

# Top 10 Hubble images

As the famous telescope turns 25, scientists who worked on the project choose their favourite pictures.

15 April 2015

## THE BUTTERFLY NEBULA

*Chosen by: Jason Kalirai, project scientist, James Webb Space Telescope, Space Telescope Science Institute*

“The Butterfly Nebula shows what happens to a star at the end of its life, when it loses all of its gas and dust to its surroundings. Not only is this a reminder to the eventual fate of our own Sun and Solar System, but Hubble’s unique ability to witness this event in a star’s long life cycle sheds light on how stars evolve.”



## THE TADPOLE GALAXY

*Chosen by: John Grunsfeld, former astronaut, NASA associate administrator for science*

“The Tadpole galaxy has been disrupted by collisions and has bursts of star formation out through its tail. But behind that galaxy are thousands of other galaxies. That to me shows the power of Hubble — it’s not just what the telescope takes a picture of, it’s everything else it captures at the same time.”



### STAR CLUSTER NGC 602

*Chosen by: Antonella Nota, astronomer, Space Telescope Science Institute*

“Stellar clusters like this one are absolutely beautiful. You see the transition from the original gas and dust cloud, the place where stars are being born, into this assembly of very young stars that are just starting in on their powerful winds.”





NASA/ESA/Hubble Heritage Team(STScI/AURA)



### **GALAXY NGC1300**

*Chosen by: Zoltan Levay, imaging scientist, Space Telescope Science Institute*

“Galaxy NGC1300, a barred spiral galaxy, has this amazing very elegant form as well as interesting colour. Beyond that we also get a strong feeling of depth — if you look closely you can see galaxies that are much farther away.”



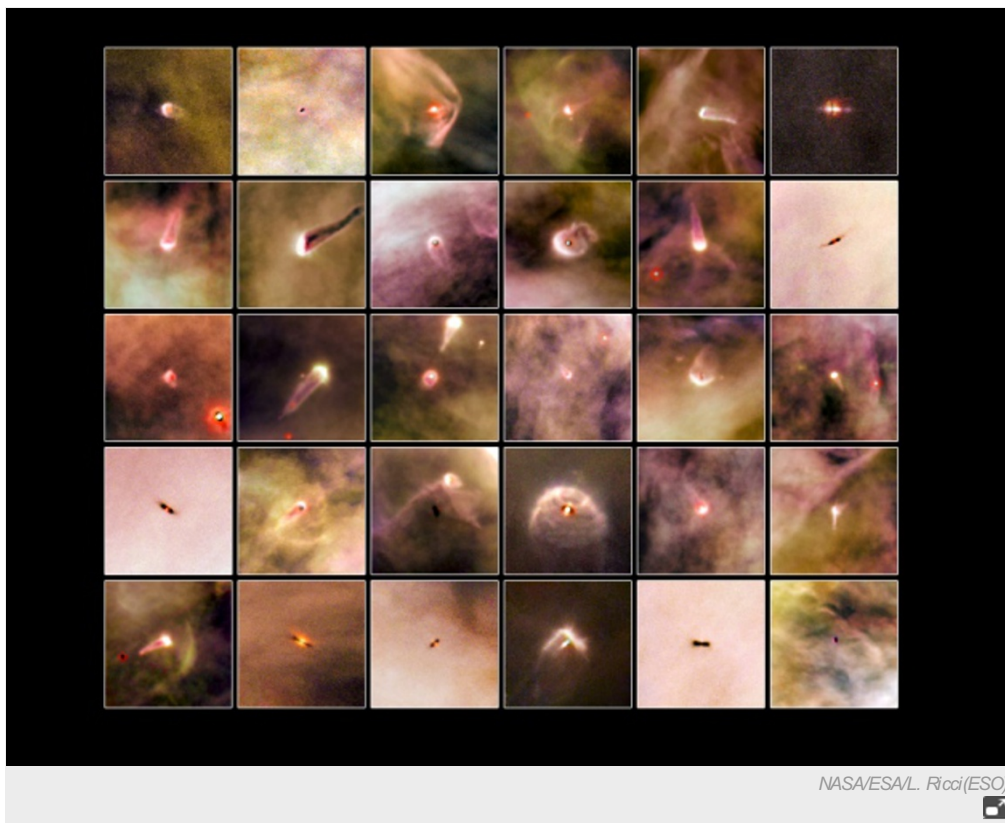
NASA/ESA/Hubble Heritage Team(STScI/AURA)



### **PROTOPLANETARY DISKS IN THE ORION NEBULA**

*Chosen by: Edward Weiler, former Hubble chief scientist*

“I’ve always been interested in the search for life in the Universe. Back in the 1800s, Laplace theorized that solar systems formed in circumstellar disks. Hubble showed that Laplace was right. It showed that the process of forming planets was extremely common.”



## THE MICE GALAXIES

*Chosen by: Jennifer Lotz, astronomer, Space Telescope Science Institute*

"I was a graduate student when they installed the Advanced Camera for Surveys, and one of the first pictures it took was of two interacting galaxies called the Mice. The detail in the tail is just amazing."



## THE HELIX NEBULA

*Chosen by: Robert O'Dell, astronomer, Vanderbilt University*

"These shells expelled by dying stars are fragmenting in tight knots of condensed gas. To me that's fascinating because it means this material going out into the interstellar medium, the material from which new generations of stars form, already has this condensation, this tantalizing possibility of being seeds for planetary formation."



NASA/ESA/C.R. O'Dell(Vanderbilt Univ.)/M. Meixner, P. McCullough(STScI)



### THE EAGLE NEBULA — PILLARS OF CREATION

*Chosen by: Jennifer Wiseman, senior project scientist, Hubble, NASA Goddard Space Flight Center*

"This is one of the iconic images. You see the columns of gas that signify a region where stars have recently formed and are still forming. We have a marvellous newer image with a newer camera, which gave us a visual clue as to how young stars that have recently formed are interacting with the dense gas remaining behind."

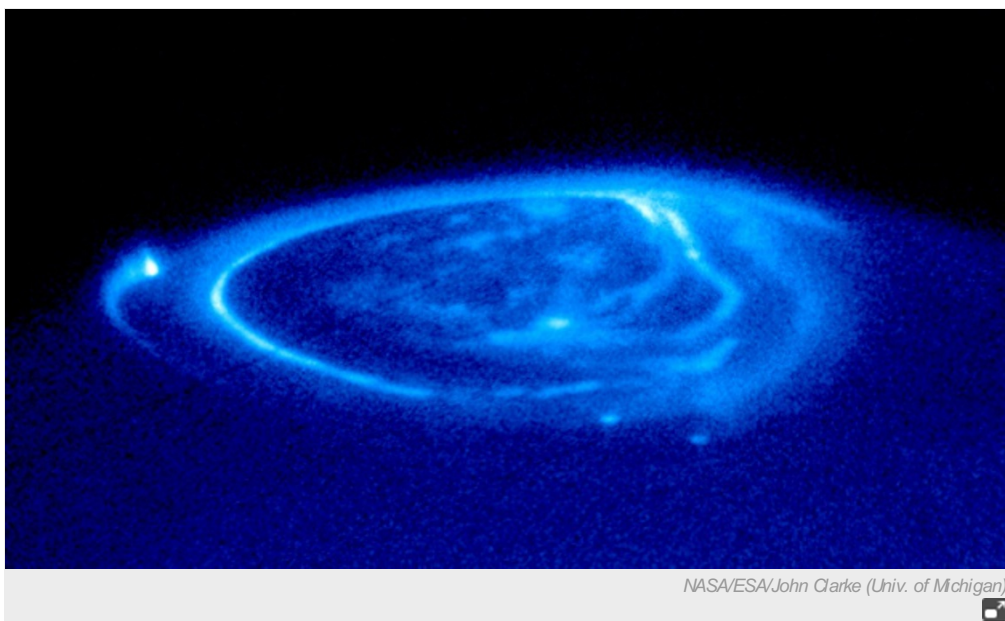




### JUPITER'S AURORA

*Chosen by: Melissa McGrath, astronomer, Marshall Space Flight Center*

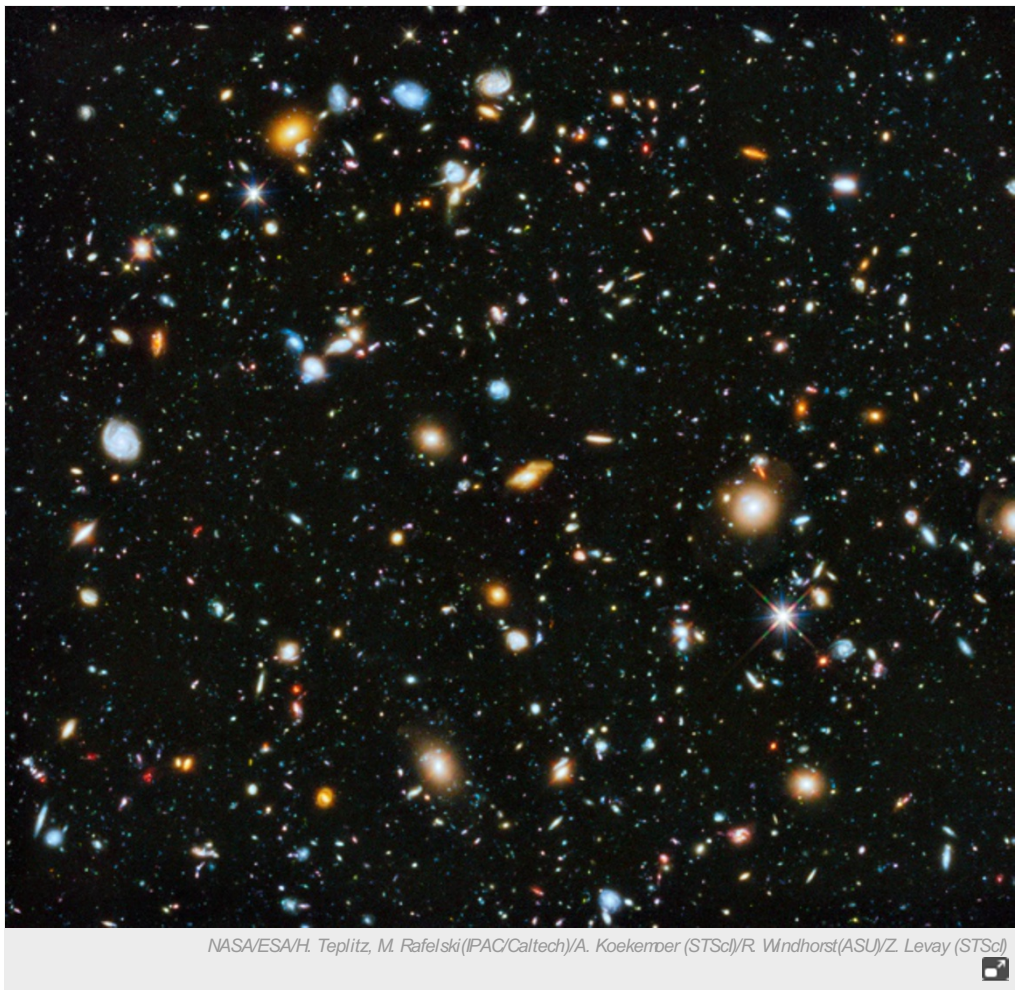
"One of the most iconic images, at least for Solar System observations, ever made with Hubble is this view of the northern polar aurora of Jupiter. You can see footprint emissions from the satellites Io, Ganymede and Europa."



### THE HUBBLE ULTRA DEEP FIELD

*Chosen by: David Leckrone, former Hubble project scientist, Goddard Space Flight Center*

“This image is of the Hubble Ultra Deep Field, updated in 2014 to encompass the full range of wavelengths that Hubble's cameras can image, from the ultraviolet to the infrared. A few of the objects here, the ones with diffraction spikes, are foreground stars. Every other object is a galaxy. Some of these emitted the light we now see when the Universe was 400 million to 600 million years old, about 3-4% of its present age.”



NASA/ESA/H. Teplitz, M. Rafelski (IPAC/Caltech)/A. Koekemoer (STScI)/R. Windhorst (ASU)/Z. Levay (STScI)

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