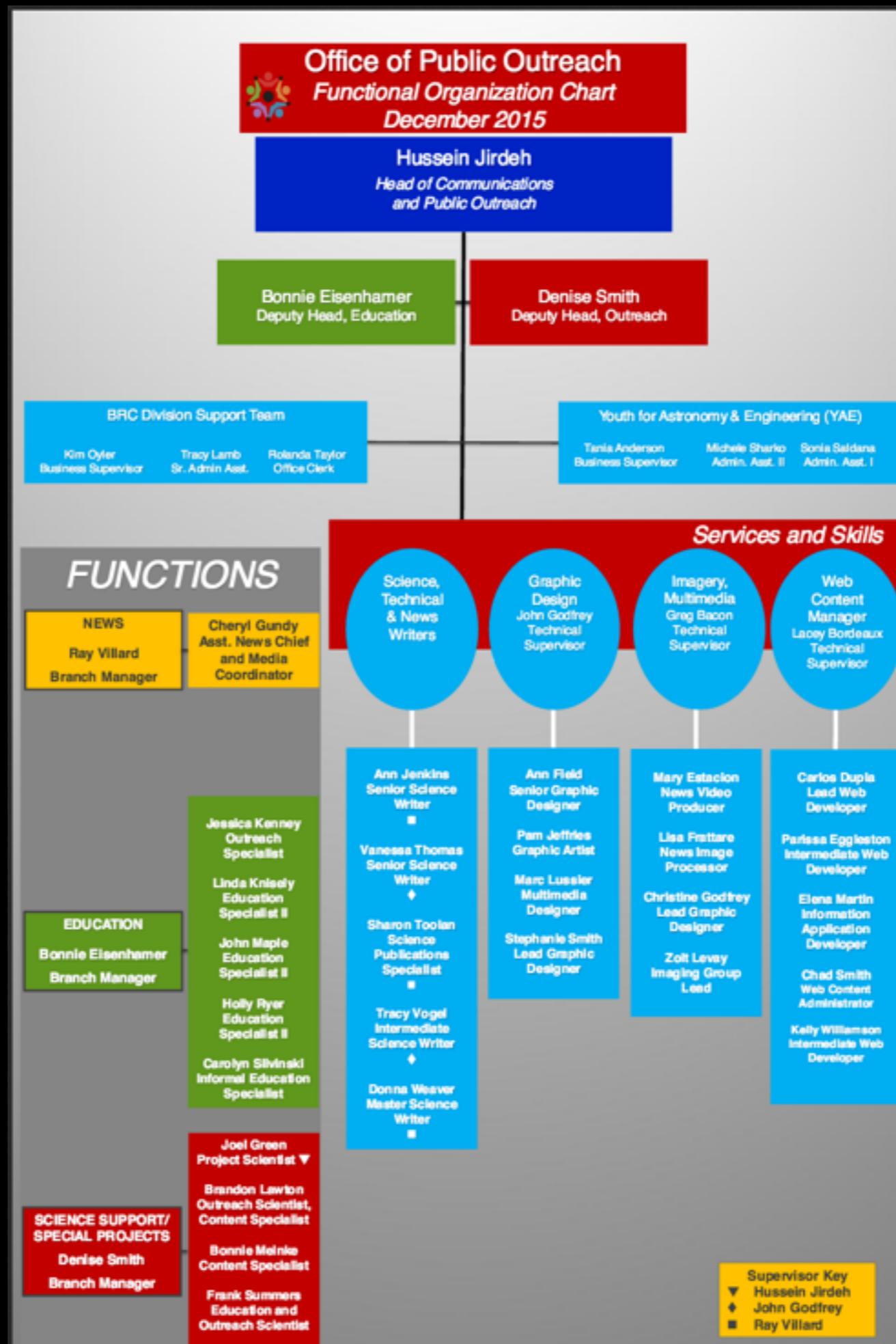




# STScI's Office of Education and Public Outreach

**Joel D. Green**  
**Project Scientist**  
**Office of Public Outreach**  
**Space Telescope Science Institute**





# News of Discoveries Reaches Students



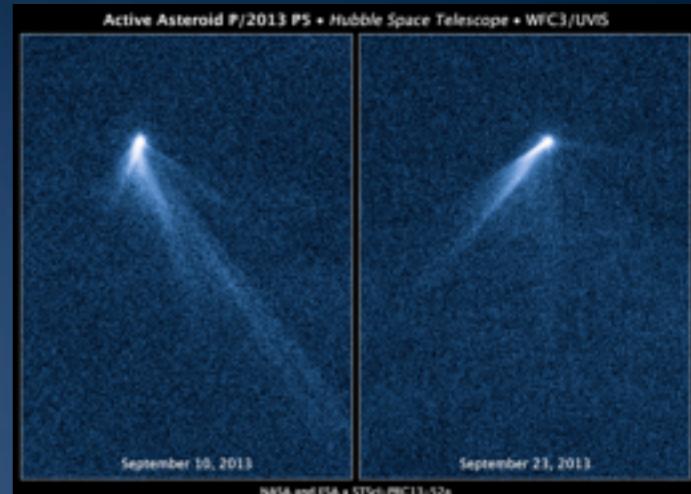
## Science Discovery



News

# News Connecting to Education

Hubble Sees Asteroid Spout Six Comet-like Tails **764** total number of Internet news stories to date with a reader circulation of **556 million\***.



Public  
Outreach &  
New Media



Within a  
week

Education  
Formal  
Informal



Within a  
month

# ONLINE OUTREACH

- **2 million** visits/month
- **150 million** hits/month
- Inbox Astronomy
- ~**40,000** subscribers
- **160** questions/month
- **HubbleSite is 10% of NASA's online traffic**



The screenshot shows the HubbleSite homepage with a dark blue header featuring the NASA logo and a search bar. The main banner features a nebula and the text "HUBBLE'S UNIVERSE unfiltered with Dr. Frank Summers". Below the banner are several sections: "iBooks are here!" (Available on the iBookstore), "Gallery" (Explore Gallery: Picture Album, Wallpaper, Astronomy Printshop, Behind the Pictures), "Get Involved!" (Explore opportunities to collaborate with experts, contribute your time and talents, or just have fun. Hubble Hangouts, Citizen Science, Hubble Image Processors), "Hubble in Action" (The Discoveries: Extrasolar Planets, Dark energy, Hubble Deep Field; The Telescope: How it operates and what it can do. Hubble Essentials, Servicing Missions, Nuts and Bolts), and "EDUCATORS" (Get the latest astronomy tools for your classroom. Visit our sister-site, Amazing Space.).



# James Webb Space Telescope

Science | News | Gallery | Telescope | Team | Resources



How did we get here?

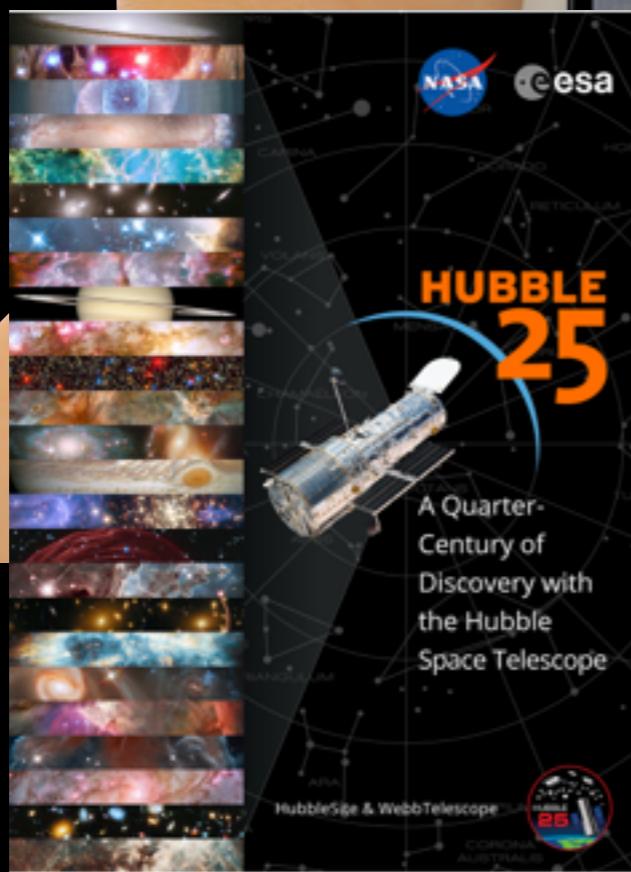
How does the universe work?

Are we alone?

The Webb Space Telescope will explore  
the answers to our greatest questions.

Play Trailer







MINUTE  
PHYSICS

## Why Do We Put Telescopes in Space?



MinutePhysics

[Subscribe](#) 3,187,192

564,760

+ Add to Share ... More

20,670 114



## Bringing Hubble and Webb to the Public Square in Non-Traditional Outreach

- Computer games/media
- Sci-fi
- Music/interactive festival exhibits
- Astronomy on Tap / Nerd Nite



# JWST STEM Innovation Project

- An interdisciplinary project that focuses on the engineering aspects and potential scientific discoveries of JWST
- Students read and research the telescope's design and or potential discoveries and create projects to demonstrate their learning.
- Currently being implemented at over 700 schools in all 50 states in the U.S.



# JWST Inspires

## Science Technology Engineering Mathematics



# EXAMPLES OF STRATEGIC PARTNERSHIPS AND REACH (How a small team serves a *BIG COUNTRY*)

## ORGANIZATIONS

Space Grant Consortia

Learning.com

WorldWide Telescope

American Library Association

National Federation of the Blind

Night Sky Network

Spitz Digital Institute

Maryland Science Center

The After-School Institute

## STATE DEPTS. OF EDUCATION

Ohio, Texas, Utah, South Carolina,  
Colorado, Hawaii, California

**Integrated in 27 states, but used in all 50.**

## TEXTBOOKS / CURRICULUM

Houghton Mifflin

Lawrence Hall of Science

NSTA SciGuides

Brooks/Cole

McGraw-Hill

Harcourt

Scholastic

Open Court

MacMillan

Baltimore County

Curriculum

## UNIVERSITIES

Johns Hopkins University

Morgan State University

University of Texas at  
Austin

University of Chicago

Georgia State University

California State University,  
Sacramento

Penn State University

Virginia Tech University

Immaculata University

## Diversity

Morgan State

Baltimore City After School Institute

Women's Collaborative Project

Tactile Astro

STEMcx

# Illuminating the Pillars: a Vision of the Future



Visible view:  
The shadowy  
nebula



Near-IR view:  
Seeing the  
background

WFC3/IR

# The state of the art in IR in 2015 → 2018

