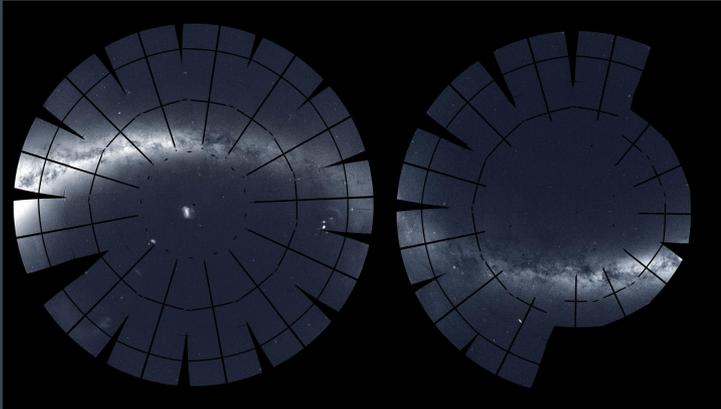


NASA TESS Communications

A how-to guide for getting NASA coverage for your result



Meet the team

Amber Straughn, Associate Director for Communications, Goddard Astrophysics

Barb Mattson, Communications Scientist & Goddard AstroComms team lead

Claire Andreoli, Communications Manager for Astrophysics (that's me!)

Frank Reddy, Senior Science Writer

Jeanette Kazmierczak, Science Writer

Sara Mitchell, @NASAUniverse lead

Kelly Ramos, @NASAUniverse

Scott Wiessinger, video producer

Sophia Roberts, video producer

Adriana Manrique, animator

Elizabeth Apala, outreach lead

Astrophysics Science Division

Barb Mattson
ASD Communications Scientist

Amber Straughn
ASD Associate Director for Communications

Claire Andreoli
Communications Manager for Astrophysicist

Communications Team

Frank Reddy
ASD Senior Science Writer

Jeanette Kazmierczak
ASD Science Writer

Sara Mitchell
ASD Social Media Lead

Kelly Ramos
ASD Social Media Specialist

Scott Wiessinger
ASD Video Producer

Elizabeth Apala
ASD Outreach Lead

Browser window: NASA | https://www.nasa.gov

Navigation: Missions | Galleries | NASA TV | Follow NASA | Downloads | About | NASA A

Sub-navigation: International Space Station | Journey to Mars | Earth | Technology | Aeronautics | Solar System and Beyond | Education | History

Your Science Here!

Mars Curiosity
NASA Finds Ancient Organic Material, Mysterious Methane on Mars

Spirit and Opportunity
Opportunity Hunkers Down During Dust Storm

New Horizons
Icy Dunes on Pluto Reveal a Diverse and Dynamic Dwarf Planet

Image of the Day
Clouds Over Alaska's Wrangell Mountains

APOLLO 50
NEXT GIANT

Chandra X-ray

Alpha Cen

Juno

Twitter Profile: NASA (@NASA)

Stats: 54K Tweets, 298 Following, 29.7M Followers, 4,529 Likes

Explore the universe and discover our home planet with @NASA. We usually post in EST (UTC-4)

Joined December 2007

77 Followers you know

...And Here...

Facebook Profile: NASA Goddard (@NASAGoddard)

Home | Find Friends

Like | Follow | Share

Use App | Send Message

Search for posts on this Page

English (US) | Español | Português (Brasil) | Français (France) | Deutsch

Privacy | Terms | Advertising | Ad Choices | Cookies | More | Facebook © 2018

...And Here...

It starts in a new discovery ...

The Astrophysical Journal Letters, 848L25 (2017), 2017 October 20
(See the end matter for the full list of authors.)

OPEN ACCESS

Gravitational Waves and Gamma-Rays from a Binary Neutron Star Merger: GW170817 and GRB 170817A

LIGO Scientific Collaboration and Virgo Collaboration, Fermi Gamma-ray Burst Monitor, and INTEGRAL

Received 2017 October 6; revised 2017 October 9; accepted 2017 October 9; published 2017 October 16

Abstract

On 2017 August 17, the gravitational-wave event GW170817 was observed by the Advanced LIGO and Virgo detectors, and the gamma-ray burst GRB 170817A was observed independently by the Fermi Gamma-ray Burst Monitor, and the *Astro-Compass* Shield for the Spectroscopy and Analysis of Gamma-ray Emission (SAGE). The probability of the near-simultaneous arrival and optical observations of GRB 170817A and GW170817 occurring by chance is 1.0×10^{-7} . We therefore confirm binary neutron star mergers as a progenitor of short GRBs. The association of GW170817 and GRB 170817A provides new insight into fundamental physics and the origin of short GRBs. We use the observed time delay of 1.1 ± 0.4 s between GRB 170817A and GW170817 to (a) constrain the difference between the speed of gravity and the speed of light to be between -3×10^{-16} and 7×10^{-16} times the speed of light, (b) place an upper bound on the violation of Lorentz invariance (LIV) present as a new test of the equivalence principle by comparing the Shapiro delay between gravitational and electromagnetic radiation. We also use the speed of light and the Lorentz factor of the ejecta emitting the gamma-rays. GRB 170817A will be closest short GRB with a known distance, but is between 2 and 6 orders of magnitude less energetic than other bursts with measured redshift. A new generation of gamma-ray detectors and submillimeter sources in existing detectors, will be essential to detect similar short bursts at greater distances. Finally, we predict a joint detection rate for the Fermi Gamma-ray Burst Monitor and the Advanced LIGO and Virgo detectors of $1.1\text{--}1.4$ per year during the 2018–2019 observing run and $0.3\text{--}1.7$ per year of design sensitivity.

Key words: binaries: close – gamma-ray burst: general – gravitational waves

1. Introduction and Background

GW170817 and GRB 170817A mark the discovery of a binary neutron star (BNS) merger detected both as a gravitational wave (GW; LIGO Scientific Collaboration & Virgo Collaboration 2017a) and a short-duration gamma-ray burst (SGRB; Goldstein et al. 2017). SGRBs are thought to be powered by radiation from the coalescence of BNS and neutron star (NS)–black hole (BH) binary systems but have a poorly understood origin (e.g., O’Shaughnessy et al. 2017a) and Virgo (Acensee et al. 2017) equipment. This was at least partly motivated by the first promise of being the most likely source of simultaneously detectable GW and electromagnetic (EM) radiation from the same source. This is important as joint detections enable a unique test of general relativity and constrain the nature of the source. BNS mergers are predicted to yield significant amounts of the EM spectrum (Mergler & Berger 2012; Frasin et al. 2012), including SGRBs (Illiano et al. 1984; Paczynski 1986; Berger et al. 1986; Paczynski 1991; Narayan et al. 1997), which produce prompt emission in gamma-rays and X-rays (e.g., Berger et al. 2003). A major astrophysical implication of a joint detection of an SGRB and of a GW from a BNS merger is the confirmation that these bursts are indeed the progenitors of at least some SGRBs. GRBs are classified as short or long depending on the duration of their prompt gamma-ray emission. This cut is based on spectral differences in gamma-rays and the bimodality of the observed

duration of their prompt gamma-ray emission. This cut is based on spectral differences in gamma-rays and the bimodality of the observed

Original content from this work may be used under the terms of the Creative Commons Attribution 4.0 International license. See the distribution of this work for more information about the authors and the site of the work. Journal contact information: www.astrojnl.org

LETTER

The X-ray counterpart to the gravitational-wave event GW170817

E. Troja^{1,2}, I. Pirro¹, H. van der Loo^{1,3}, R. Wollaeger¹, M. Im^{1,4}, D. Fox¹, N. R. Butler¹, S. R. Cenker^{1,5}, S. Sakamoto⁶, C. R. Fryer⁷, R. Ricci⁸, A. Lenti⁹, R. E. Ryan¹⁰, D. Korobkin¹¹, S. X. Li¹², M. J. Burgess¹³, W. H. Lee¹⁴, A. M. Watson¹⁵, C. Chaff¹⁶, S. Covino¹⁷, P. D’Avanzo¹⁸, C. J. Ferrero¹⁹, J. Becerra Gonzalez²⁰, H. G. Khachatryan²¹, A. Sani²², A. Kim²³, C.-U. Lee²⁴, H. M. Lee²⁵, A. Kutyrev²⁶, G. Lim²⁷, R. Sánchez-Cerdeña²⁸, S. Veitch²⁹, M. W. Herring³⁰, and Y. Youn³¹

A long-standing paradigm in astrophysics is that collisions—or mergers—of two neutron stars form highly relativistic and collimated outflows (jets) that power γ -ray bursts of short (less than two seconds) duration¹. The observational support for this model, however, is only indirect². A harbinger outstanding prediction is that gravitational-wave events from such mergers should be associated with γ -ray bursts, and that a majority of these bursts should be seen off-axis, that is, they should point away from Earth³. Here we report the discovery observations of the X-ray counterpart associated with the gravitational-wave event GW170817. Although the electromagnetic counterpart at optical and infrared frequencies is dominated by the radioactive glow (known as a kilonova⁴) from freshly synthesized r-process neutron capture (r-process) material in the merger ejecta⁵ (or NS–BH merger), at late and, later, radio frequencies are consistent with the presence of a γ -ray burst viewed off-axis. Our detection of X-ray emission at a location coincident with the kilonova transient provides the missing observational link between short γ -ray bursts and gravitational waves from neutron star mergers, and gives independent confirmation of the collimated nature of the γ -ray burst emission.

On 17 August 2017 at 12:41:04 universal time (UTC hereafter UT), the Advanced Laser Interferometer Gravitational-Wave Observatory (LIGO) detected a gravitational-wave transient from the merger of two neutron stars at a distance⁶ of 40 ± 8 Mpc. Approximately two seconds later, a weak γ -ray burst (GRB) of short duration (< 2 s) was observed by the Fermi Gamma-ray Space Telescope⁷ and INTEGRAL⁸. The low luminosity of this γ -ray transient was unusual compared to the population of short GRBs at cosmological distances⁹, and its physical connection with the gravitational-wave event remained unclear. A vigorous observational campaign targeted the localization region of the gravitational-wave transient, and rapidly identified a source of bright optical, infrared and diffracted emission in the early-type galaxy NGC 4993¹⁰. This source was designated SSS17a by the Swift team¹¹, but here we use the official IAU designation, AT 2017gk. AT 2017gk was initially not visible in radio and X-ray wavelengths. However, on 22 August 2017, we observed the field with the Chandra X-ray Observatory and detected X-ray emission at the position of AT 2017gk (Fig. 1). This observation (see Methods) implies an isotropic luminosity of 9×10^{46} erg s⁻¹ if located in NGC 4993 at a distance of about 40 Mpc. Further Chandra observations, performed between 1 and 2 September 2017, confirmed the presence



Figure 1. Optical/infrared and X-ray images of the counterpart of GW170817. (a) Optical/infrared image showing a bright and red transient in the early-type galaxy NGC 4993, at a projected physical offset of about 2 kpc from its nucleus. A similar small offset is observed

in less than a quarter of short GRBs¹². Dust lanes are visible in the inner regions, suggestive of a past merger (see Methods). (b) Chandra observations revealed a faint X-ray source at the position of the optical/infrared transient. X-ray emission from the galaxy nucleus is also visible.

1. Introduction

The detection of gravitational waves (GWs) by the Laser Interferometer Gravitational-wave Observatory (LIGO) is one of the most exciting advances in physics in decades. Abbott et al. (2016a) reported the first LIGO detection of GWs, resulting from the merger of two black holes (BHs). The observed waveforms showed a near-perfect match to predictions from general relativity for the inspiral and merger of two BHs, ushering in the era of GW astronomy. Extensive follow-up observations based on this GW event found no robust electromagnetic (EM) counterparts (e.g., Abbott et al. 2016; Coughan et al. 2016; Evans et al. 2016; Soares-Santos et al. 2016), consistent with theoretical predictions for stellar-mass BH mergers.

The next frontier is multi-messenger astronomy, where GW sources are associated with EM emitters, connecting GW astronomy to our richer understanding of astrophysics. Core-collapse supernovae, mergers of two neutron stars (NSs), and mergers of NS–BH binaries are among the EM sources likely to have detectable GW signals. In particular, NS–NS mergers have been predicted to be the progenitors of short GRBs (e.g., Paczynski 1986; Narayan et al. 1992), and may produce kilonova (Li & Paczynski 1998) that are responsible for the majority of r-process nucleosynthesis in the Universe (Gibson et al. 1989). On 2017 August 17 at 12:41:04 UTC, LIGO–Virgo detected event GW170817—the observed first possible weak source reported in Evans et al. (2017b), that, with refined astrophysical corrections and

luminosity distance of $D_L = 40 \pm 8$ Mpc (LIGO Scientific Collaboration & Virgo Collaboration 2017a, 2017b; Abbott et al. 2017). This discovery is the first in a new class of GW events stemming from NS binary coalescences, which are predicted to produce EM emission. Approximately 2 s after the GW trigger, the Gamma-ray Burst Monitor (GBM) instrument on board the Fermi Gamma-ray Space Telescope was also triggered by the short-duration GRB 170817A (Coughan et al. 2017; Goldstein et al. 2017a, 2017b; von Kienlin et al. 2017). Thanks to light localization by LIGO–Virgo, follow-up ground-based optical imaging soon discovered the associated optical transient Swope Supernova Survey 17a (SSS17a; Coughan et al. 2017a, 2017b), near the galaxy NGC 4993 at $z = 0.0098$ ($D_L = 42.5 \pm 0.3$ Mpc; da Costa et al. 2017).

This discovery initiated rapid follow-up surveillance by X-ray telescopes. The first X-ray observations of the field yielded upper limits from the Monitor of All-sky X-ray Images (MAXI) on board the International Space Station (Sugita et al. 2017) and the X-ray Telescope (XRT) on Swift Observatory (Evans et al. 2017a). In particular, Swift observations began 0.6 days post-trigger, followed by a cadence of one-to-several observations daily. No X-ray emission was detected at the location of SSS17a due to a limiting luminosity of $L_{0.3\text{--}10\text{keV}} \leq 9.2 \times 10^{41}$ erg s⁻¹ (Evans et al. 2017c). Stacked Swift–XRT observations spanning 16 days event GW170817—the observed first possible weak source reported in Evans et al. (2017b), that, with refined astrophysical corrections and

The Astrophysical Journal Letters, 848L25 (2017), 2017 October 20
© 2017. The American Astronomical Society. All rights reserved.

<https://doi.org/10.3847/2041-8213/aa7046>



A Deep Chandra X-Ray Study of Neutron Star Coalescence GW170817

Daryl Haggard^{1,2}, Melaina Nyckla³, John J. Ruan⁴, Vicky Kalogera⁵, S. Bradley Cenko^{6,7}, Phil Brantner⁸, and Andrea Kottner⁹

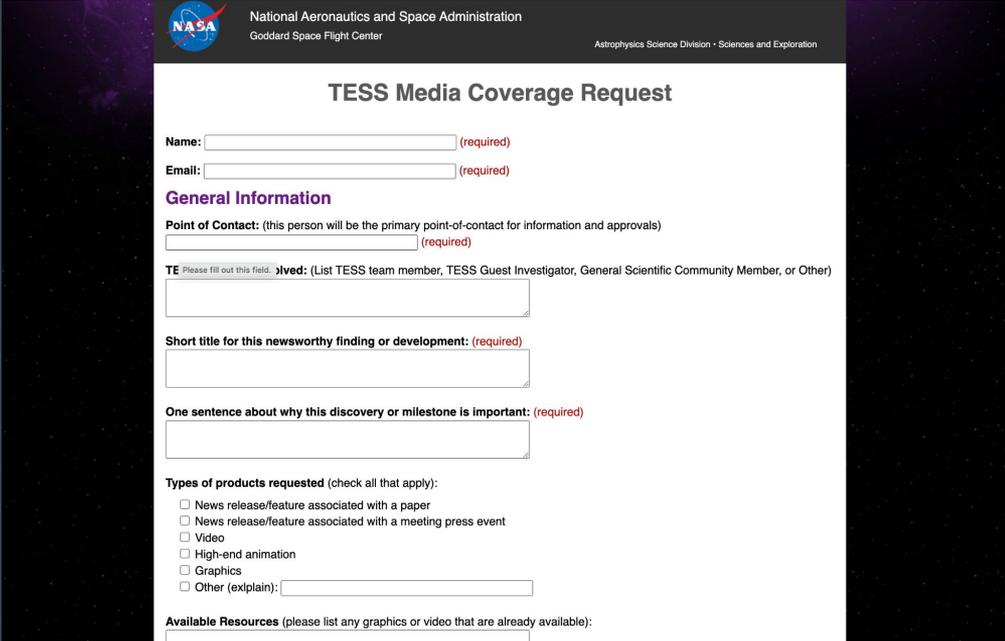
¹McGill Space Institute and Department of Physics, McGill University, 3600 rue Université, Montreal, QC H3A 2T4, Canada
²CFAR, Astrical Global School, Gravity & the Extreme Universe Research Institute for Advanced Research, 604 University Avenue, Toronto, ON M5G 1M5, Canada
³Center for Interdisciplinary Exploration and Research in Astrophysics and Department of Physics and Astronomy, Northwestern University, 215 Sheridan Road, Evanston, IL 60208-3112, USA
⁴Astronomy Science Division, NASA/Goddard Space Flight Center, Greenbelt, MD 20771, USA
⁵Joint Space Science Institute, University of Maryland, College Park, MD 20742, USA
⁶Leineweber Institute for Space and Earth Observation and Department of Physics & Astronomy, University of Leicester, University Road, Leicester, LE1 7RH, UK
⁷Department of Astronomy and Astrophysics, Pennsylvania State University, 521 Dave Lab, University Park, PA 16802, USA
Received 2017 September 19; revised 2017 September 22; accepted 2017 September 22; published 2017 October 16

Abstract

We report Chandra observations of GW170817, the first neutron star–neutron star merger discovered by the joint LIGO–Virgo Collaboration, and the first direct detection of gravitational radiation associated with an electromagnetic counterpart. Fermi short γ -ray burst GRB 170817A, first event occurred on 2017 August 17 and subsequent observations identified an optical counterpart, SSS17a, coincident with NGC 4993 ($\sim 10^\circ$ separation). Early Chandra ($\Delta t = 2$ days) and Swift ($\Delta t = 1.3$ days) observations yielded non-detections at the optical position, but ~ 9 days post-trigger Chandra monitoring revealed an X-ray point source coincident with SSS17a. We present two deep Chandra observations totaling > 65 ks, collected on 2017 September 01–02 ($\Delta t = 15\text{--}16$ days). We detect X-ray emission from SSS17a with $L_{0.3\text{--}10\text{keV}} = 2.4 \times 10^{42}$ erg s⁻¹ and a power law spectrum of $\Gamma = 2.4 \pm 0.8$. We find that the X-ray light curve from a binary NS coalescence associated with this source is consistent with the afterglow from an off-axis short γ -ray burst, with a jet angle $\geq 23^\circ$ from the line of sight. This event marks both the first electromagnetic counterpart to a LIGO–Virgo gravitational-wave source and the first identification of an off-axis short GRB. We also confirm extended X-ray emission from NGC 4993 ($L_{0.3\text{--}10\text{keV}} \sim 9 \times 10^{41}$ erg s⁻¹) consistent with its IS10 galaxy classification, and report two new Chandra point sources in this field, CXOU J170819.8–034011.7 (gravitational waves – stars: neutron – X-rays: binaries)

Tell your comms team

- ✘ Our team asks for media requests from folks *when they submit the paper to the journal*
- ✘ TESS media request form link: https://asd.gsfc.nasa.gov/media_req_tess/
- ✘ Please talk to us BEFORE you post a paper on arXiv!



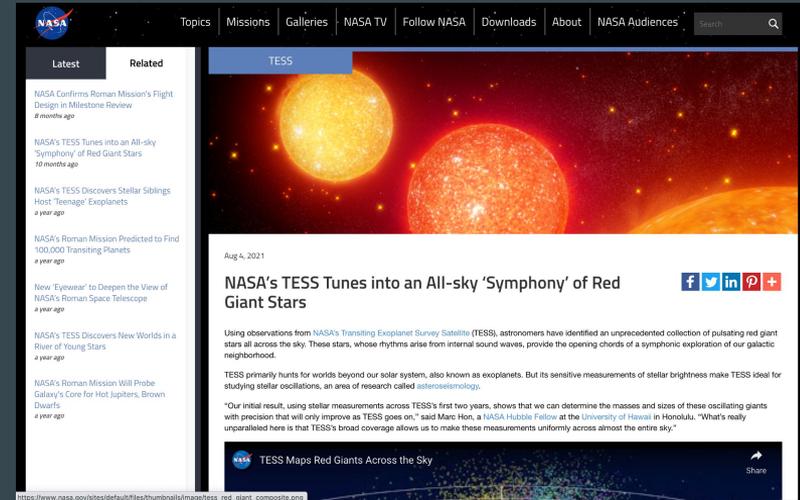
The image shows a screenshot of the "TESS Media Coverage Request" form. At the top, it features the NASA logo and the text "National Aeronautics and Space Administration" and "Goddard Space Flight Center". Below this, it says "Astrophysics Science Division • Sciences and Exploration". The form title is "TESS Media Coverage Request".

The form contains the following fields and sections:

- Name:** [text input] (required)
- Email:** [text input] (required)
- General Information**
- Point of Contact:** (this person will be the primary point-of-contact for information and approvals) [text input] (required)
- TE** (Please fill out this field.) **Invited:** (List TESS team member, TESS Guest Investigator, General Scientific Community Member, or Other) [text input]
- Short title for this newsworthy finding or development:** (required) [text input]
- One sentence about why this discovery or milestone is important:** (required) [text input]
- Types of products requested** (check all that apply):
 - News release/feature associated with a paper
 - News release/feature associated with a meeting press event
 - Video
 - High-end animation
 - Graphics
 - Other (explain): [text input]
- Available Resources** (please list any graphics or video that are already available): [text input]

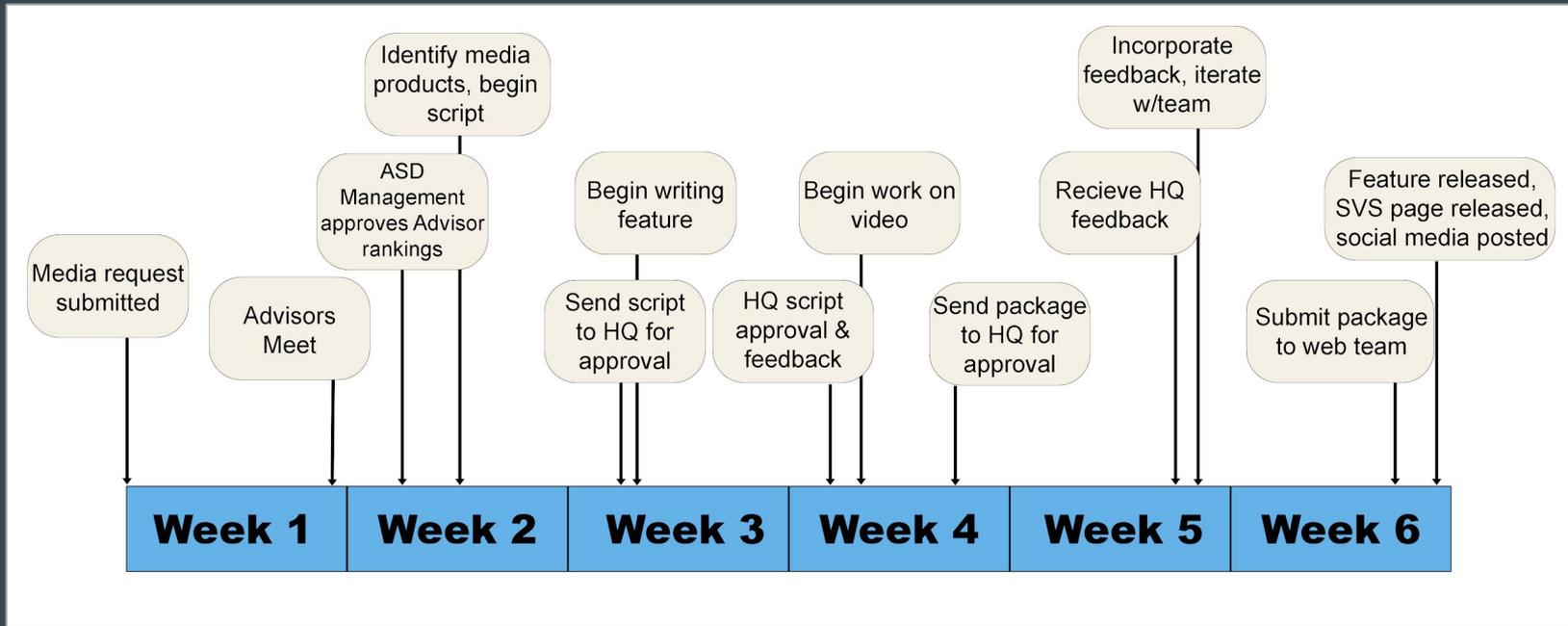
Media request is accepted, now what?

- ✘ We'll work up a news feature (typically) or press release (for Very High Profile results)
- ✘ We'll also work on multimedia products - videos and/or still images to explain the finding
- ✘ Lead time: 4-10+ weeks
- ✘ 6 weeks minimum for graphic or video support



What does the schedule look like?

Minimum timeline - assuming everything is in place, and everyone responds in a timely fashion



Example: TESS Detects its First Earth-Size Planet in HZ

The screenshot shows the NASA website interface. At the top, there is a navigation bar with links for Topics, Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences, along with a search bar. Below the navigation bar, there are two tabs: 'Latest' and 'Related'. The 'Latest' tab is active, showing a list of recent news items with their titles and 'a year ago' timestamps. The 'Related' tab is also visible. The main content area features a large image of a star with three planets orbiting it, labeled TOI 700 b, TOI 700 c, and TOI 700 d, with a green shaded area representing the Habitable Zone. Below the image is the article title 'NASA Planet Hunter Finds its 1st Earth-size Habitable-zone World' and a date 'Jan 6, 2020'. The article text describes the discovery of TOI 700 d, an Earth-sized planet in the habitable zone of its star, discovered by NASA's Transiting Exoplanet Survey Satellite (TESS). It mentions that TOI 700 d is one of only a few Earth-size planets discovered in a star's habitable zone so far. The article also includes a quote from Paul Hertz, NASA's astrophysics division director, and a 'Share' button at the bottom.

Topics Missions Galleries NASA TV Follow NASA Downloads About NASA Audiences Search

Latest Related

NASA's TESS Discovers Stellar Siblings Host 'Teenage' Exoplanets
a year ago

Distant Planet May Be On Its Second Atmosphere, NASA's Hubble Finds
a year ago

NASA's TESS Discovers New Worlds in a River of Young Stars
a year ago

NASA Missions Unmask Magnetar Eruptions in Nearby Galaxies
a year ago

NASA's TESS Creates a Cosmic Vista of the Northern Sky
2 years ago

Search for New Worlds at Home With NASA's Planet Patrol Project
2 years ago

NASA Missions Spy First Possible 'Survivor' Planet Hugging White Dwarf Star
2 years ago

TESS

Jan 6, 2020

NASA Planet Hunter Finds its 1st Earth-size Habitable-zone World

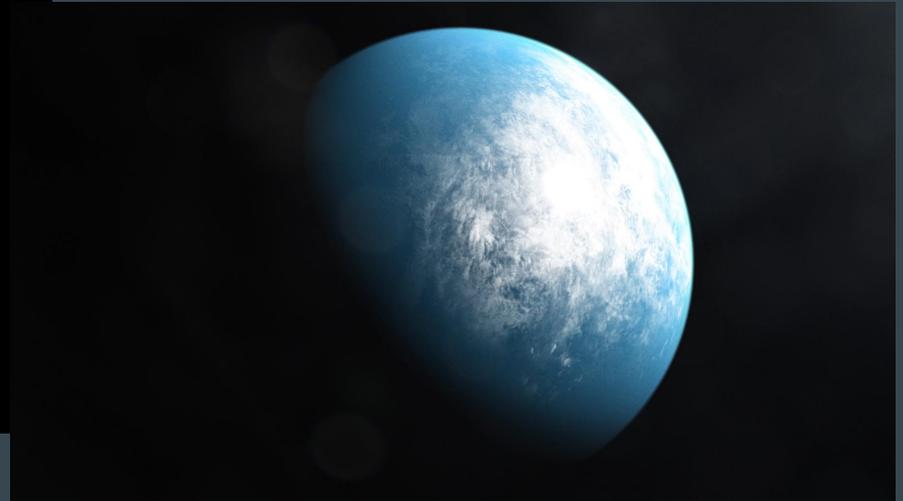
NASA's Transiting Exoplanet Survey Satellite (TESS) has discovered its first Earth-size planet in its star's habitable zone, the range of distances where conditions may be just right to allow the presence of liquid water on the surface. Scientists confirmed the find, called TOI 700 d, using NASA's Spitzer Space Telescope and have modeled the planet's potential environments to help inform future observations.

TOI 700 d is one of only a few Earth-size planets discovered in a star's habitable zone so far. Others include several planets in the TRAPPIST-1 system and other worlds discovered by NASA's Kepler Space Telescope.

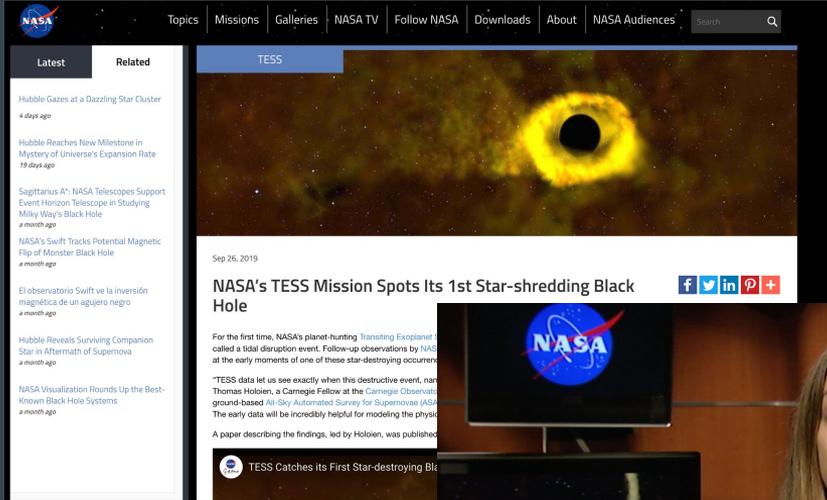
"TESS was designed and launched specifically to find Earth-sized planets orbiting nearby stars," said Paul Hertz, astrophysics division director at NASA Headquarters in Washington. "Planets around nearby stars are easiest to follow-up with larger telescopes in space and on Earth. Discovering TOI 700 d is a key science finding for TESS. Confirming the planet's size and habitable zone status with Spitzer is another win for Spitzer as it approaches the end of science operations this January."

TESS Mission's First Earth-size World in Star's Habitable-zone

Share



Example: TESS Mission Spots Black Hole Destroying Star



The screenshot shows the NASA website's navigation bar with links for Topics, Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences. A search bar is located on the right. The main content area is titled "TESS" and features a large image of a bright yellow ring of light surrounding a black hole. Below the image is the headline "NASA's TESS Mission Spots Its 1st Star-shredding Black Hole" dated Sep 26, 2019. The article text begins: "For the first time, NASA's planet-hunting Transiting Exoplanet Survey Satellite (TESS) has spotted a black hole in the process of shredding a star. The early data will be incredibly helpful for modeling the physics of these star-destroying events." A social media sharing bar is visible below the headline.

Latest Related

Hubble Gazers at a Dazzling Star Cluster
4 days ago

Hubble Reaches New Milestone in Mystery of Universe's Expansion Rate
19 days ago

Sagittarius A*: NASA Telescopes Support Event Horizon Telescope in Studying Milky Way's Black Hole
a month ago

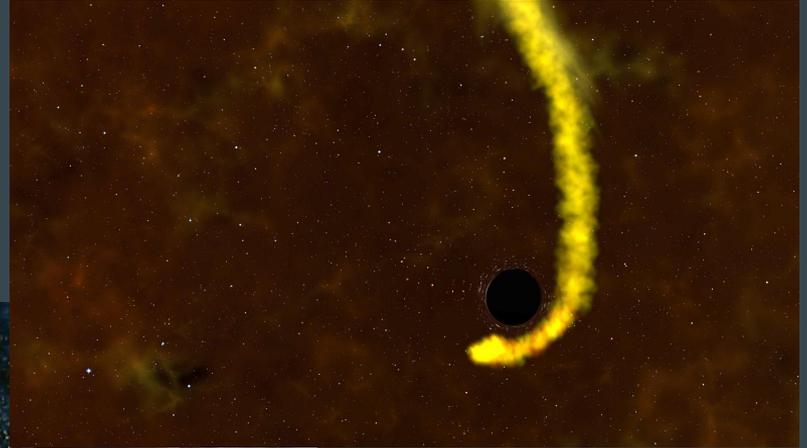
NASA's Swift Tracks Potential Magnetic Rip of Monster Black Hole
a month ago

El observatorio Swift ve la inversión magnética de un agujero negro
a month ago

Hubble Reveals Surviving Companion Star in Aftermath of Supernova
a month ago

NASA Visualization Rounds Up the Best-Known Black Hole Systems
a month ago

TESS Catches its First Star-destroying Black Hole



We also promote partner releases

Interesting result but no time to coordinate NASA coverage? We sometimes promote institutional releases from nasa.gov/tess

The screenshot displays the NASA Transiting Exoplanet Survey Satellite (TESS) website. The top navigation bar includes links for Topics, Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences, along with a search bar. The main content area is divided into several sections:

- Follow:** Social media icons for Facebook and Twitter, and the text "The Search for Life and Exoplanets".
- Related Topics:** Links for "Kepler and K2" and "All Topics A-Z".
- Exoplanets:** A featured article titled "Citizen Scientists Spot Jupiter-like Planet" with a sub-header "ABCs of Exoplanets". The article text reads: "Every new planet found orbiting a distant star opens a world of possibilities. Exoplanets capture our imaginations. TESS will scour the skies to discover more distant worlds than ever before. Come along on the journey with 'ABCs of Exoplanets.'" It includes links for "Interactive Book" and "Posters".
- Exoplanets:** A smaller article titled "DLR: NASA's TESS Finds a Planet with an Eight-hour..." with a red arrow pointing to the "Interactive Book" link in the larger article.
- Exoplanet Exploration:** A section titled "Exoplanet Exploration" with the text: "Step outside on a clear night, and you can be sure of something our ancestors could only imagine: Every star you see likely plays host to at least one planet. NASA's Exoplanet Exploration Program is responsible for implementing plans for the discovery and understanding of planets around nearby stars."
- Stars:** Two articles: "TESS Tunes into an All-sky 'Symphony' of Red Giant..." and "U-Warwick: Teardrop star reveals hidden supernova...".
- Related Links:** A list of links including "TESS Launch Team | Prelaunch Briefings, Events", "Launch Campaign Photos", "TESS project website at NASA Goddard", "TESS Guest Investigator Program Office website", and "TESS Science writers guide HD multimedia on TESS".

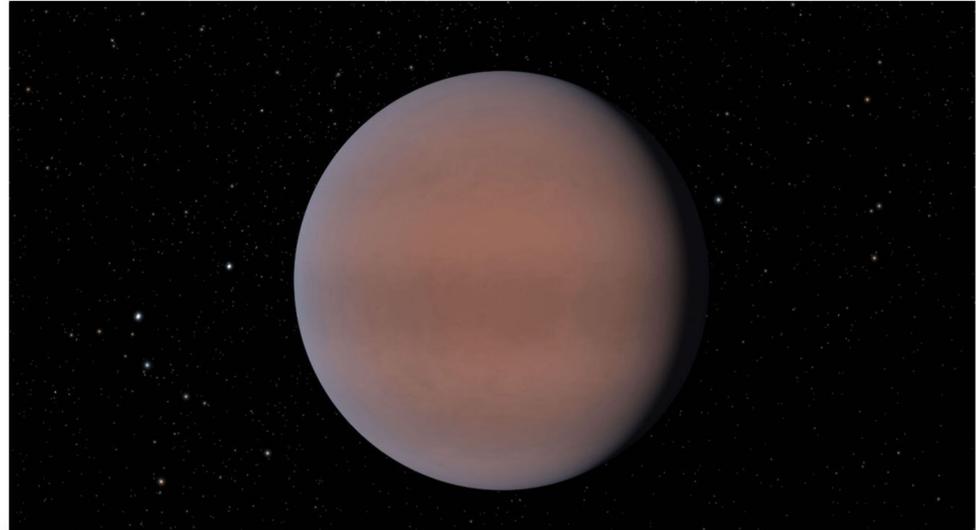
NASA Exoplanets: Discovery Alerts

The screenshot shows the NASA Exoplanets website. At the top, there is a navigation bar with the NASA logo and links for Topics, Missions, Galleries, NASA TV, Follow NASA, Downloads, About, and NASA Audiences. A search bar is also present. Below the navigation bar is a large banner for the TESS Exoplanet Mission. The main content area is titled "Transiting Exoplanet Survey Satellite (TESS)" and includes sub-sections for Overview, Images, Videos, and Media Resources. On the left, there is a sidebar with "Follow" options for Facebook and Twitter, and a section for "The Search for Life and Exoplanets" with "Related Topics" like Kepler and K2. The main content area features a large image of a Jupiter-like planet with a red arrow pointing to a smaller image of a planet. Below this, there are several article teasers: "Exoplanets Citizen Scientists Spot Jupiter-like Planet", "Hubble Discovery Alert: Water Vapor Detected on a 'Super Neptune'", and "Keck: NASA's Planets on". There is also a section titled "About TESS" with a "Read more" link.

NEWS | January 13, 2022

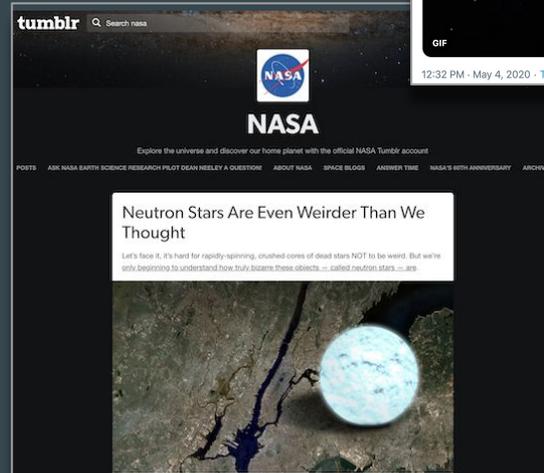
Discovery Alert: Water Vapor Detected on a 'Super Neptune'

By Pat Brennan, NASA's Exoplanet Exploration Program



Social Media Coverage

- ✗ Twitter and Facebook:
@NASAUniverse
 - ✗ Highlight news features
 - ✗ Serialized content
 - ✗ Evergreen content
- ✗ Tumblr post on the NASA HQ account
- ✗ Instagram posts on the NASA HQ account
- ✗ We work with partners like @NASAExoplanets to cross-promote and coordinate content



Tips for working with your local comms team

We expect:

- ✗ Tell us early about upcoming results and papers
- ✗ Give timely feedback on draft visuals and text
- ✗ Communicate with your fellow authors
- ✗ Keep us apprised of the publication status and timelines

Tips for working with the NASA TESS comms team

We offer:

- ✘ Write a feature or release; shepherding through institution processes
- ✘ Create visuals to accompany the release
- ✘ Provide every opportunity to ensure science is correct and fairly represented
- ✘ Support the feature with social media

Questions?

