Input: A bidm = 100000000000000.0a bidm = 0.01 $m \bar{b} idm = 1000.0$ Delta\_bid $\bar{m} = 2000.00000000001$ f bidm = 0.9Baryon temperature DM temperature  $10^{2}$  $10^1$ Tdm [K]  $10^{0}$  $10^{-1}$ 7500 10000 12500 0 2500 5000 0 2500 5000 7500 10000 12500 conf. time [Mpc] conf. time [Mpc] Baryon temperature difference DM temperature difference 0.35 0.30 0.25 ∆Tdm [K] 0.20 0.15 0.10 0.05 0.00 5000 7500 10000 12500 2500 5000 7500 10000 12500 0 0 2500 conf. time [Mpc] conf. time [Mpc] Baryon temperature ratio DM temperature ratio 40 Tdm ratio 20 10

7500 10000 12500

2500

0

5000

conf. time [Mpc]

 $10^{4}$ 

 $10^{3}$ 

 $10^{1}$ 

10<sup>0</sup>

0.0

-0.1

-0.2

-0.3

-0.4

-0.5

-0.6

1.0

0.9

0.7

0.6

0

2500

5000

conf. time [Mpc]

7500 10000 12500

Tb ratio 8.0

돌 10<sup>2</sup>