



**Discover the Universe with NASA During IYA  
Observing the Universe Beyond the Solar System**

<b>1:45 - 1:55</b>	<b>Introduction</b> – <i>How are NASA space telescopes and observatories extending Galileo’s legacy of astronomical discovery? How can you use NASA’s scientific and educational resources to engage your audiences in IYA?</i>
<b>1:55 - 2:40</b>	<b>How Big Is the Universe?</b> Modeling cosmic size and scale in several realms... <i>Purpose: to explore a more accurate in-depth model that provides learners with a tool for better understanding data and discoveries from current astronomy research)</i>
<b>2:40 - 3:20</b>	<b>Are We Alone?</b> Modeling and measuring light curves from transiting extra-solar planets <i>Purpose: to examine a case-study of how astronomers today are discovering other worlds (possibly other earths!) orbiting distant stars, through activities that engage learners in exploring key science concepts such as light and energy, orbits and gravity, models and evidence.</i>
<b>3:20- 3:35</b>	<b>Break</b>
<b>3:35 - 4:15</b>	<b>What Else is Out There?</b> Tour of the Invisible Universe  Purpose: to explore what we know about our Universe via images from space and ground telescopes that detect energy from every part of the spectrum. This activity helps learners develop a better understanding of how and why scientists view objects in space, and where these objects are located relative to the Earth.
<b>4:15 - 5:00</b>	<b>Free-choice share-a-thon</b> Browse a selection of relevant NASA resources at your own pace  <u>-- Telescopes and Data in the Classroom</u> <ul style="list-style-type: none"> <li>- Amazing Space/Telescopes from the Ground Up</li> <li>- Hubble Deep Field activity packet / strategies for using current science resources to emphasize science process skills</li> </ul> <u>-- Making your own observations</u> <ul style="list-style-type: none"> <li>- MicroObservatory Online Telescopes</li> <li>- Hands-On Universe partnership with Kepler and WISE missions</li> <li>- Analyze NASA’s x-ray data from black holes, pulsars, and neutron stars using Student Hera</li> </ul> <u>-- More Multi-wavelength Astronomy</u> <ul style="list-style-type: none"> <li>- Active Astronomy / GEMS Invisible Universe / Cool Cosmos</li> <li>- Touch the Invisible Sky Braille Book</li> </ul>
<b>5 - 5:15</b>	<b>WRAP- UP/Feedback:</b> whole group reflection on using NASA resources in <i>your</i> context, <i>IYA</i> context – postcard feedback