



**Discover the Universe with NASA  
During the International Year of Astronomy 2009!**

**GOALS for TODAY:**

- 1) to explore resources that use the contexts of IYA, the 400th anniversary of Galileo's telescope observations, and NASA's Space Science missions to engage student and public audiences in positive science learning experiences
- 2) to reflect on strategies for developing awareness, knowledge, and understanding of 3 key astronomy-related science concepts:
  - Earth's place in the universe
  - Tools for learning from light
  - Models, evidence, and the nature of science
- 3) to inspire participants to commit to a post-workshop action step to integrate at least one take-home insight or resource from the workshop into their own astronomy education practice during IYA
- 4) to gather feedback on how to better accomplish goals 1-3!

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| <b>Pre- 9am arrival</b> | Participants fill out Pre-Workshop Thought Questions ( <i>clean copies and answer sheets will be available for you to take home with you</i> )  |
| <b>9:00-9:30</b>        | <b>Introductions; Goals &amp; Themes of day; Warm-Up Brainstorm Activity</b><br><i>Pair share and record ideas re: "Observation and exploration of Earth's place in the Universe is an ongoing human endeavor"</i>  |
| <b>9:30-10:10</b>       | <b>Modeling the Universe</b><br><i>What are our current ideas about the structure of the Universe? Galileo's ideas?</i>   |
| <b>10:10-10:20</b>      | <b>Stretch Break</b>  |
| <b>10:20-10:45</b>      | <b>Assessing Our Audiences' (and Galileo's) Understanding of Key Concepts</b><br><i>Review selected Pre-Workshop Thought Questions - discussion of assessment items as probes of conceptual (and pedagogical) understanding</i>   |
| <b>10:45-12:15</b>      | <b>How Do We Know? Tools for Learning from Light</b><br><i>Active Astronomy: i) understanding light, color, and filters "What's getting Through?"; ii) Sensing and Detecting invisible light; iii) Different energies of light tell us different things: spectroscopy and astronomical context</i>  |
| <b>12:15-12:30</b>      | <b>Group Discussion: Insights from Morning, Choose PM sessions</b>  |
| <b>12:30-1:30</b>       | <b>Lunch is On Us!</b> – <i>Special Presentation on Kepler Planet-Finding Mission</i>   |
| <b>1:30-1:45</b>        | <b>Stretch Break</b> – Move to PM Session Rooms   |
| <b>1:45-5:15</b>        | <ul style="list-style-type: none"> <li>• <u>Observing Our Sun and Solar System</u> – Kingsbury (Lobby Level)</li> <li>• <u>Observing the Universe Beyond the Solar System</u> – Remain Here</li> <li>• <u>NASA IYA Resources for Museums &amp; Planetariums</u> – Pershing (Lobby Level)</li> </ul> |