Carpe Noctem

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Event Horizon Telescope Researchers Reveal First-ever Image of a Black Hole

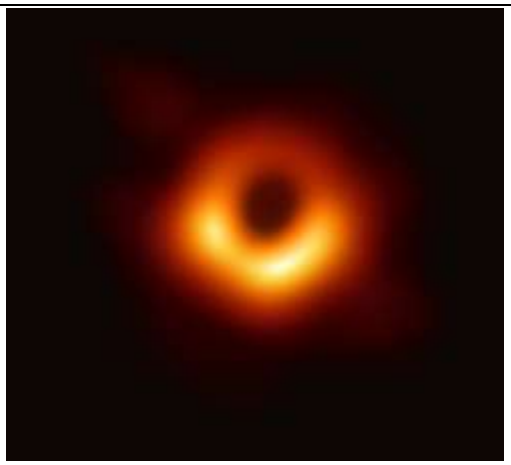
Peter Reuell

Harvard Staff Writer

WASHINGTON, D.C. — A global team of astronomers, led by Harvard scientists, has for the first time captured an image of a black hole.

The image, revealed today by researchers from the Event Horizon Telescope (EHT), shows a bright ring of material surrounding a dark center that marks the event horizon of the black hole — the "point of no return, where nothing, not even light — can escape."

The image is the result of a colossal, years-long effort by dozens of researchers. To find it, the EHT focused on a pair of supermassive black holes — the one at the center of the Milky Way galaxy, known as Sagittarius A* , and a second that lies at the heart of an elliptical galaxy called M87.



The black hole in M87.

Capturing an image of a black hole, project leaders said, is about more than getting the first glimpse of one of the most curious objects in the cosmos. It also opens the door to allowing astronomers and physicists to test Einstein's theories of gravity and general relativity under the most extreme conditions in the universe.

"A black hole, if you looked at it naked would be invisible," said Sheperd Doeleman, director of the EHT. "It's nature's most amazing invisibility cloak."

So how do you take a picture of something from which even light cannot escape?

"In a paradox of its own gravity," Doeleman explained, "you wind up seeing it because all the gas and dust that's attracted to it gets crushed into a smaller and smaller volume, causing it to heat up to hundreds of billions of degrees. So you wind up with a 3-D flashlight illuminating all the space-time around the black hole."

The only way to detect black holes, Doeleman said, is through Very Long Baseline Interferometry. The process involves collecting data from multiple radio telescopes around the globe, then using algorithms and supercomputers to analyze that data, effectively creating a "virtual telescope" the size of the Earth itself,

Ed: This article was excerpted from the Harvard Gazette. We thank Harvard University for its use.

President's Letter Apr-Jun 2019

I hope everyone is enjoying the change in the weather. As I write this, I am sitting by my telescope at the Texas Star Party in Ft. Davis,

Texas. We have had some absolutely beautiful nights with so many stars visible it is difficult to see the constellations. There are a few CTASers here enjoying the dark skies as well.

If you didn't make the last General Member ship meeting, you missed a great program about the Mayborn Planetarium in Killeen, presented by their Chief Astronomer, Warren Hart. If you have kids of any age, I highly recommend a family day trip to explore this wonderful resource. I hope more exciting programs at our business meetings, and I hope you will be able to come in the future. If there is something in particular you would like to see, please let me know. Coming up in July will be our next meeting and summer Star-B-Q at the observatory, so put that on your calendar.

The work on the observatory is getting close to being finished. We are able to operate the telescope and cameras, and it was successfully observing at our last Open House. We are still working out some software bugs before it can be fully released for remote operations, but I expect to begin training classes this summer. We will make a broadcast announcement soon.

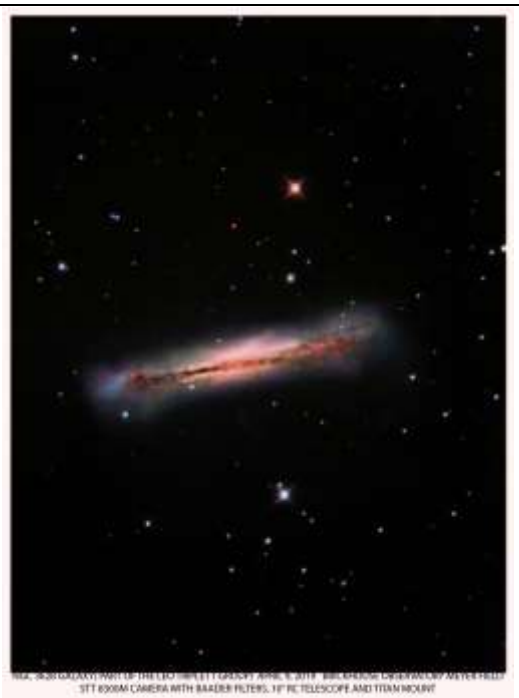
I look forward to seeing you at the observatory star parties. Clear Skies!

Dick Campbell

President

NGC3628

By: aubrey Brickhouse



Galaxy season is here and here is the "edge on" spiral NGC3628 in Constellation Leo. Along with M54 and M66, it makes up the Leo Triplett group that is about 36 million light years away. Shot this on April 9th 2019 at the Brickhouse Observatory. NGC3628 is gravitationally disturbed and has a long tail of gas and dust towards one of the other members of the Leo Triplett.

Lunar Observing Award presented to Eric Rachut

Johnny Barton, the CTAS Correspondent to the Astronomical League (AL) presented two lunar observing awards to Eric Rachut for his detailed work observing and sketching hundreds of lunar features over a period of more than a year. Eric's favorite objects were the lunar "domes", difficult to see, but now believed to be evidence of ancient seismic activity. Congratulations, Eric! Check out your next issue of the AL "Reflector" for all of the observing awards available. You may find something that inspires you to get out that telescope.

The Antennae Galaxies

By; Aubrey Brickhouse

NGC4038 & 4038 Antennae Galaxies in the constellation Canis Major shot on April 8 and 9th in 2019 from the Brickhouse Observatory on a 10" RC telescope. The Antennae Galaxies are in the process of joining to make one Giant Galaxy some time between now and 400 Million years in the future.

M63 a.k.a. The Sunflower Galaxy.

By: Jeffrey McClure

Captured at the 2019 Texas Star Party.

M-82

By: Jeffrey McClure

Captured at the 2019 Texas Star Party.

Jupiter and Saturn

By: Dave Eisfeldt

Taken on the morning of 5/15/2019

Jupiter

As a side note: Jupiters giant red spot (an enourmous storm) is dissapating. Watching Jupiter over the course of a few years, everyone will see a definite change. Scientis have no facts about its behavior at this time.

Saturn

Whale Galaxy

By Aubrey Brickhouse

UPCOMING EVENTS	
Observatory Open House	**Jun 15**
Waco Sidewalk Star Party	**Jun 15**
Hubbard & Belton Star Parties	**Jun 15**
Member Star Party	**June 28**

A DAYTIME METEOR SHOWER IS UNDERWAY: Radars in the northern hemisphere are pinging with activity as one of the strongest meteor showers of the year takes place in broad daylight. The source of the shower is sungrazing Comet 96P/Machholz. Although the meteors are emerging from a radiant point near the glaring sun, it may be possible to see a few of them before sunrise on June 7th.