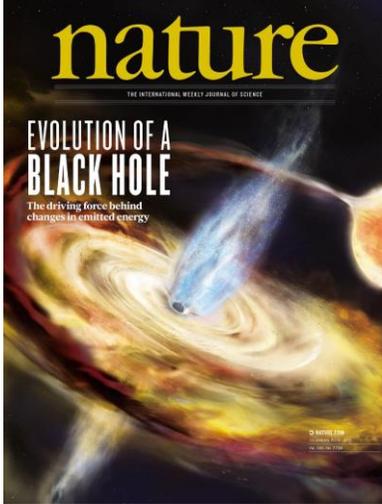
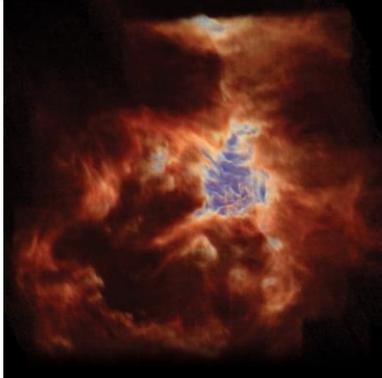


## NASA's Universe of Learning Science Briefing: [January 2019](#)

The resources in this list pertain to the presentation given on [January 10, 2019](#), titled, "[Live from AAS 2019](#)".

NASA's Universe of Learning is a program which will integrate NASA's Astrophysics Science Mission Directorate programs, and will advance STEM learning and literacy by creating and delivering a unified suite of education products, programs, and professional development that spans the full spectrum of NASA Astrophysics. NASA's Universe of Learning is partnering with the Museum Alliance to provide professional development briefings for the informal science education community. These briefings provide current NASA Astrophysics themes, content, and resources to the informal community. These curated lists present the resources described during the briefings. To find the briefings, you can go here: [http://universe-of-learning.org/science\\_briefing](http://universe-of-learning.org/science_briefing).

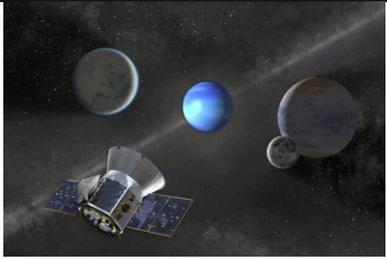
### Featured Press Releases

 <p>AAS 233 233RD MEETING OF THE AMERICAN ASTRONOMICAL SOCIETY SEATTLE, WASHINGTON 6-10 JANUARY 2019</p>	<p><a href="#">AAS 233 Press Kit</a></p>
 <p>nature THE INTERNATIONAL WEEKLY JOURNAL OF SCIENCE EVOLUTION OF A BLACK HOLE The driving force behind changes in emitted energy</p>	<p><a href="#">Astronomers Map 'Light Echoes' of Newly Discovered Black Hole:</a> Using NASA's Neutron star Interior Composition Explorer (NICER) payload aboard the International Space Station, the team detected X-ray light from the recently discovered black hole, called MAXI J1820+070 (J1820 for short), as it consumed material from a companion star. Waves of X-rays formed "light echoes" that reflected off the swirling gas near the black hole and revealed changes in the environment's size and shape.</p>
	<p><a href="#">Lifting the Veil on Star Formation in the Orion Nebula:</a> The stellar wind from a newborn star in the Orion Nebula is preventing more new stars from forming nearby, according to new research using NASA's Stratospheric Observatory for Infrared Astronomy (SOFIA). These results were reported in the Jan. 7, 2019, issue of the journal Nature. (Video link below)</p> <p><b>Video:</b> <a href="https://www.youtube.com/watch?v=E5yl7i7twpU&amp;list=PL_Aw-wk7sjRWH7dsEVYCoWUsNnqQMhPGd&amp;index=22">https://www.youtube.com/watch?v=E5yl7i7twpU&amp;list=PL_Aw-wk7sjRWH7dsEVYCoWUsNnqQMhPGd&amp;index=22</a></p> <p><a href="#">NASA's SOFIA Observatory Captures Orion's Dragon in 3D:</a> New data from NASA's Stratospheric Observatory for Infrared Astronomy, SOFIA, reveal a three-dimensional (3-D) view of the Orion Nebula – Earth's closest star-formation nursery – and a powerful stellar wind. Researchers can rotate, zoom in, and even dive through this data cube to better understand how stars are forming. (Video link below)</p>

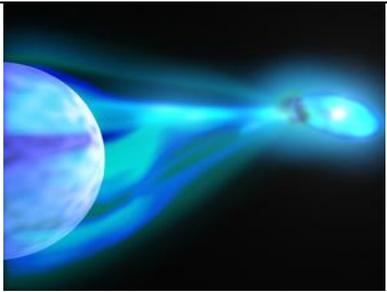
This material is based upon work supported by NASA under cooperative agreement award number NNX16AC65A to the Space Telescope Science Institute, working in partnership with Caltech/IPAC, Jet Propulsion Laboratory, Smithsonian Astrophysical Observatory, and Sonoma State University. Any opinions, findings, and conclusions or recommendations expressed in this material are those of the author(s) and do not necessarily reflect the views of the National Aeronautics and Space Administration.

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	<p><b>Video:</b> <a href="https://www.youtube.com/watch?v=1eR6Qc2I3xM&amp;list=PL_Aw-wk7sjRWH7dsEVYCoWUsNnqQMhPGd&amp;index=23">https://www.youtube.com/watch?v=1eR6Qc2I3xM&amp;list=PL_Aw-wk7sjRWH7dsEVYCoWUsNnqQMhPGd&amp;index=23</a></p>
	<p><b><a href="#">NASA's TESS Rounds Up its First Planets, Snares Far-flung Supernovae</a>:</b> NASA's Transiting Exoplanet Survey Satellite (TESS) has found three confirmed exoplanets, or worlds beyond our solar system, in its first three months of observations.</p> <p><b><a href="#">TESS discovers its third new planet, with longest orbit yet</a>:</b> The new planet, named HD 21749b, orbits a bright, nearby dwarf star about 53 light years away, in the constellation Reticulum, and appears to have the longest orbital period of the three planets so far identified by TESS. HD 21749b journeys around its star in a relatively leisurely 36 days, compared to the two other planets — Pi Mensae b, a “super-Earth” with a 6.3-day orbit, and LHS 3844b, a rocky world that speeds around its star in just 11 hours. All three planets were discovered in the first three months of TESS observations.</p>

## Resources

	<p><b><a href="#">A Black Hole Eats a Snack—Investigation of a Black Hole Transient</a>:</b> A black hole has just munched down a snack, and it's your job to figure out what it ate and how fast it ate it. To do this, you are going to look at the only evidence of the black hole's snack – spectrum of X-ray light that it emitted while eating, an X-ray belch if you will. The X-ray data was taken by Suzaku, a Japanese X-ray observatory with NASA participation.</p>
	<p><b><a href="#">VR Google Expeditions tour of the SOFIA observatory</a>:</b> Now it's possible to explore NASA's flying observatory with a new 3-D virtual tour that brings users aboard SOFIA, the Stratospheric Observatory for Infrared Astronomy.</p>
	<p><b><a href="#">3D Model of SOFIA mode</a>:</b> Now you can print your own 3D model of SOFIA, the Stratospheric Observatory for Infrared Astronomy. SOFIA is a modified Boeing 747SP aircraft that carries a 106-inch telescope, making it the largest airborne observatory in the world. Researchers use SOFIA to observe star birth and death, the formation of new solar systems, planets, nebulae, black holes, to identify complex molecules in space, and more. With the help of the NASA Ames SpaceShop Rapid Prototyping Facility, the SOFIA mission has created this eight-piece, 3D-printable model of the SOFIA 747SP aircraft. The printable files are at a 1/200 scale, with interior details and a removable upper fuselage section. This model features interchangeable open- and closed-telescope cavity configurations and telescope instruments.</p>

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	<p><b><a href="#">Visualization: Orion Visible/IR Flythrough:</a></b> As part of NASA's Universe of Learning, the interconnected nature of astrophysics science has allowed astrophysicists to visualize flying through the Orion Nebula in both visible and infrared light. This visualization is based on real data from NASA's Hubble Space Telescope and Spitzer Space Telescope.</p>
	<p><b><a href="#">NASA's Eyes on Exoplanets:</a></b> Welcome to NASA's Eyes, a way for you to learn about your home planet, our solar system, the universe beyond and the spacecraft exploring them. With the click of a mouse, you can visit newly discovered gas giants, Earth-sized planets and "super Earths"—rocky like ours, but gargantuan. The program is updated daily with the latest finds from NASA's Kepler mission and from ground-based observatories around the world as they hunt for planets like our own.</p>
	<p><b><a href="#">Planet Hunters TESS:</a></b> (Citizen Science) The recently launched <a href="#">Transiting Exoplanet Survey Satellite (TESS)</a> is providing us with a huge amount of data that lets us look for planets outside of our own Solar System. Over the next two years TESS will be busy surveying two-hundred-thousand bright nearby stars, measuring and recording their brightness every two minutes. With your help, we hope to uncover lots of interesting planetary systems, allowing us to explore the formation and evolution of these worlds. Our findings may even bring us one step closer to answering the question that we all seek to answer: Are we alone in the Universe?</p>

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