

## **ASTRONOMY 8400 – SPRING 2024**

### **Student Presentation Assignment**

Each student will give a 15-minute presentation on one of the following “rungs” in the cosmic distance scale ladder. An additional 5 minutes will be allowed for questions. **Please provide a copy of the presentation in pdf to the class prior to your talk.**

In your presentation, make sure that you cover the basic technique, range of relevant distances, potential problems, and sources of error. Chapters 2 and 7 in Binney & Merrifield are good places to start, but also include “recent” results from at least one scientific journal paper.

#### Distance Indicators:

1. Trigonometric parallax – Tutterow, 4/11/24
2. Moving cluster – Sharifi, 4/11/24
3. Secular and statistical parallax – Sloneker, 4/11/24
4. Main Sequence Fitting – Leblanc – 4/16/24
5. Cepheids and RR Lyrae stars - Carrasco, 4/16/24
6. Luminosity functions (planetary nebulae and globular clusters) – Kane, 4/16/24
7. Surface brightness fluctuations – Das, 4/18/24
8. Spiral/elliptical galaxy kinematics – Justin Robinson
9. Type Ia Supernovae – Lafountain, 4/18/24
10. Time delays (supernovae and gravitational lens) – Johns, 4/18/24