0.1 Background

0.1.1 The formation of stars and galaxies

Primordial matter

Gravitational collapse

Galaxies

Stars

0.1.2 Nuclear physics of stars

The nucleus

Write about the modern models for the nucleus

Interaction of nuclei

nuclear physics, nuclear physics experiments, cross-sections, density and temperature dependence

Production of heavy elements

Write about the neutron capture processes Make a new section here where I describe the application to stars and chemical production burbridge paper?

0.1.3 Galactic chemical evolution

Start by piecing together the tiniest of nuclear physics with the galactic and stellar physics Typical history of chemical enrichment as a galaxy ages Write about models for chemical evolution, both one-zone and others

More subsections about GCE

0.1.4 Cosmic clocks

I should probably start here!

Write some pretty words about radioactive dating Introduce the concept based on nuclear physics

Radioactive isotope dating with C-14 etc.

This section is just and example of how to carbon-date and dino-date

Radioactive isotope dating on r-process elements

Generally how to about the whole shit

The $^{187}_{75}$Re-$^{187}_{75}$Os system