


A Universe of NASA Resources

The webinar will begin at 1:00 p.m. (MT) and will be recorded.



Audio problems? Click and highlight the  button at the top of your screen. You can also click “Meeting” > “Audio Setup Wizard”. You will not need microphone capabilities.

Today's Agenda

- Introduction and Reminders
- NASA's Museum Alliance - Amelia Chapman
- Solar System Ambassadors – Heather Doyle
- Night Sky Network – Vivian White
- Eyes On - Kevin Hussey
- NASA's Universe of Learning - Emma Marcucci
- NASA Solar System Trek Program – Brian Day
- Q&A: All

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Professional development resources, including webinars, newsletters, blogs, forums, videos, and much more!

Headed to ALA? Come See Us!

- **NASA Booth #1839 – Hyperwall talks, swag, and more!**
- **STEM Opportunities, Resources, and Partnerships between Public Libraries and Afterschool Providers**
 - Saturday, June 23; 1:00-2:00 p.m.; Room 288
- **Tech-time Fun with Real-world Connections**
 - Saturday, June 23; 2:30-3:30 p.m.; Room 386-387
- **Lessons Learned from the 2017 Eclipse: What Participation in Charismatic Events Can Do For Your Library**
 - Monday, June 25; 2:30-3:30 p.m.; Room 395-396

STEM ACTIVITY Clearinghouse

Like an activity
and think other
library staff
should know how
great it is? Didn't
like an activity or
have
modifications to
make it better?
**Make sure to
leave a review!**

Sort by

Rating ★★★★★
Participants Enjoyed the
Activity
★★★★★
Participants Learned from
This Activity
★★★★★
Activity Instructions Were
Clear and Easy to Follow
★★★★★
Would Recommend
★★★★★

Heather Beverley
04/20/2018

All Ages Fun

I have done this program for 4-6th graders, and it was a great success. We started by sharing a video that explained how bridges were built, and then followed it with a discussion on what shapes were strongest. The kids then used that knowledge to build their own bridges. We allowed the kids to do test runs of their bridges, so they could modify their designs as needed. Although the original activity calls for 200 pennies, we had several bridges that easily held 200 pennies, so more pennies on hand is not a bad thing! Additionally, all the kids really enjoyed watching everyone else's bridges and how they fared. going as far as group counting as the pennies were placed on the bridge.

The reason I say this is all ages fun, though, is that I've also done this activity in a continuing education class, and the whole room full of some 40 adults were abuzz with laughter and excited planning; and while there was no group counting as their was with the kids, there was lots of cheering and exclaiming as each bridge was tested!

Rating ★★★★★
Participants Enjoyed the
Activity
★★★★★
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★★★★★
Activity Instructions Were
Clear and Easy to Follow
★★★★★
Would Recommend
★★★★★

Kendra Mullison
12/06/2017

Built to last.

This program was a blast! We had to make a couple of concessions based on availability of supplies, but a little flexibility goes a long way here. We only had bendy straws, for example, as well as blue painter's tape and washers instead of pennies. (As it turns out, washers are more expensive than pennies, so our solution won't be practical for every group.)

We ran this program as a part of a weekly makerspace program which takes over our large meeting room for two hours each Monday, and the bridge-building and "testing" parts lasted for most of that time. Every group will look and feel different, especially when it comes to the time required to finish the bridges; our group was made up of roughly fifteen kids aged four through eleven. Some of our kids elected to work individually, and others requested to work in groups. The groups almost universally took longer to complete bridges of similar design and complexity to those working individually, mostly because they were kept busy "negotiating" various design features.

A couple of thoughts:

- Explaining the length requirements and testing processes with a demonstration at the very beginning is extremely important, especially for the younger children. All of our kids understood once they saw the challenge in process, but some of the terminology didn't quite stick. That turned out to be fine.

- Test out the testing process (recursive, I know) before you actually run the program. It's not practical to sit a cup of pennies on top of every bridge design. The truss bridges were notoriously difficult, so we ended up creating a sling which hung beneath the bridges to hold the weight. Doing so was tricky and took up time, however.

- Printing out and perhaps even laminating a number of different bridge designs for inspiration is also useful, especially for those younger children. We are situated in a part of the country which is mostly sans bridges, and those which "are" around are the standard concrete highway overpass kind of construction. Most of our kiddos had never seen a suspension or truss bridge in their lives, which is worth noting for more rural and landlocked communities like ours. So: photos really help as props and demonstrations. If you have bridge-related items in your library collection, those might substitute.

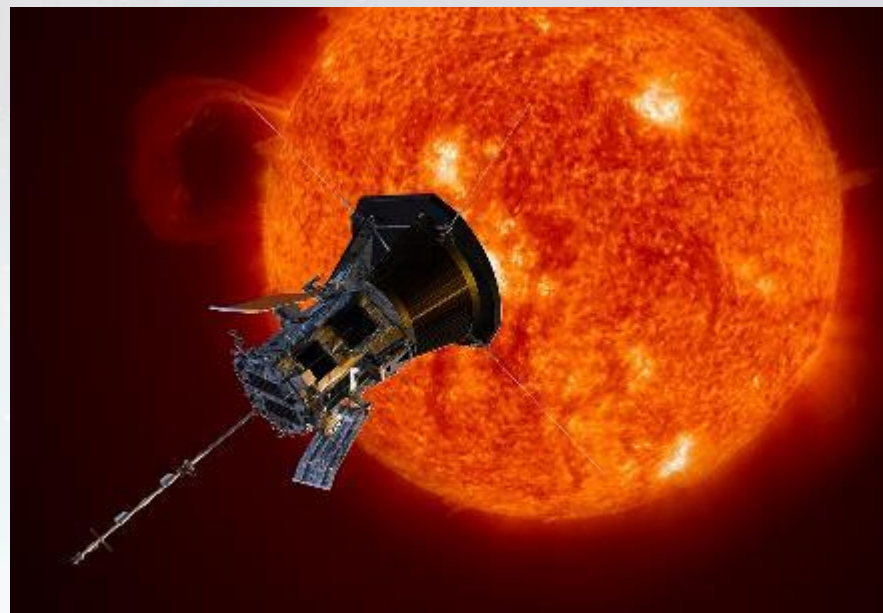
- Measuring out a standard length or two of tape for each bridge in addition to counting out the straws is important, as we had several groups overdo it on the tape—to the point where the bridge masses were made up of a higher percentage of tape than straw.

- The "redesign" part of the process is really important! I highly recommend timing the first building session, keeping it short, then doing the testing. After the first round of testing, offer more time to redesign each bridge. For many of our younger kiddos the activity really "clicked" during the test, and they were begging to "fix" them even before I had finished adding the washers/pennies!

- Offering a prize for the strongest bridge is a great incentive, but as most librarians are probably already aware, it can be divisive as well. Finding a way to reward participants for the considerable time and effort involved is important, but if you can do so without prioritizing "winning" over "engineering" ... do that, and then let me know how you managed it!

The Parker Solar Probe Launch

- Launch Window: 7/31 – 8/19
- Webinar Recording:
<https://youtu.be/sDxLuIYT2-s>
- Event Page:
<http://www.starnetlibraries.org/parker-solar-probe/>
- Clearinghouse Sun Activities:
<http://clearinghouse.starnetlibraries.org/124-sun>



NASA's Museum Alliance is an active community of practice that provides access to NASA resources for informal educators.



Our Platforms

- Member **website** of searchable resources



Our Platforms

- Member **website** of searchable resources
- **Calendar** of mission events, deadlines, etc



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- Regular live **briefings** by NASA experts




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- Regular live **briefings** by NASA experts
- Direct **assistance** to members



Member Website



National Aeronautics and Space Administration

Welcome Amelia's Test Account

Museum Alliance

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Meet Citizen Scientists
Every day enthusiastic amateurs worldwide are making discoveries and valuable contributions to NASA — and you can join them!

JOIN OUR COMMUNITY	MEET OUR COMMUNITY	EVENTS IN YOUR COMMUNITY	COMPETITIVE PROGRAM
The Museum Alliance brings current NASA science and technology to free-choice learners through professional development of informal education providers and access to NASA staff and materials. More	Over 1,000 professionals at more than 500 U.S. museums, science centers, planetariums, NASA Visitor Centers, Challenger Centers, observatories, parks, libraries, camps, and youth-serving organizations are partners in the Museum Alliance. More	From exhibits to planetarium shows to educator workshops to special lectures, Museum Alliance partners present space exploration and aeronautics programs and events for their local communities. More	NASA Teams Engaging Affiliated Museums and Informal Institutions (formerly CP4BMPVC) aligns with NASA and Federal science, technology, engineering, and math (STEM) education goals. More


Featured Events



55th Anniversary (1963), Mercury-Atlas 9 Launch (Cooper)
Tuesday, May 16, 2016




NASA Live: Spacewalk
Wednesday, May 15, 2016



The Parker Solar Probe Launch: How Will Your Library Be Involved?
Thursday, May 17, 2016

Member Website


 National Aeronautics and Space Administration

Welcome Amelia's Test Account

Museum Alliance

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Meet Citizen Scientists


Every day enthusiastic amateurs worldwide are making discoveries and valuable contributions to NASA — and you can join them!

JOIN OUR COMMUNITY	MEET OUR COMMUNITY	EVENTS IN YOUR COMMUNITY	COMPETITIVE PROGRAM
The Museum Alliance brings current NASA science and technology to free-choice learners through professional development of informal education providers and access to NASA staff and materials. More	Over 1,000 professionals at more than 500 U.S. museums, science centers, planetariums, NASA Visitor Centers, Challenger Centers, observatories, parks, libraries, camps, and youth-serving organizations are partners in the Museum Alliance. More	From exhibits to planetarium shows to educator workshops to special lectures, Museum Alliance partners present space exploration and aeronautics programs and events for their local communities. More	NASA Teams Engaging Affiliated Museums and Informal Institutions (formerly GP4BMPVC) aligns with NASA and Federal science, technology, engineering, and math (STEM) education goals. More

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Member Website

Searchable collections of resources (activities, printables, videos, games, lesson plans, websites, etc)

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Searchable collections of resources (activities, printables, videos, games, lesson plans, websites, etc)

Themes include:

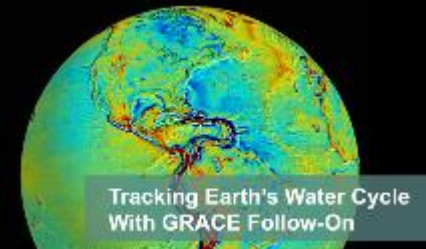
- Apollo 50th Anniversary
- Teen Tech Week
- Virtual Reality/360 Videos
- Girls in STEM
- Spanish Resources
- Summer Reading
- Space/Sport Connection
- Star Wars and NASA
- Earth Day
- Citizen Science

Museum Alliance Calendar



Presentations by NASA Experts

- Live conversations, Q&A
- Presentation materials
- Key links and websites
- Average of 4 a month
- Archived recording and transcript



How to Find Us

<https://informal.jpl.nasa.gov/museum/>

Amelia.J.Chapman@jpl.nasa.gov







National Aeronautics and
Space Administration

Solar System Ambassadors Program

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Event Calendar

News & Nuggets

Resources

NASA Nationwide

Program Management

Who We Are

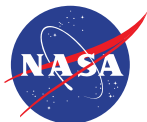
Meet Richard, a NASA Solar System Ambassador



Richard Stember is a NASA Solar System Ambassador volunteer who shares his passion for space with the public.

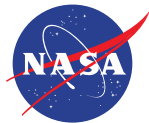
Solar System Ambassadors

www.solarsystem.nasa.gov/ssa/home.cfm



Jet Propulsion Laboratory
California Institute of Technology

Solar System Ambassadors



Who We Are



- **SSA is 21 years old, having started as the Galileo Ambassador program in 1997**
- **908 space enthusiast volunteers**
- **50 states, DC, Puerto Rico, Guam, US Virgin Islands and US citizens living abroad: Canada, Germany, Haiti, Netherlands, New Zealand, Republic of Korea, Singapore, United Kingdom**

What We Do



- Public engagement in a variety of venues
- CY2017 Events: 3,820
 - Direct Audience: 1,037,795
 - Indirect Audience: 20,067,574 readers/viewers/listeners
- Library events since 2001: 2,473 events reaching 282,569 people
- Some of us specialize...

How We Train



- **NASA Nationwide** - formerly SSA professional development
- More than 500 archived telecons since 1999
- Collaborate with NASA Museum Alliance
- Now available to other NASA volunteers and networks, including STAR_Net librarians

How to Find A Local Solar System Ambassador



- SSA Website: <https://solarsystem1.jpl.nasa.gov/ssa/home.cfm>
- Directory Search by State or by SSA Name
- Email Ambassador using website form
- If seeking several Ambassadors in an area, contact SSA Leads at: ambassad@jpl.nasa.gov

How We Can Serve Your Library



- **NASA Milestones: InSight Landing, New Horizons MU-69 Flyby**
- **Speakers: NASA Presentations, Summer Reading Programs**
- **Hands-on Activities: Science Days, Summer Camps**
- **Celestial Viewing: Solar Viewing, Evening Star Parties**
- **Your suggestions...**

Why We're Ambassadors



*If what I do makes a difference in the life of just one child, then it was worth doing. --Sr. Clarice Lolich,
Solar System Ambassador*

Update...



Gene and Danielle during their visit to JPL in 2017. Danielle has completed her first year at Case Western Reserve University in Ohio, majoring in engineering. She's looking into NASA internships...



Jet Propulsion Laboratory
California Institute of Technology

jpl.nasa.gov

Night Sky Network

Astronomy Clubs bringing the wonders of the universe to the public



Resources and Potential Partnerships with Astronomy Clubs

Vivian White

nightskyinfo@astrosociety.org

Astronomical Society of the Pacific

Resources Beyond Your Fingertips



Night Sky Network

Astronomy Clubs bringing the wonders of the universe to the public



More than 450 clubs in the network

nightskynetwork.org

Night Sky Network

Astronomy clubs bringing the wonders of the universe to the public

In partnership with the
Astronomical Society of the Pacific

[CLUBS & EVENTS](#)[NIGHT SKY PLANNER](#)[OUTREACH RESOURCES](#)[ABOUT THE NETWORK](#)

FEATURED



30 Years Ago, We Visited Uranus

The plucky Voyager 2 space probe made its closest approach to the Uranus system 30 years ago this month, giving humanity our first close-up glimpse of this cold, giant world. Voyager 2 made many

CURRENT LOCATION

Unknown



- [set to current location](#)
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FOLLOW THE NIGHT SKY NETWORK



31,748 Events held since 2004

3,409,833 People Reached

CLUBS & EVENTS

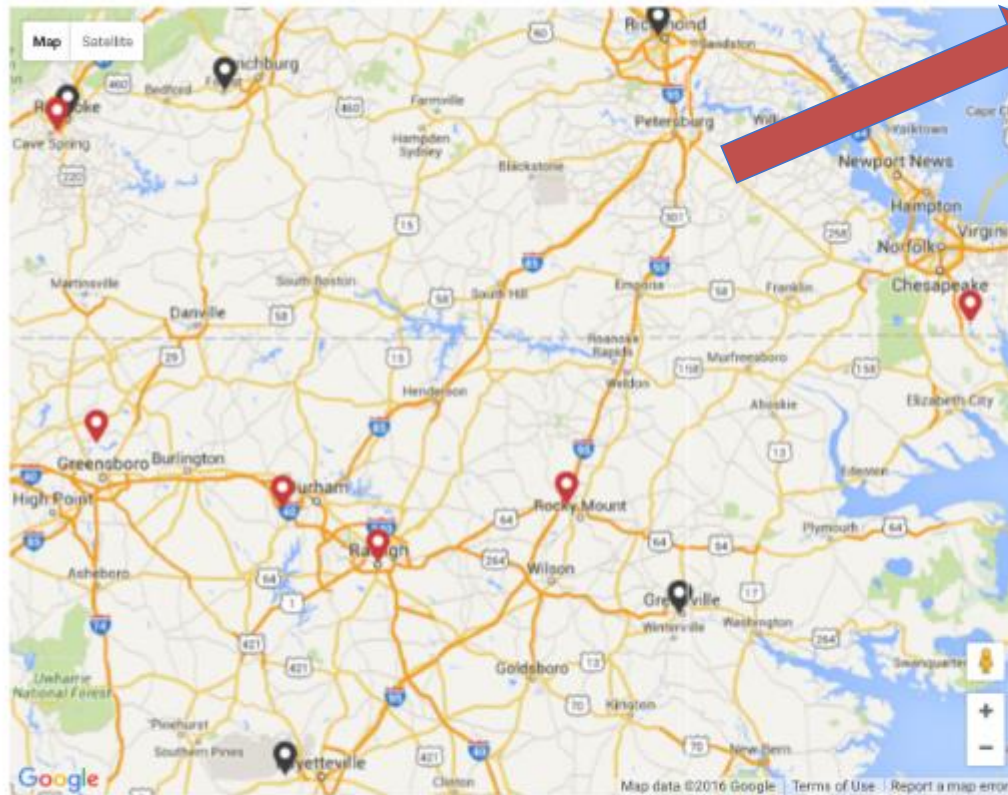
EVENTS IN YOUR AREA

8:00 PM - 10:00 [Globe at Night](#)

Find Local Clubs

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ASTRONOMY CLUBS IN YOUR AREA



This website uses GeoIP2 JavaScript from MaxMind.

club with upcoming events Night Sky Network member club

CLUBS NEAR YOU

- 4 miles [Tar River Astronomy Club](#)
ROCKY MOUNT, NC 27804
- 33 miles [Carolina Skies Astronomy Club](#)
Greenville, NC 27834
- 49 miles [Raleigh Astronomy Club](#)
Raleigh, NC, NC 27603
- 70 miles [Chapel Hill Astronomical and Observational Society](#)
Chapel Hill, NC 27514

[+ more clubs](#)[+ more clubs](#)

Night Sky Network

Astronomy Clubs bringing the wonders of the universe to the public



CLUBS & EVENTS

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ABOUT THE NETWORK



Tri-State Astronomers

SHARE

Recommend

[About TSA](#) [Club Website](#) [Events](#) [Locations](#) [Request an Event](#) [Join Club](#) [Register](#) [Contact Club](#)

FOLLOW THE NIGHT

About Us

"To bring together those who appreciate the night sky!" The [TriState Astronomers](#) is a group of amateur astronomers from the area surrounding Hagerstown, MD. & Washington County. Since 1985, we enjoy sharing the ageless wonders of the night sky.

[Find us on facebook](#)

CLUB CONTACT INFO

Tri-State Astronomers

William Brish Planetarium
823 Commonwealth Ave
Hagerstown MD 21740

Phone: N/A

Chairman@TriStateAstronomers.org

UPCOMING EVENTS

6:00 PM - 8:00 PM
Thu 2/11/16
community event

Fri 3/4/16 - Sun 3/6/16
club event

6:00 PM - 7:30 PM
Tue 3/15/16
community event

6:30 PM - 10:00 PM

Astronomy Demos and Activities

Night Sky Network

Astronomy clubs bringing the wonders of the universe to the public

In partnership with the
Astronomical Society of the Pacific



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CURRENT LOCATION

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Search US zip, city or place



- › [set to current location](#)
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FOLLOW THE NIGHT SKY NETWORK




36,601 Events held since 2004

4,004,950 People Reached

Featured Activities

Night Sky Planner

And Other Resources



Jet Propulsion Laboratory
California Institute of Technology

JPL HOME EARTH SOLAR SYSTEM STARS & GALAXIES SCIENCE & TECHNOLOGY
BRING THE UNIVERSE TO YOU

Night Sky Network


Astronomy clubs bringing the wonders of the universe to the public

In partnership with the
Astronomical Society of the Pacific

Username Password LOGIN

CLUBS & EVENTS NIGHT SKY PLANNER OUTREACH RESOURCES ABOUT THE NETWORK

Outreach Resources



FEATURED ACTIVITY


Standing in the Shadow of Earth

👤 CHILD, TEEN, ADULT

Show your visitors that watching the sun set also means watching the night rise. Turn away from the setting sun to watch the shadow of our planet rise up in the east as night rises during these long winter nights.

[VIEW DETAILS](#)


POPULAR ACTIVITIES & RESOURCES



Banner: Exploring Our Solar System

👤 CHILD, TEEN, ADULT

What planets can we see in the night sky? Why can't we see all the planets? Where has NASA explored in the Solar System?



2015 NSN Certificate of Appreciation

Print one of these certificates to accompany the 2015 award pins.

FIND ACTIVITIES & RESOURCES

Search

Choose Keyword

ACTIVITY KEY

🕒 DAYTIME EVENT

🌙 NIGHTTIME EVENT

🏠 INSIDE VENUE

🌳 OUTSIDE VENUE

👤 TARGET AUDIENCE

SHARE

Recommend

Tweet

3+1

Print

FOLLOW THE NIGHT SKY NETWORK

f

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MORE RESOURCES FROM NASA

NASA Space Place Program for Astronomy Clubs

Astronomy clubs can sign up with NASA's Space Place program to receive monthly feature articles giving the inside story on specific NASA missions, which may be published in the clubs' newsletters.

Solar System Ambassadors

NASA's volunteer Solar System Ambassadors are space enthusiasts from various walks of life who are interested in communicating the excitement of space exploration missions with their local communities.

Saturn Observatory Campaign

The Saturn Observation Campaign gives sky enthusiasts the opportunity to share the splendor of Saturn with their local communities.

NASA PhotoJournal

Find, download, and use NASA photos of the planets, galaxies,

Tips for Working with Clubs

- Plan ahead
- Visit a club star party or meeting
- Feed them
- Show Appreciation
 - Bookmarks
 - Thank you notes
 - Library swag



Astronomy Clubs are a Local Resource!

Vivian White

nightskyinfo@astrosociety.org

Night Sky Network

<http://nightskynetwork.org>

Astronomical Society of the Pacific

<http://astrosociety.org>



Jet Propulsion Laboratory
California Institute of Technology

NASA's Eyes

Presented by Kevin Hussey, Manager
Visualization Technology Applications & Development

NASA's Universe of Learning Connecting with Libraries



**STAR Net Webinar
June 6, 2018**

**Emma Marcucci
emarcucci@stsci.edu**



Learners of all ages and backgrounds are engaged and immersed in exploring the universe for themselves.



Our Portfolio

A science-driven, audience-driven, and learning-driven program in NASA Astrophysics



Our Portfolio

A science-driven, audience-driven, and learning-driven program in NASA Astrophysics



*Direct Connection to
NASA Astrophysics
Science, Technology,
and Content Experts*



Community Program

Girls STEAM Ahead with NASA

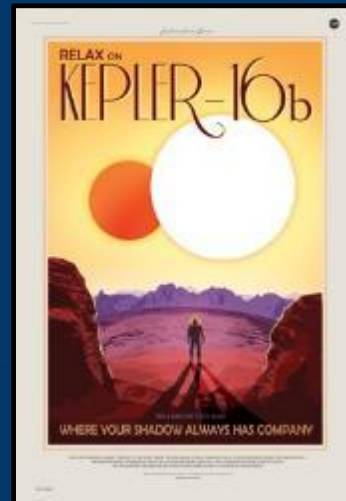
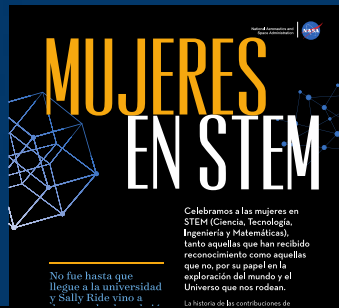


Community Program

Girls STEAM Ahead with NASA



Exhibits and Posters

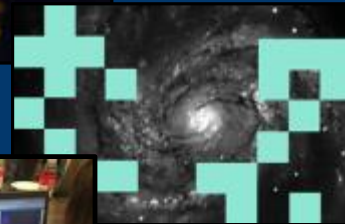
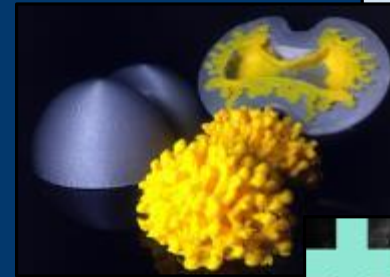


Community Program

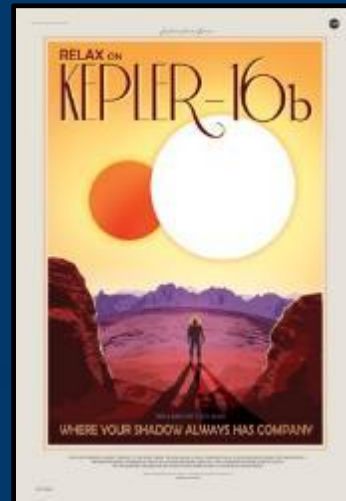
Girls STEAM Ahead with NASA



3D Learning and Coding



Exhibits and Posters



Astropix

Data Tools



Credit: NASA, ESA, SSC, CXC, and STScI



Credit: G. Dubner (IAFE, CONICET-University of Buenos Aires) et al.; NRAO/AUI/NSF; A. Loll et al.; T. Temim et al.; F. Seward et al.; Chandra/CXC; Spitzer/JPL-Caltech; XMM-Newton/ESA; and Hubble/STScI



Data Tools

Astropix



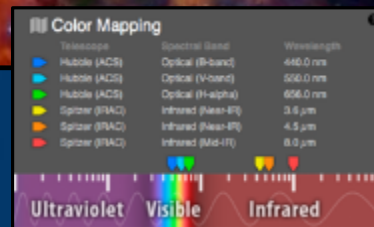
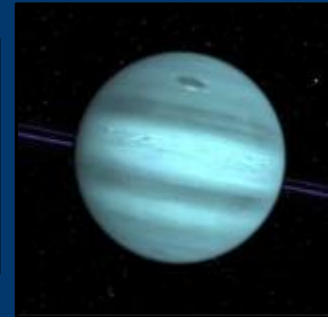
Credit: NASA, ESA, SSC, CXC, and STScI



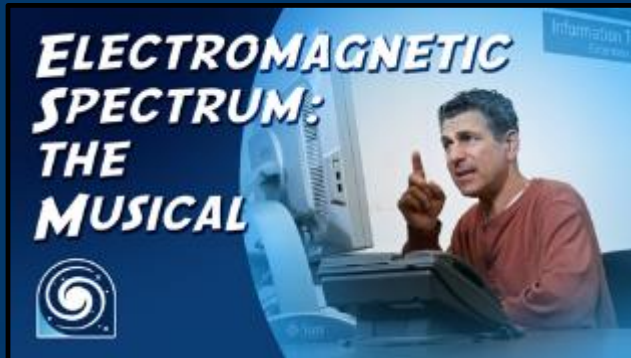
Credit: G. Dubner (IAFE, CONICET-University of Buenos Aires) et al.; NRAO/AUI/NSF; A. Loll et al.; T. Temim et al.; F. Seward et al.; Chandra/CXC; Spitzer/JPL-Caltech; XMM-Newton/ESA; and Hubble/STScI



MicroObservatory



Multimedia



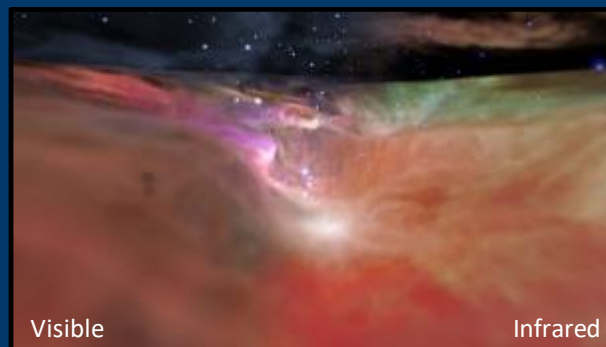
Universe Unplugged



ViewSpace



AstroViz



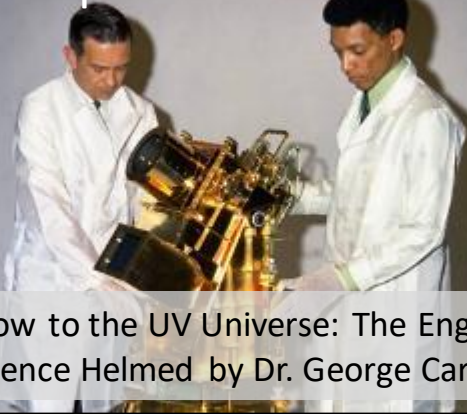
Eyes on Exoplanets



Professional Learning

Science Briefings

Special Events



A Window to the UV Universe: The Engineering and Science Helmed by Dr. George Carruthers

Credit: U.S. Naval Research Laboratory

Breaking News



Multi-messenger Astronomy:
A New Era in Space Science

Credit: NASA

Science Themes



Birth of Stars, Near and Far

Credit: NASA/ESA/STScI

Learn more at: <https://www.universe-of-learning.org/>


Get involved: info@www.universe-of-learning.org



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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.





NASA Solar System Trek

Brian Day

NASA Ames Research Center

<https://science.nasa.gov/science-activation-team/solar-system-trek>