

**PARALLAX AND PROPER MOTION TEACHING NOTES**

Materials you'll need to teach this:

- Meter rules
- Sidewalk chalk
- Protractors (from lab materials box)
- 12 computers with Starry Night Pro

This lab exercise has two parts – one you conduct outside on the sidewalk, the other in the computer lab. The first part goes through using terrestrial objects to measure parallax, and is heavily borrowed from a lab written by Eric Jensen while at ASU, and partly because Starry Night Pro is no good for measuring honest-to-goodness parallaxes. The students should use a protractor held horizontal at eye level to measure the offset angles needed. Make them do it several times to get an accuracy estimate.

The second part involves using the software to measure proper motion by measuring the separations of the subject stars to nearby, more distant, stars. The changes in separation over years is NOT big – you'll only get 1-2" over a 3-4 years period, so encourage the students to use longer baselines than that.

Other than that, this is a pretty simple lab, but should capture their imagination some.