

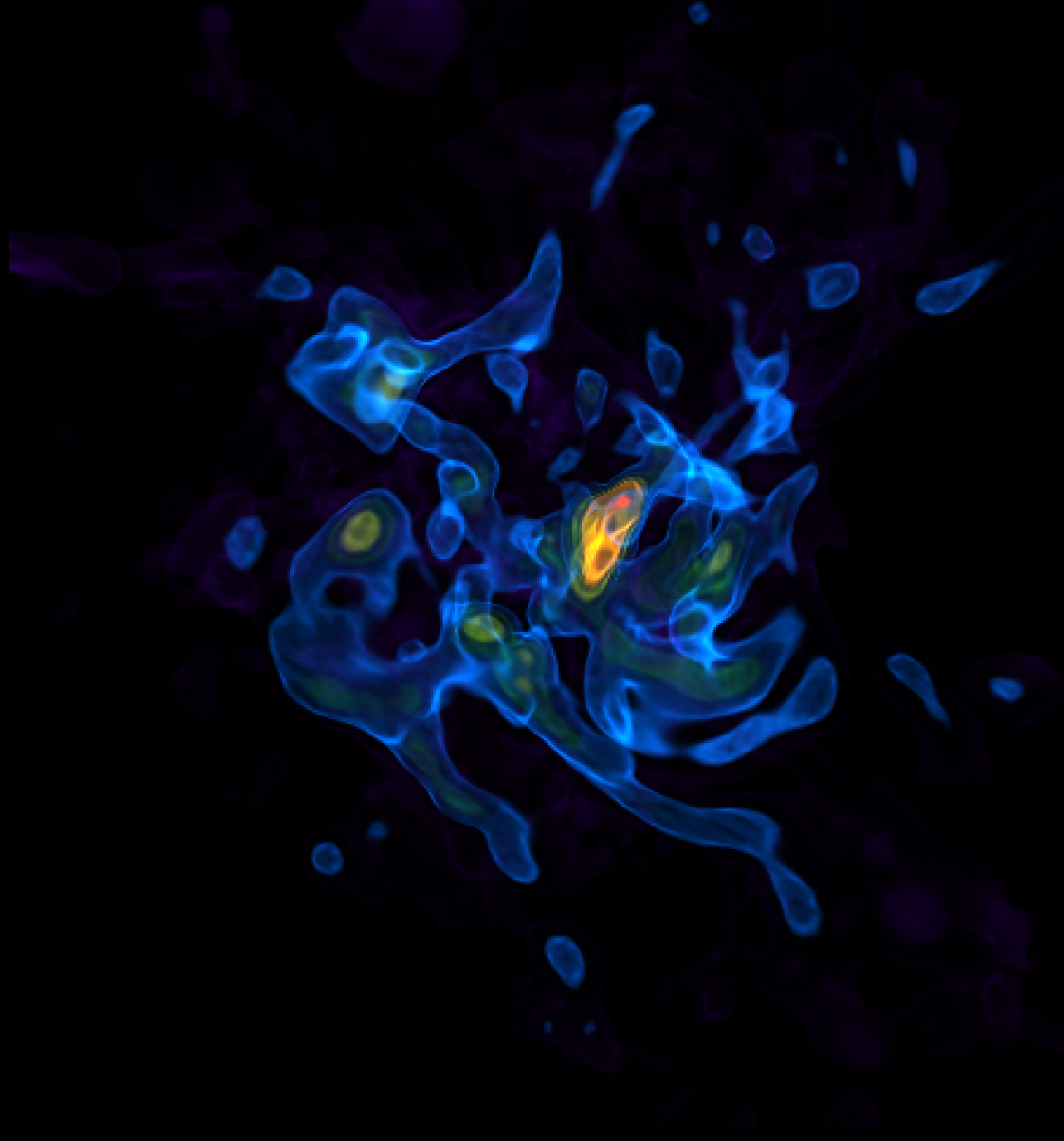
Galactic Rain: Coupling
Star Formation to
Circumgalactic Mass

By: Austin Gilbert, Brian O'Shea, Devin Silvia

Our View of Galaxies Before Hubble

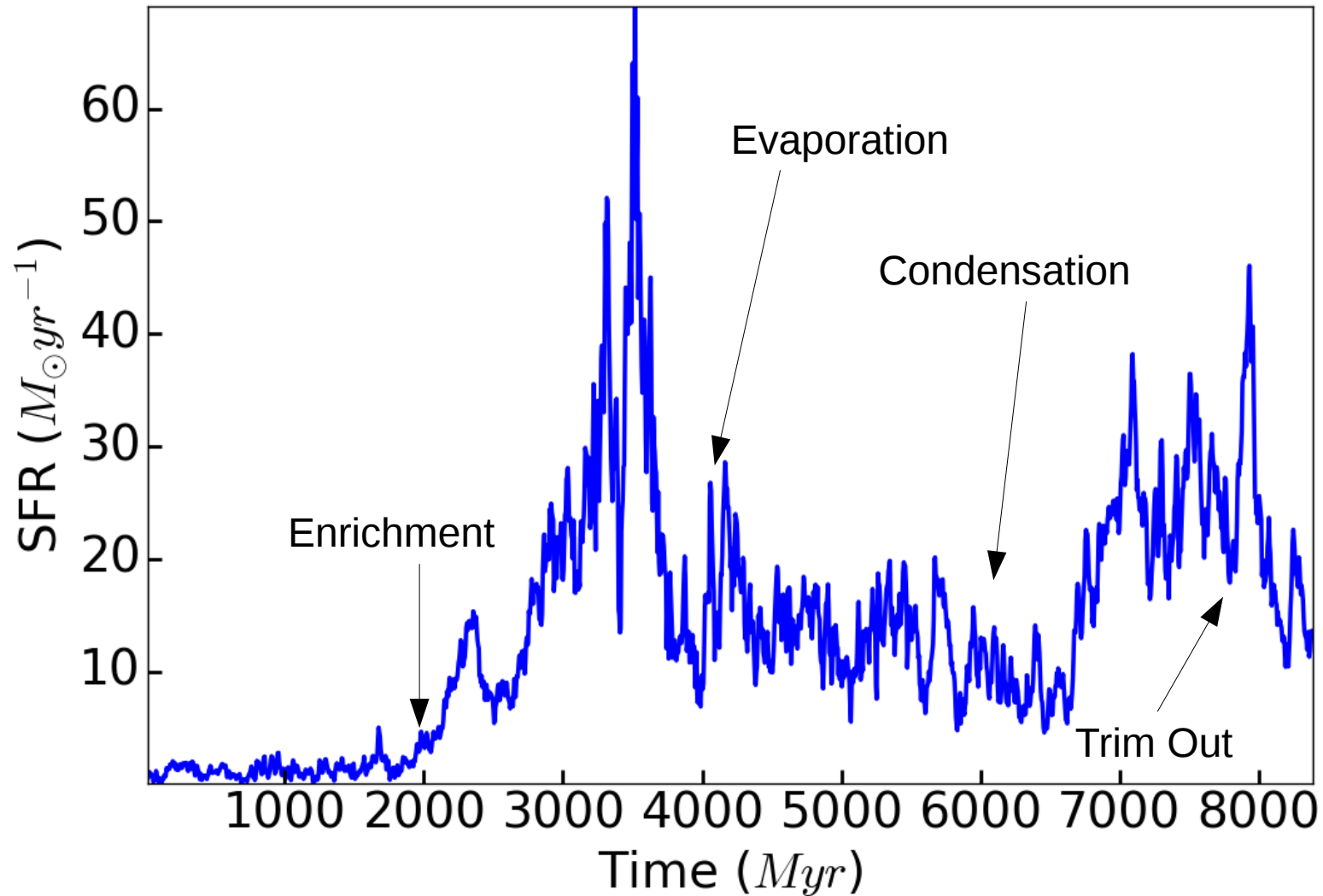


Our View of Galaxies After Hubble:

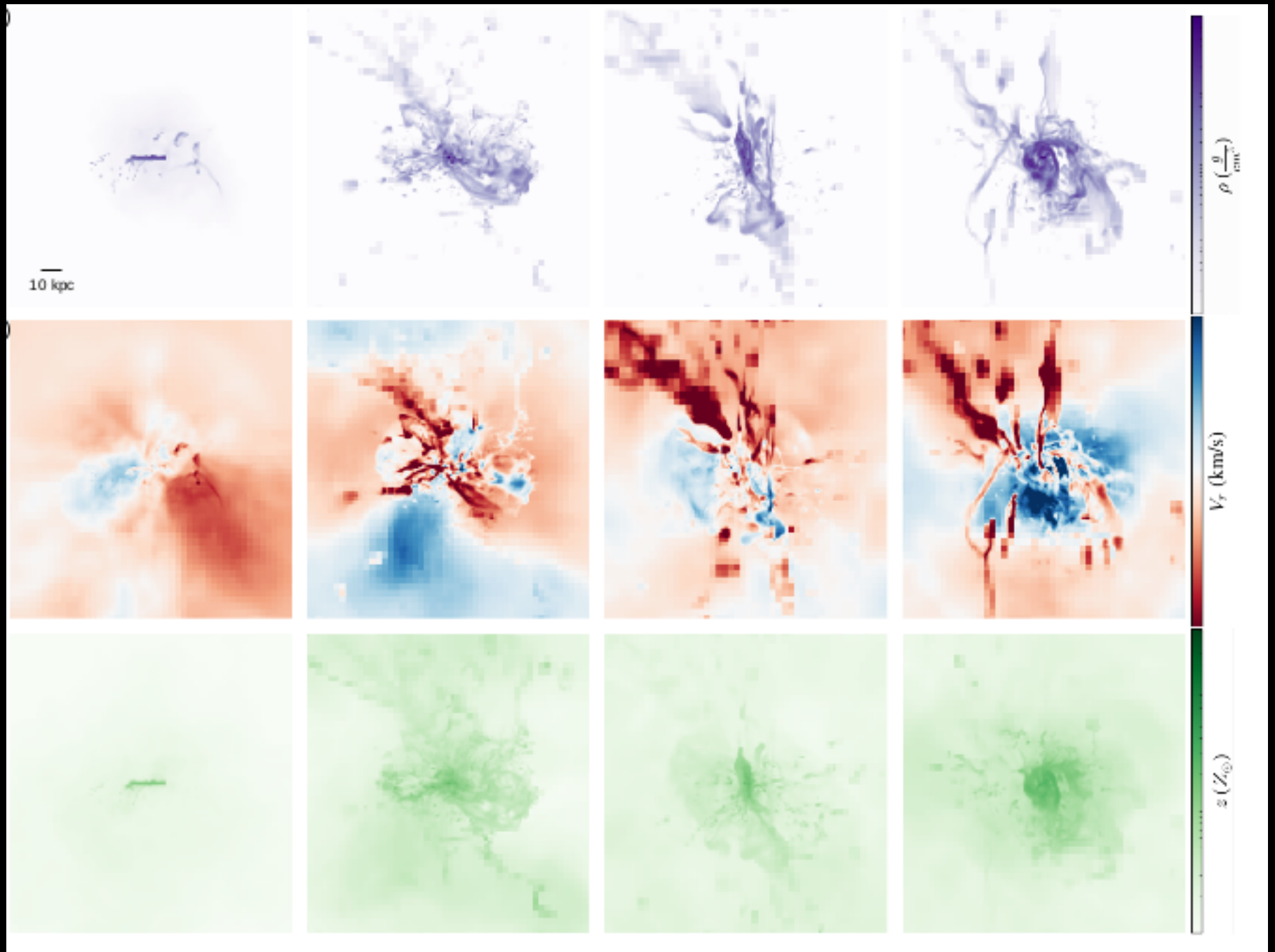


Goal: See if the circumgalactic medium and the star formation rate of a galaxy are coupled by a feedback mechanism.

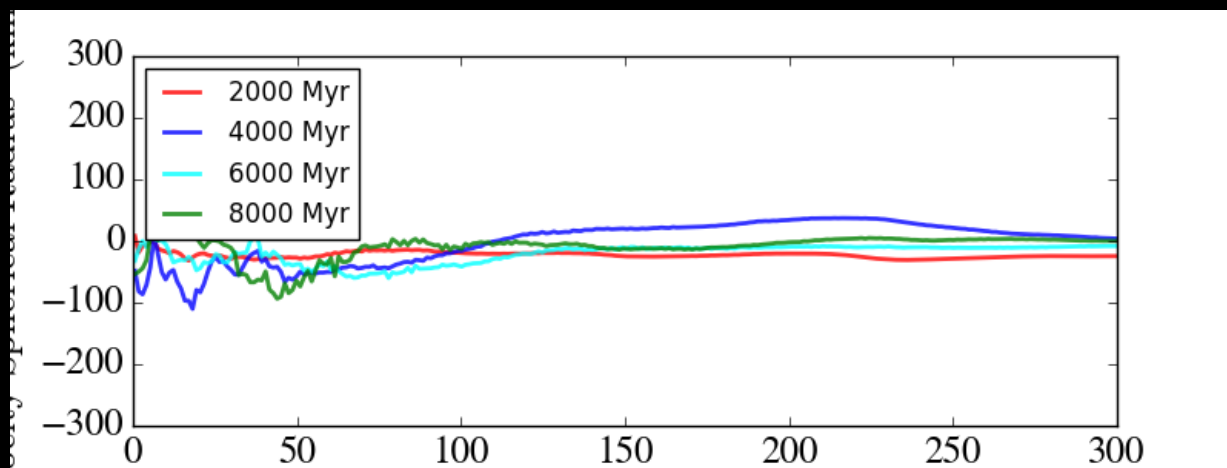
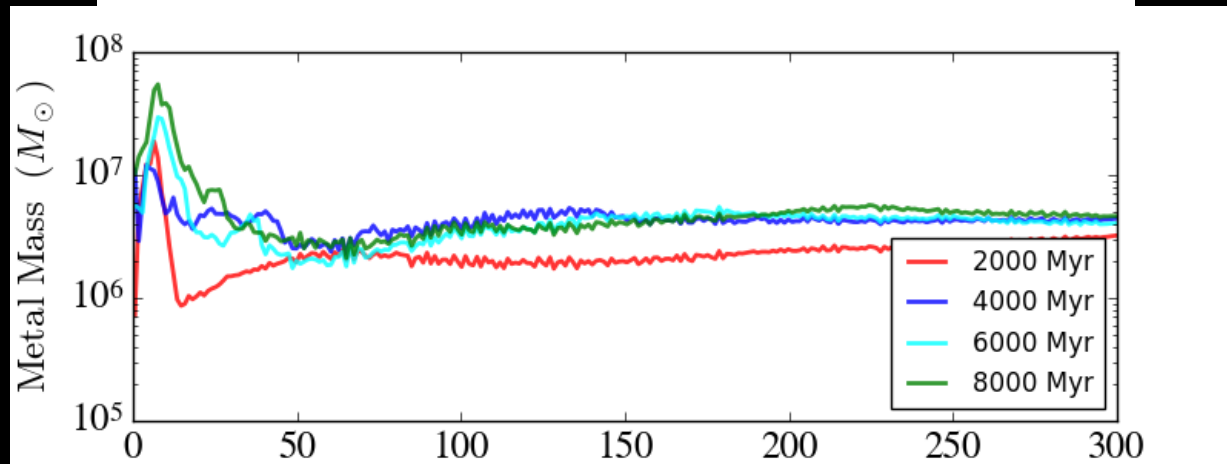
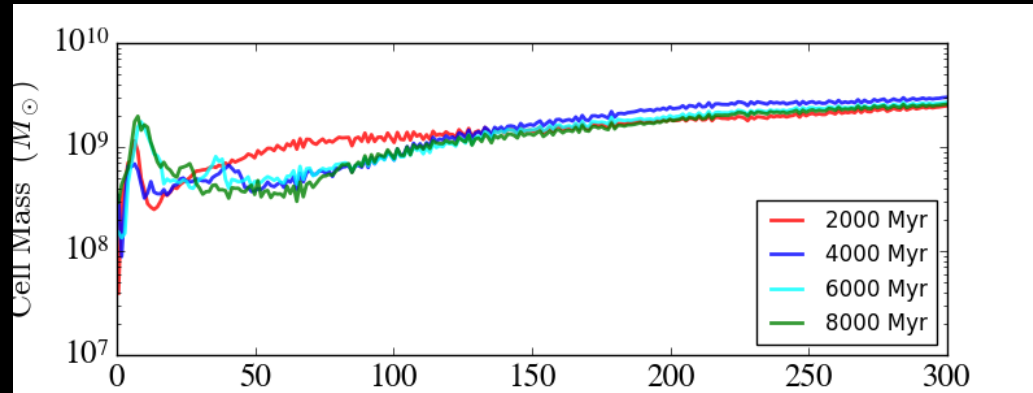
Star Formation Rate



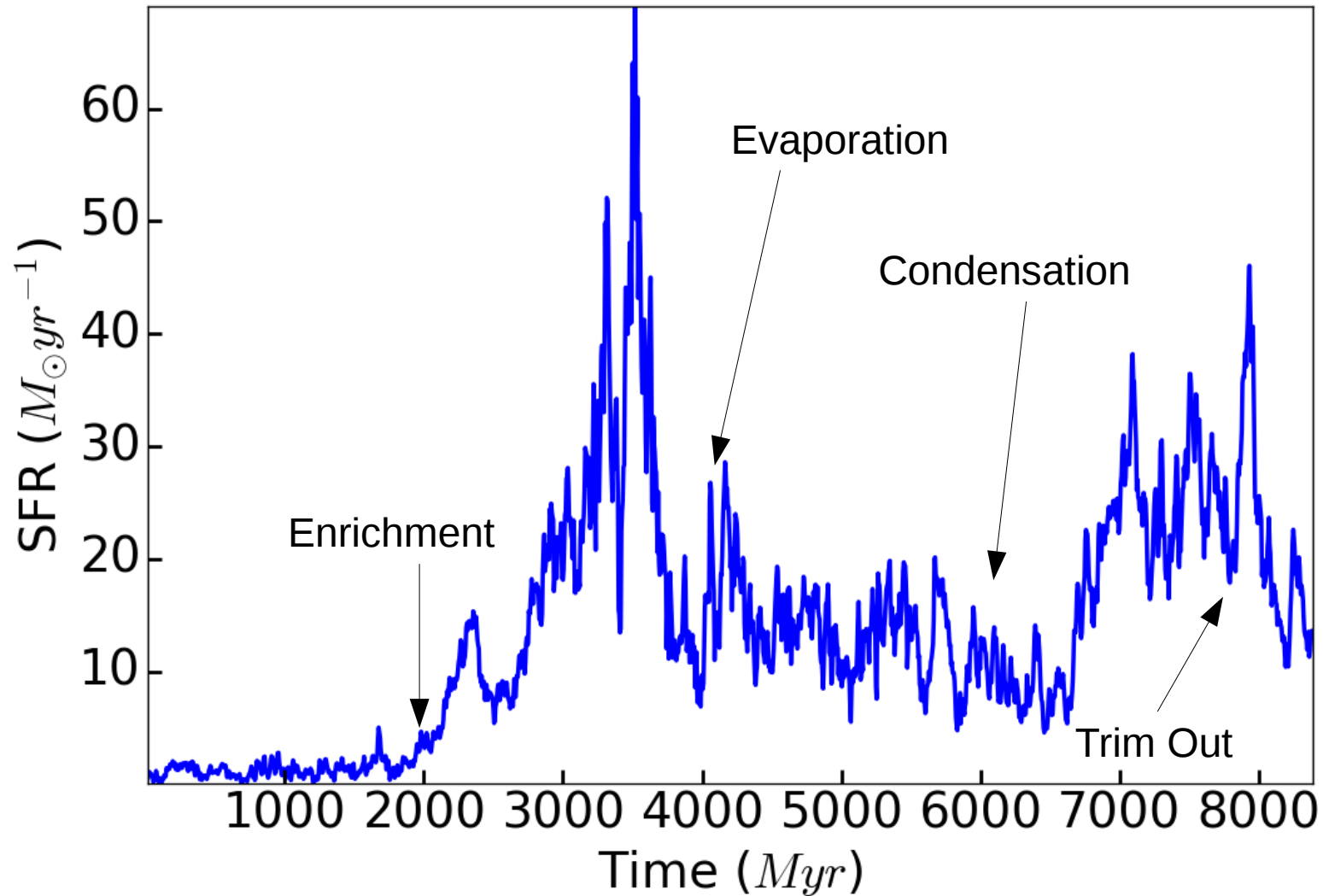
Enrichment



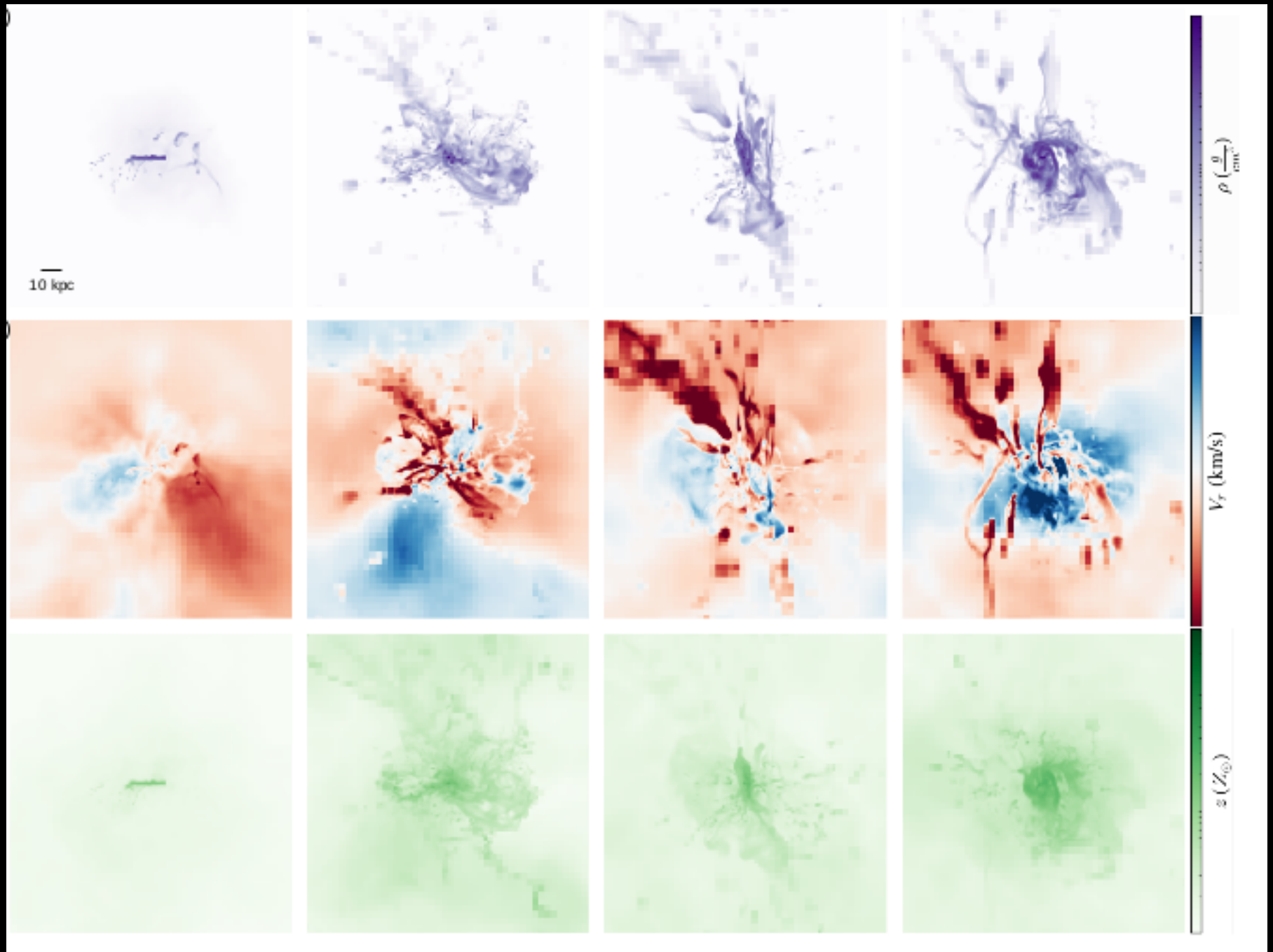
Enrichment



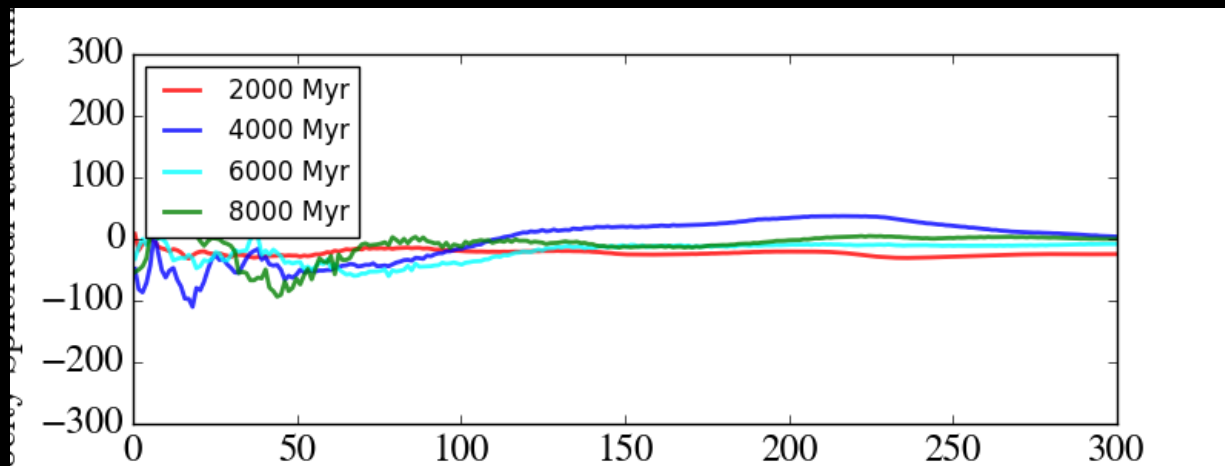
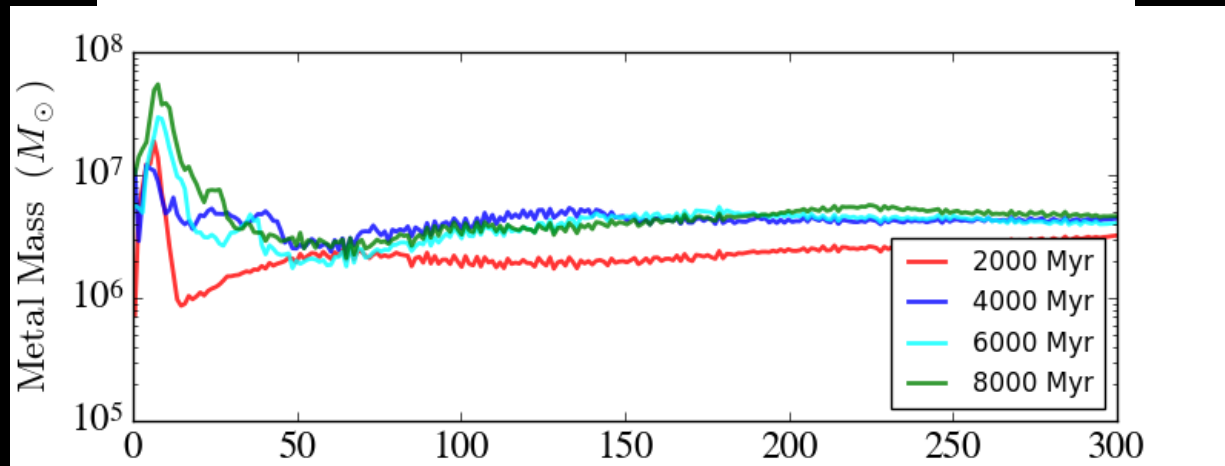
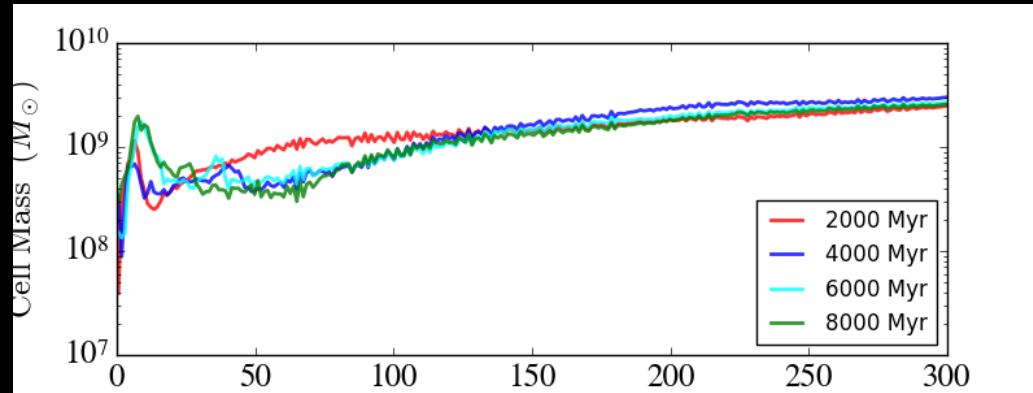
Star Formation Rate



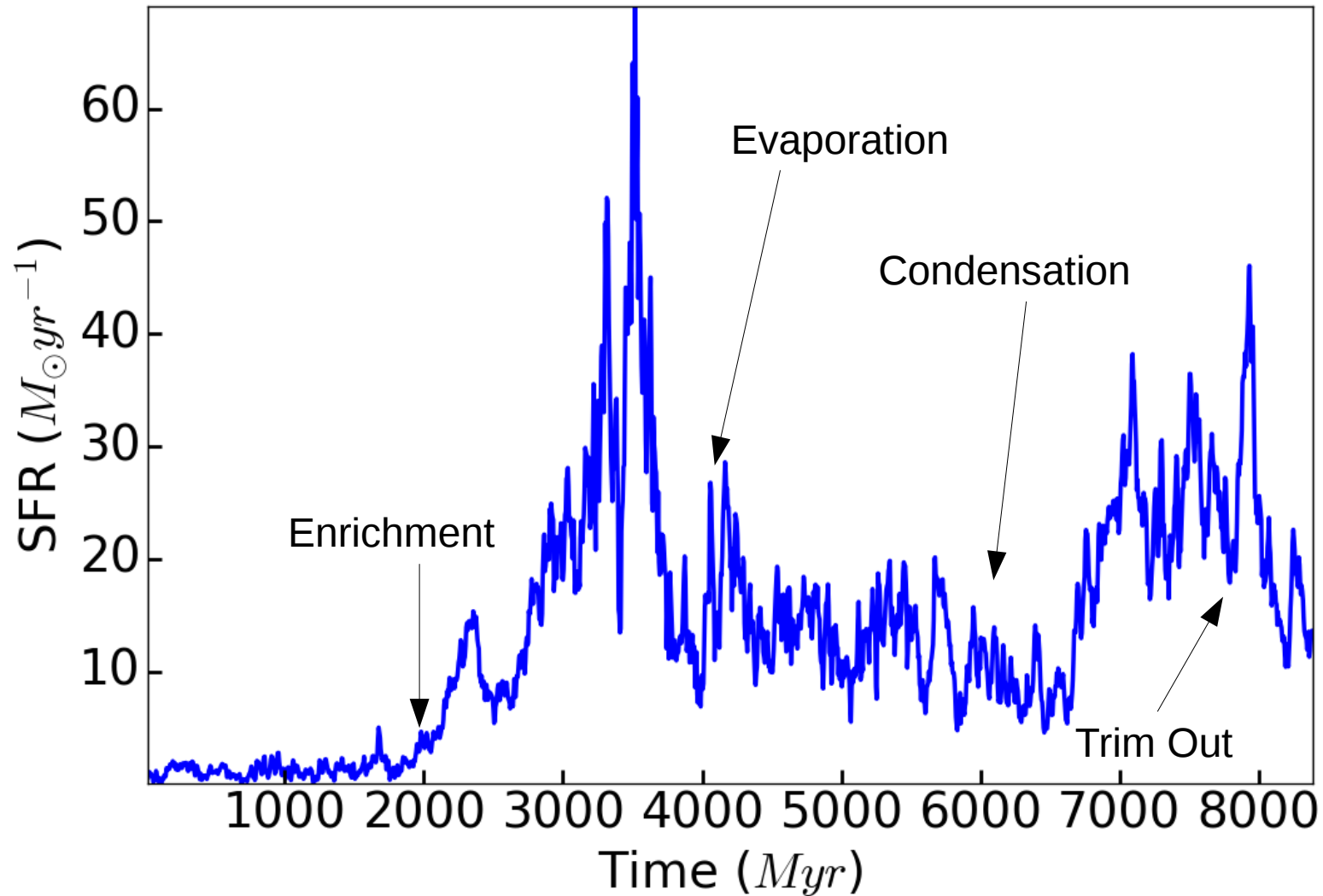
Evaporation



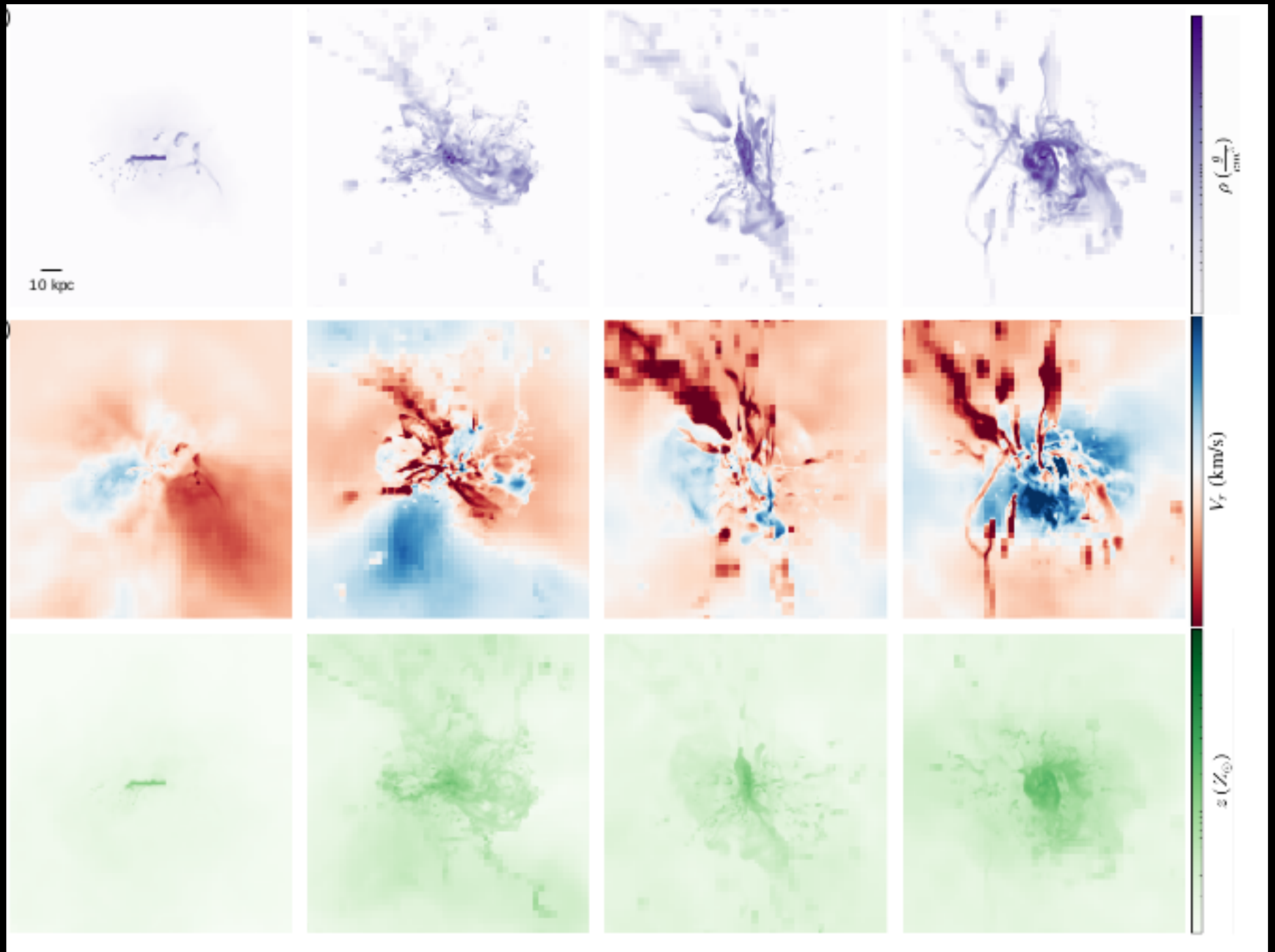
Evaporation



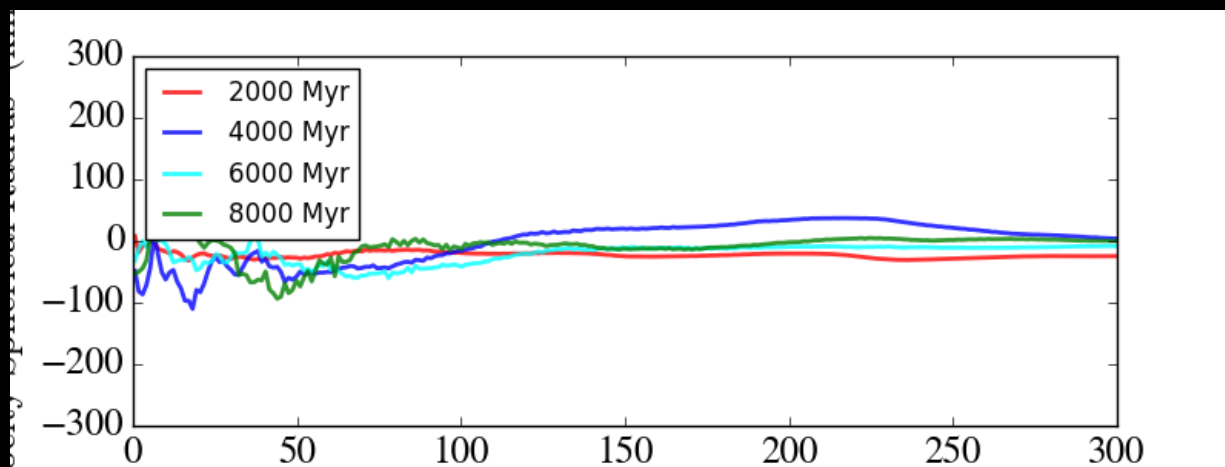
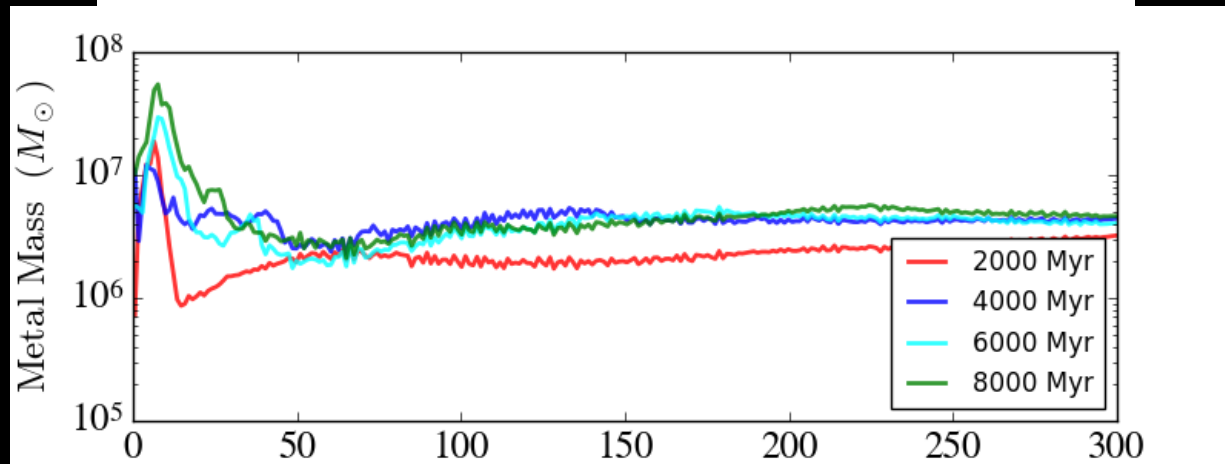
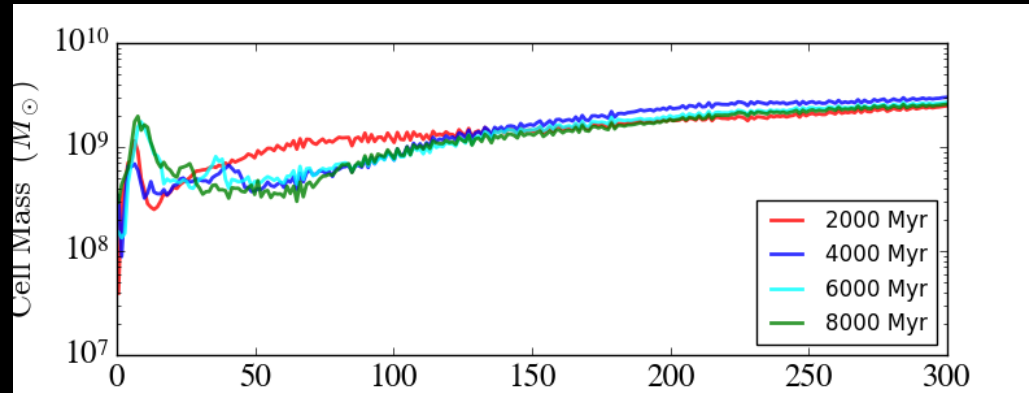
Star Formation Rate



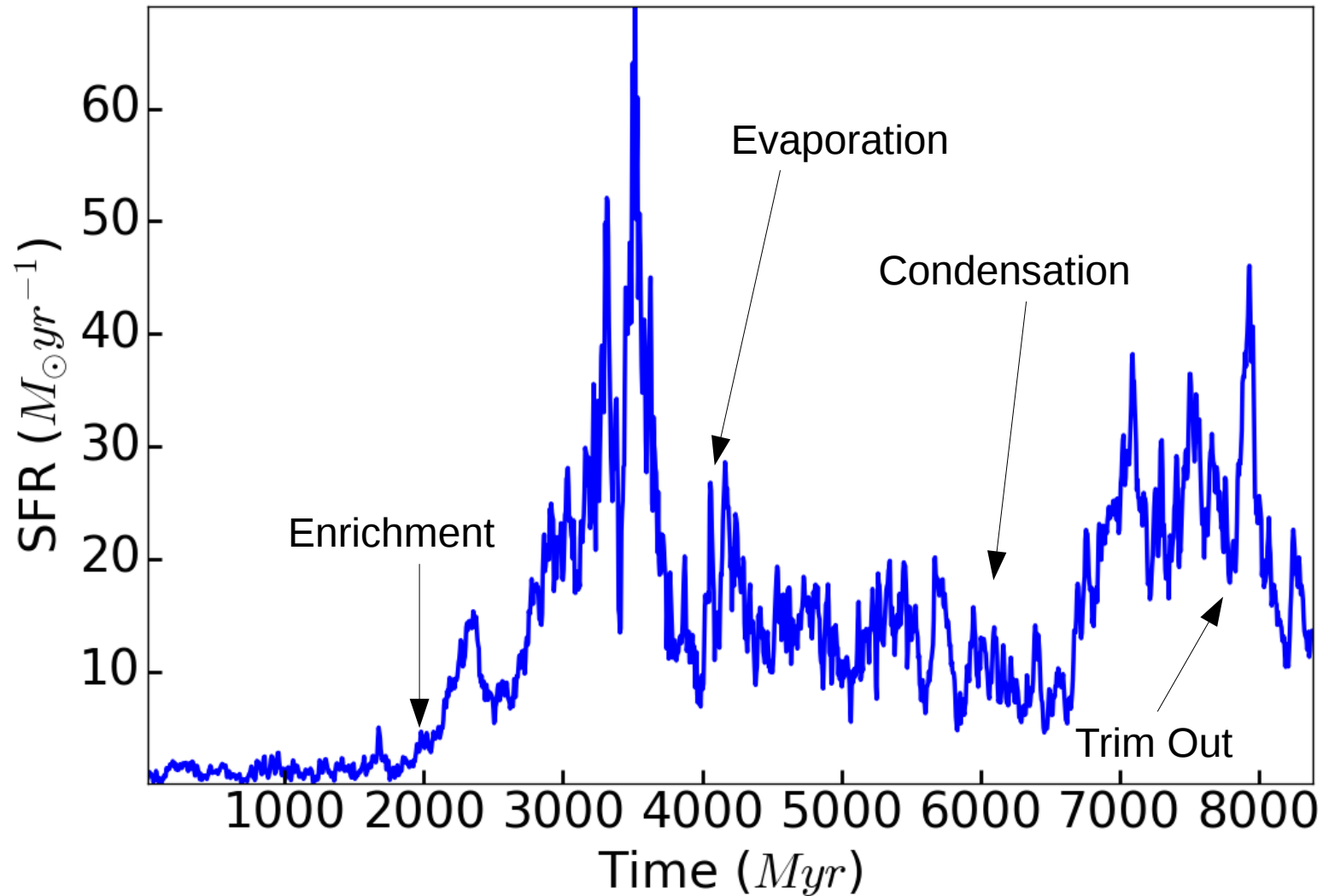
Condensation



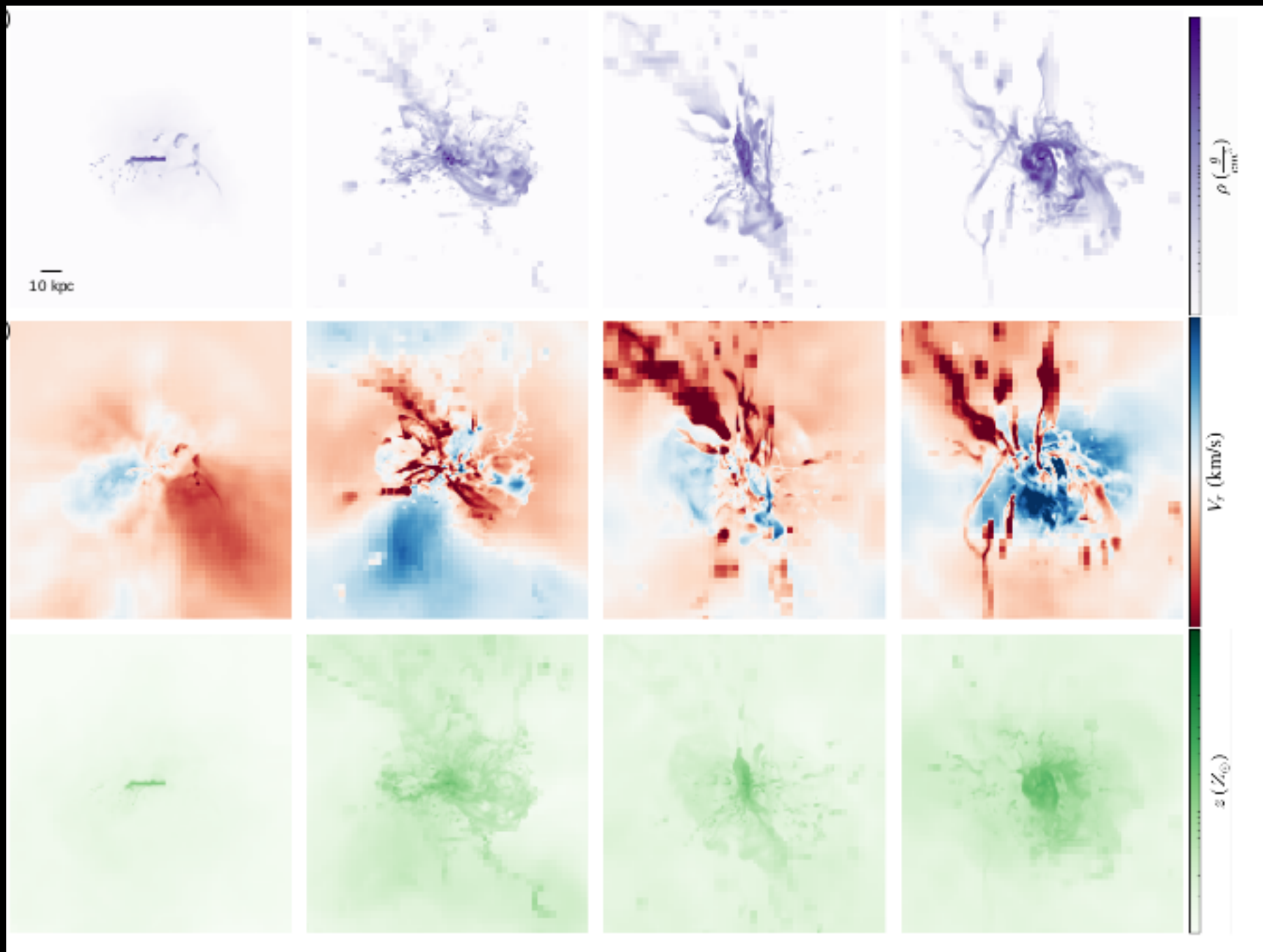
Condensation



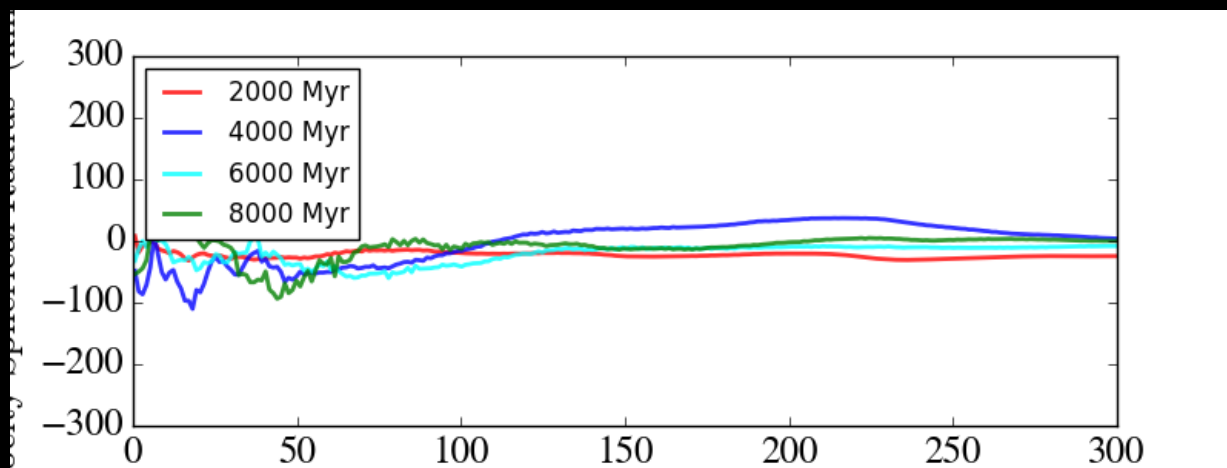
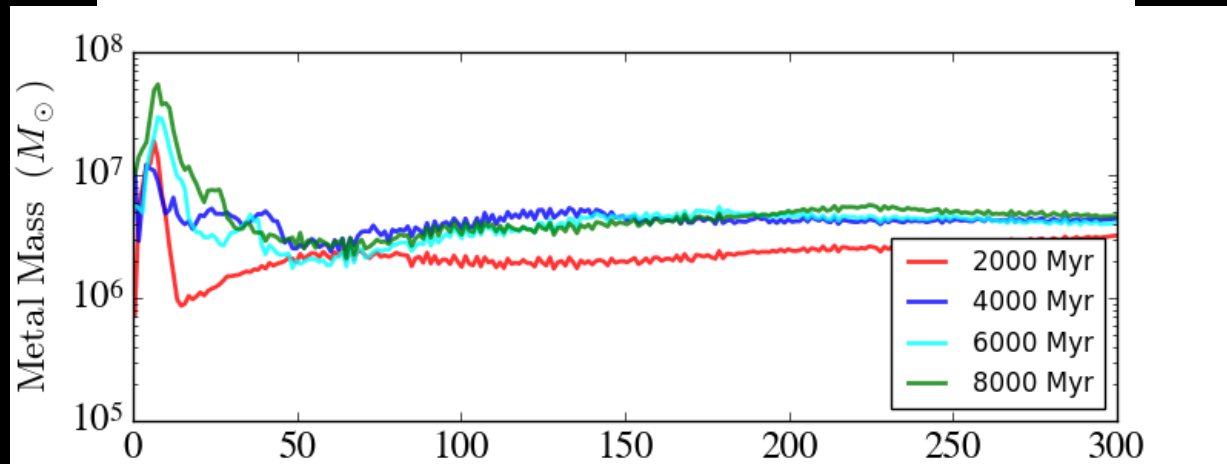
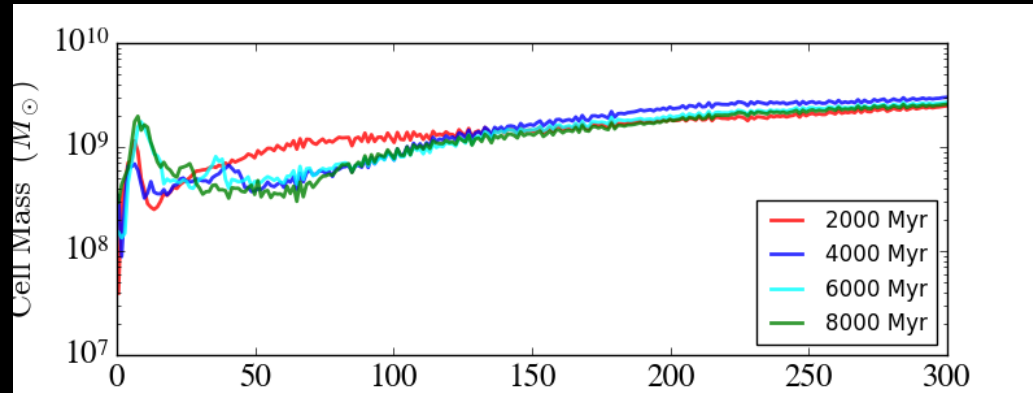
Star Formation Rate



Trim Out



Trim Out



Conclusions:

-The cgm is strongly coupled to the star formation rate of the galaxy it surrounds in our case study.

-We need stronger constraints on the mass in the cgm, and include other effects (Magnetism, Cosmic Rays, more accurate star models) to make this model work on realistic time scales of real galaxies.