PHY 474 Spring 2021

Literature Review Schedule

What is a Literature Review?—Please see page 2 for a detailed discussion of what it is you're expected to do.

Stage 1: Submission of preliminary reports — Week 7

- On a sheet of paper, please print your name and title of your literature review. The topics assigned to you are listed in a separate document in D2L.
- Write down the titles of the five papers that will form the anchor of your review, the author, year, and journal information, and a short blurb about each paper. Clearly, this will not contain all the material you're planning to present in your talk and paper, but you should be able to identify major trends in your assigned topic so that I can suggest any corrective action that might be needed.
- Submit PDF's into D2L Dropbox no later than 9 PM on Tuesday, May 11.
- You will receive feedback as soon as possible, so that you have enough time to prepare for your presentations. Points for this stage, however, will be assigned together at the end of the quarter.

Stage 2: In-class presentations — Week 10

- Presentations will be on Wednesday of Week 10. This is the last class meeting of the quarter, and you should be prepared for class to run longer than usual.
- You are strongly encouraged to use a PowerPoint or equivalent. It is your responsibility to ensure that your presentation shows up and works on the computer. Please check before class, otherwise time will be charged to you.
- Presentations should be **10-15 minutes** long. I will encourage questions from students, but question time is not charged to your presentation time.
- Feedback on your presentations will only be given if some corrective action is needed (usually not the case, since that should've become clear in comments on the previous stage). Points for this stage will be assigned at the end of the quarter together with all the other stages.

Stage 3: Paper — Finals Week (see dropbox for deadline)

• Format will be listed in a separate document titled *Instructions for Paper*.

Points Distribution

- Stage 1: 20 points (points assigned at the end of the quarter)
- Stage 2: 20 points (points assigned at the end of the quarter)
- Stage 3: 50 points

What is a Literature Review?

A literature review **summarizes and synthesizes** ongoing work. As defined by the Writing Center at UNC at Chapel Hill, a "summary is a recap of the important information of the source," and "a synthesis is a re-organization, or a reshuffling, of that information."

Thus, you will examine the literature to figure out the activity on the topic assigned to you, and summarize and synthesize it. Some questions that are often asked of me include:

- How many papers do you want me to include? The five papers you will pick should form the anchor of your review, but a good review will also branch out from these five papers and see what additional efforts are ongoing in that area. A good way to do this is to either follow links from those papers, or search for activity in that area by bringing up a list of publications on the topic on the NASA ADS page at http://adsabs.harvard.edu/abstract_service.html, then begin scanning abstracts to see what is relevant, especially if you can classify some of them in any way. Use a few different iterations of search keywords to make sure you're accessing all the relevant information. If there is an ARAA (Annual Review of Astronomy & Astrophysics) publication on that topic, then you'll get most of the activity in that field, and will only need to search for a few updates (more recent than the printing of the ARAA article). In some cases, you may need to look at figures and additional information in the papers to fashion your narrative. Note that if you need to access the content of a paper and can't access it on ADS, you should be able to access a preprint of it on the arXiv server at http://arxiv.org/find/astro-ph.
- How far back do you want me to go? Again, that is hard to answer. My advice would be to mention a few key historical developments for context, then focus on recent work within the past five years or so. Different topics may have a different rhythm of activity.
- How long do you want me to make my report? It will depend on your topic. Formally, the paper you will write will need to be a minimum of 8 pages (details on paper will be posted later in a separate document), but there is no maximum limit. Report whatever information you think is appropriate to give an overview of activity in the field of your assigned topic. Try to avoid a (chronologically) linear narrative, however; a paper that can summarize and synthesize (see top of this page) will be given more credit than a paper that merely reports a linear timeline.
- Can I read only the abstracts? Or do I need to read the whole paper? That depends! I would do two passes and save the links (first author, year, journal abbreviation should let you access the paper quickly later if you need to see if again), or if you're paranoid like me and have enough disk space you could download PDF's of the papers. In the first pass, skim over the abstracts. Once you've identified patterns (or not, perhaps a particular paper stands alone), you might want to go back to a few papers and read them in more detail, perhaps picking up some figures or tables from them to make your point.

Any additional questions you have should be sent via email, or ask at one of our many meetings every week. This activity is a major part of this course, so please take some time to do it well!