

glutamine

avg. attomole per cell \pm sdev

0.06

0.04

0.02

0.00

timepoint

0

2

4

6

8

10

12

14

16

18

20

22

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28

30

32

34

36

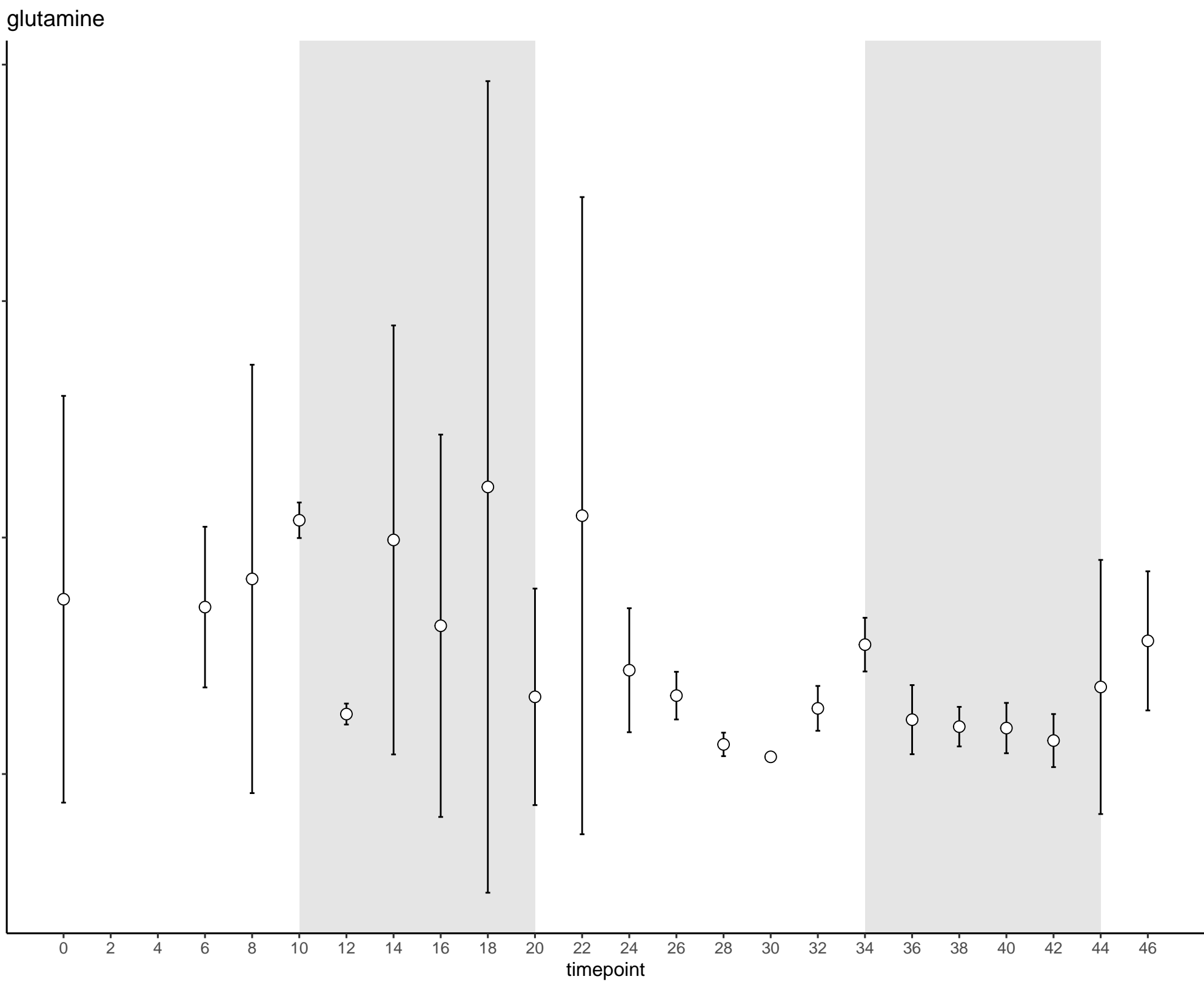
38

40

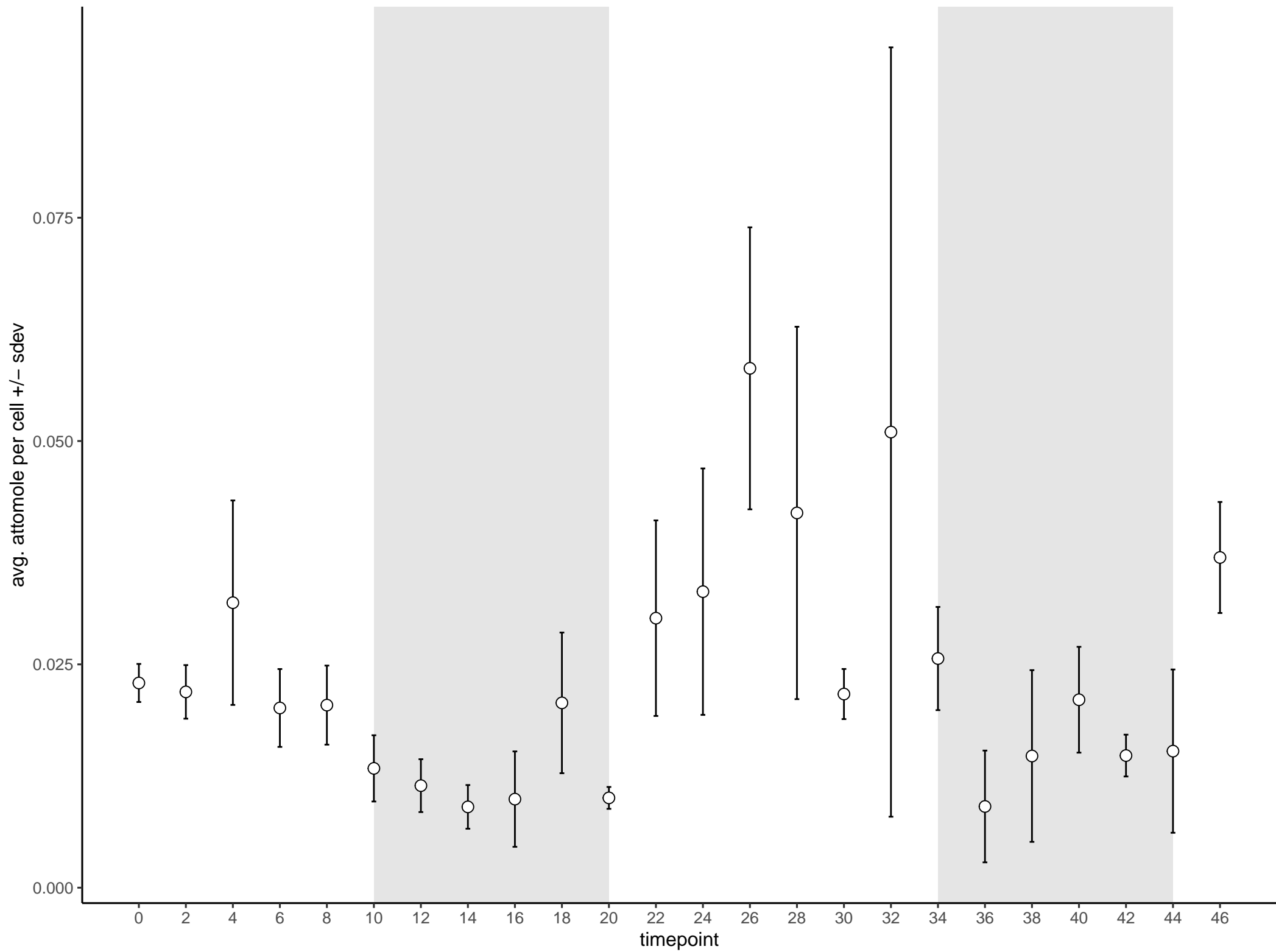
42

44

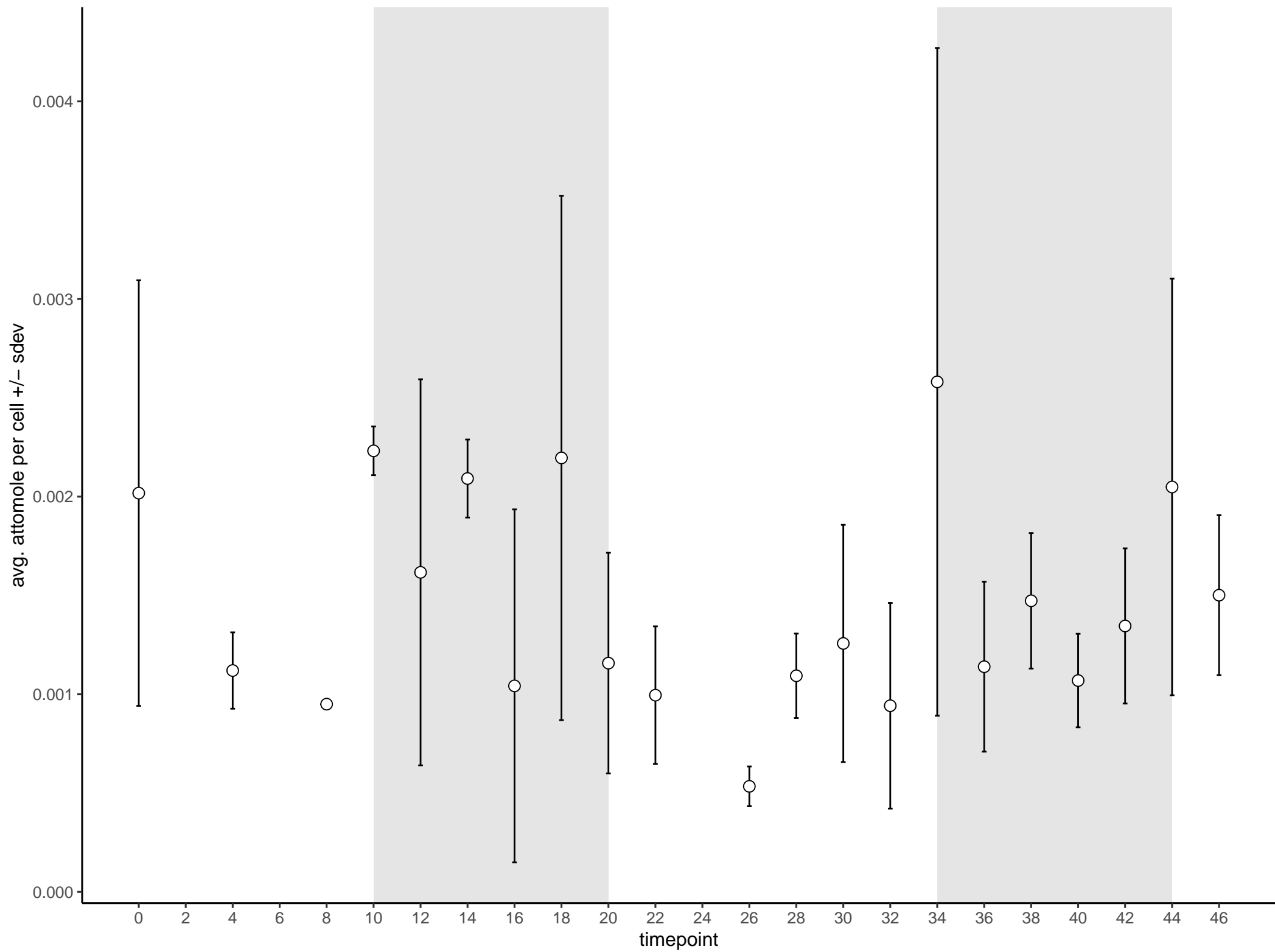
46

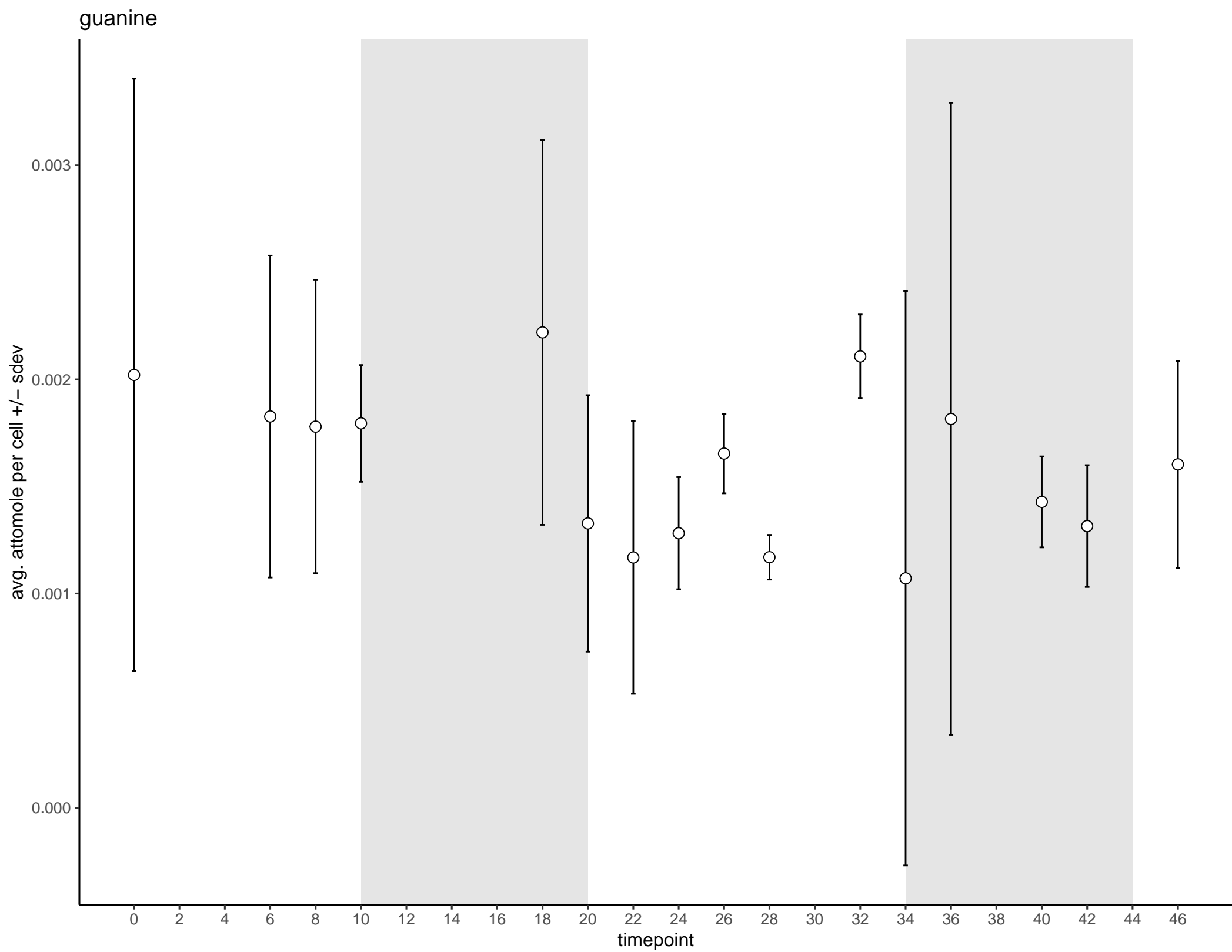


adenosine 5'-monophosphate pos



3-methyl-2-oxobutanoic acid

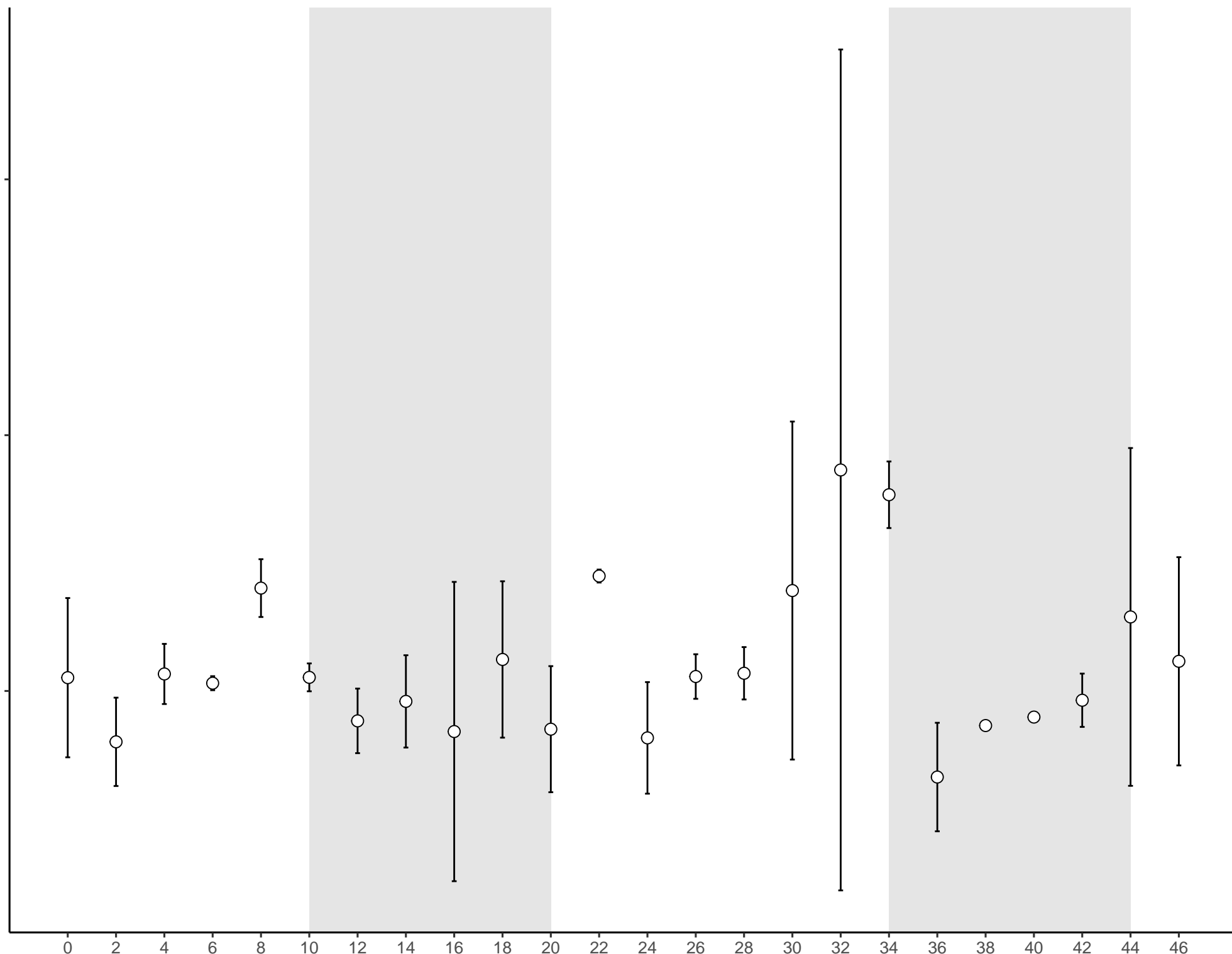




guanosine pos

avg. attomole per cell \pm sdev

timepoint



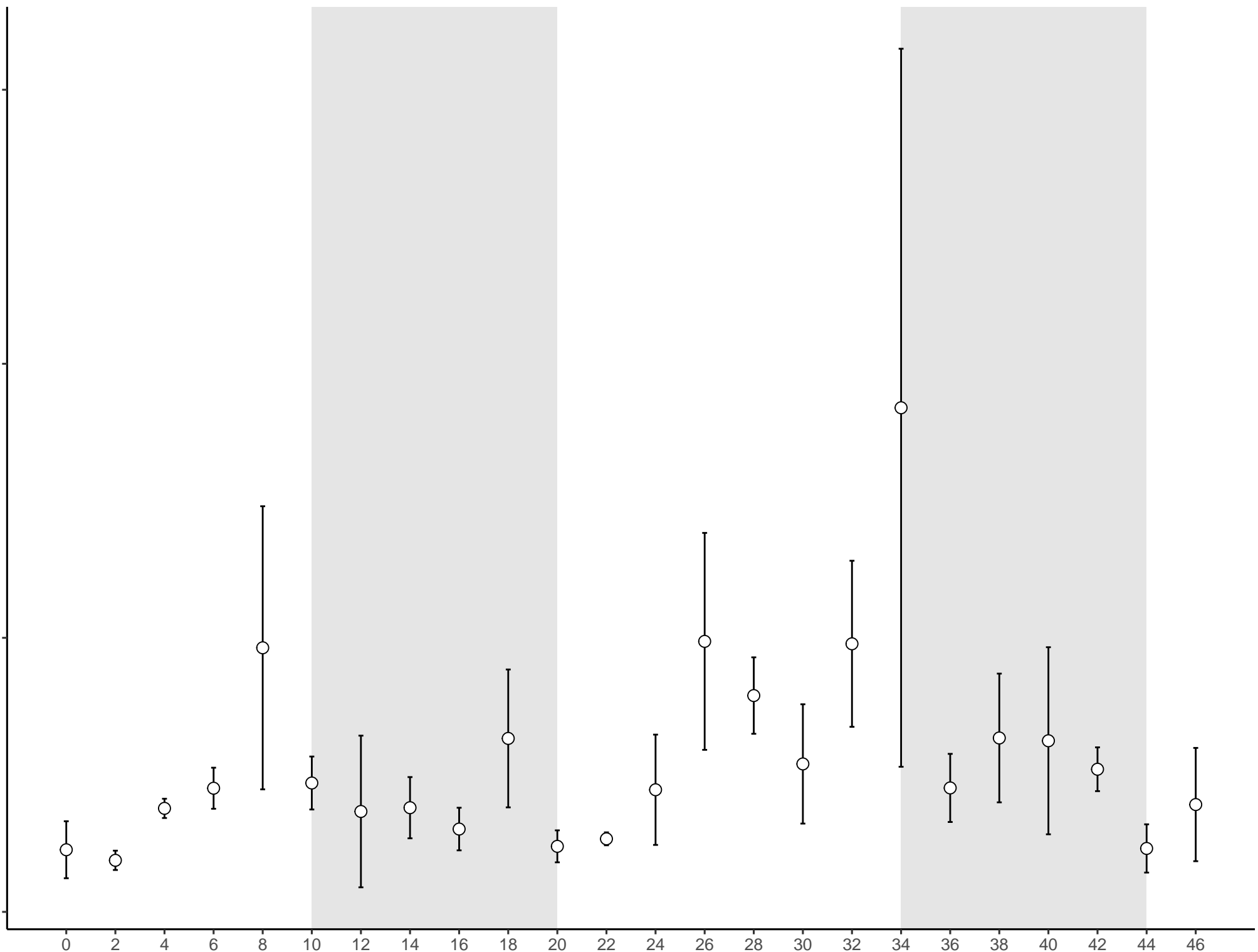
glutathione oxidized

avg. attomole per cell \pm sdev

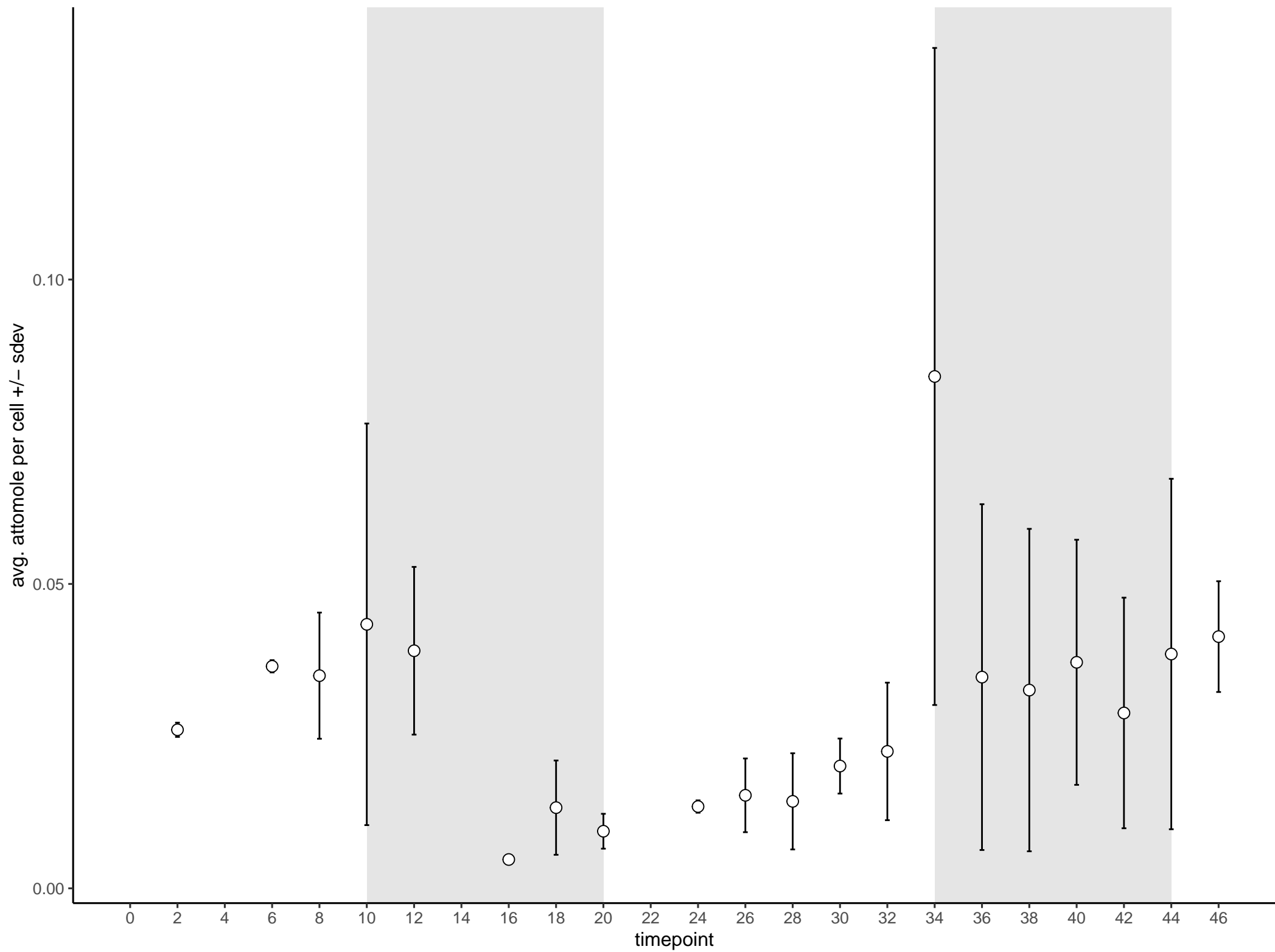
0.6
0.4
0.2
0.0

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



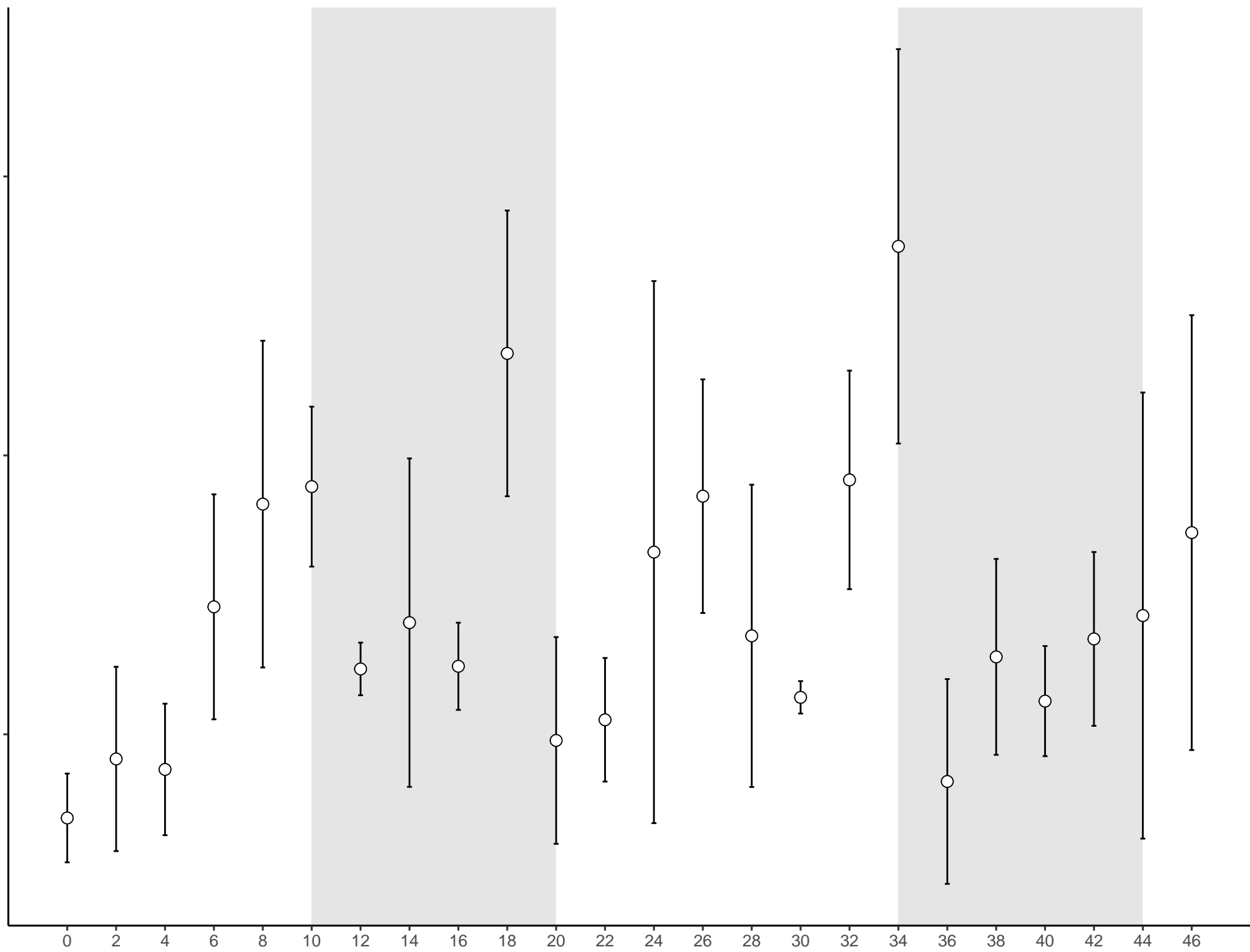
glutathione pos



n-acetylglutamic acid

avg. attomole per cell \pm sdev

timepoint



NAD

avg. attomole per cell \pm sdev

0.09

0.06

0.03

0

2

4

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32

34

36

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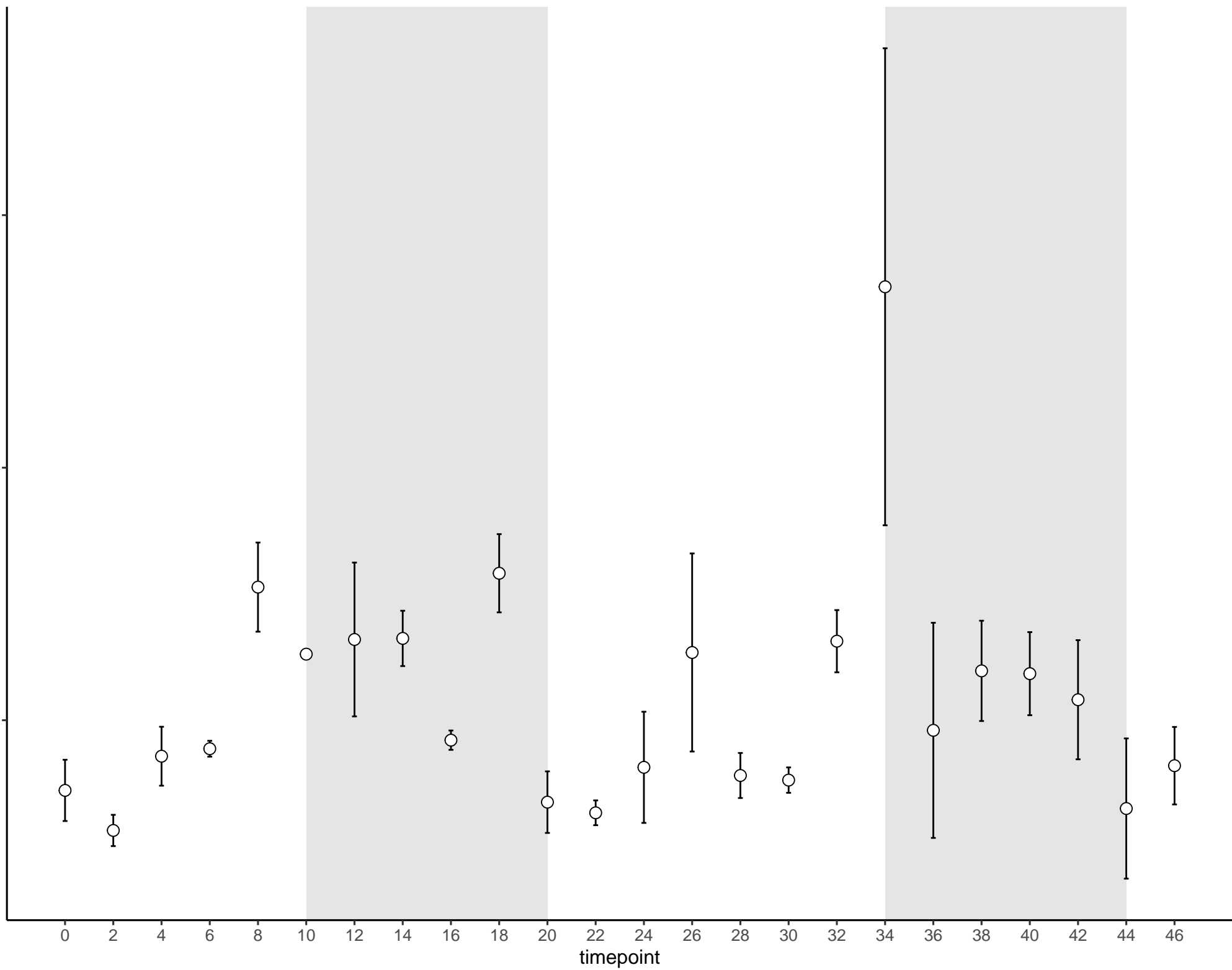
40

42

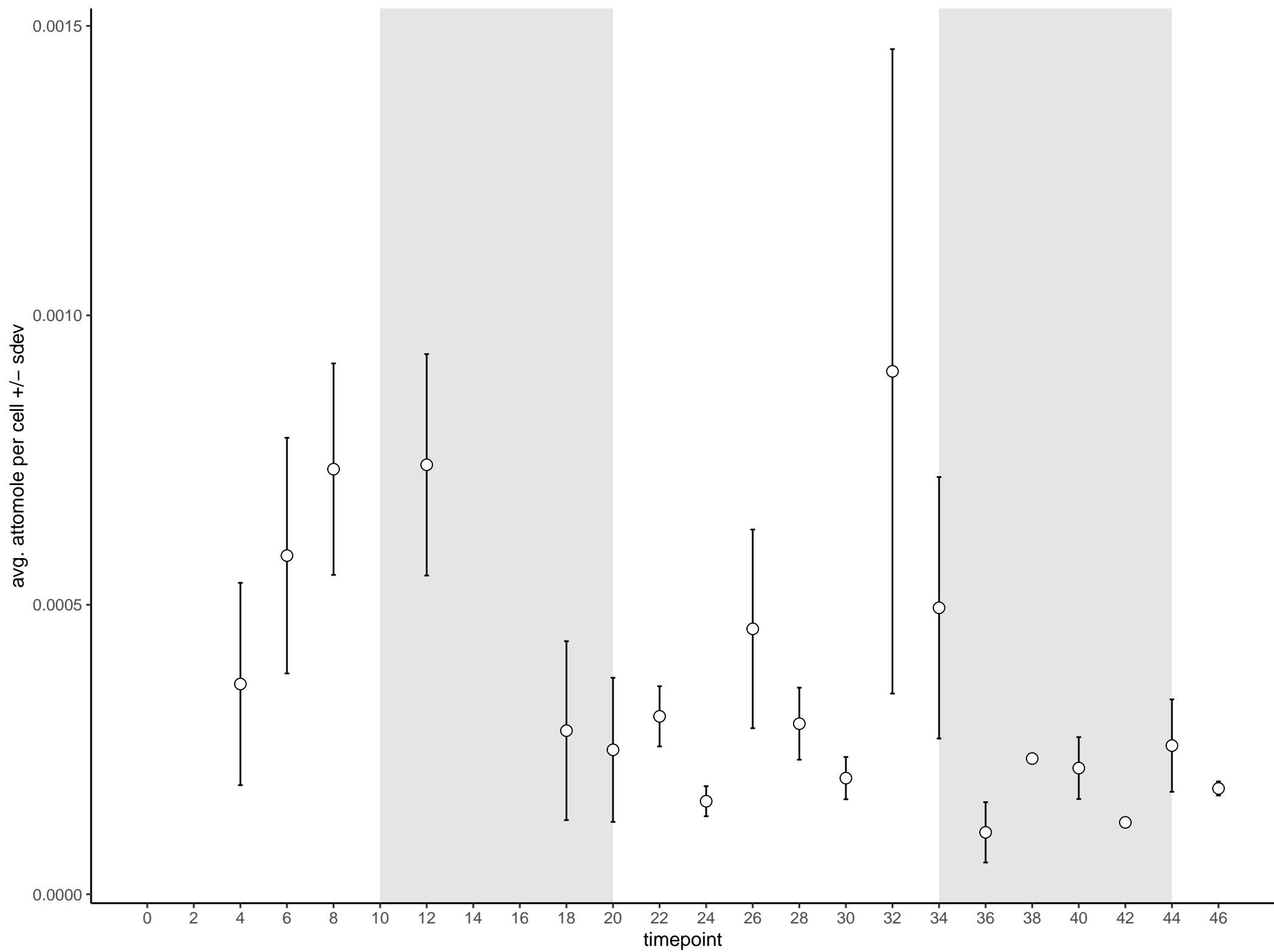
44

46

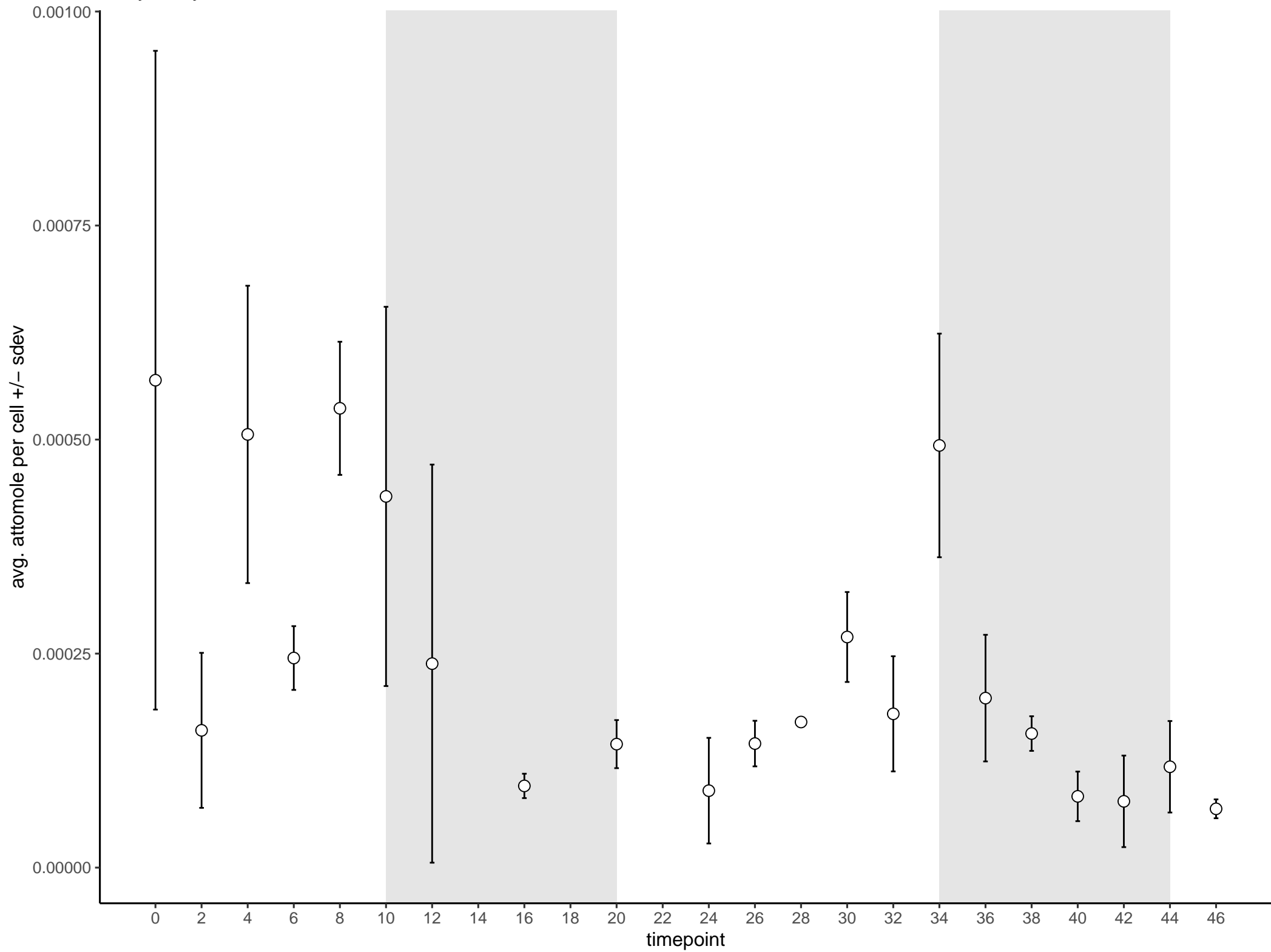
timepoint

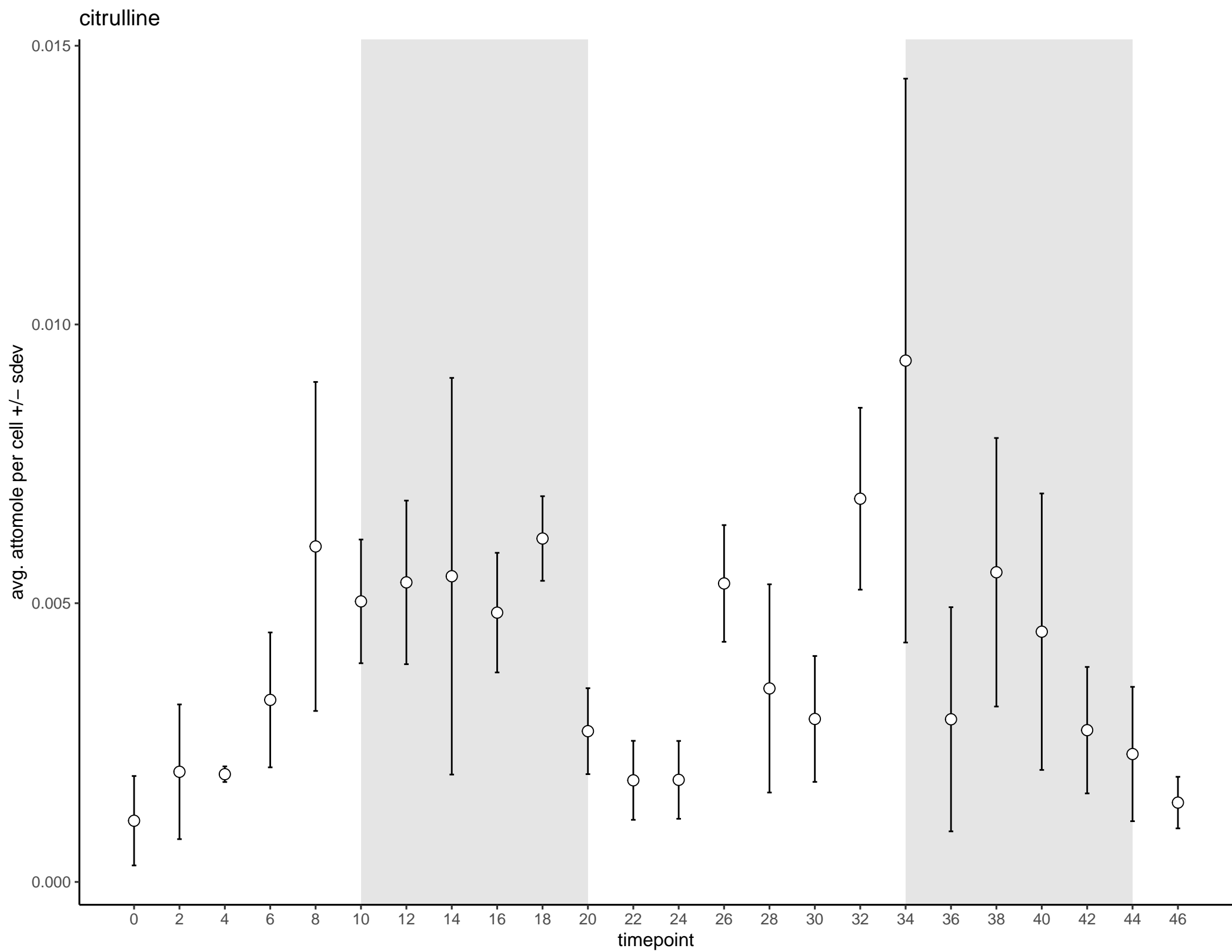


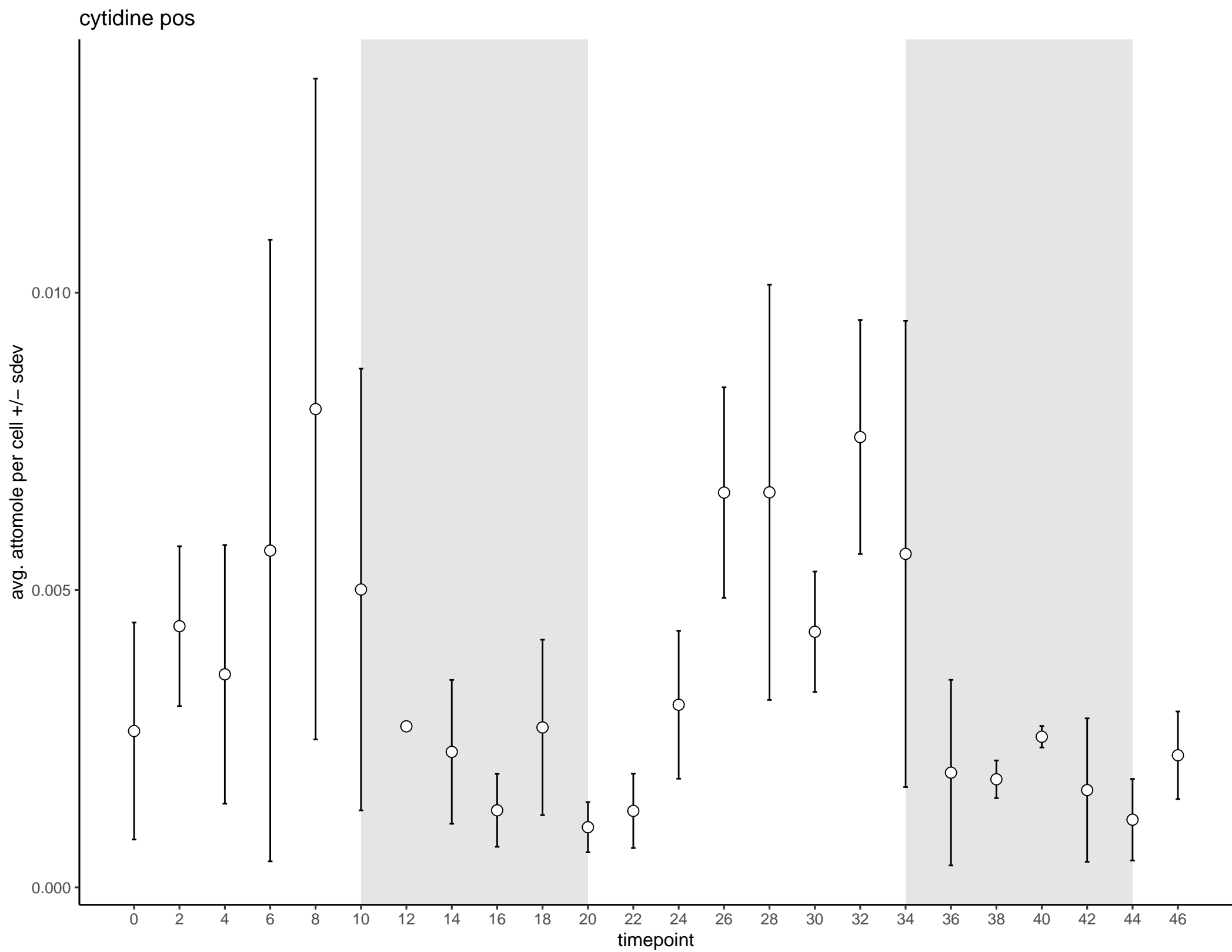
hexose-6-phosphate



4-hydroxybenzoic acid







cytosine

avg. attomole per cell \pm sdev

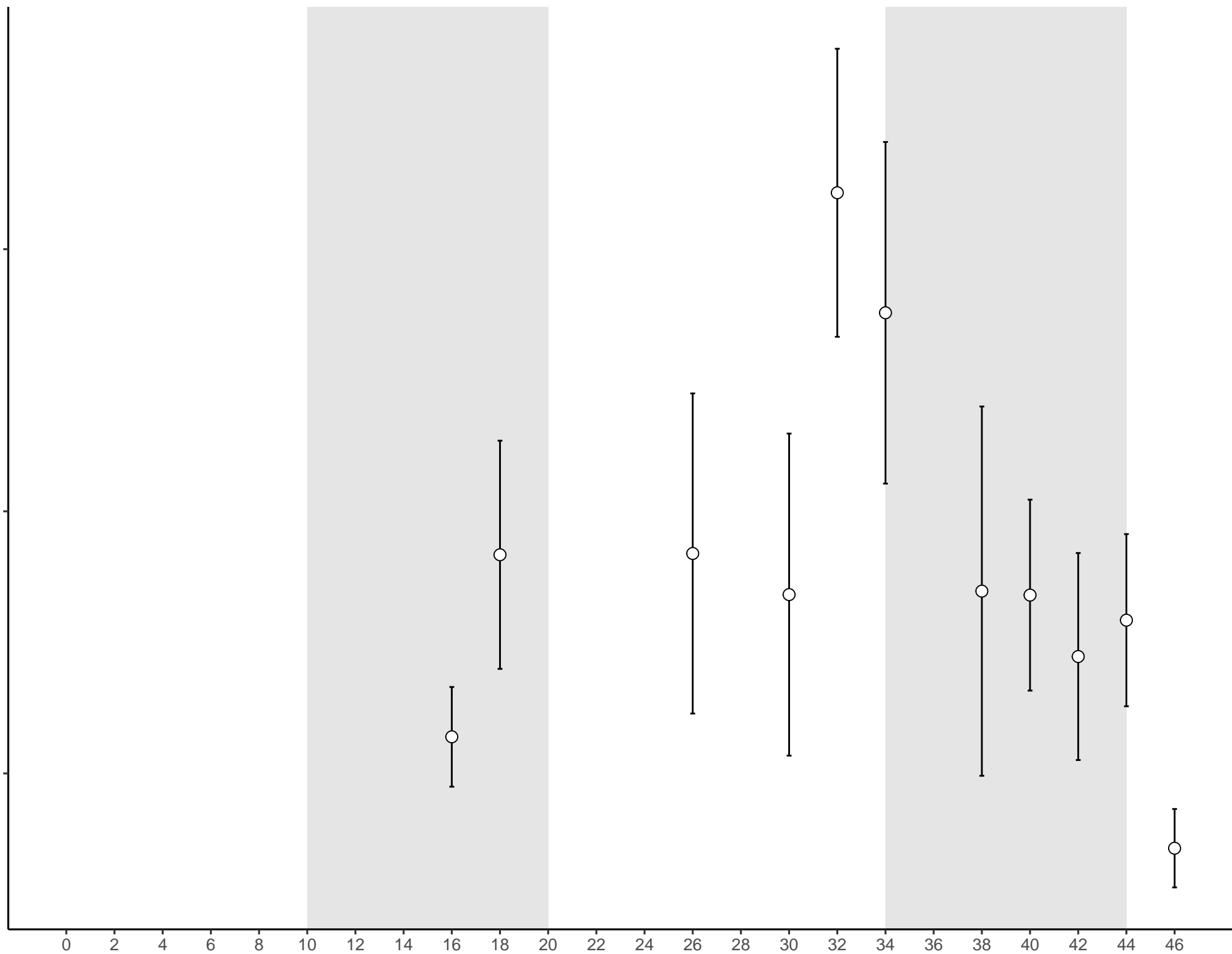
$6e-04$

$4e-04$

$2e-04$

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



desthiobiotin

avg. attomole per cell \pm sdev

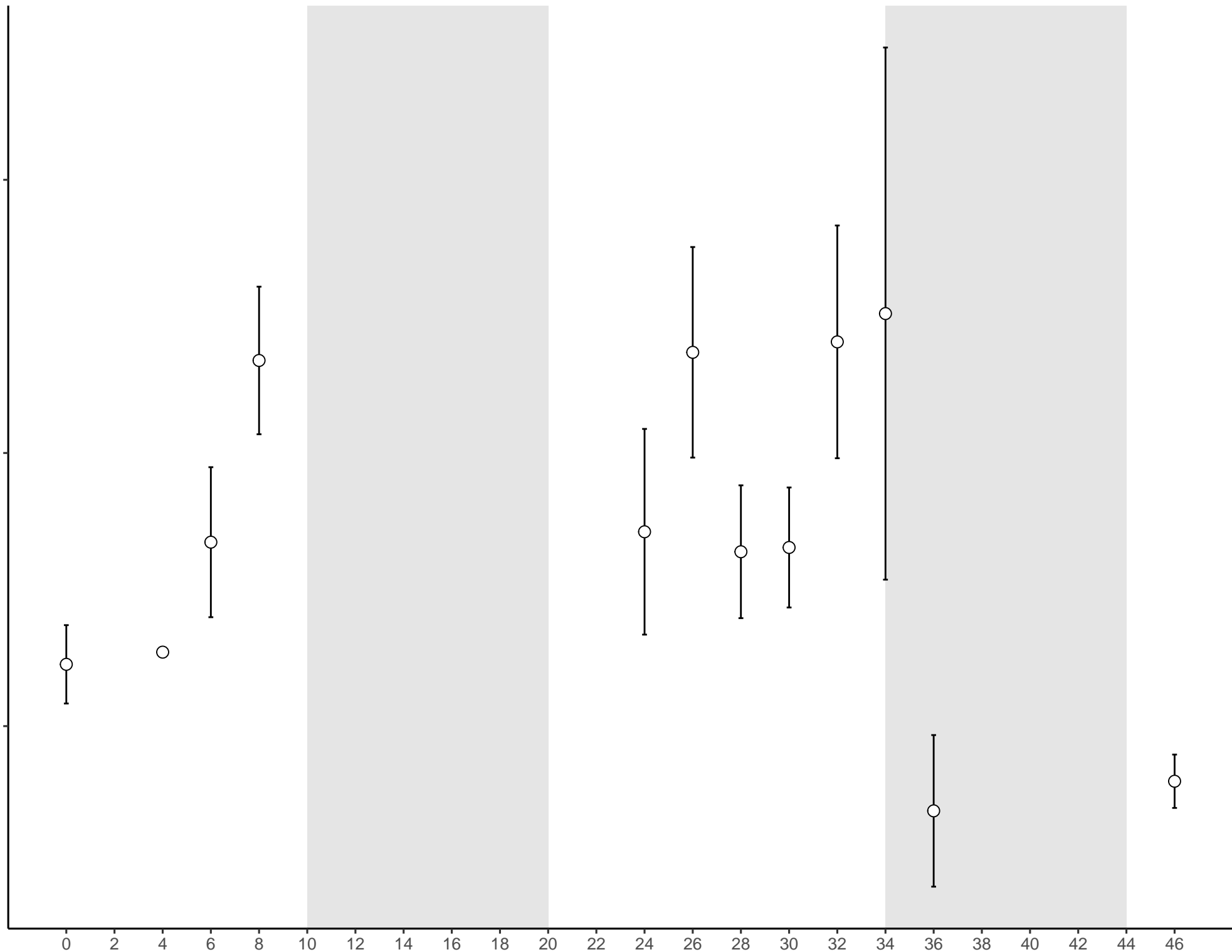
$3\text{e-}04$

$2\text{e-}04$

$1\text{e-}04$

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



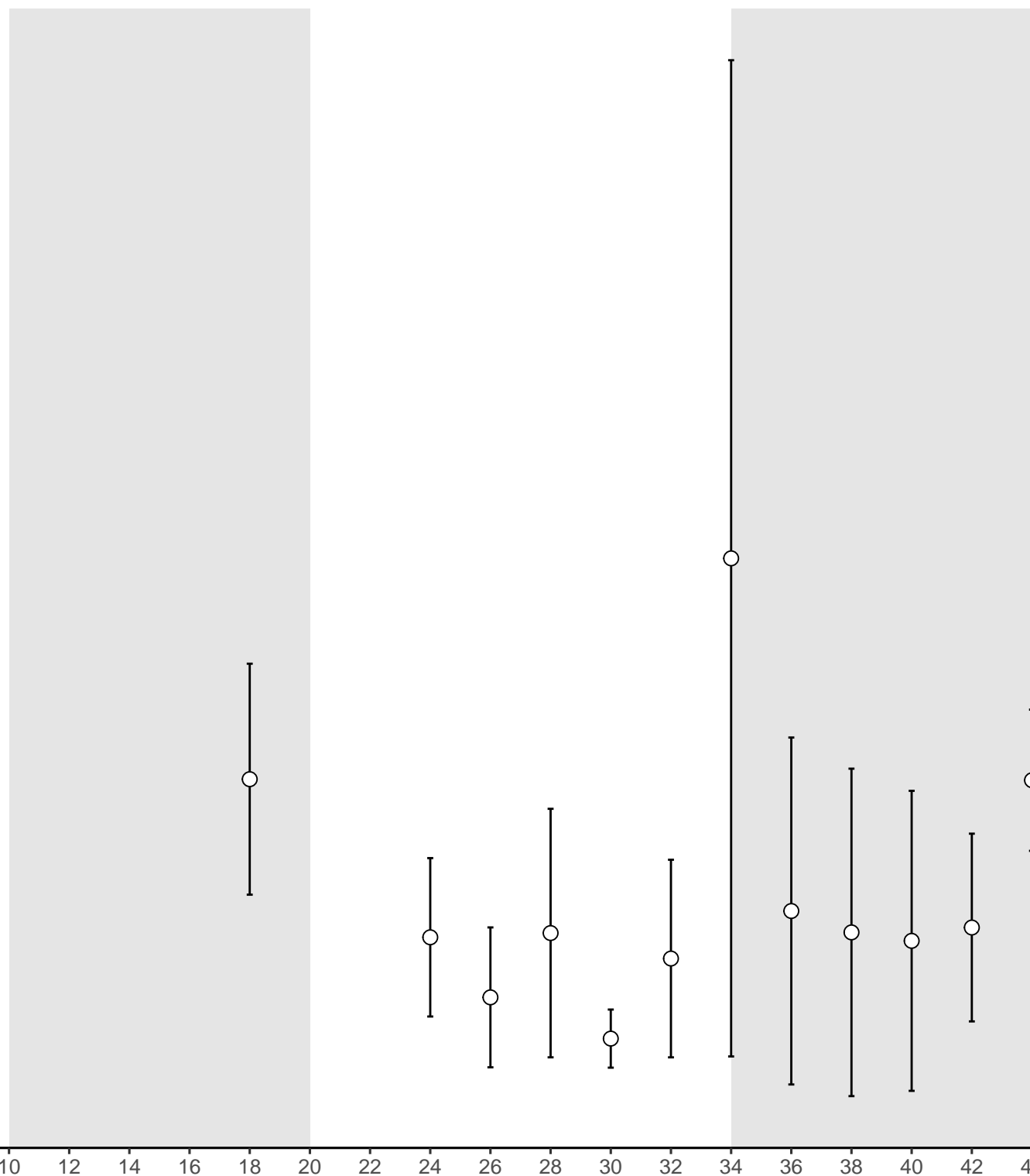
spermidine

avg. attomole per cell \pm sdev

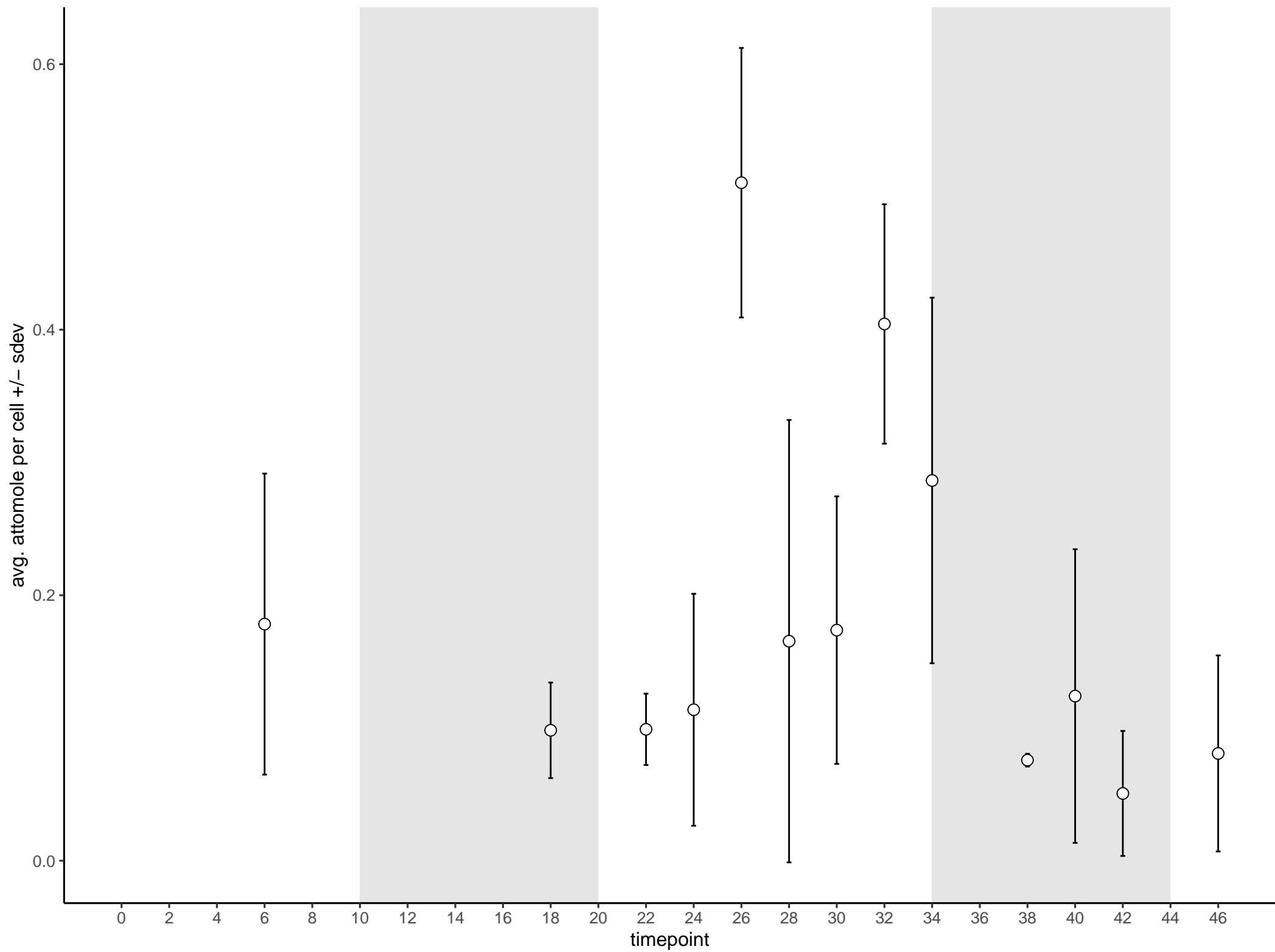
0.12
0.09
0.06
0.03
0.00

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

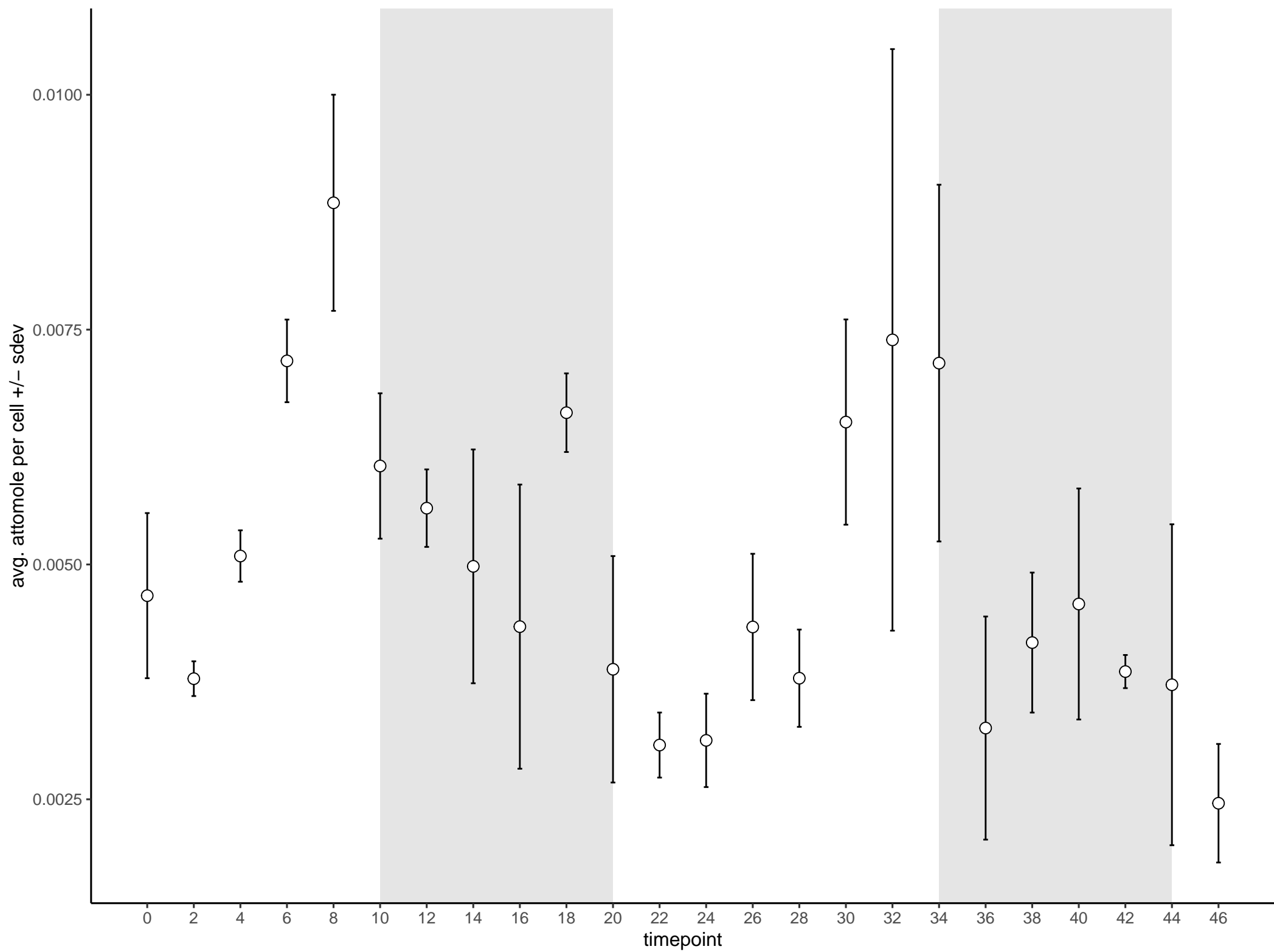
timepoint

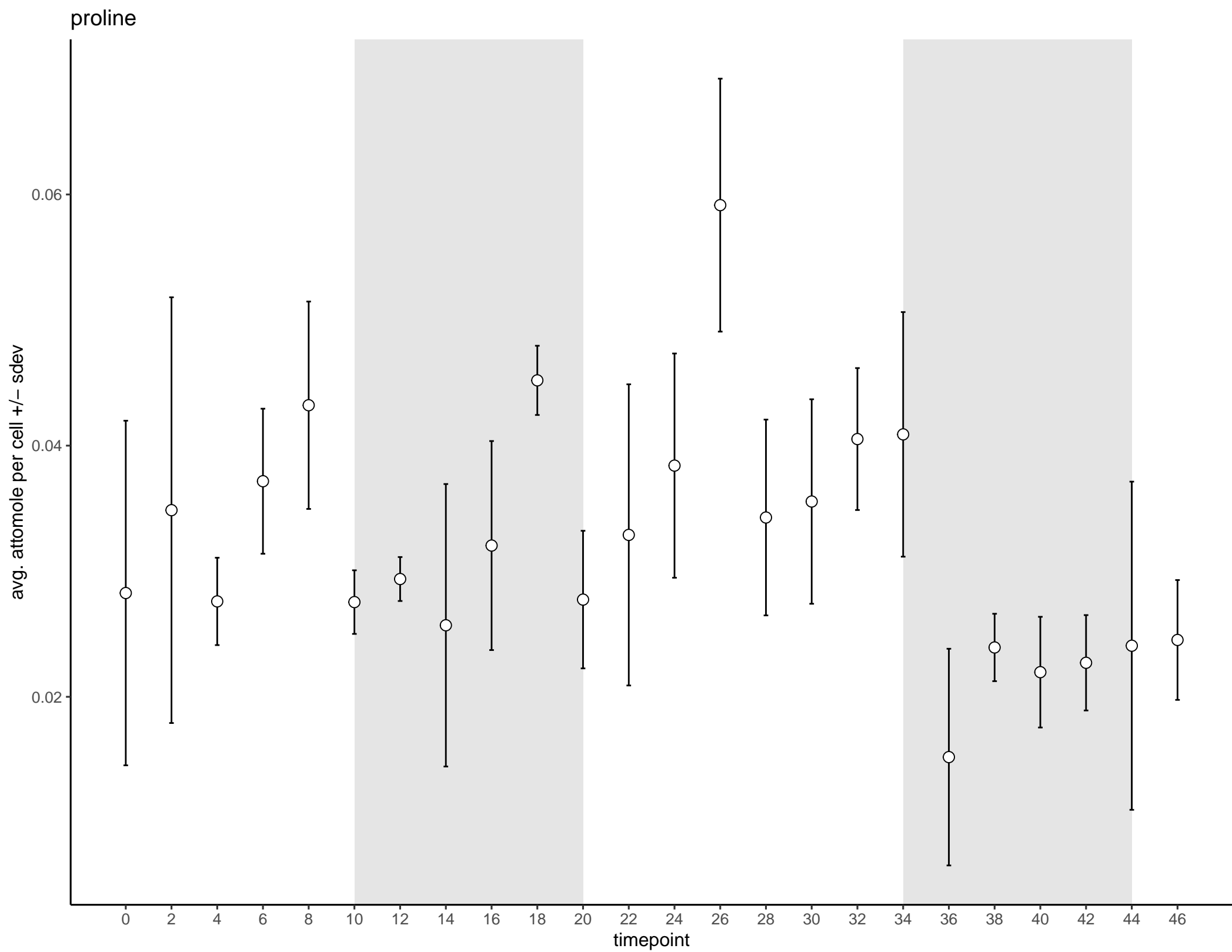


threonine (isom. homoserine)

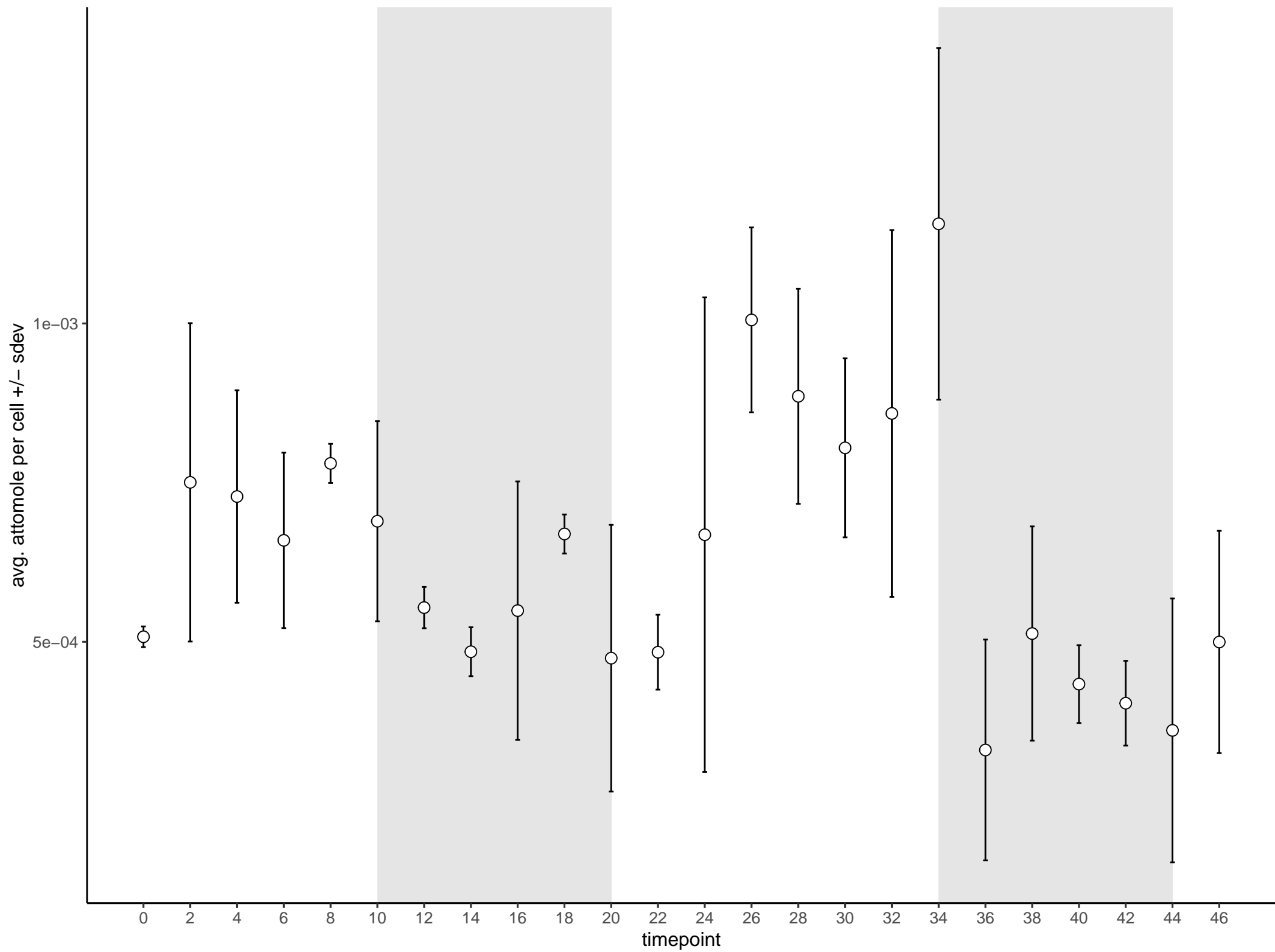


phenylalanine





s-(5'-adenosyl)-L-homocysteine pos



adenine pos

avg. attomole per cell \pm sdev

0.003

0.002

0.001

0

2

4

6

8

10

12

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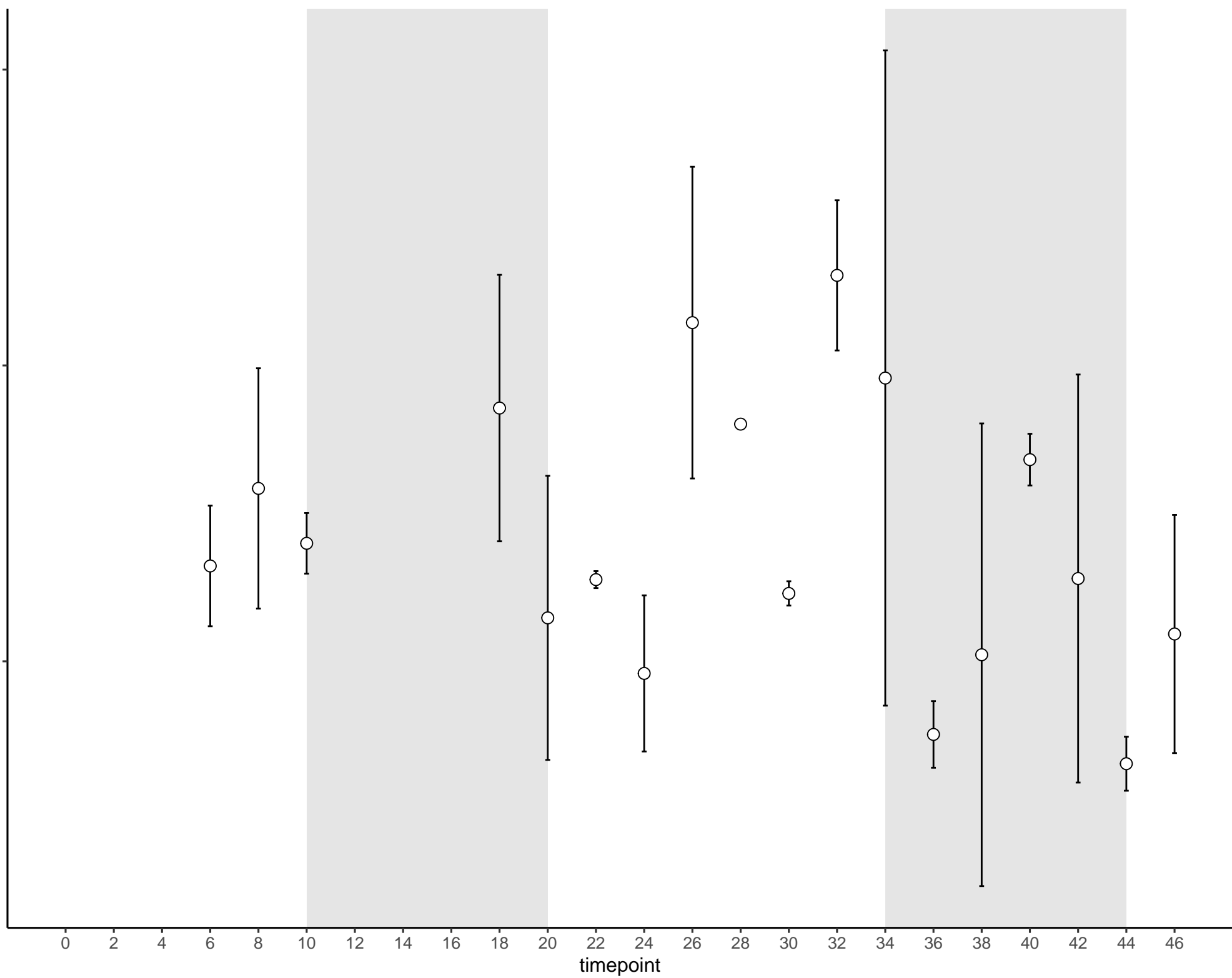
40

42

44

46

timepoint



alpha-ketoglutaric acid

avg. attomole per cell \pm sdev

0.03

0.02

0.01

0.00

0

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36

38

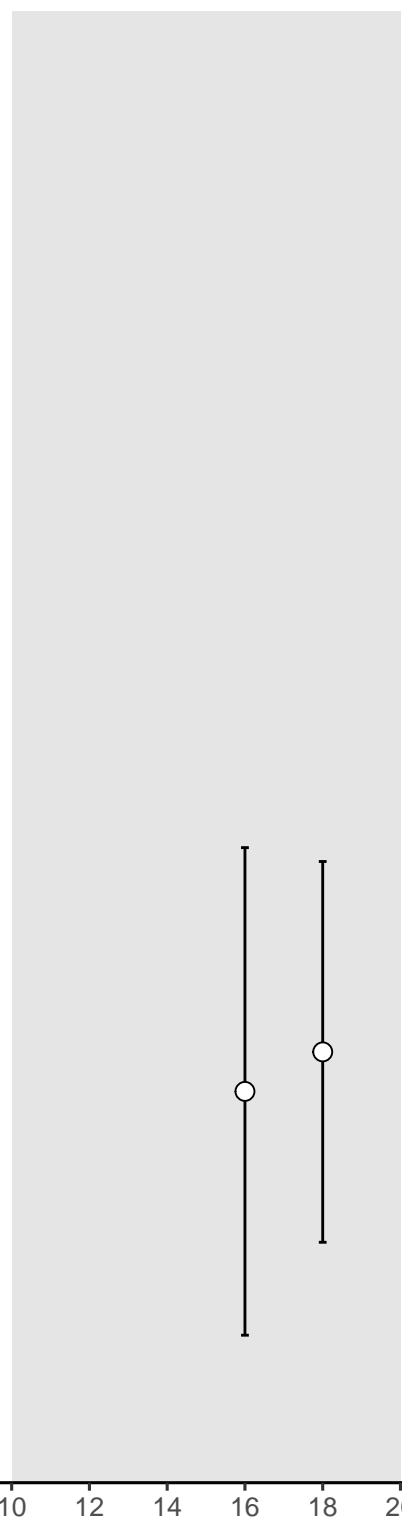
40

42

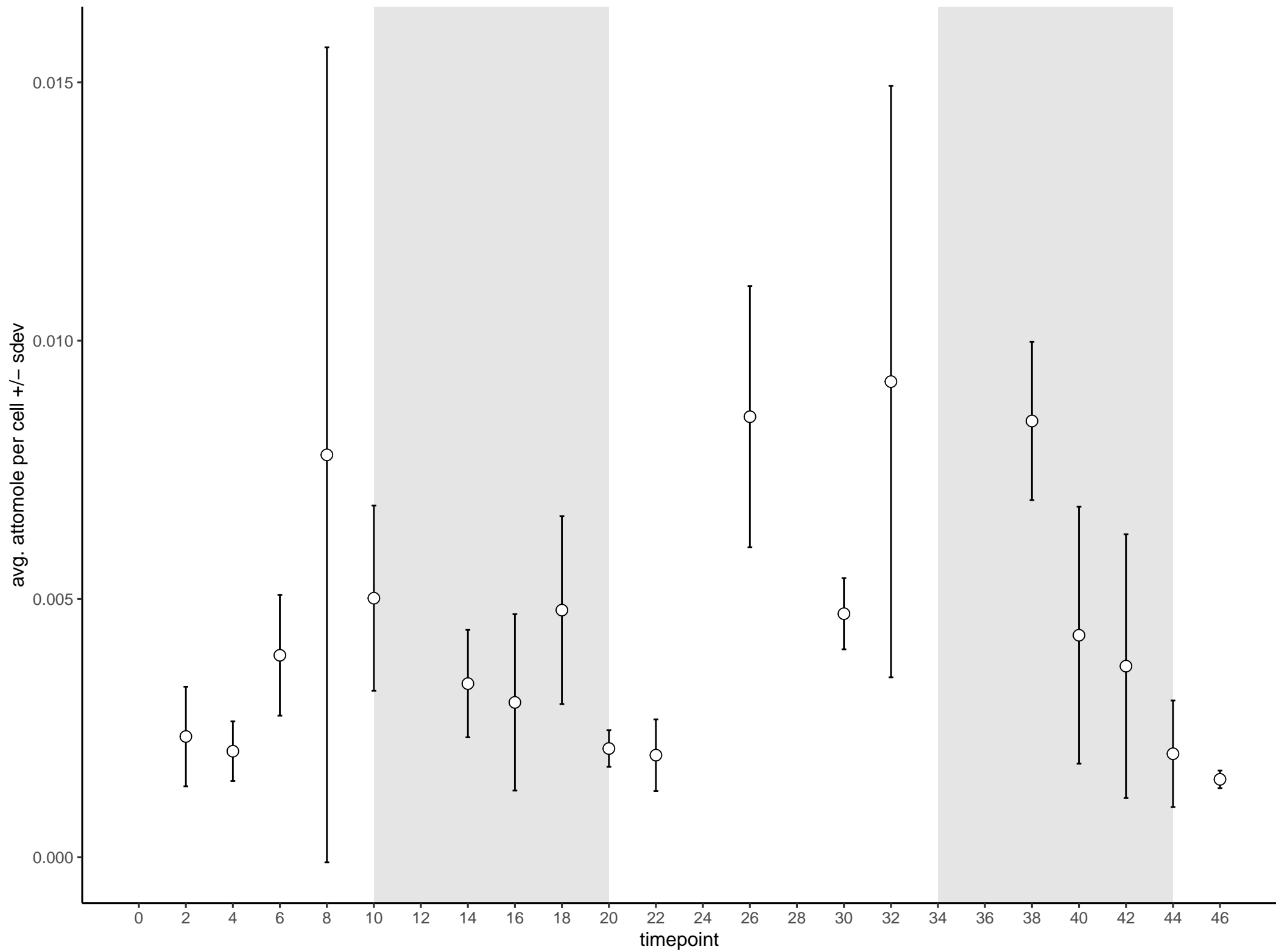
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46

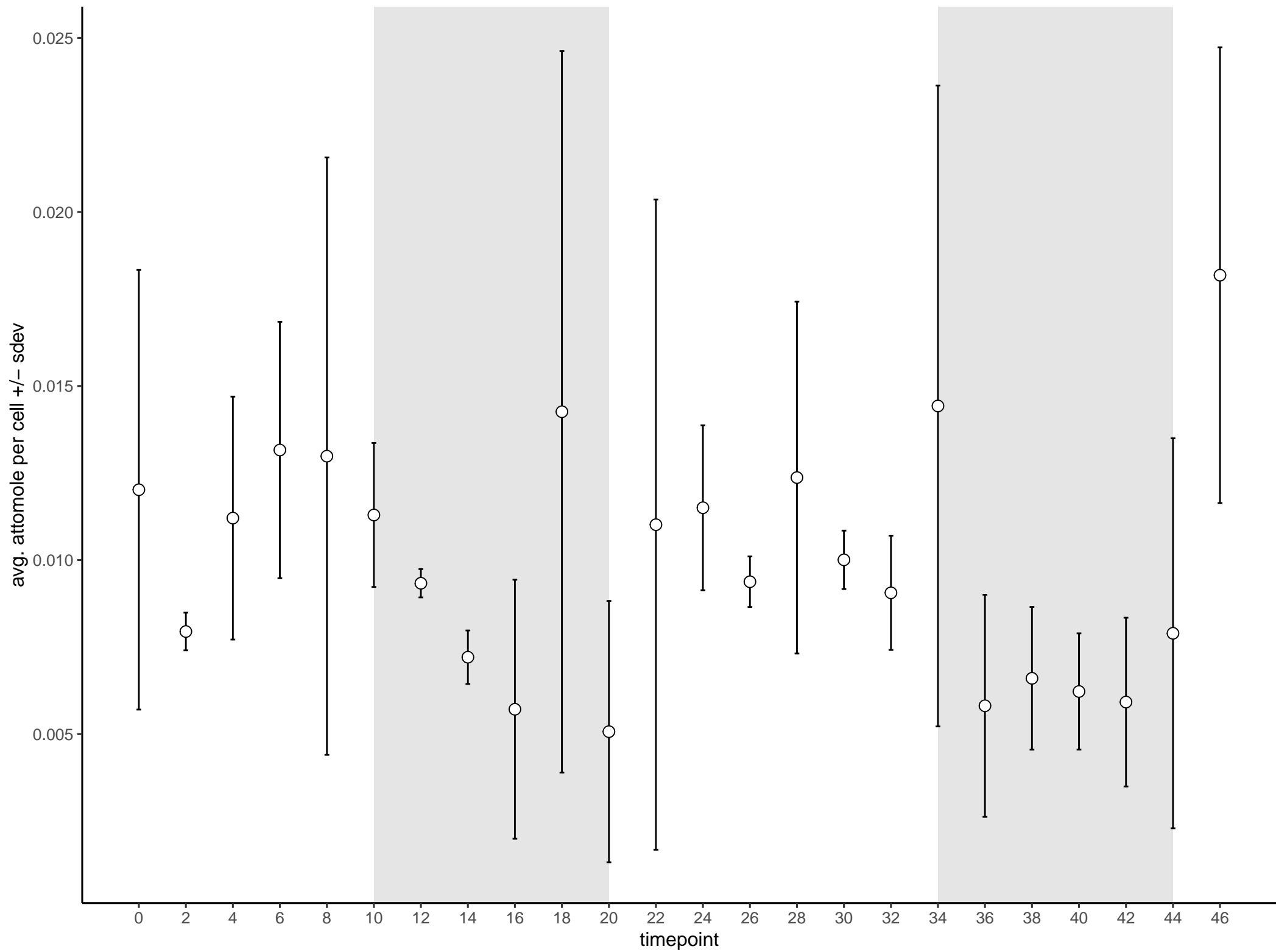
timepoint



aspartic acid neg



s-adenosyl-l-methionine



glutamic acid neg

avg. attomole per cell \pm sdev

60

40

20

0

2

4

6

8

10

12

14

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38

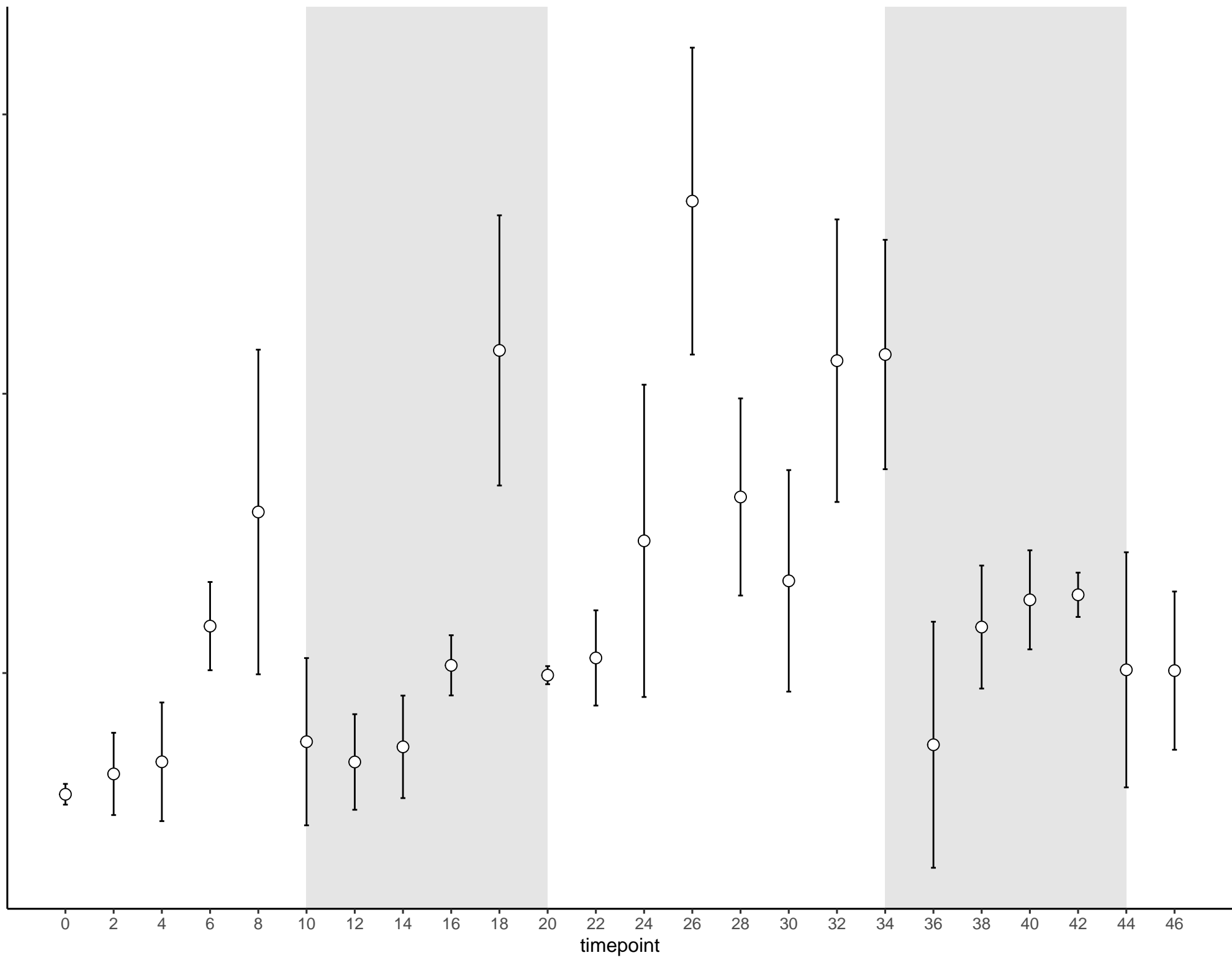
40

42

44

46

timepoint



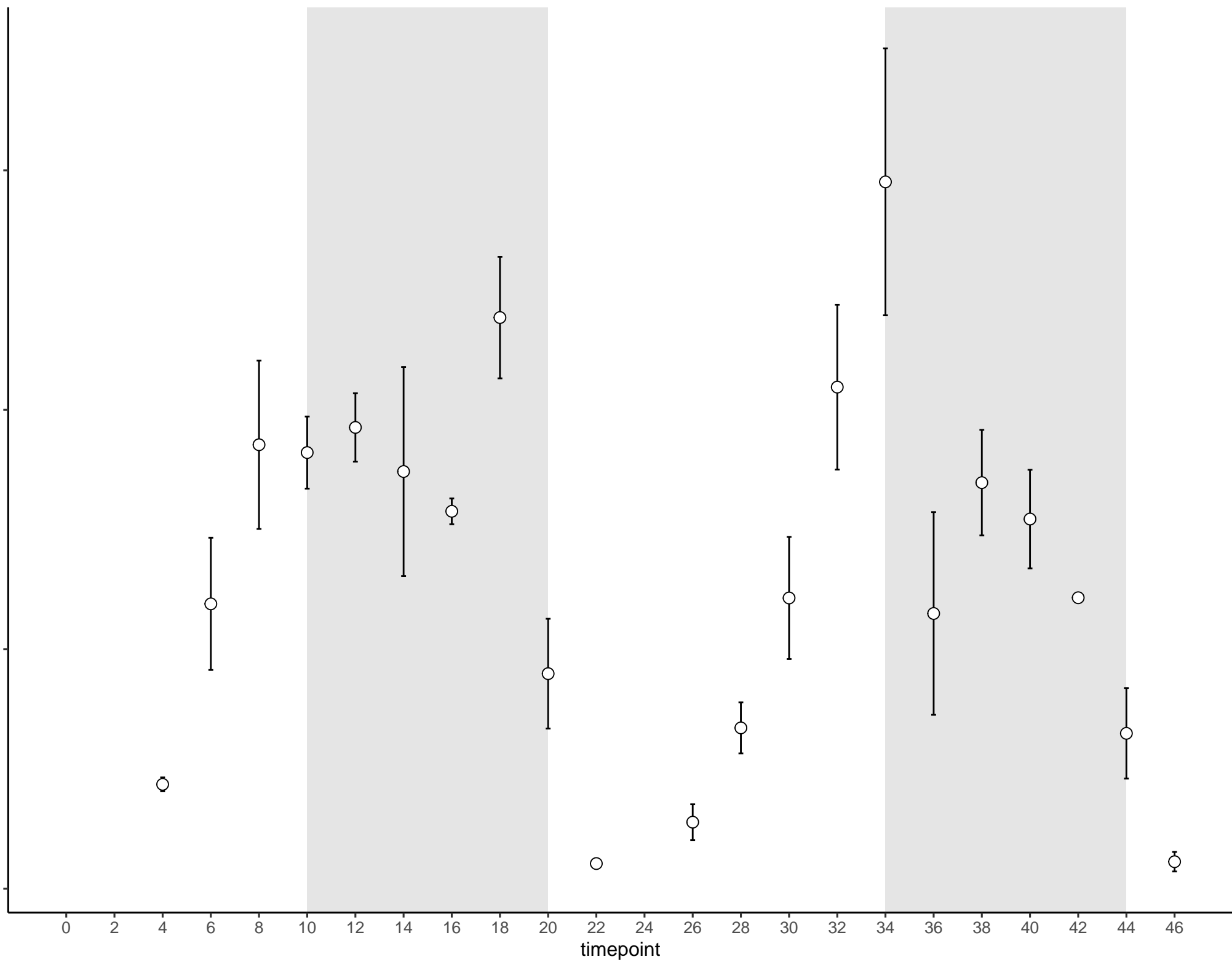
sucrose387 neg

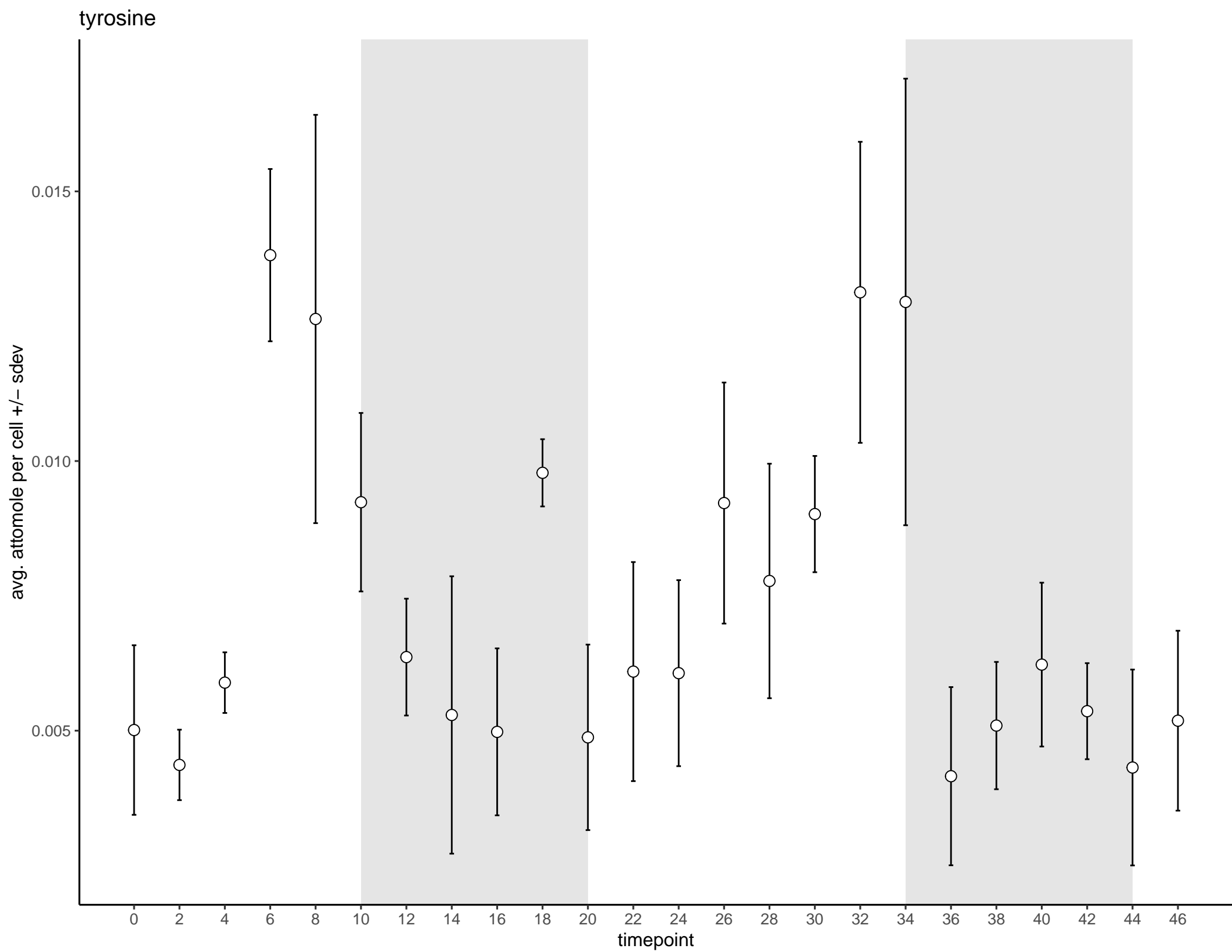
avg. attomole per cell \pm sdev

7.5
5.0
2.5
0.0

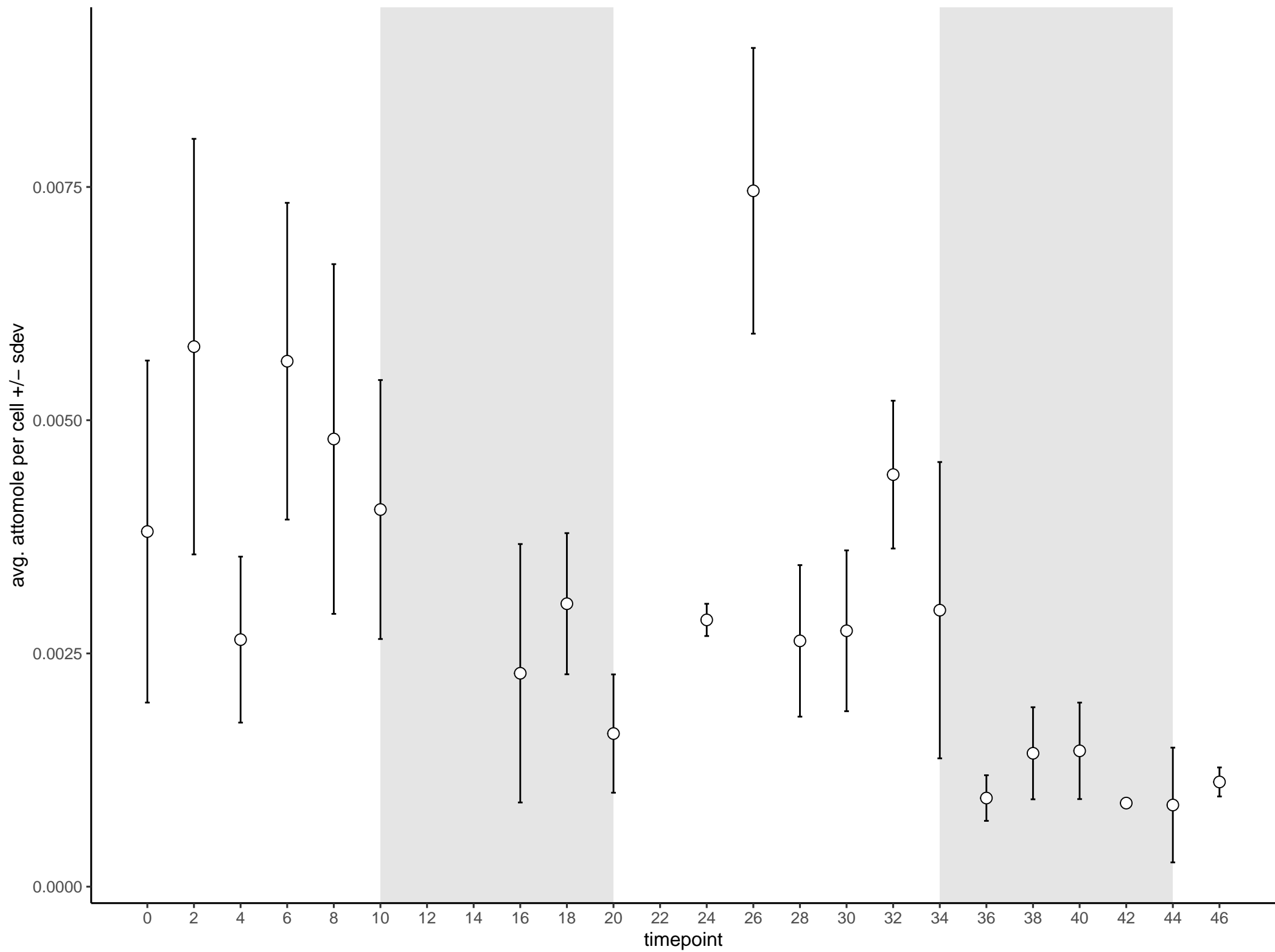
timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

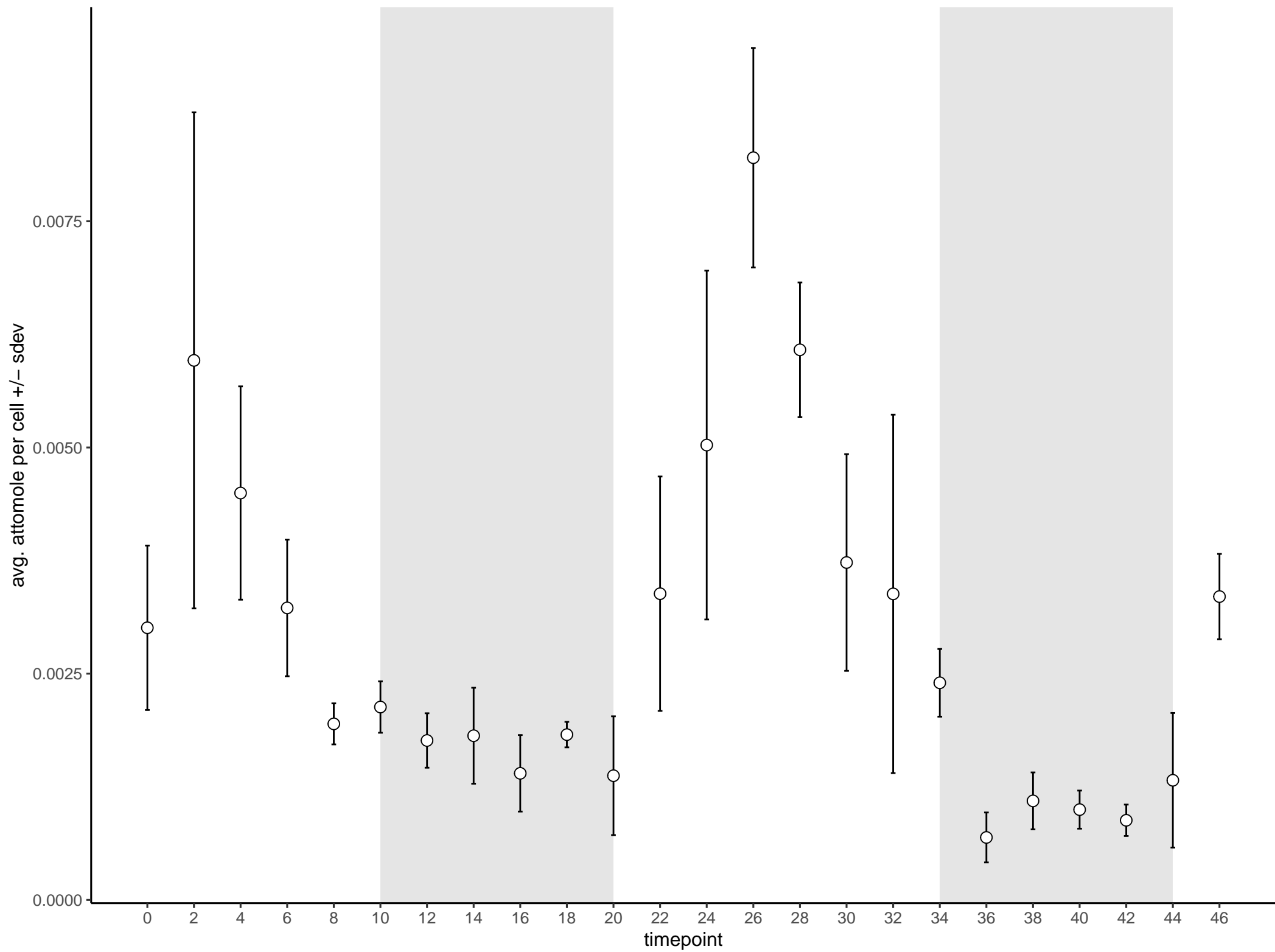




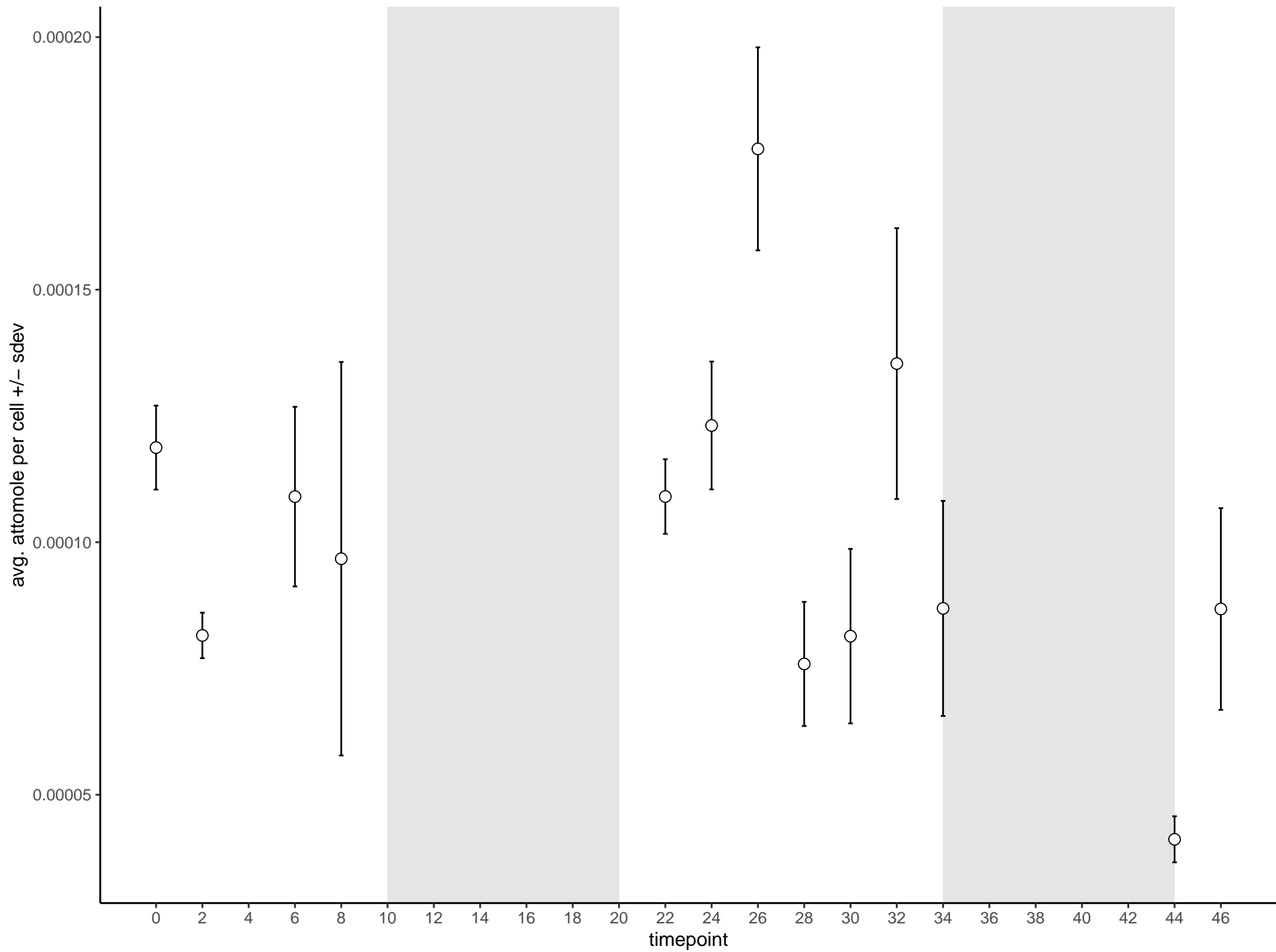
UDP-glucose



uridine 5-monophosphate pos



xanthosine neg



pantothenic acid neg

avg. attomole per cell \pm sdev

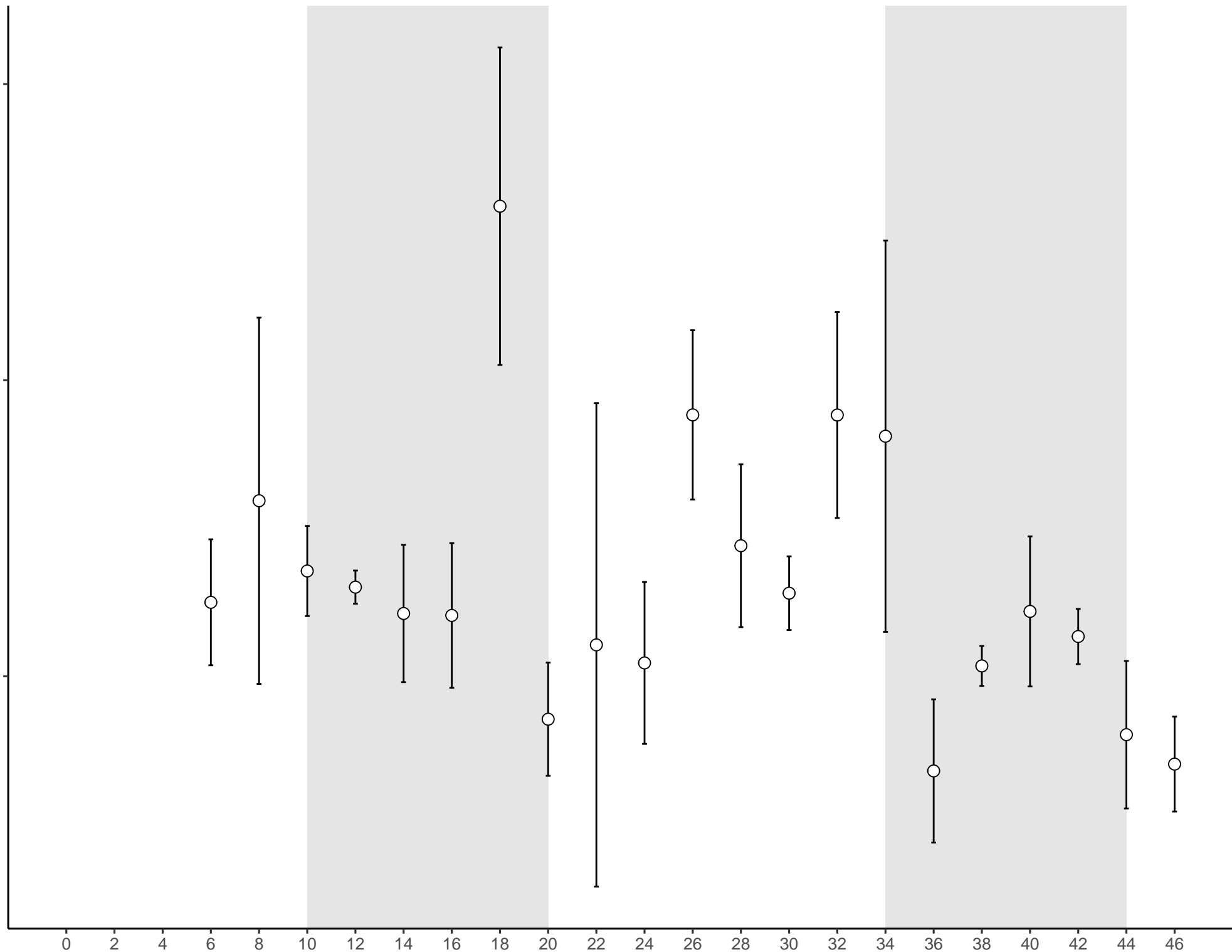
$3\text{e-}04$

$2\text{e-}04$

$1\text{e-}04$

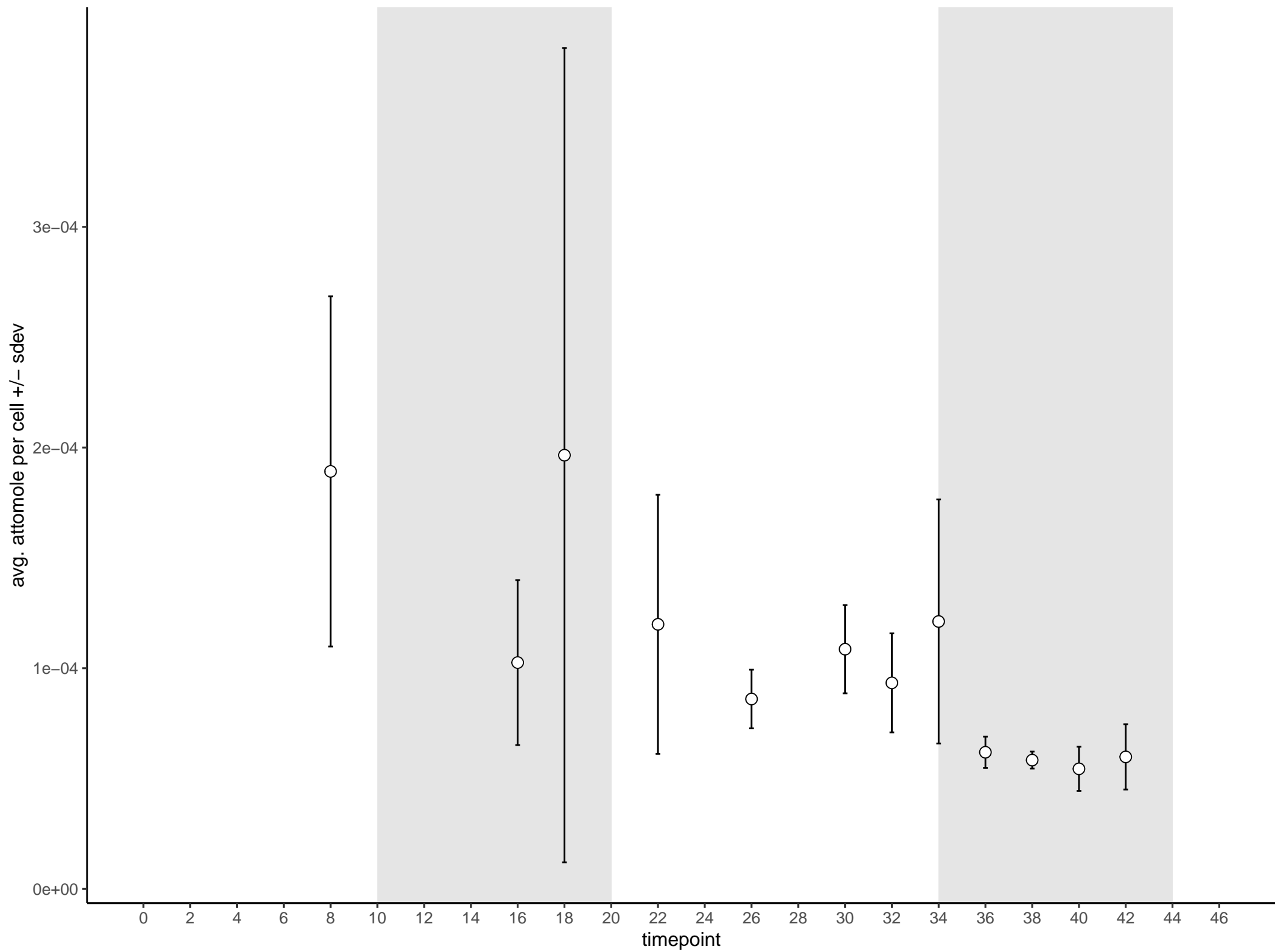
timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



kynurenine

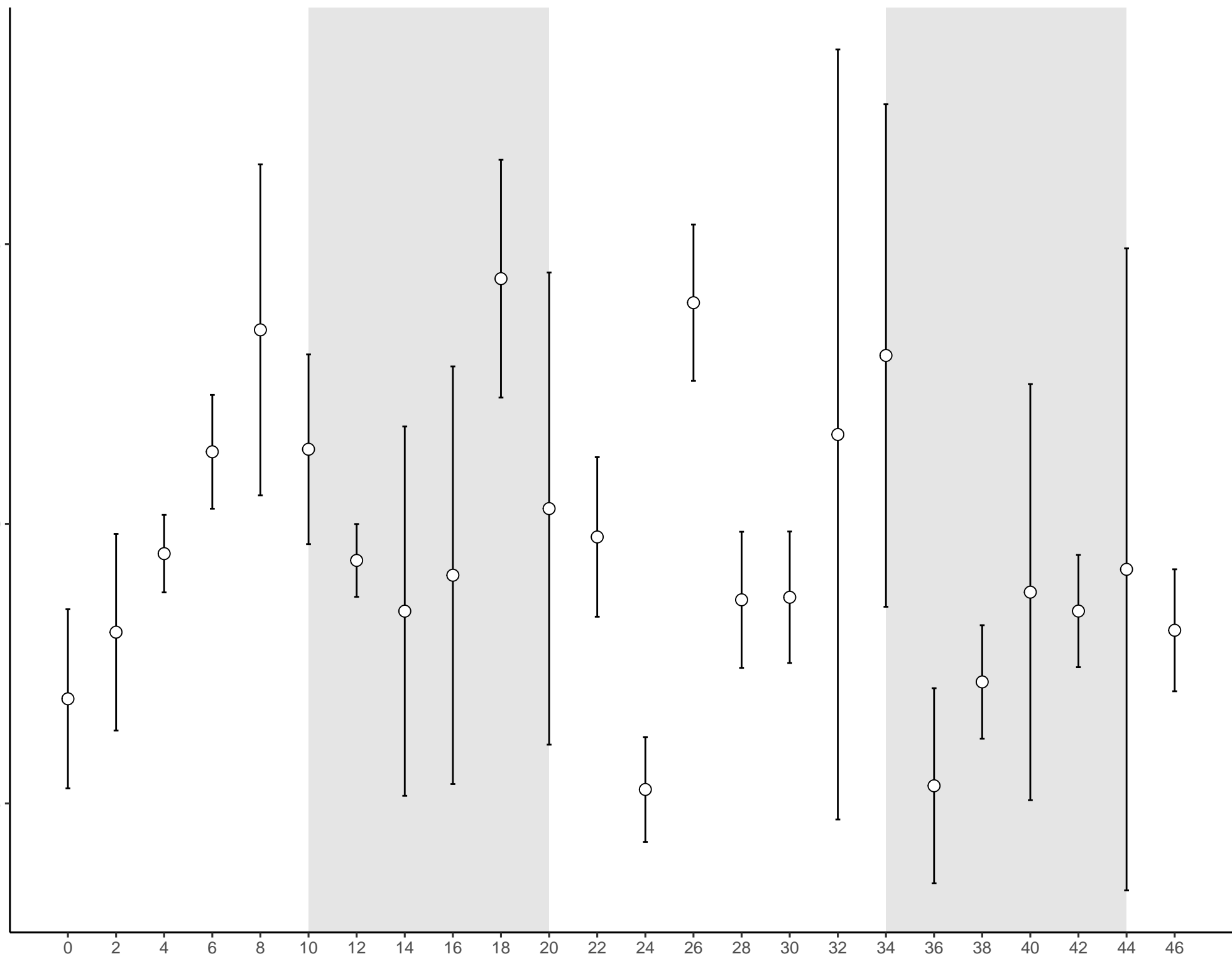
avg. attomole per cell \pm sdev



leucine

avg. attomole per cell \pm sdev

timepoint



inosine 5-monophosphate pos

avg. attomole per cell \pm sdev

0.03

0.02

0.01

0

2

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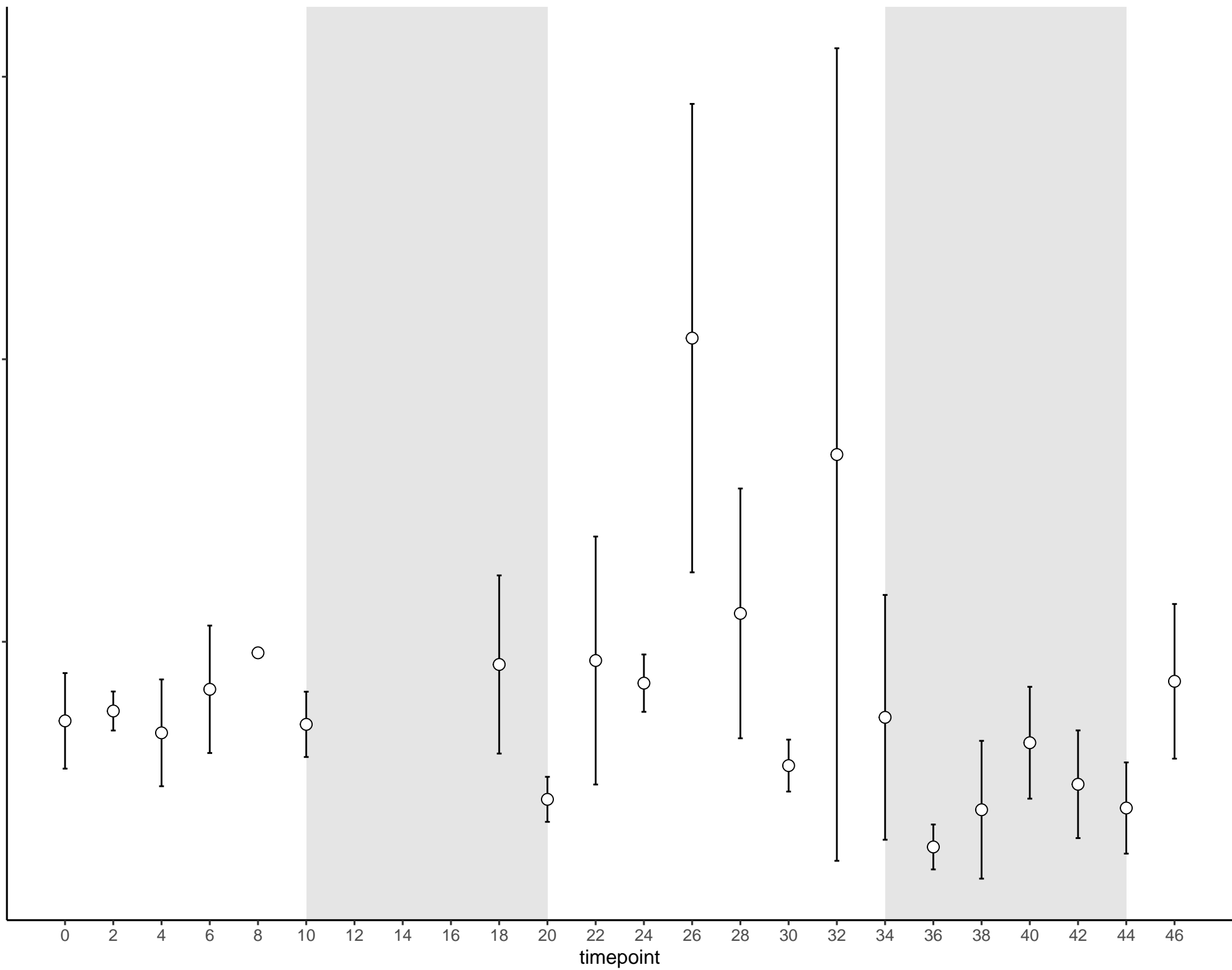
40

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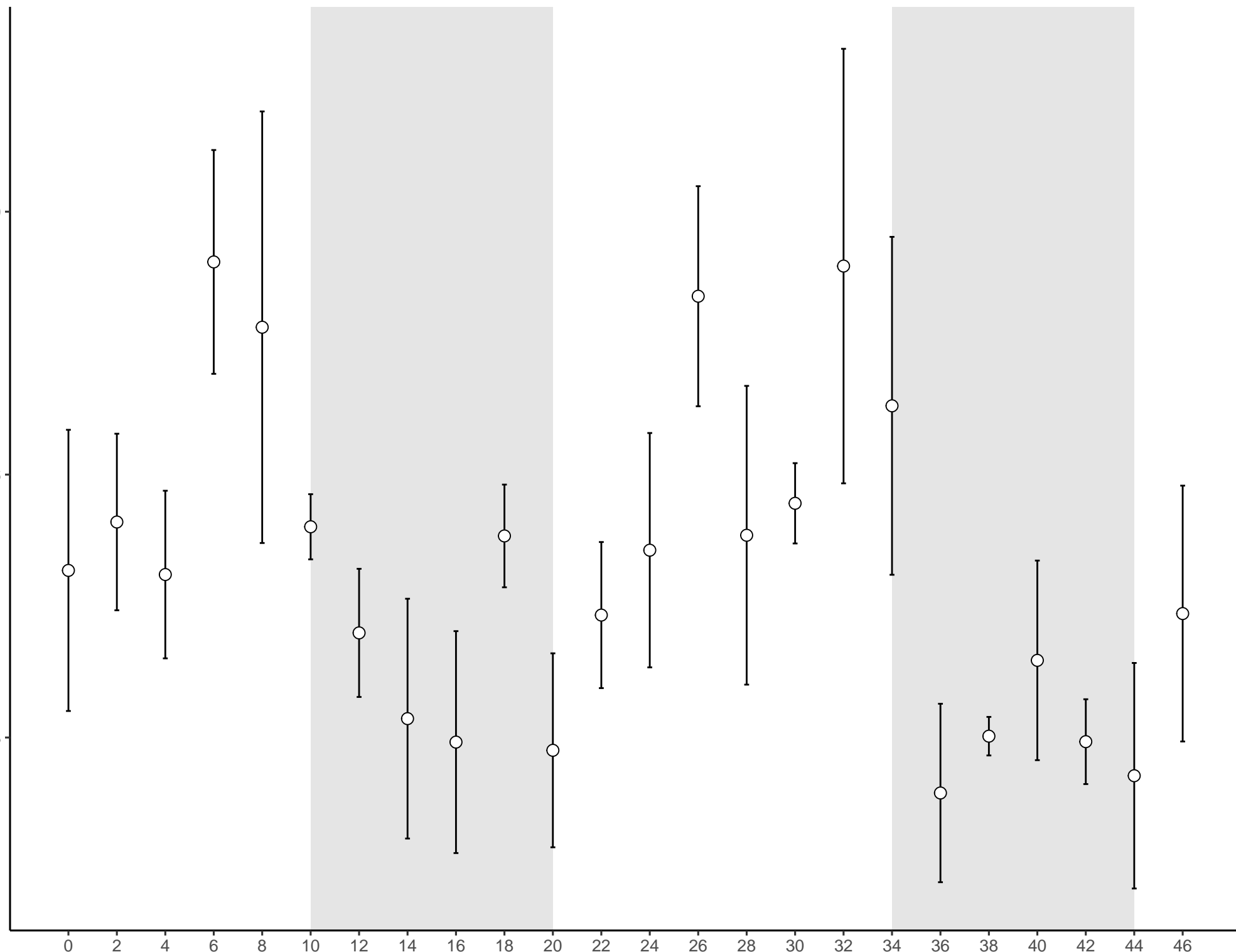
timepoint



isoleucine

avg. attomole per cell \pm sdev

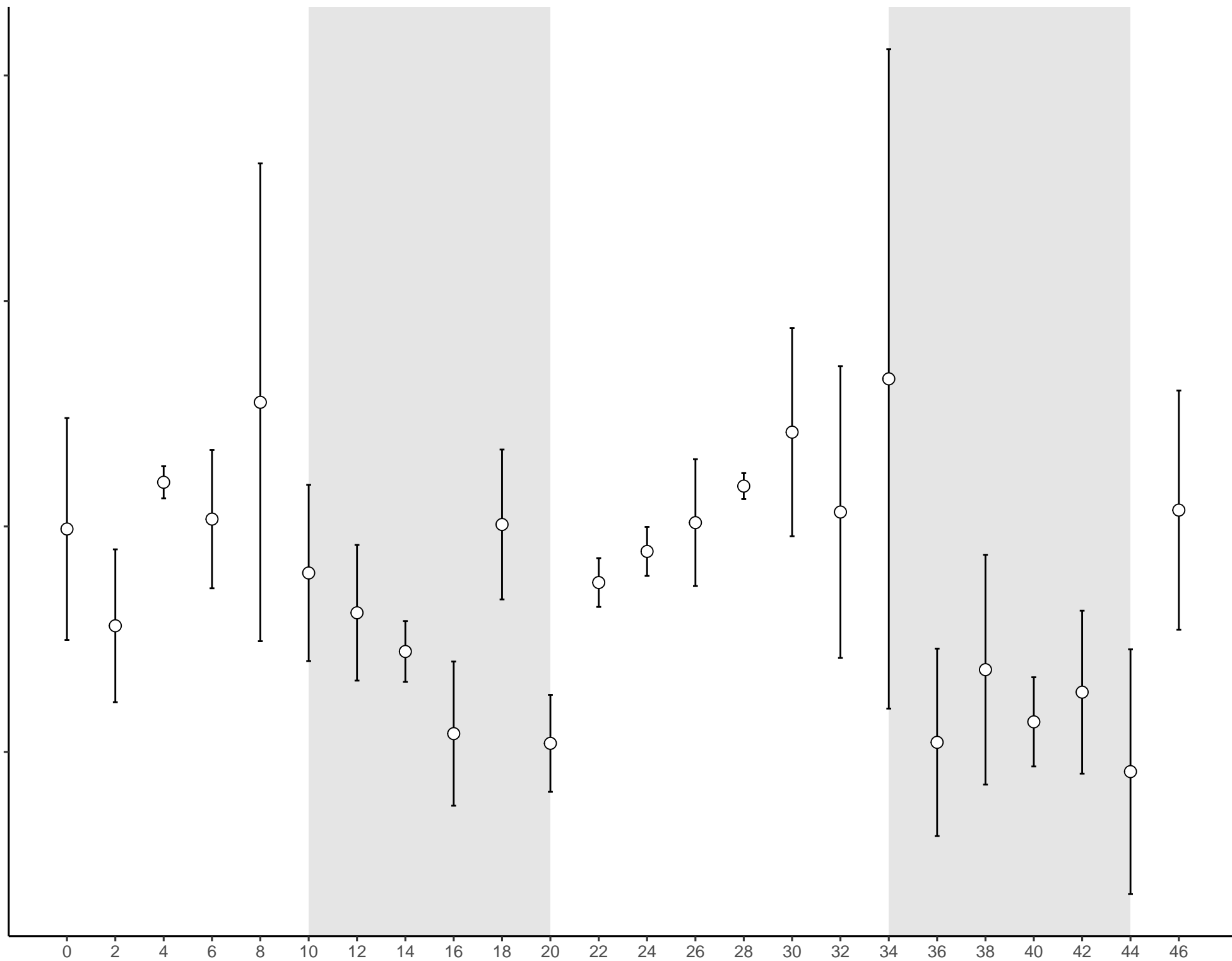
timepoint



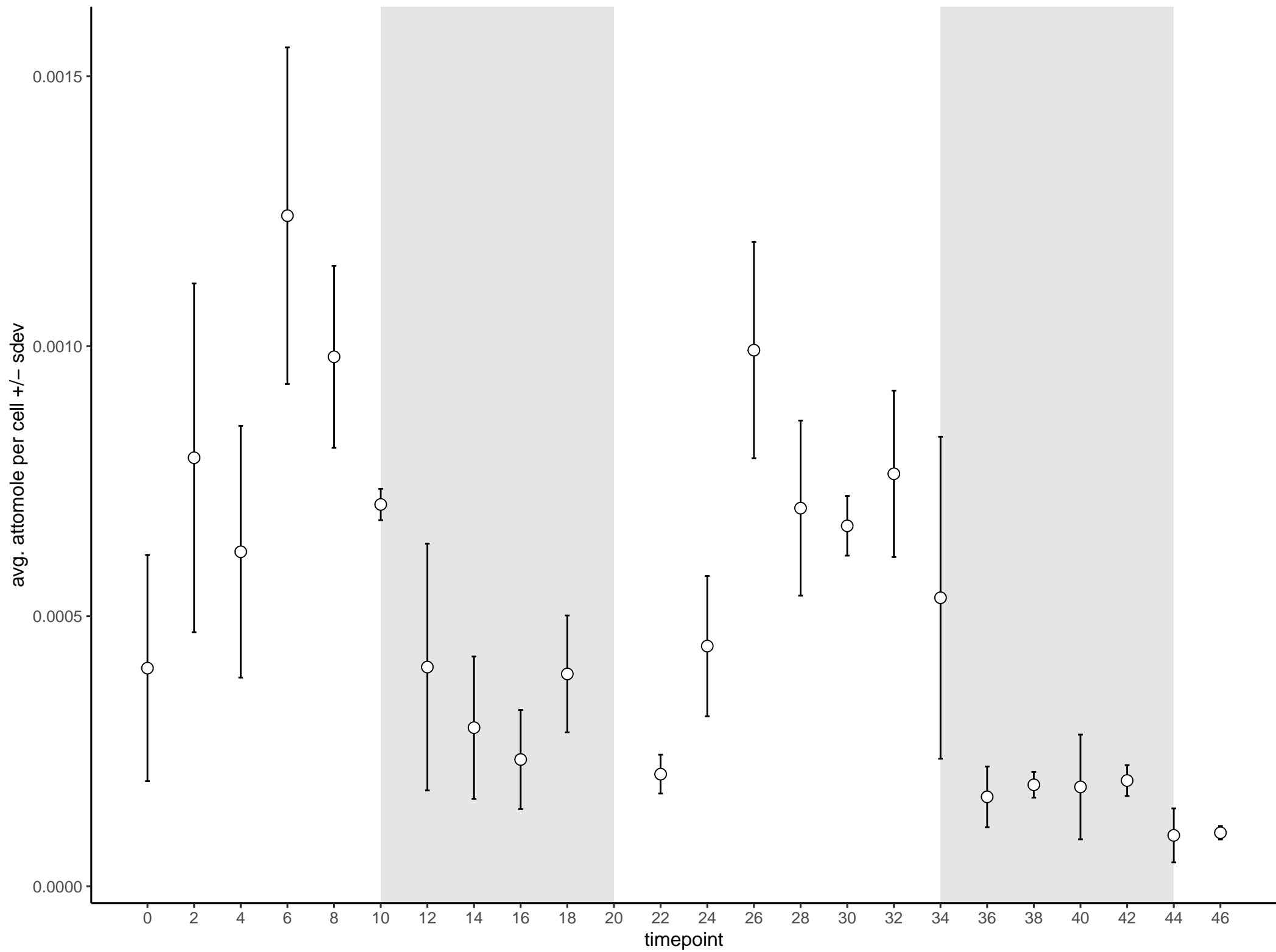
MTA

avg. attomole per cell \pm sdev

timepoint



n-acetylglucosamine204



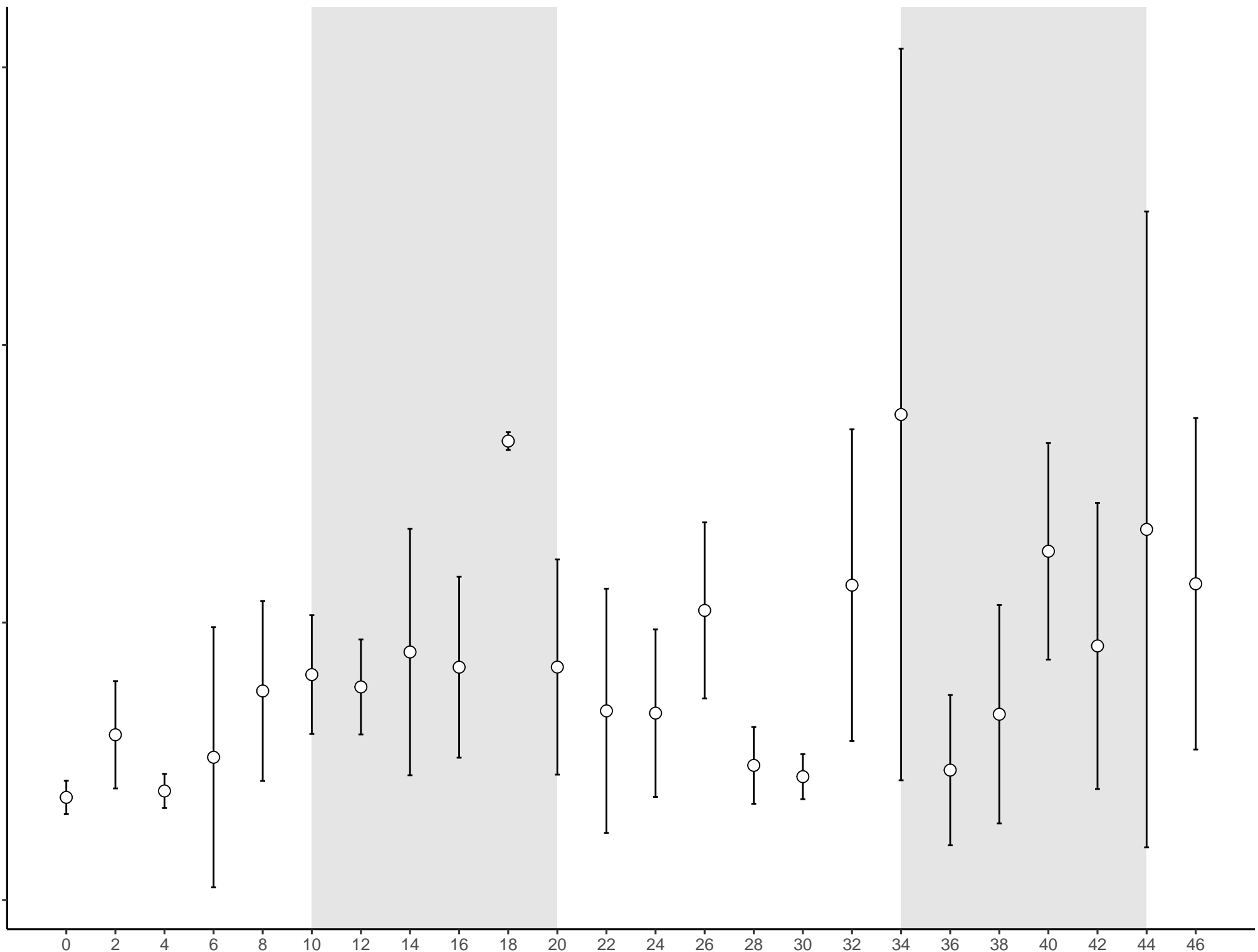
citric acid

avg. attomole per cell \pm sdev

0.3
0.2
0.1
0.0

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



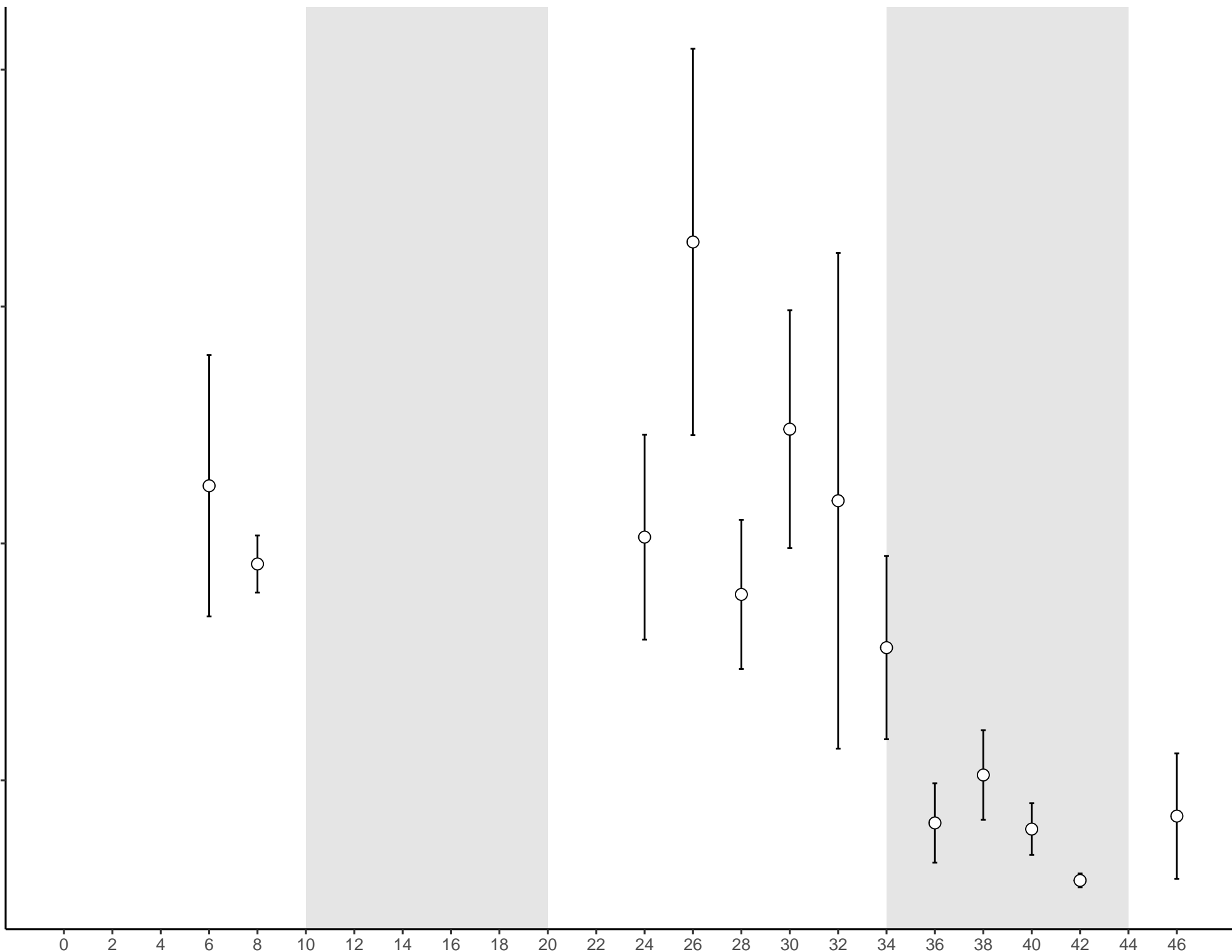
methionine

avg. attomole per cell \pm sdev

0.004
0.003
0.002
0.001

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46

timepoint



succinic acid

avg. attomole per cell \pm sdev

0.02

0.01

0.00

timepoint

0

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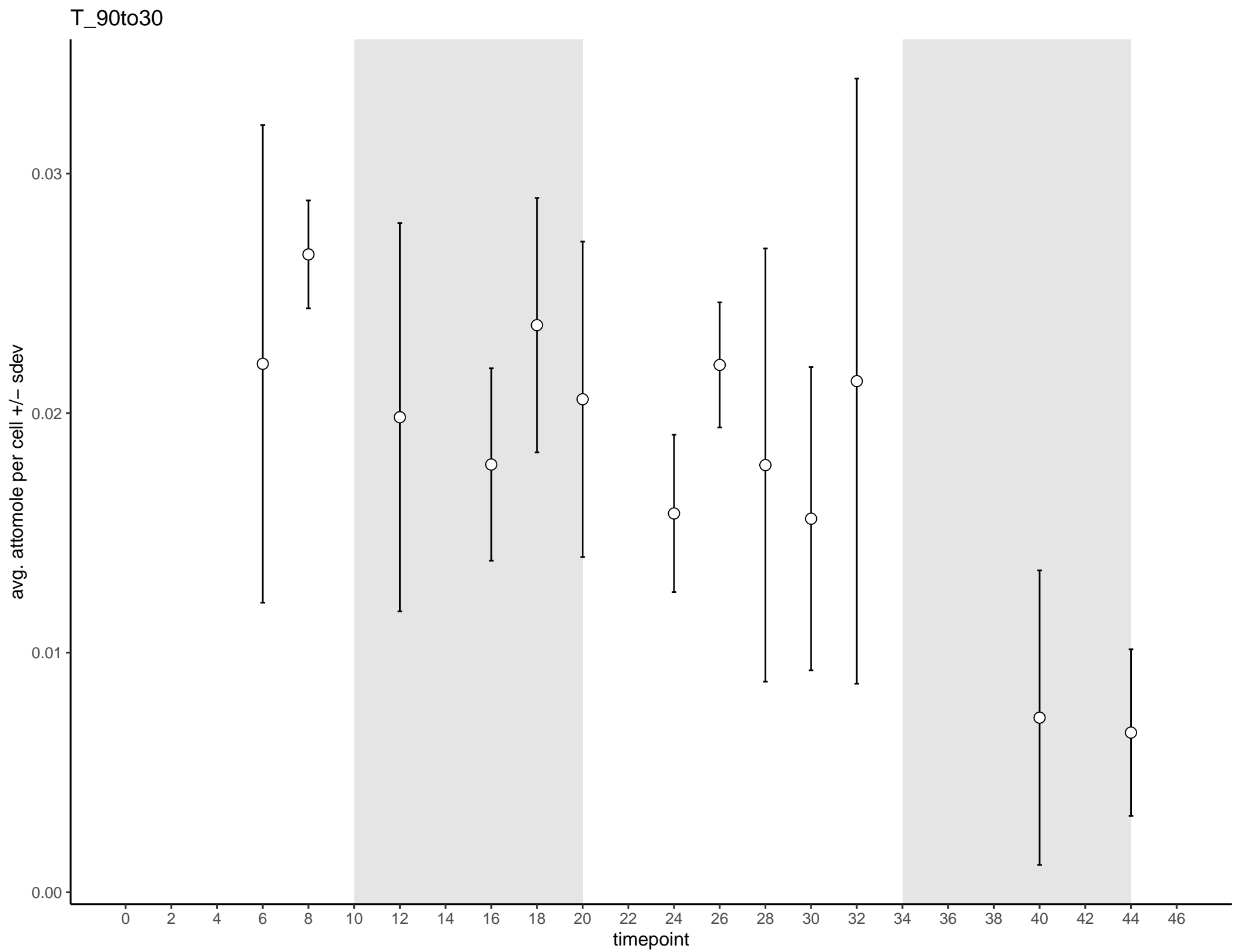
38

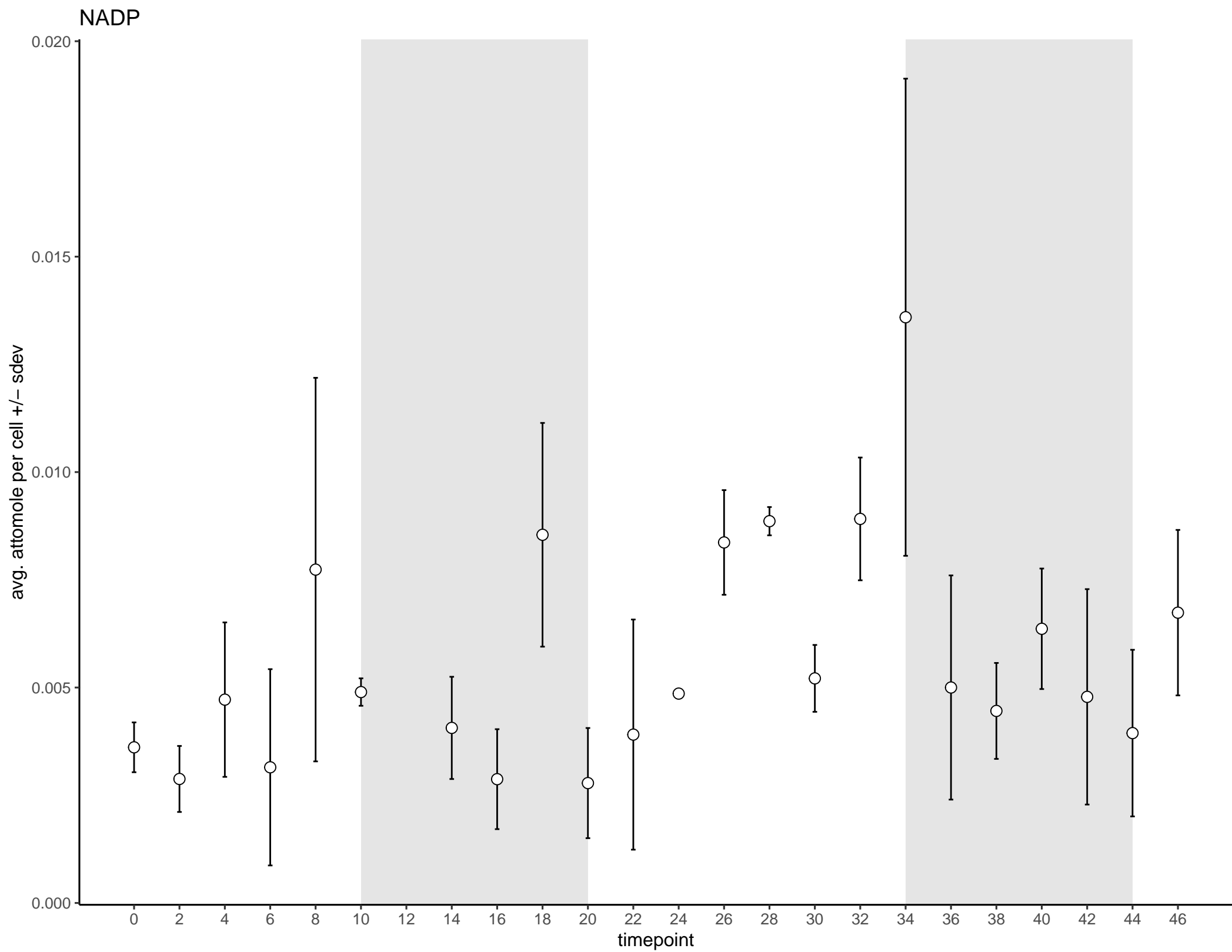
40

42

44

46





nicotinamide

avg. attomole per cell \pm sdev

0.009

0.006

0.003

0.000

0

2

4

6

8

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32

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36

38

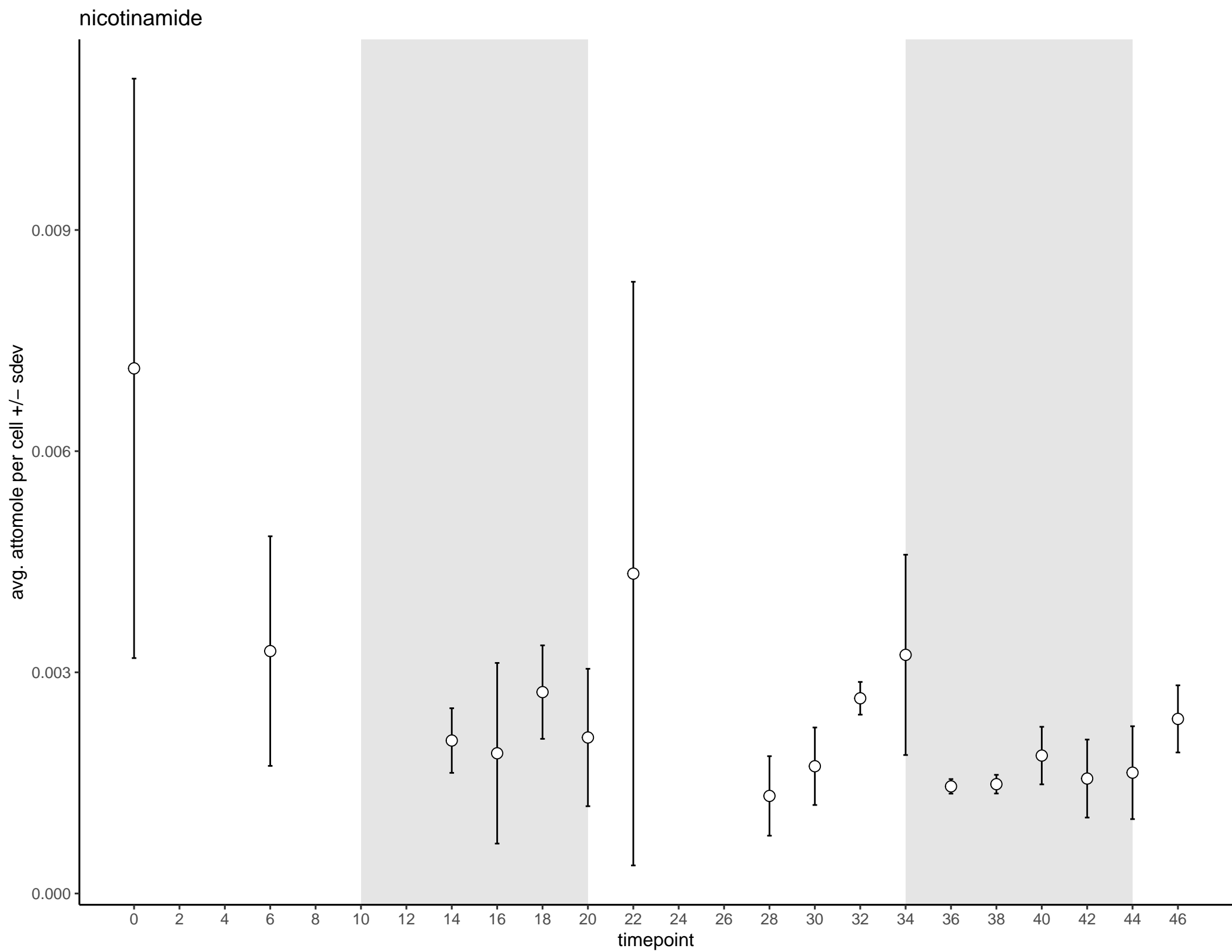
40

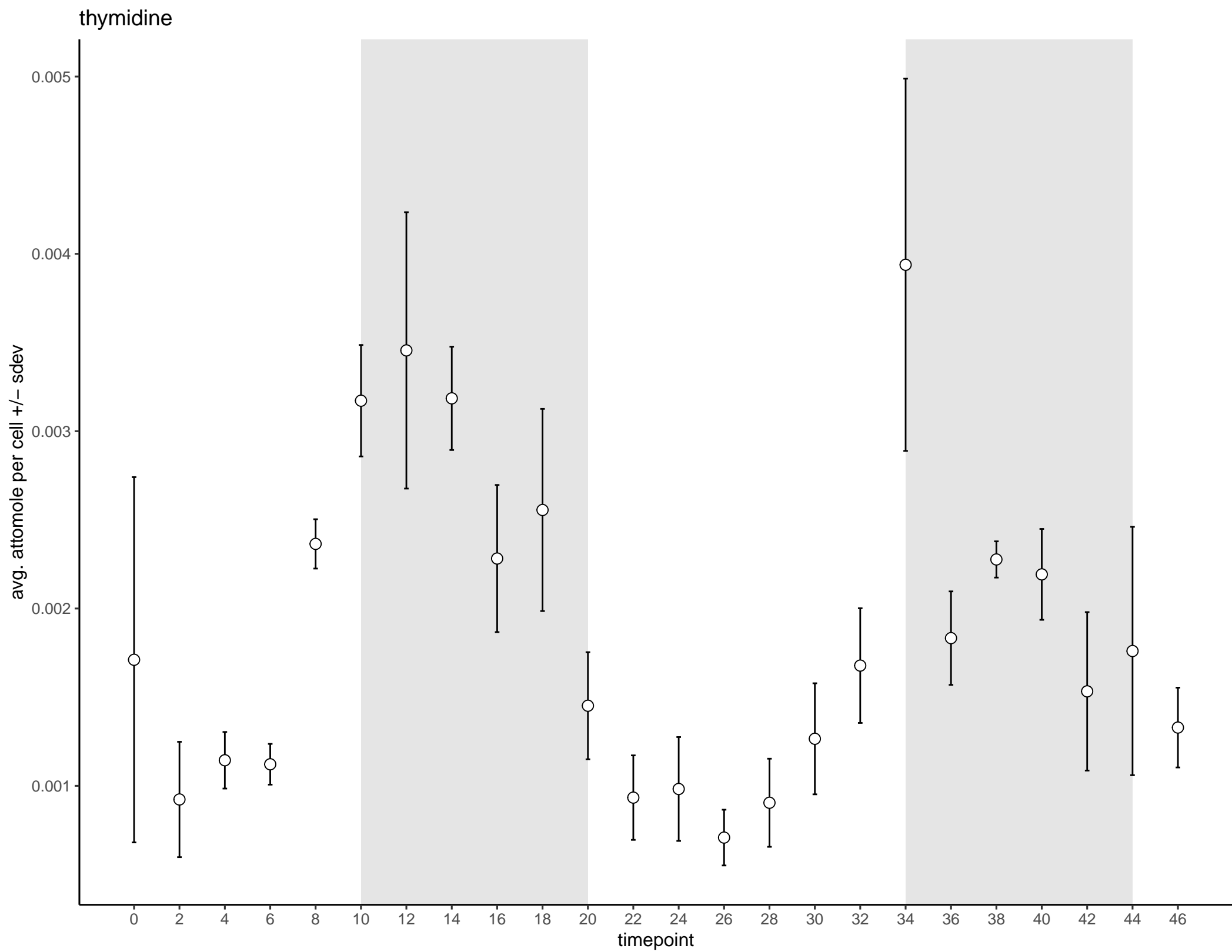
42

44

46

timepoint

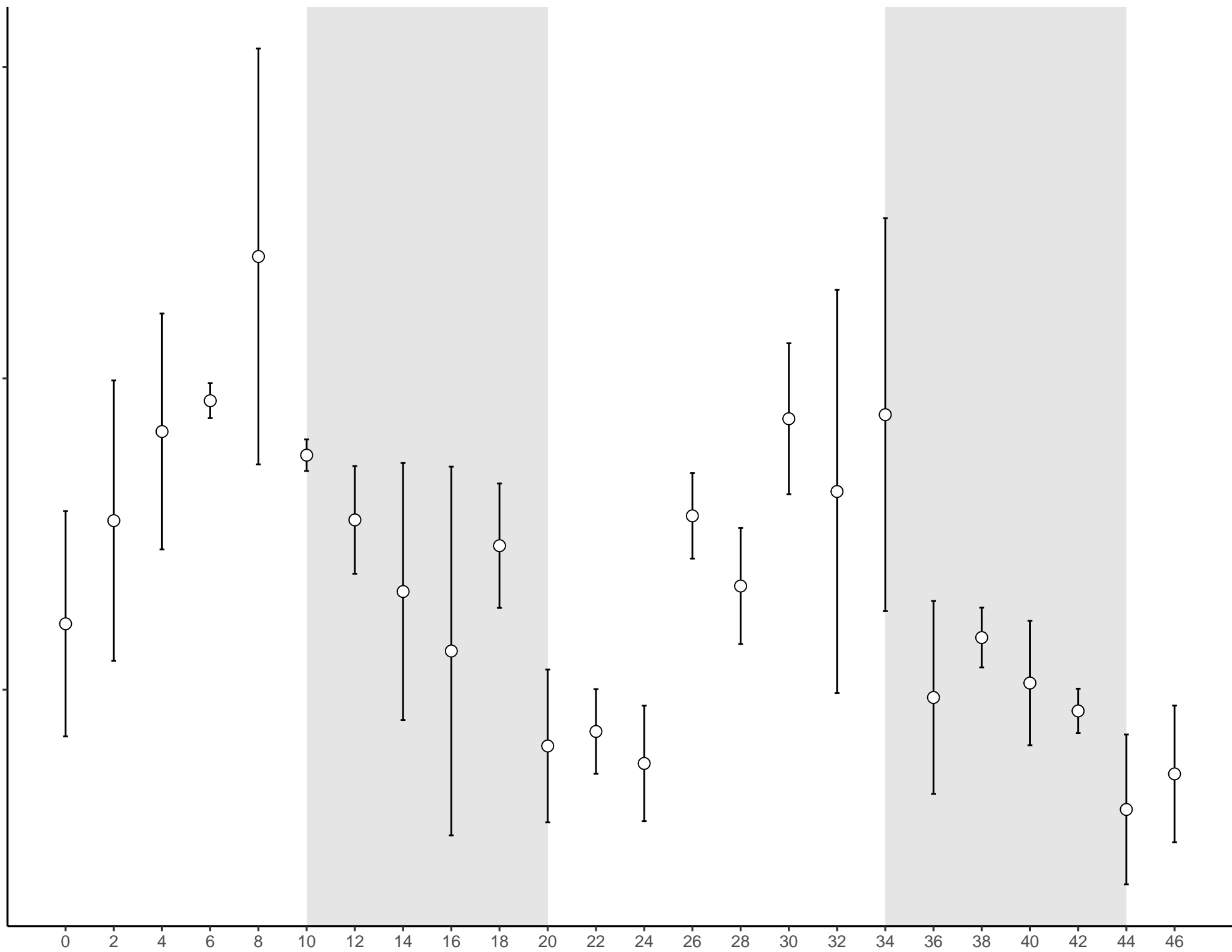




tryptophan

avg. attomole per cell \pm sdev

timepoint



T_90to62

avg. attomole per cell \pm sdev

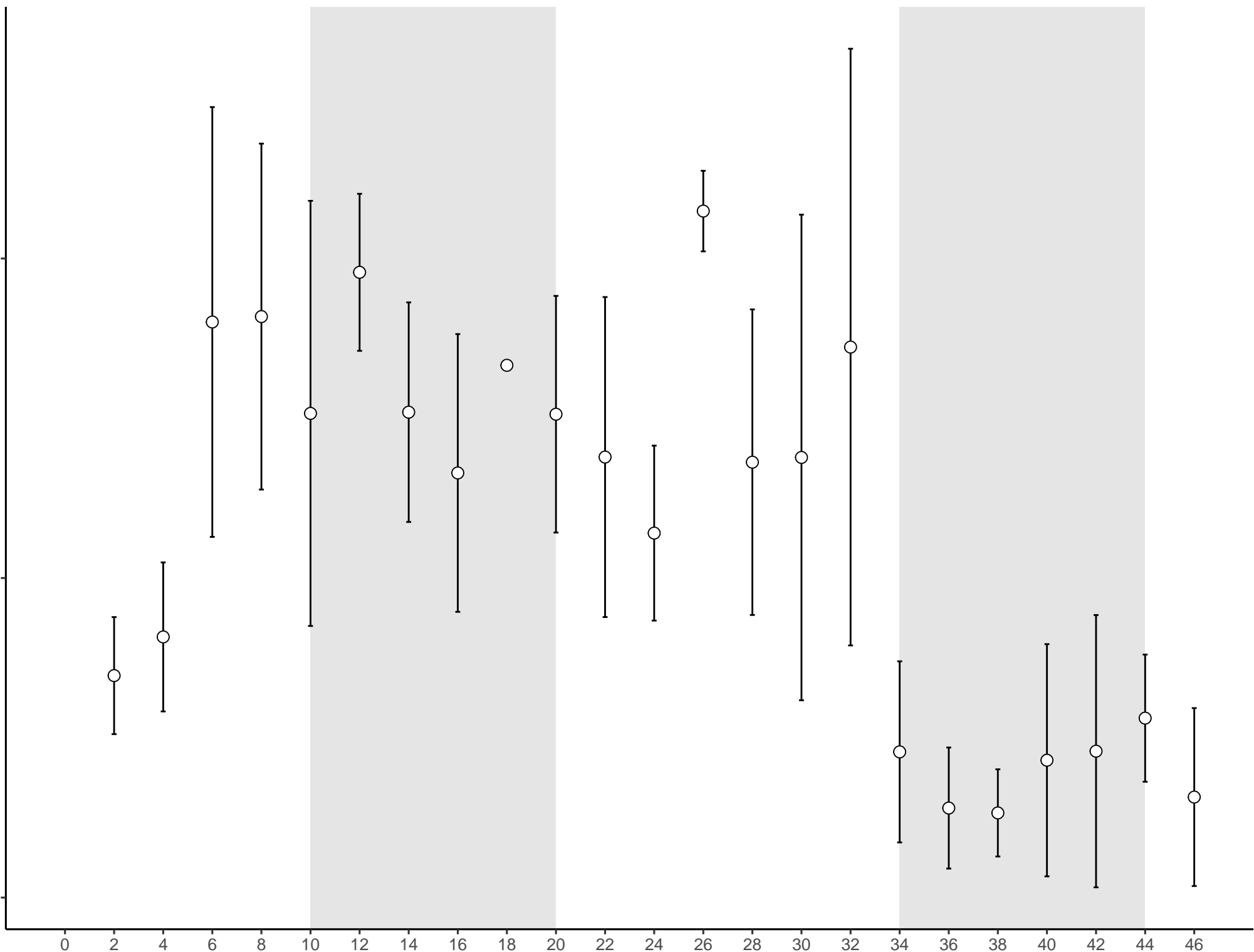
1.0

0.5

0.0

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



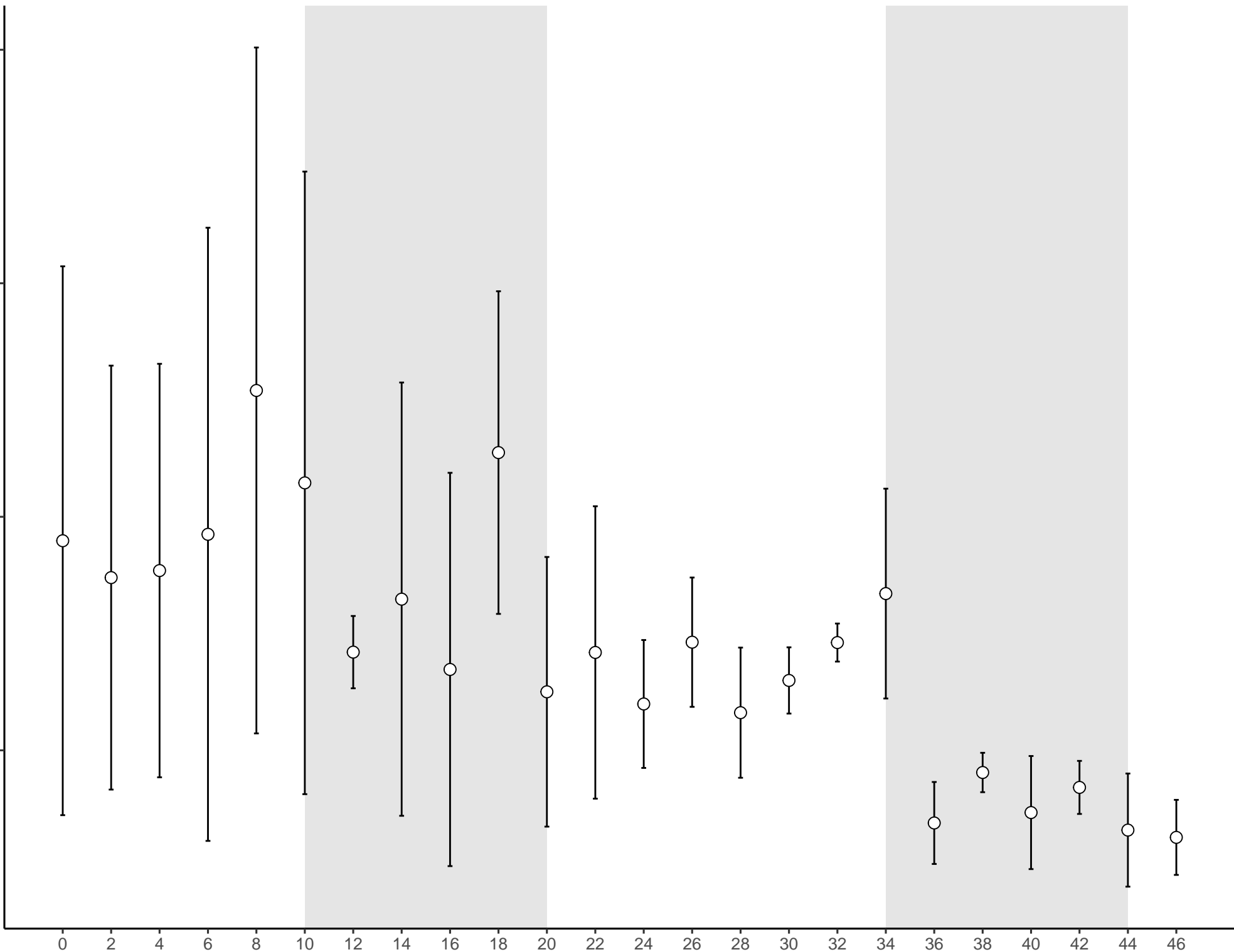
lumichrome

avg. attomole per cell \pm sdev

0.004
0.003
0.002
0.001

timepoint

0 2 4 6 8 10 12 14 16 18 20 22 24 26 28 30 32 34 36 38 40 42 44 46



tetrahydrobiopterin240

