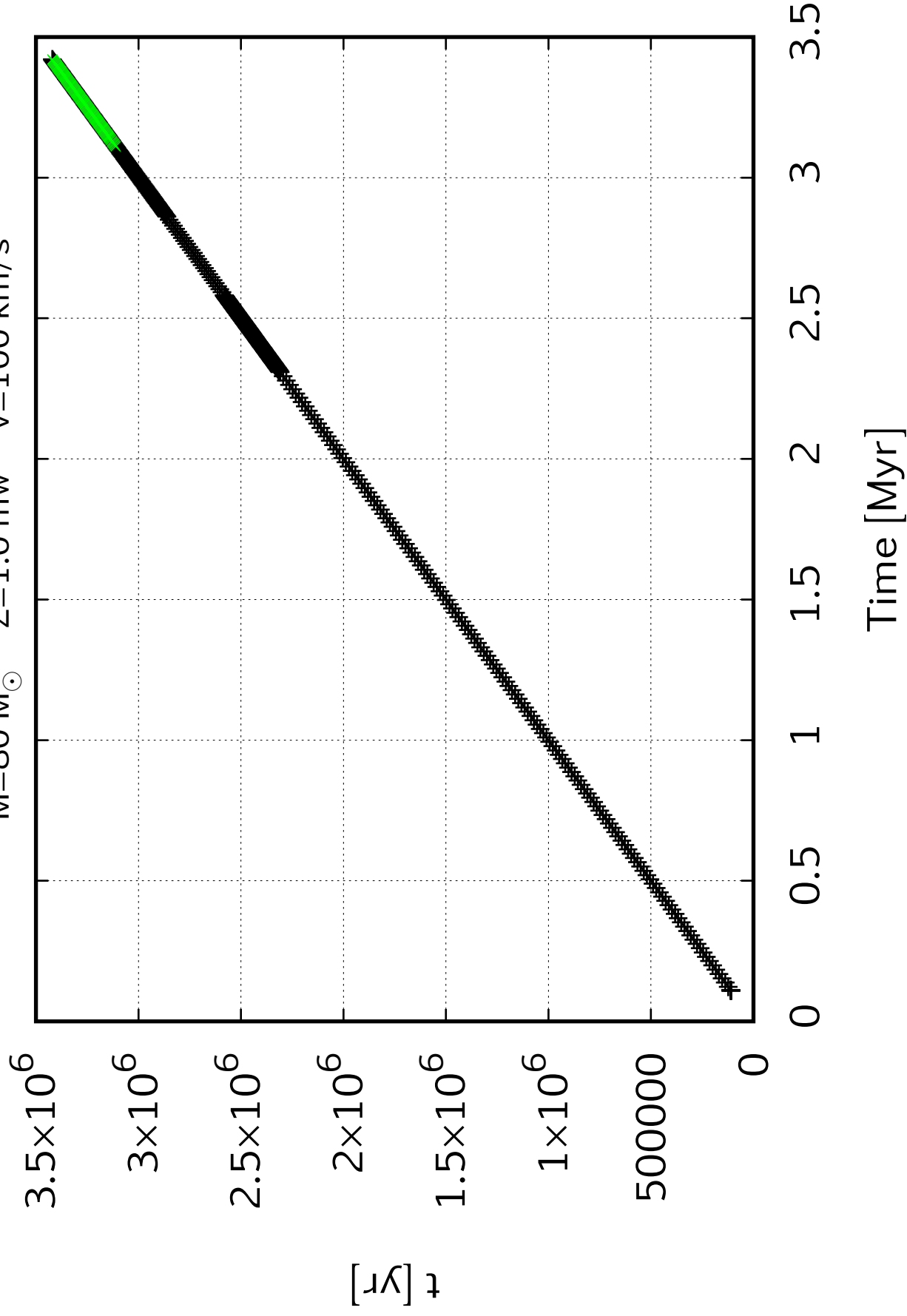
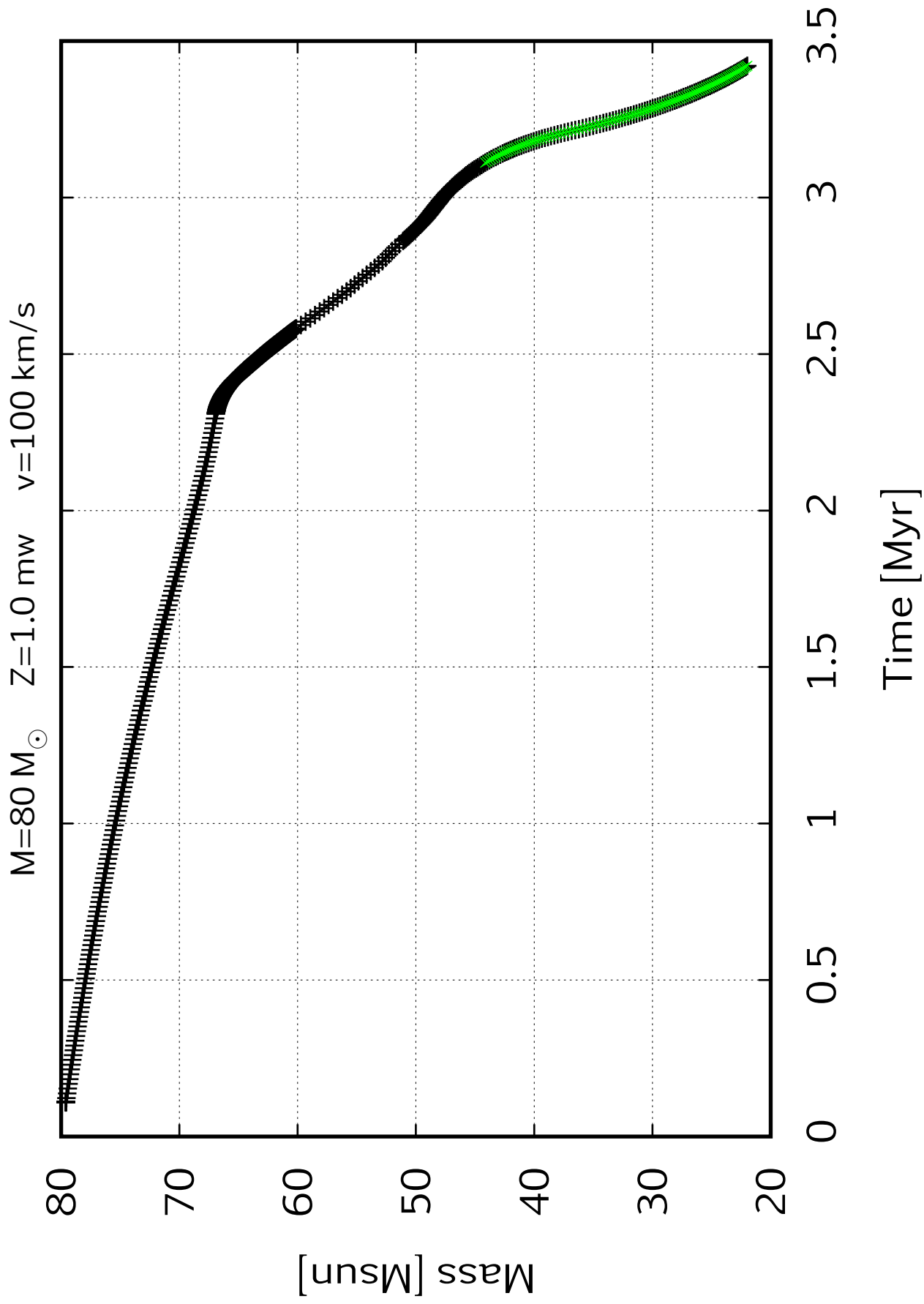
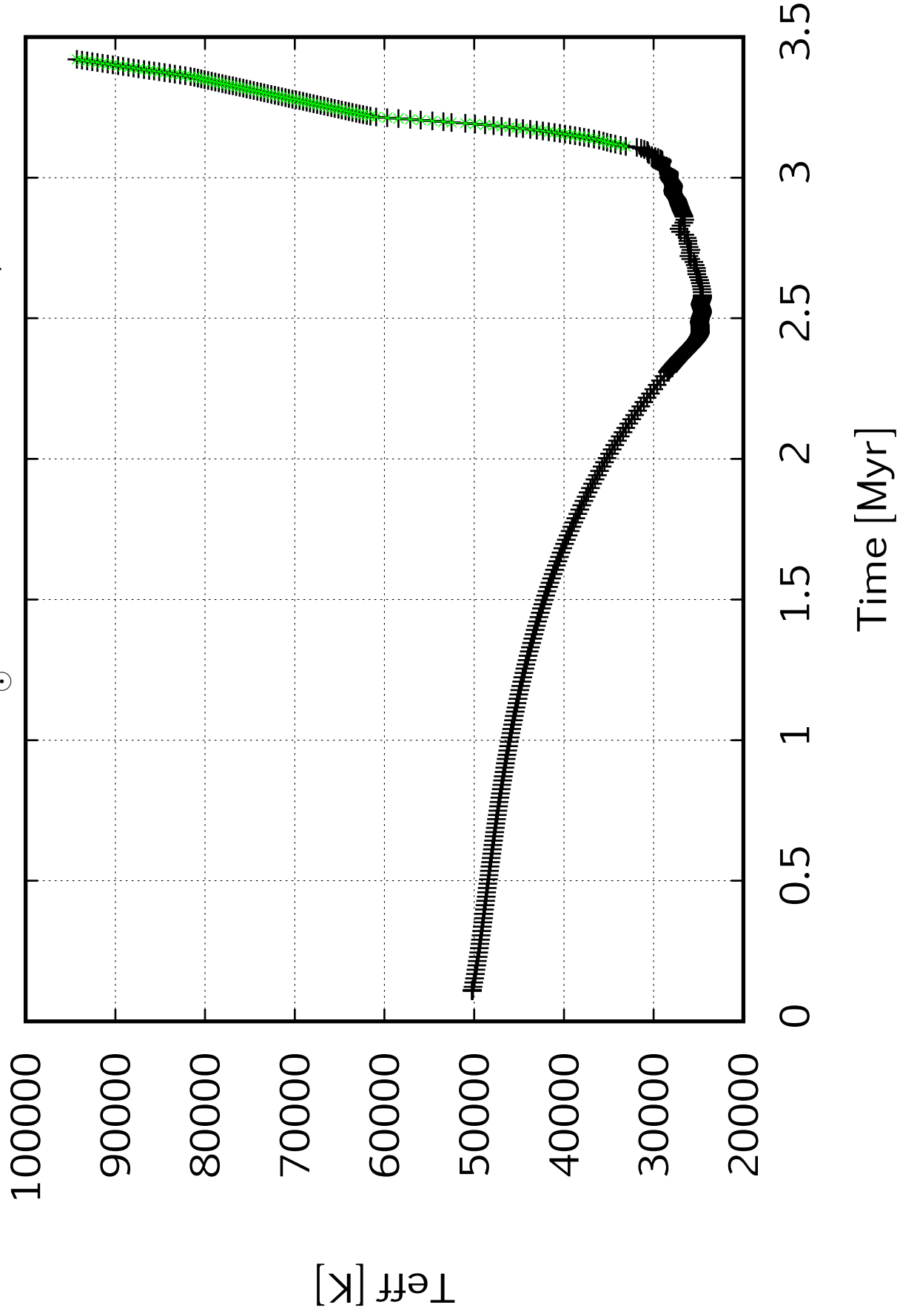


$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$

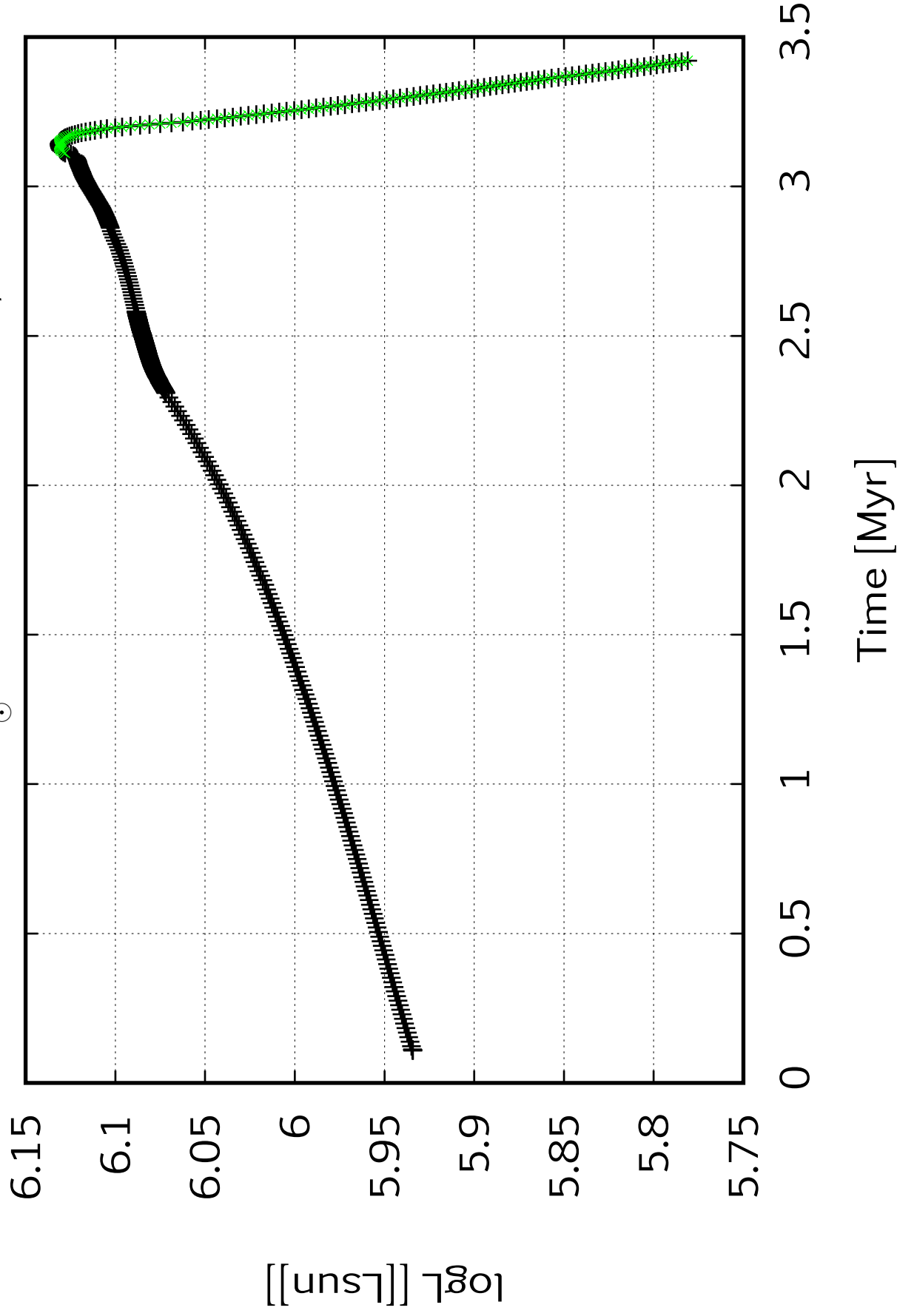




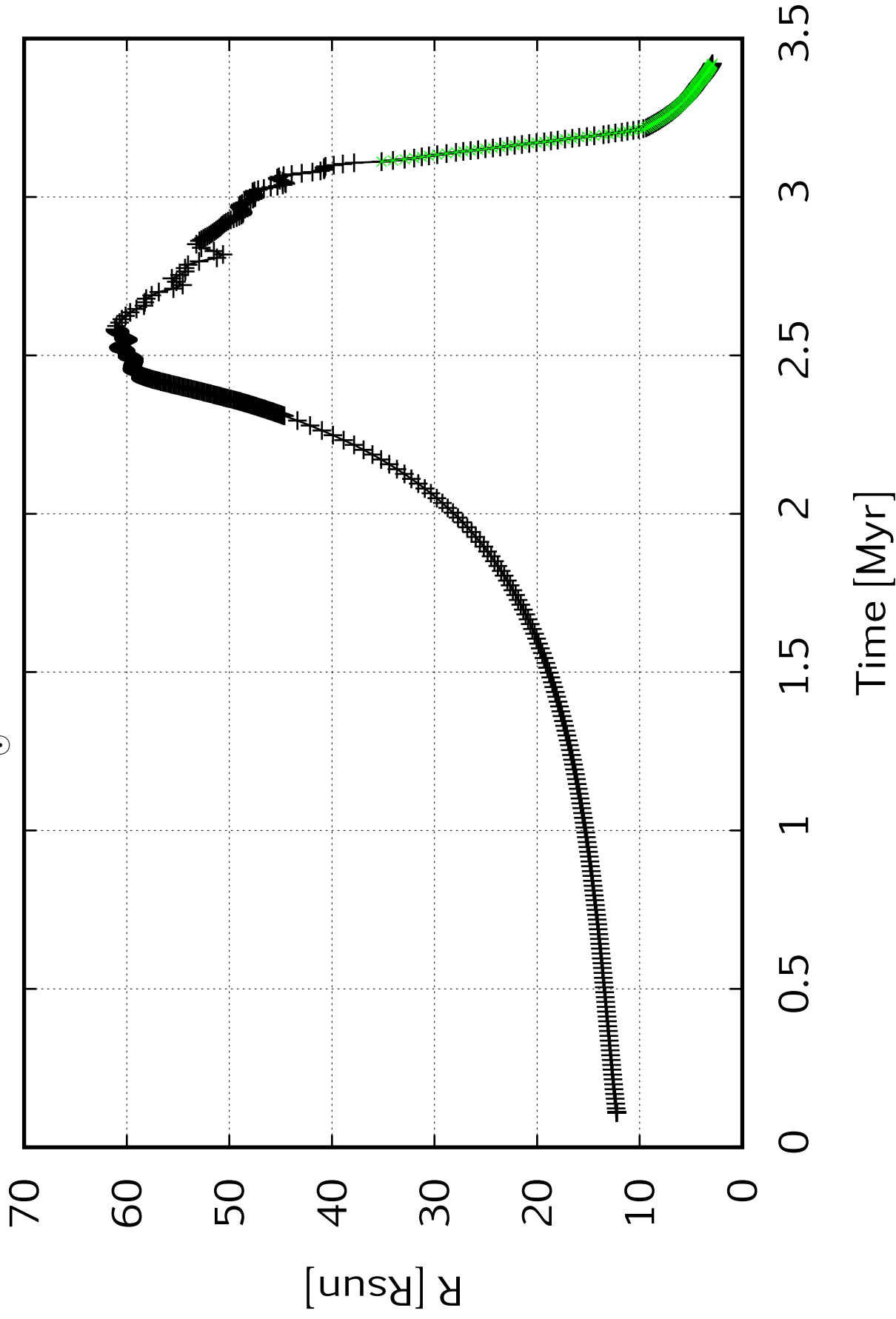
$M=80\ M_{\odot}$ $Z=1.0\ \text{mw}$ $v=100\ \text{km/s}$



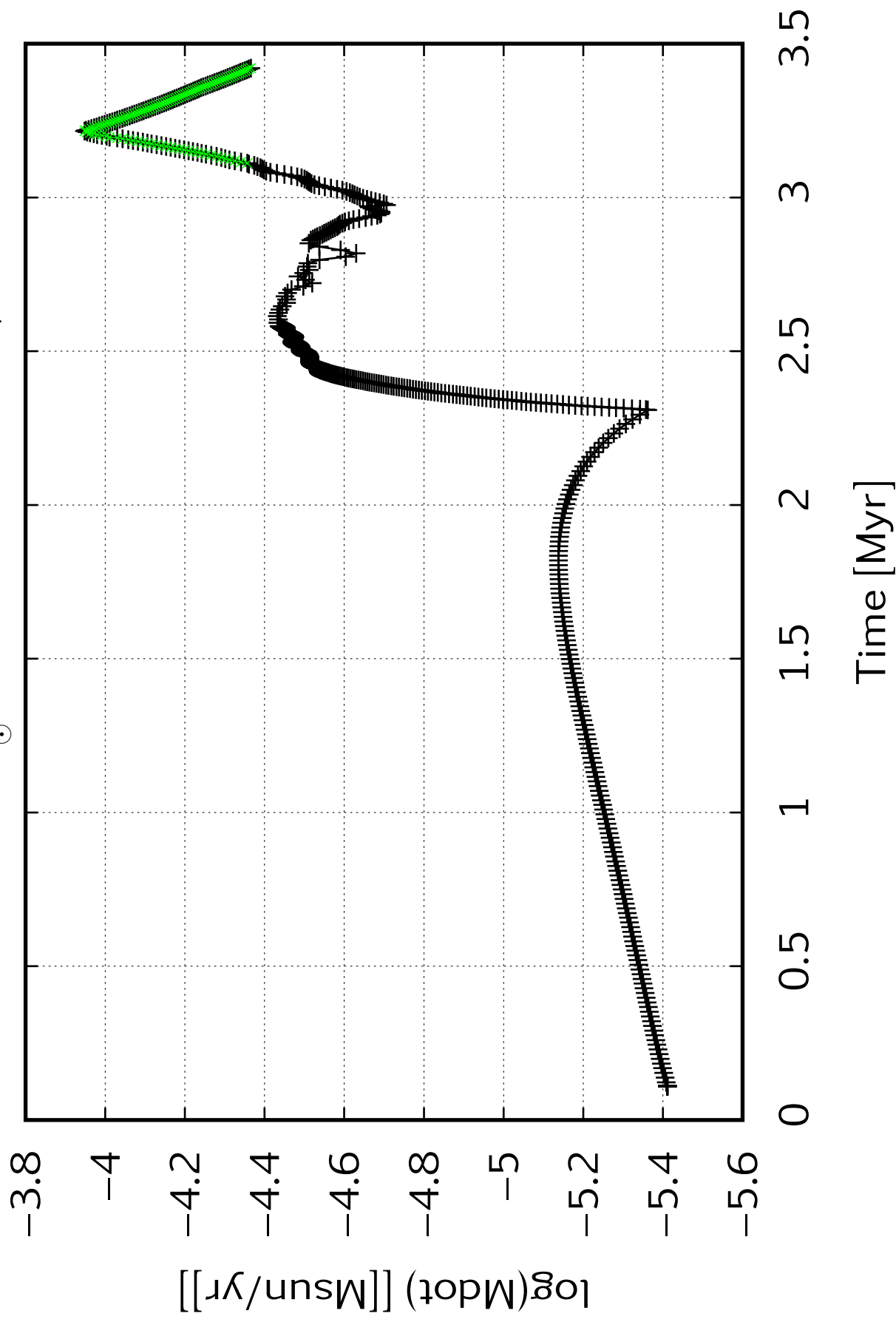
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



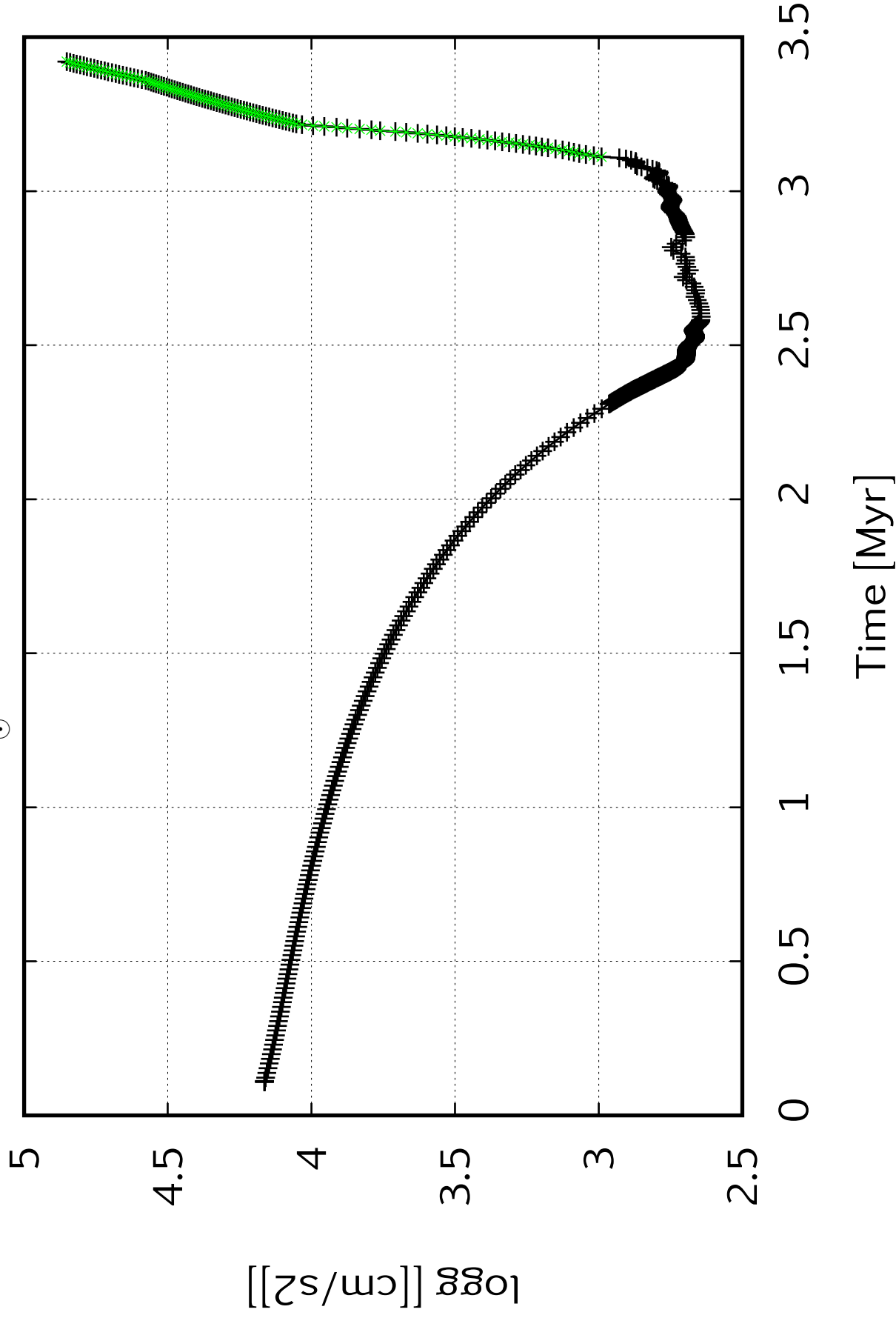
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



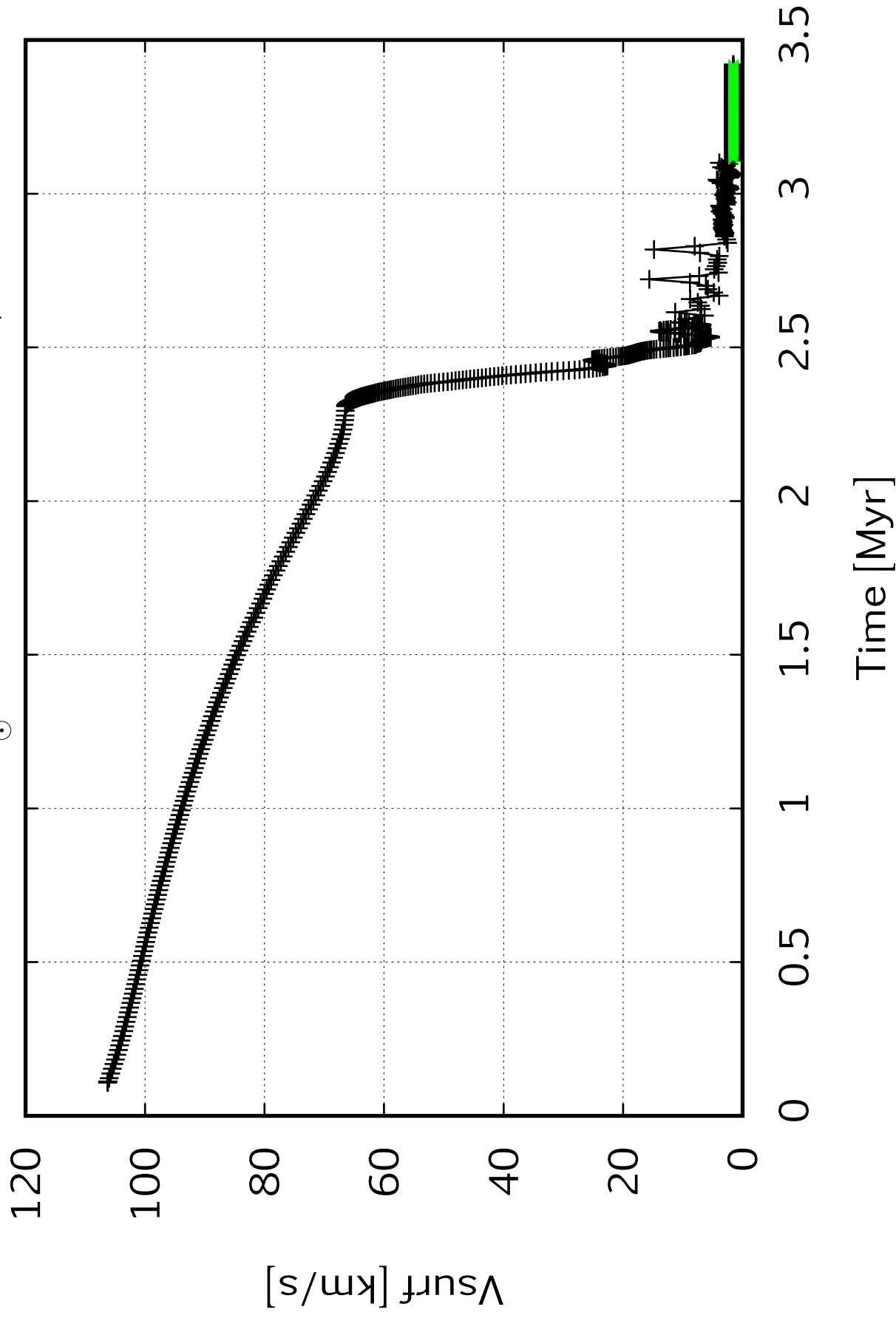
$M=80\ M_{\odot}$ $Z=1.0\ \text{mw}$ $v=100\ \text{km/s}$



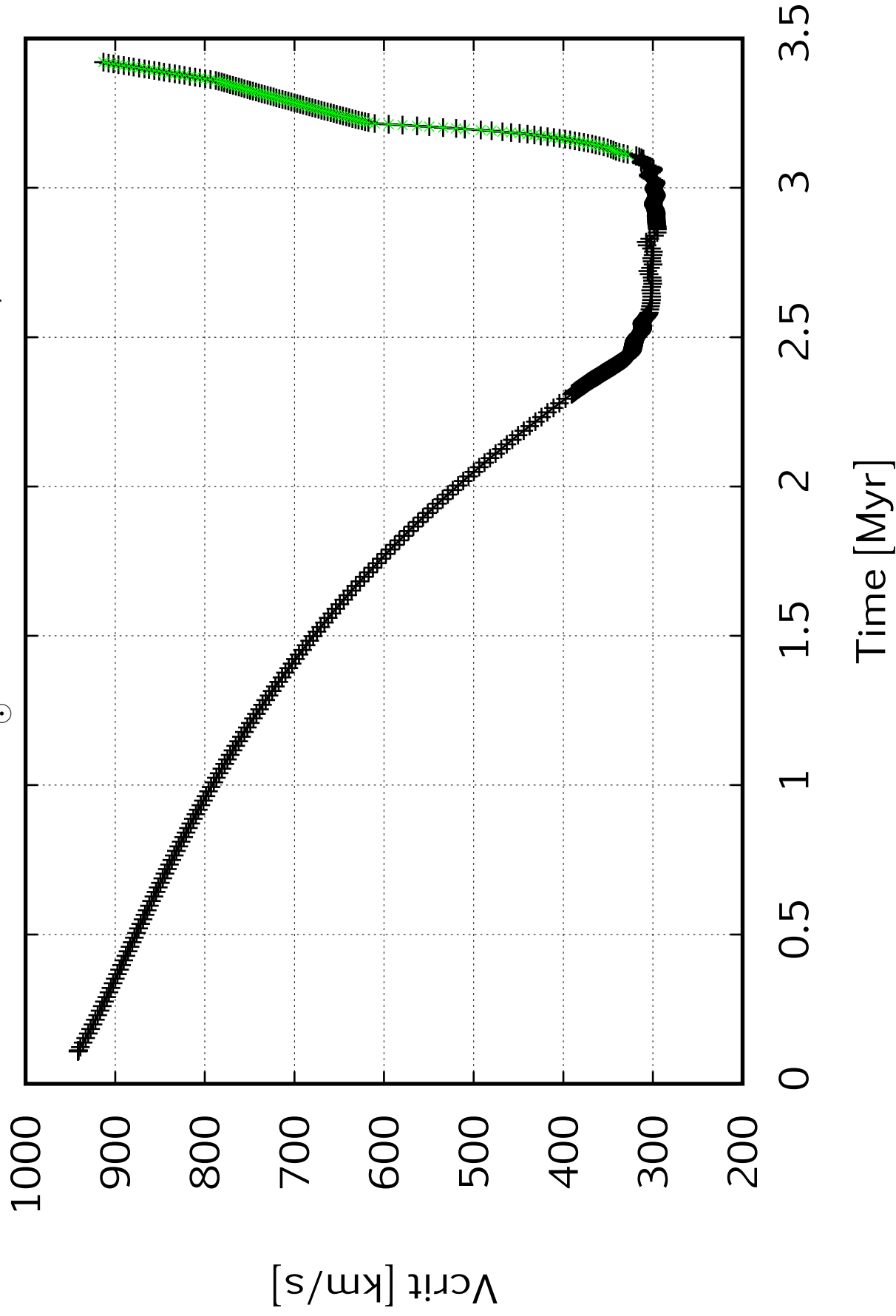
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



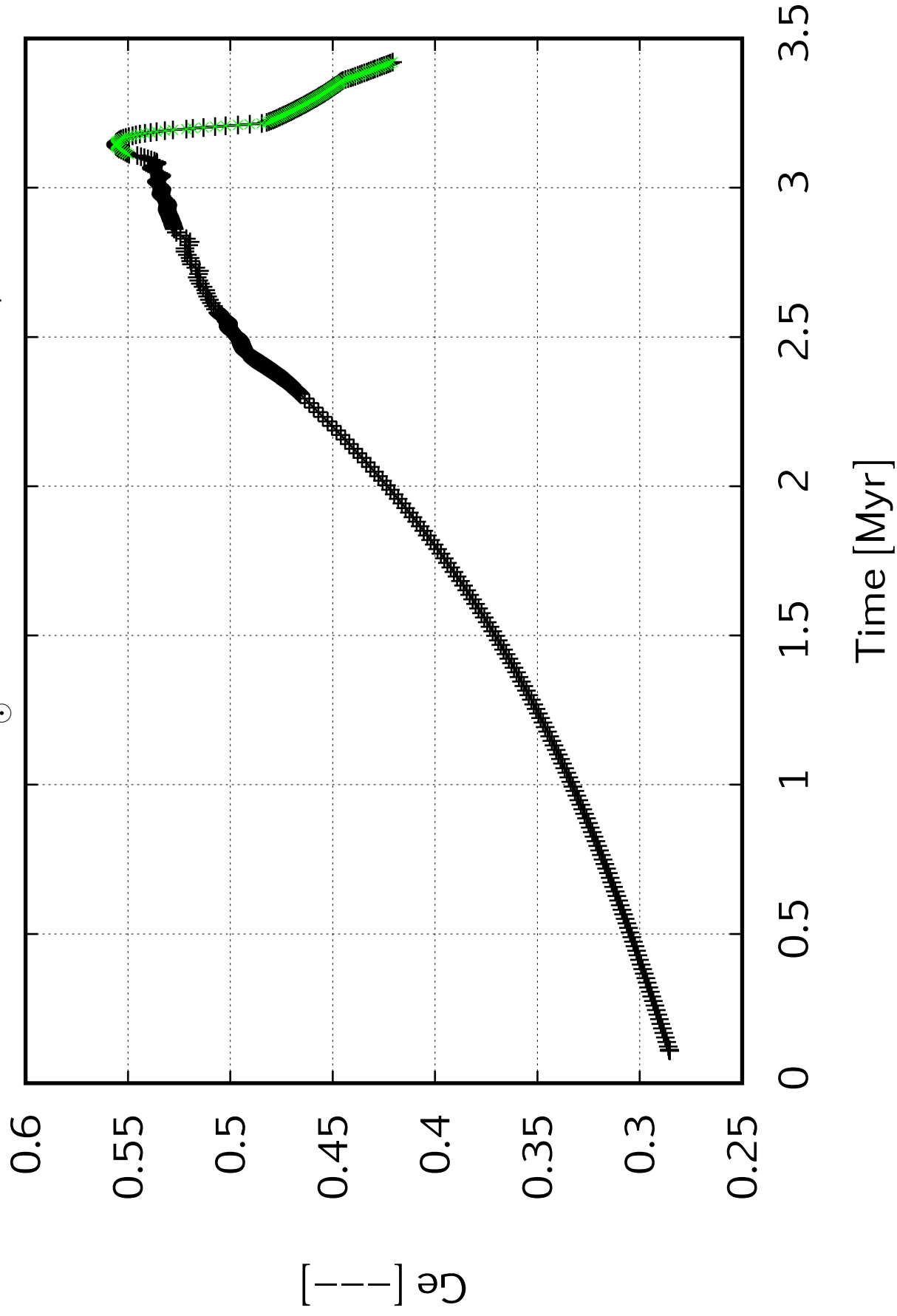
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

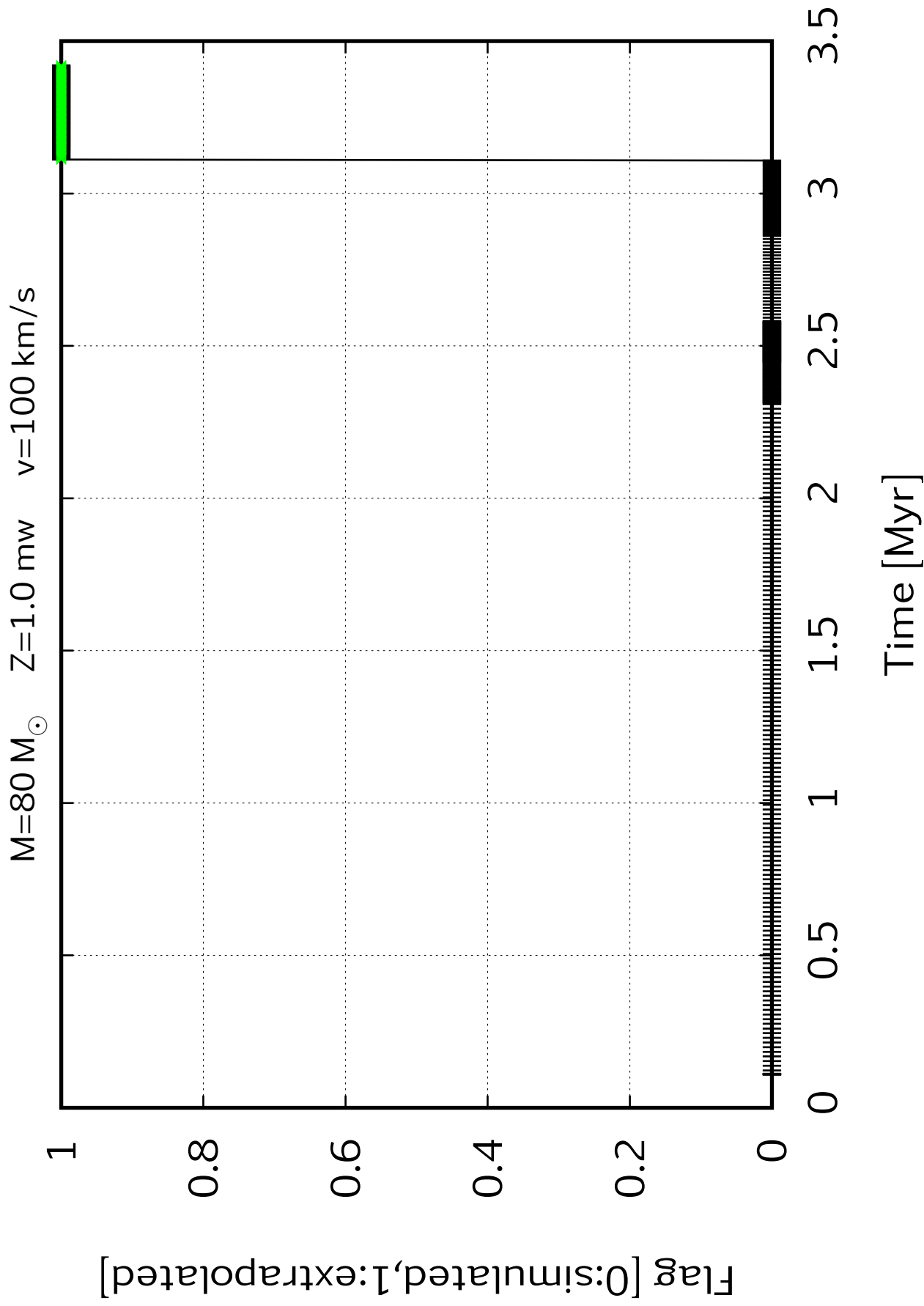


$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$





$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

12.15

12.1

12.05

12

11.95

11.9

11.85

$[\text{---}] (\text{H}) \text{eps}$

0

0.5

1

1.5

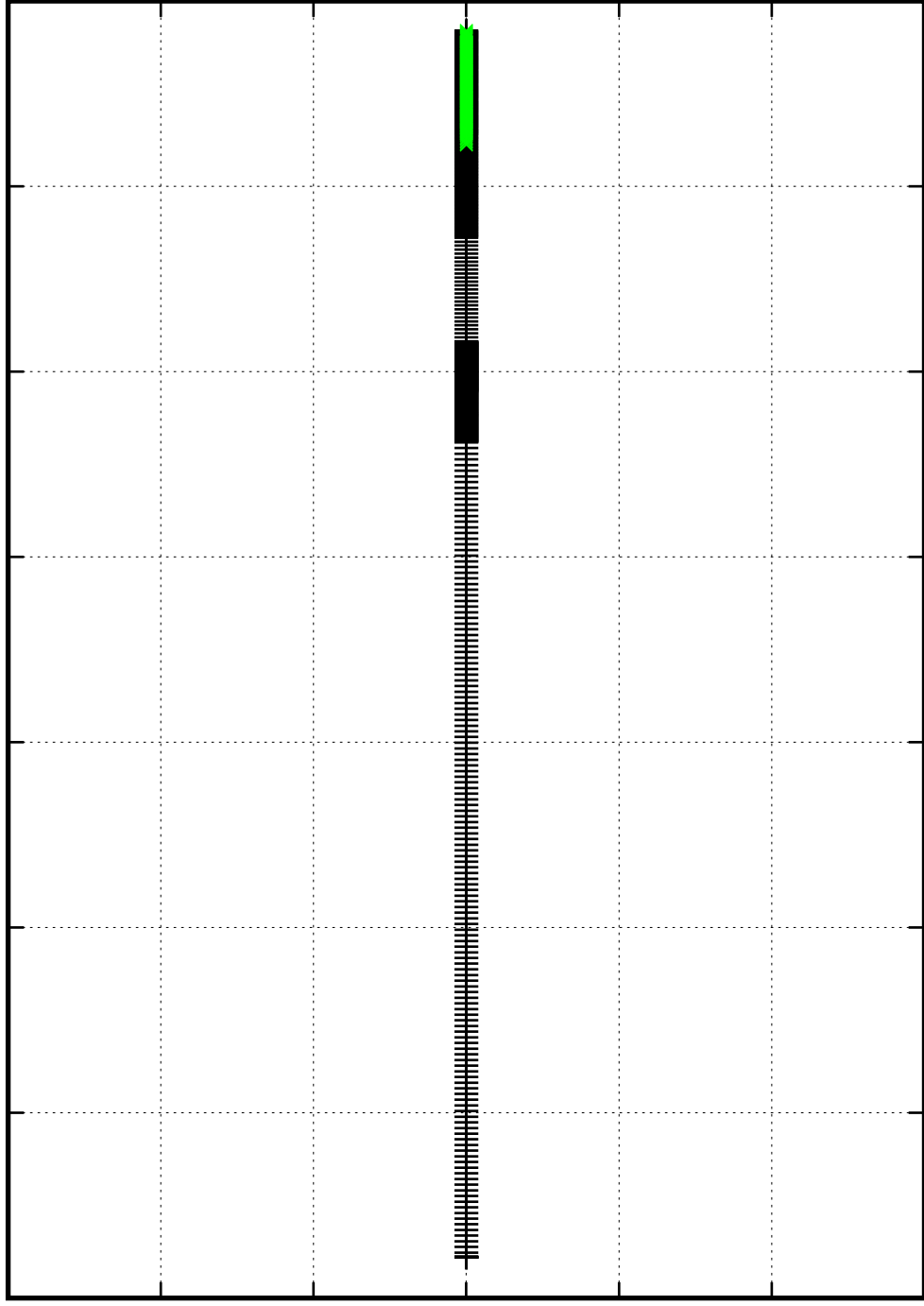
2

2.5

3

3.5

Time [Myr]



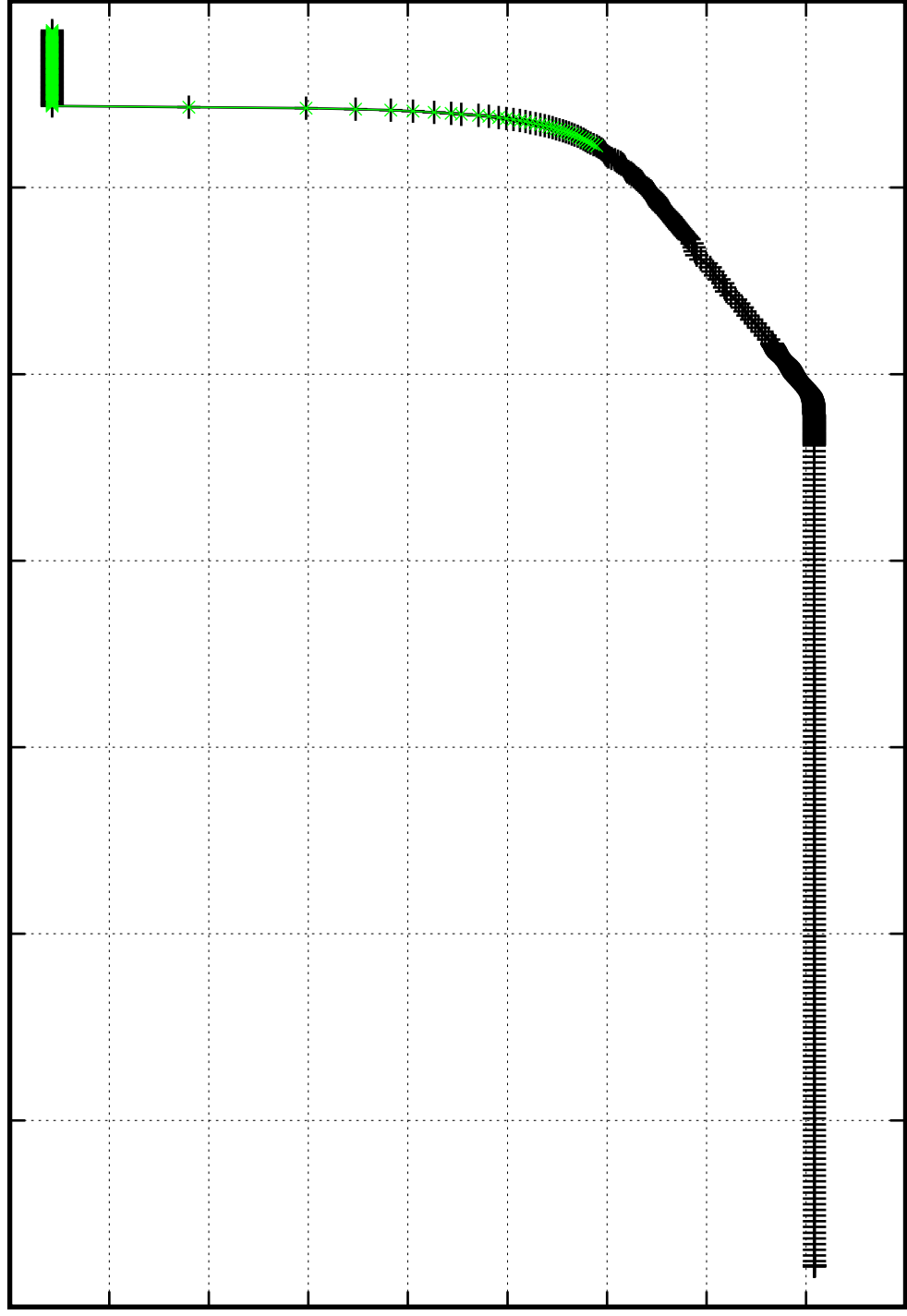
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

$\epsilon_{\text{ps}}(\text{He})$ [—]

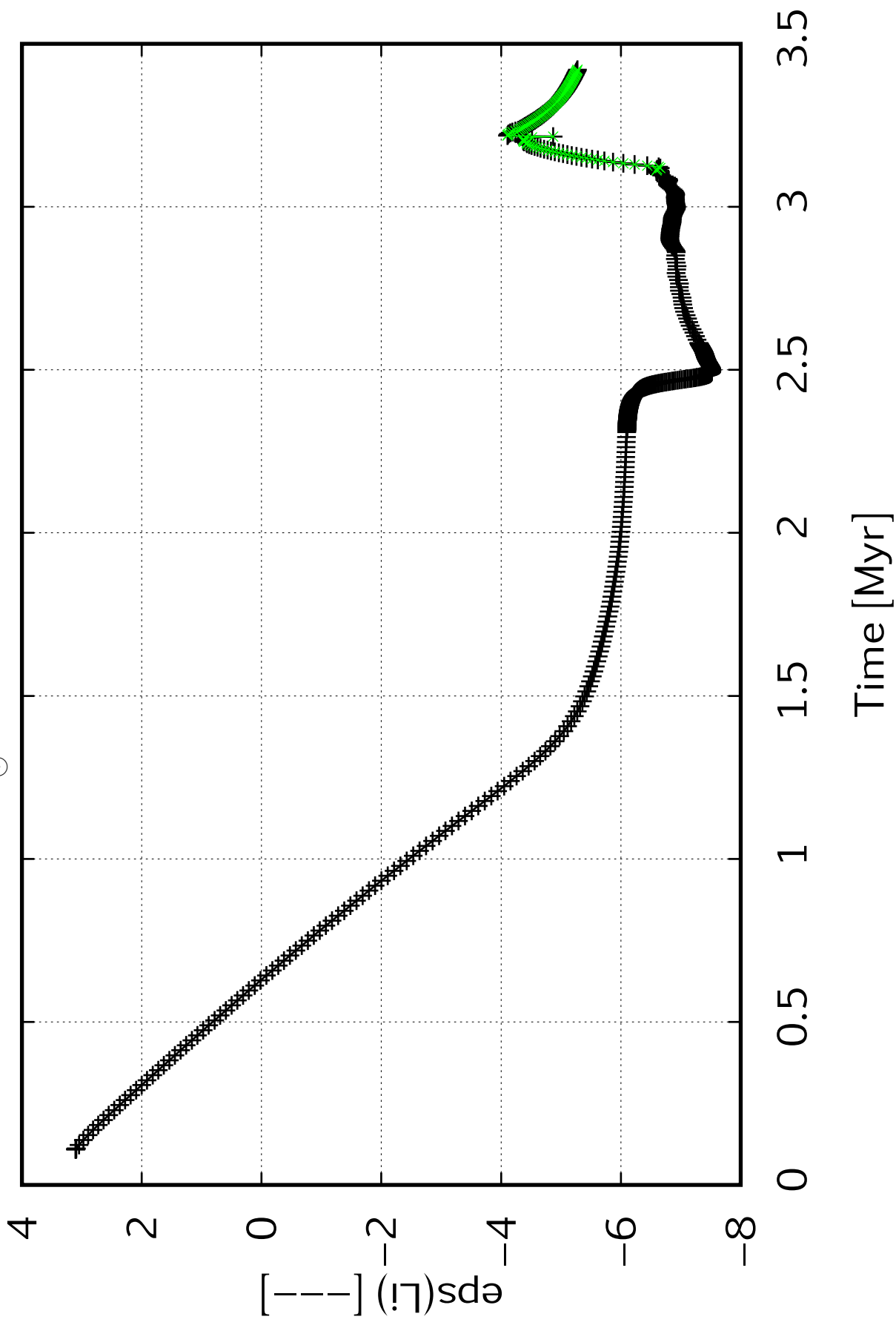
15
14.5
14
13.5
13
12.5
12
11.5
11
10.5

0 0.5 1 1.5 2 2.5 3 3.5

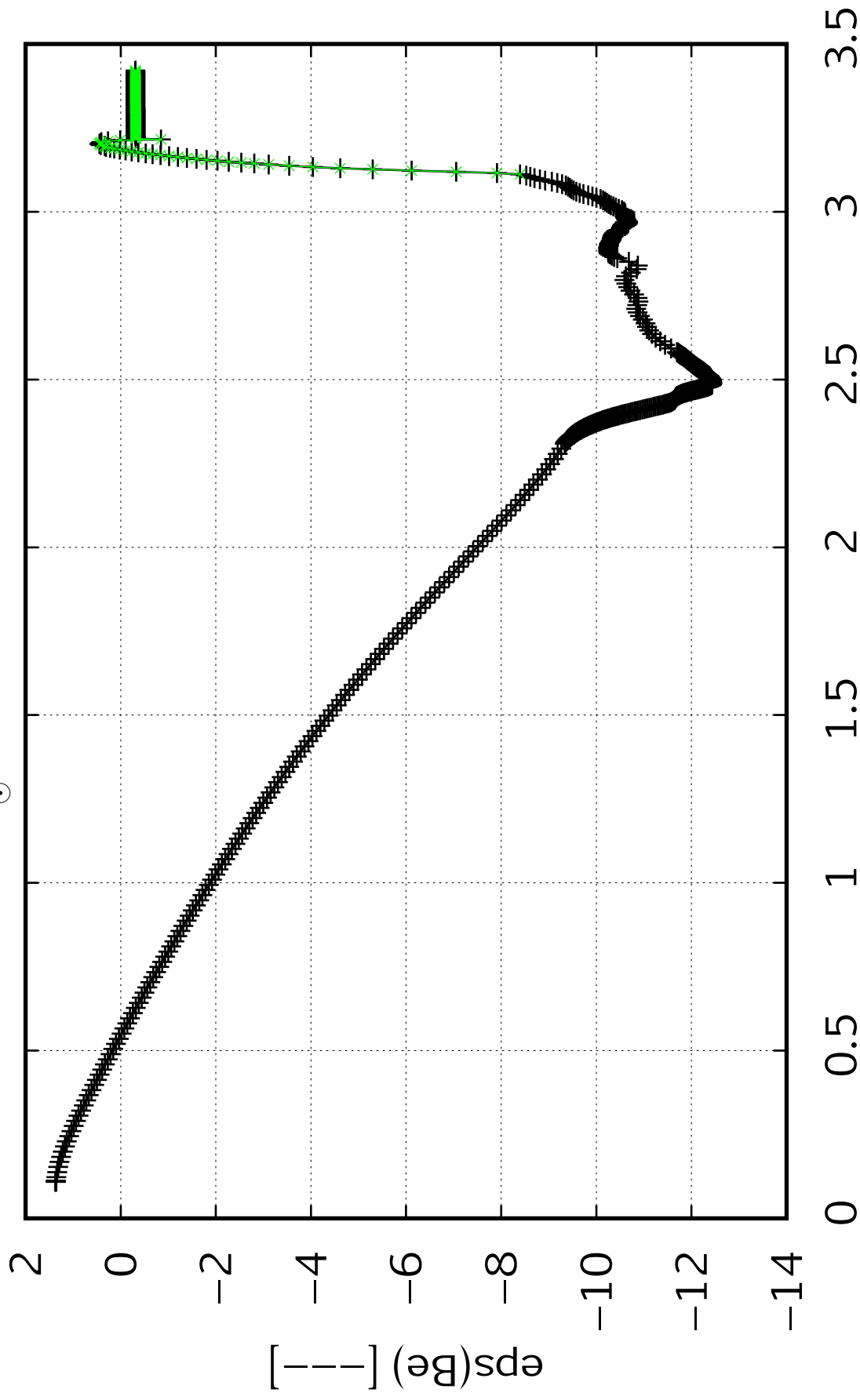
Time [Myr]



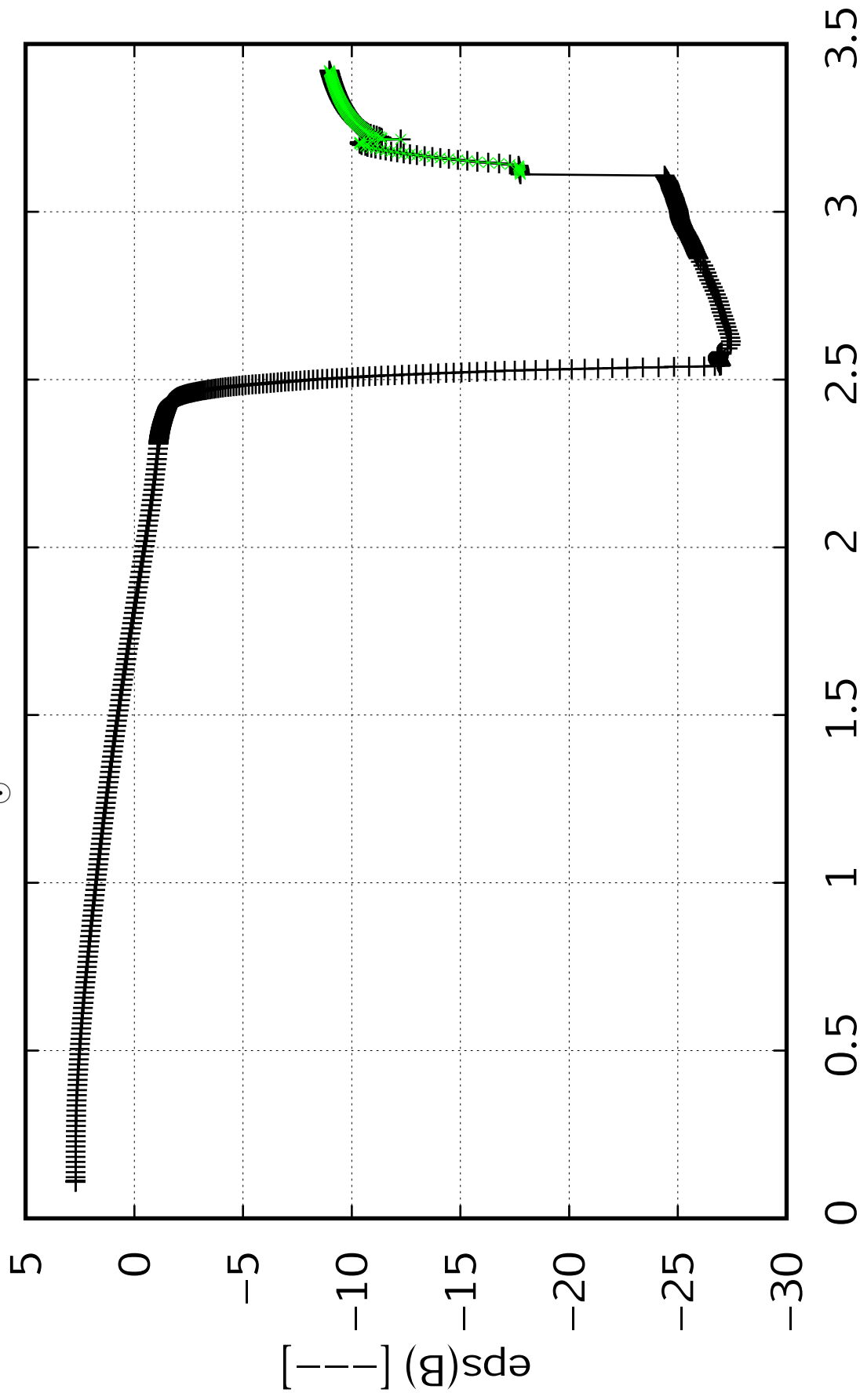
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



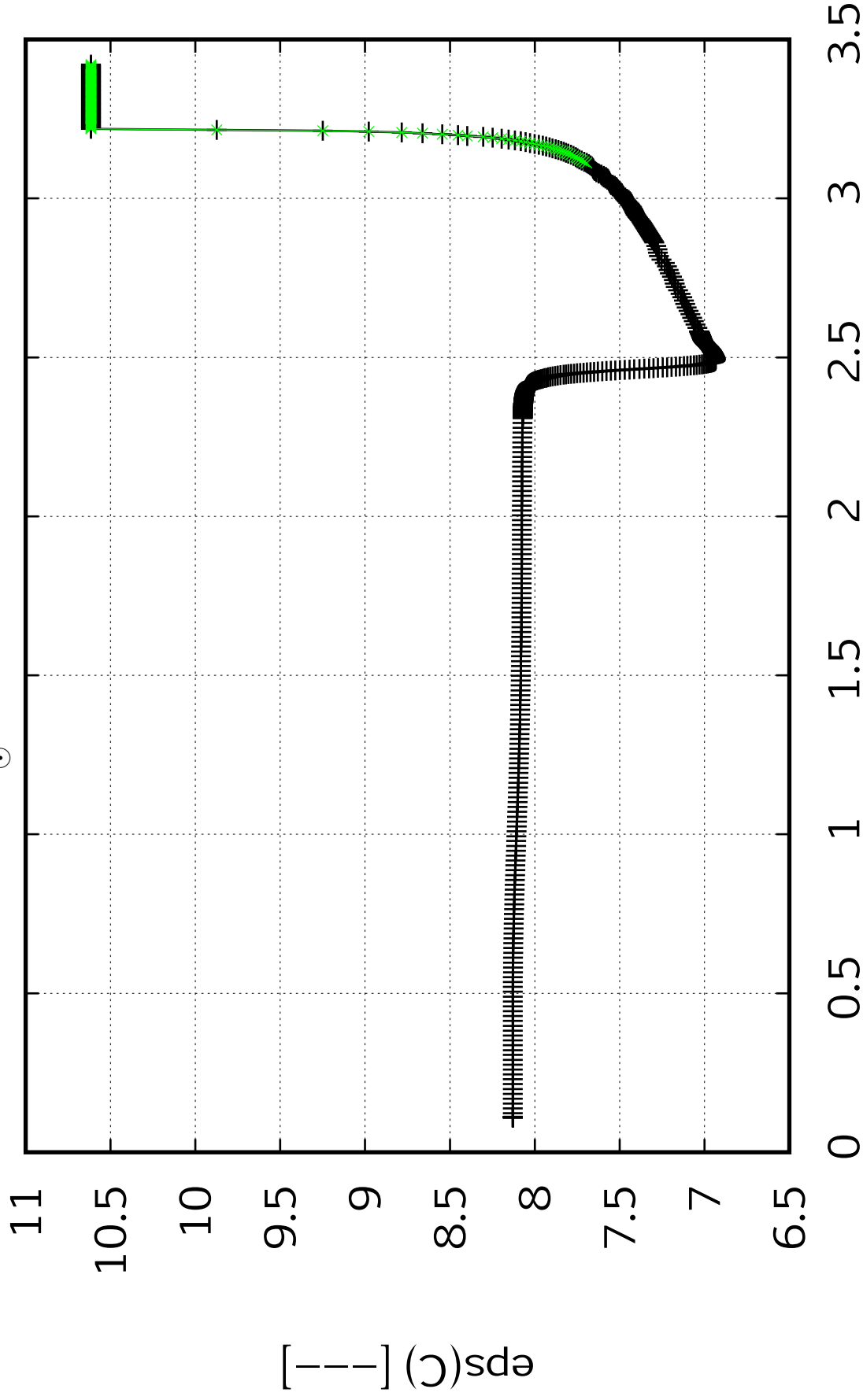
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



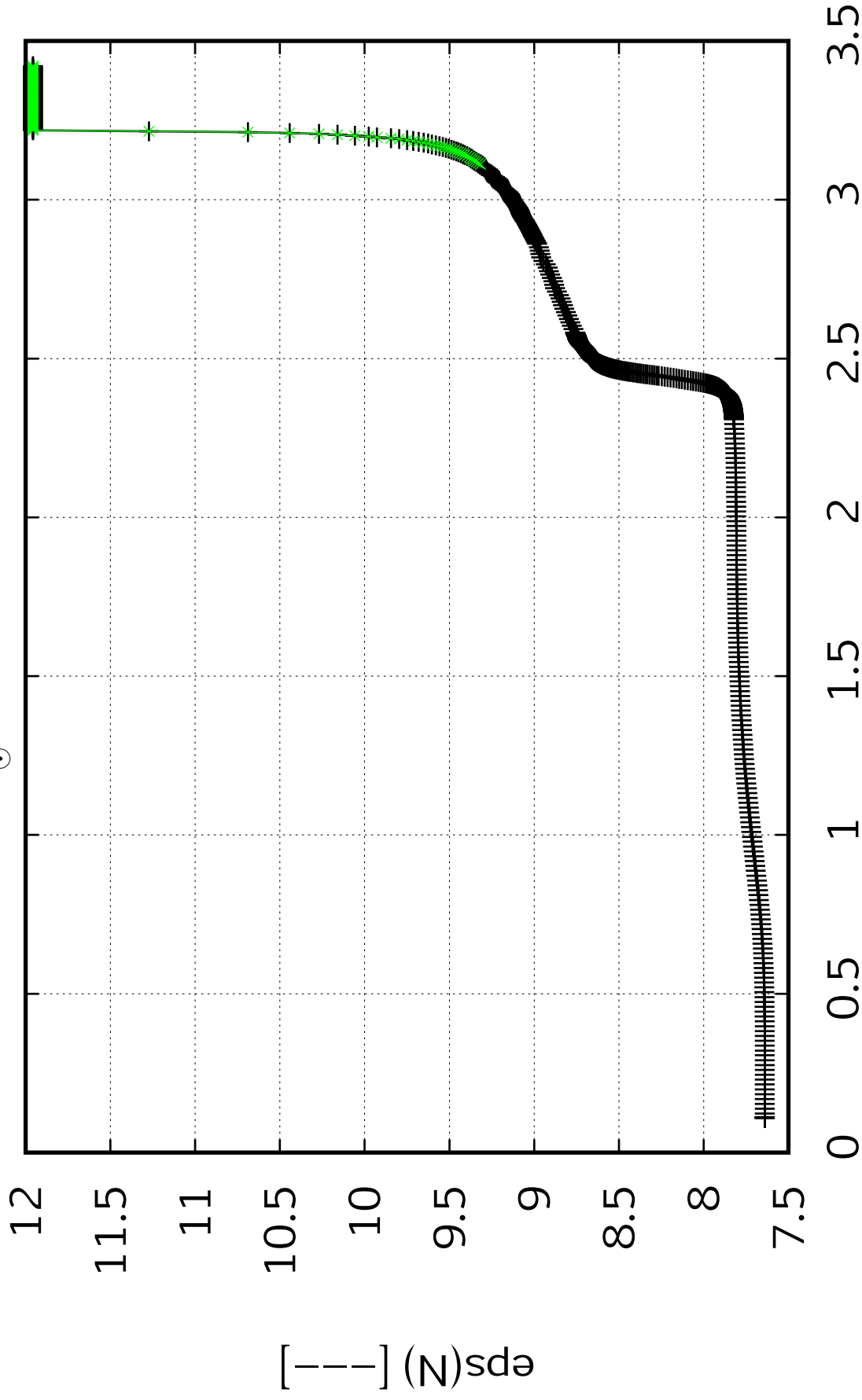
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



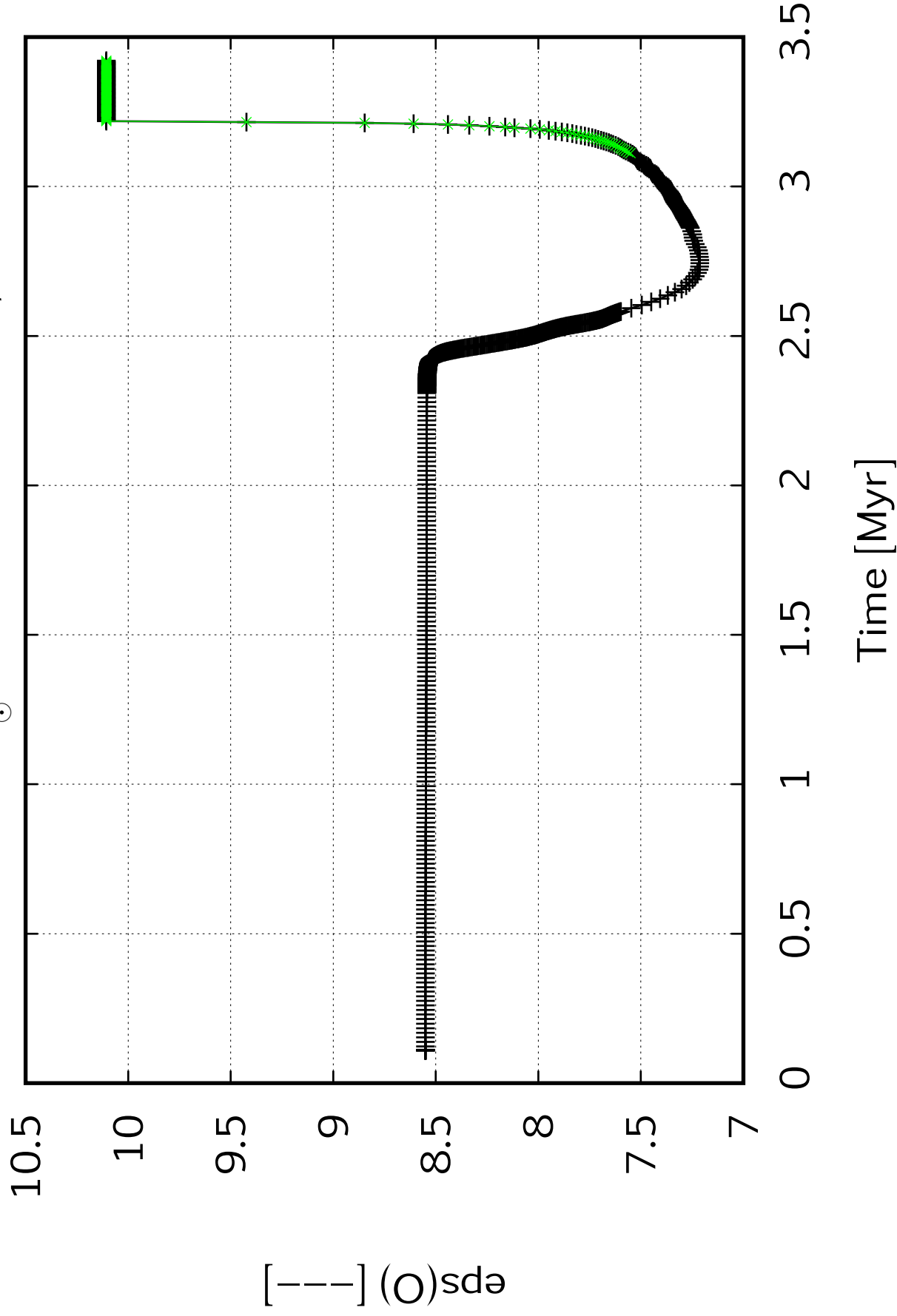
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



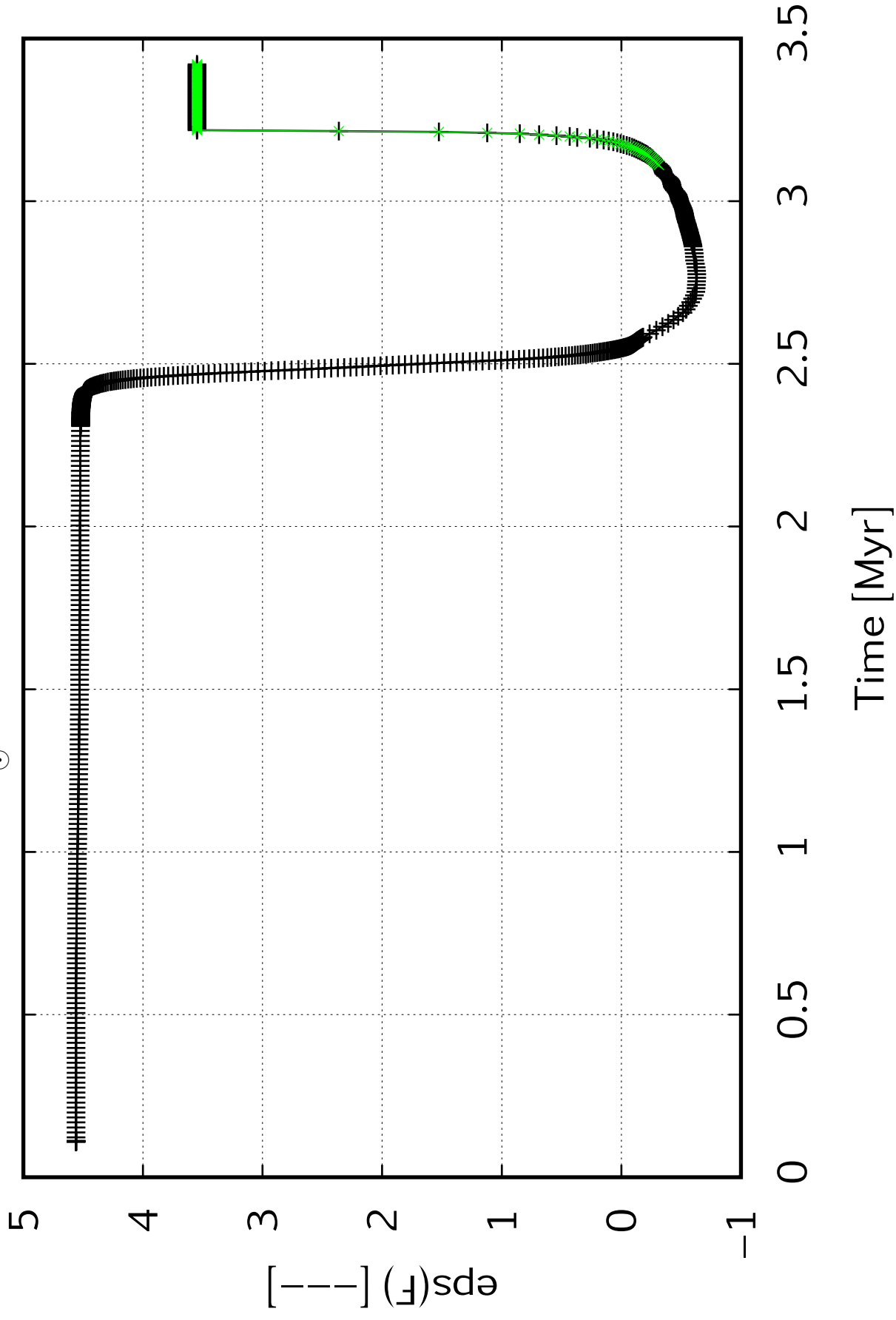
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



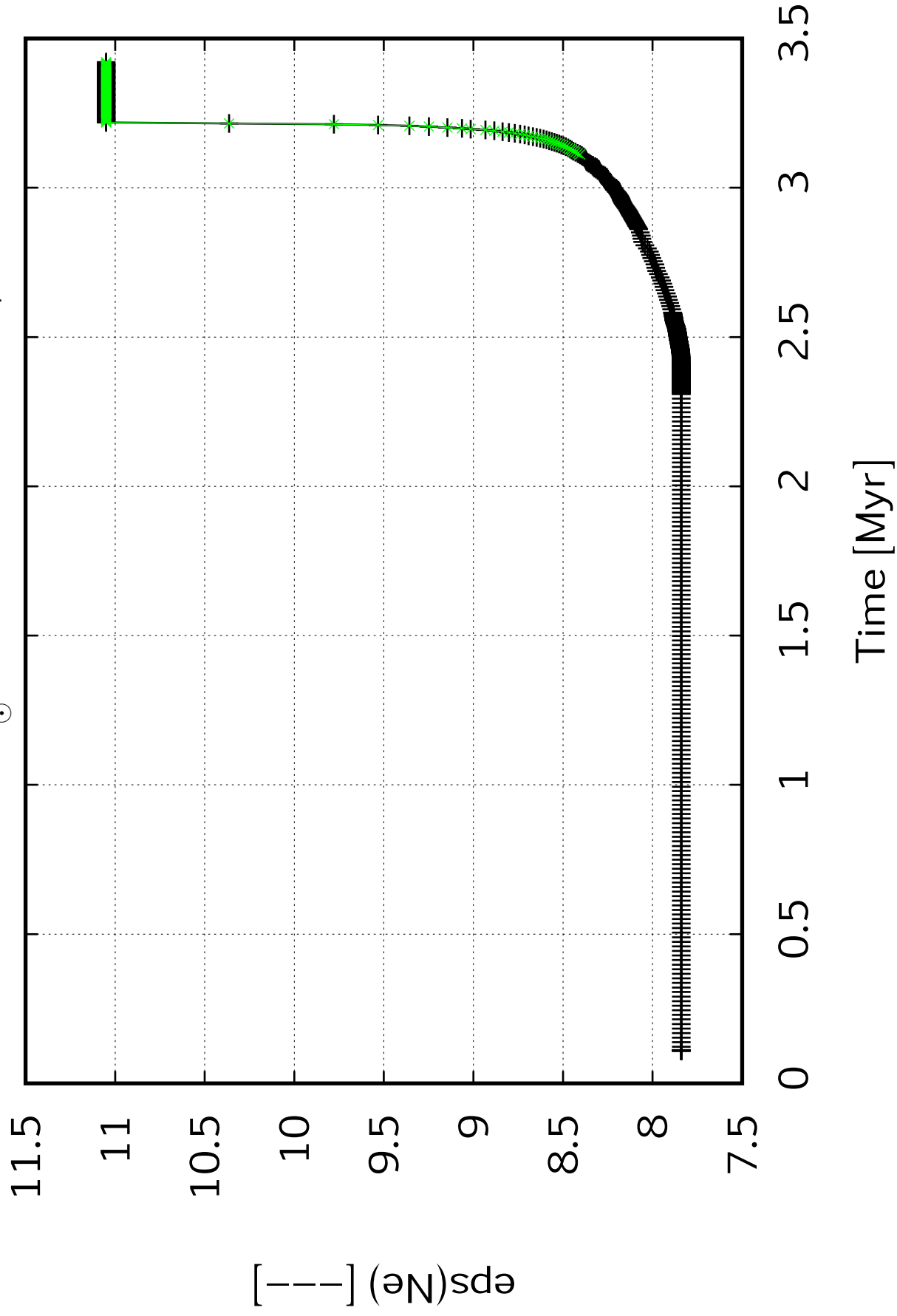
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



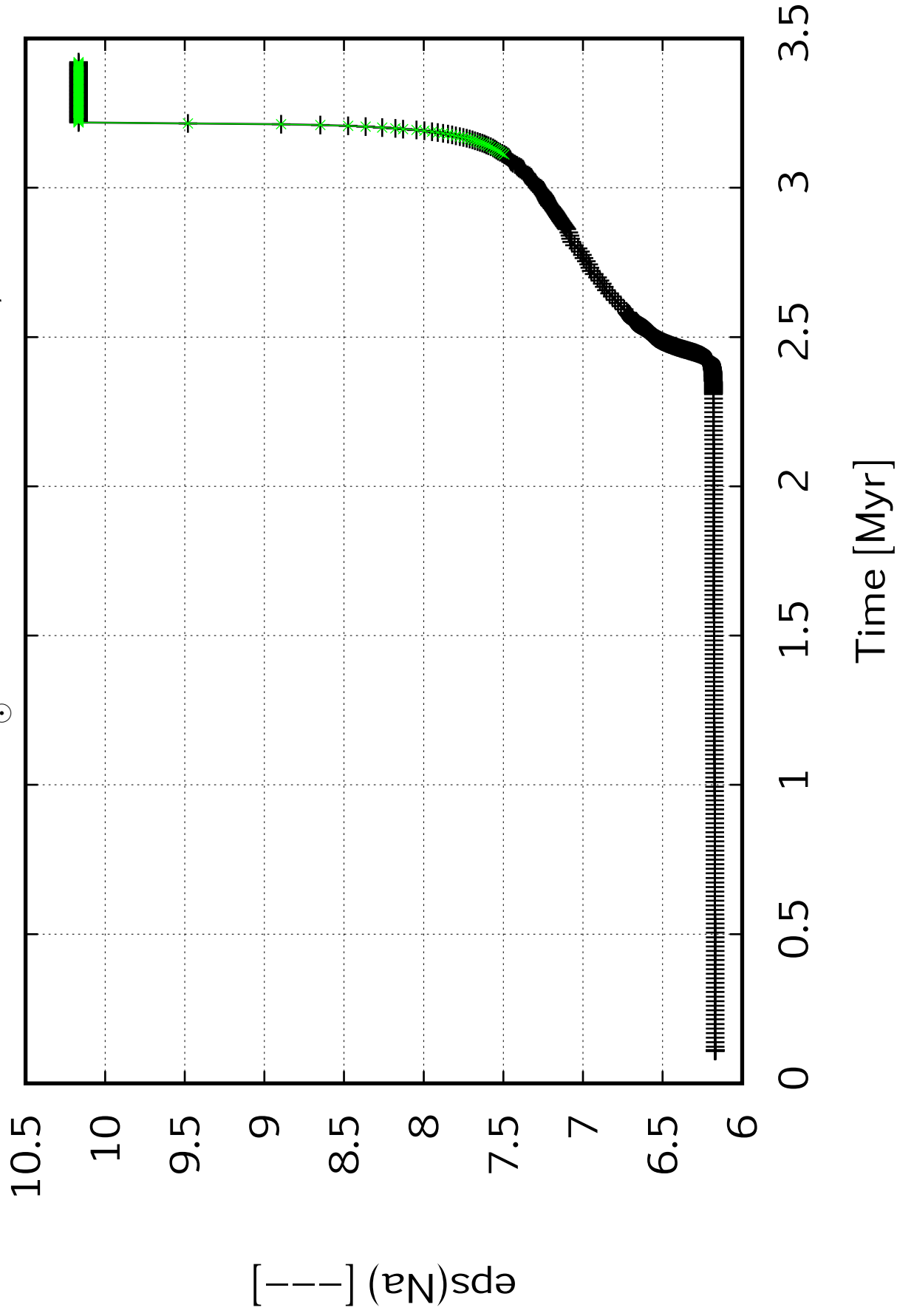
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



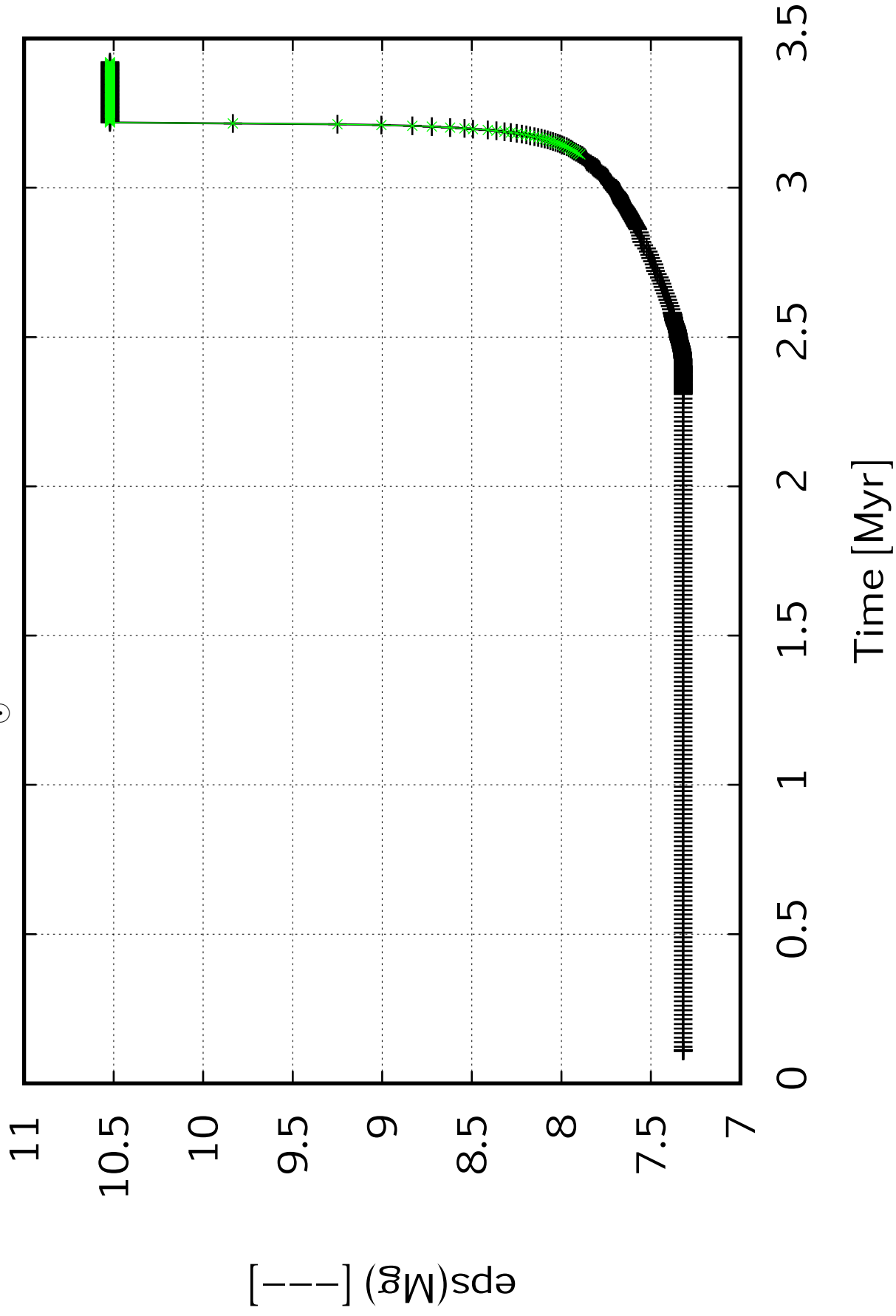
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



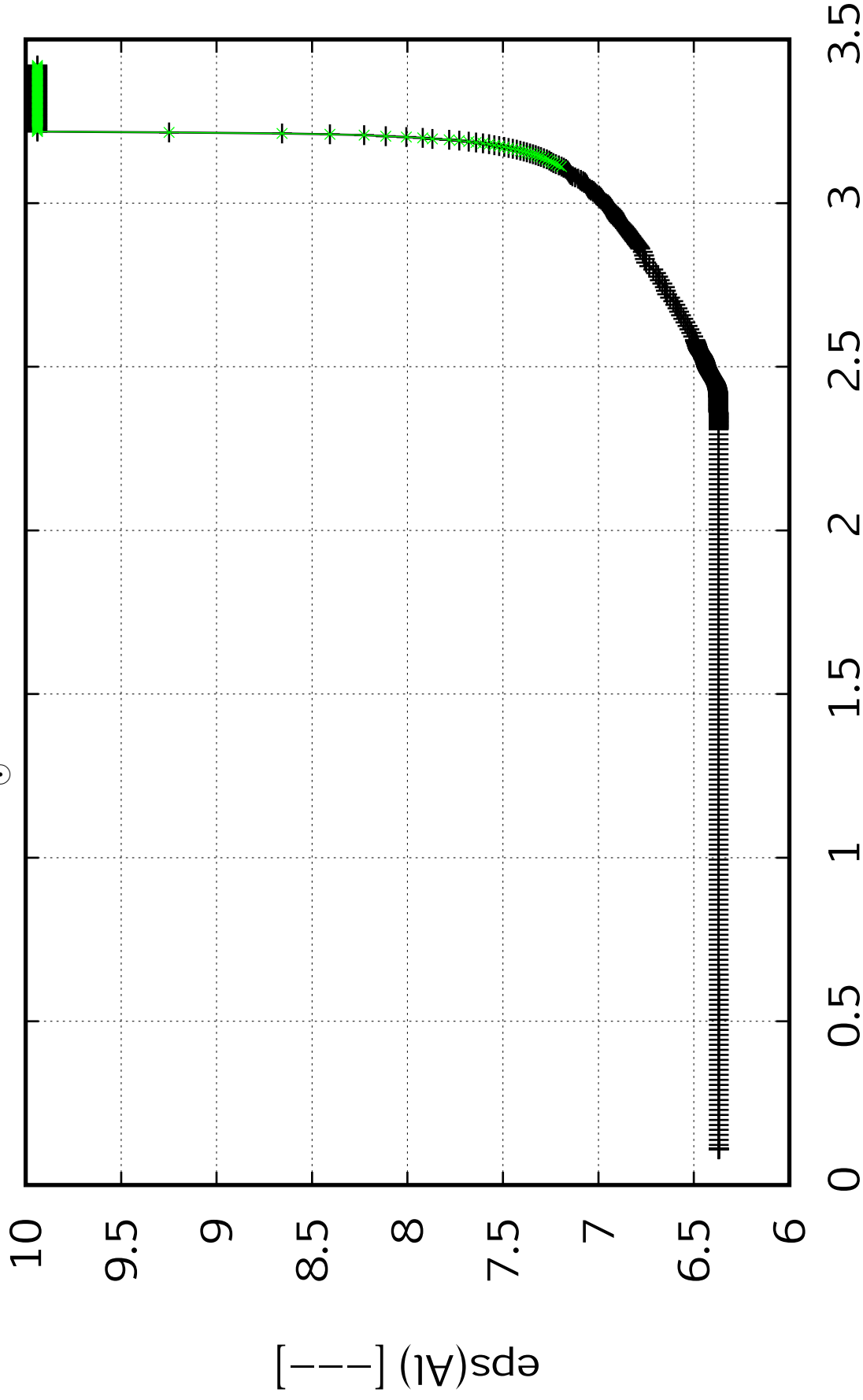
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

22.2

22.15

22.1

22.05

22

21.95

21.9

21.85

21.8

21.75

He-core-size [M_{sun}]

0

0.5

1

1.5

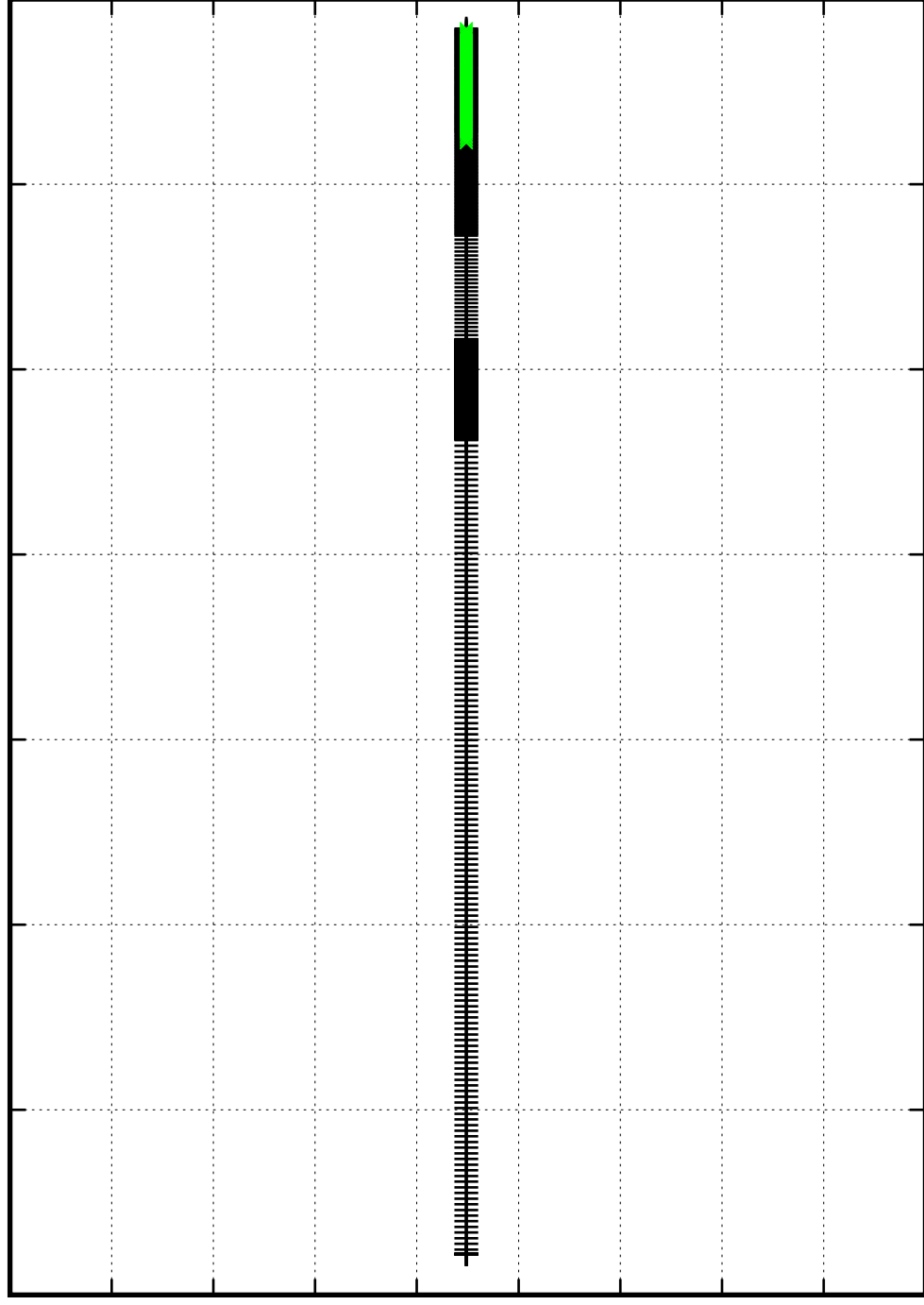
2

2.5

3

3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

17.8

17.75

17.7

17.65

17.6

17.55

17.5

17.45

17.4

CO-core-size [M_{sun}]

0

0.5

1

1.5

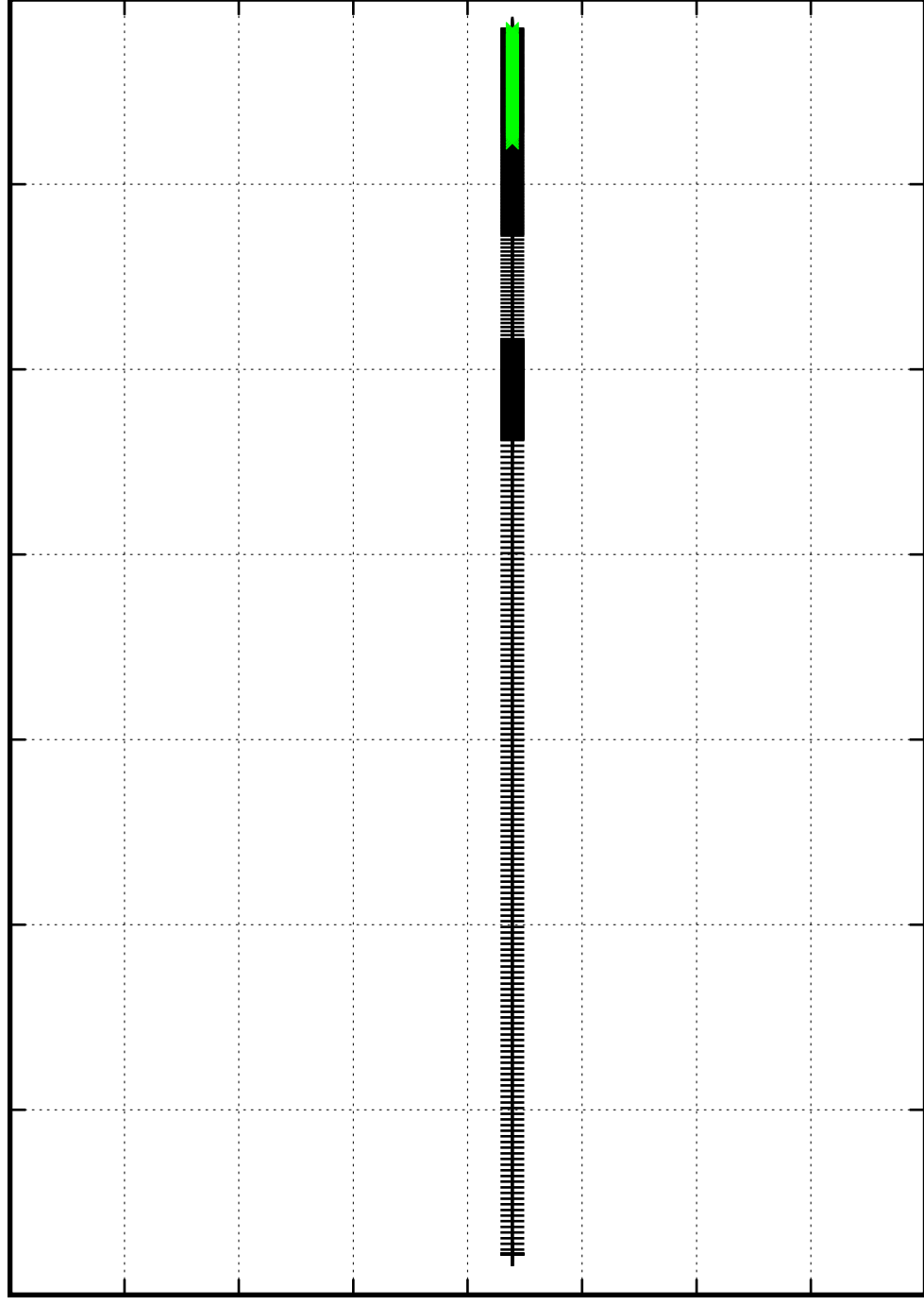
2

2.5

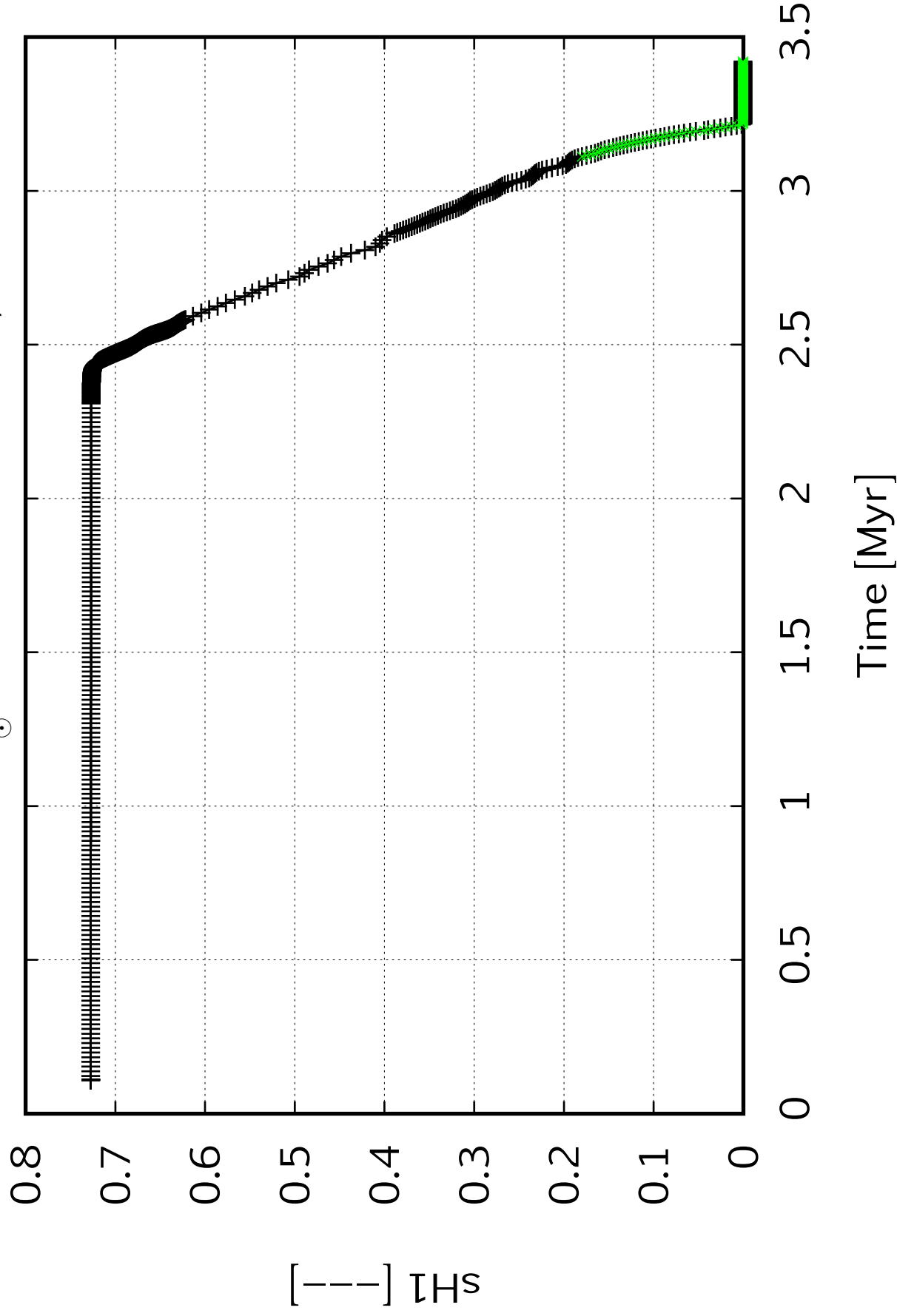
3

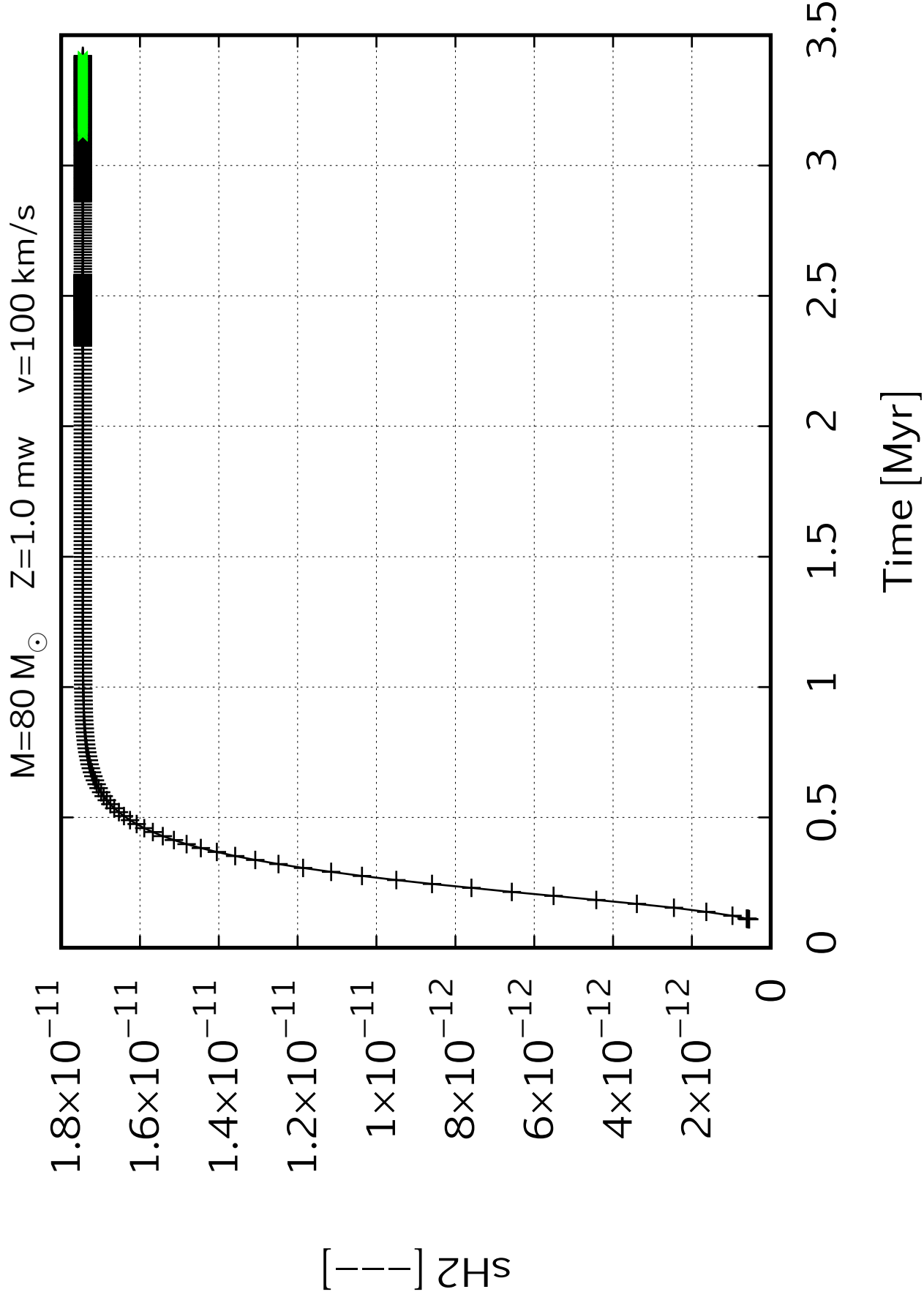
3.5

Time [Myr]

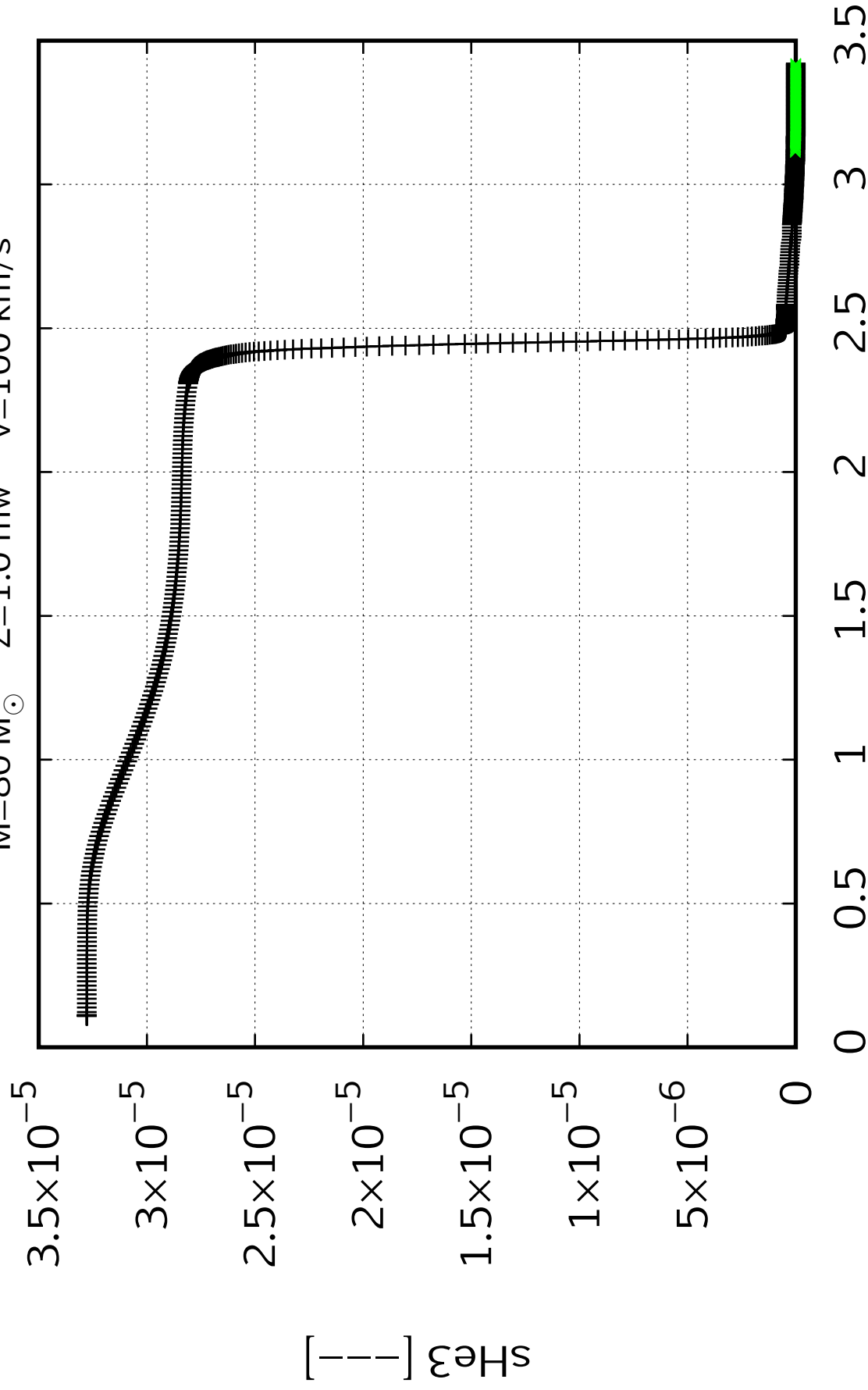


$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

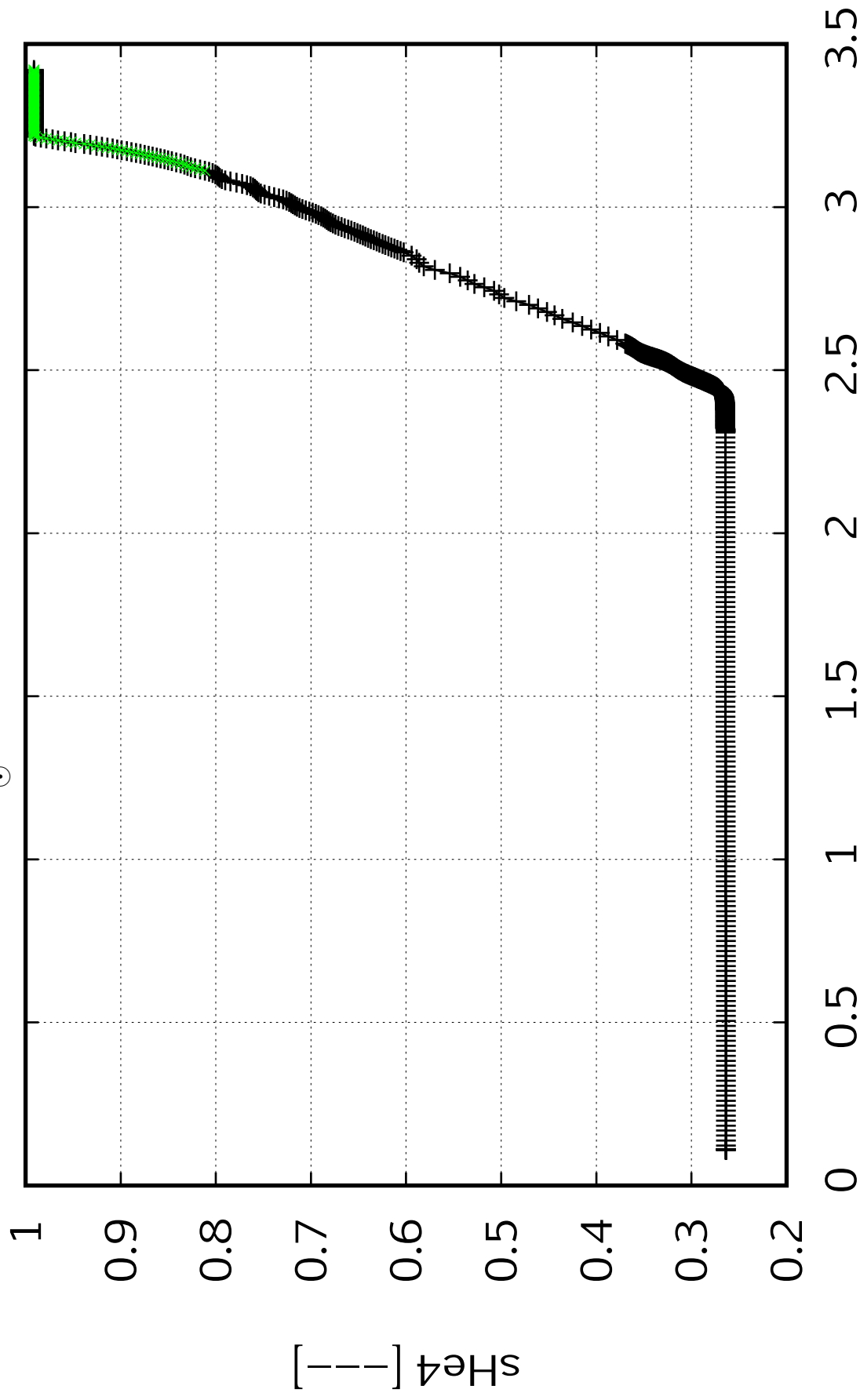




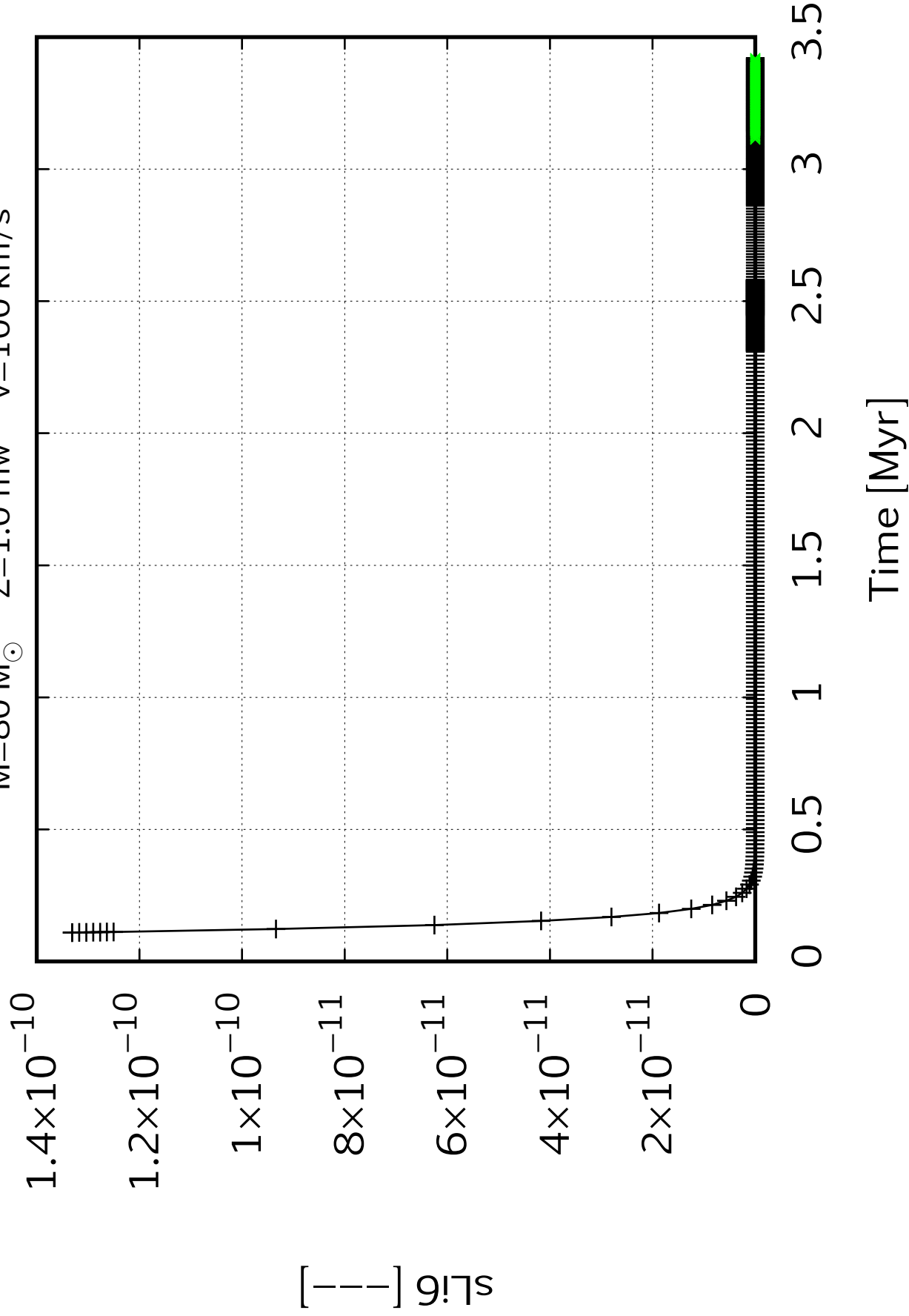
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



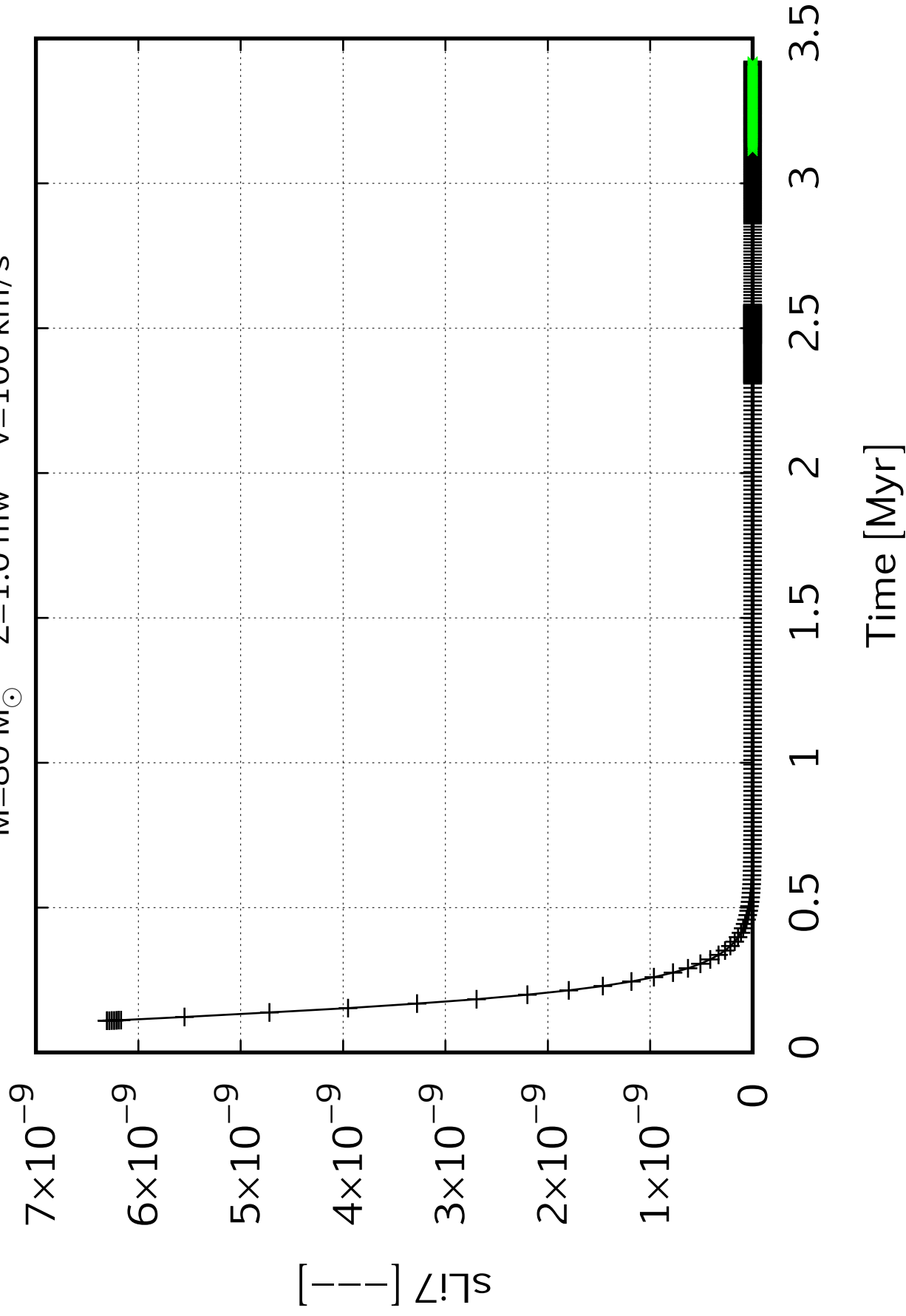
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

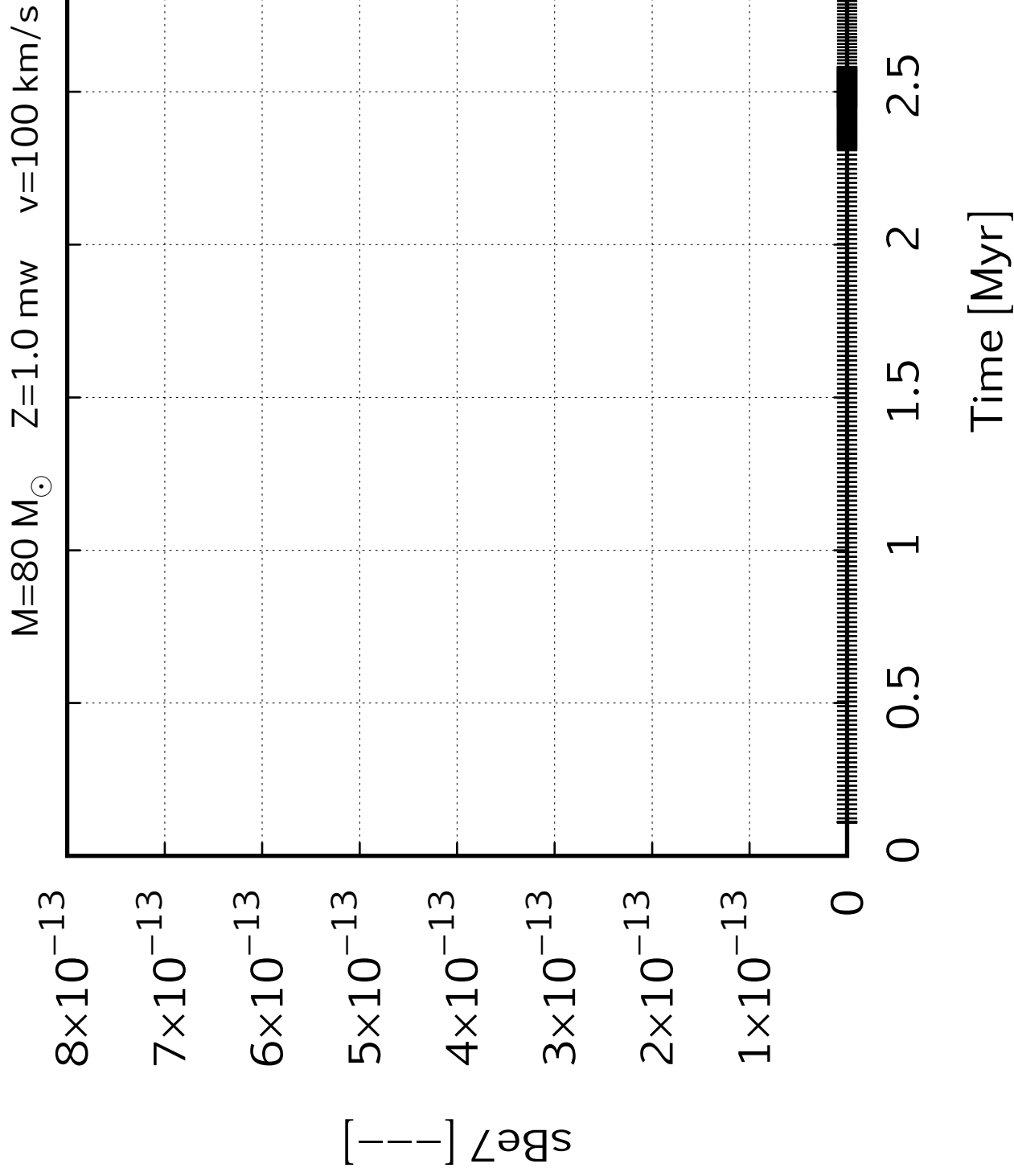


$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

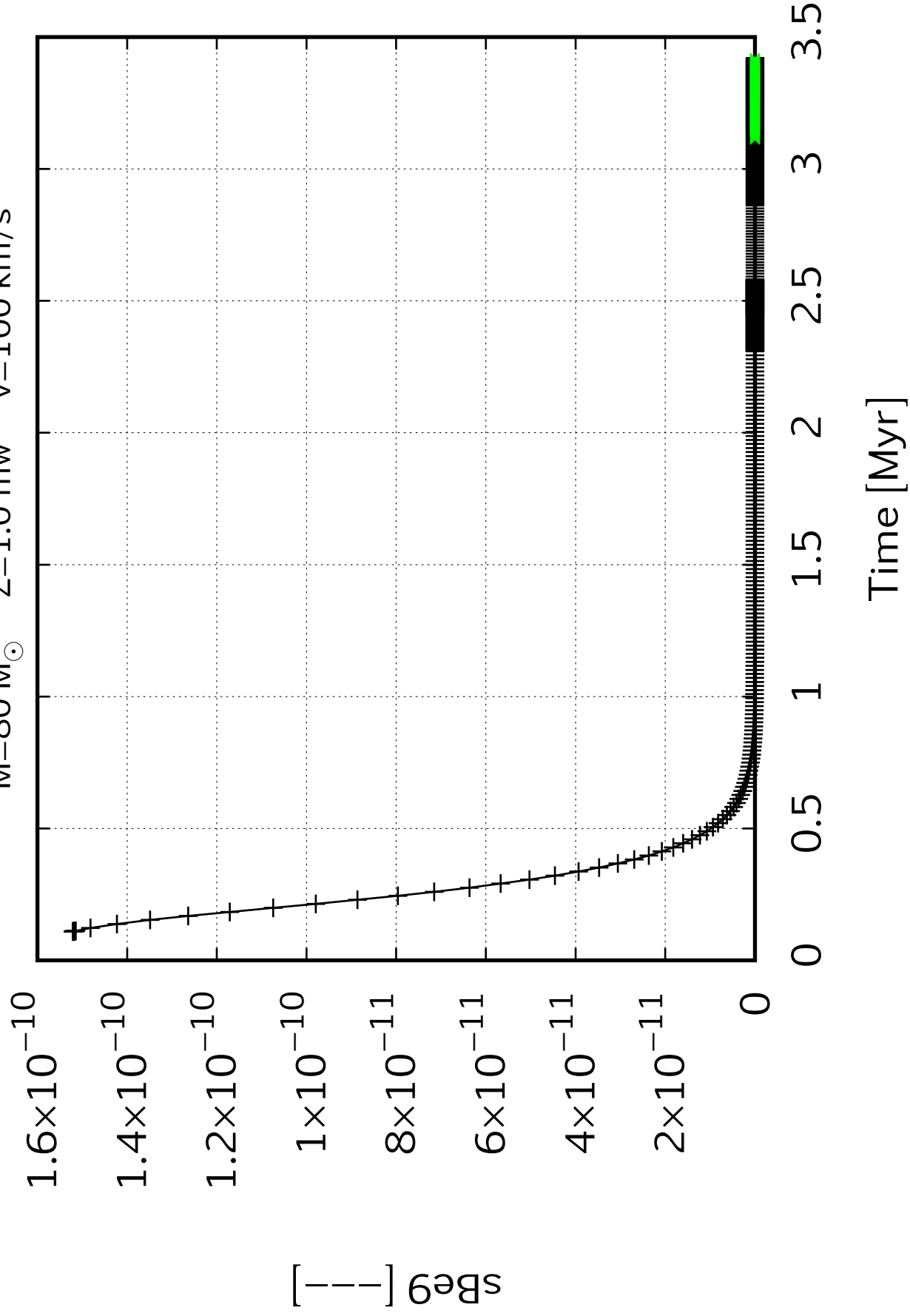


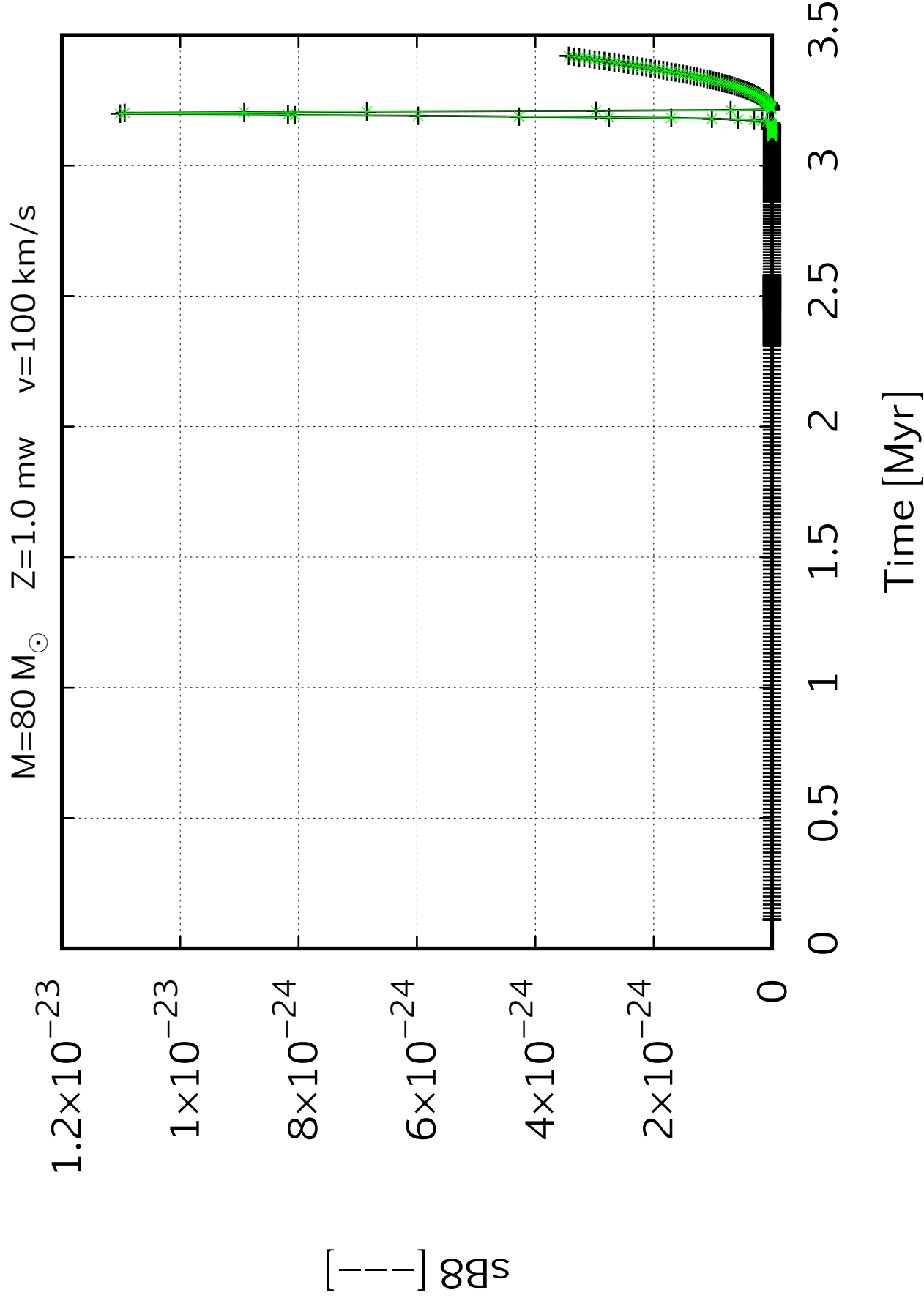
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

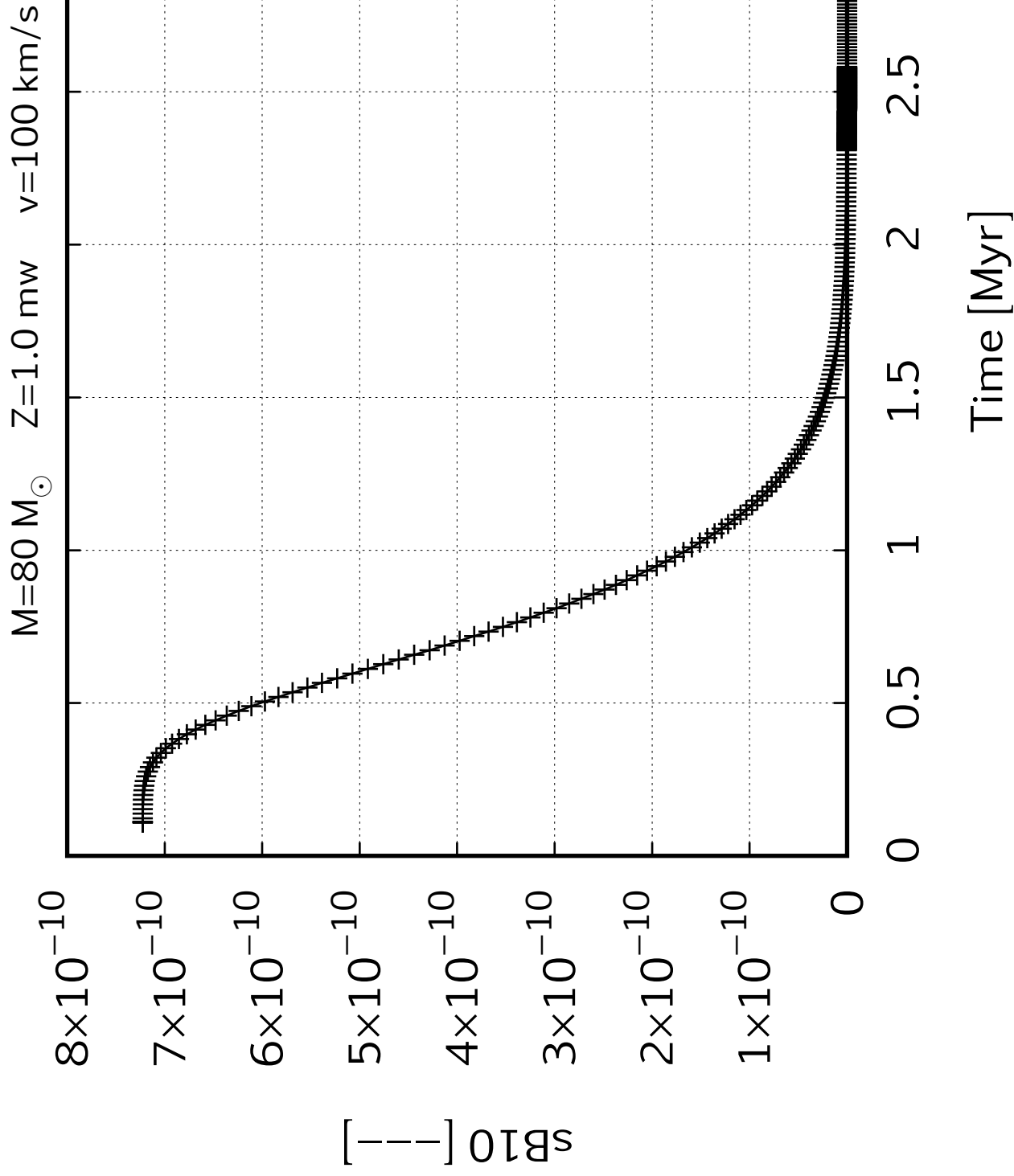




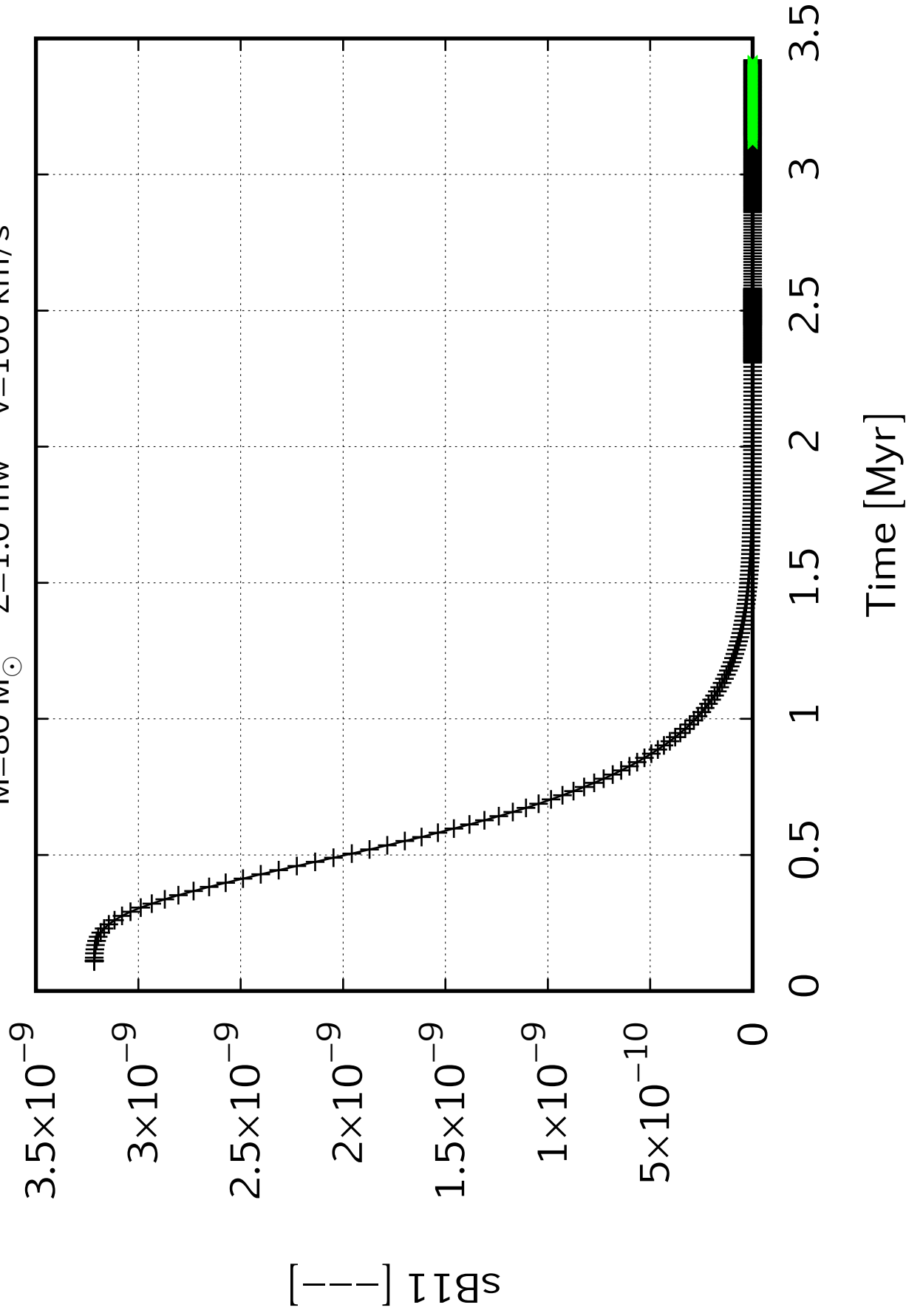
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



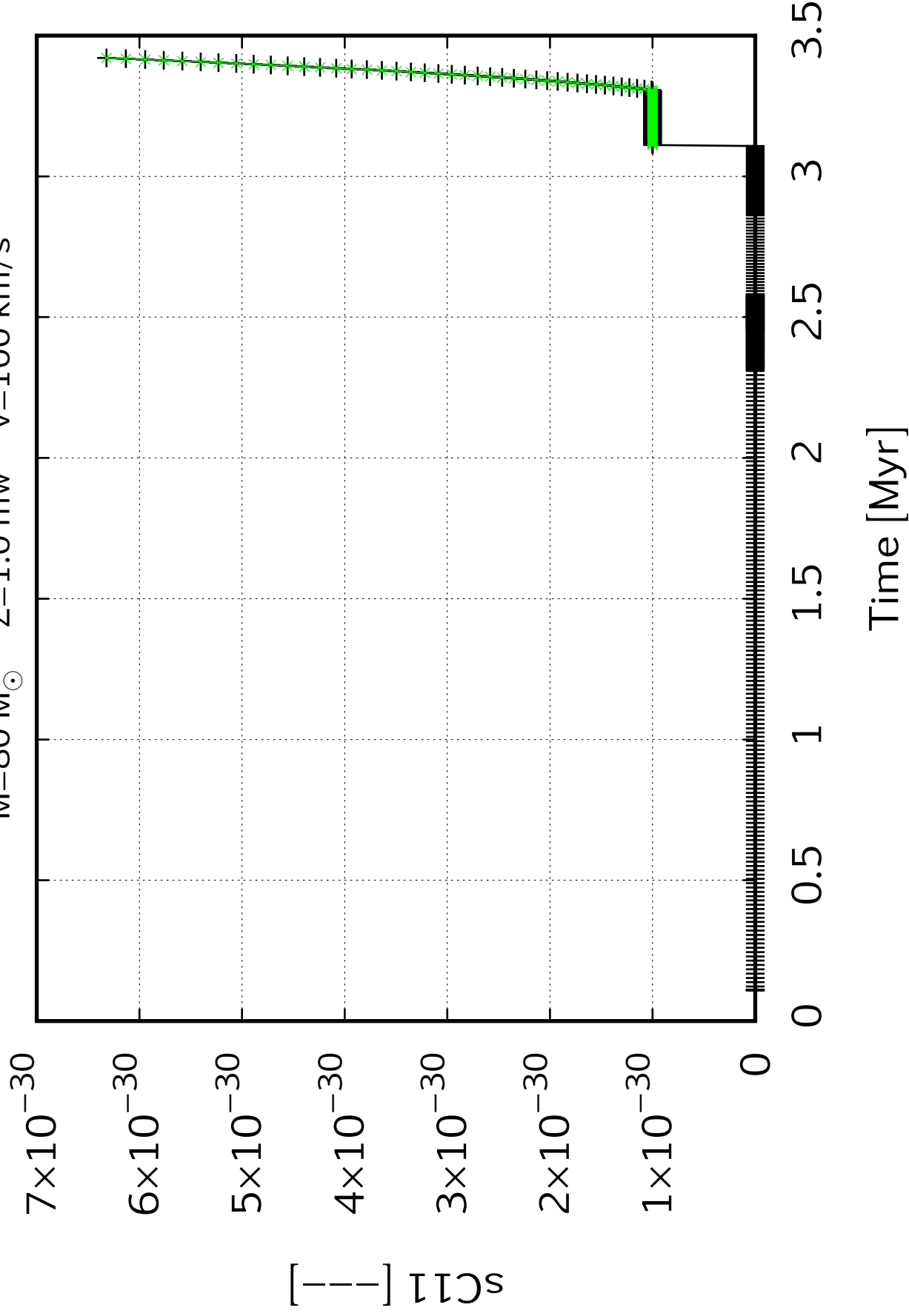




$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$



$M=80\ M_{\odot}$ $Z=1.0\ \text{mw}$ $v=100\ \text{km/s}$

0.0012

0.001

0.0008

0.0006

0.0004

0.0002

0

$s_{\text{C12}} [--]$

0

0.5

1

1.5

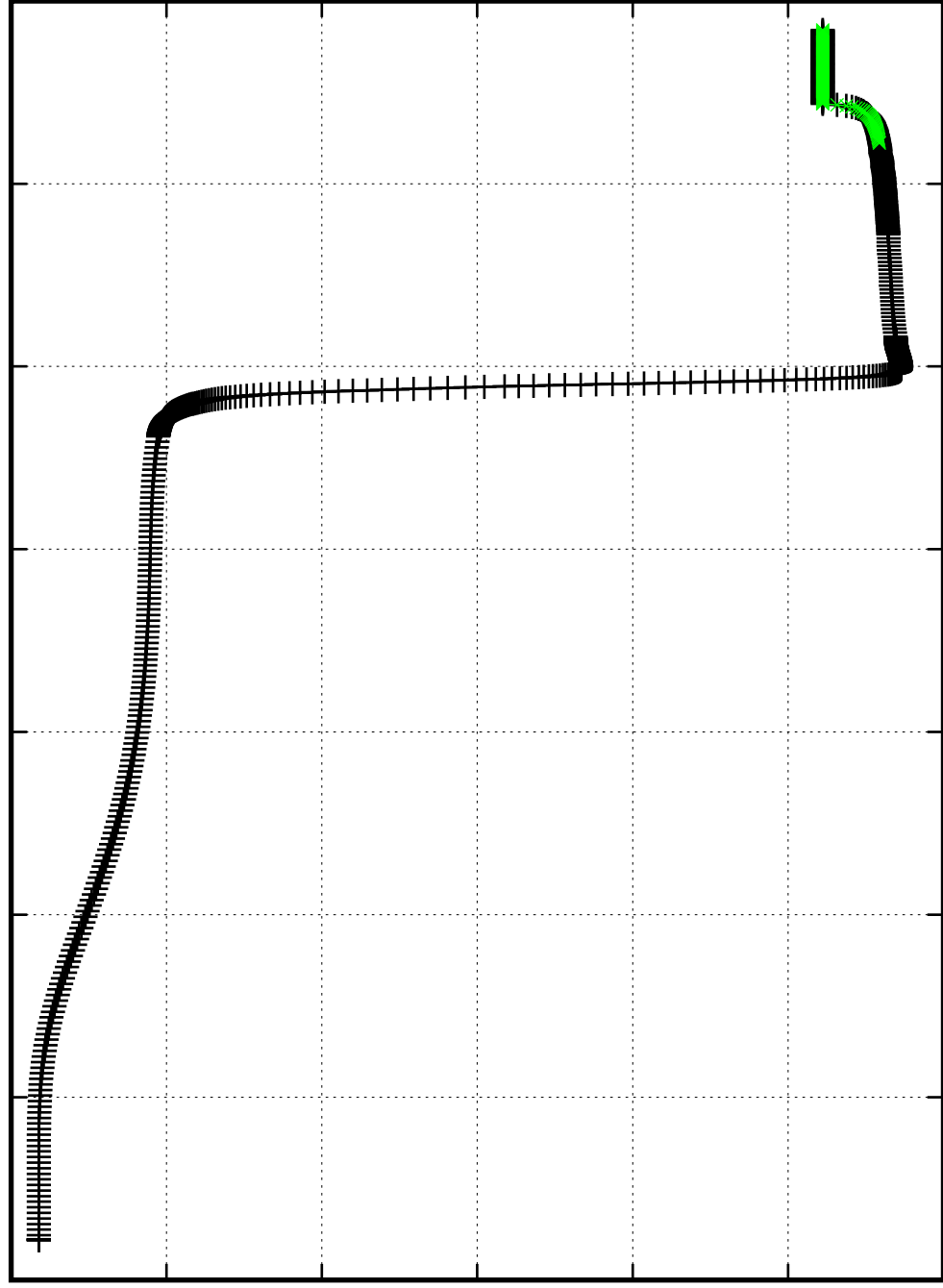
2

2.5

3

3.5

Time [Myr]

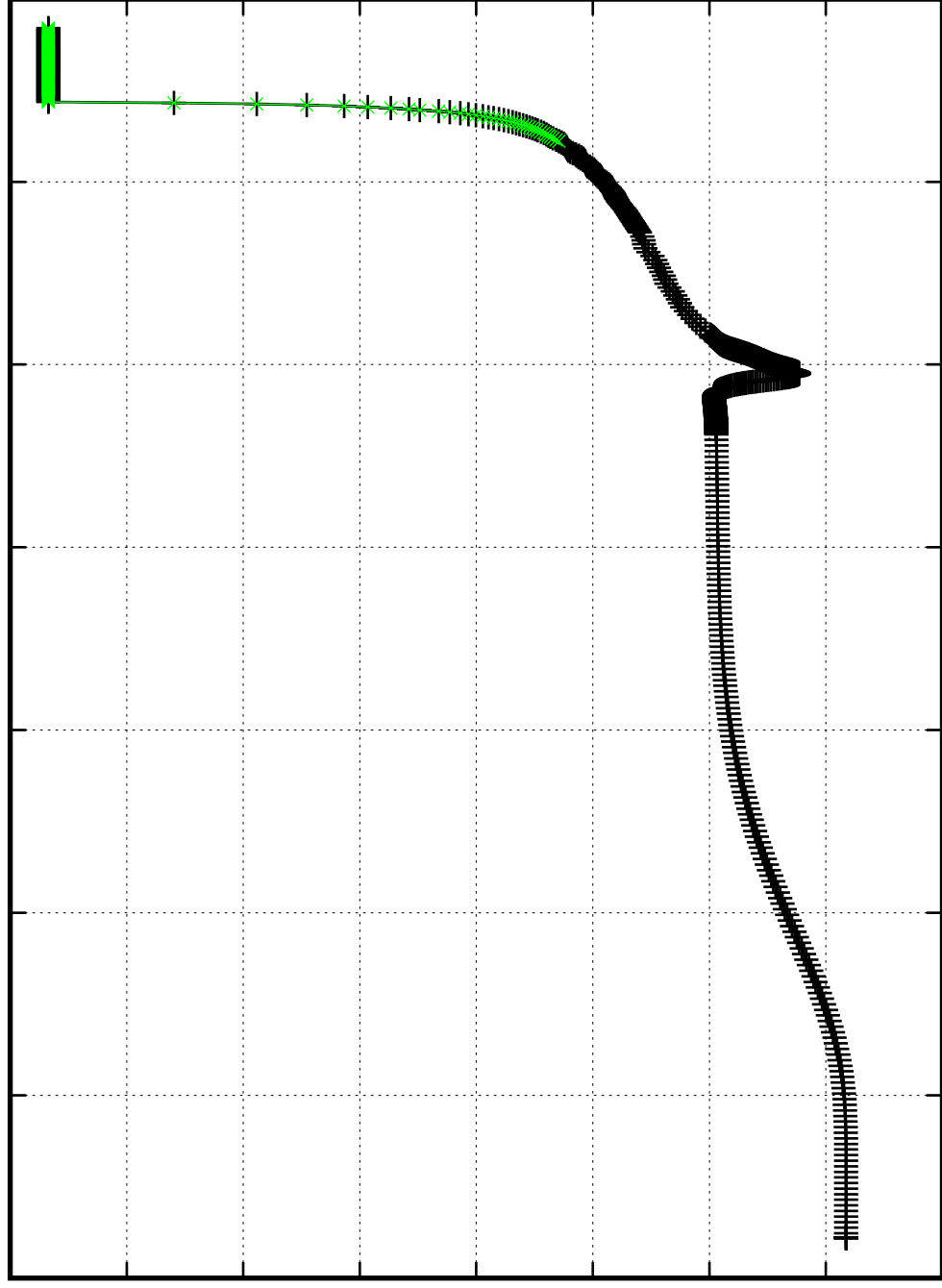


$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

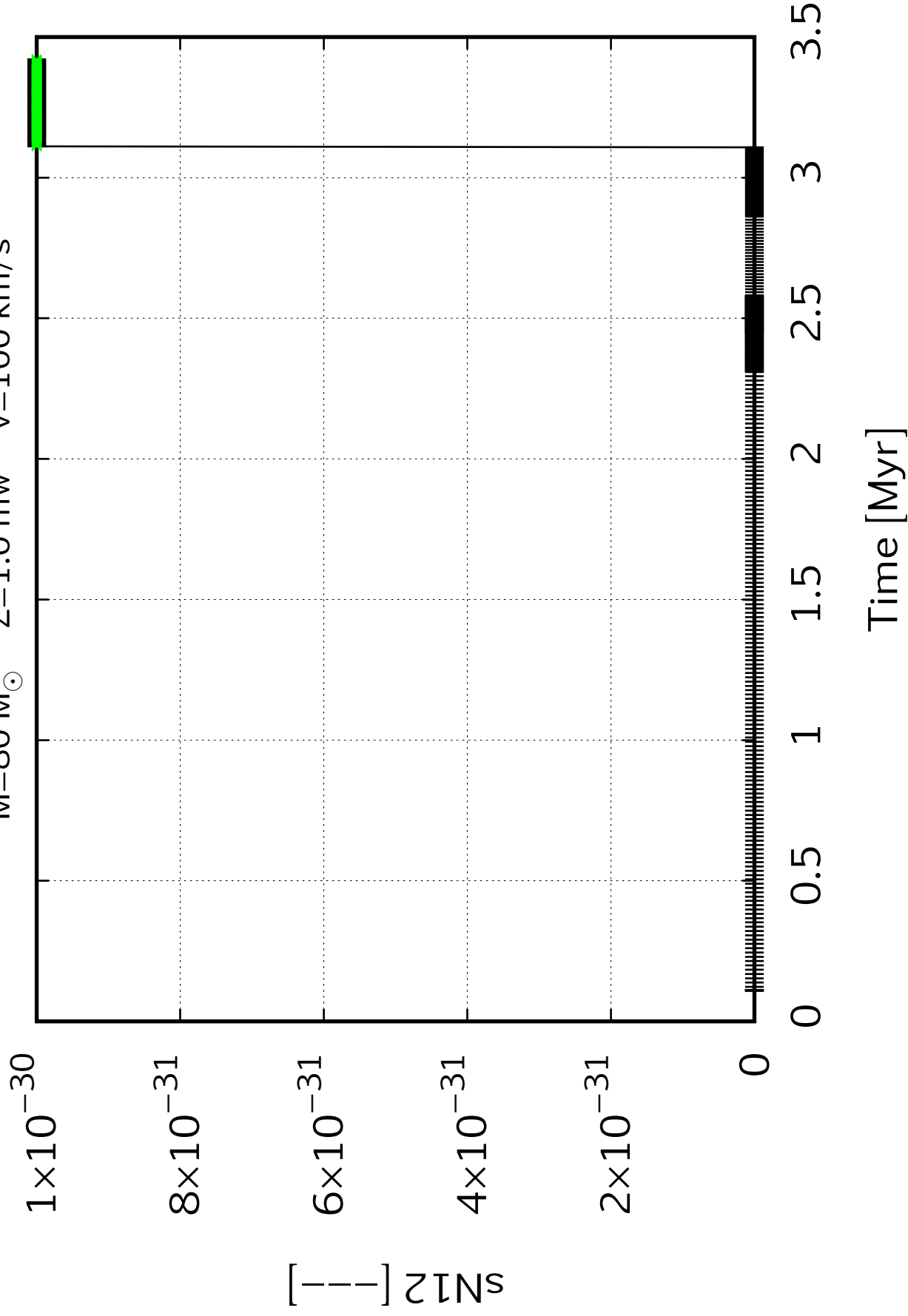
sC13 [—] —

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$



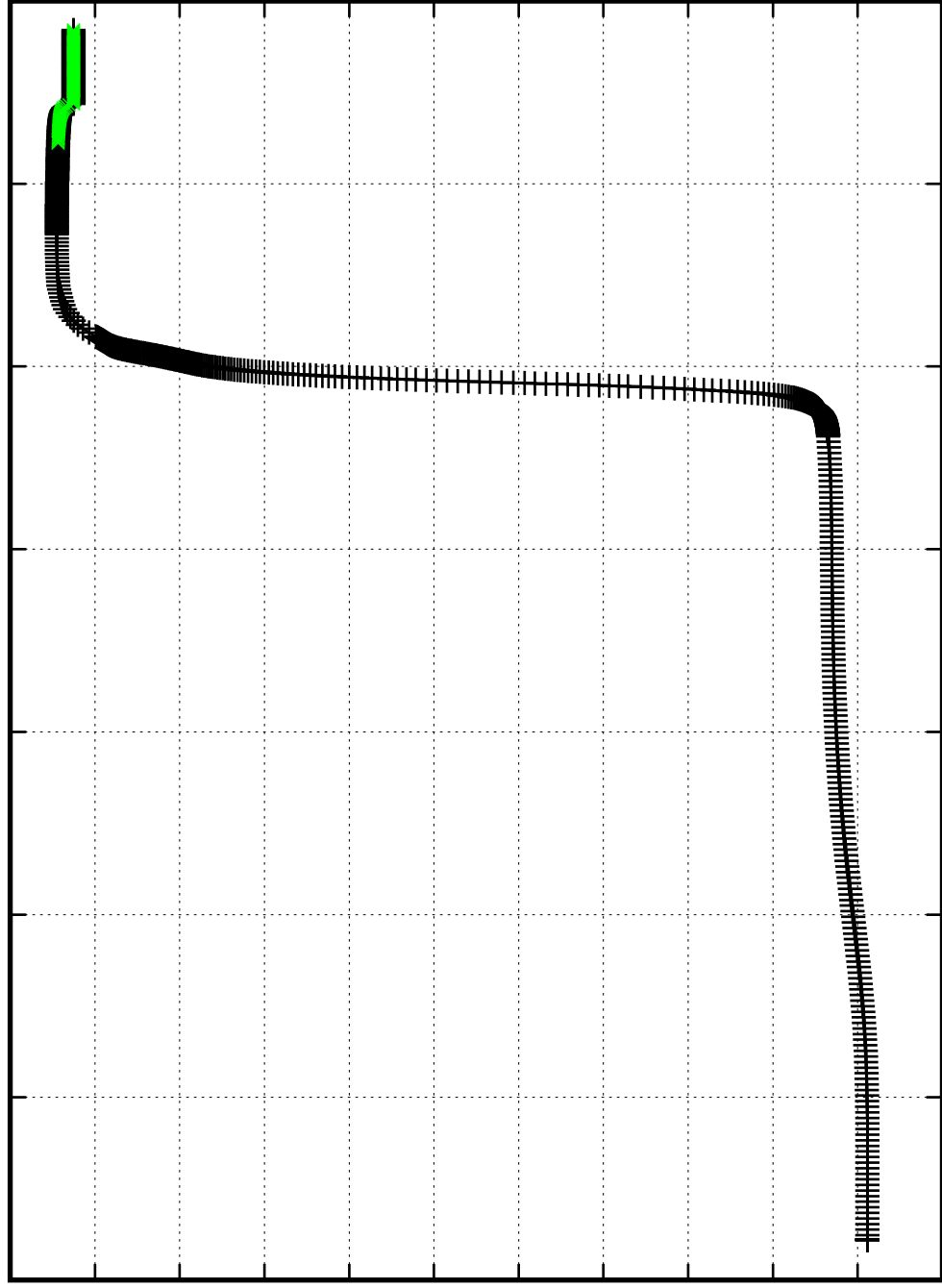
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

$sN_{14} []$

0.0055
0.005
0.0045
0.004
0.0035
0.003
0.0025
0.002
0.0015
0.001
0.0005
0

0 0.5 1 1.5 2 2.5 3 3.5

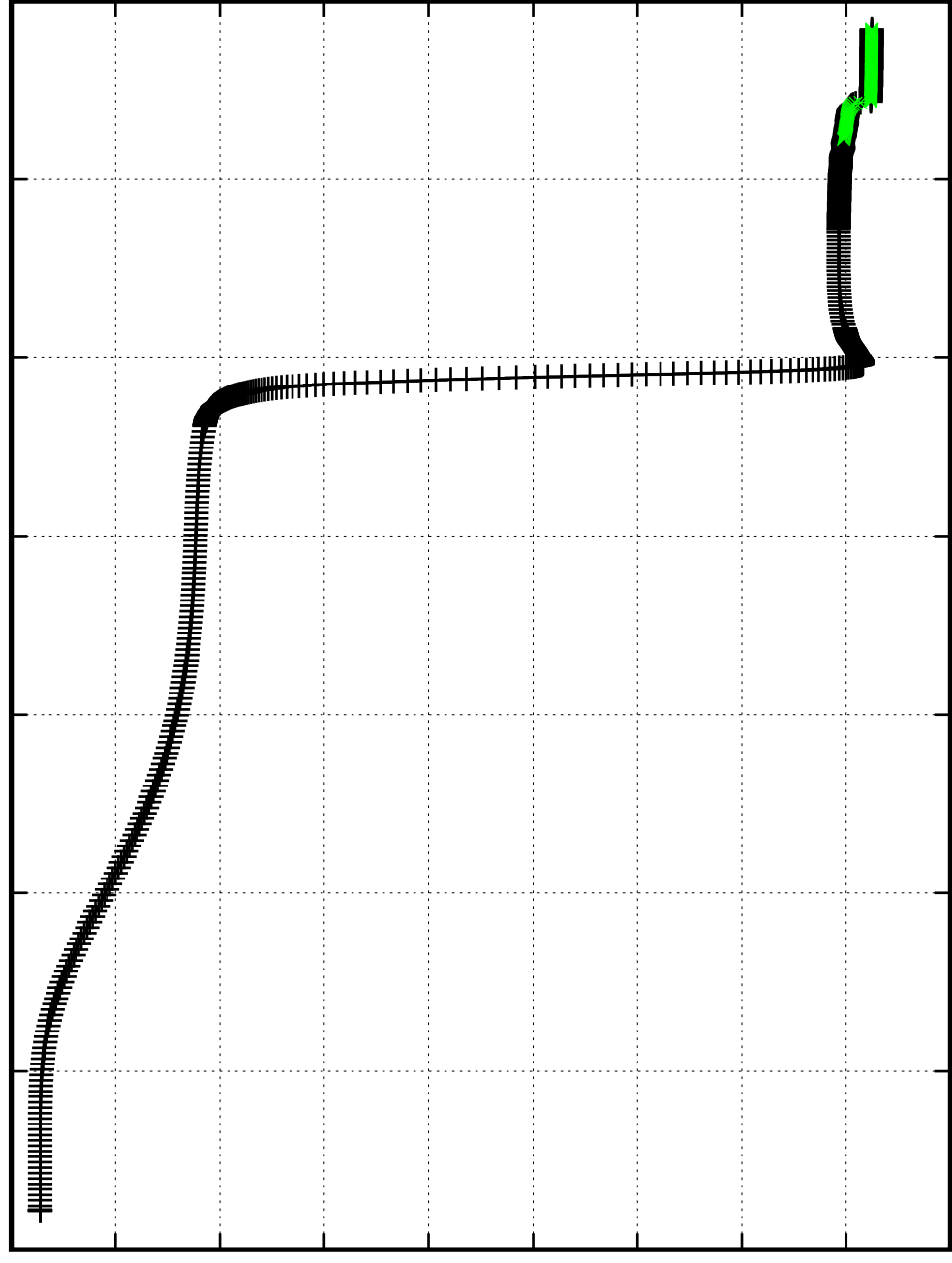
Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

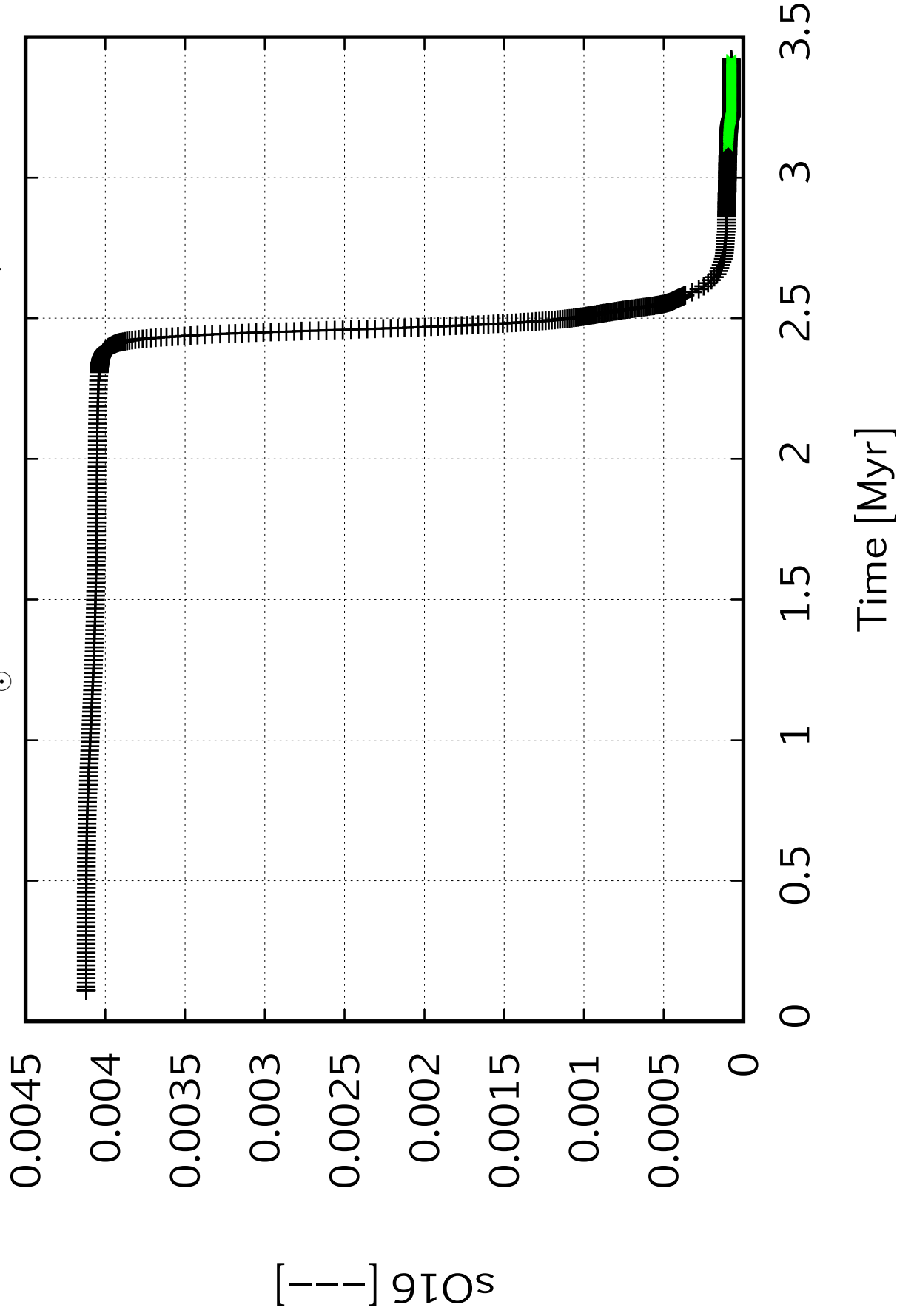
$[N_{15}]$

1.8×10^{-6}
 1.6×10^{-6}
 1.4×10^{-6}
 1.2×10^{-6}
 1×10^{-6}
 8×10^{-7}
 6×10^{-7}
 4×10^{-7}
 2×10^{-7}
0



Time [Myr]

$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$



$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

0.00014

0.00012

0.0001

8×10^{-5}

6×10^{-5}

4×10^{-5}

2×10^{-5}

0

$[\text{O} \text{ I}]$

0

0.5

1

1.5

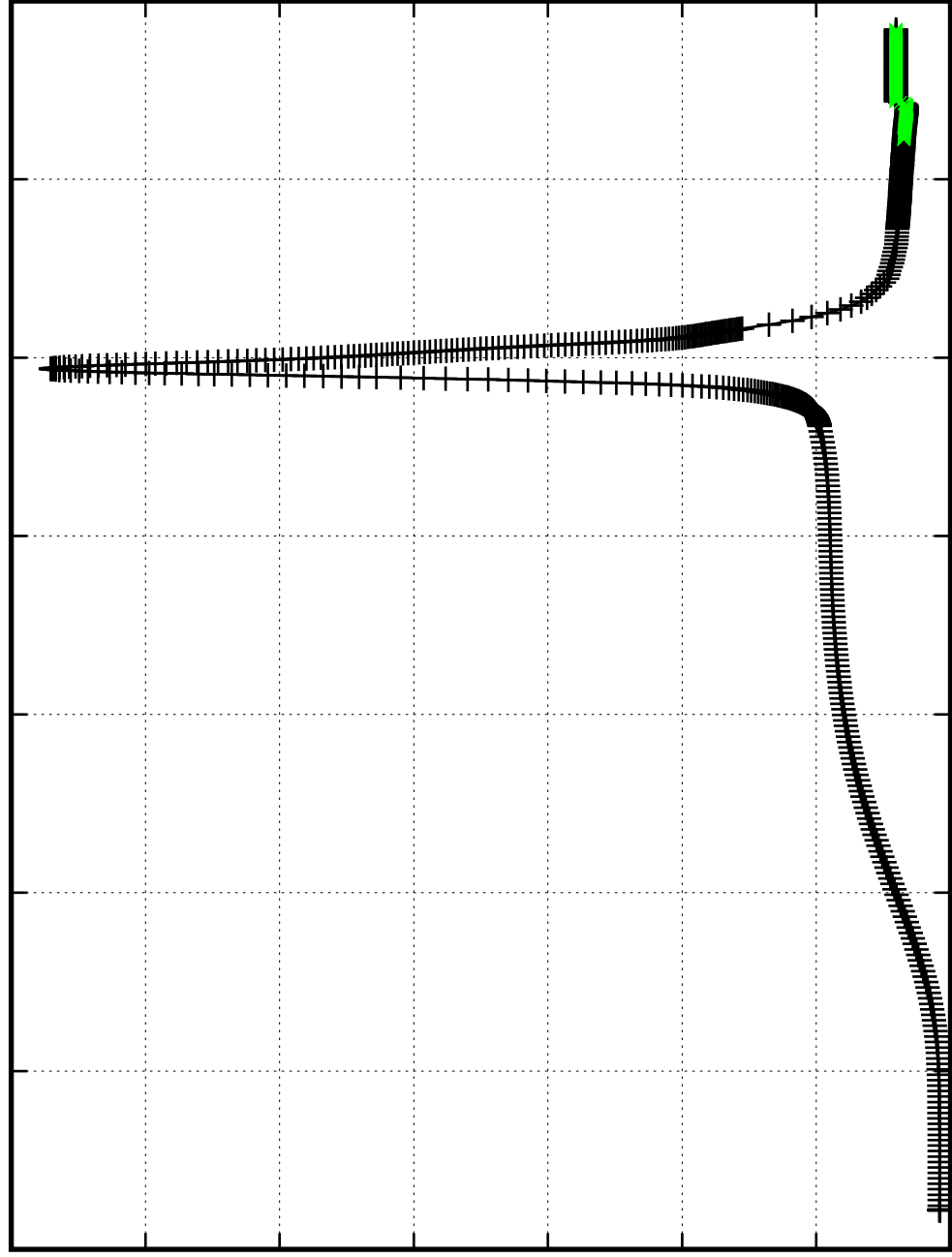
2

2.5

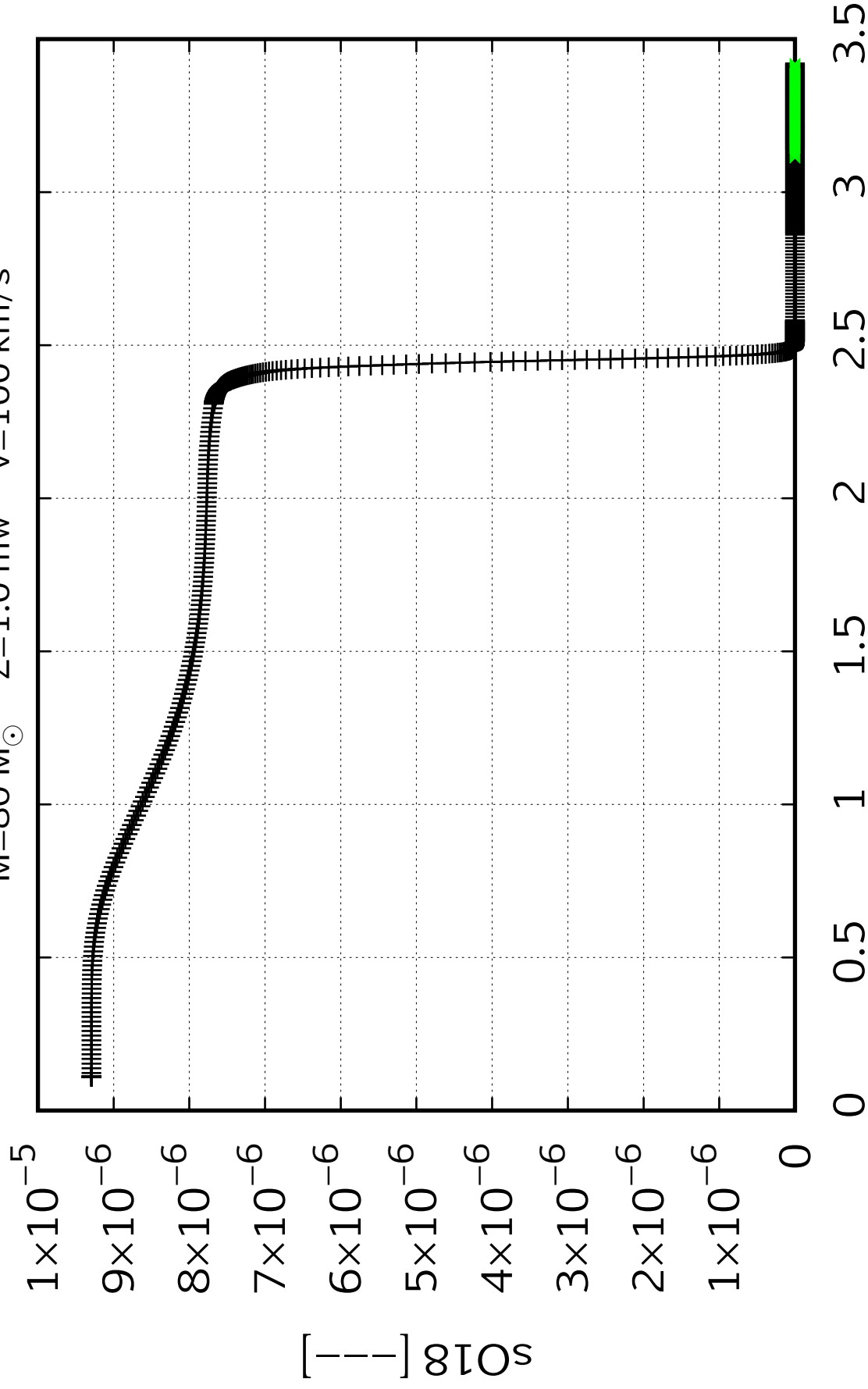
3

3.5

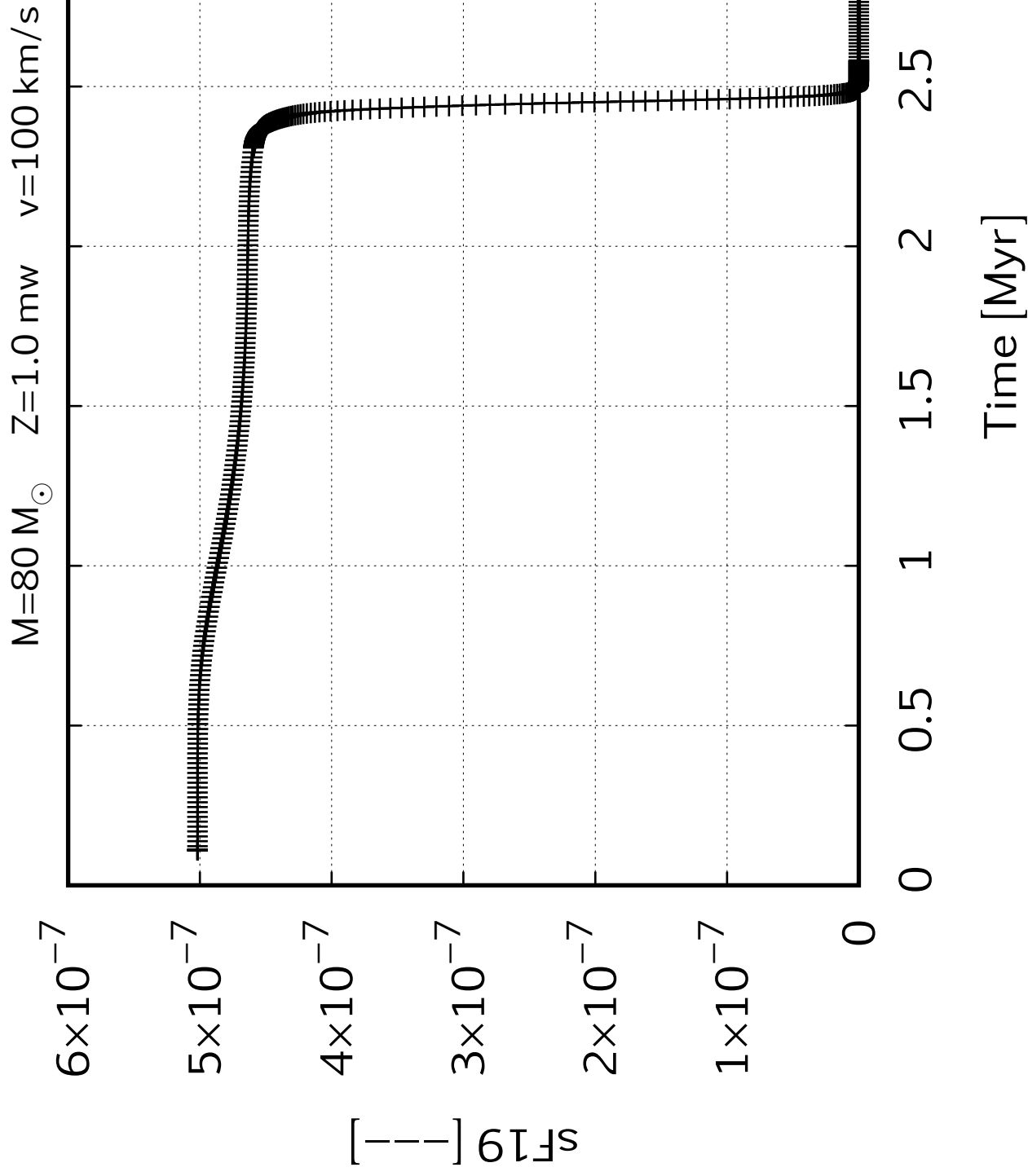
Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

0.00094

0.00093

0.00092

0.00091

0.00090

0.00089

0.00088

$s_{\text{Ne20}} [--]$

0

0.5

1

1.5

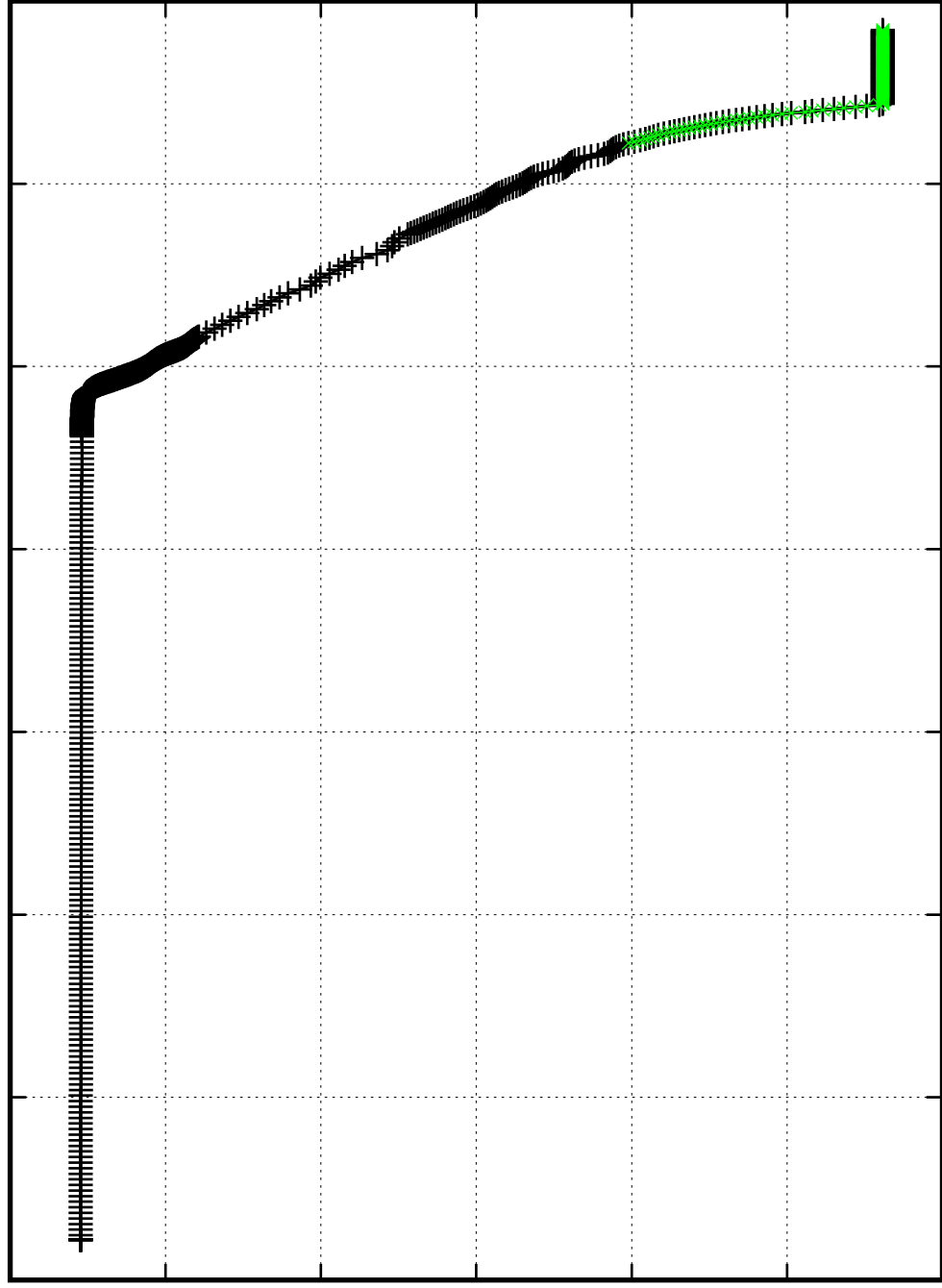
2

2.5

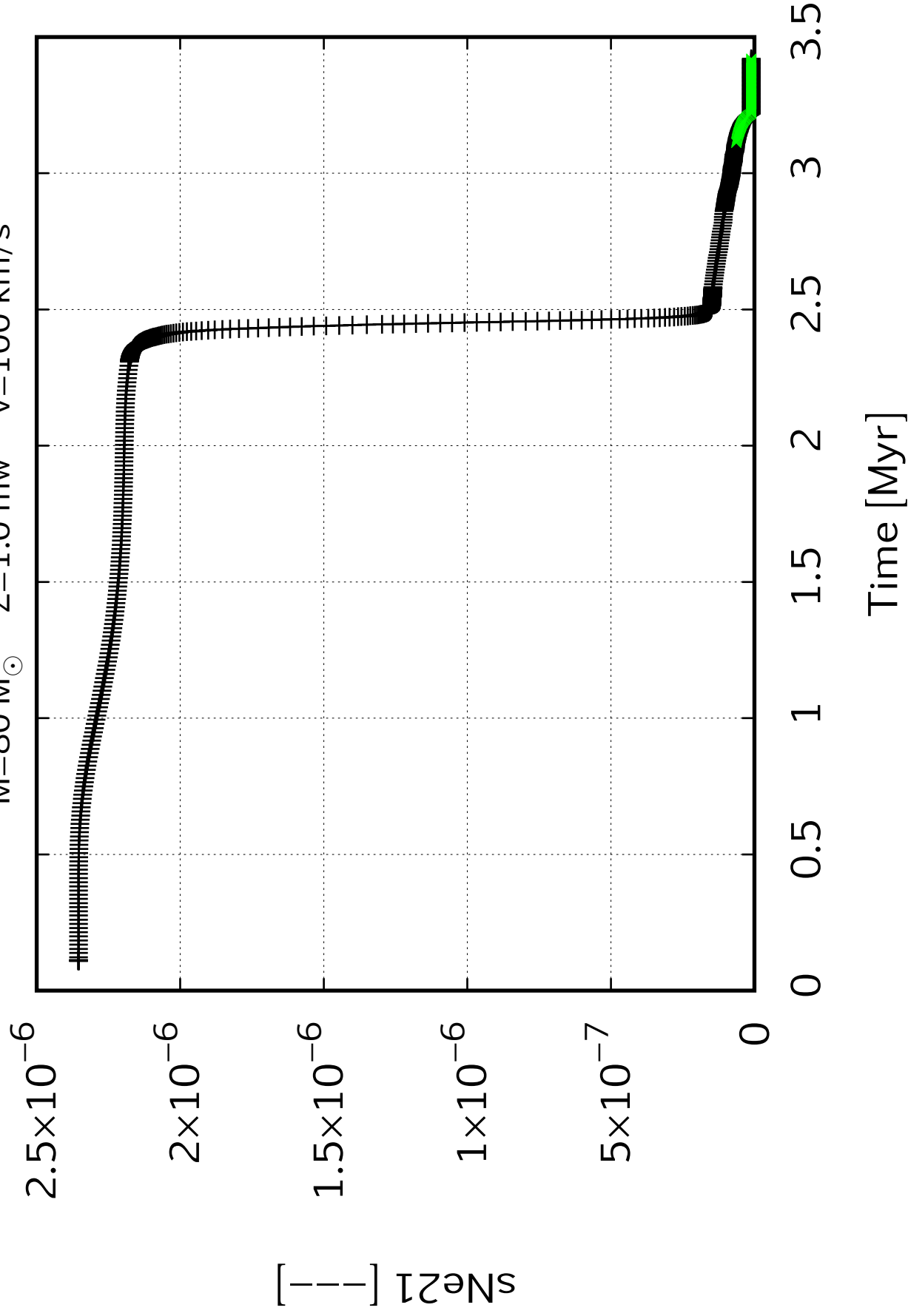
3

3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



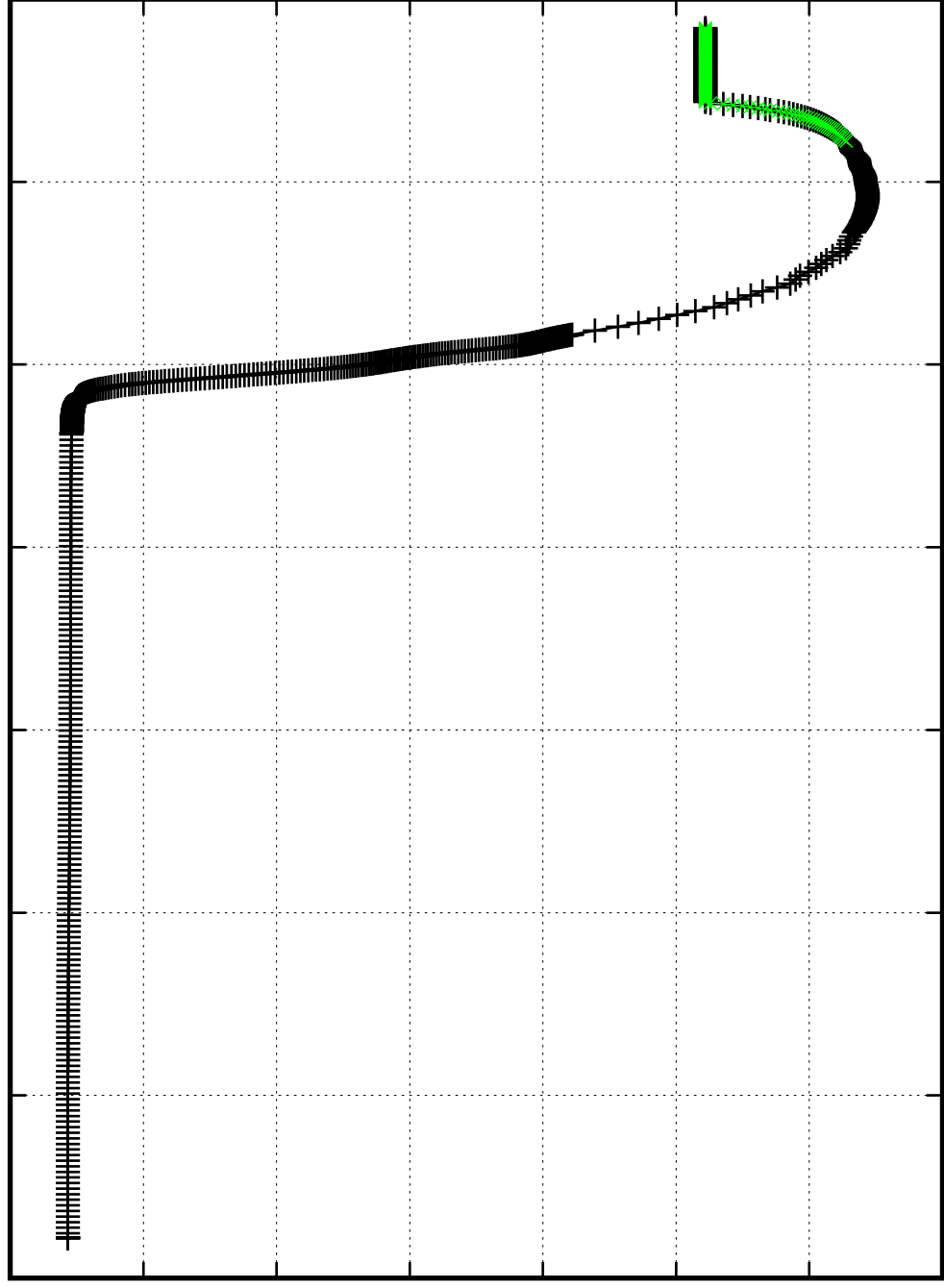
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

$s_{\text{Ne22}} [-]$

0.00008
0.00007
0.00006
0.00005
0.00004
0.00003
0.00002
0.00001

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$

0.00014

0.00012

0.00010

0.00008

0.00006

0.00004

0.00002

$s_{\text{Na23}} [--]$

0

0.5

1

1.5

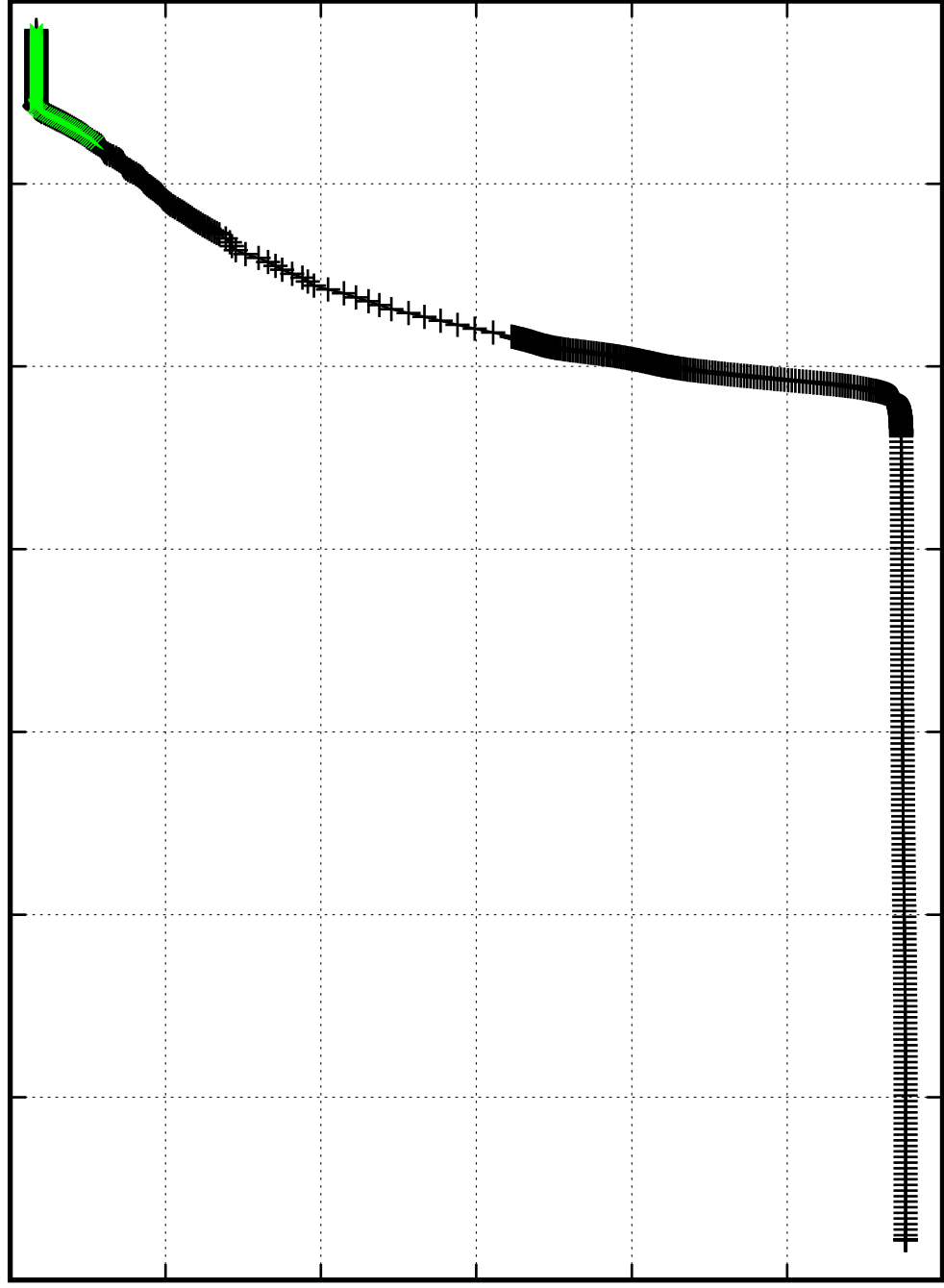
2

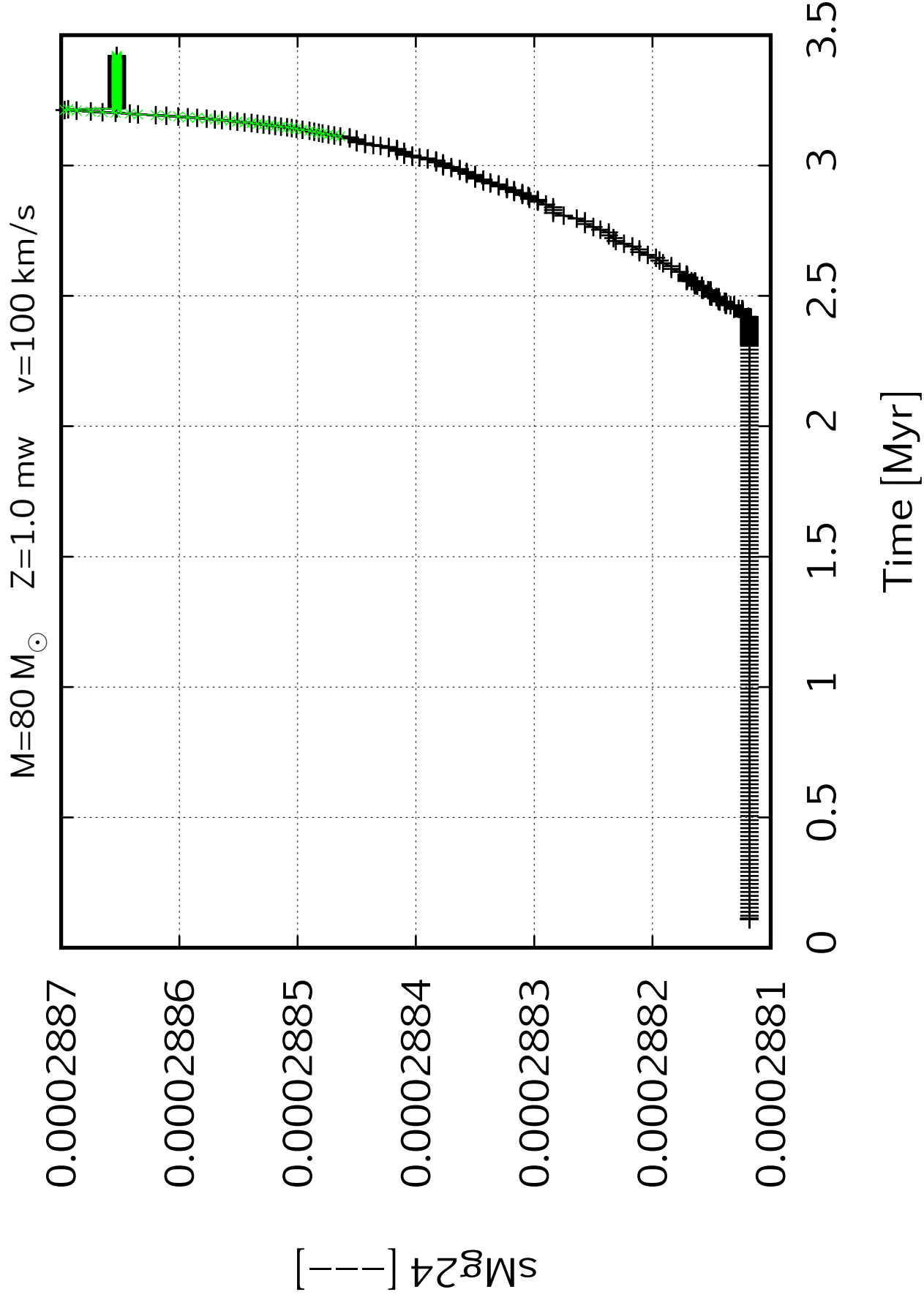
2.5

3

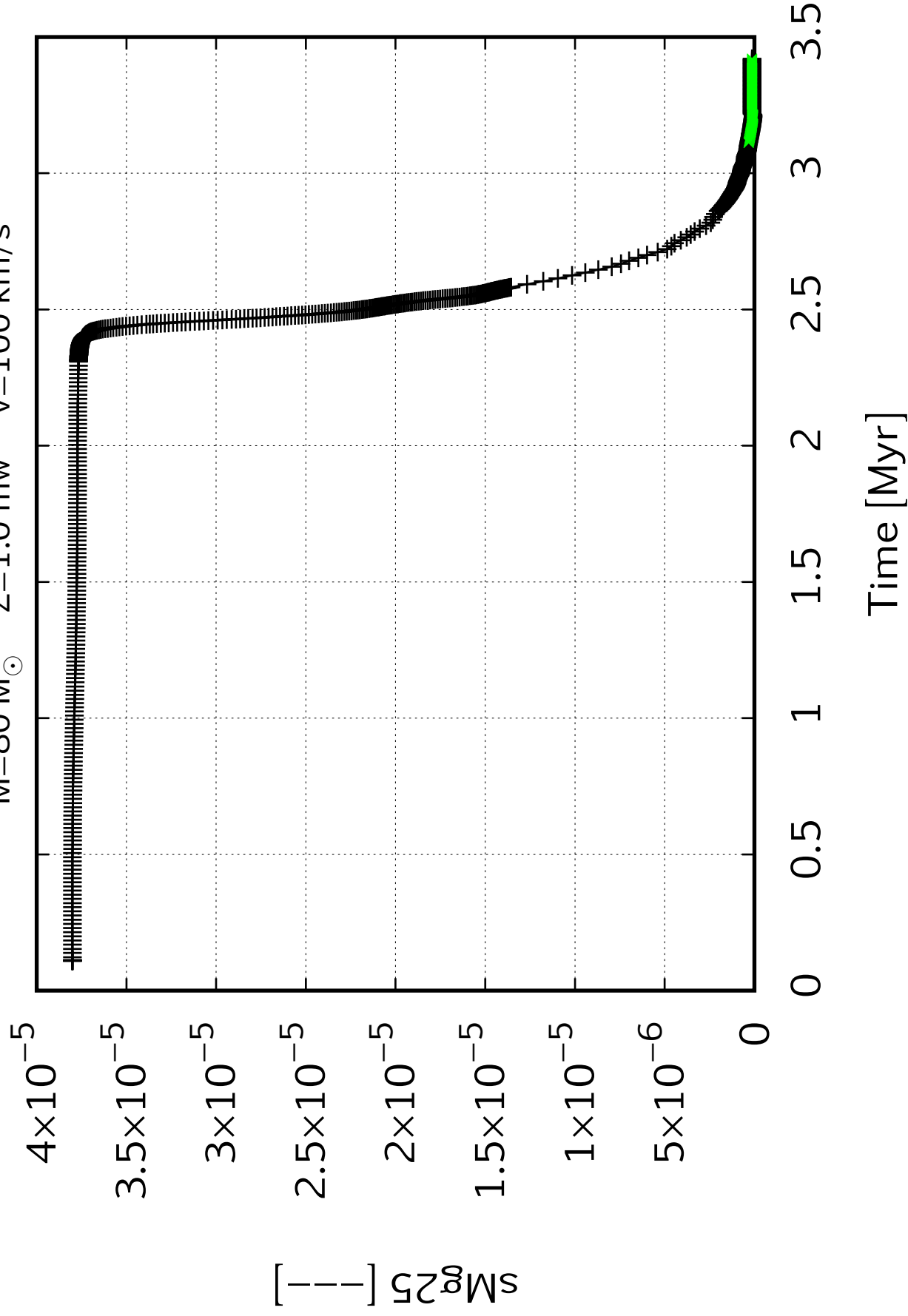
3.5

Time [Myr]





$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

0.00007

0.00007

0.00006

0.00006

0.00005

0.00005

0.00004

0.00004

sM_{g26} [—]

0

0.5

1

1.5

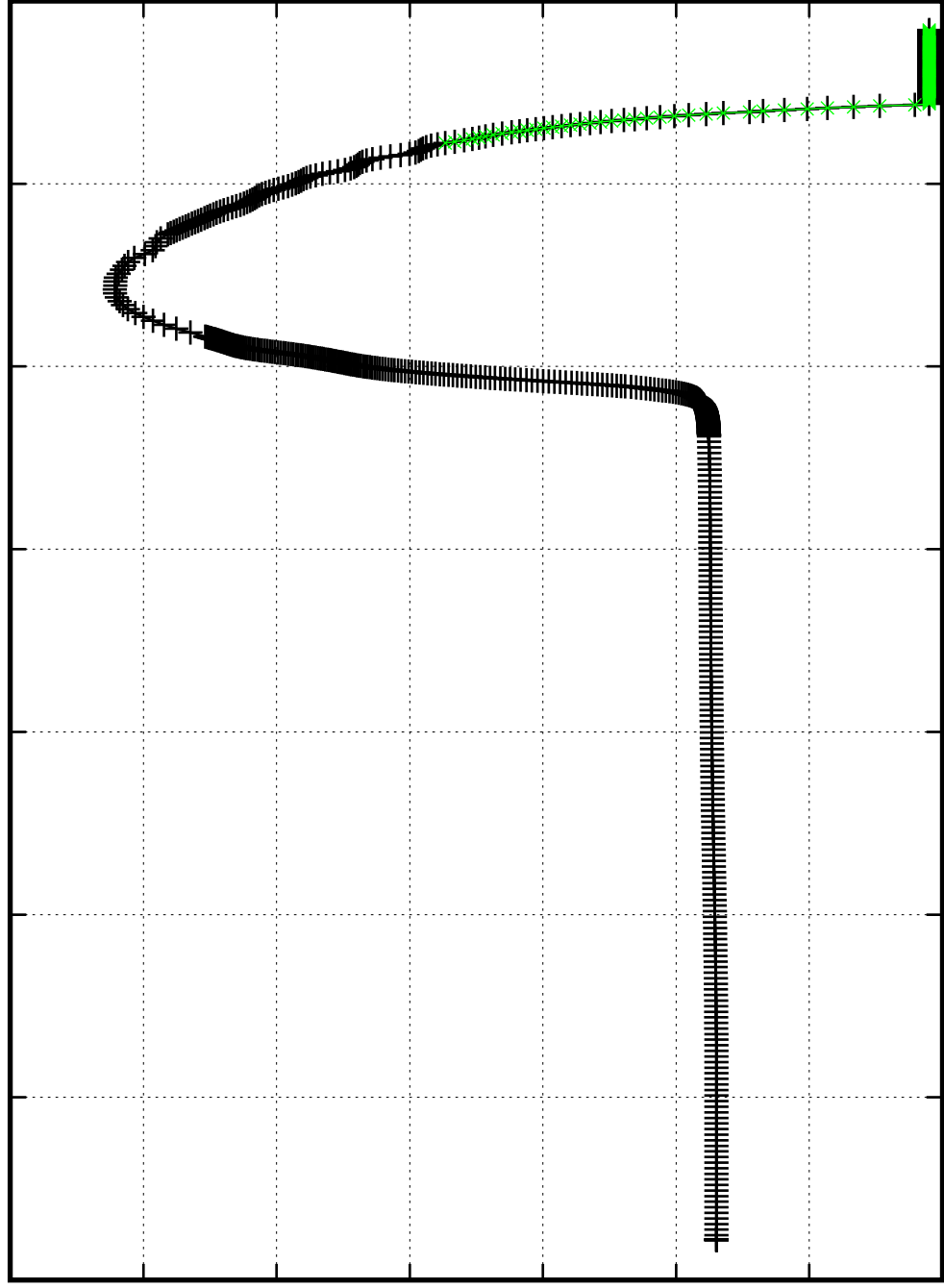
2

2.5

3

3.5

Time [Myr]



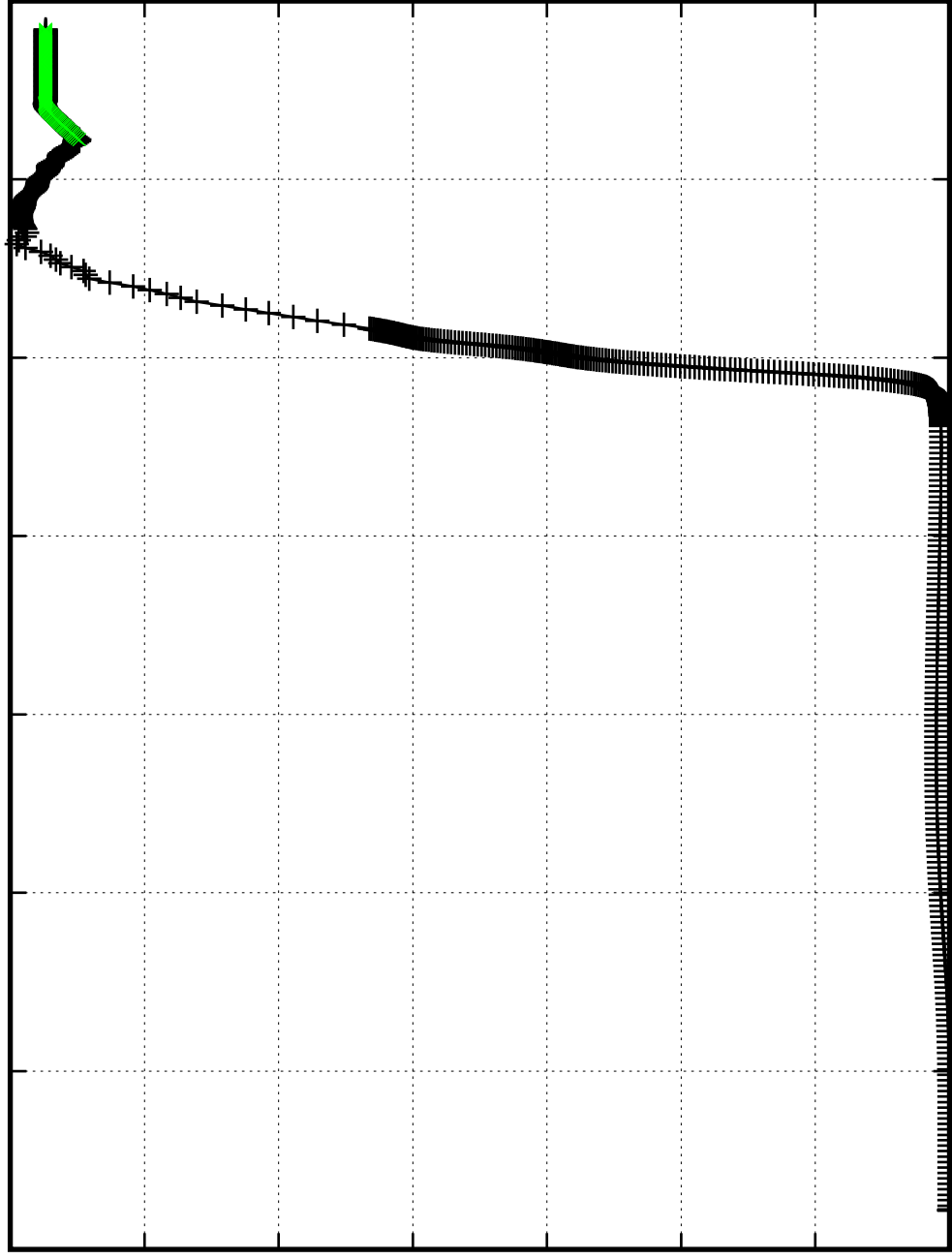
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

3.5×10^{-6}
 3×10^{-6}
 2.5×10^{-6}
 2×10^{-6}
 1.5×10^{-6}
 1×10^{-6}
 5×10^{-7}
0

$[\text{--}]^{\text{Al26}}$

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



$M=80\ M_{\odot}$ $Z=1.0\ \text{mw}$ $v=100\ \text{km/s}$

0.00010
0.00009
0.00009
0.00008
0.00008
0.00007
0.00007
0.00006
0.00006
0.00005
0.00005

$s_{\text{Al}27}$ [—]

0

0.5

1

1.5

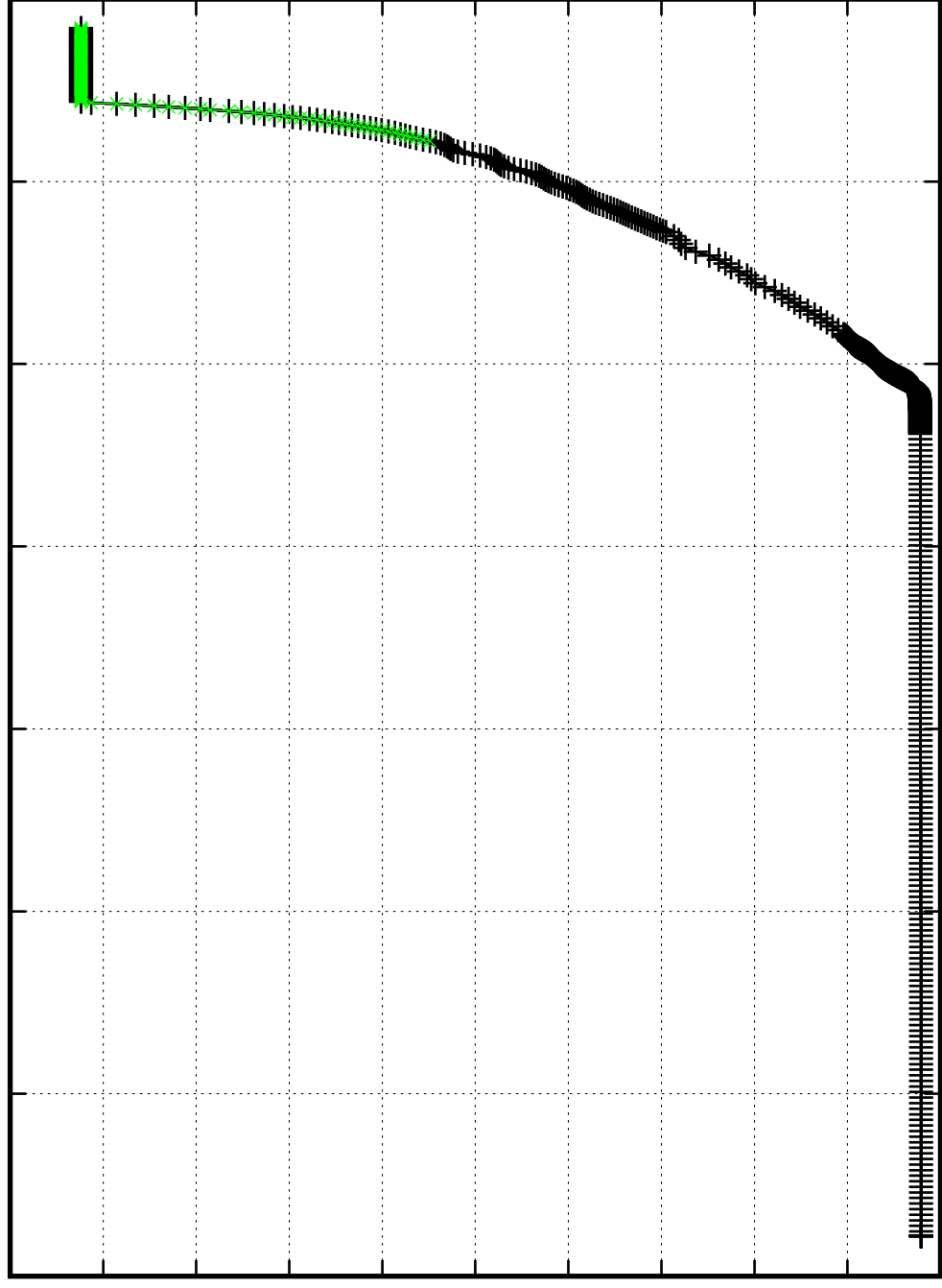
2

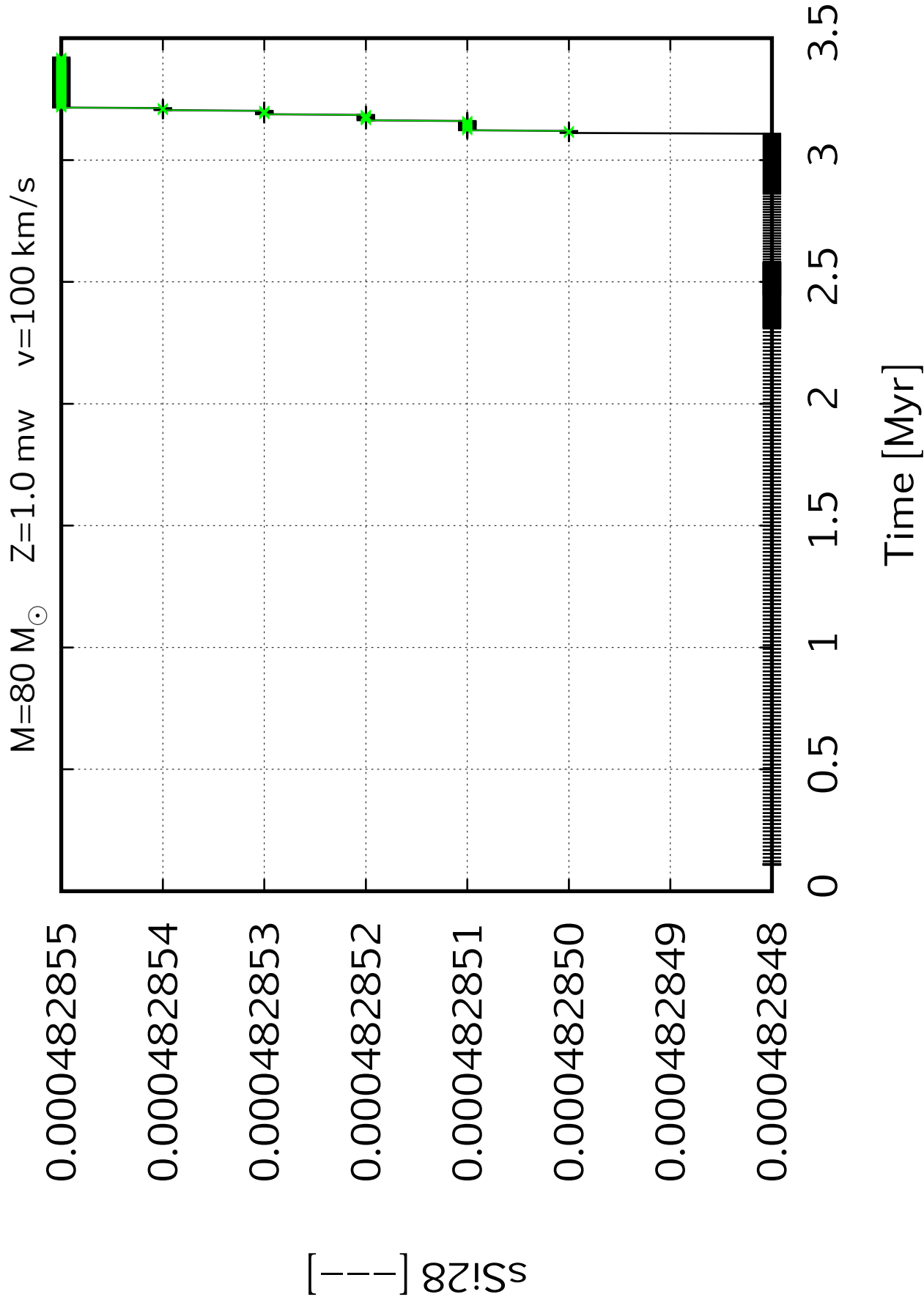
2.5

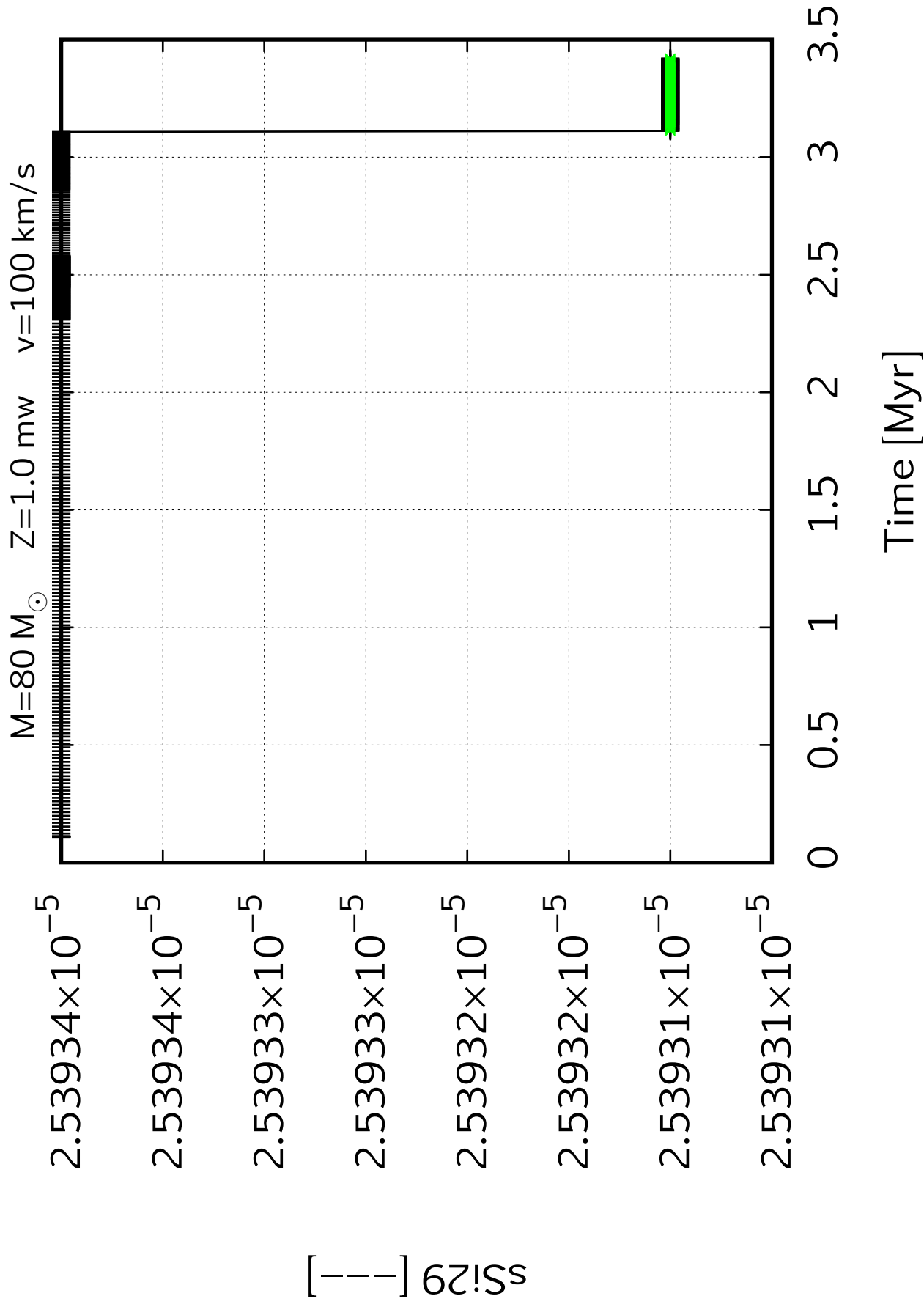
3

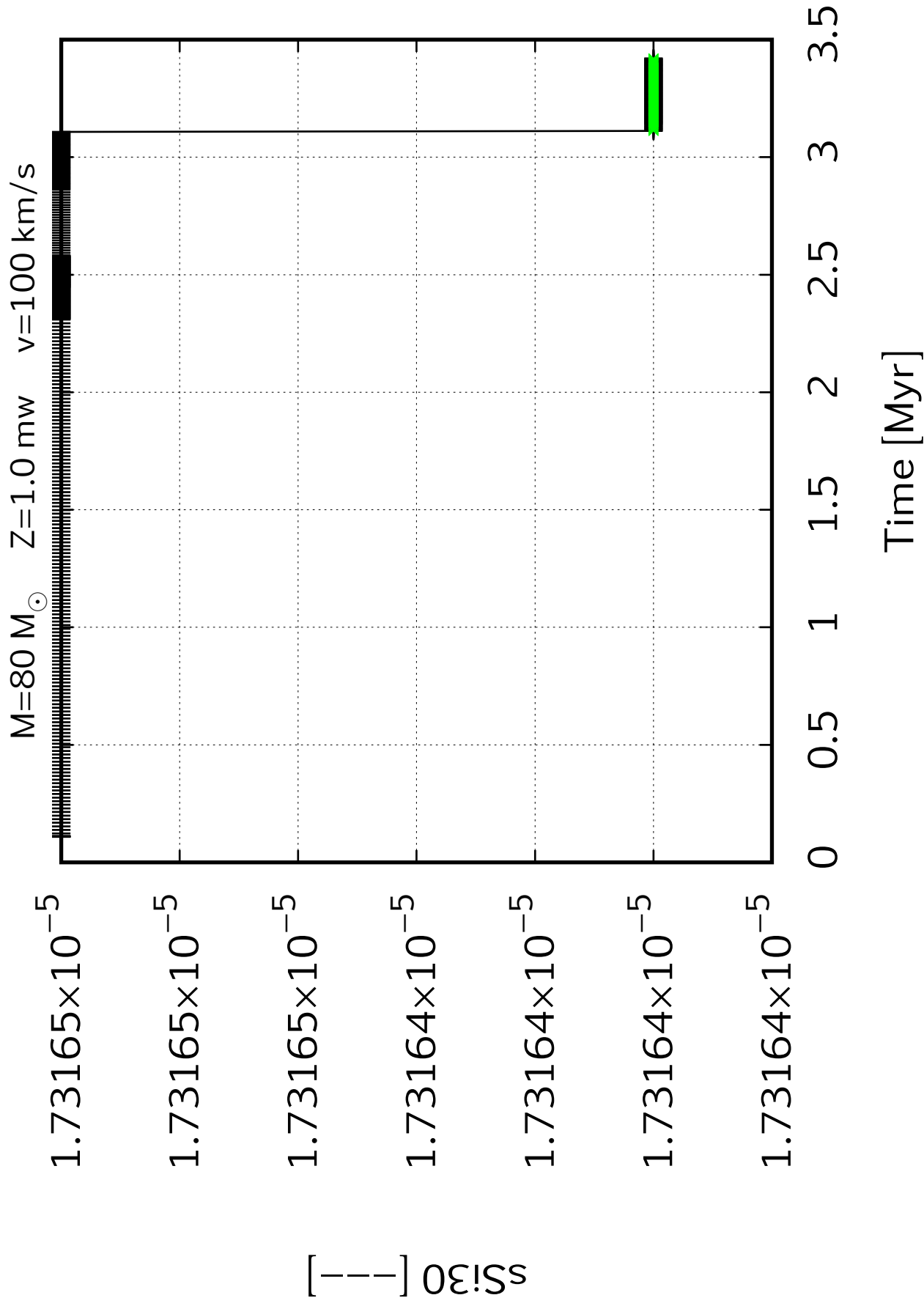
3.5

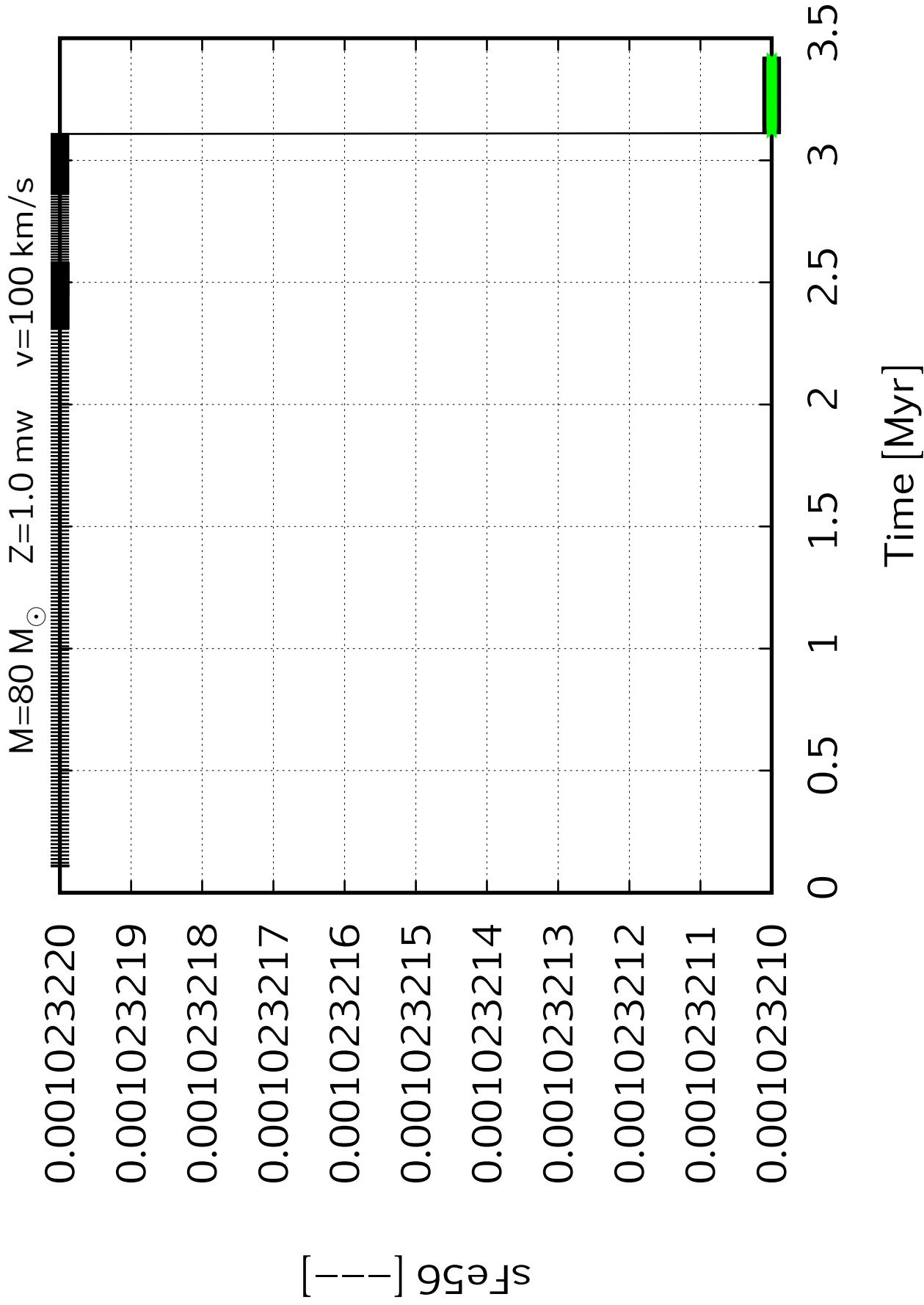
Time [Myr]



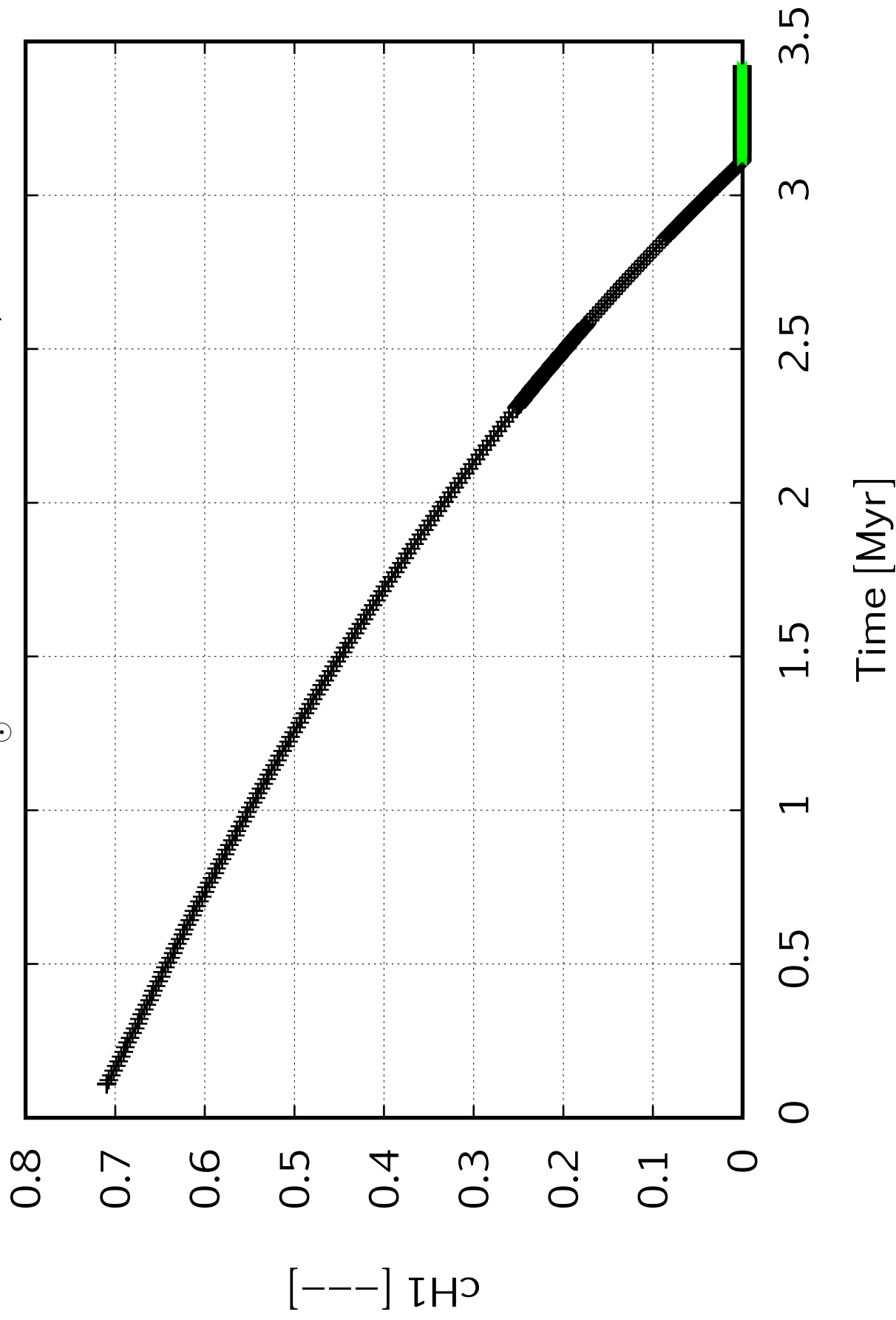


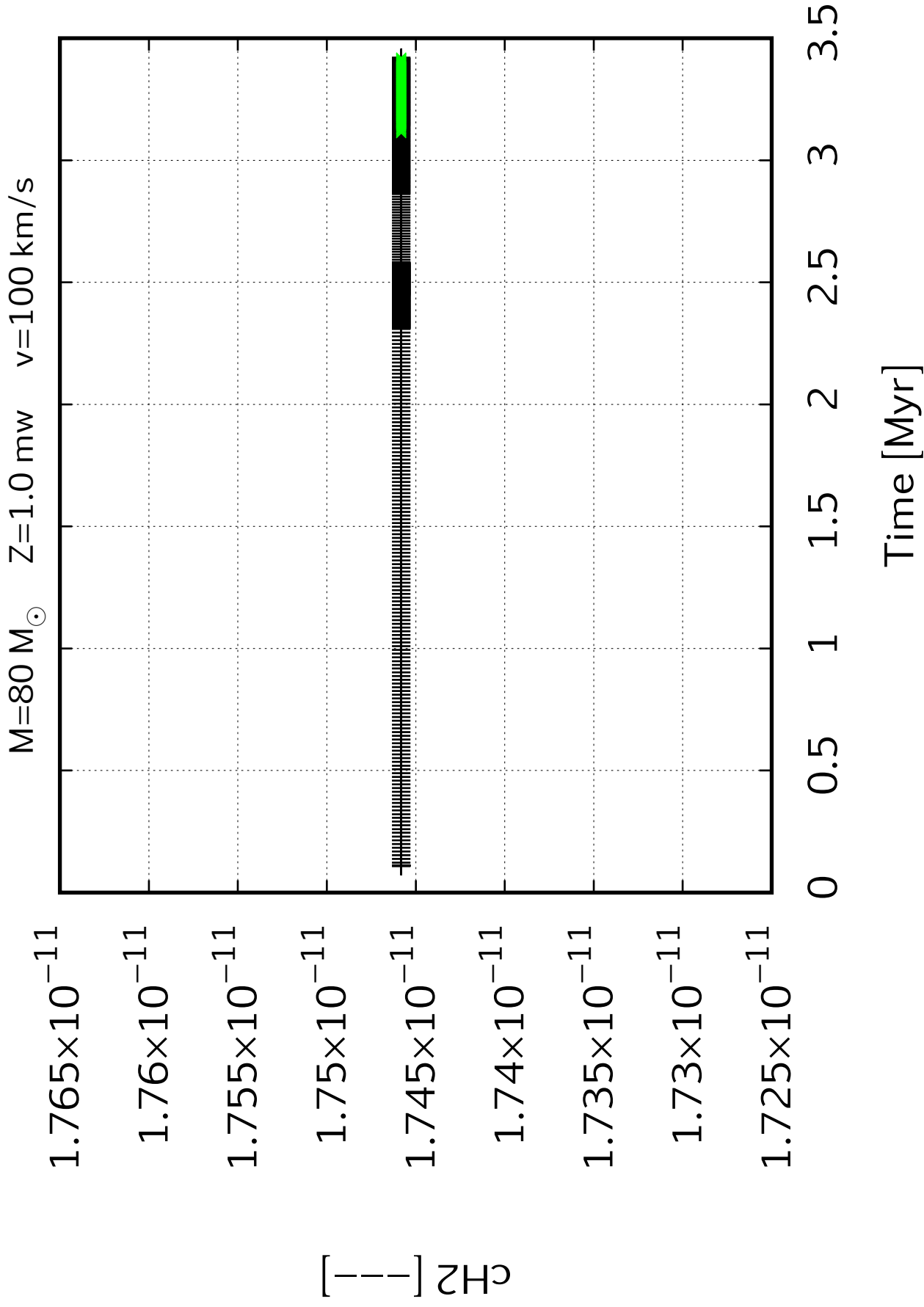




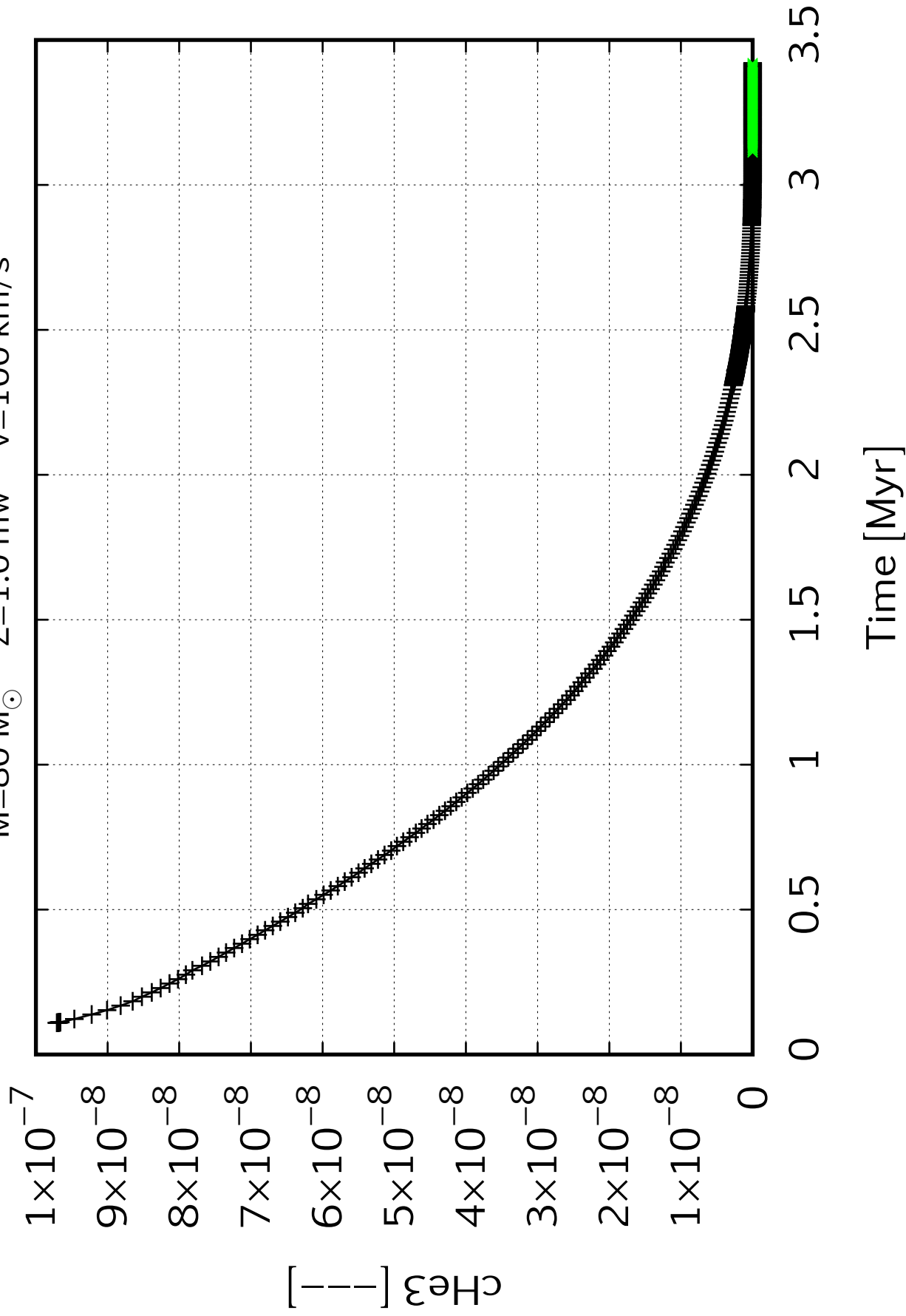


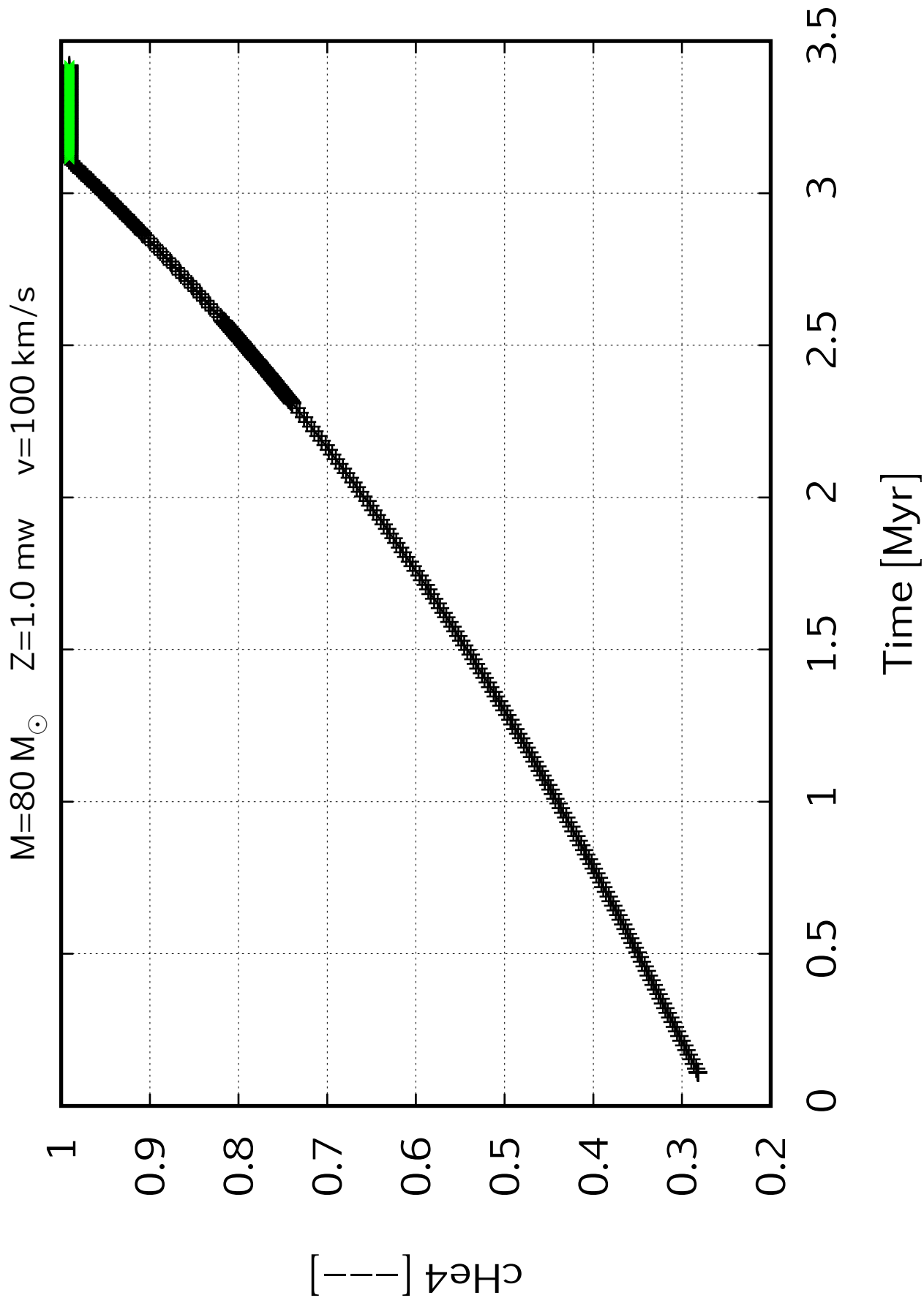
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

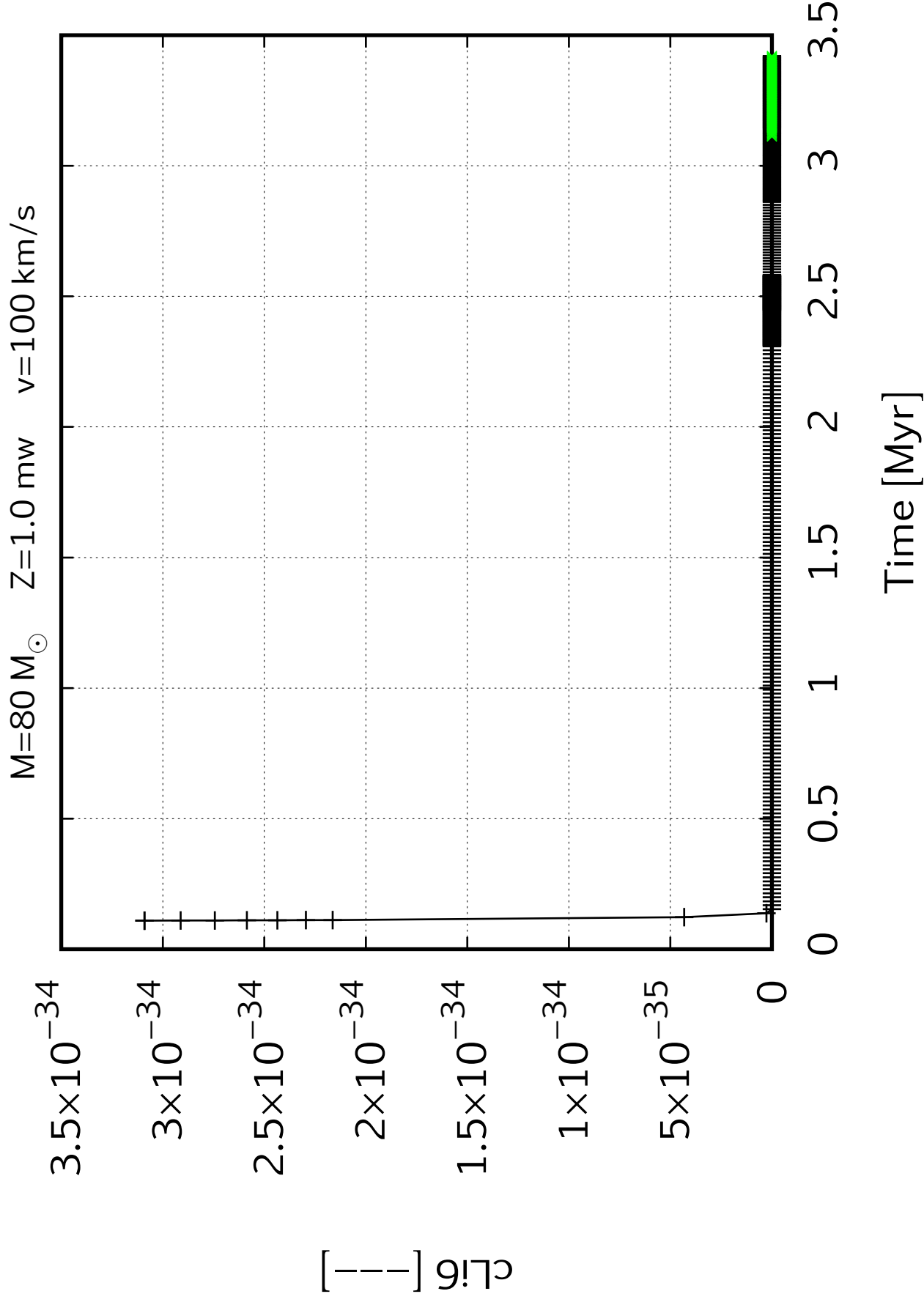




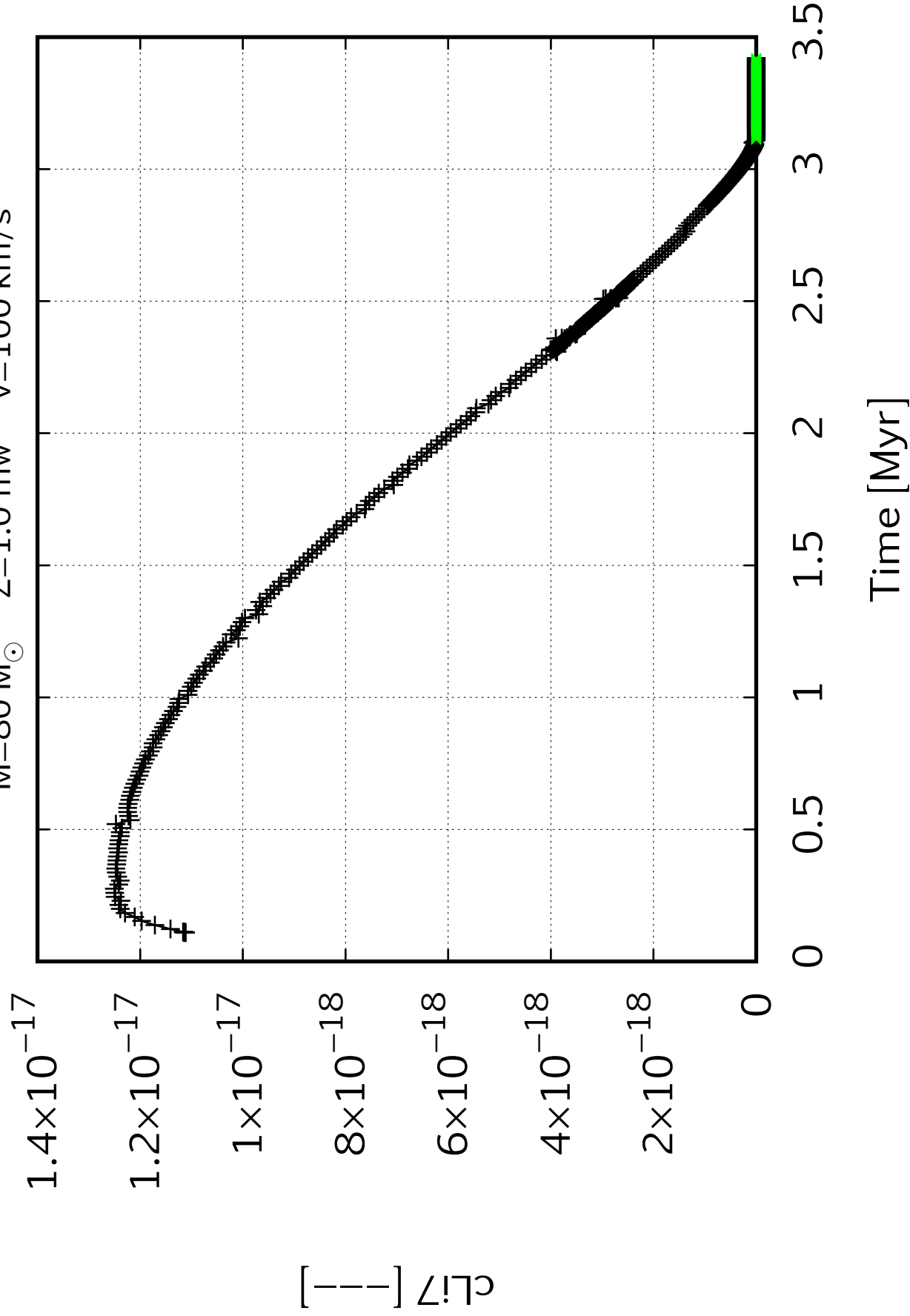
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



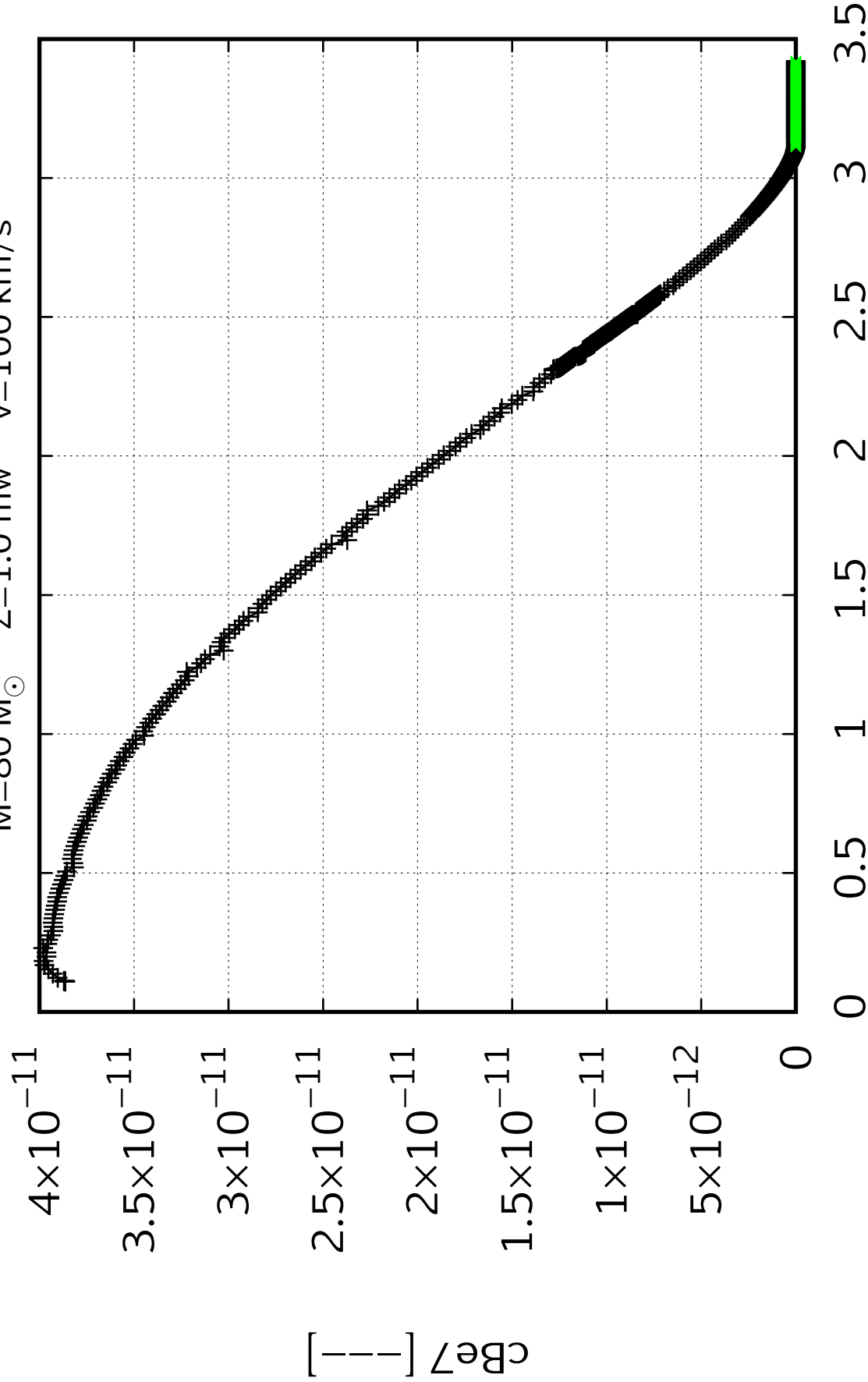




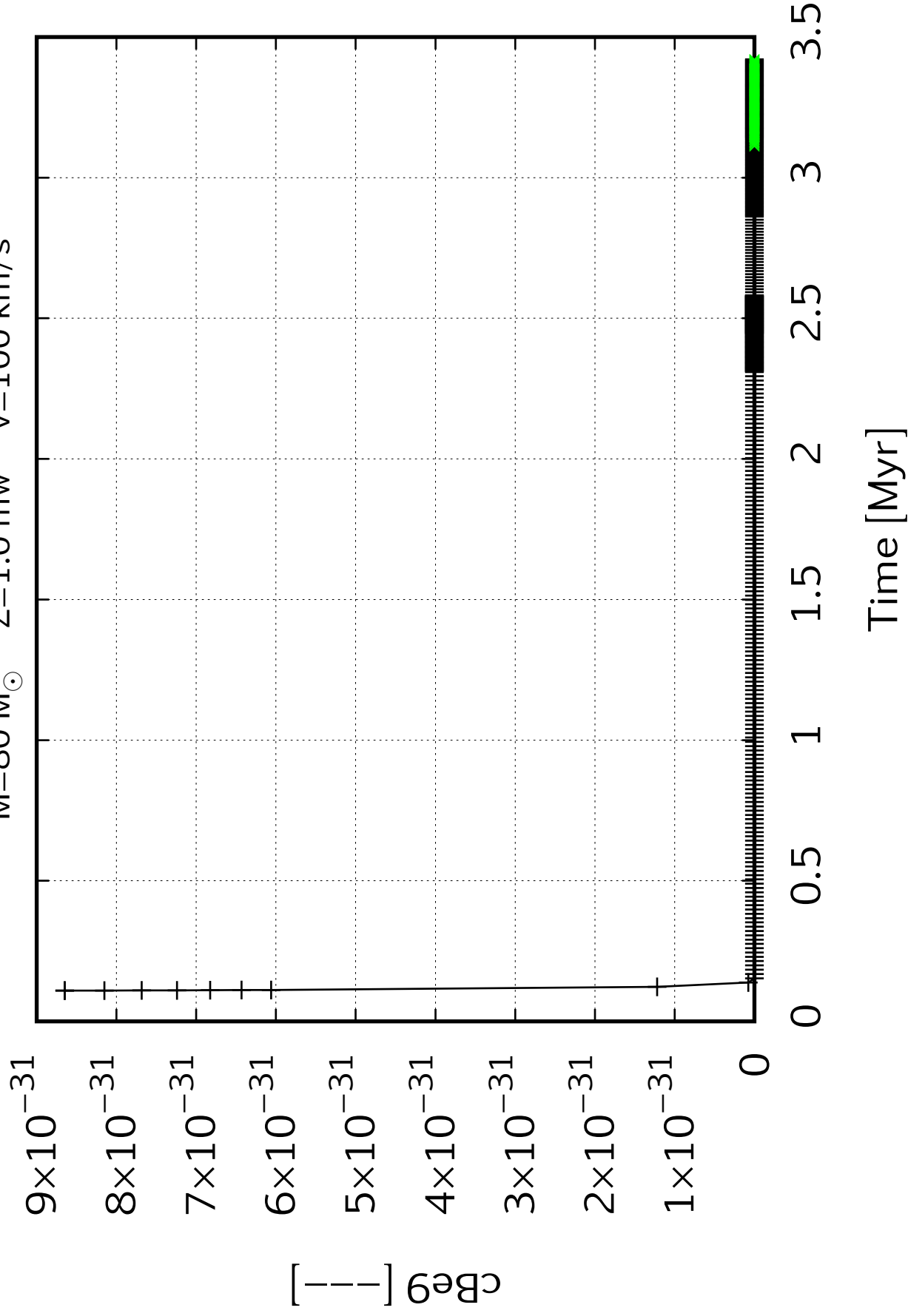
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



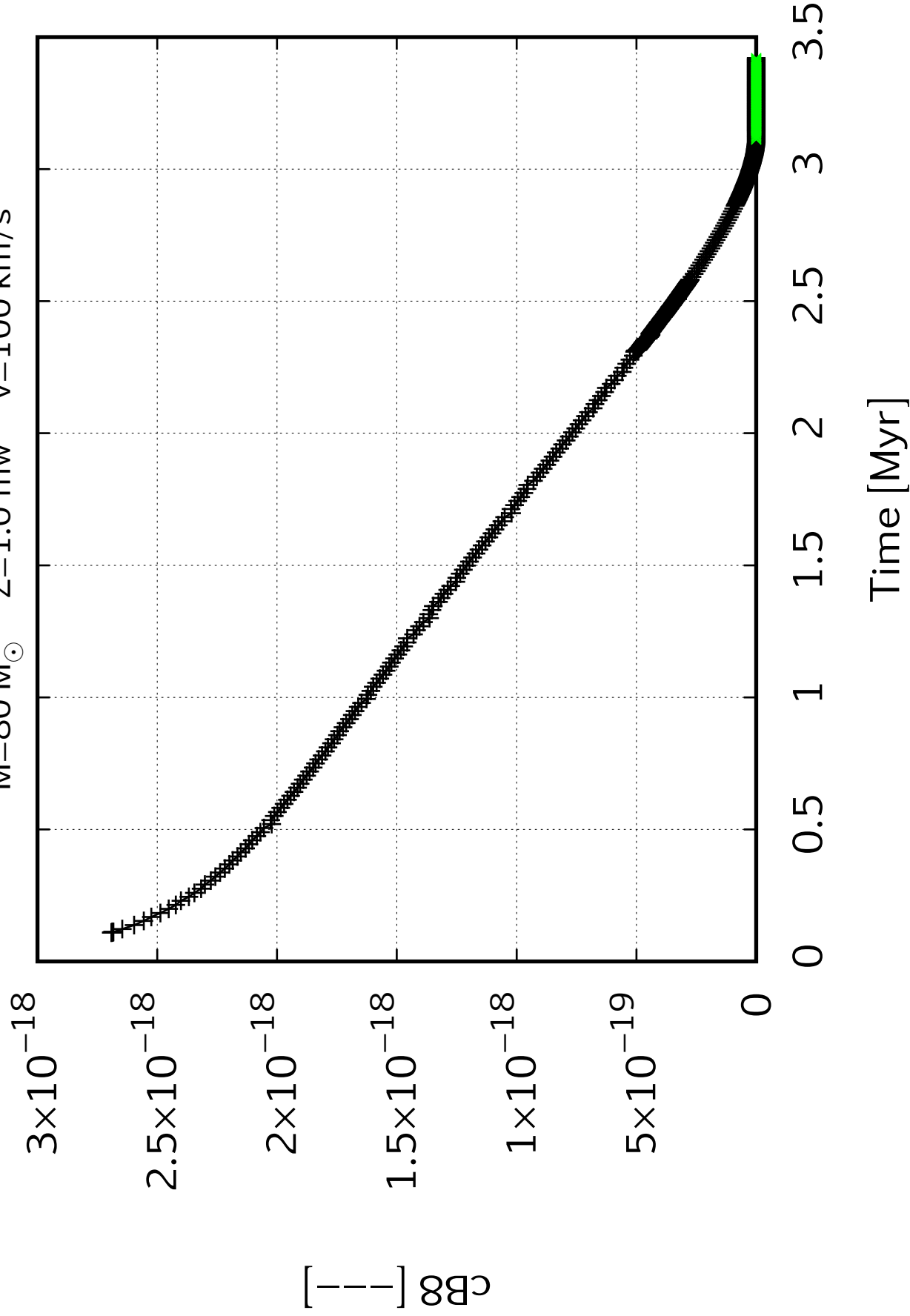
$M=80 M_{\odot}$ $Z=1.0 \text{ mw}$ $v=100 \text{ km/s}$



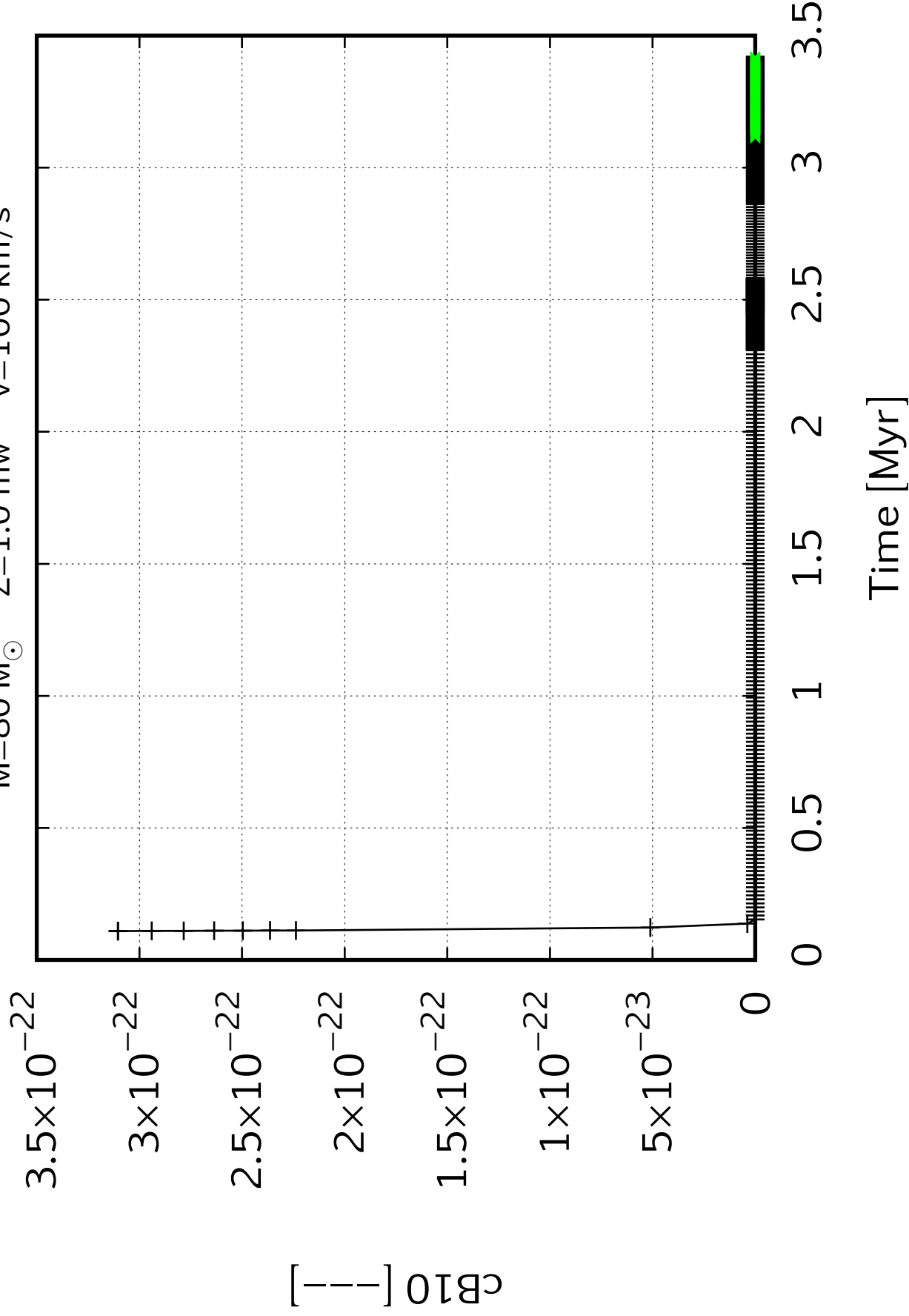
$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



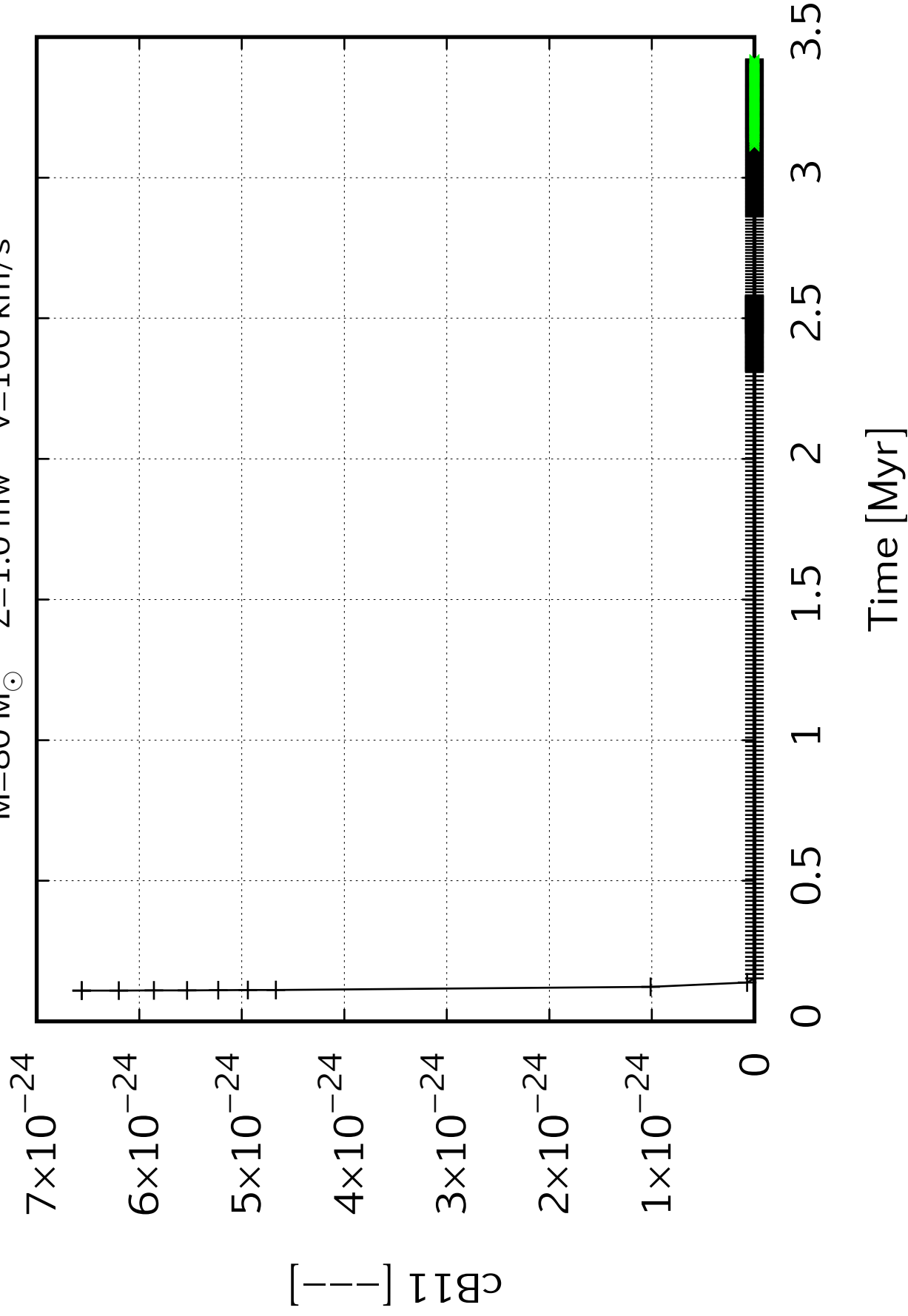
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



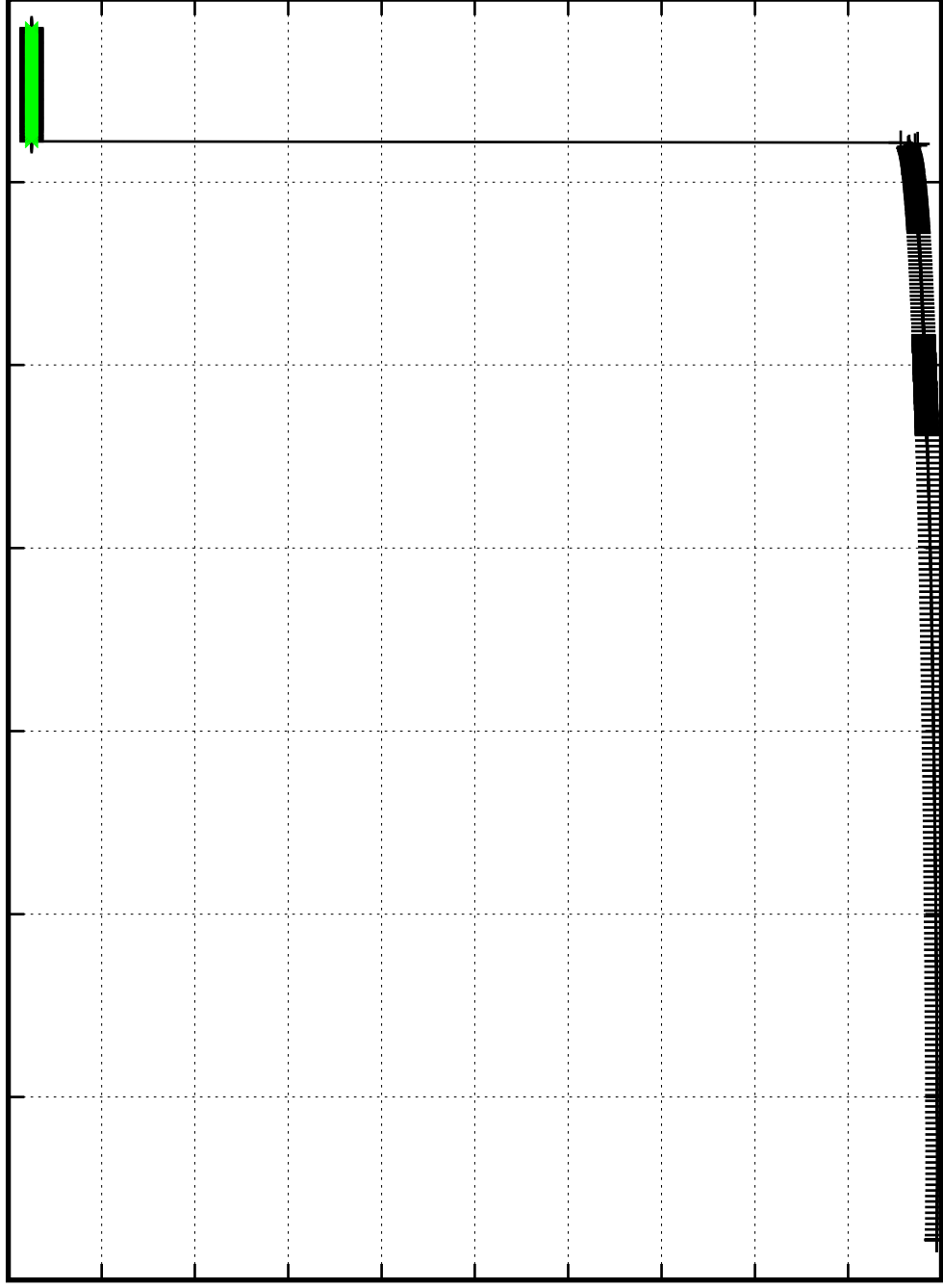
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

1×10^{-27}
 9×10^{-28}
 8×10^{-28}
 7×10^{-28}
 6×10^{-28}
 5×10^{-28}
 4×10^{-28}
 3×10^{-28}
 2×10^{-28}
 1×10^{-28}
0

$[C\,II]$

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



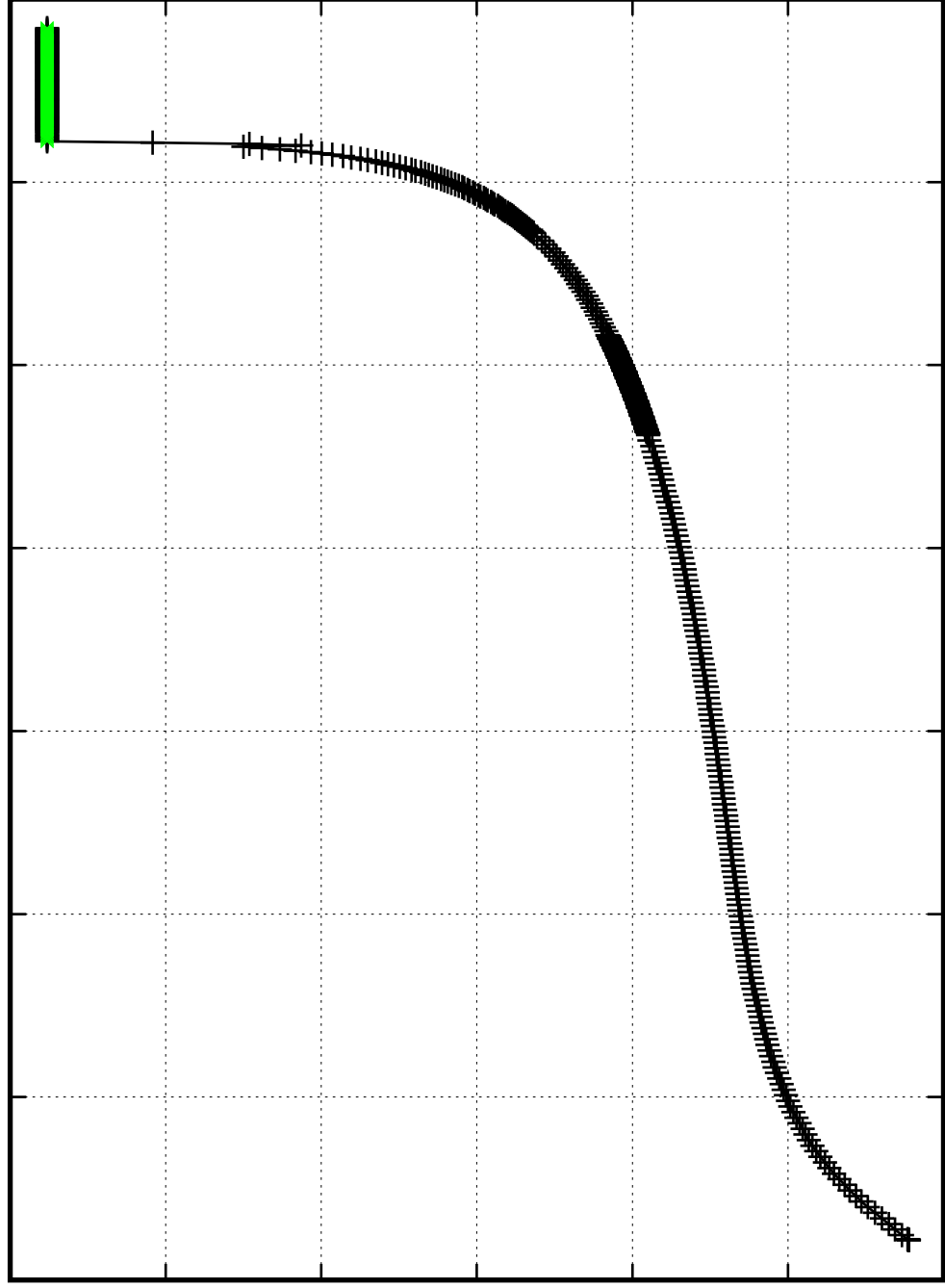
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

$c_{12}[-]$

0.00016
0.00014
0.00012
0.00010
0.00008
0.00006
0.00004

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



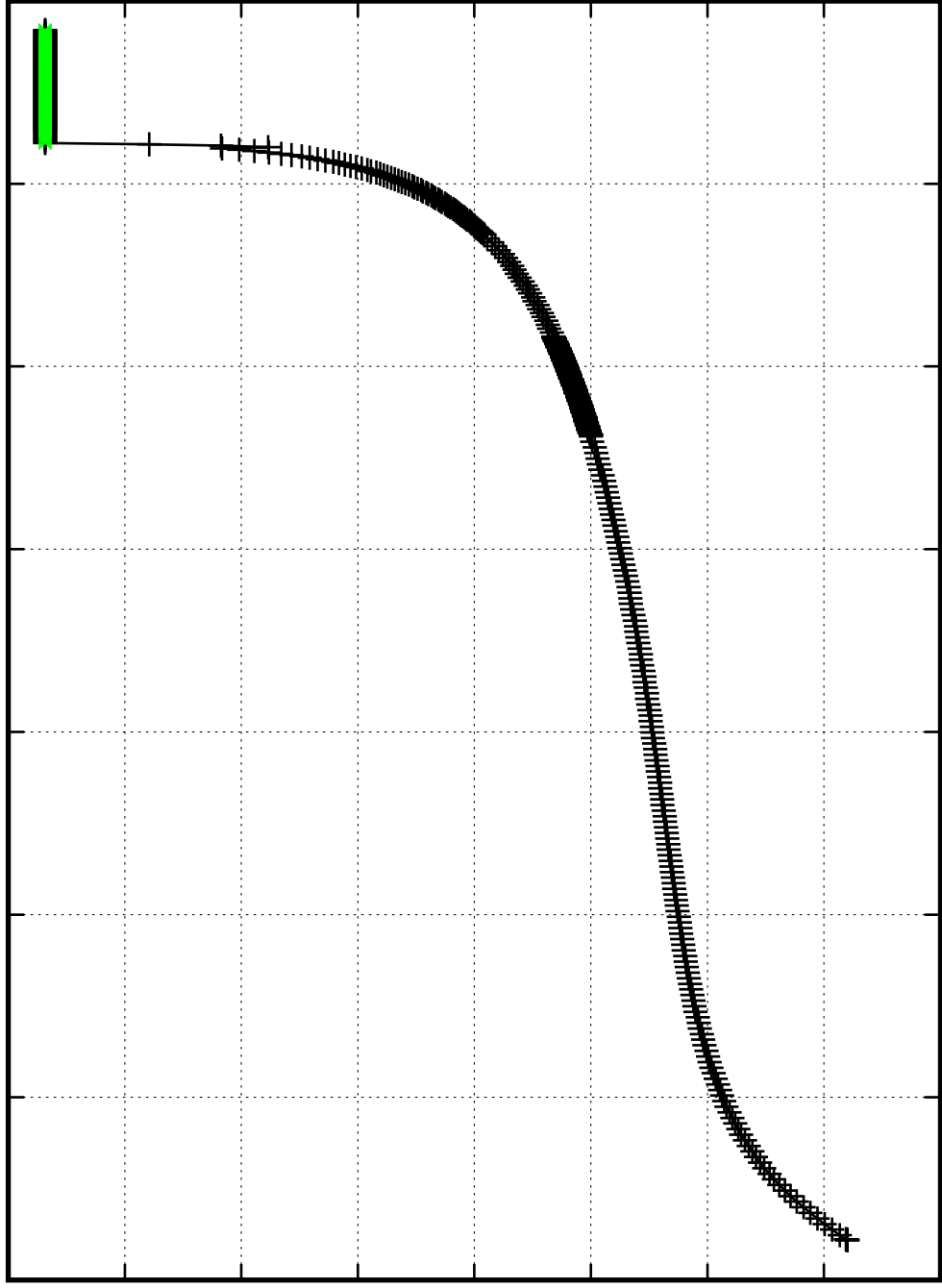
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

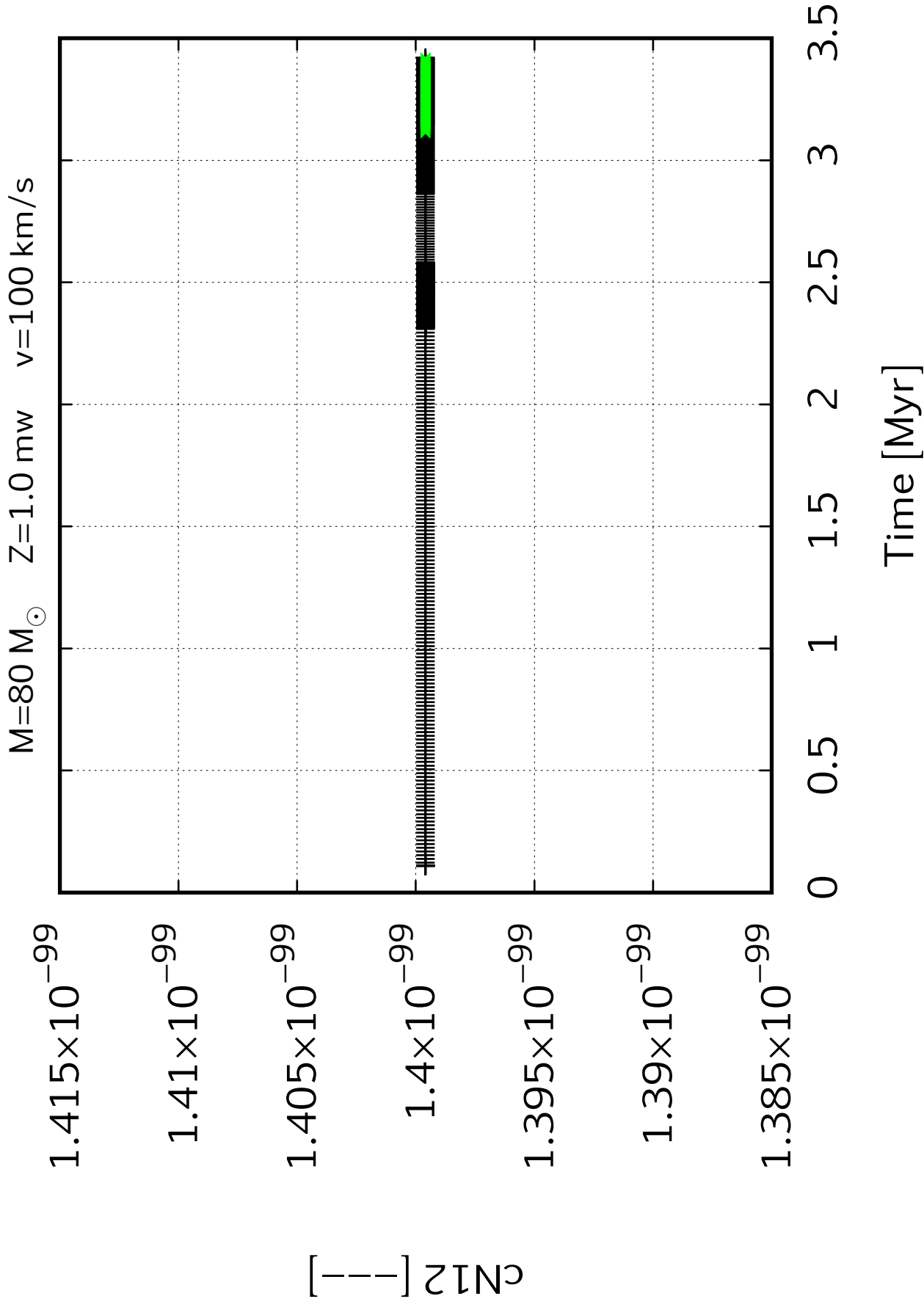
c_{13} [—]

0.00005
0.00005
0.00004
0.00004
0.00003
0.00003
0.00002
0.00002
0.00001

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]





$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$

0.0054
0.0052
0.005
0.0048
0.0046
0.0044
0.0042
0.004
0.0038
0.0036
0.0034
0.0032

$cN_{14} []$

0

0.5

1

1.5

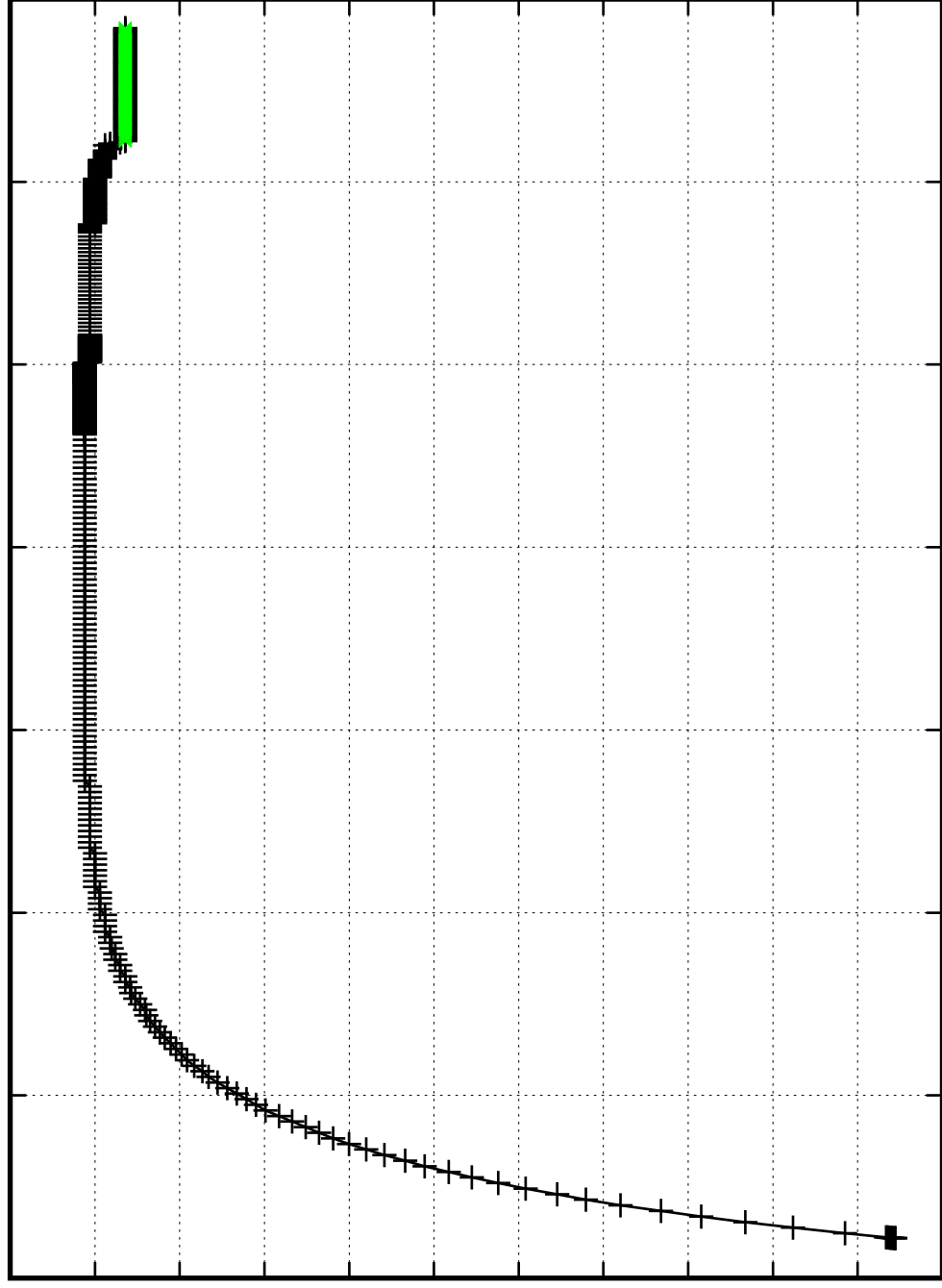
2

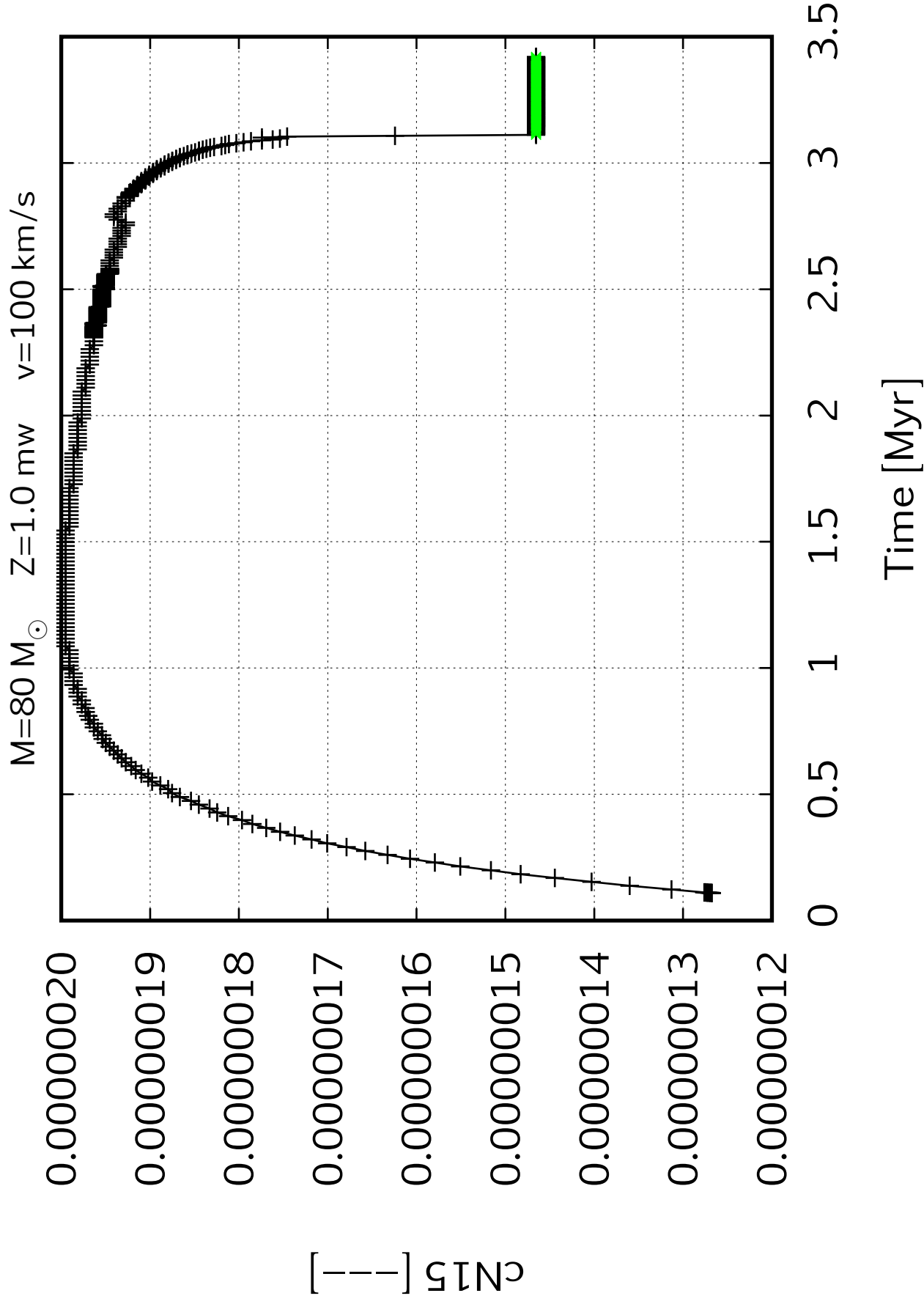
2.5

3

3.5

Time [Myr]





$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$

0.0025

0.002

0.0015

0.001

0.0005

0

$[\text{O16}]/[\text{I}]$

0

0.5

1

1.5

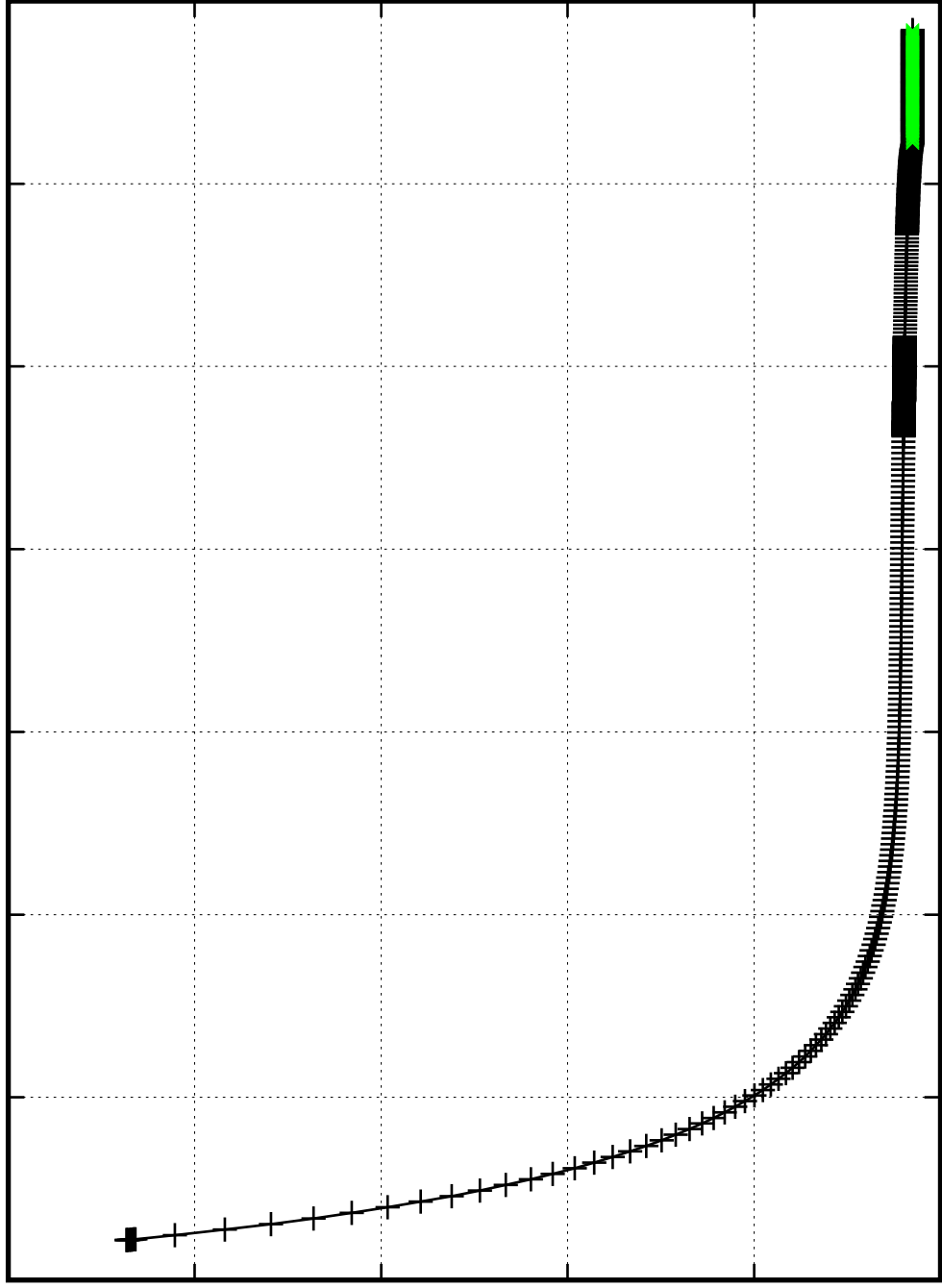
2

2.5

3

3.5

Time [Myr]



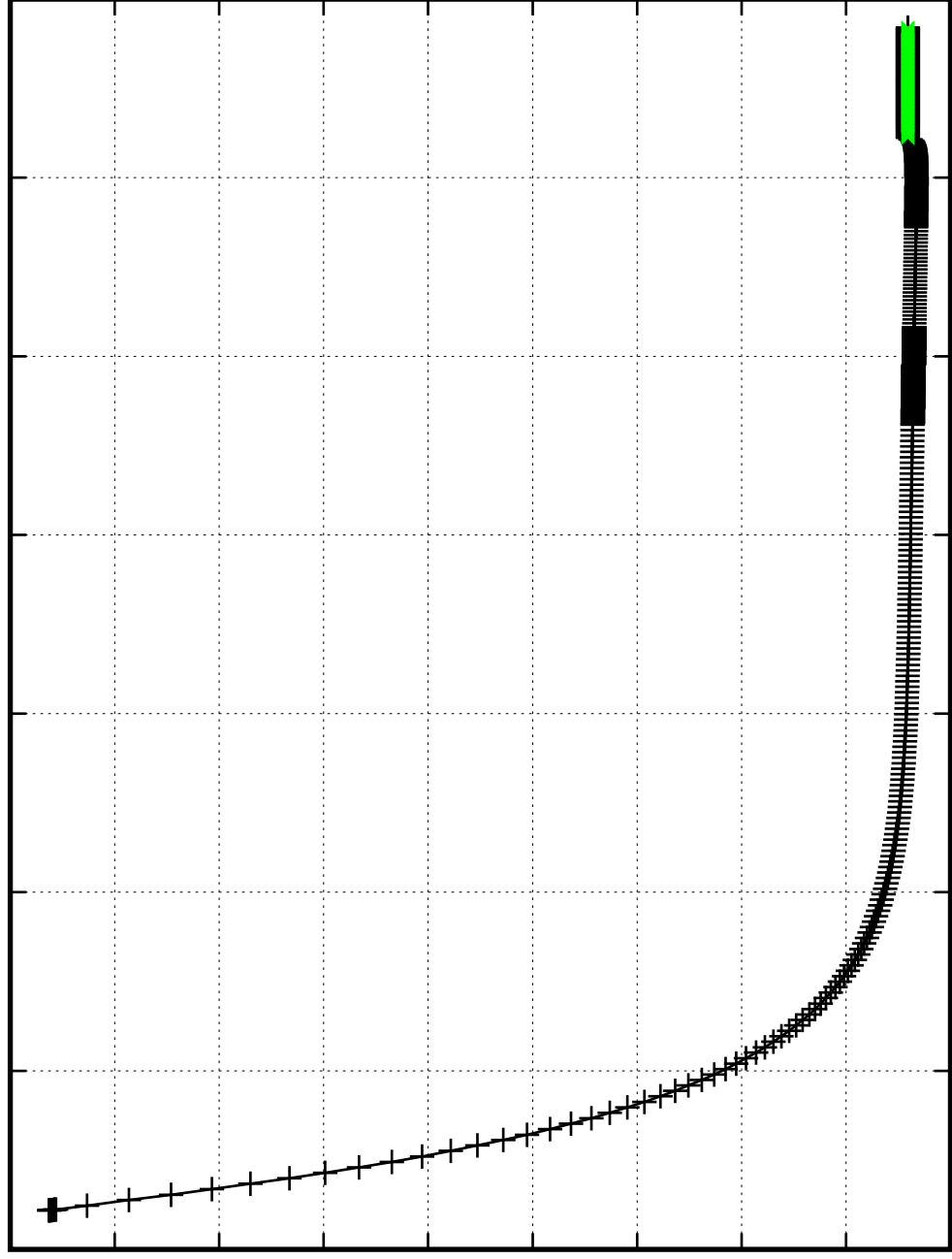
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

$[\text{O} \text{ I}]$

0.00018
0.00016
0.00014
0.00012
0.0001
 8×10^{-5}
 6×10^{-5}
 4×10^{-5}
 2×10^{-5}
0

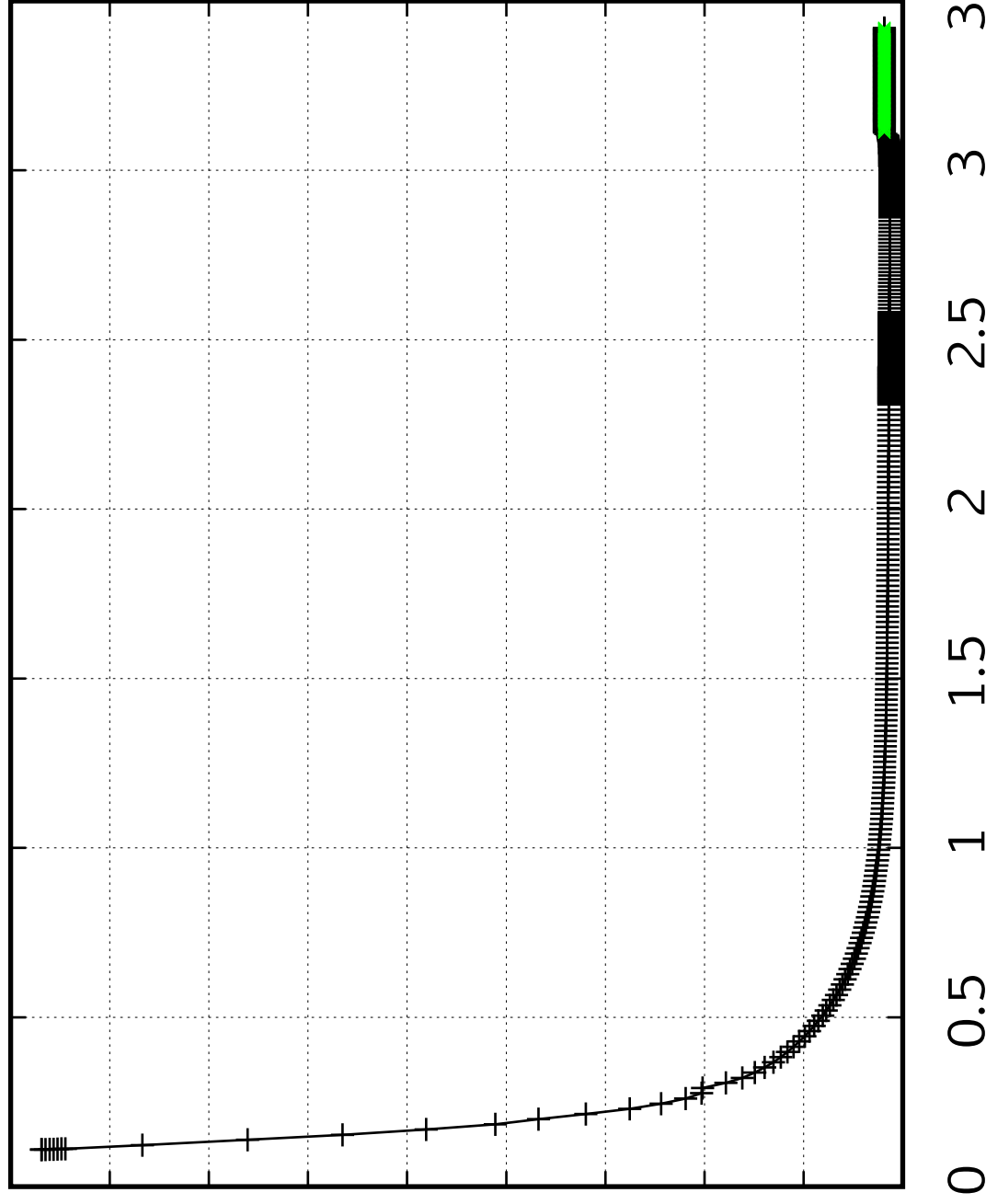
0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



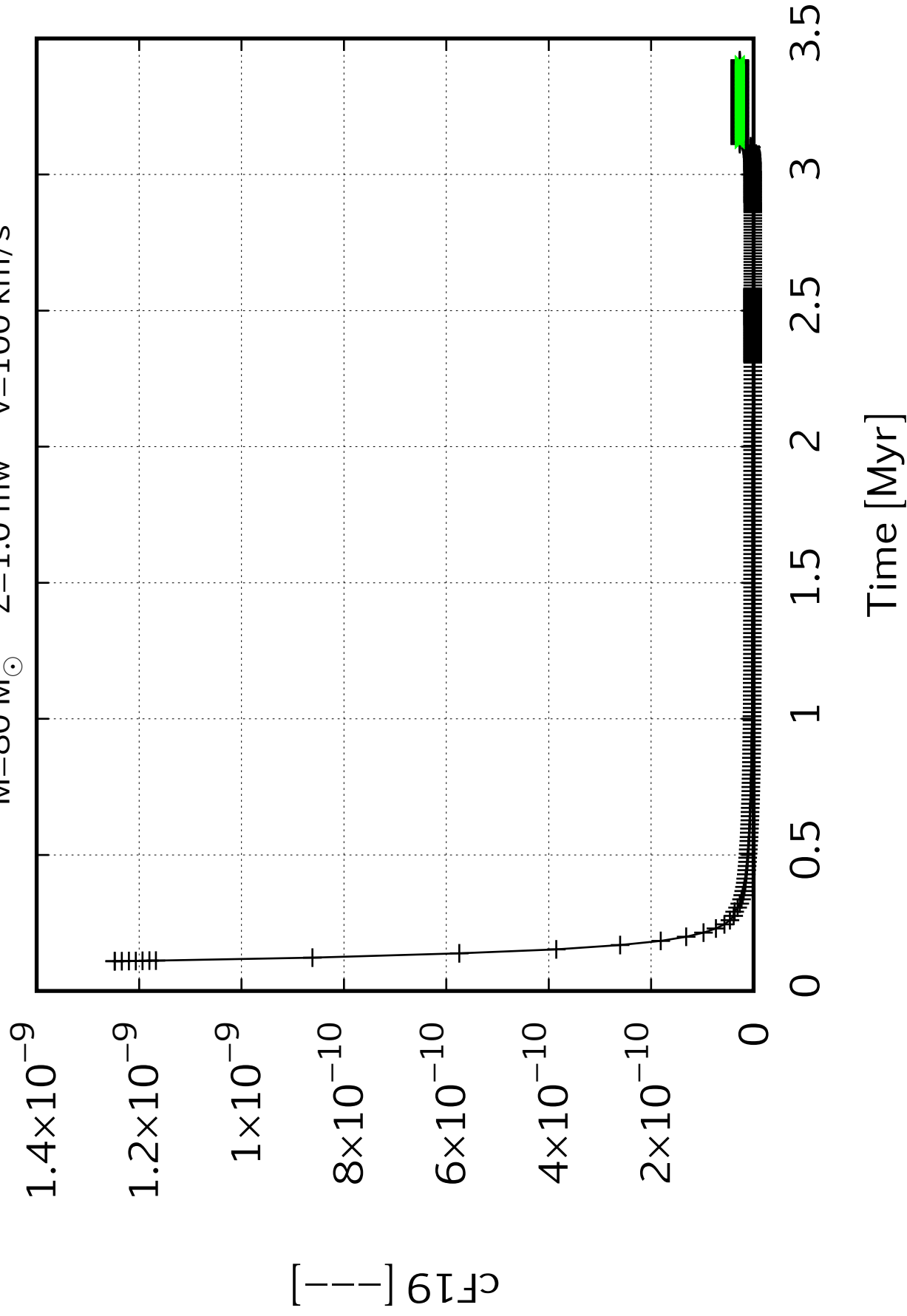
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

$[\text{O II}]\lambda 4450$



Time [Myr]

$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

0.00094

0.00093

0.00092

0.00091

0.00090

0.00089

0.00088

$c_{\text{Ne20}} [--]$

0

0.5

1

1.5

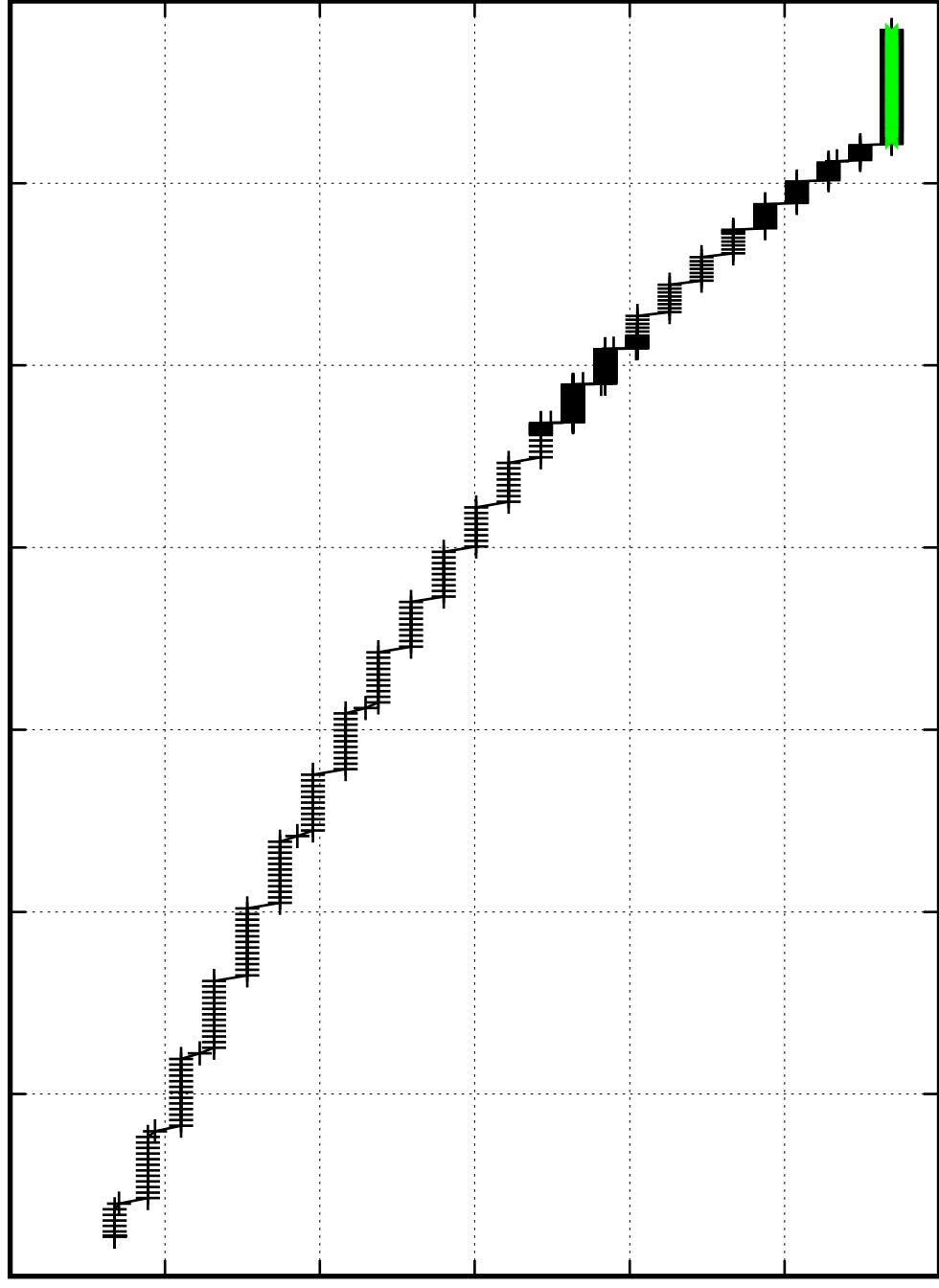
2

2.5

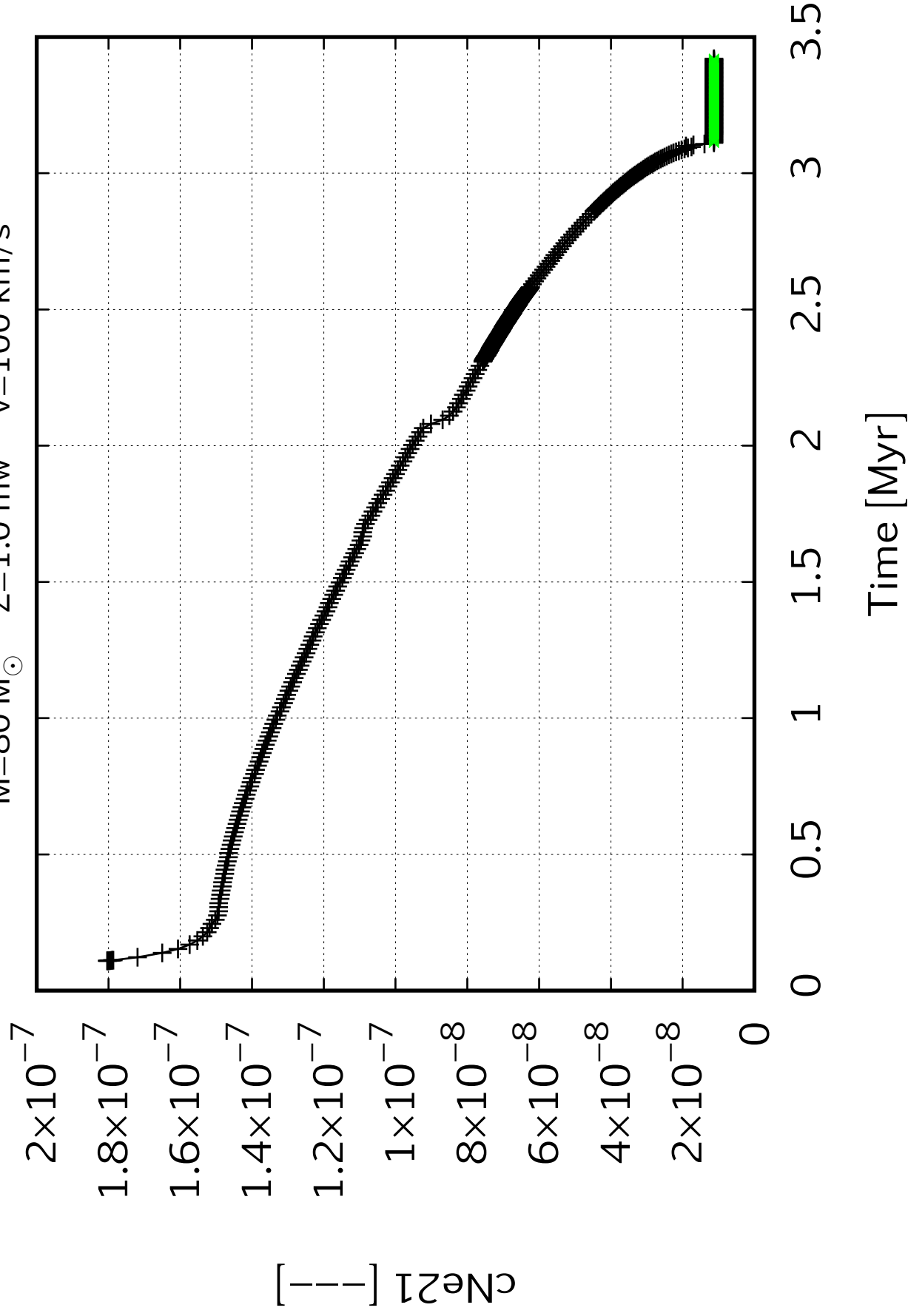
3

3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$



$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

0.00007

0.00006

0.00005

0.00004

0.00003

0.00002

0.00001

$c_{\text{Ne22}} [--]$

0

0.5

1

1.5

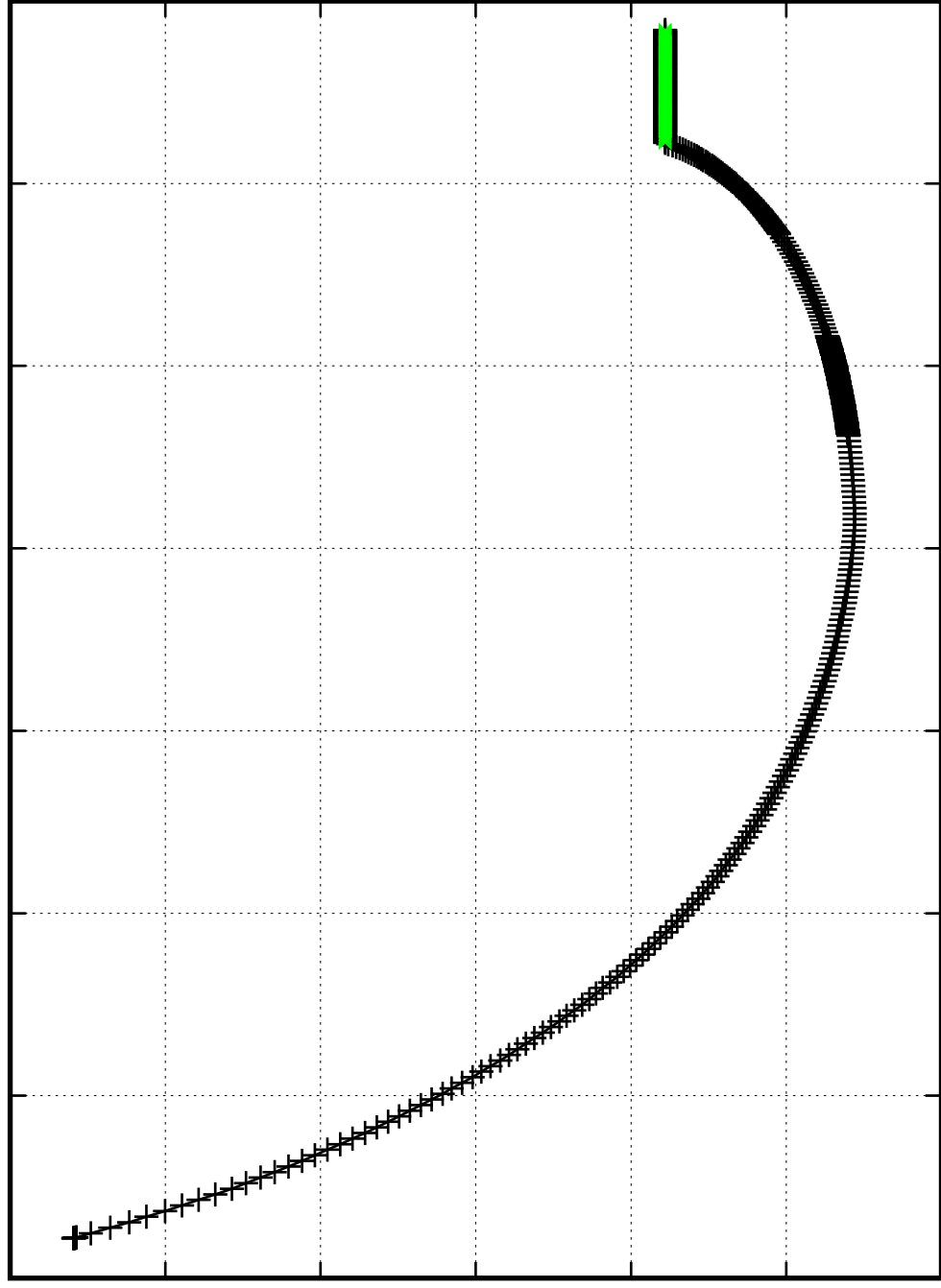
2

2.5

3

3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0\,\text{mw}$ $v=100\,\text{km/s}$

0.00014
0.00013
0.00012
0.00011
0.00010
0.00009
0.00008
0.00007
0.00006
0.00005
0.00004
0.00003

$c_{\text{Na}23} [-]$

0

0.5

1

1.5

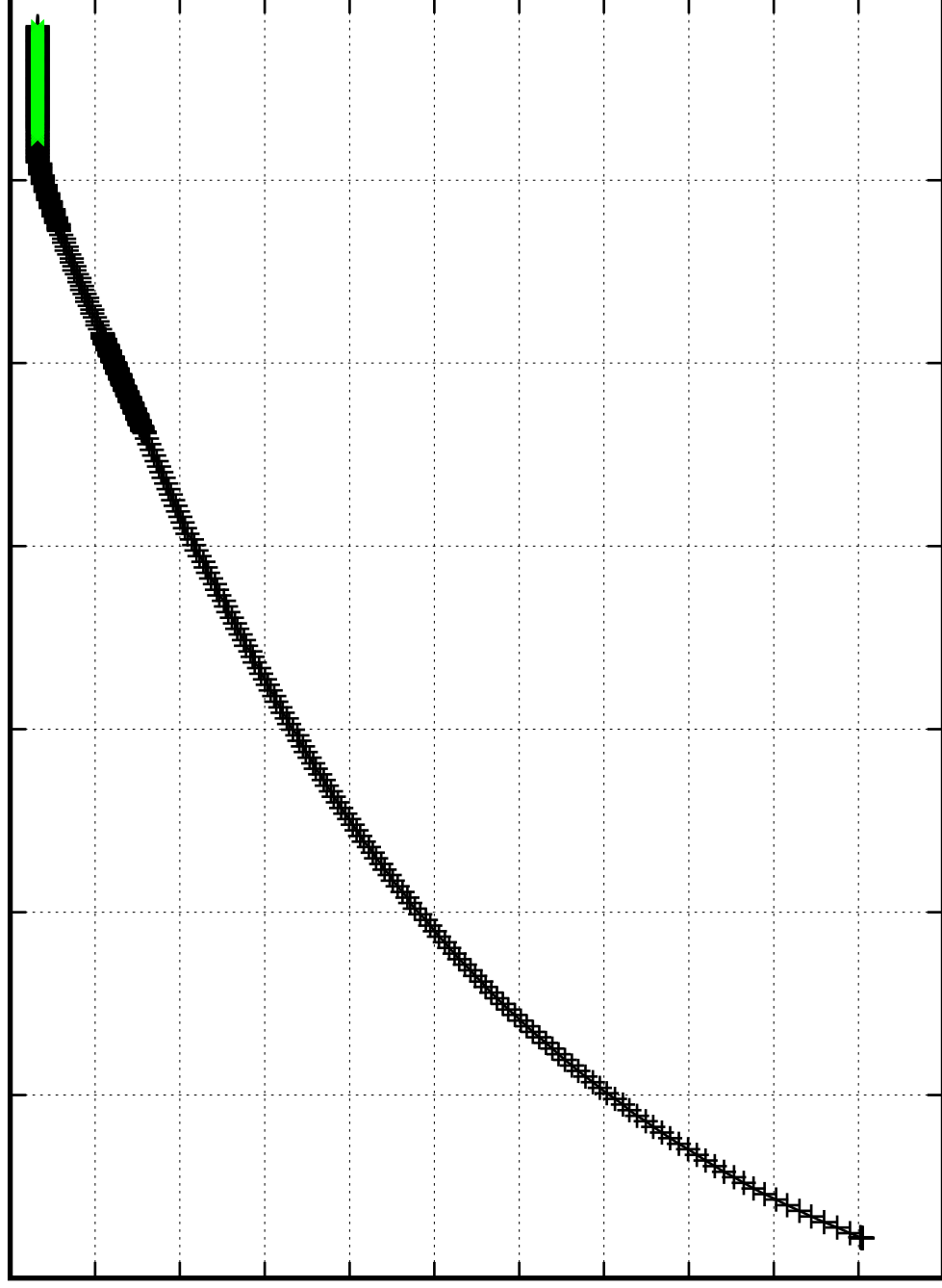
2

2.5

3

3.5

Time [Myr]



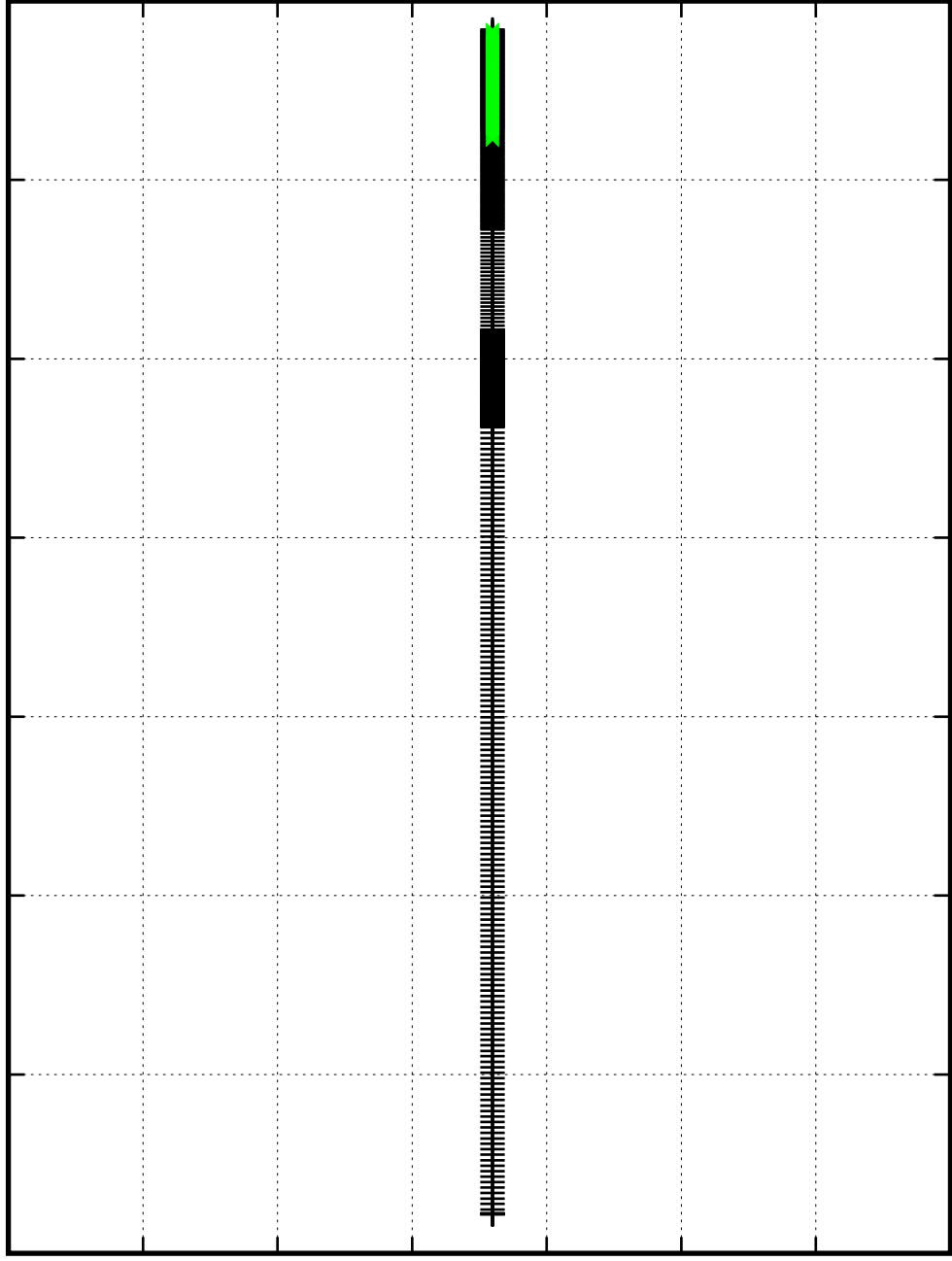
$M=80\ M_{\odot}$ $Z=1.0\ \text{mw}$ $v=100\ \text{km/s}$

$cM_{24}^{0g} [--]$

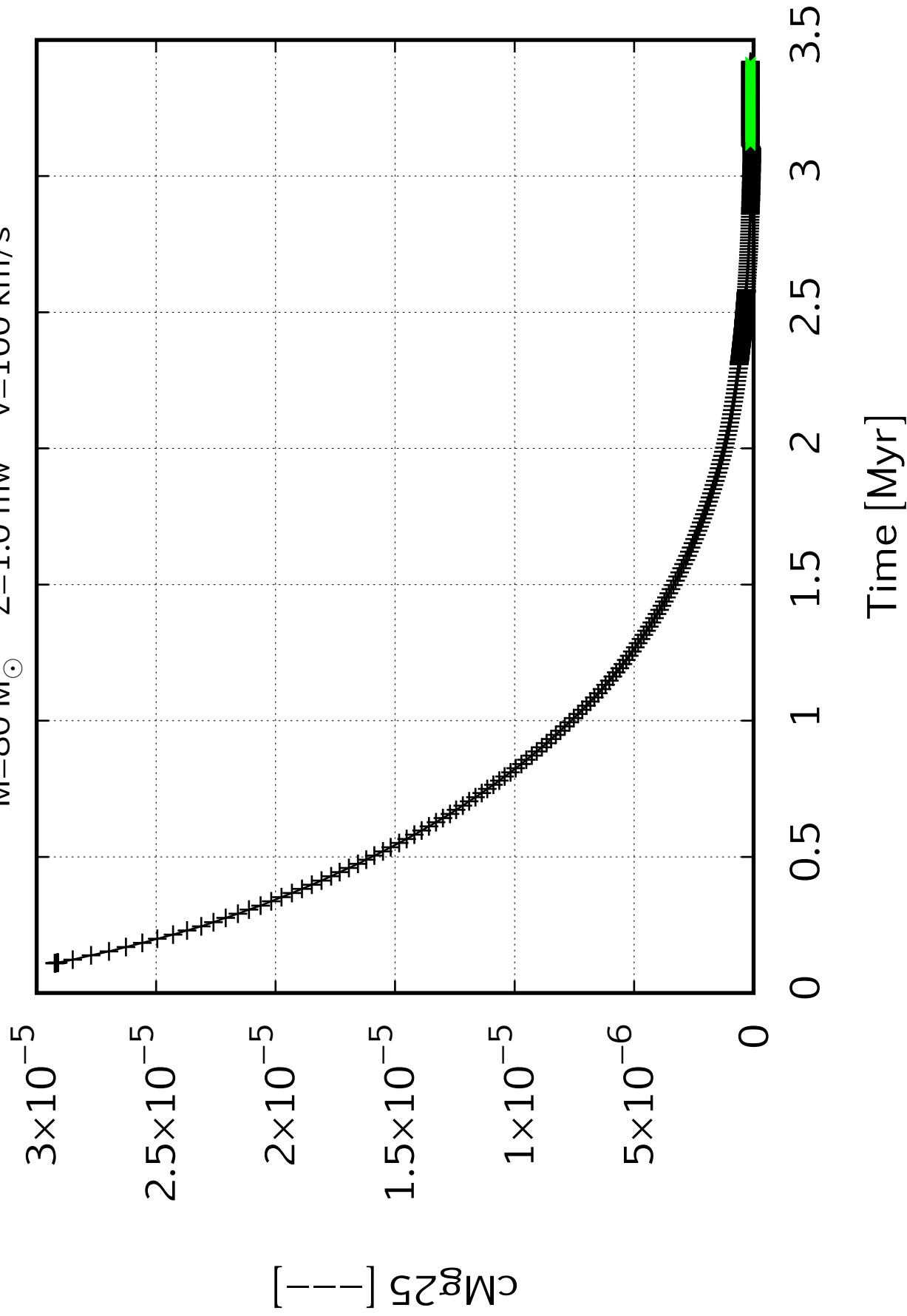
0.000292
0.000291
0.000290
0.000289
0.000288
0.000287
0.000286
0.000285

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100$ km/s



$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

0.00006

0.00006

0.00005

0.00005

0.00004

0.00004

cM_{g26} [—]

0

0.5

1

1.5

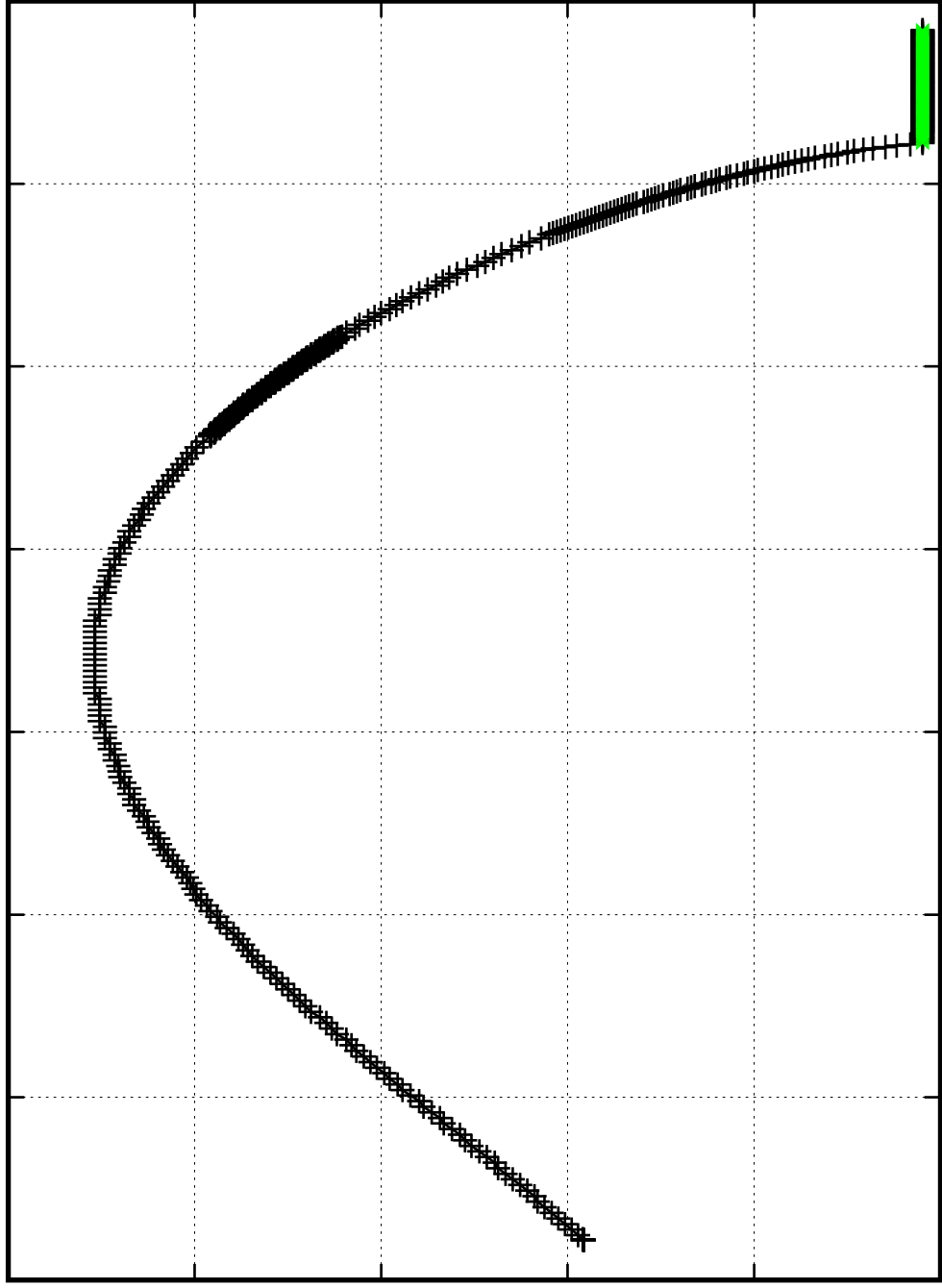
2

2.5

3

3.5

Time [Myr]



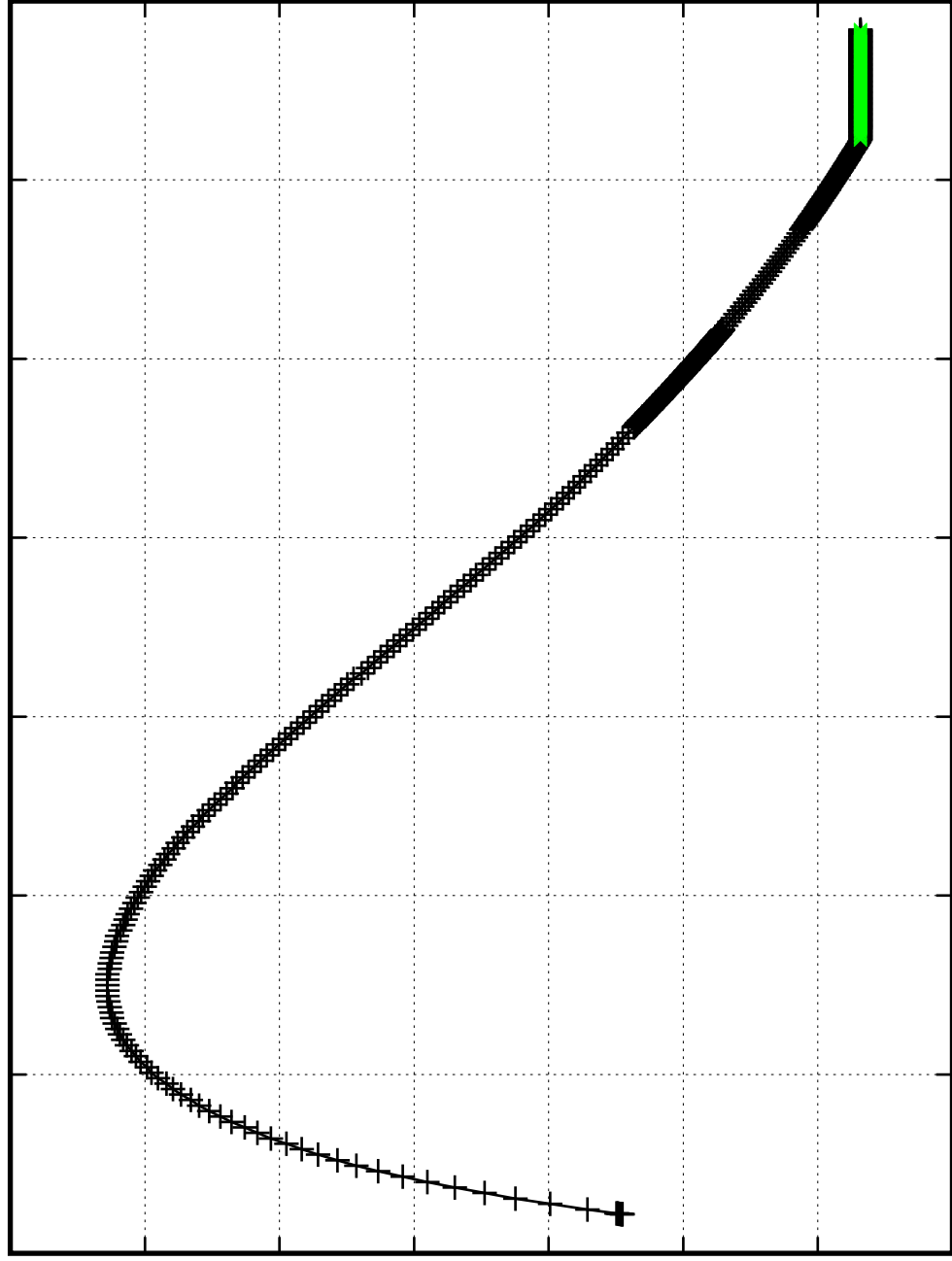
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

cAl26 [---]

0.000016
0.000014
0.000012
0.000010
0.000008
0.000006
0.000004
0.000002

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



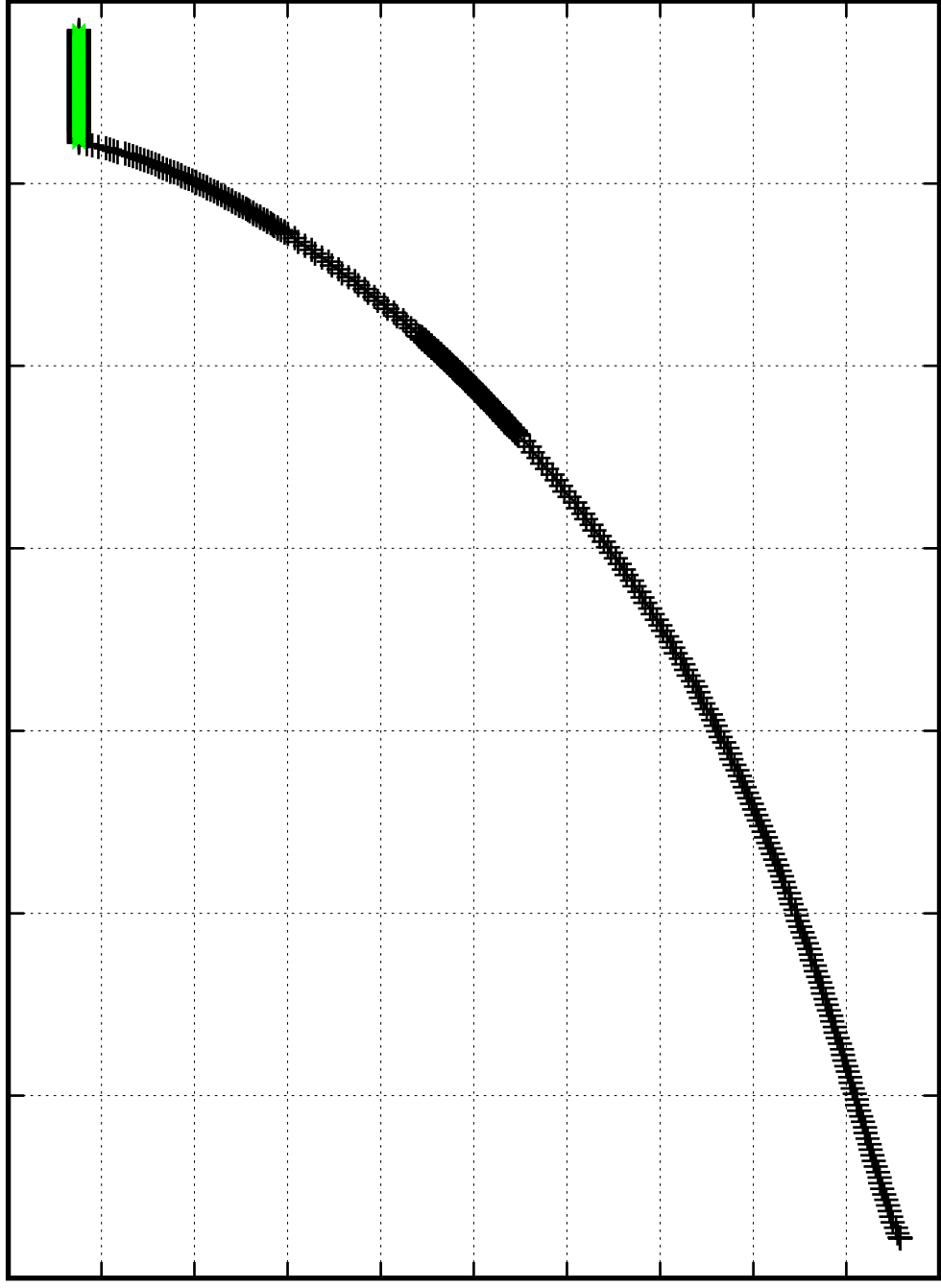
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

$c_{\text{Al27}} [-]$

0.00010
0.00009
0.00009
0.00008
0.00008
0.00007
0.00007
0.00006
0.00006
0.00005
0.00005

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



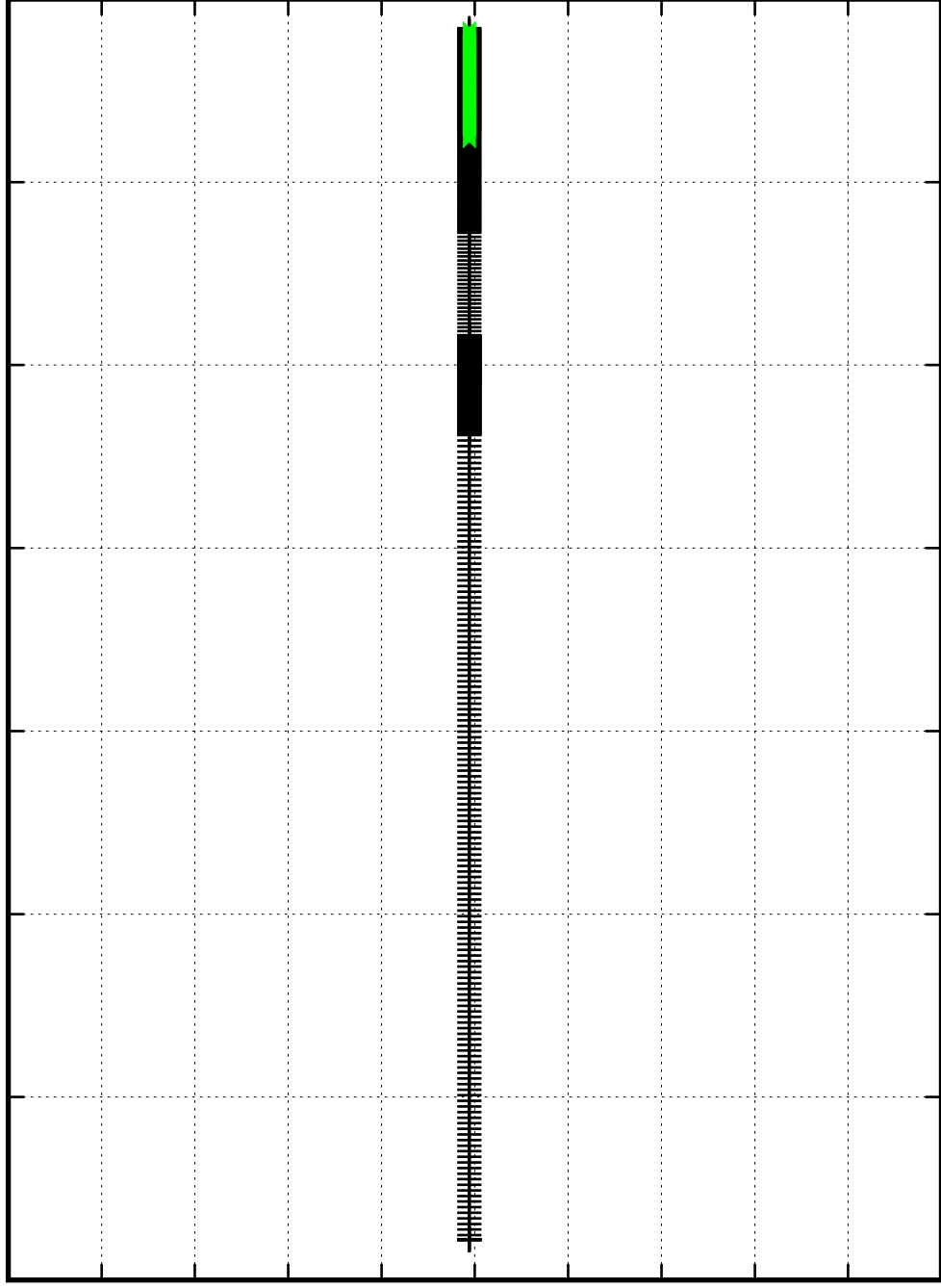
$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\text{ km/s}$

0.00049
0.00049
0.00049
0.00049
0.00048
0.00048
0.00048
0.00048
0.00048
0.00048
0.00048

$[\text{--}]_{\text{CS:28}}$

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



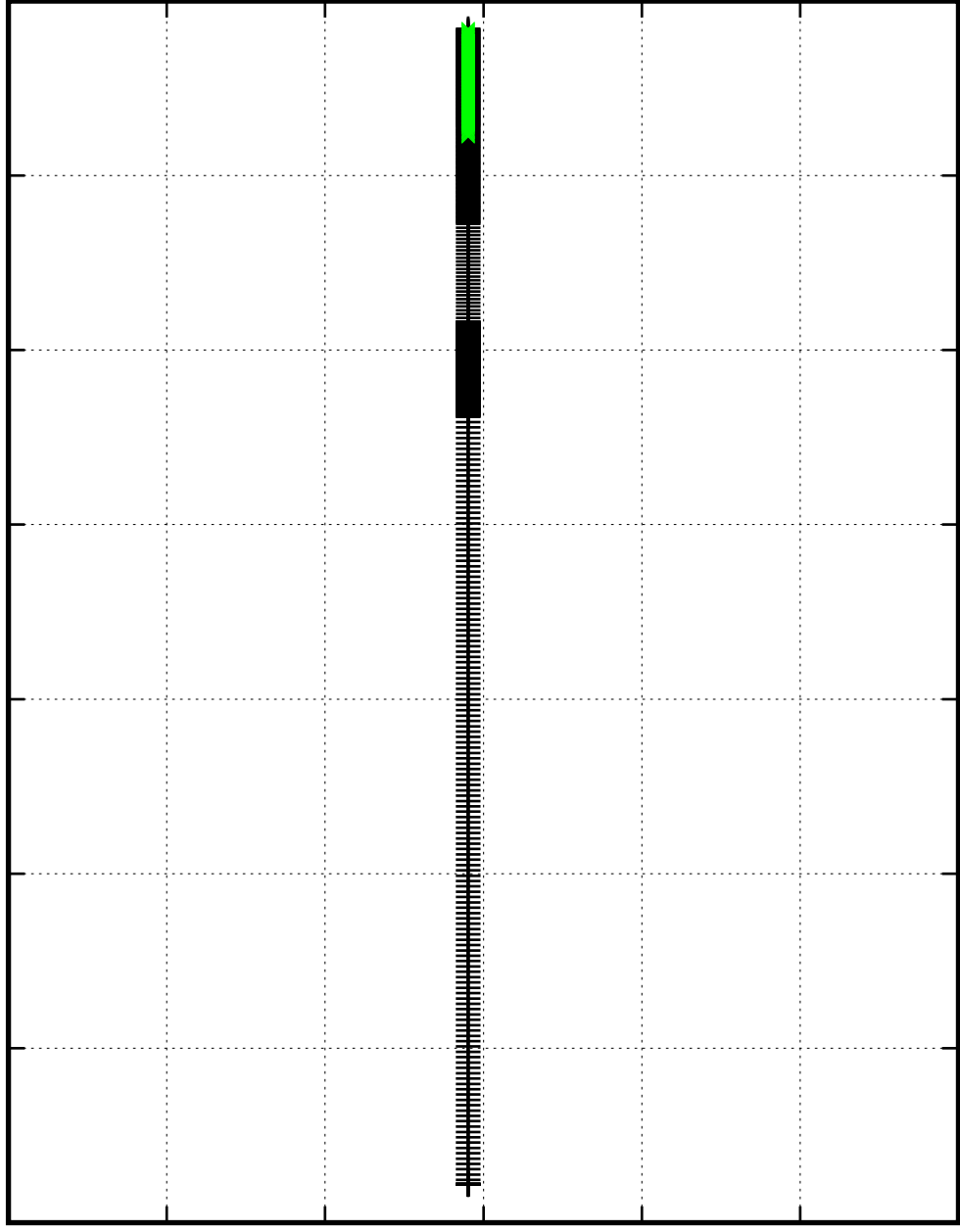
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

$[\text{--}]_{\text{CS}29}$

0.0000257
0.0000256
0.0000255
0.0000254
0.0000253
0.0000252
0.0000251

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



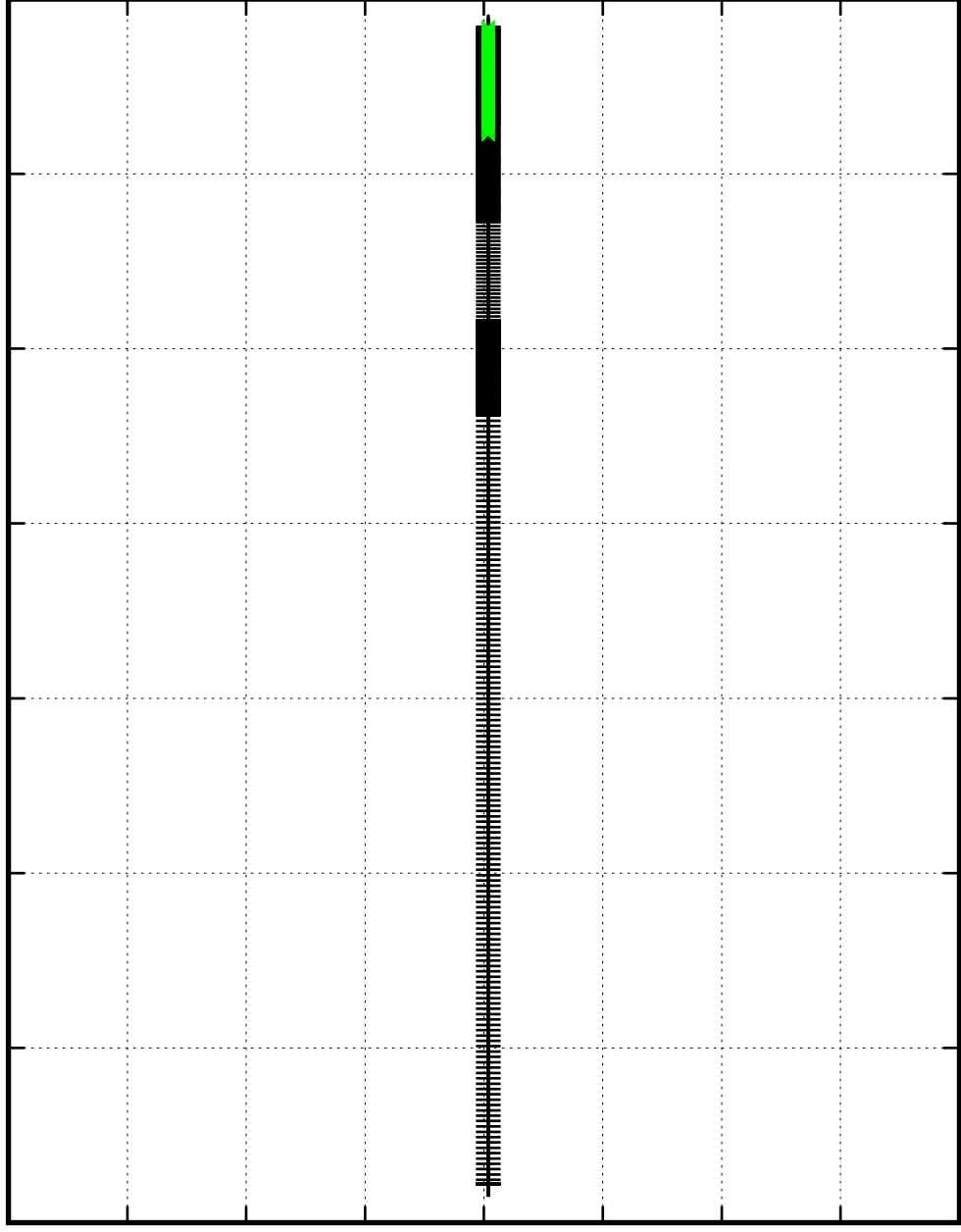
$M=80 M_{\odot}$ $Z=1.0$ mw $v=100$ km/s

$[\text{--}]_{\text{Si30}}$

0.00000175
0.00000175
0.00000174
0.00000174
0.00000173
0.00000173
0.00000172
0.00000172
0.00000171

0 0.5 1 1.5 2 2.5 3 3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$

0.00104

0.00103

0.00103

0.00102

0.00102

0.00101

[Fe56]

0

0.5

1

1.5

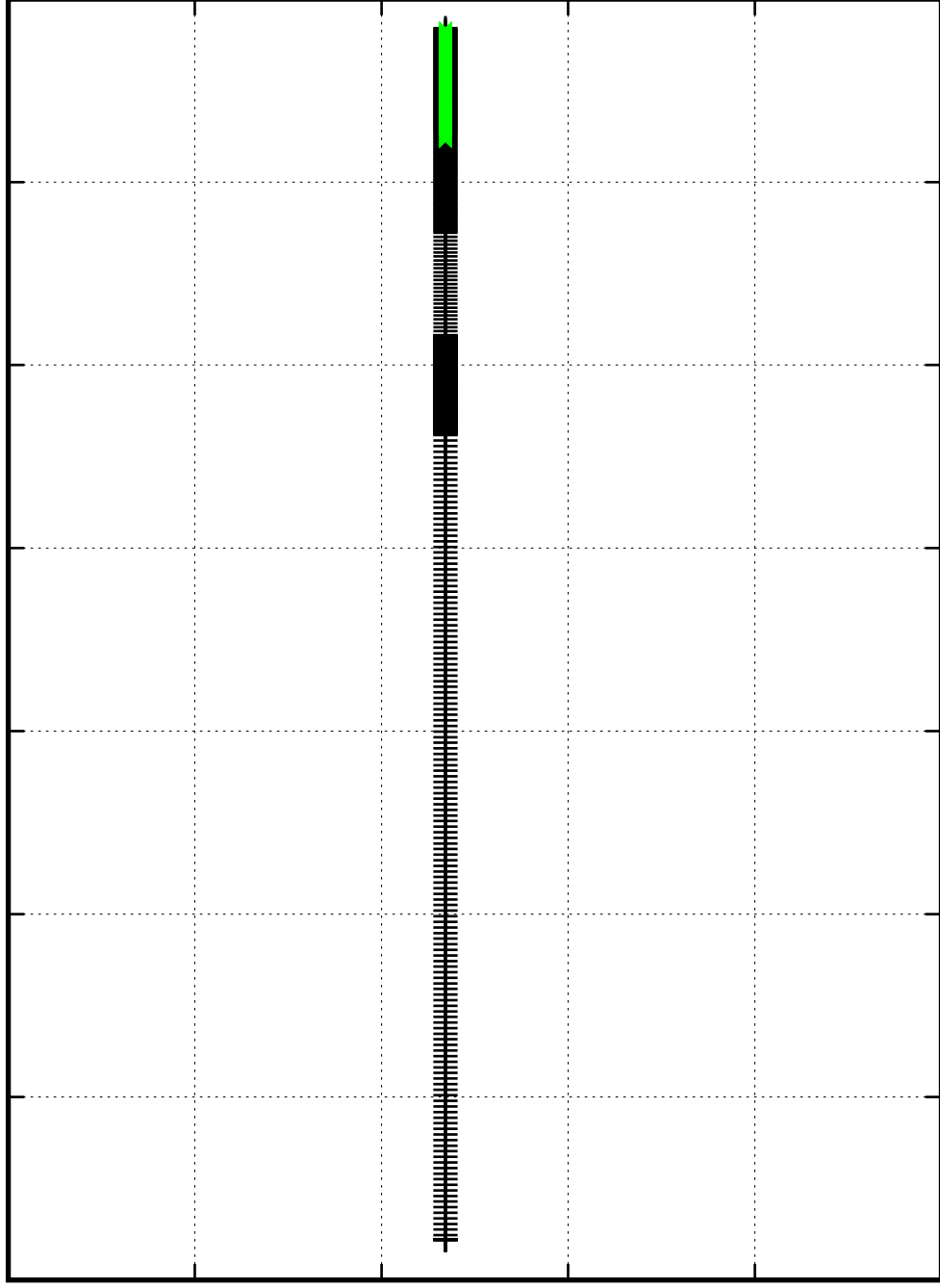
2

2.5

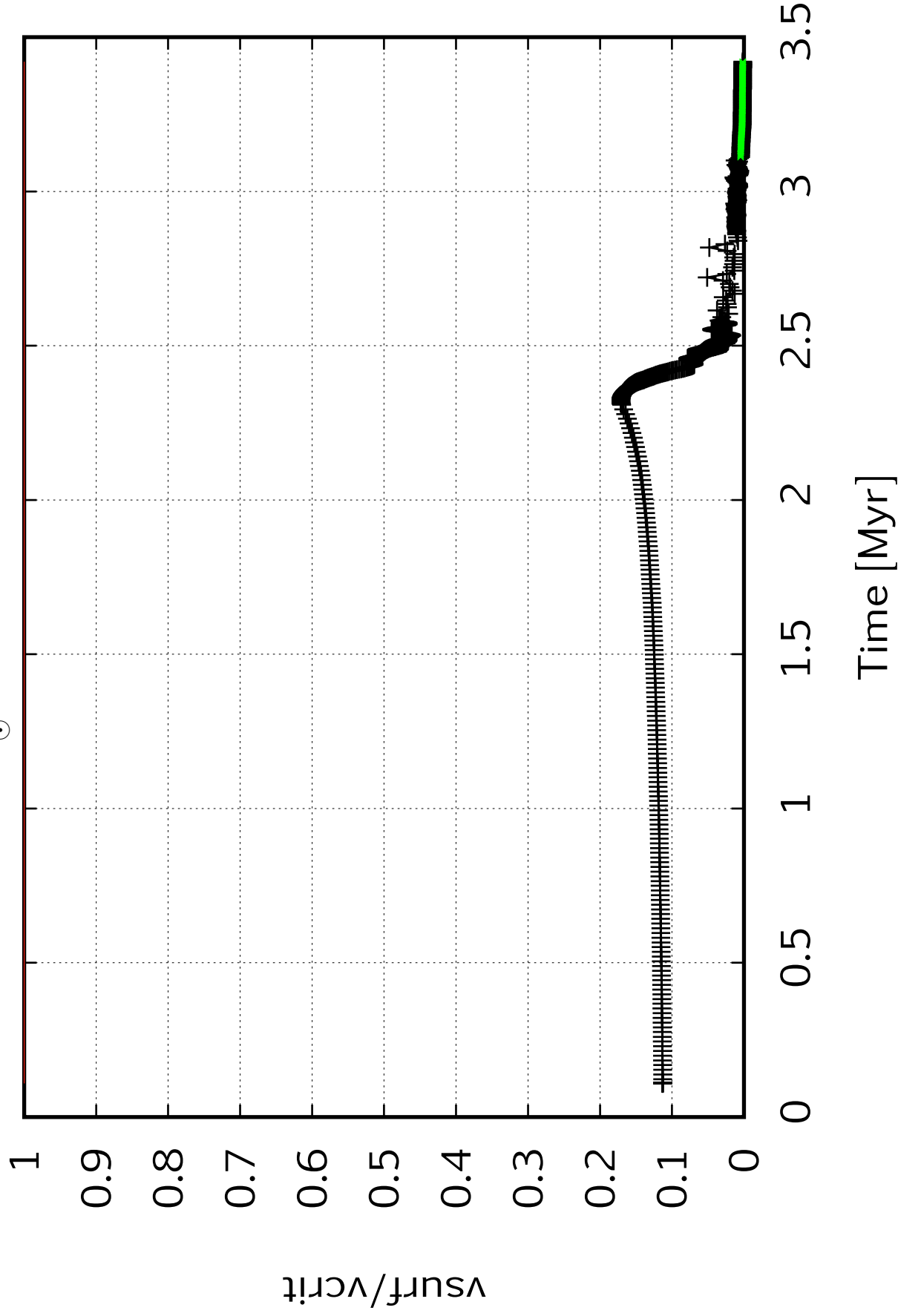
3

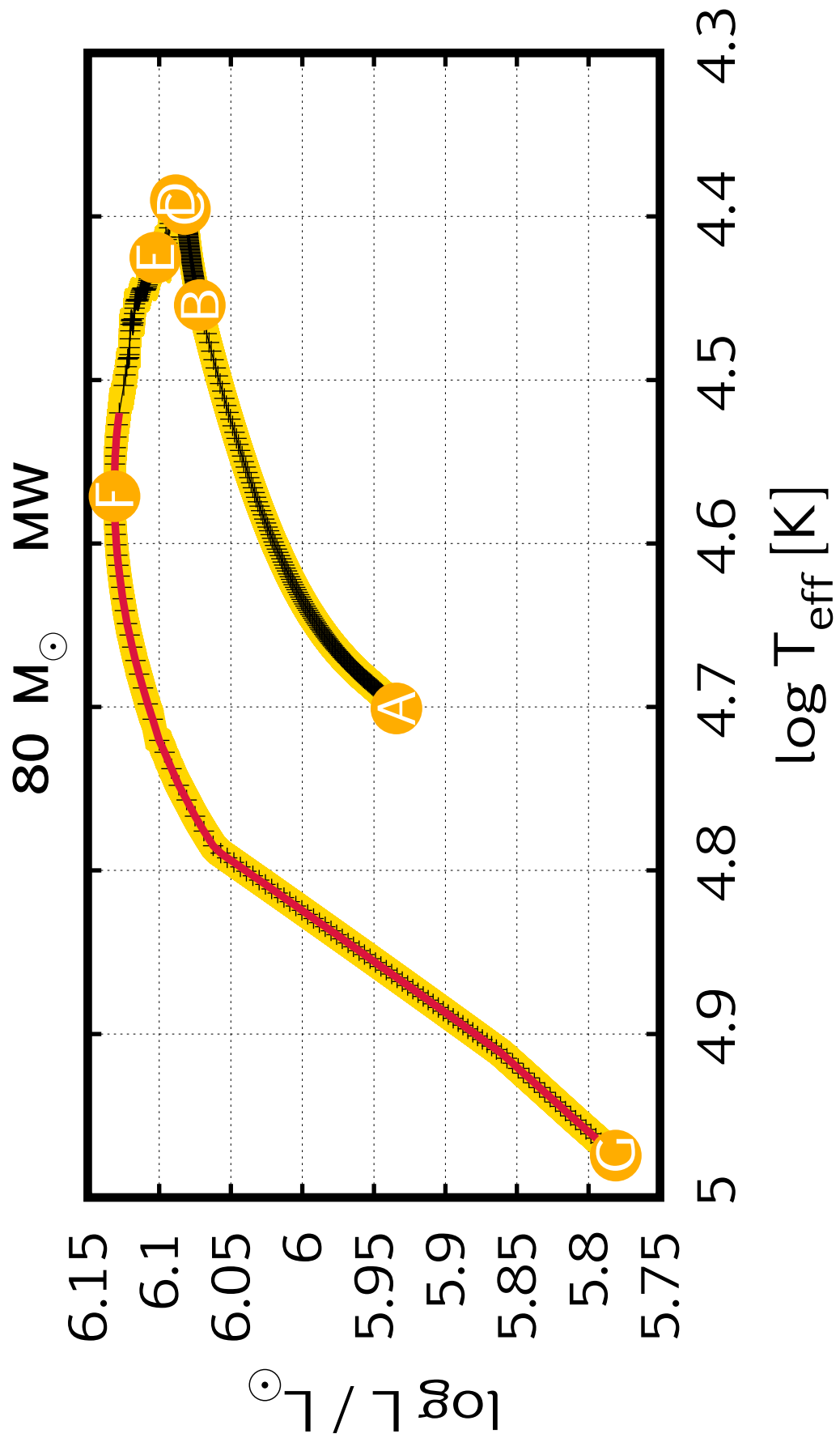
3.5

Time [Myr]



$M=80\,M_{\odot}$ $Z=1.0$ mw $v=100\,\text{km/s}$





80 M_{\odot} MW

$\log \dot{M} [M_{\odot}/\text{yr}]$

-3.8

-4

-4.2

-4.4

-4.6

-4.8

-5

-5.2

-5.4

-5.6

0

0.5

1

1.5

2

2.5

3

3.5

Time [Myr]

