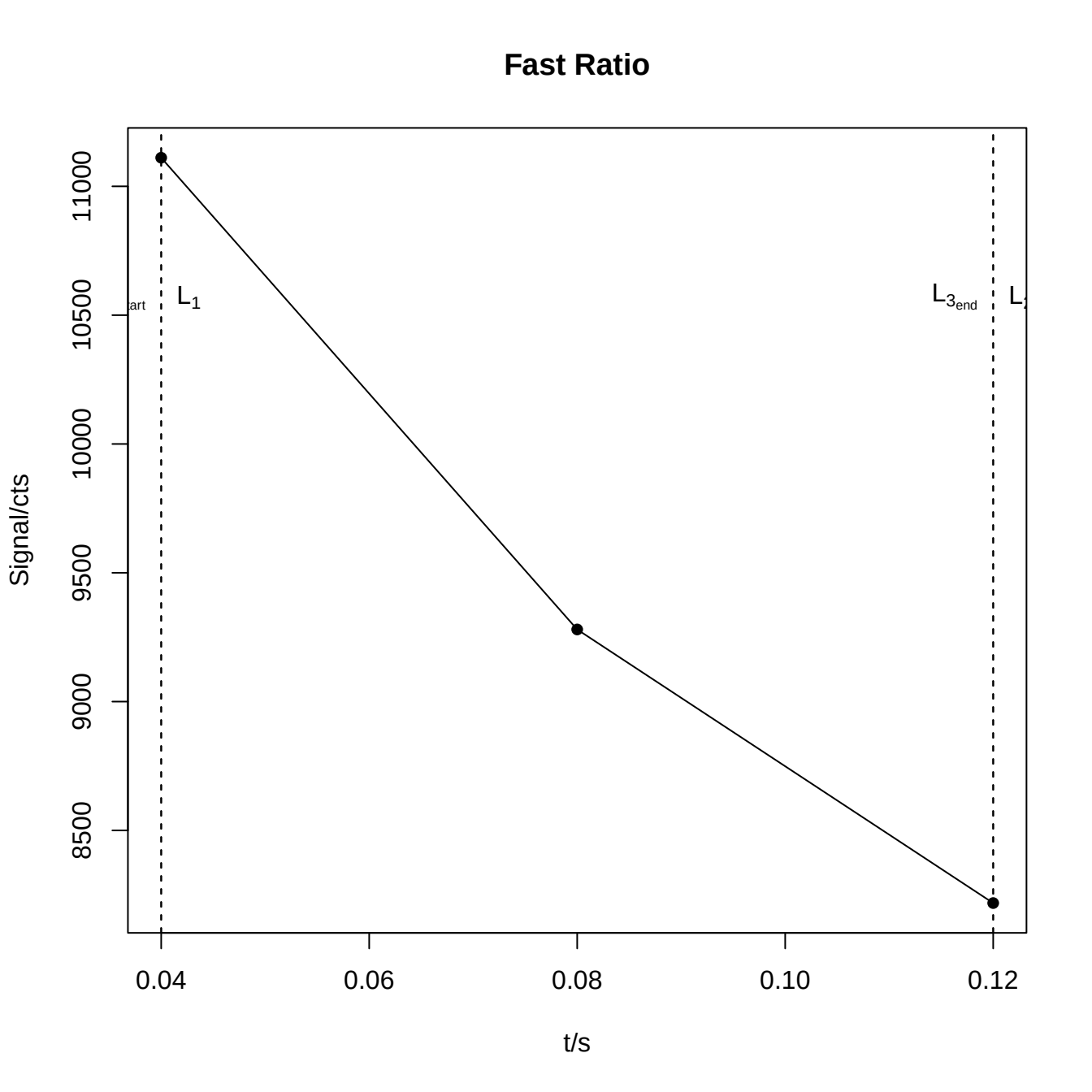
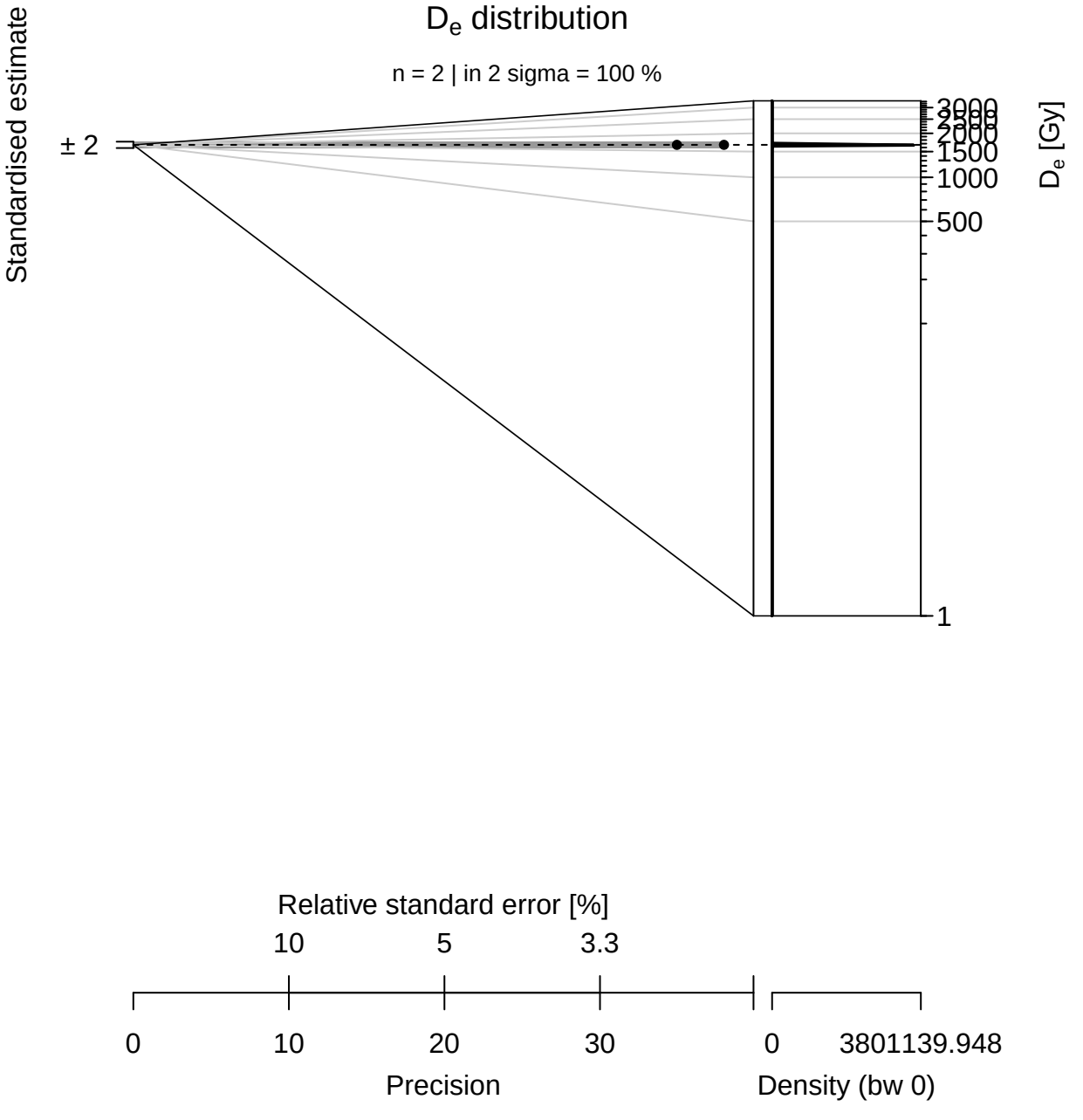
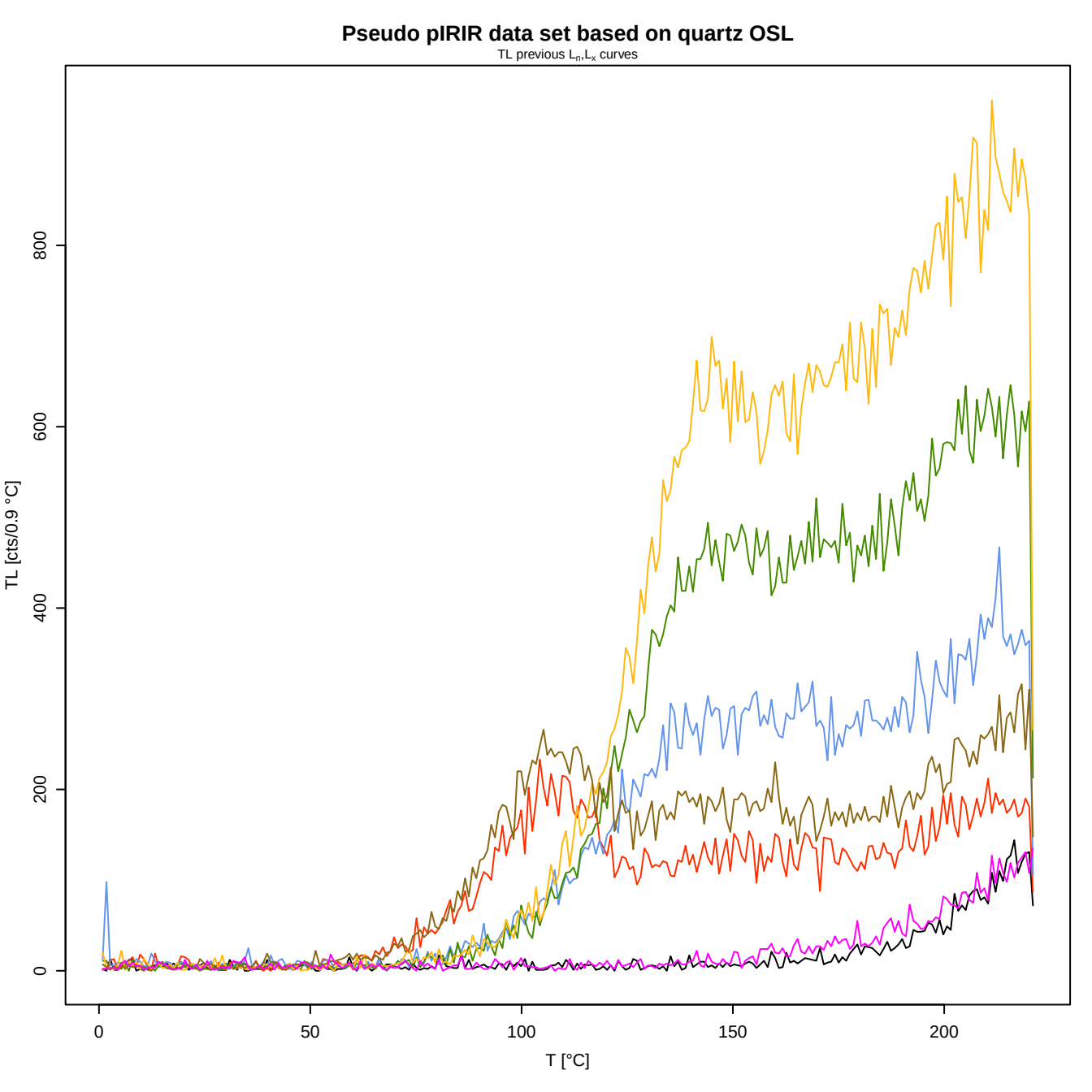
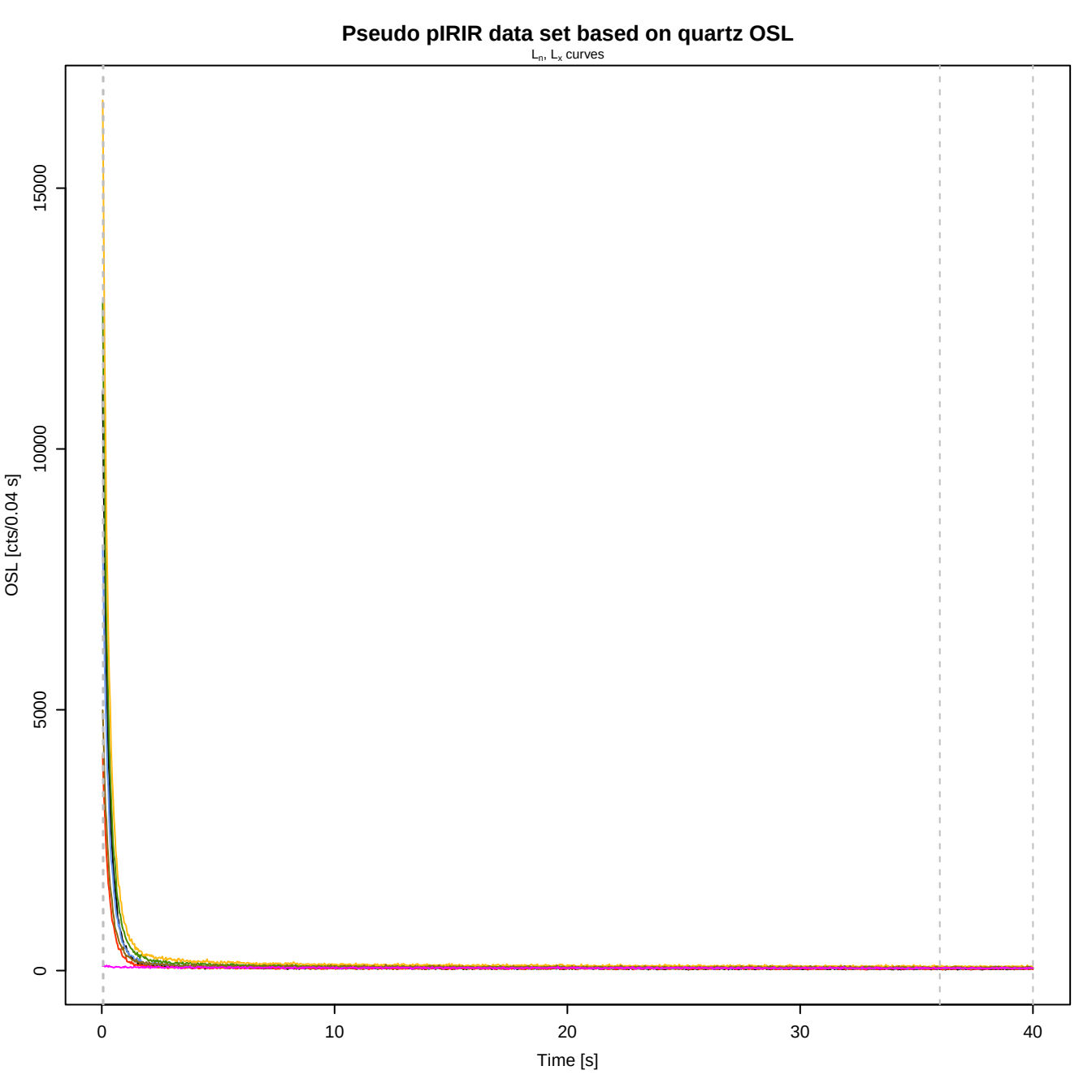

Fast Ratio
Signal/cts
11000
10500
10000
9500
9000
8500
art
L1
L3end
L
0.04
0.06
0.08
0.10
0.12
t/s

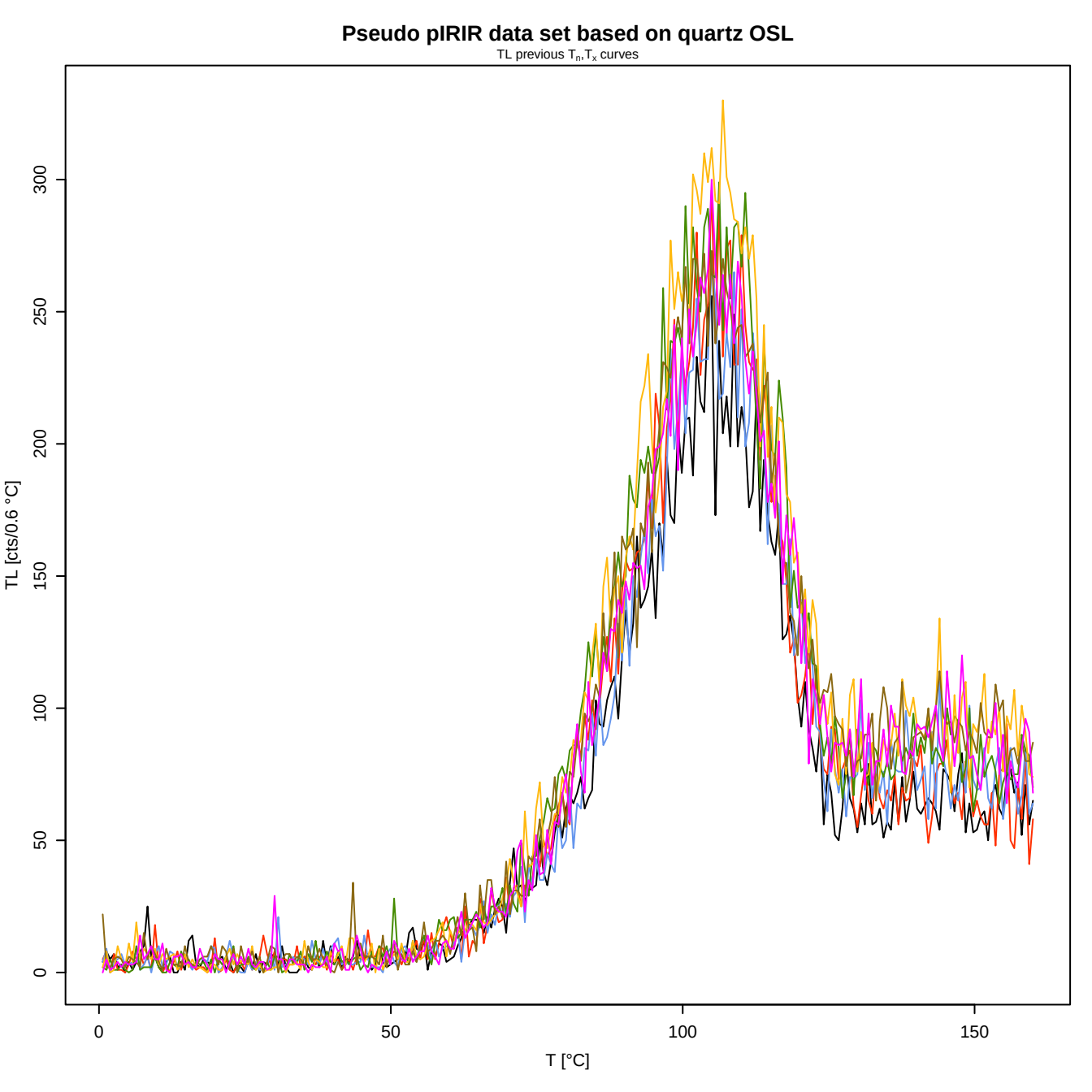

De distribution
n = 2 | in 2 sigma = 100 %
Standardised estimate
± 2
3000
2500
2000
1500
1000
500
1
De [Gy]
Relative standard error [%]
10
5
3.3
0
10
20
30
Precision
0
3801139.948
Density (bw 0)

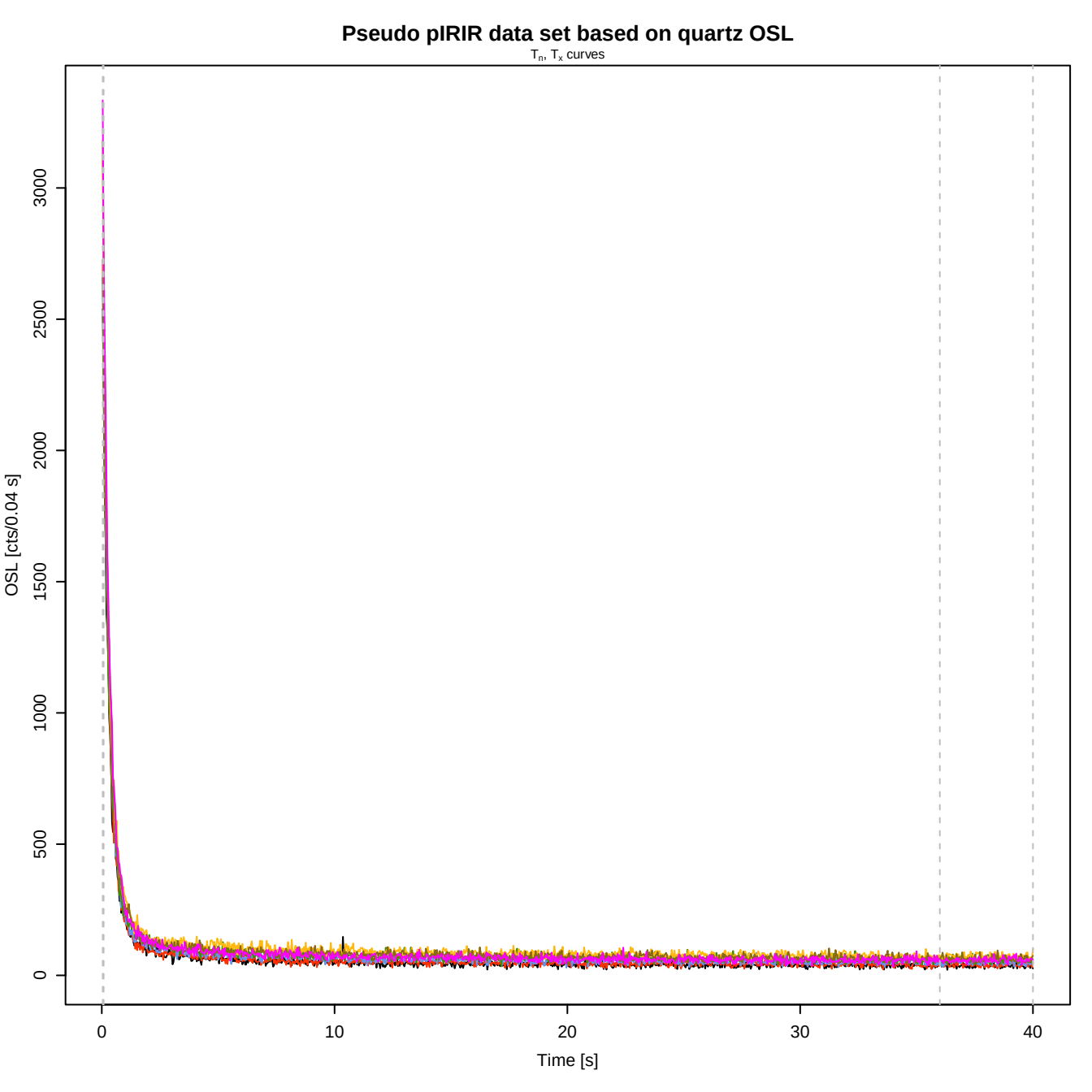
Pseudo pIRIR data set based on quartz OSL

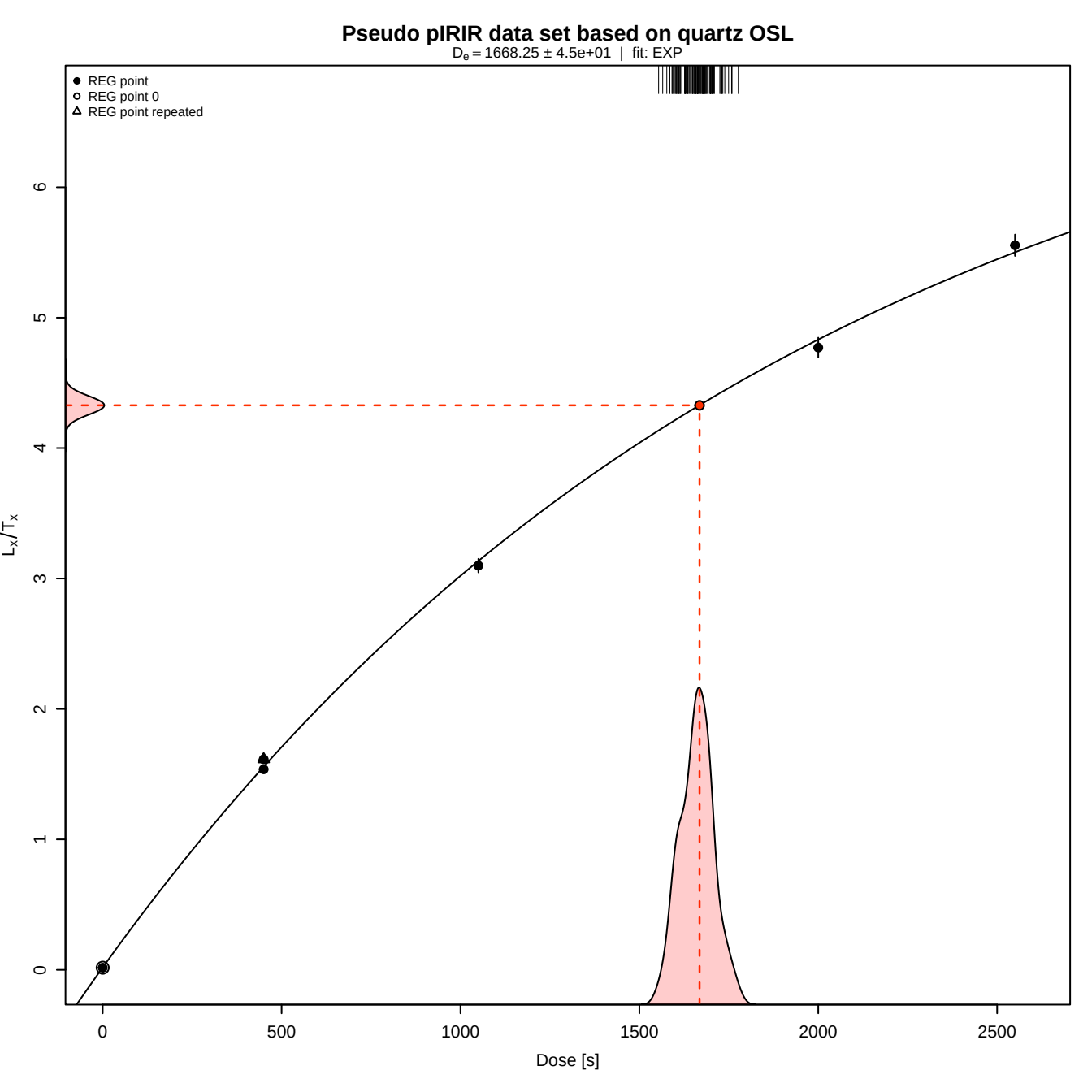
TL
pseudoIRSL1
pseudoIRSL2

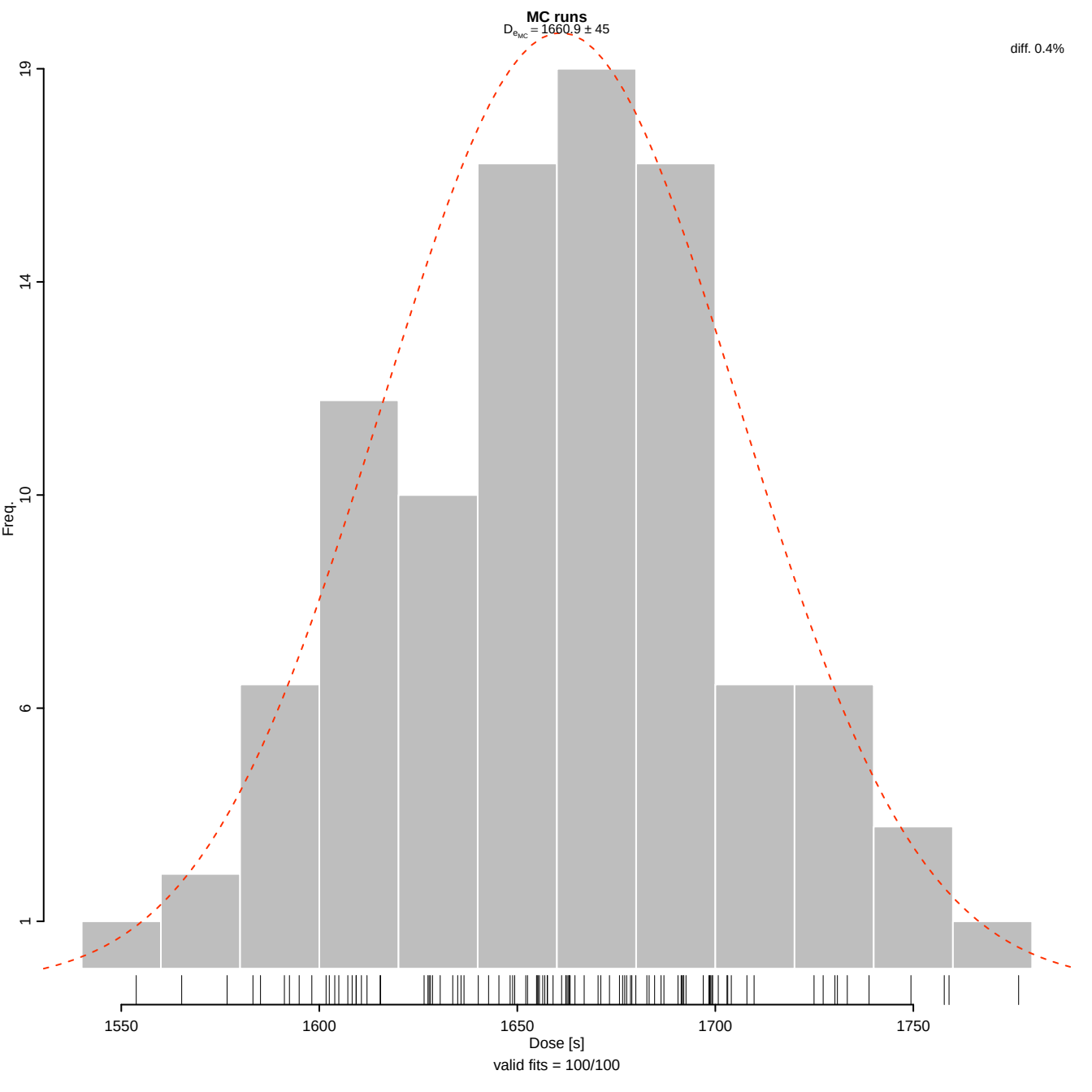

Pseudo pIRIR data set based on quartz OSL
TL previous L_n,L_x curves
TL [cts/0.9 °C]
0
200
400
600
800
T [°C]
0
50
100
150
200

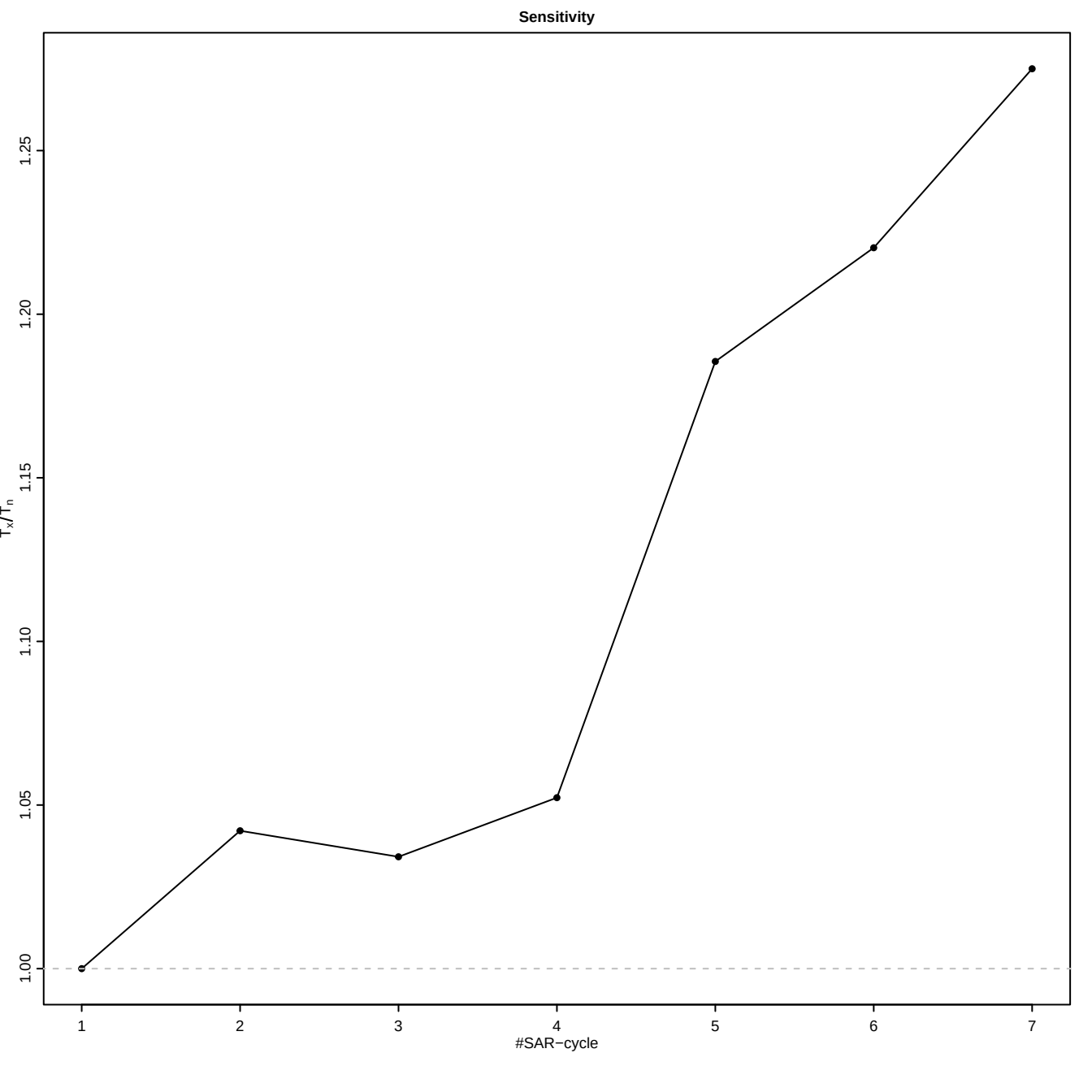

Pseudo pIRIR data set based on quartz OSL
L_n, L_x curves
OSL [cts/0.04 s]
0
5000
10000
15000
0
10
20
30
40
Time [s]

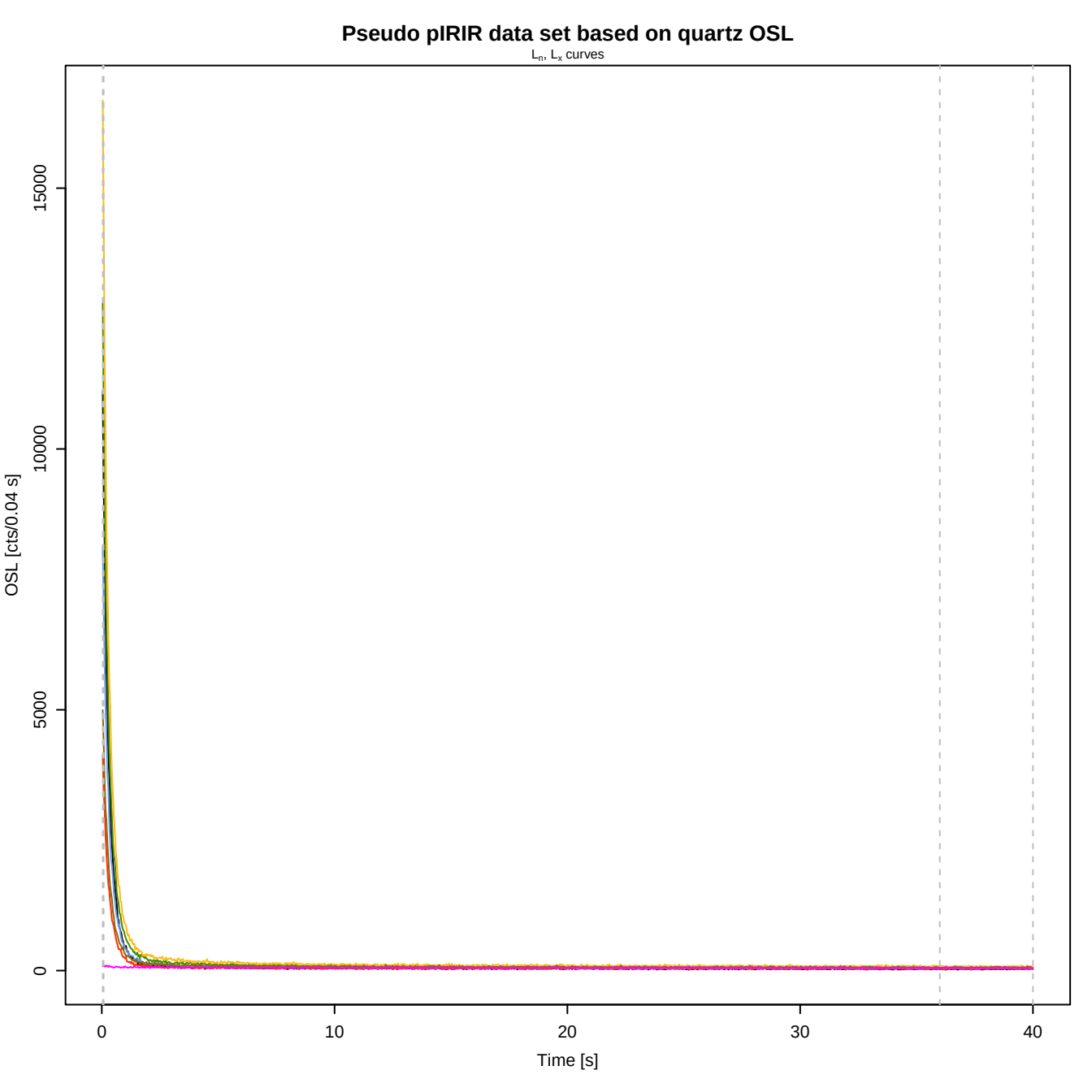

Pseudo pIRIR data set based on quartz OSL
TL previous T_n,T_x curves
TL [cts/0.6 °C]
T [°C]
0
50
100
150
0
50
100
150
200
250
300

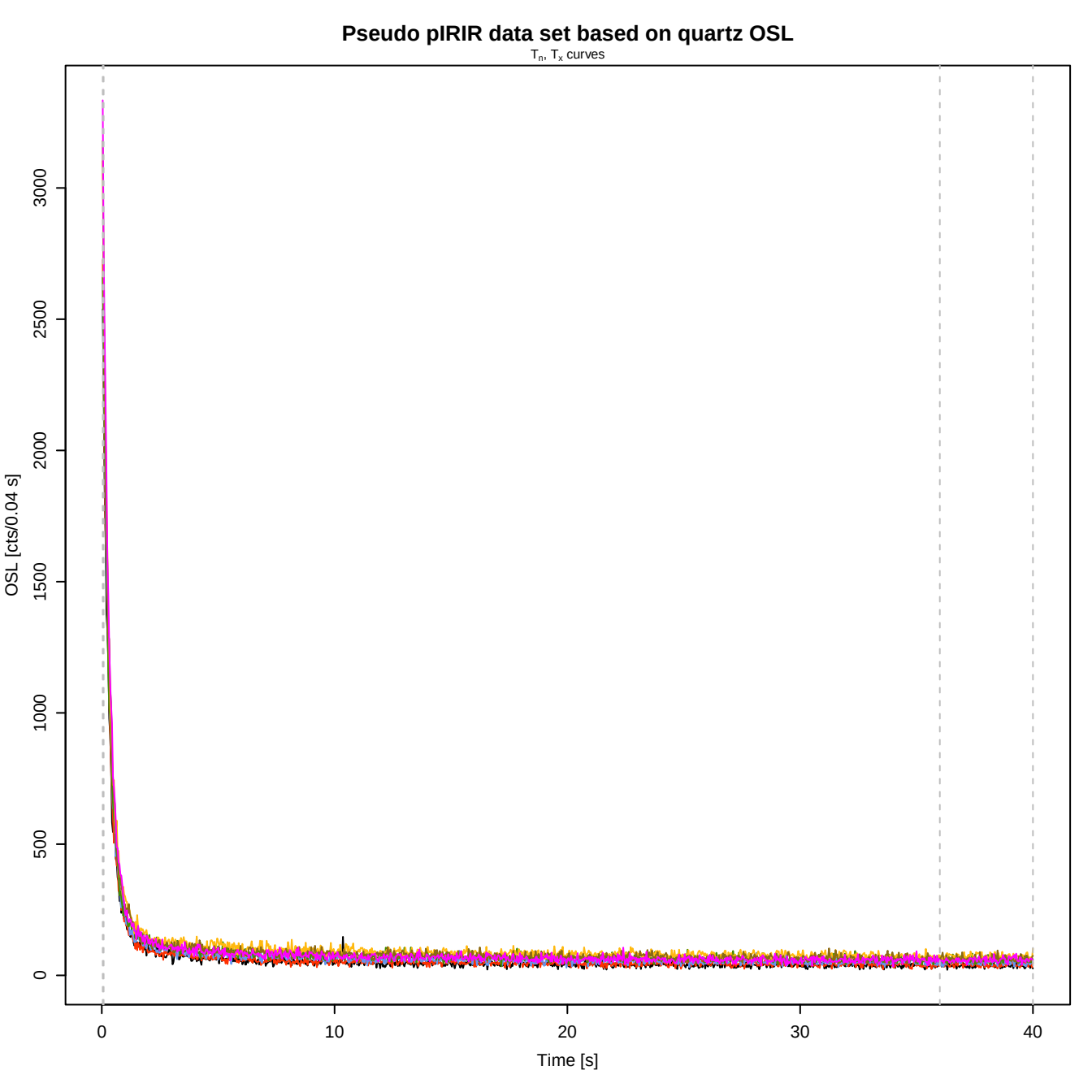

Pseudo pIRIR data set based on quartz OSL
T_n, T_x curves
OSL [cts/0.04 s]
0
500
1000
1500
2000
2500
3000
0
10
20
30
40
Time [s]


Pseudo pIRIR data set based on quartz OSL
De = 1668.25 ± 4.5e+01 | fit: EXP
REG point
REG point 0
REG point repeated
Lx/Tx
Dose [s]
0
1
2
3
4
5
6
0
500
1000
1500
2000
2500

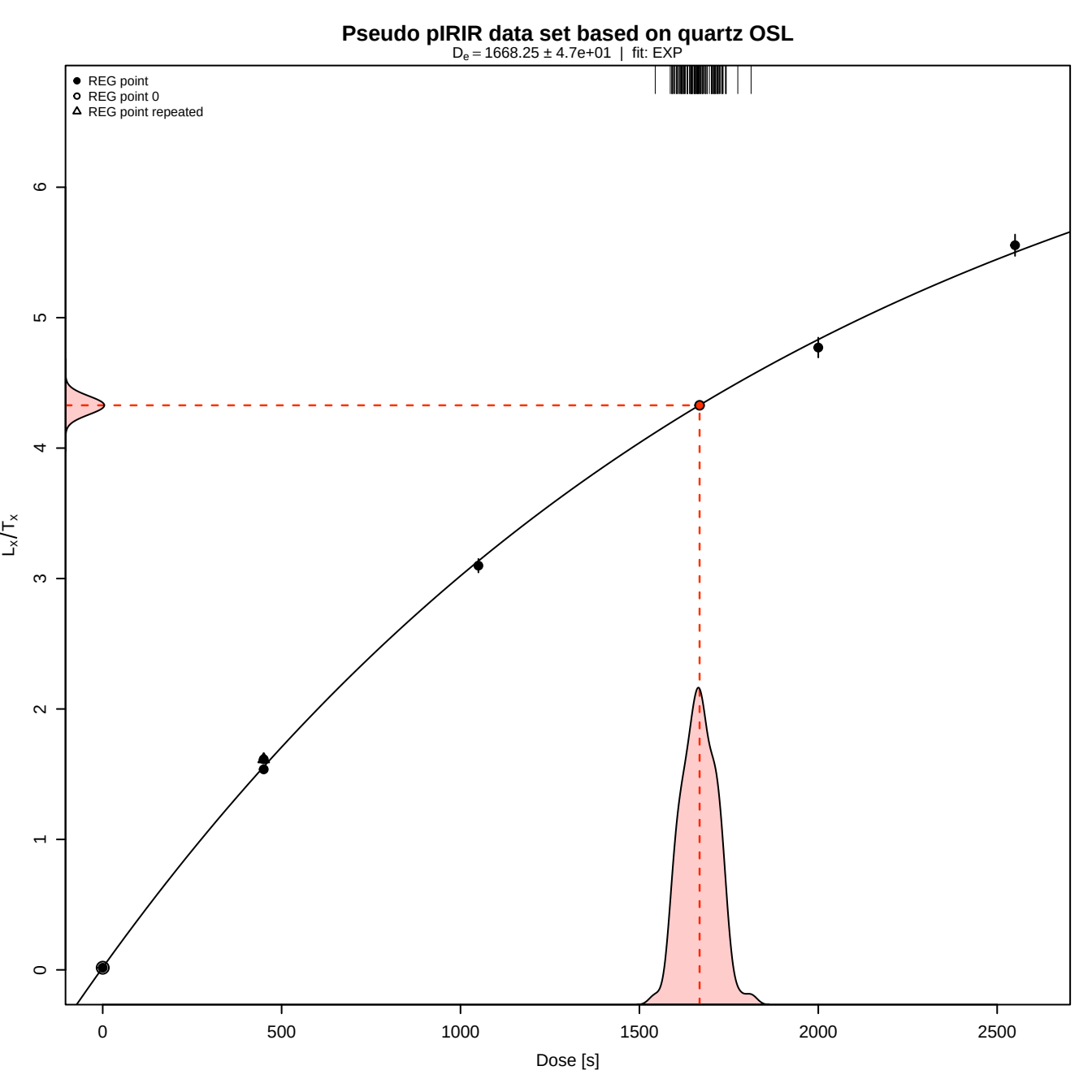

MC runs
De_MC = 1660.9 ± 45
diff. 0.4%
Freq.
1
6
10
14
19
1550
1600
1650
1700
1750
Dose [s]
valid fits = 100/100

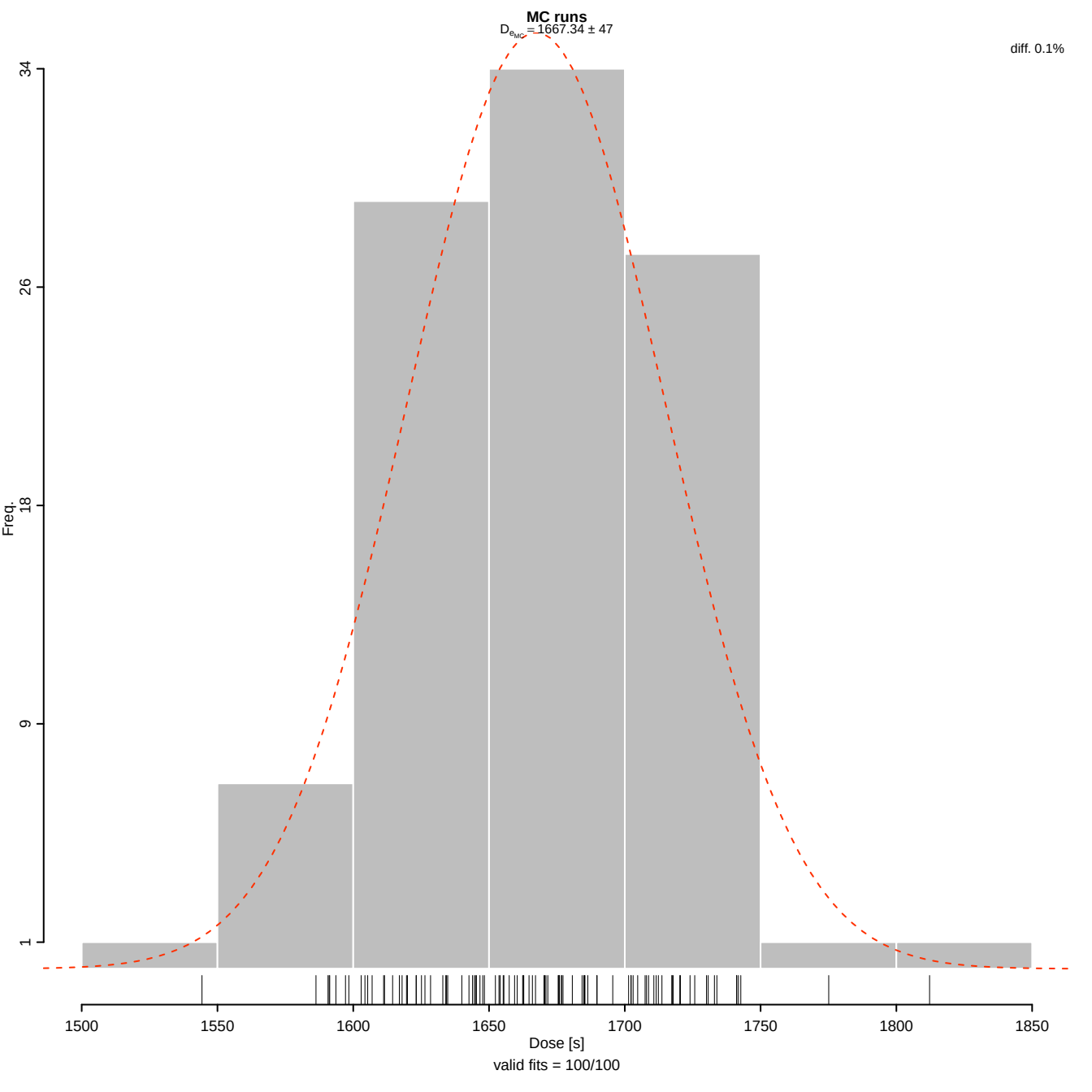

Sensitivity
1.25
1.20
1.15
1.10
1.05
1.00
T_x/T_n
1
2
3
4
5
6
7
#SAR−cycle

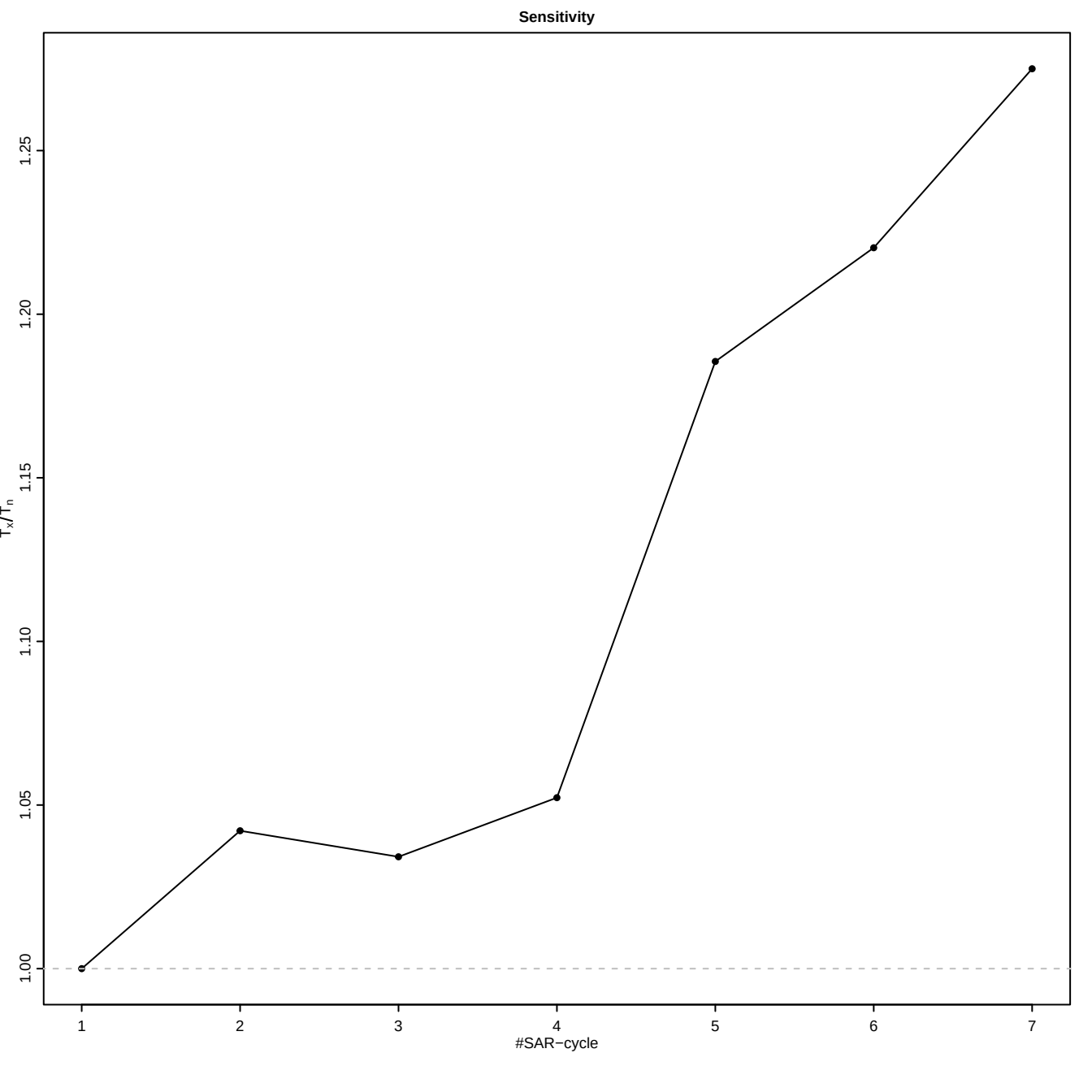

Pseudo pIRIR data set based on quartz OSL
L_n, L_x curves
OSL [cts/0.04 s]
0
5000
10000
15000
0
10
20
30
40
Time [s]

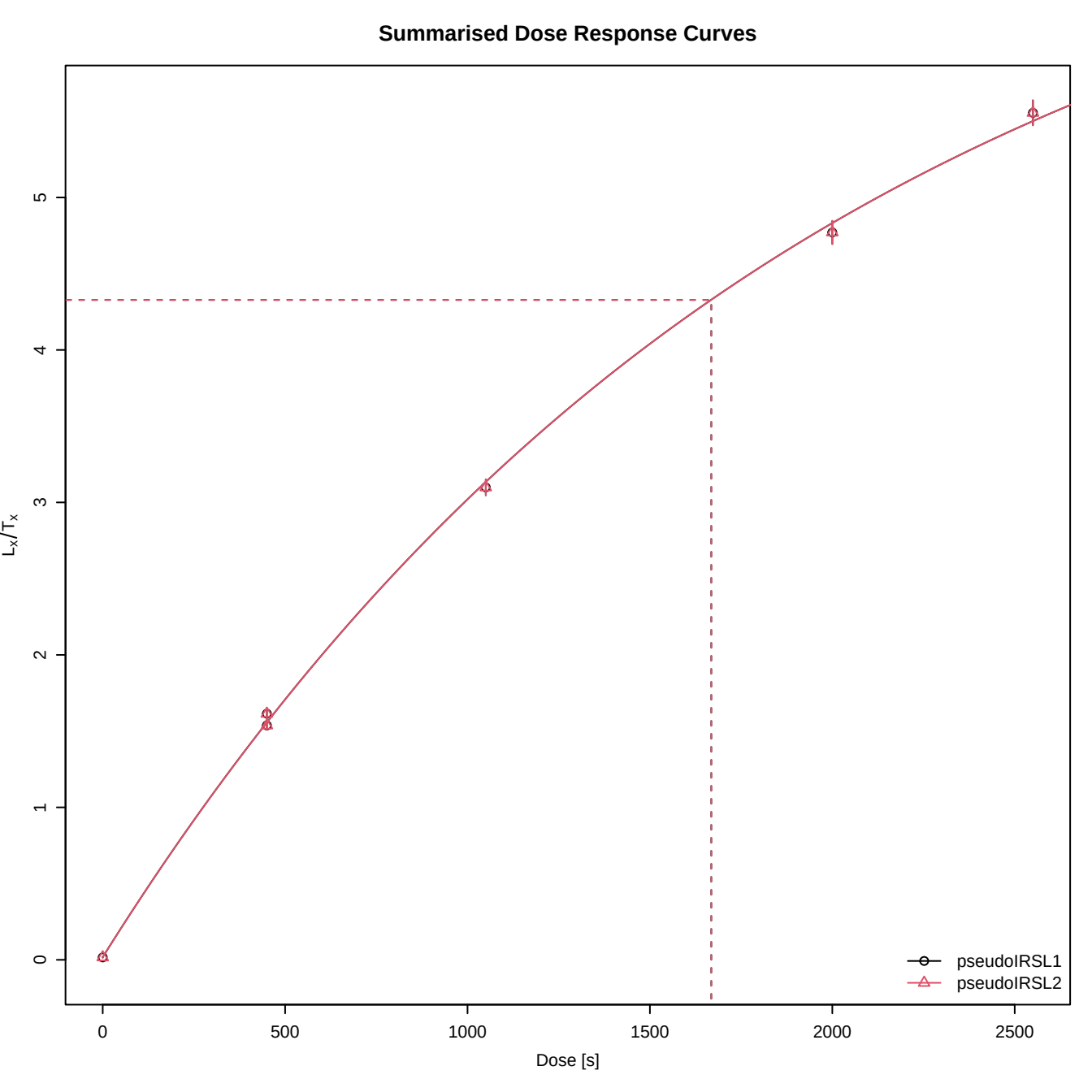

Pseudo pIRIR data set based on quartz OSL
T_n, T_x curves
OSL [cts/0.04 s]
0
500
1000
1500
2000
2500
3000
0
10
20
30
40
Time [s]

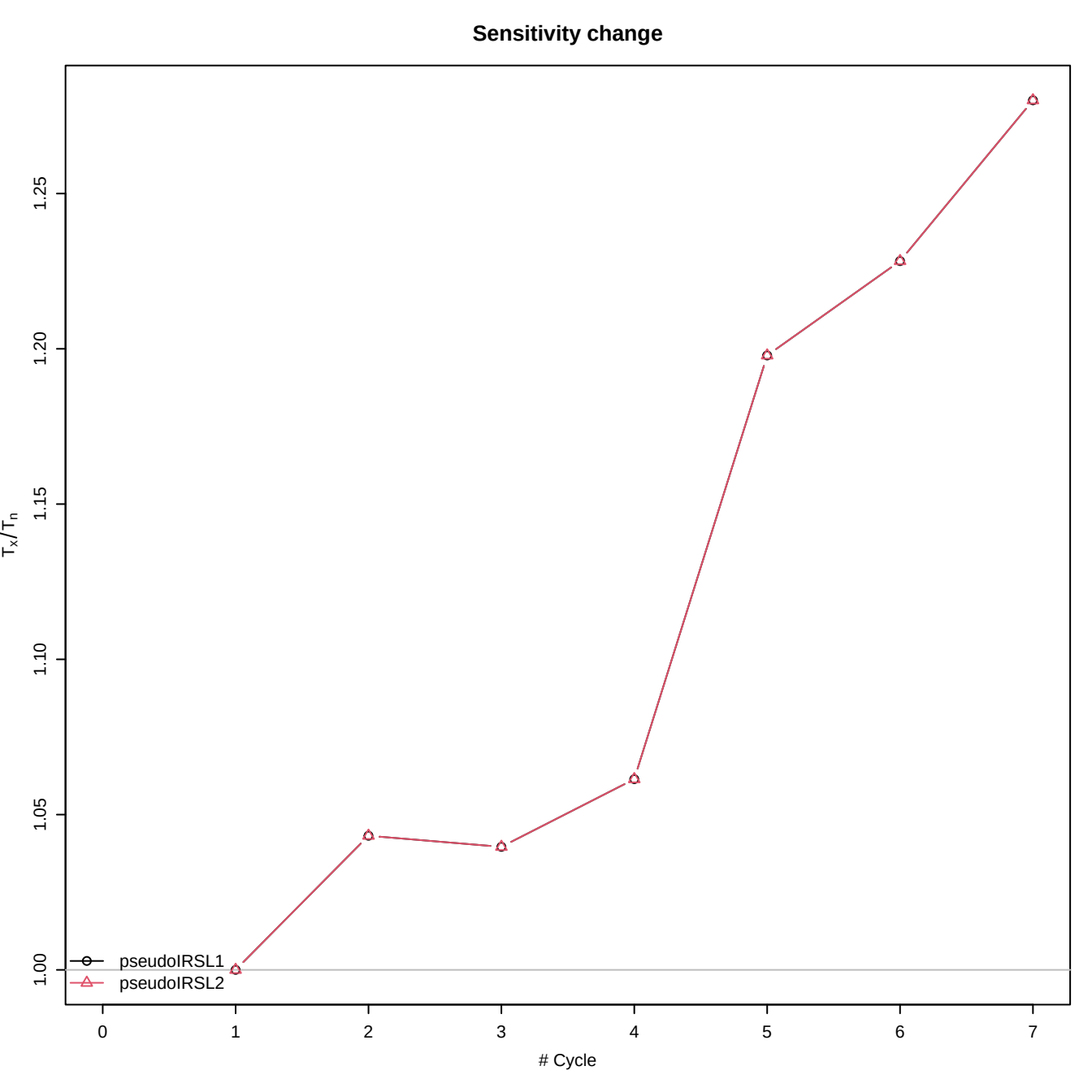
Natural
(0)
R1
(450)
R2
(1050)
R3
(2000)
R4
(2550)
R5
(450)
R0
(0)

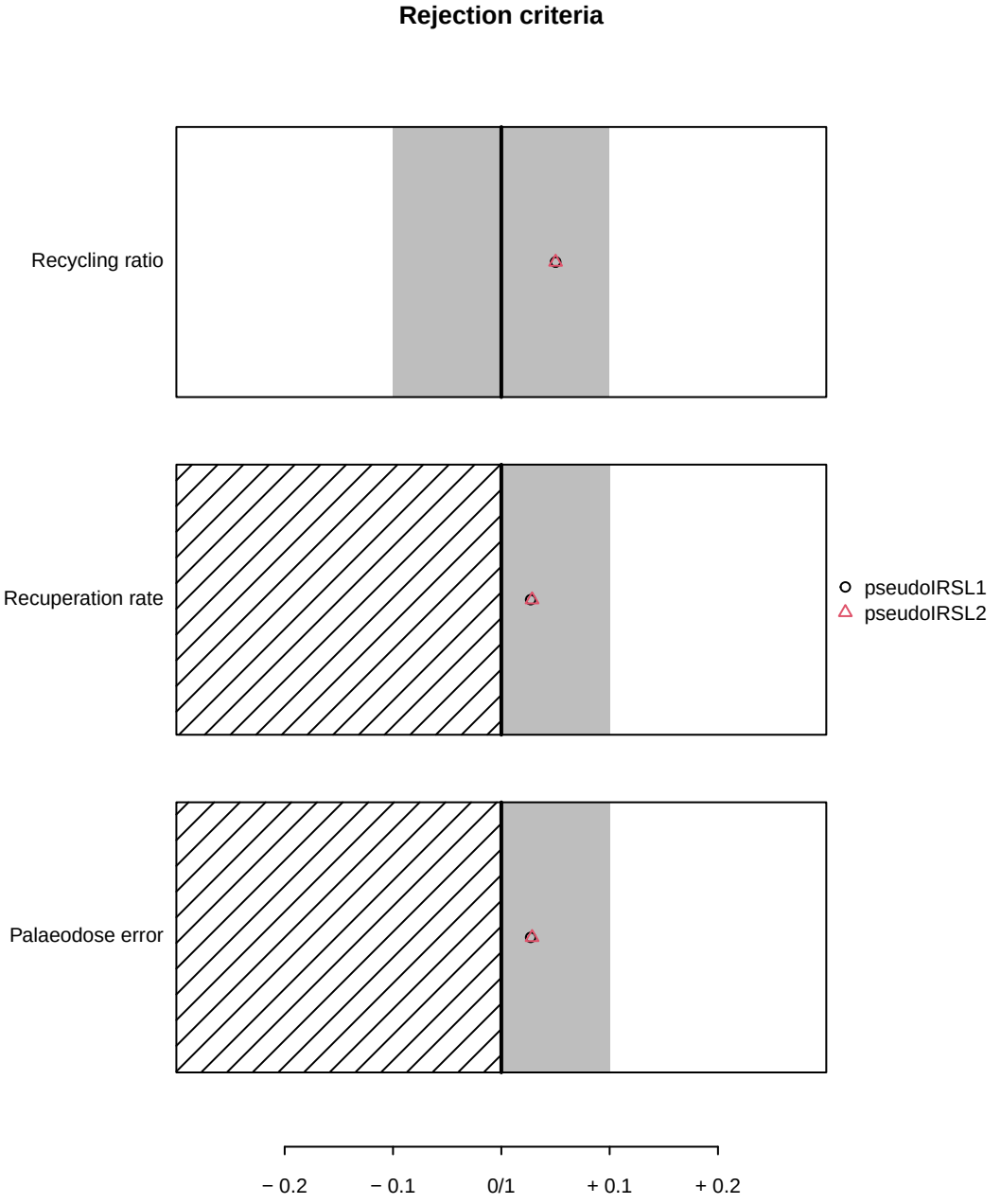

Pseudo pIRIR data set based on quartz OSL
De = 1668.25 ± 4.7e+01 | fit: EXP
REG point
REG point 0
REG point repeated
Lx/Tx
Dose [s]
0
1
2
3
4
5
6
0
500
1000
1500
2000
2500


MC runs
$D_{\theta_{MC}}$ = 1667.34 ± 47
diff. 0.1%
Freq.
34
26
18
9
1
1500
1550
1600
1650
1700
1750
1800
1850
Dose [s]
valid fits = 100/100


Sensitivity
1.25
1.20
1.15
1.10
1.05
1.00
T_x/T_n
1
2
3
4
5
6
7
#SAR−cycle

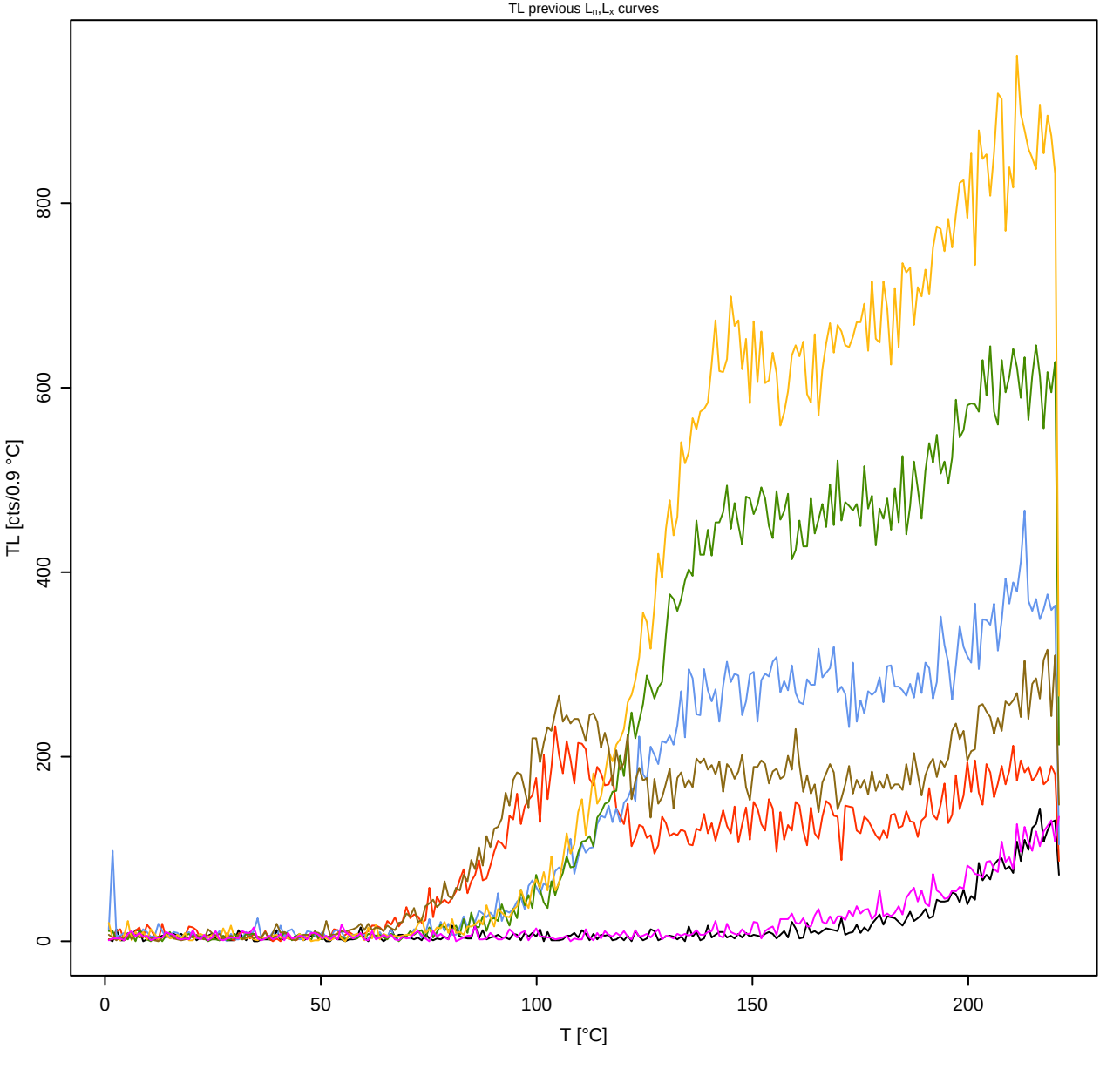

Summarised Dose Response Curves
L_x/T_x
Dose [s]
0
1
2
3
4
5
0
500
1000
1500
2000
2500
pseudoIRSL1
pseudoIRSL2

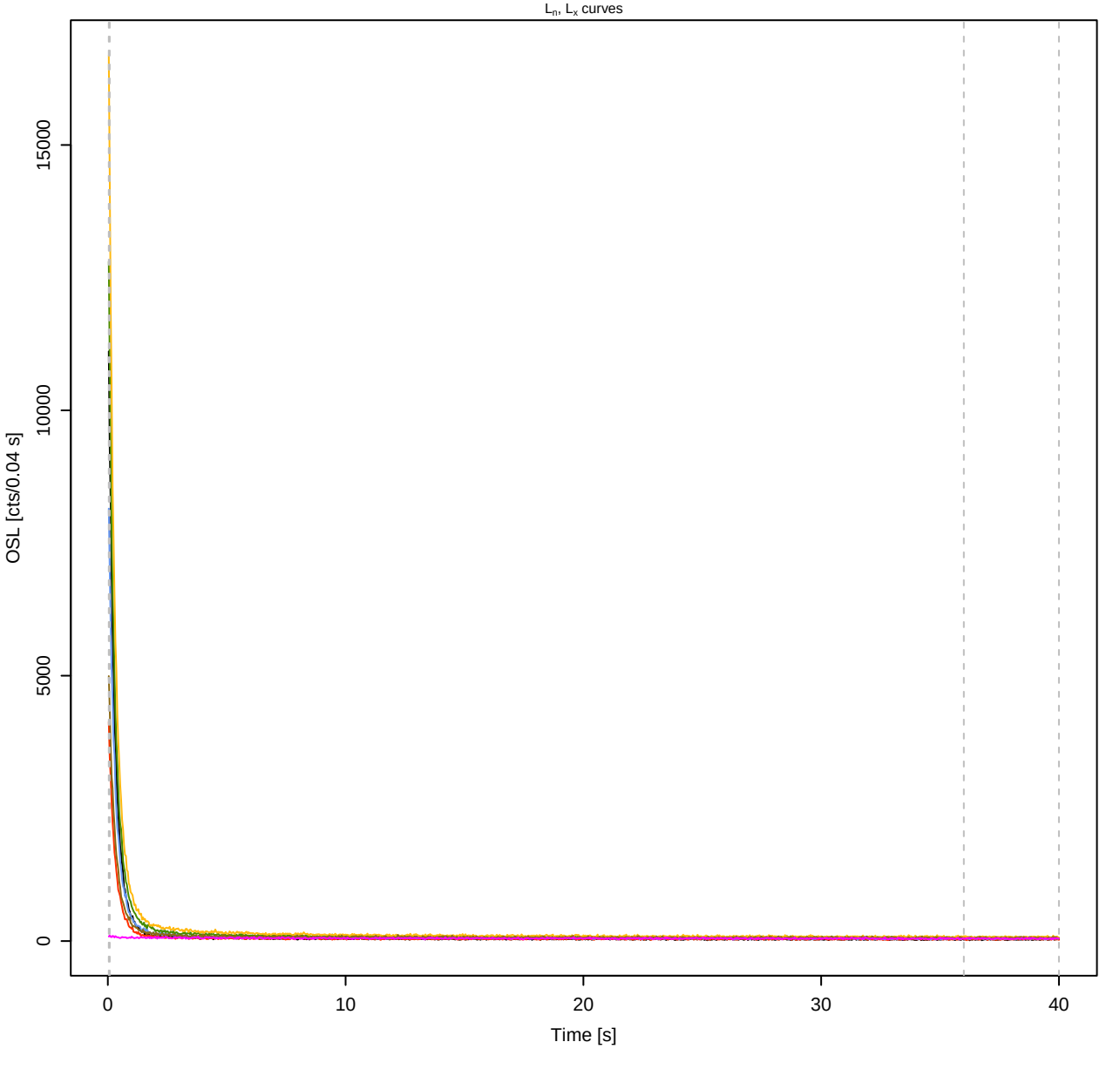

Sensitivity change
T_x/T_n
1.00
1.05
1.10
1.15
1.20
1.25
0
1
2
3
4
5
6
7
Cycle
pseudoIRSL1
pseudoIRSL2

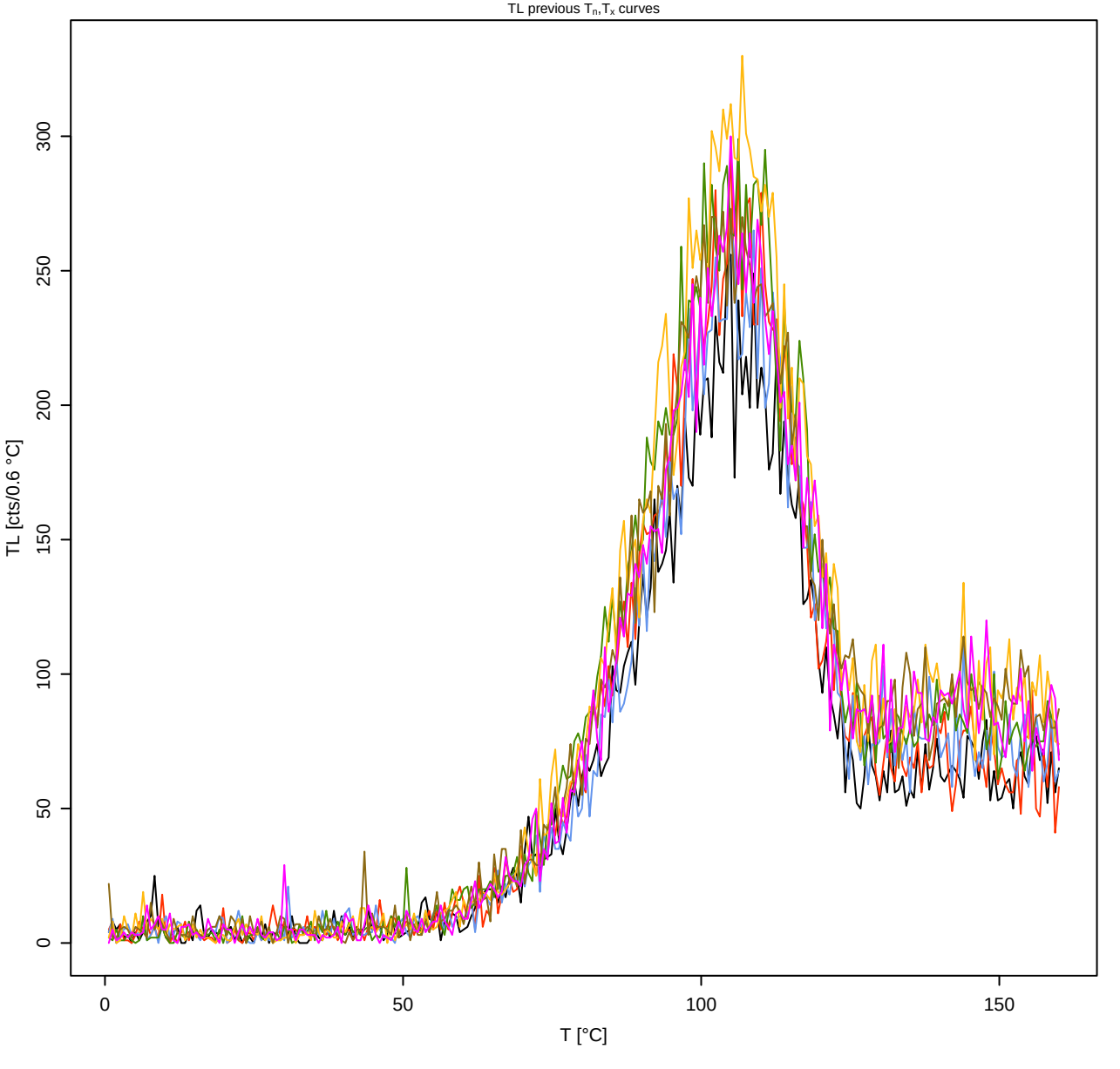

Rejection criteria
Recycling ratio
Recuperation rate
Palaeodose error
pseudoIRSL1
pseudoIRSL2
− 0.2
− 0.1
0/1
+ 0.1
+ 0.2

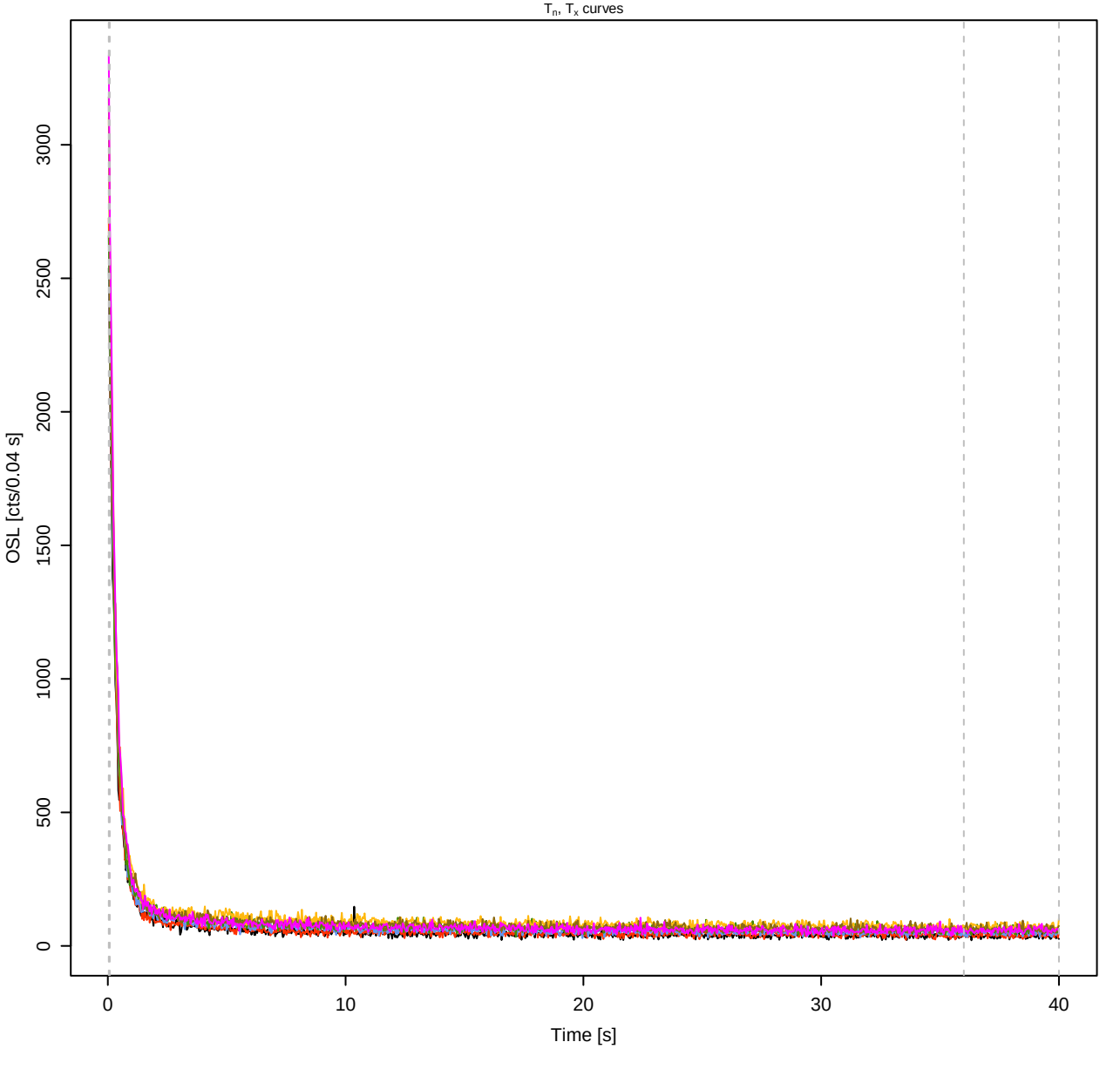
MEASUREMENT INFO

TL
IR50
pIRIR225

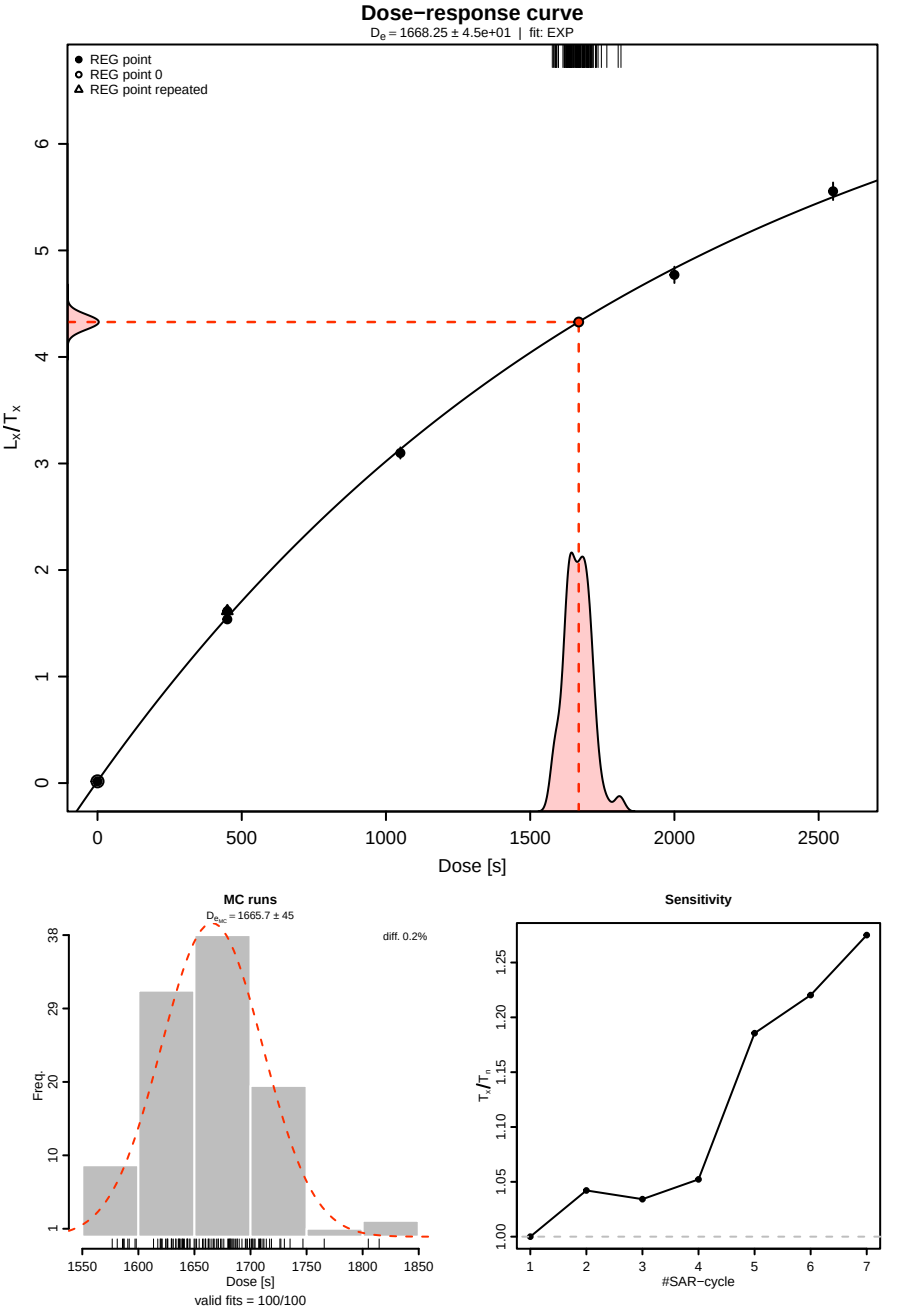

TL previous L_n,L_x curves
TL [cts/0.9 °C]
0
200
400
600
800
T [°C]
0
50
100
150
200


L_n, L_x curves
OSL [cts/0.04 s]
0
5000
10000
15000
0
10
20
30
40
Time [s]


TL previous T_n,T_x curves
TL [cts/0.6 °C]
0
50
100
150
200
250
300
T [°C]
0
50
100
150


T_n, T_x curves
OSL [cts/0.04 s]
0
500
1000
1500
2000
2500
3000
Time [s]
0
10
20
30
40

Natural
(0)
R1
(450)
R2
(1050)
R3
(2000)
R4
(2550)
R5
(450)
R0
(0)


Dose−response curve
De = 1668.25 ± 4.5e+01 | fit: EXP
REG point
REG point 0
REG point repeated
Lx/Tx
Dose [s]
0
500
1000
1500
2000
2500
MC runs
De,MC = 1665.7 ± 45
diff. 0.2%
Freq.
Dose [s]
valid fits = 100/100
Sensitivity
Tx/Tn
#SAR−cycle

No IRSL curve detected!

Checks

1668 <= 2550

De > max. dose point

0.03 <= 0.1

Palaeodose error

339

Signal−to−noise ratio

0.01 <= 0.1

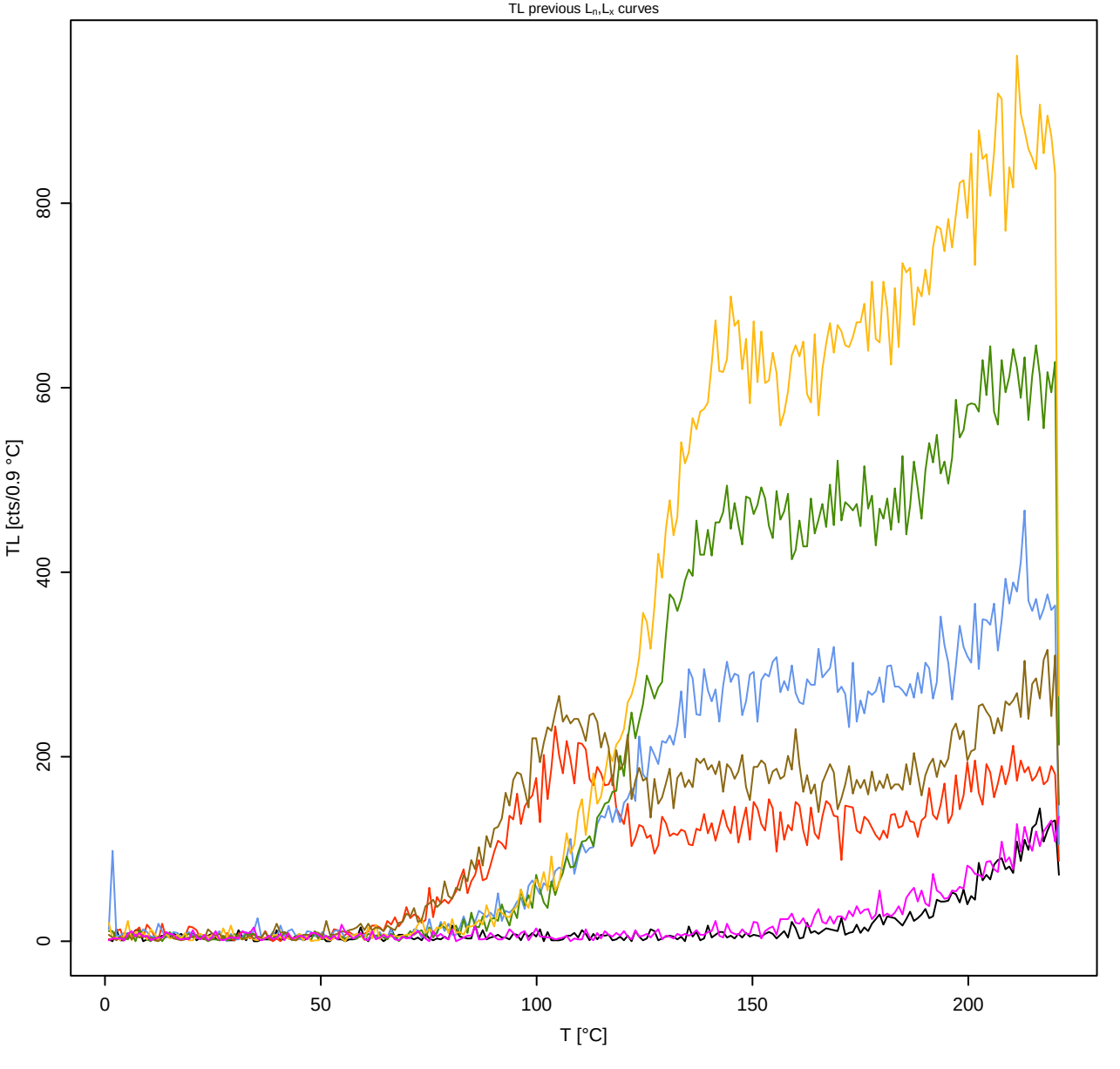
Testdose error

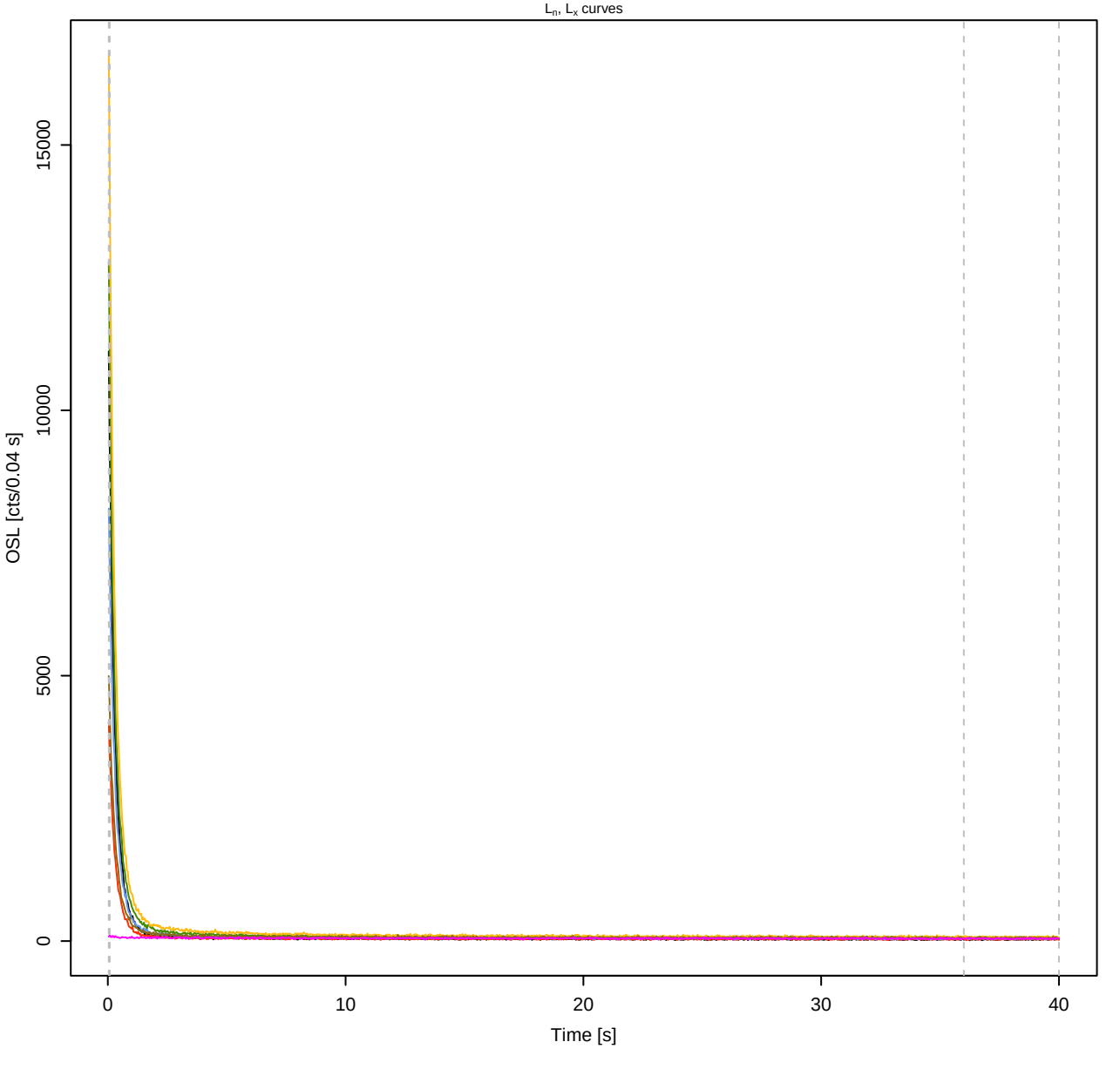
0 <= 0.1

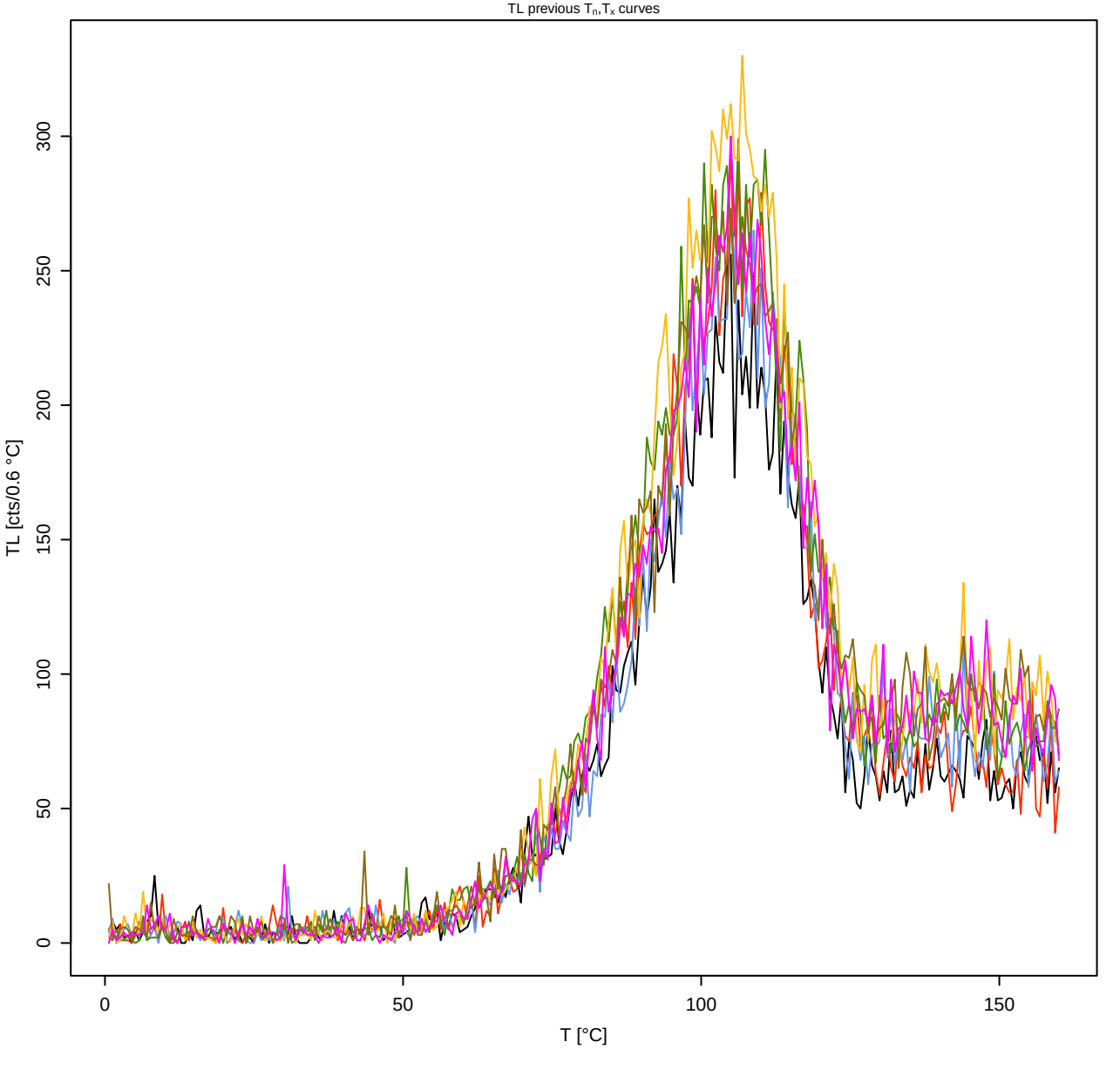
Recuperation rate (Natural) 1

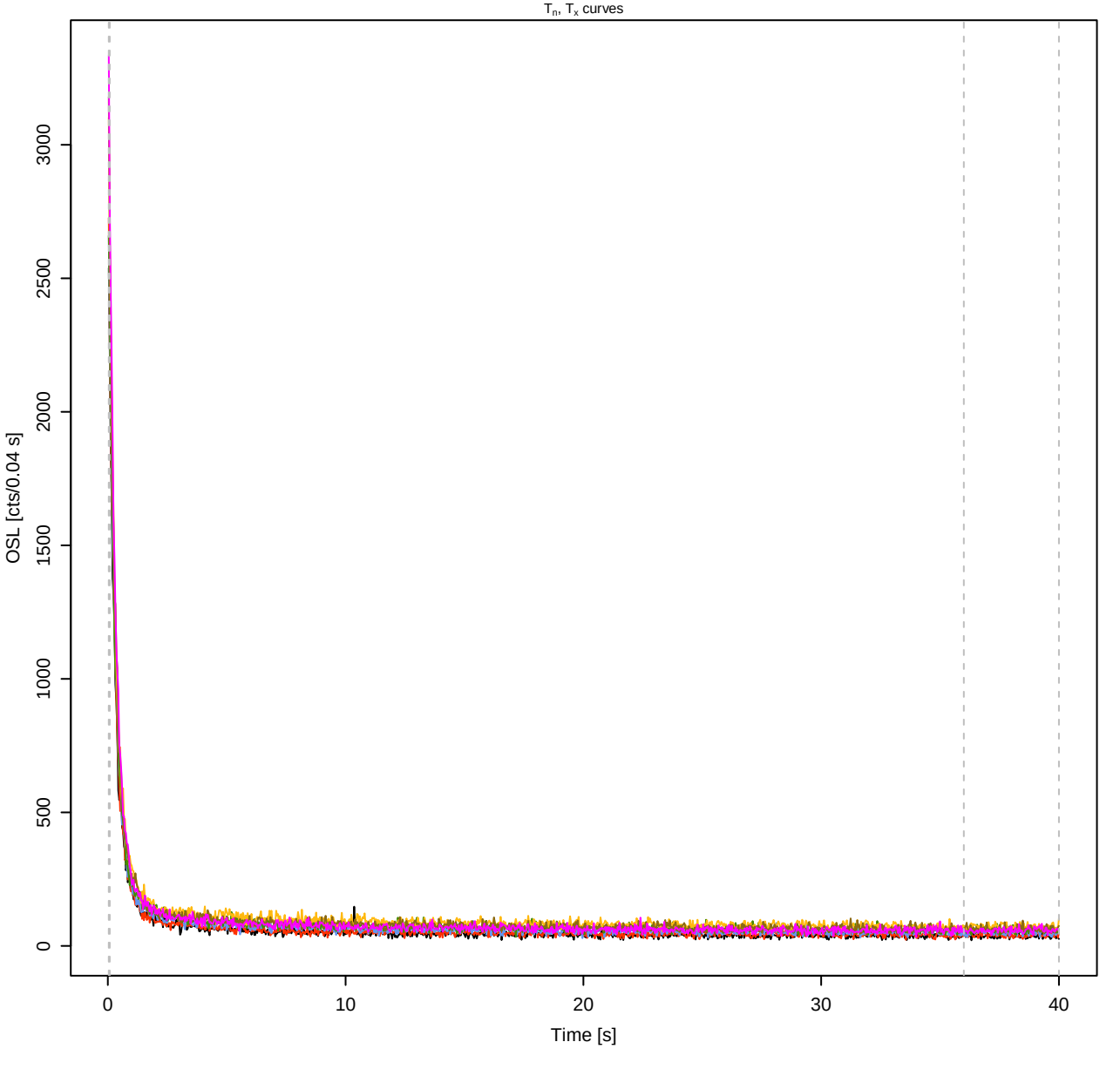
1.05 <= 1.1

Recycling ratio (R5/R1)

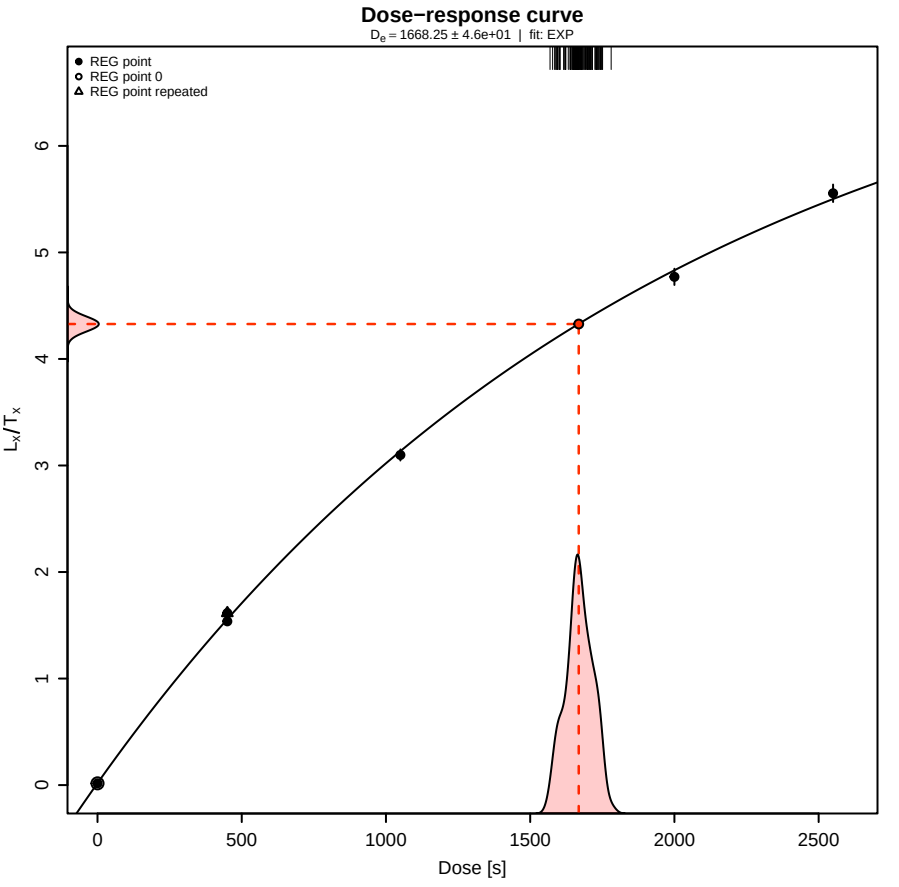

TL previous L_n,L_x curves
TL [cts/0.9 °C]
0
200
400
600
800
T [°C]
0
50
100
150
200

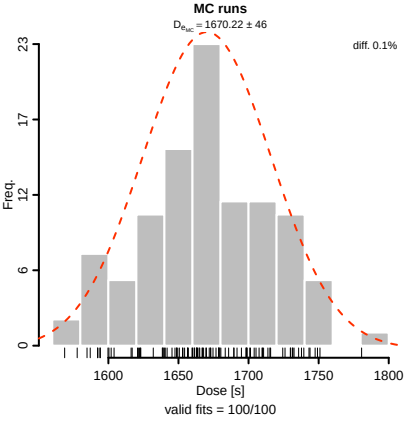

L_n, L_x curves
OSL [cts/0.04 s]
0
5000
10000
15000
0
10
20
30
40
Time [s]

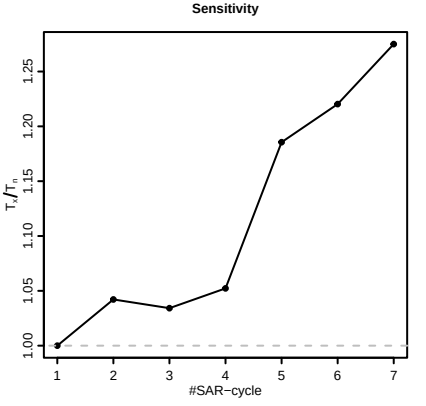

TL previous T_n,T_x curves
TL [cts/0.6 °C]
0
50
100
150
200
250
300
T [°C]
0
50
100
150


T_n, T_x curves
OSL [cts/0.04 s]
0
500
1000
1500
2000
2500
3000
Time [s]
0
10
20
30
40

Natural
(0)
R1
(450)
R2
(1050)
R3
(2000)
R4
(2550)
R5
(450)
R0
(0)


Dose−response curve
D_e = 1668.25 ± 4.6e+01 | fit: EXP
REG point
REG point 0
REG point repeated
L_x/T_x
Dose [s]


MC runs
$D_{e_{MC}}$ = 1670.22 ± 46
diff. 0.1%
Freq.
Dose [s]
valid fits = 100/100


Sensitivity
T_x/T_n
#SAR−cycle

No IRSL curve detected!

Checks

1668 <= 2550

De > max. dose point

0.03 <= 0.1

Palaeodose error

339

Signal−to−noise ratio

0.01 <= 0.1

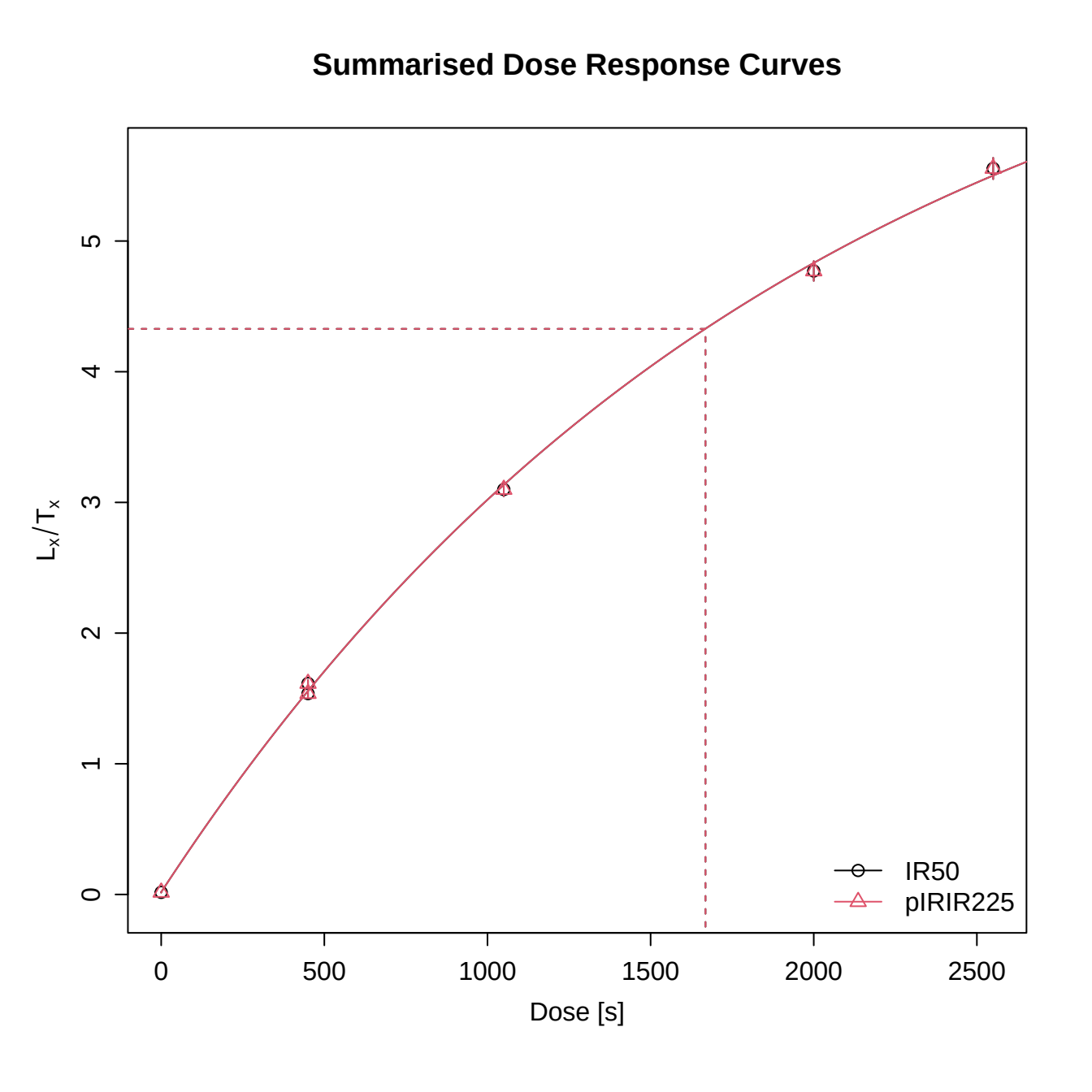
Testdose error

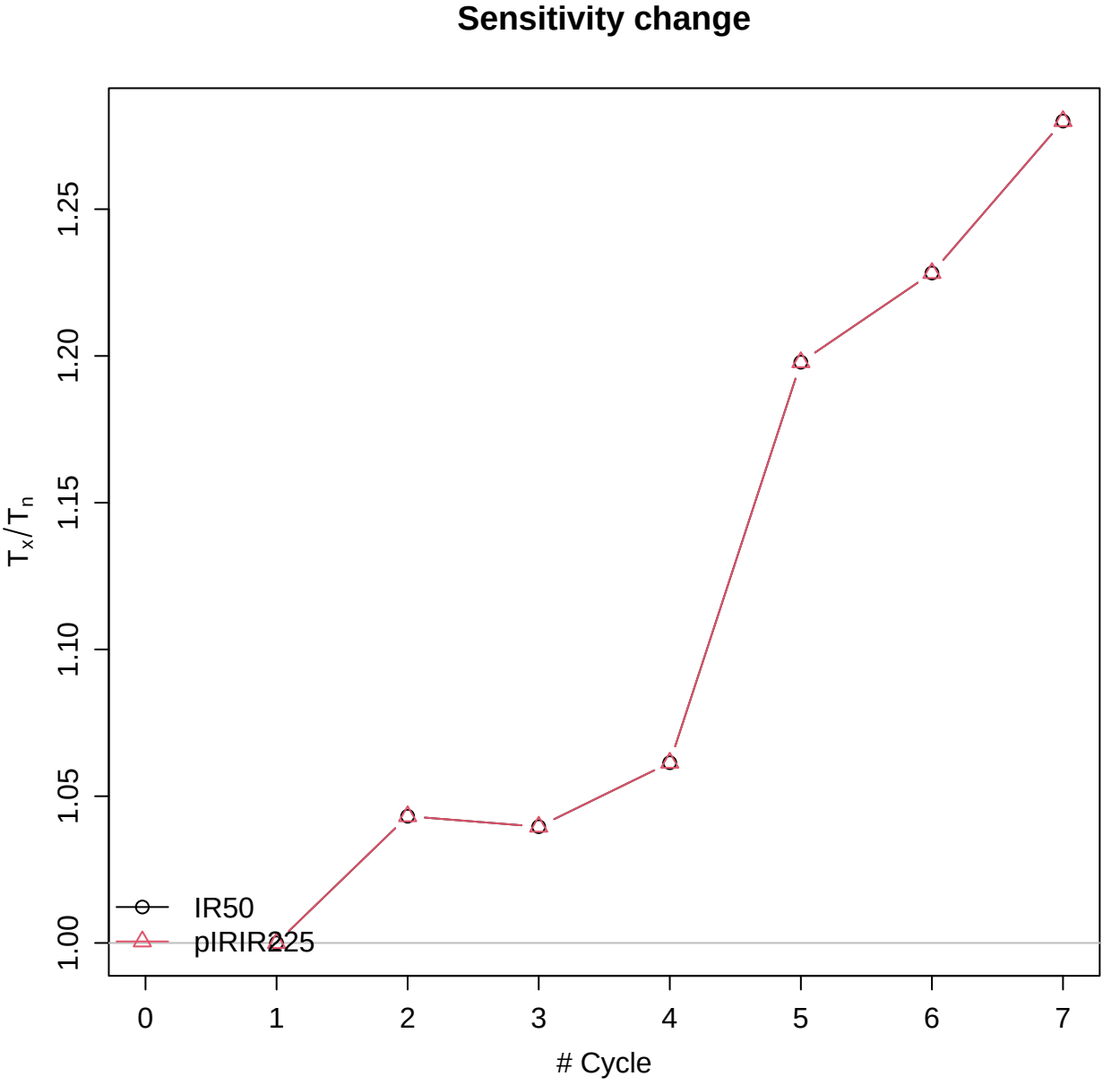
0 <= 0.1

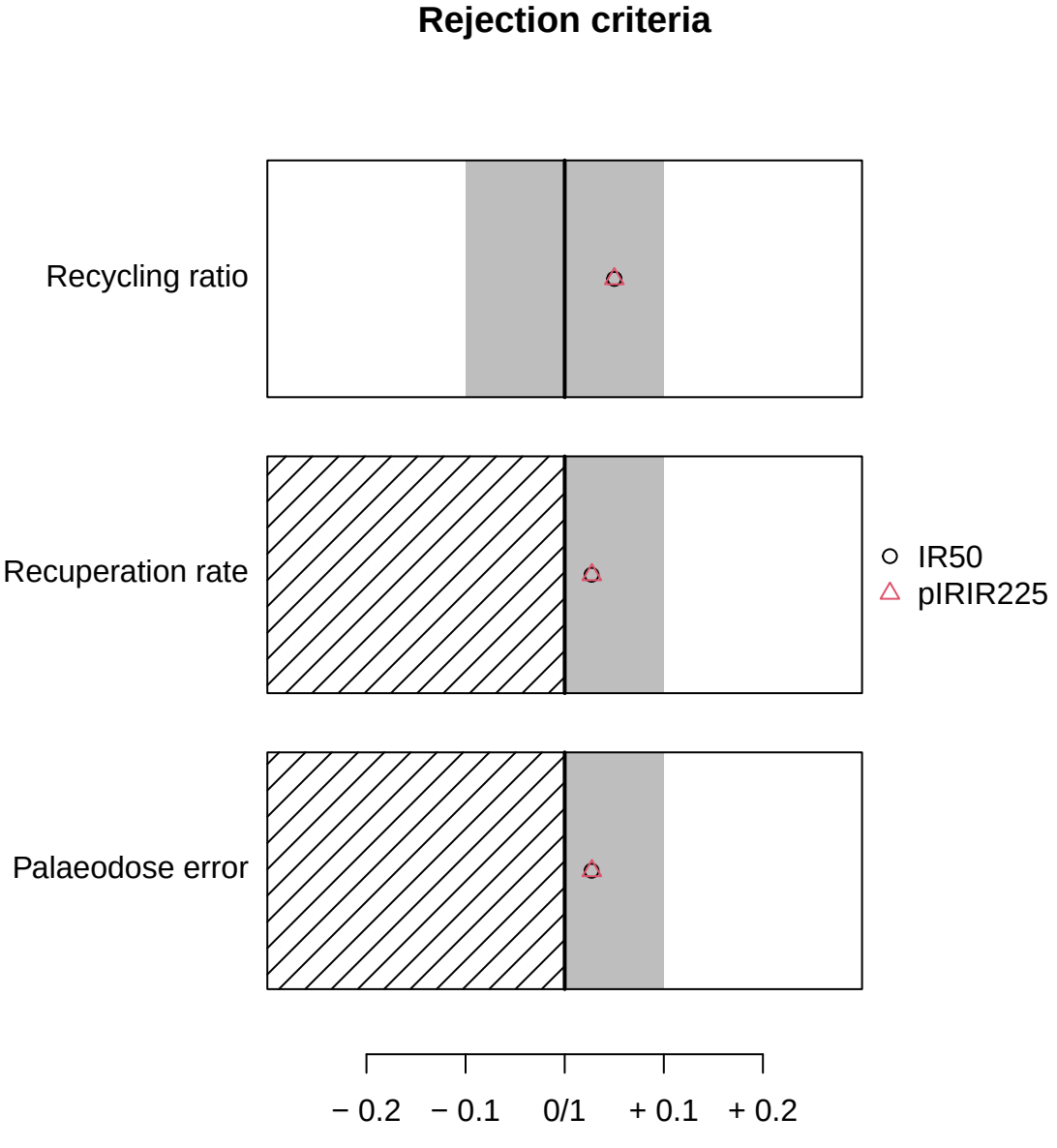
Recuperation rate (Natural) 1

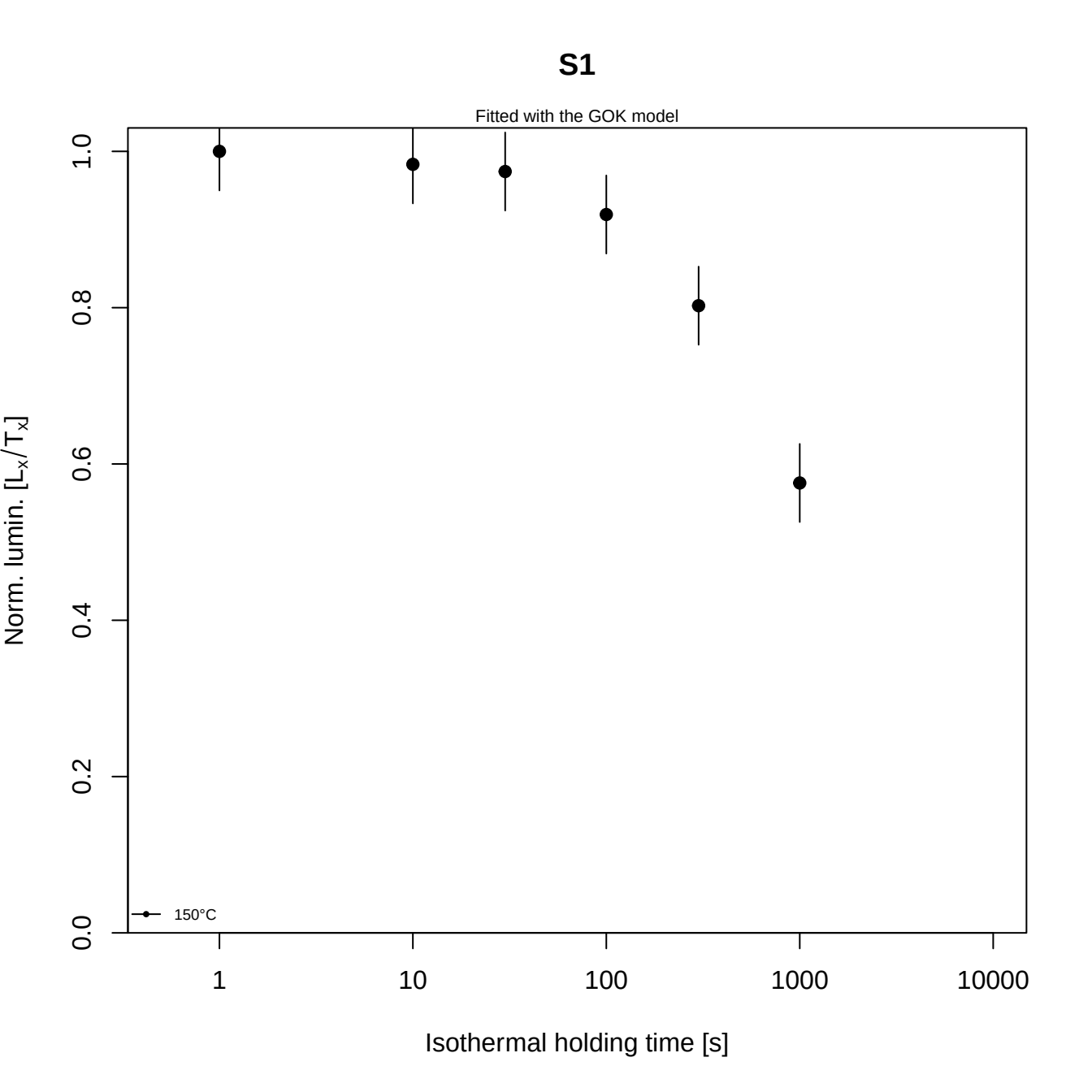
1.05 <= 1.1

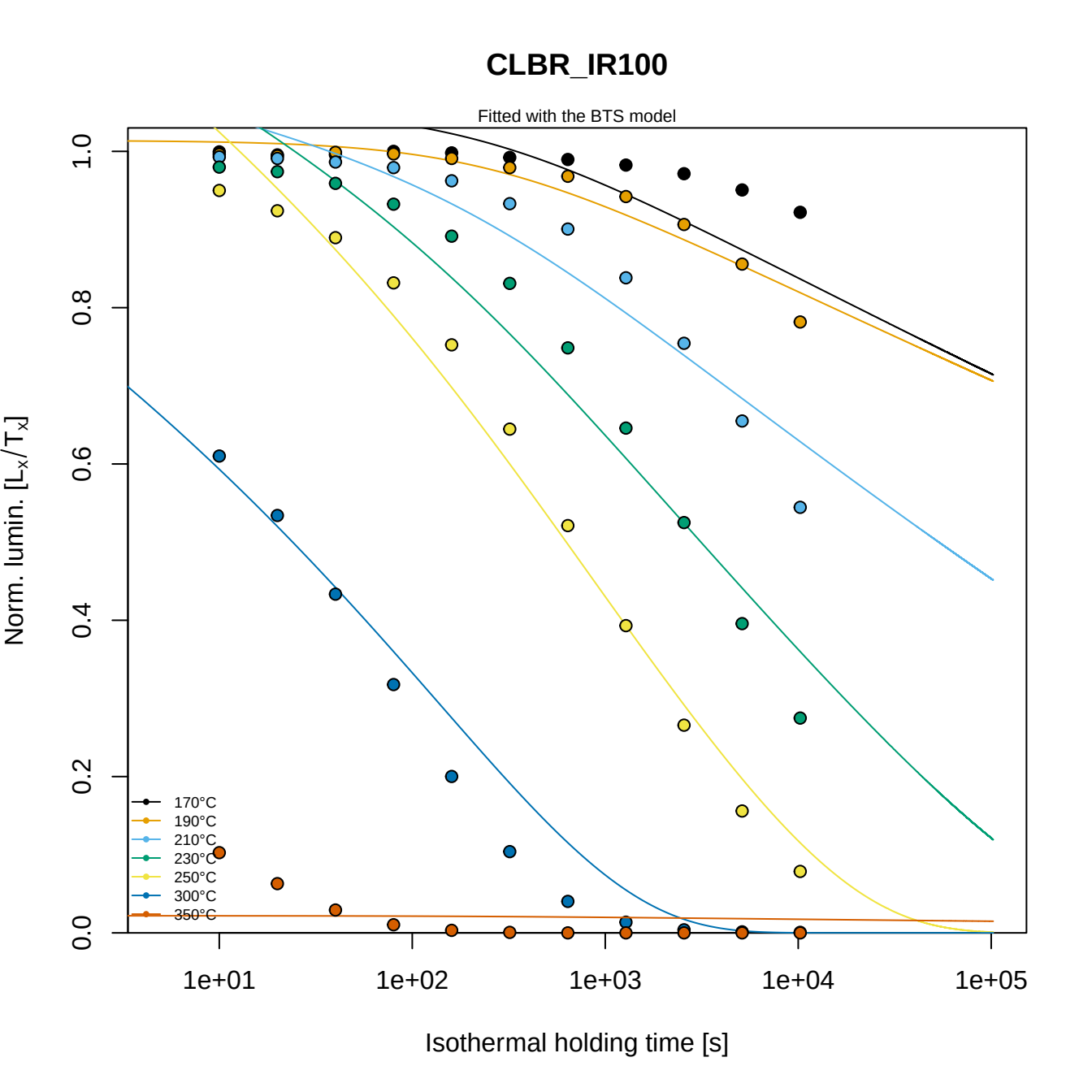
Recycling ratio (R5/R1)


Summarised Dose Response Curves
L_x/T_x
0
1
2
3
4
5
0
500
1000
1500
2000
2500
Dose [s]
IR50
pIRIR225


Sensitivity change
T_x/T_n
1.00
1.05
1.10
1.15
1.20
1.25
0
1
2
3
4
5
6
7
Cycle
IR50
pIRIR225


Rejection criteria
Recycling ratio
Recuperation rate
Palaeodose error
IR50
pIRIR225
− 0.2
− 0.1
0/1
+ 0.1
+ 0.2


S1
Fitted with the GOK model
Norm. lumin. [Lx/Tx]
0.0
0.2
0.4
0.6
0.8
1.0
150°C
1
10
100
1000
10000
Isothermal holding time [s]


CLBR_IR100
Fitted with the BTS model
Norm. lumin. [Lx/Tx]
1.0
0.8
0.6
0.4
0.2
0.0
1e+01
1e+02
1e+03
1e+04
1e+05
Isothermal holding time [s]
170°C
190°C
210°C
230°C
250°C
300°C
350°C