

# NISE Network Online Workshop

DIY NASA Exhibits with Earth Information Center & ViewSpace

October 7, 2025



## Today's Presenters:

- **Timothy Rhue II**, Principal Informal Education Specialist at the [Space Telescope Science Institute](#) (STScI), Baltimore, MD
- **Nicole Ramberg-Pihl**, Senior Project Manager & Earth Scientist at [NASA's Earth Information Center](#), NASA



**Welcome!** As we wait to get started with today's discussion, please...

**Introduce yourself!** Type your name, institution, and location into the [Chat Box](#)

**Questions?** Feel free to type your questions into the [Chat Box](#) at any time throughout the webinar. A selection of questions from the chat and workshop registration will be read aloud by moderators for presenters to answer during the Q&A.

**Today's workshop will be recorded; those registered will receive an email when available here:** [nisenet.org/online-workshop-recordings](https://nisenet.org/online-workshop-recordings)

# See You Next Time!

## Upcoming Online Workshops...

- **Co-Creating with Communities - Inspiring Partner Stories**  
Tuesday, October 28, 2025  
2pm-3pm Eastern / 11am-12pm Pacific
- **The Climate Action Playbook - Resources Focused on the Developmental Needs of Early Learners**  
Tuesday, December 2, 2025  
2pm-3pm Eastern / 11am-12pm Pacific

Learn more and register at [nisenet.org/events](https://nisenet.org/events)



**Timothy Rhue II**  
**Principal Informal Education**  
**Specialist**  
**Space Telescope Science Institute**  
**(STScI)**  
**[trhue@stsci.edu](mailto:trhue@stsci.edu)**



# Introduction

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## What I'll cover

- What is ViewSpace
- What ViewSpace could look like in your space
- What it's like to use ViewSpace
- Resources that help you use ViewSpace as a museum
- Costs and Requirements (spoiler: ViewSpace itself is free)
- How to access/install



# What is ViewSpace?

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## Videos

- Collection
- Library

## Interactives

- Sliders
- Image Tours

Clarke  
Planetarium



# Maryland Science Center





Kentucky  
Science  
Museum





# Lowell Observatory



## ViewSpace Interactives – Exhibit Stand





ViewSpace  
Interactives –  
Facilitated  
Activity



# Interactive Sliders – Seeing Through Smoke

## Forms of Light: Seeing Through Smoke

Infrared light reveals a hidden scene [Text Description](#)

☒ Labels [Full Story >](#)



Smoke, which is made up in part by soot and water vapor, scatters visible light.

VISIBLE

## Forms of Light: Seeing Through Smoke

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Smoke, which is made up in part by soot and water vapor, scatters visible light.

VISIBLE

## Forms of Light: Seeing Through Smoke

Infrared light reveals a hidden scene [Text Description](#)

☒ Labels [Full Story >](#)



Infrared light passes through the fine particles in smoke, providing a clear view.

VISIBLE

INFRARED

## Topics

## Star Formation: Eagle Nebula

A Cosmic Cocoon [Test Description](#)[Labels](#) [Full Story](#)

## VIEWSPACE

## Topics

## Star Formation: Eagle Nebula

A Cosmic Cocoon [Test Description](#)[Labels](#) [Full Story](#)

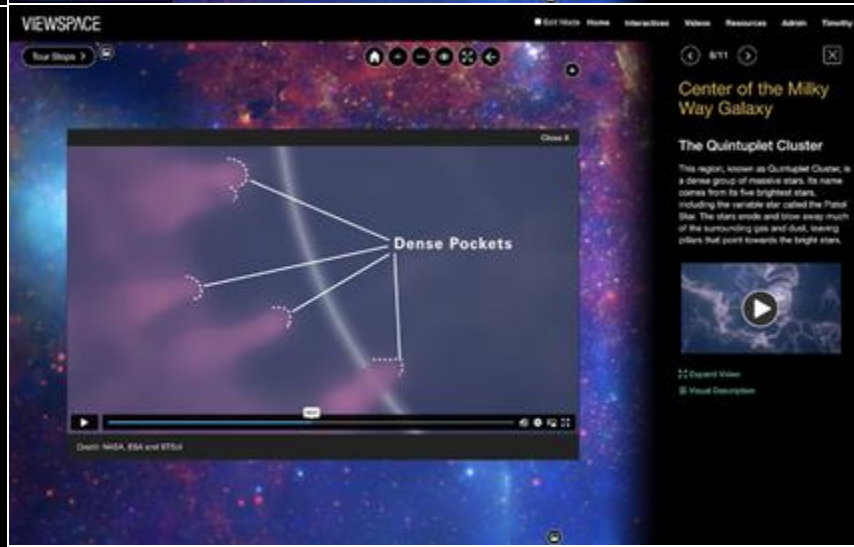
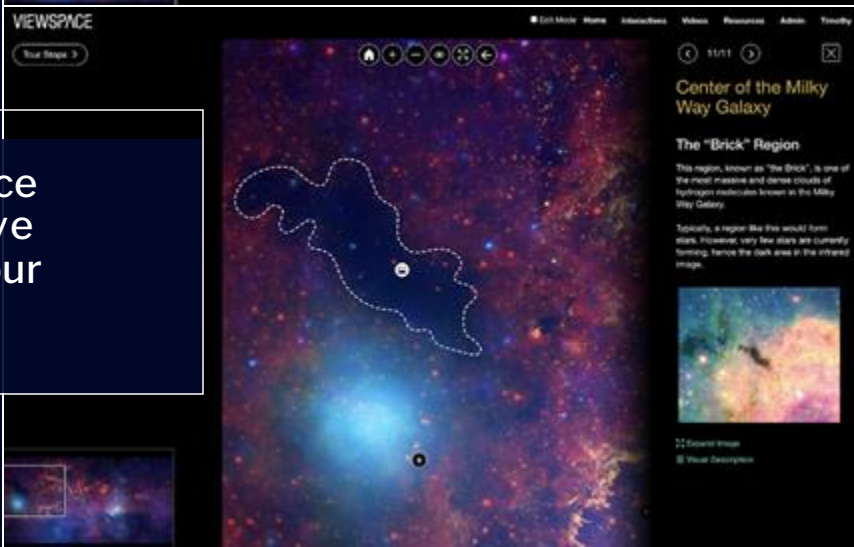
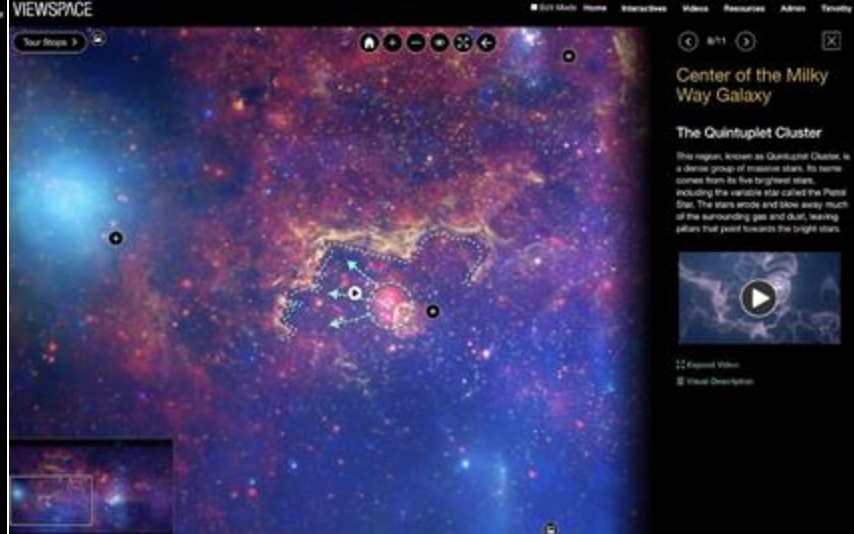
## VIEWSPACE

## Topics

## Star Formation: Eagle Nebula

A Cosmic Cocoon [Test Description](#)[Labels](#) [Full Story](#)

# Interactive Sliders – Eagle Nebula



ViewSpace  
Interactive  
Image Tour



## Video Library

Popular Topics

Search Topics

Sort

SUBMIT

## Space Topics



Cosmic Mysteries



Extreme Physics And  
Phenomena



History And Origin Of The  
Universe



How Do We Know?

# WELCOME TO VIEWSPACE BEGIN YOUR JOURNEY

Default sound for ViewSpace Collections is now controlled in [your profile](#). See the section titled "ViewSpace Collection Sound Settings" in your profile to change the setting.

While playing, sound can be muted or unmuted by pressing the "m" key on your keyboard. For more information see our [Setup Guide](#) (F. Controlling the Video).

If you have issues with videos freezing during playback and need support, please contact [support@viewspace.org](mailto:support@viewspace.org) and join the [mailing list](#) for updates. The looping video sets listed on your profile page are a stable workaround to the collections while our third-party video streaming service attempts to address the issues.

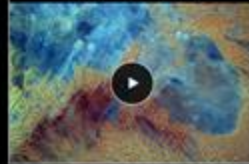
### ViewSpace Collection



### Space Collection



### Earth Collection



## Exhibit Labels

# VIEWSPACE



Find out more about ViewSpace at [viewspace.org](http://viewspace.org)  
ViewSpace is based on work supported by NASA. 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.

### Title Banners

Place a ViewSpace title banner beside or above the ViewSpace screen to capture visitors' attention and welcome them to the website.



Download the following sizes below:

8.5" x 11" portrait (1 MB)  
8.5" x 11" landscape (1 MB)  
11" x 17" portrait (1.6 MB)  
11" x 17" landscape (2.4 MB)  
22" x 28" portrait (1.9 MB)  
22" x 28" landscape (2 MB)  
24" x 36" portrait (1.6 MB)  
24" x 36" landscape (2.3 MB)

### Labels

Prepare your audience for immersion in ViewSpace with an explanatory label that provides a brief introduction to the website content.



Download the following sizes below:

8.5" x 11" portrait (589 KB)  
8.5" x 11" landscape (540 KB)  
11" x 17" portrait (630 KB)  
11" x 17" landscape (780 KB)  
22" x 28" portrait (1.7 MB)  
22" x 28" landscape (1.6 MB)  
24" x 36" portrait (1.9 MB)  
24" x 36" landscape (1.4 MB)

### Assets

[Download assets \(37.4 MB\)](#) to create your own customized labels. Assets are provided as InDesign files and image files. All images, text, and fonts provided for exhibit labels and banners can be used free of restrictions or copyright.



# How to Get ViewSpace

## Interactives Web Apps

- On a tablet
  - Tours.viewspace.org and sliders.viewspace.org
  - Click the install button



## Video Collections Account

- <https://viewspace.org/resources/videos#request>
  - Ideally use a generic e-mail address

# Setup Guide

## Installing ViewSpace's Interactive Apps

ViewSpace's free interactive apps provide direct access to the complete library of ViewSpace's interactives from a tablet's home screen or a computer desktop. The device can be locked using Kiosk Mode (on Windows, Devices, Locked Access (on iPadOS), desktop or getting (on Android) device) to prevent users from navigating away from the interactives library to access other apps, apps, or functionalities, making the app ideal for use as an interactive kiosk or during informal education programs. There are two apps, one to access the Image Tours and one to access the Image Sliders.

- To install the Interactive Image Tours App, navigate to <https://tours.viewspace.org> and follow the instructions for your device below.
- To install the Interactive Image Sliders App, navigate to <https://sliders.viewspace.org> and follow the instructions for your device below.



**Note:** The images in this section illustrate the steps for installing ViewSpace's Interactive Apps using three different devices. However, you can follow similar steps using almost any device and browser combination to install the apps.

- A. Desktop Computer (using Microsoft Edge) +
- B. iPadOS Tablet (using Safari) +
- C. Android Tablet (using Google Chrome) +

### Support and Contact Information

If you have trouble following any part of this document, cannot find answers to your questions within it, or wish to provide feedback, you can contact us directly at: [space@viewspace.org](mailto:space@viewspace.org). We highly encourage all users to join our mailing list, which allows you to stay informed about ViewSpace updates, new features, and more.

**Note:** If you are experiencing issues playing videos in Kiosk Mode, please review the guide's Section 8, Kiosk Mode Troubleshooting & Support.

## B. iPadOS Tablet (using Safari)

### Installing the App on an iPadOS Tablet

1. To install the **Interactive Image Tours App**, open Safari and navigate to <https://tours.viewspace.org>.

To install the **Interactive Image Sliders App**, open Safari and navigate to <https://sliders.viewspace.org>.

2. Click on the **share** icon, which is located either at the top or bottom of the screen. The icon resembles a box with an arrow emerging from the top.

Then click **Add to Home Screen**. This will install the app to the device.



3. Click **Add**.

## Setting up ViewSpace Video Collections as a Kiosk (Exhibit)

- A. System Requirements +
- B. Receiving an Invitation +
- C. Signing Up +
- D. Enabling Sound (Optional) +
- E. Playing Video Collections Manually +
- F. Playing Video Collections Automatically (Kiosk Mode) +
- G. Controlling the Video +
- H. Kiosk Mode Troubleshooting and Support +



# Support

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[support@viewspace.org](mailto:support@viewspace.org)



# Hardware & Software Needed

## Videos

- Display
- Computer
- Internet connection
- Browser
- Account

## Interactives

- Web App
- Option 1
  - Tablet (Recommended)
    - Optional stand
- Option 2
  - Computer & Display







# Internet Requirement

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## Interactives

- Need an internet connection
- Wifi hotspot is an option for events

## Videos

- Generally need an internet connection
- Update coming: videos will continue playing during interruptions
  - Will stop without a connection after 24 hours



## Backend Changes in Progress

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### Video streaming upgrades

- ViewSpace will remain running for 24 hours if there is an internet or server outage
- Playback issues due to browser changes have been fixed
  - New video player
  - Using ViewSpace and having issues? Contact [support@viewspace.org](mailto:support@viewspace.org)
- Beta testing is currently in progress
  - Rollout before the end of the year

### Backend maintenance

- Keeping up with browser changes
- Windows and other OS updates
- Etc.



## Links

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[Viewspace.org](https://viewspace.org)

[support@viewspace.org](mailto:support@viewspace.org)

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National Aeronautics and  
Space Administration

# Earth Information Center

## Getting Started

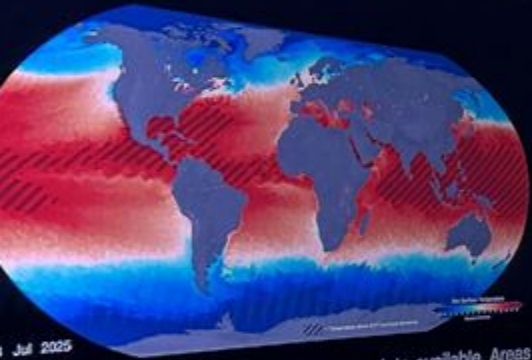
October 2025

THURSDAY  
JULY 17, 2025  
9:16:06 AM  
earth.gov

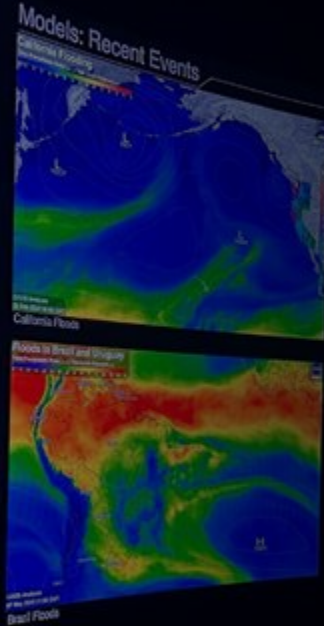
# Disasters

## Monitoring & Response

SA's timely information and agile network of partners aid  
ms responding on the ground and help communities  
und the world build disaster resilience.



ur real-time sea surface temperature data available. Areas  
re the temperature is above 82°F (27.8°C) intensify and  
tain hurricanes, cyclones and typhoons.



# What is an Earth Information Center?

The Earth Information Center (EIC) is a NASA led program, enabled by contributions across Federal government that allows visitors to view Earth from the unique vantage point of space. The EIC showcases information from NASA's fleet of Earth observing missions which provide data on Earth's systems from local to global scales – these include Earth's oceans, land, air, and atmosphere.

EIC exhibits showcase awe-inspiring visualizations, interactive media, and narratives to communicate the interactions among Earth's systems and inspire the next generation of STEM professionals.

*The EIC's mission is to bring Earth information to the public in a format that is engaging, inspiring, and actionable.*



# Sharing the EIC Content Catalog

Since the program's inception in June 2023 and the opening of the first EIC at NASA Headquarters in Washington, D.C., the program has focused on sharing the broad catalog of content and experiences with museums, planetariums, libraries, K-12 schools, universities, science centers, and other interested organizations.

The EIC's flexible format allows organizations to select elements and content that meet the unique needs of their organization's visitor base, programming, and space constraints.

NASA's Earth  
Information  
Center  
at the National Museum  
of Natural History

Core to the research at both the Smithsonian and NASA is ongoing learning and discovery about our planet + works. Whether you need high in Earth's orbit or on the ground, in 10 pages to 100,000, we have the data from NASA and the Smithsonian to help you understand our changing planet.

Experience our changing planet.  
**Earth Information Center**



Right  
Before  
Your  
Eyes

# A Range of Experiences

Bring NASA's Earth science to life in your venue.

From hyperwalls displaying near real-time data visualizations and video stories to interactive touchscreen applications and immersive storytelling, the EIC highlights the applications of Earth observation data to address environmental challenges across the globe.



***Hyperwall***



***Interactive Applications***



***Immersive Storytelling***



***Interpretive Panels***  
(Coming Soon)

# Hyperwall Package

Access our “Mission Control for Earth,” powered by NASA Earth observing missions. The Hyperwall is ~20-minute loop of content streamed to your venue. It contains near real-time dashboards, awe-inspiring visualizations, and stakeholder stories that highlight how Earth observation data are used to make informed decisions around the world.





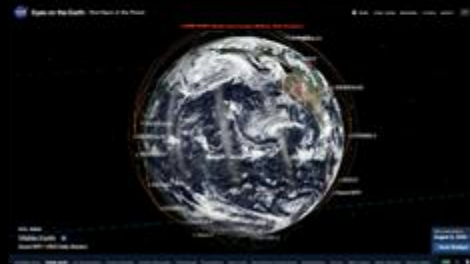
# Hyperwall Mission Control Dashboards

visually explore near real-time information, data visualizations, and the latest insights about Earth's systems. Featured dashboards include Earth Now, Wildland Fires, Disasters, and Air Quality.

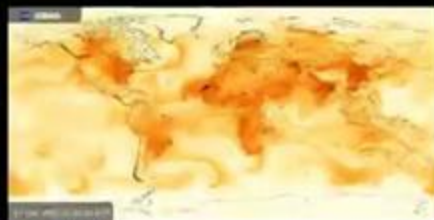
## Earth Now

NASA satellites provide data on Earth's land, ecosystems, water, air, temperature, and climate - and have done so for more than 50 years. Earth information from space supports decision makers, partners, and people in developing the tools they need to mitigate, adapt, and respond to our changing planet.

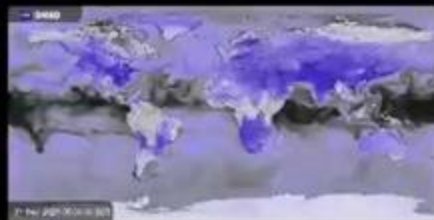
## Earth Observing Fleet



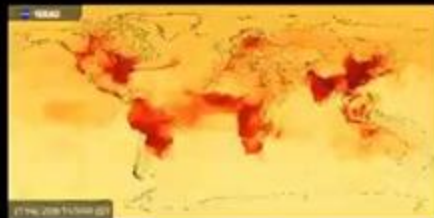
## Current Satellite Observations



Particulate Matter (PM2.5)



Near Surface Ozone (O3)



Carbon Monoxide



Nitrogen Dioxide (NO2)

## Image of the Day



Mon, Aug 04, 2020

### Dust Engulfs Coastal Peru

Skies turned orange across the city of Ica as winds, locally known as *Paracas winds*, lifted dust from the coastal desert region.

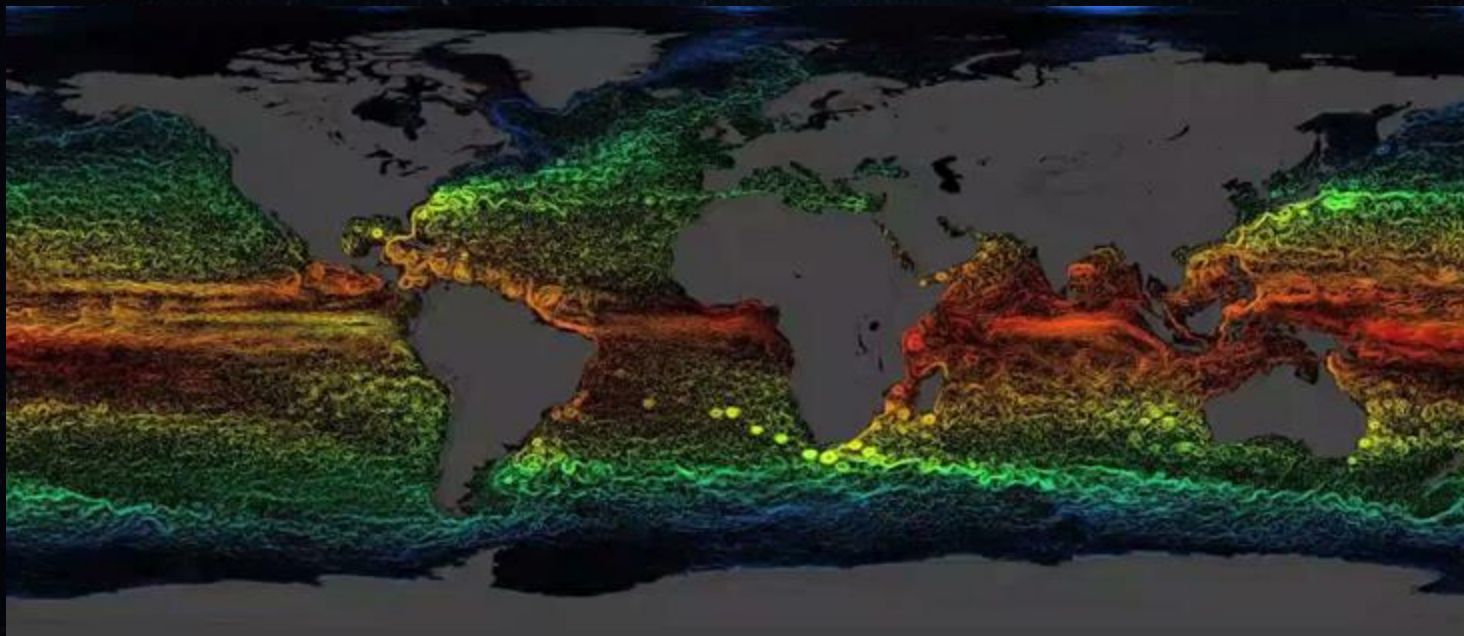
## Current Measurements

<b>Global Temperature</b> ↑ 1.5°C <small>since preindustrial</small>	<b>Sea Level</b> ↑ 3.6" <small>since January 1993</small>	<b>Minimum Extent of Arctic Sea Ice</b> ↓ 12.2% <small>per decade since 1979</small>
<b>Carbon Dioxide</b> ↑ 430 <small>current parts per million</small>	<b>Methane</b> ↑ 1935 <small>current parts per billion</small>	<b>Ice Sheets</b> ↓ 401 <small>metric tons lost per year</small>
		<b>Ocean Warming</b> ↑ 372 <small>degree Celsius since 1955</small>

# Hyperwall *Earth Portraits*

Dive into full screen visualizations about our dynamic planet.

Featured visualizations include ocean currents and eddies, height of forests across continents, nighttime lights across the globe, a 3D view atmospheric rivers, spread of wildfires in the Western United States, and more.



*Pictured here is the Ocean Flows visualization which uses the Estimating the Circulation and Climate of the Ocean (ECCO) model to visualize ocean currents around the world.*

# Hyperwall Stakeholder Shorts

Hear the voices of people putting Earth information into action to improve lives and livelihoods across the globe.

Short video stories show how communities worldwide use NASA data to tackle challenges. Featured stories show how NASA data can be used protect drinking water, stabilize global markets, build coastal resilience or inform conservation measures, wildfire management, and agricultural practices.



Visit [Earth.gov](https://earth.gov) to view more stories.



# Interactive Applications

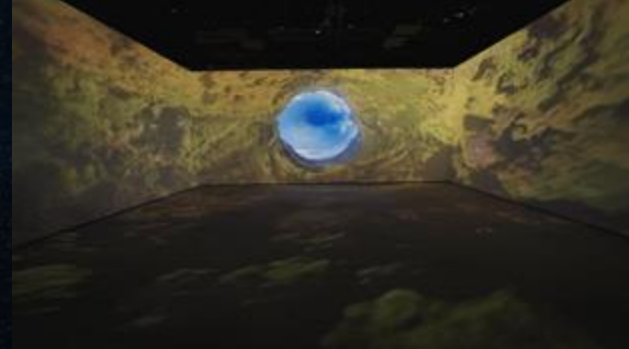
Explore Earth observing missions and the publicly available data they collect through a variety of applications for all ages and multiple levels of scientific literacy. Featured applications include Planet Pen, Eyes on the Earth, GEOS Earth Now, RAIN-GLOBAL, Your Name in Landsat, and more.



# Immersive Experience

Step inside *[Un]tethered*, an immersive, spoken word narrative that explores the interconnected relationship between humans and planet Earth through the lens of Bruce McCandless' well known spacewalk.

The *[Un]tethered* experience features Earth imagery, a compelling narrative, custom animations, and a custom soundtrack.



# Interpretive Panels (Coming Soon)

Dive deeper into the content through engaging signage and interpretive panels that venues can print in multiple sizes using commercial large format printers.



# How to Get Started

- Who can get an EIC?
  - Museums, planetariums, science centers, aquariums, universities, libraries, and more!
- How Does it work?
  - EIC creates and delivers content to hardware that is purchased, owned, and maintained by each venue. Venues can also use hardware already in their spaces.
- How do I get started?
  - Select what EIC elements you would like in your venue.
  - Reach out to: [hq-eic@mail.nasa.gov](mailto:hq-eic@mail.nasa.gov)
  - Agree to Terms & Conditions
  - Our team will send the packaged content and can support setup

Models: Air Quality

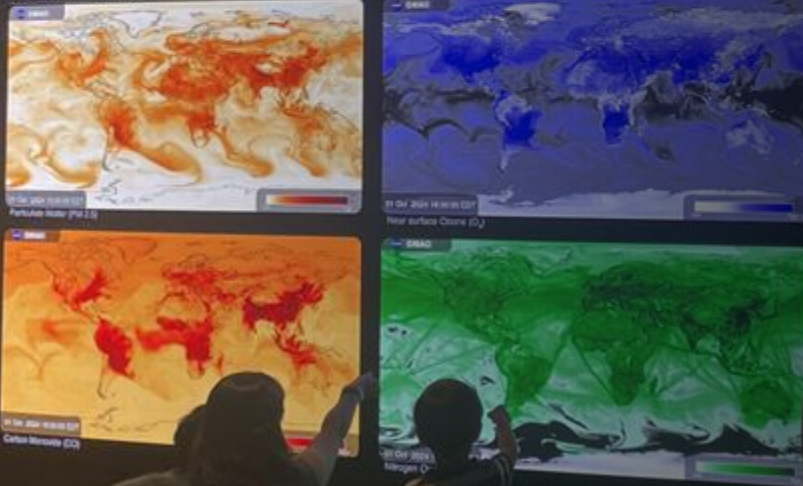
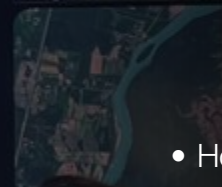
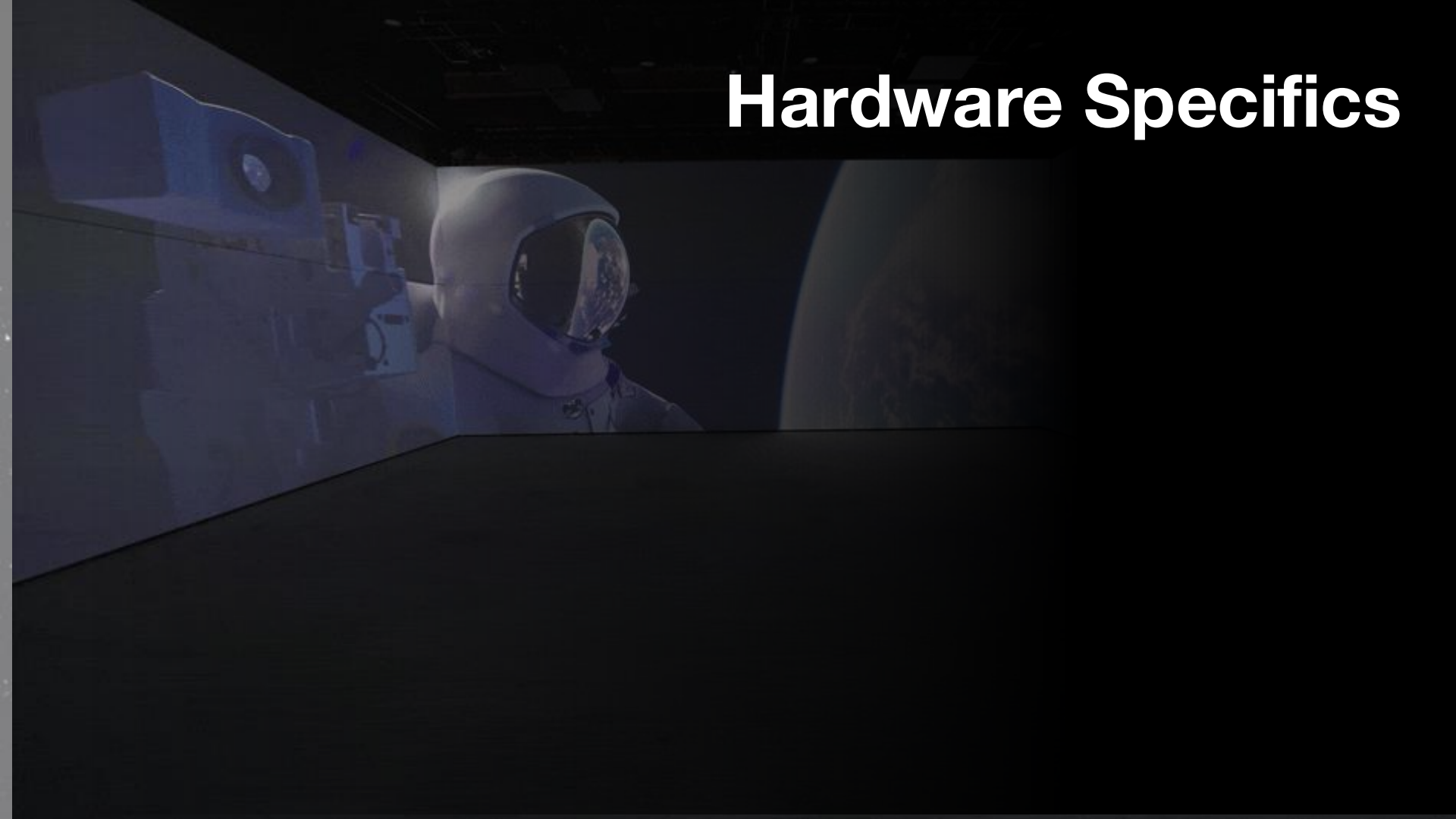


Image of the Day



# Hardware Specifics





# Design Your Hyperwall

Select the setup that works for your organization and meets the requirements for displaying EIC dashboards, beauty pieces, and video stories. The hyperwall content stream is designed for an ultrawide (aspect ratio 32:9) display. The content is natively at 8K resolution (7680x2160), but 4K (3840x2160) displays are also supported. Below we list some display options:

## Tier 1 (Large masked display)

- **Setup** One 85" or larger Display behind a physical mask to create the ultrawide aspect ratio.
- **Aspect Ratio 32:9**
- **Supported Resolution 3840x1080**
- **Space Requirement** At least 74.1" W x 41.7" H
- **Installation** Self procurement and installation

## Tier 2 (Tiled videowall)

- **Setup** Video wall, multiple low bezel displays (a 4x2 array of HD displays for example)
- **Aspect Ratio 32:9**
- **Supported Resolution 7680x2160**
- **Space Requirement** At least 16' W x 4.5' H
- **Installation** Self procurement and installation or vendor options available

## Tier 3 (Direct view LED wall)

- **Setup** Custom video wall
- **Aspect Ratio 32:9**
- **Supported Resolution 3840x1080 – 7680x2160 with options in between**
- **Space Requirement** 16'Wx4.5'H to 32' W x 9' H
- **Installation** Vendor procurement and installation



# Hyperwall Minimum Requirements

## Computer

- **Processor** with performance capabilities that compare to or exceed the AMD Ryzen 7 9700X 8 core Processor or Intel Core i7-1400K or Intel Core i9-14900K
- **GPU** Performance capabilities equal to or exceeding an NVIDIA GeForce RTX 5070 Ti and capable of driving two 4k@60 Hz displays.
- **RAM** Minimum 32 GB
- **Storage** 1TB solid state storage
- **Operating System** Microsoft Windows 11 Pro or higher
- Additional
  - Mouse and keyboard
  - Wired ethernet interface capable of at least 1 Gb

*Example Velocity Micro's Raptor Z55a computer system with a NVIDIA GeForce RTX 5070 Ti GPU (meets the above specifications)*

## Displays

- One 85" display with recommended physical mask on unit
- 2 HDMI cables (long enough to reach computer from monitor but not too long that signal degrades, 5m max)

*Example Samsung Business QM55R 55 in 4k UHD 3840x2160*

*24/7 (meets the above specifications)*

## Other requirements

- 24/7 Internet access with continuous and stable power
- Sufficient heating and cooling to maintain stable temperature
- Secure, accessible, and sufficient space for back-end system

# Interactive Minimum Requirements

## Computer

- **Processor** 1GHz or faster with 2 or more cores on a compatible 64-bit processor
- **RAM** 4 GB or more
- **Storage** 64 GB or larger storage device
- **System Firmware** UEFI, Secure Boot Capable
- **TPM** Trusted Platform Modular (TPM), Version 2.0
- **Graphics Card** DirectX 12 compatible graphics WDDM 2.x
- **Operating System** Microsoft Windows 11Pro or higher

## Displays

- 55" Touchscreen or touch capable displays
- Landscape orientation

# Immersive Minimum Requirements

## Computer

- **Processor** Multi-core processor comparable to or exceeding a recent Intel Core i7 or AMD Ryzen 7 (sufficient for multi-stream 4K playback)
- **GPU** Graphics card capable of driving 5 simultaneous 4K outputs @ 60 fps
- **RAM** Minimum 32 GB
- **Storage** 1TB SSD
- **Operating System** Microsoft Windows 11 Pro or higher
- **Additional** Operator control display, mouse, and keyboard
- 

## Displays / Projection

- System capable of outputting to 3-4 synchronized surfaces
- Compatible with projectors, LED walls, or large format displays
- 2x HDMI or DisplayPort cables per display

## Audio

- Capable of synchronized multi-channel playback
- Supported formats: stereo, 5.1, or 7.1 surround

## Resolution Options

### Version 1 – 3 Surfaces

Resolutions for a left, center, and right wall setup:

- Left and Right = 3942 x 2160
- Center = 5512 x 2160 (note, the center wall is wider than the two sides)

### Version 2 – 4 Surfaces

Resolutions for a left, center, right, and floor setup

- Left, Front, Right = 3628 x 1600
- Floor = 3628 x 3580



# Interested in the EIC?



To start your own EIC journey, email: [hq-eic@mail.nasa.gov](mailto:hq-eic@mail.nasa.gov)

For more information, visit [Earth.gov](https://earth.gov)

For other inquiries, reach out to:

Eleanor Stokes, Program Manager: [eleanor.stokes@nasa.gov](mailto:eleanor.stokes@nasa.gov)

Nicole Ramberg-Pihl, Project Manager: [nicole.c.ramberg-pihl@nasa.gov](mailto:nicole.c.ramberg-pihl@nasa.gov)

# Resources, reminders and Q&A



# NISE Network Exhibit Resources

- *Sun, Earth, Universe*  
<https://www.nisenet.org/sunearthuniverse>
- *Sun, Earth, Universe* Exhibition Host Resources  
<https://www.nisenet.org/catalog/sun-earth-universe-exhibition-host-resources>
- *Build a Human Habitat on Mars* Exhibit Host Resources  
<https://www.nisenet.org/marshabitat>



# More NASA Exhibit Resources

- **NASA Solar System Treks:** Online, browser-based portals that allow you to visualize, explore, and analyze the surfaces of other worlds using real data returned from a fleet of spacecraft  
<https://trek.nasa.gov/#>

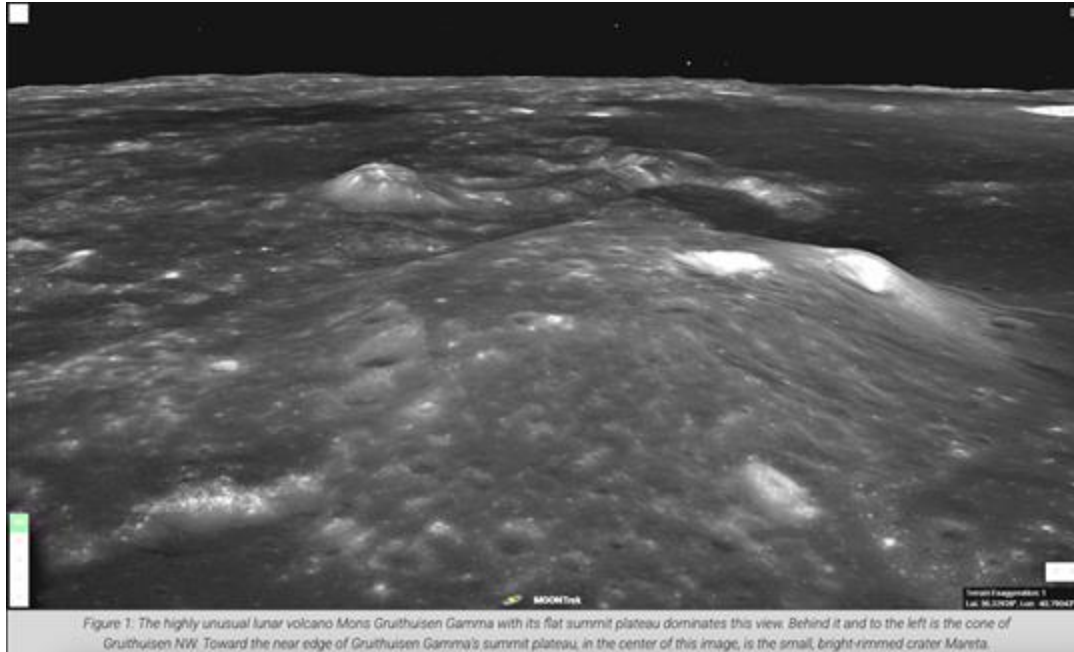


Figure 1: The highly unusual lunar volcano Mons Gruthuisen Gamma with its flat summit plateau dominates this view. Behind it and to the left is the cone of Gruthuisen NW. Toward the near edge of Gruthuisen Gamma's summit plateau, in the center of this image, is the small, bright-rimmed crater Mareta.

# More NASA Exhibit Resources

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- **NASA's Eyes** (Eyes on the Solar System, Eyes on Asteroids, Eyes on the Earth, Eyes on Exoplanets): A suite of 3D visualization applications that allows everyone to explore and understand real NASA data and imagery

<https://science.nasa.gov/eyes/>

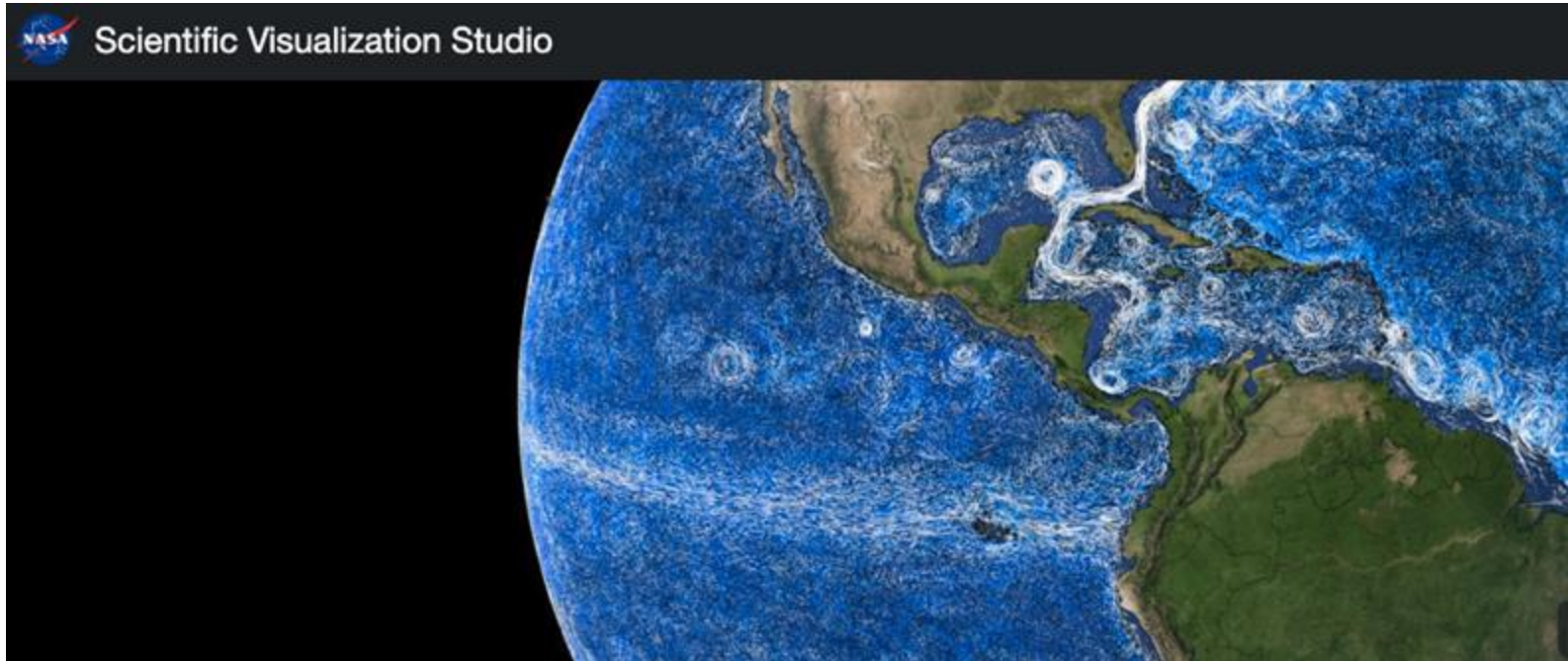
<https://science.nasa.gov/eyes/museums/>



# More NASA Exhibit Resources

- **NASA Scientific Visualization Studio:** Produces visualizations, animations, and images in order to promote a greater understanding of Earth and space sciences

<https://svs.gsfc.nasa.gov/>





# More NOAA Exhibit Resources

- **NOAA Science on a Sphere:** A room-sized, global display system that projects visualizations of planetary data onto a six foot diameter sphere to help illustrate Earth System science to all ages  
<https://sos.noaa.gov/>





# Resources & Opportunities



Learn more and access  
the NISE Network's online  
digital resources  
[nisenet.org/browse-topic](https://nisenet.org/browse-topic)



Read our monthly newsletter  
[nisenet.org/newsletter](https://nisenet.org/newsletter)



Past Recordings of Online Workshops  
[nisenet.org/online-workshop-recordings](https://nisenet.org/online-workshop-recordings)

Follow NISE Net on social networking  
[nisenet.org/social](https://nisenet.org/social)



# See You Next Time!

## Upcoming Online Workshops...

- **Co-Creating with Communities - Inspiring Partner Stories**  
Tuesday, October 28, 2025  
2pm-3pm Eastern / 11am-12pm Pacific
- **The Climate Action Playbook - Resources Focused on the Developmental Needs of Early Learners**  
Tuesday, December 2, 2025  
2pm-3pm Eastern / 11am-12pm Pacific

Learn more and register at [nisenet.org/events](https://nisenet.org/events)



# Thank You



Q&A