Ay 124 Literature Research Project

The aim of the literature project is to get acquainted with recent discussions in the astronomical journals on the given topic. We expect you to present this in a readable, organised manner in the form of a ~5 page report. It is important to include your own opinions on the matter and the reasons behind these as well as some discussion of where you think the particular subject is moving and what is needed, either observationally or theoretically, to make further progress.

The literature project accounts for 30% of the total grade and completed projects should be handed to Dmitriy in the first instance by Friday February 12th. Each will be read by Andrew and Richard and graded with comments and returned to you within a couple of weeks.

Please let Dmitriy know which of the following topics you are choosing. It is ok for several people to be simultaneously working on the same topic (within reason!). If none of the topics appeals to you and you have your own ideas, please suggest a title for approval to Richard or Andrew before commencing work on it. Advice on how to begin searching the literature can be obtained from anyone, including Dmitriy, fellow students and postdocs. A good starting place is the Astronomy Library Web page.

Suggested Topics

1. Astrometry and the Galactic Distance Scale: What will GAIA find?
2. Faint Star Counts and Galactic Structure: Highlights of the Sloan Digital Sky Survey
3. Microlensing and Galactic Dark Matter
4. The Thick Galactic Disk
5. The History of the Galactic Bulge
6. Dwarf Galaxies in the Local Group
7. `Red Nuggets’: ultracompact ellipticals at high redshift
8. Simulations of Galaxy Encounters and Mergers
9. Search techniques for very high redshift galaxies
10. Tidal streams and the stellar halo
11. High-velocity clouds and Galactic fuelling
12. Galactic outflows at low and high redshifts

Richard Ellis and Andrew Benson, January 14th 2010