

List of papers and review to help you get started

Below you may find at least one (review) article per topic. You can use the articles as a starting-point, but note that some sections may be too detailed for the scope of your seminar. The articles will include further references that may be useful as well.

In general, a large (but incomplete) collection of review articles can be found on:

https://ned.ipac.caltech.edu/level5/author_index.html

Besides the articles, we recommend that you use any additional (web-based) resource that you think is useful. In case you have doubts or questions, feel free to contact Jorryt mattheej@phys.ethz.ch

Theme A: How to measure integrated galaxy properties

1. How to measure the stellar masses of distant galaxies

Review by Conroy. <https://ned.ipac.caltech.edu/level5/Sept14/Conroy/frames.html>

2. How to measure the star formation rate in distant galaxies

Madau & Dickinson 2014, particular section 3 and 4, <https://arxiv.org/pdf/1403.0007.pdf>

3. How to measure atomic (HI) gas

<https://ned.ipac.caltech.edu/level5/Sept04/Wright/frames.html>

4. How to measure molecular (CO / H₂) gas

Carilli & Walter <https://ned.ipac.caltech.edu/level5/Sept17/Carilli/frames.html>

<https://ned.ipac.caltech.edu/level5/Sept13/Bolatto/frames.html>

5. How to measure the hot gas

<https://ned.ipac.caltech.edu/level5/Sept05/Mathews/frames.html>

Theme B: Abundances & Chemical evolution

6. Chemical evolution models

<https://ned.ipac.caltech.edu/level5/March17/Finlator/frames.html>

Chapter 5 in <https://arxiv.org/pdf/1811.09642.pdf>

7. Measuring the gas-phase metal abundances in distant galaxies

Chapter 3 in Maiolino & Mannucci 2019, <https://arxiv.org/pdf/1811.09642.pdf>

8. Stellar abundances and quenching

Conroy <https://ned.ipac.caltech.edu/level5/Sept14/Conroy/frames.html>

Thomas et al. <https://arxiv.org/pdf/astro-ph/0410209.pdf>

Theme C: Dark matter haloes

9. Measuring the dark matter halo mass through weak lensing

<https://ned.ipac.caltech.edu/level5/Sept04/Brainerd/frames.html>

10. Dark matter halo profiles in dwarfs : problems and solutions

<https://ned.ipac.caltech.edu/level5/Sept17/Walker/frames.html>

11. Measuring the dark matter halo mass of the Milky way through its satellites

<https://ned.ipac.caltech.edu/level5/Sept04/Brainerd/frames.html>

Theme D: Supermassive black holes

12. Measuring the mass of supermassive black holes in the Milky Way and nearby galaxies

Review by Genzel et al. <https://arxiv.org/pdf/1006.0064.pdf>

13. Measuring the mass of supermassive black holes in quasars

Proceedings by Bentz, 2015. <https://arxiv.org/pdf/1505.04805.pdf>

14. The origin of supermassive black holes
Johnson & Haardt 2016, <https://arxiv.org/pdf/1601.05473.pdf>
Introducing the subject <https://arxiv.org/pdf/1910.06346.pdf>

Theme E: The early Universe

15. When did reionisation happen?
<https://ned.ipac.caltech.edu/level5/March19/Wise/frames.html>

16. Reionisation as a possible solution for the missing satellites problem
Sawala et al. 2015, <https://arxiv.org/pdf/1404.3724>

17. Theoretical properties of Population III stars
<https://ned.ipac.caltech.edu/level5/Sept12/Glover/frames.html>

Theme F: The Milky Way

18. The resolved star formation history of the Milky Way and its satellites
Proceedings by Gilmore <http://cds.cern.ch/record/481424/files/0011450.pdf>

19. Stellar streams in the Milky Way's halo
Fardal et al. <https://arxiv.org/abs/1804.04995>

20. The lowest metallicity stars in the Milky Way
(parts of) Frebel & Norris 2015, <https://arxiv.org/pdf/1501.06921.pdf>