

Webb Telescope Reveals a Galaxy's Hidden Glow

A new NASA image shows how special light can uncover dust, motion, and star birth in the Black Eye Galaxy.



A spiral galaxy with a bright center, a dark band, and red glowing dust in its arms.

NASA shared a new space image today. It shows Messier 64, a **galaxy** with a dark stripe across its bright middle. That is according to NASA's Astronomy Picture of the Day.

Messier 64 is a **spiral** galaxy. That means its stars, gas, and dust curve around the center like arms on a pinwheel. It is also called M64. Many people call it the Black Eye Galaxy because of the dark band that seems to cover part of its face.

The new view uses the James Webb Space Telescope, a telescope in space that studies light people cannot see. Webb looked at M64 with an instrument called MIRI, a tool that sees mid-**infrared** light. Infrared light is invisible to our eyes. Warm dust can glow in that kind of light.

That matters because space dust can hide things. In older Hubble telescope pictures, the dust looked dark. Webb shows some of that dust as red. NASA says the dust absorbs light from newborn stars and then gives light back out.

Imagine standing in a very dark room with a flashlight pointed at fog. You might see a wall of gray. Now imagine having special glasses that show heat. The fog would tell you more about what is inside it. Webb gives astronomers, or space scientists, a different kind of special glasses.

M64 is not just pretty. It also tells a story about **motion**. NASA says gas near the inside of the galaxy and gas farther out are moving in opposite directions. Where those gas **currents** meet, they squeeze together. That can help new stars form.

Scientists think this odd motion probably happened after M64 joined with a smaller galaxy long ago. A **merger** is when two galaxies come together and become one larger system. Astronomers once thought spiral galaxies usually had calm histories. M64 helped show that spirals can have busy histories too.

That includes our own Milky Way. The Milky Way is the spiral galaxy where Earth lives. NASA says galaxies like ours can also have mergers.

On the page, the first thing to notice may be color and shape. The bigger idea is change. A galaxy can look still in a photo. But inside it, gas moves, dust warms, and stars begin. One picture can help scientists ask better questions about a place no person can visit.

Written from reporting by NASA.

THINK IT THROUGH

1. Scientists often look at the same place in space with different telescopes. Is that worth the time? Why or why not?

2. A space picture can make a galaxy look still. How should this story change the way people look at space images?

3. If you could ask NASA for one more observation of M64, what would you want scientists to learn next?

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A S M O T I O N T X I T
S S E T A L O R N P N R
R N P U C T Y C Y O E N
G R R I U D A R U S U N
H E M E R G E R Y R R A
S I N F R A R E D T N S
O A G E E L L T E C O D
O B U E N A B S O R B E
E Z W D T X A M R D C V
E N L R S Y A C R R I B
O E O O I M A E O E S A
S A R I O A A S A N C L

ABSORB

CURRENTS

GALAXY

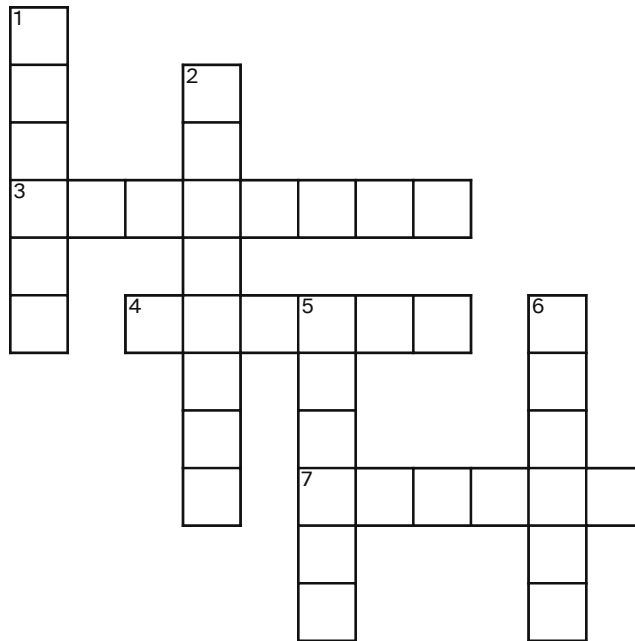
INFRARED

MERGER

MOTION

SPIRAL

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ACROSS

- 3** Invisible kind of light often linked to warmth
- 4** When two star systems join to make one bigger one
- 7** Take in light or energy instead of letting it pass through

DOWN

- 1** Moving from one place or direction to another
- 2** Streams of gas moving in different directions
- 5** Huge group of stars, gas, and dust held together in space
- 6** Pinwheel-like curve around a middle point

Where this came from

This article was written for 3andB from the reporting below. It is not a reprint — the wording is ours and the facts are theirs.

NASA

“APOD: 2026 September 16 – Webb’s View of M64”

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<https://science.nasa.gov/image-article/apod-2026-september-16-webbs-view-of-m64/>

WHAT IS IN THIS PACKET

The article and its discussion questions, a word search, and a crossword.

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