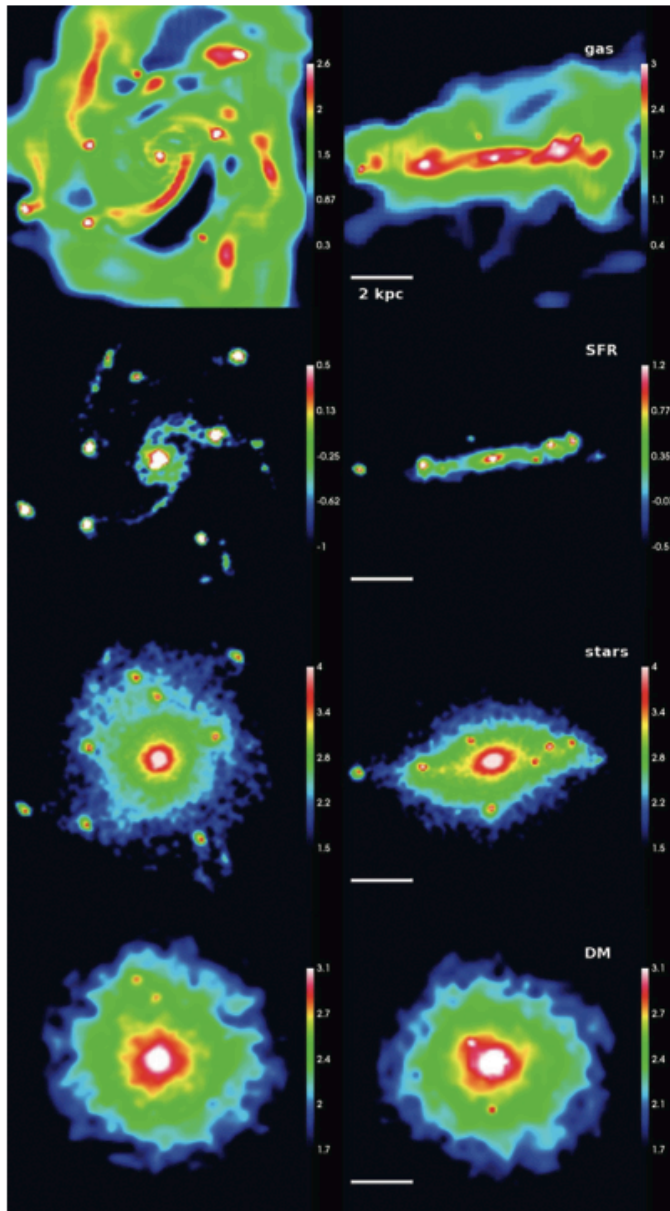


Accretion and other histories...

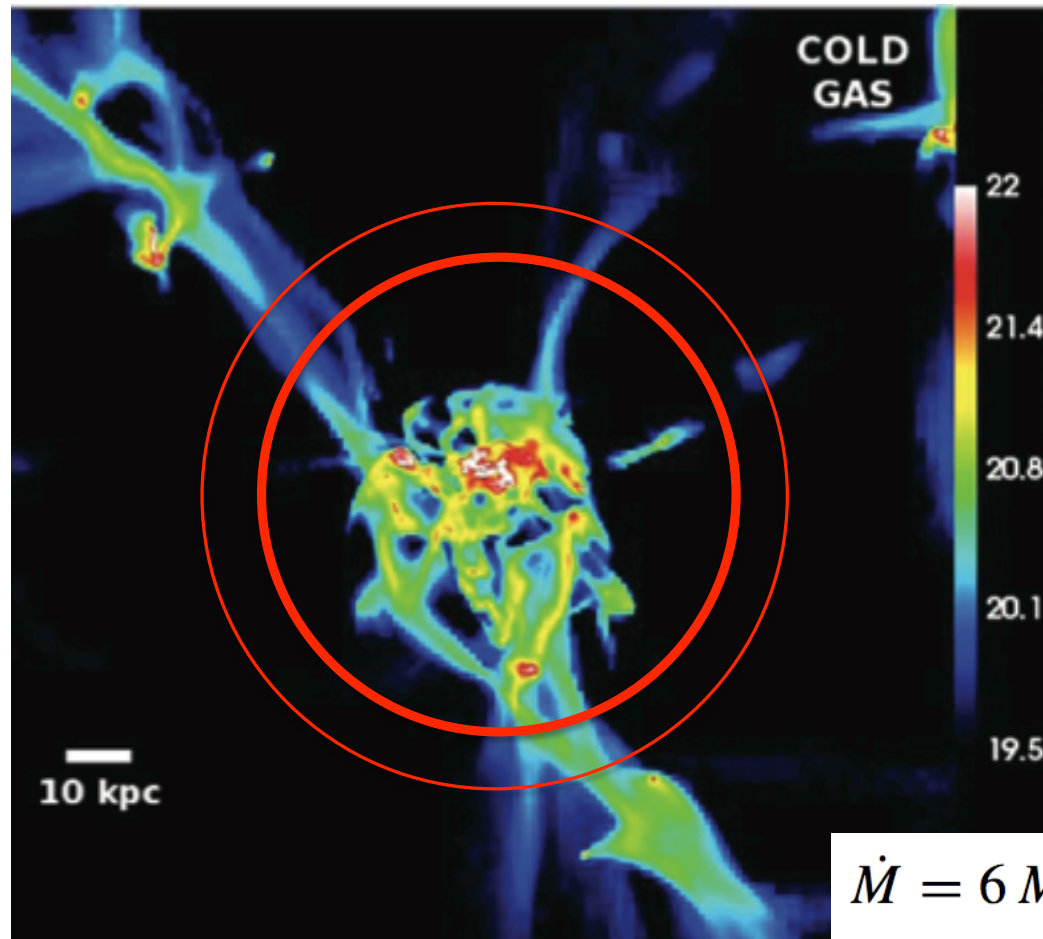


In an ART galaxy

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Ceverino+10

Accretion rate through spherical shells



Accretion Rate =
(radius)² ×
(mean density in the shell) ×
(infall velocity)

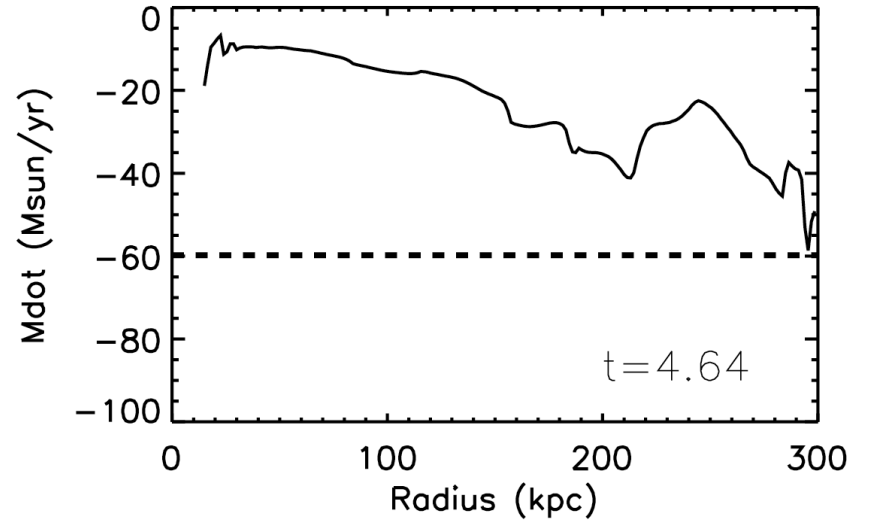
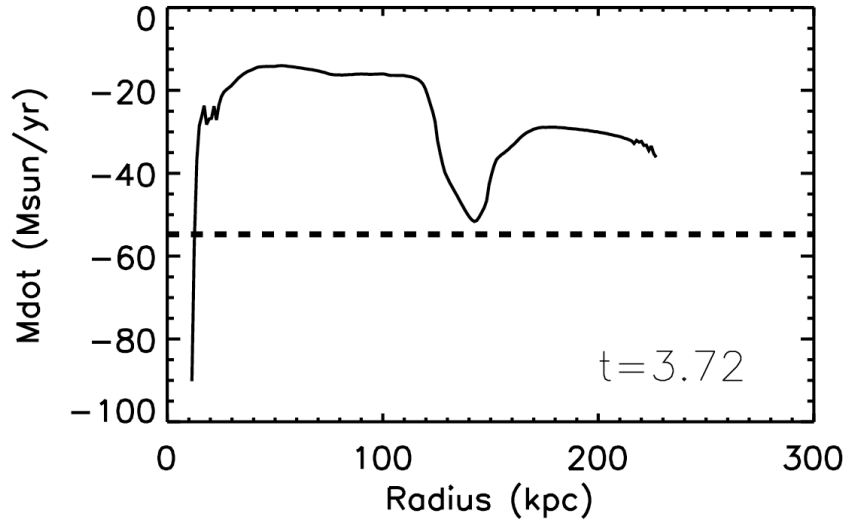
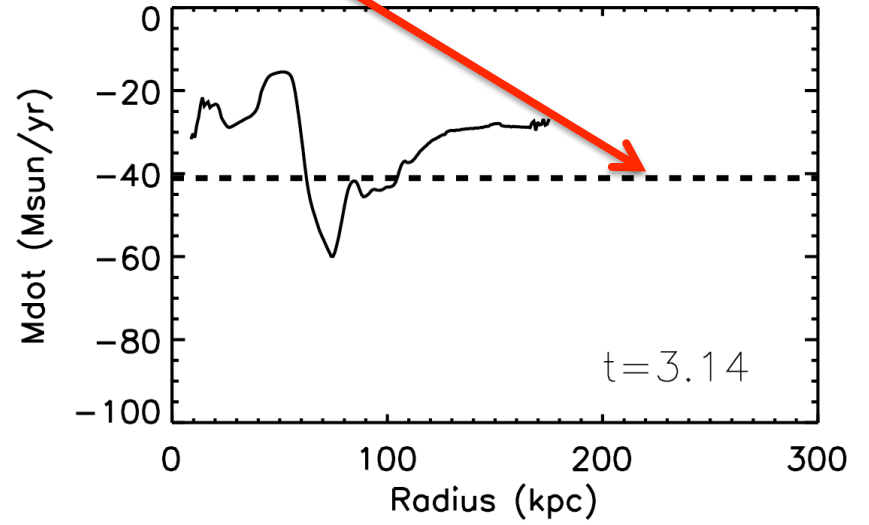
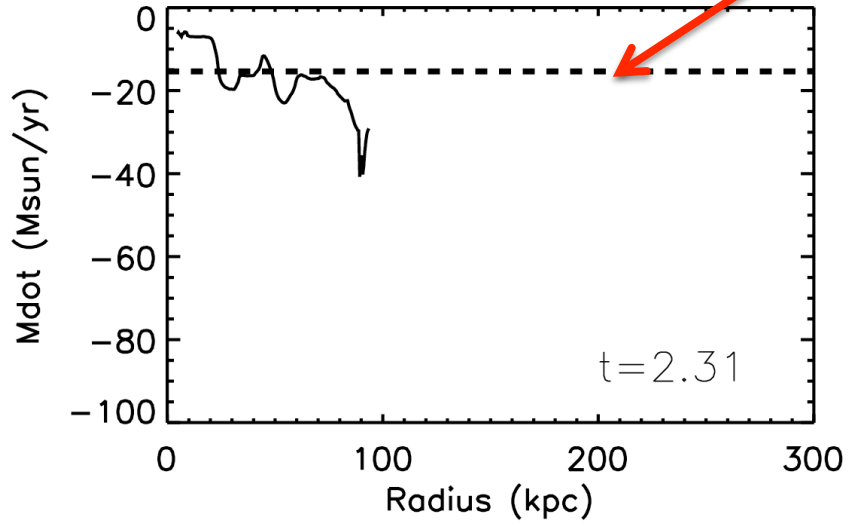
...integrated over the sphere

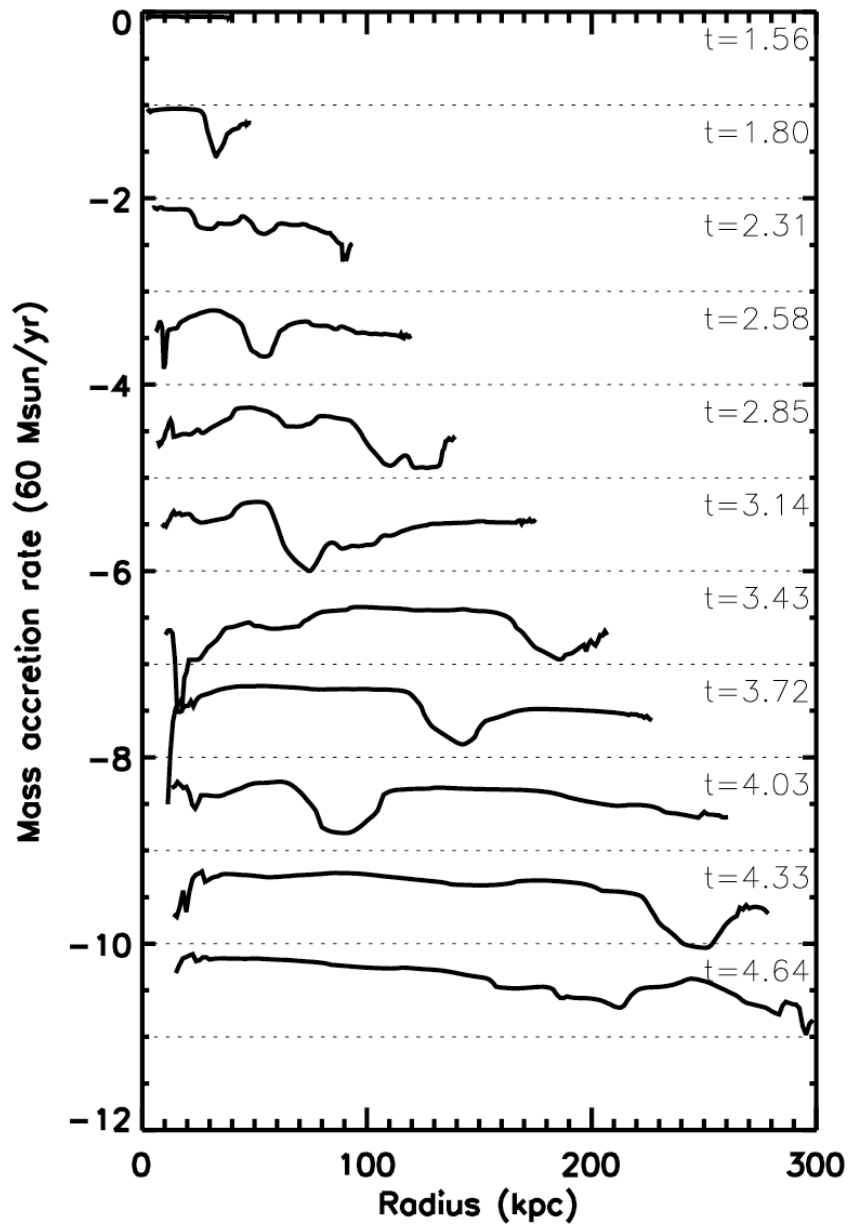
Typical theoretical gas accretion:

$$\dot{M} = 6 M_{12}^{1.15} (1 + z)^{2.25} f_{0.16} M_{\odot} \text{ yr}^{-1}$$

Ceverino+10

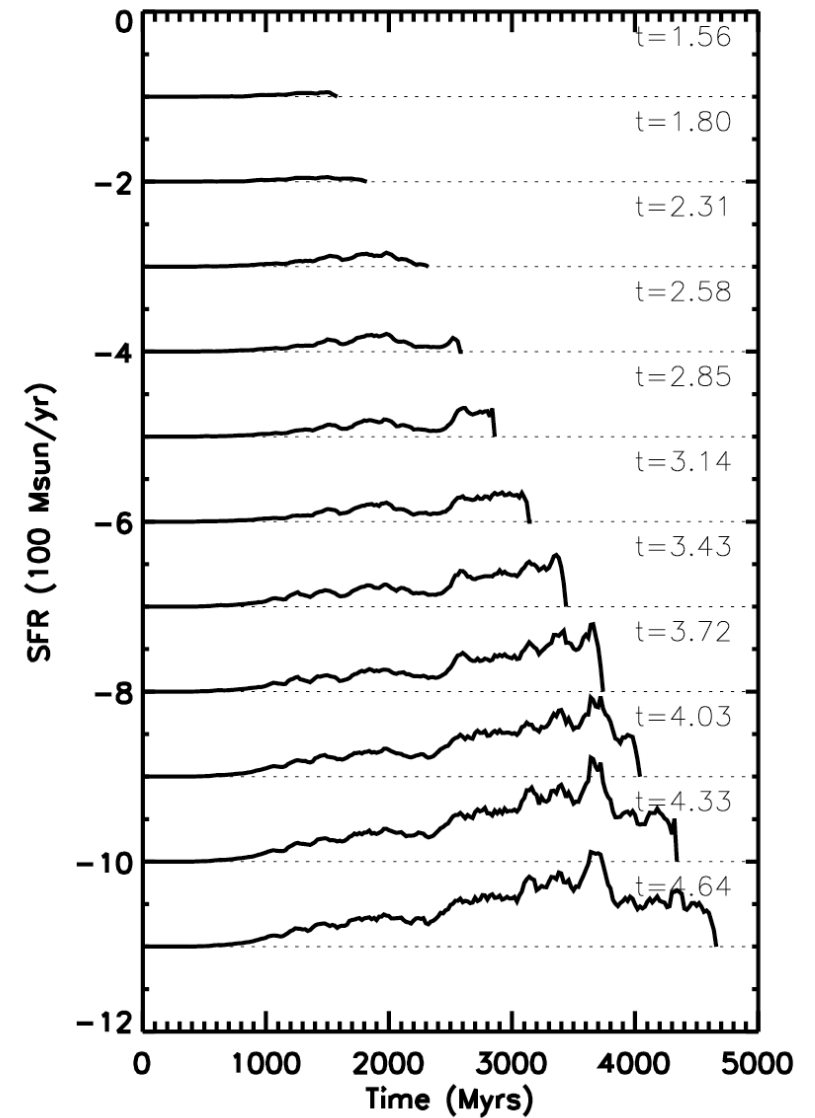
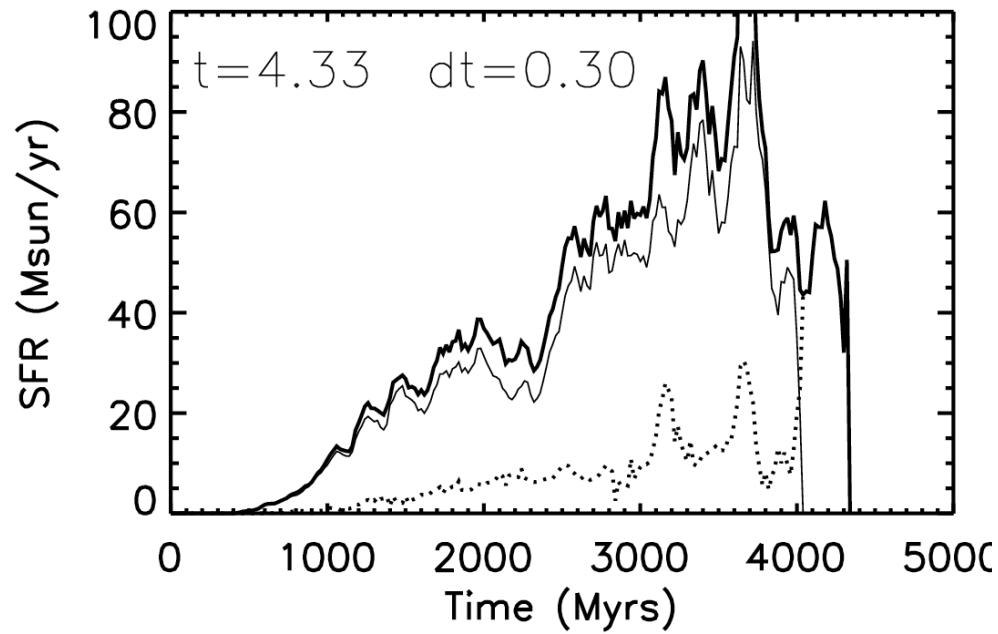
Values from the fitting formula





Jared Gabor

How does this compare to SFR?



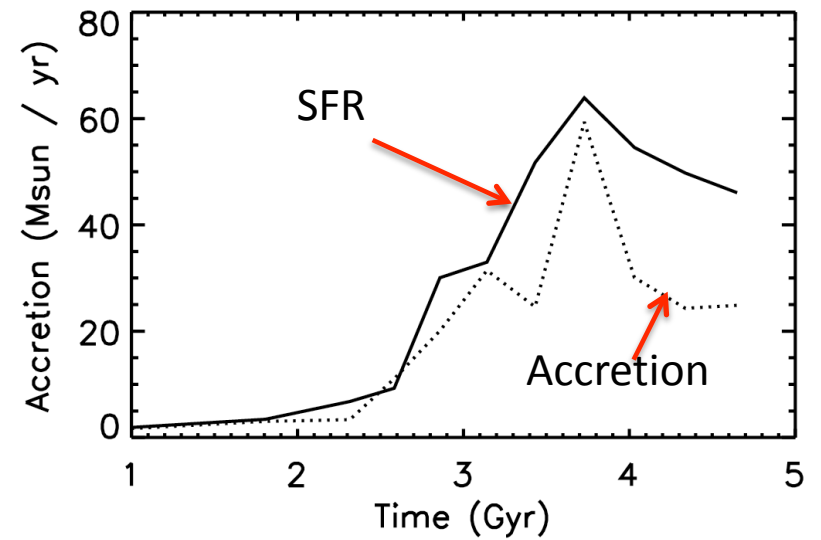
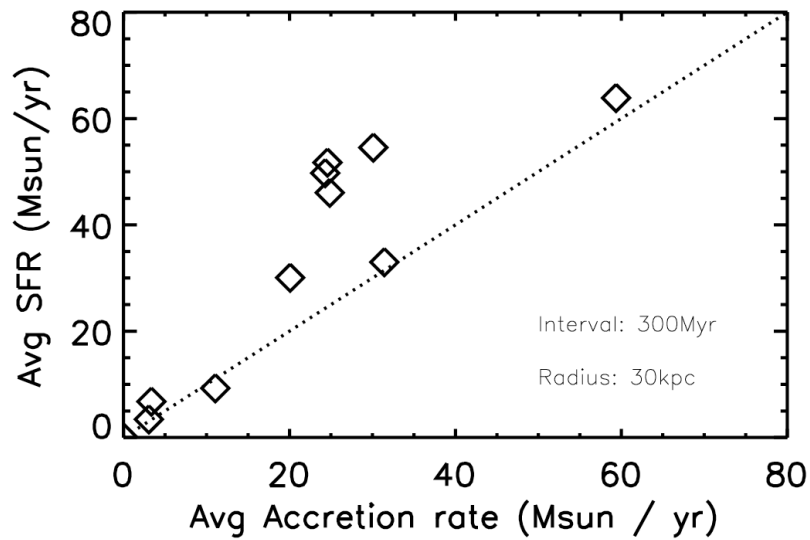
SFR vs. Accretion Rate

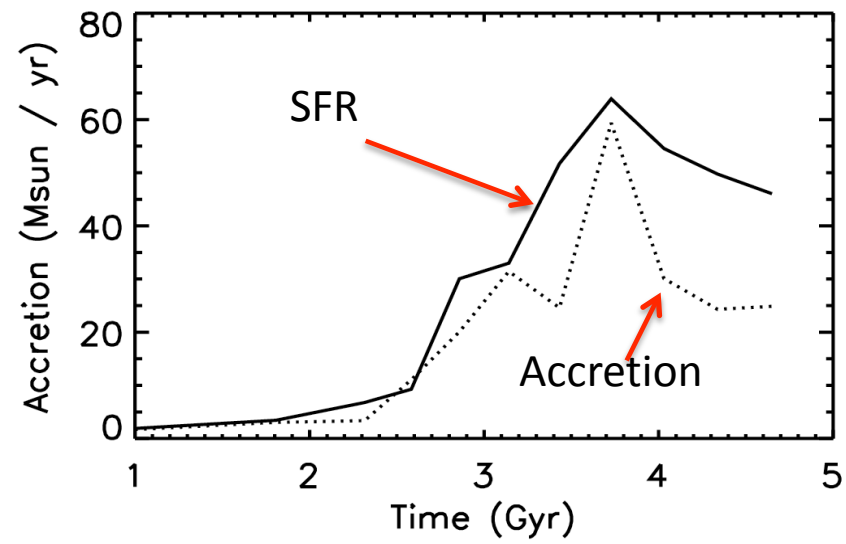
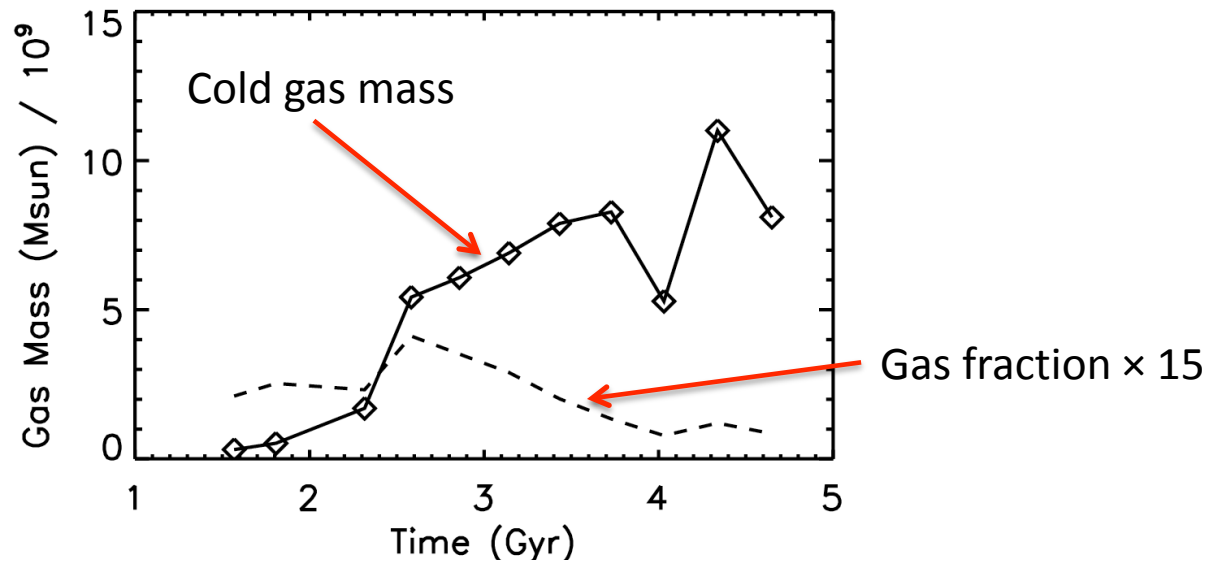


Averaged over the last 300 Myrs



Averaged over the nearest 30kpc from *previous* timestep





What's going on?

- Where does the star formation fuel come from?
- Cooling of hot gas halo?
- Hot halo becomes important at $M \approx 3 \times 10^{11} M_{\text{sun}}$ (Birnboim+Dekel 03)
- Approx $t=3$ Gyrs for this galaxy

