

University of Nebraska

ASTRONOMY EDUCATION WORKSHOP

<http://astro.unl.edu>



(Saturday, October 15, 2005 — Avery 19, UNL City Campus)

This event is free to high school and college astronomy/physics instructors and undergraduate students interested in careers in science education. Please register in advance by phone at 402-472-3686 or by email at klee6@unl.edu. This workshop has three goals: 1) to acquaint educators with innovative usages of instructional technology in astronomy education, 2) to bring together members of the astronomy and physics teaching community to share ideas and identify potential collaborators, and 3) to promote new developments in the UNL Department of Physics and Astronomy.

Workshop Agenda

This workshop will have a “Light & Spectroscopy” theme. All activities will include concepts from the 9-12 National Science Content Standard B items “Structure of Atoms”, “Motions and Forces”, “Conservation of Energy and the Increase of Disorder” and “Interactions of Energy and Matter”.

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| 9:00 am | Welcome
Ron Roeber, Associate Vice Chancellor for Facilities and Information Technology |
| 9:10 pm | Presentation: “Exploring the Infrared Universe” (Avery 19)
Michelle Thaller (CalTech)

Abstract: Dr. Thaller will begin by demonstrating an infrared camera and show how the same principles are at work in the Spitzer Space Telescope. She will then describe some of the many areas of astronomy where Spitzer has made substantial new discoveries. |
| 10:00 pm | Demonstration: “Bringing Infrared Light into the Classroom” (Avery 19)
Michelle Thaller (CalTech) & Tim Slater (University of Arizona) |
| 11:00 pm | Exploration: “Using Ranking Tasks in Astronomy” (Avery 13b, Avery 16)
Tim Slater (University of Arizona), Kevin Lee (UNL), & Andy Frederick (UNL) |
| 12:00 pm | Lunch (Selleck Hall Cafeteria— President’s Room) |
| 1:00 pm | Computer Lab: Two New Modules of the Nebraska Astronomy Applet Project (Avery 16)
“Hydrogen Atom Energy Levels & Blackbody Curves”
Ed Schmidt (UNL), Adam Davis (UNL), Chris Siedell (UNL), & Dave Kriegler (UNO) |
| 2:30 pm | Peer Instruction Demonstration: “ClassAction—Light & Spectroscopy Module” (Avery 19)
Todd Young (Wayne State College) & Kevin Lee (UNL) |
| 2:55 pm | Wrap-up and door prize raffle (must be present to win!) |

This workshop is sponsored by the UNL Center for Science, Mathematics, and Computer Education and the UNL Department of Physics and Astronomy. Numerous educational materials, continental breakfast, and lunch are provided and reimbursement will be made for travel costs up to \$50.