“Crisis averted? Universe’s expansion is accelerating after all, study says”

In November last year, the scientific community was rocked by an extraordinary study. Opposing the widely held view that the expansion of the universe is accelerating, this paper claimed it was actually *slowing down*.

If true, astronomers need to rethink much of what they know about the structure of the universe, particularly the

mysterious force we call dark energy.

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“MIT astronomers detect oldest known flickering quasar from the cosmic dawn”

A quasar from the universe’s first 850 million years has started to look less like a distant pinprick and more like a real physical system. By catching it flickering over time, astronomers have traced the structure of matter swirling

around one of the earliest known supermassive black holes. What they found deepens one of cosmology's biggest puzzles.

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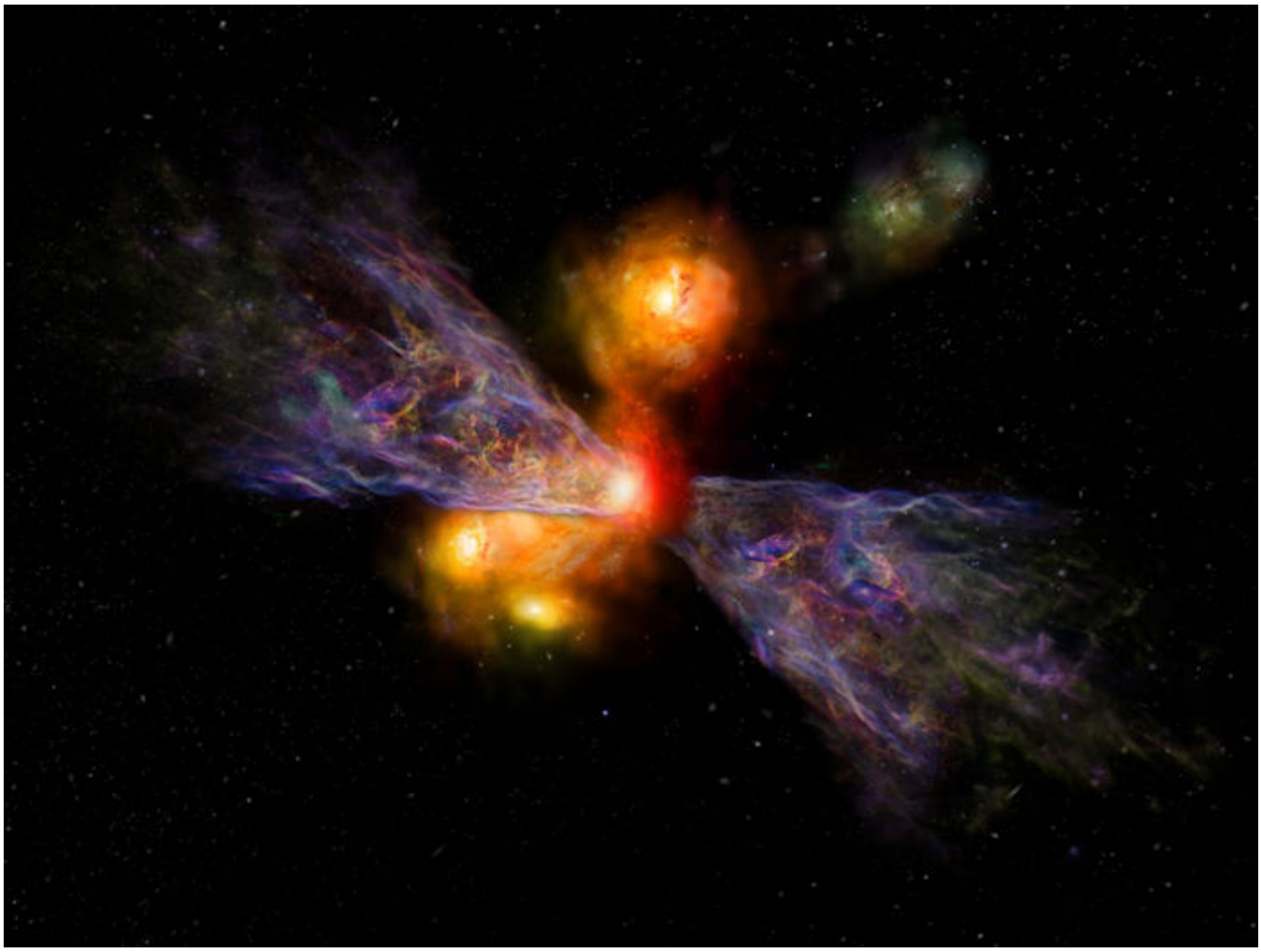
"Galaxy-killing wind may explain why giant galaxies died so early"



A massive galaxy in the early universe seems to be growing itself toward ruin. While it churns out new stars at a furious pace, it is also blasting away the cold gas that makes those stars possible. This is a self-defeating process that may help explain why so many big galaxies died young.

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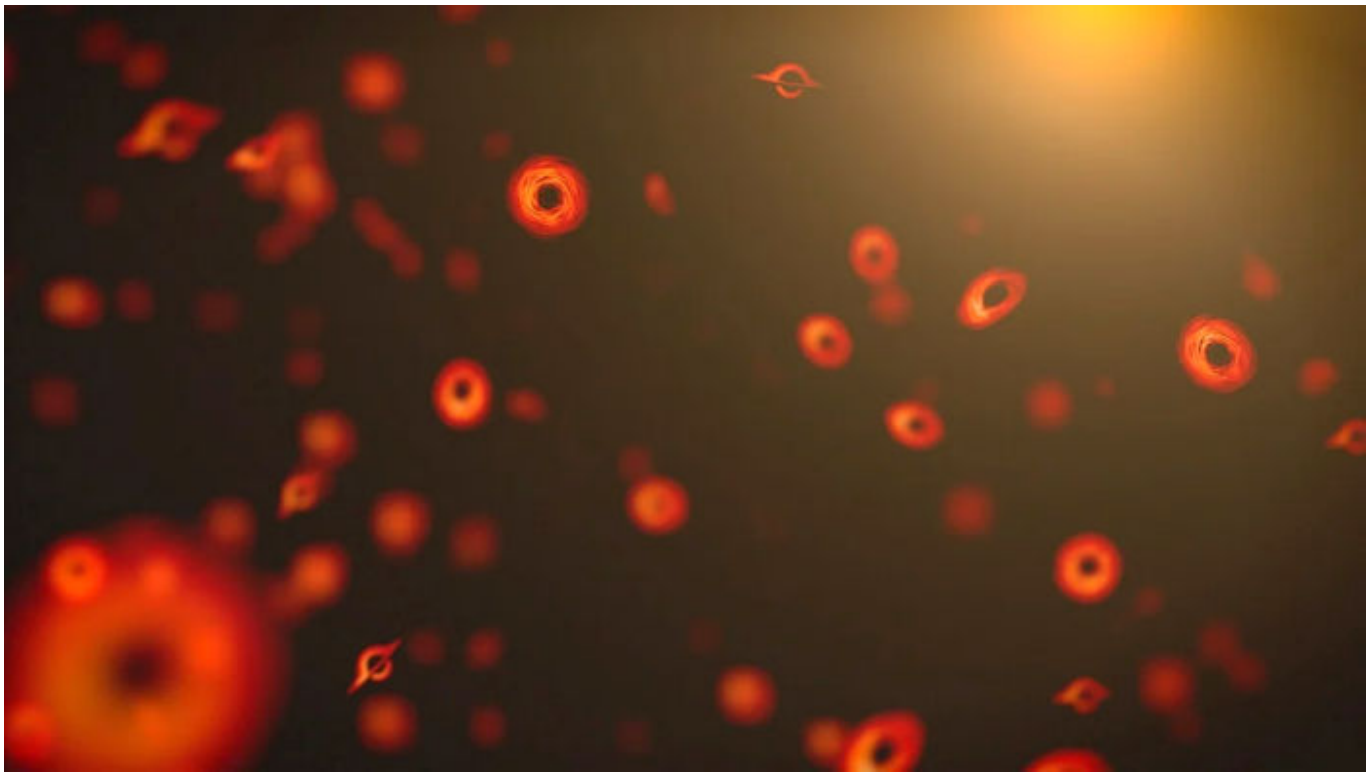
“Exploding Primordial Black Holes Might Have Reshaped the Early Universe — And Created All Matter As We Know It”



Primordial black holes are a theoretical class of objects that would have been formed in the first moments of the Universe, when the density was so high that black holes could just pop into existence. According to Hawking, these black holes would evaporate with a giant release of energy. A new paper suggests that these popping black holes could have pushed the balance of the Universe towards having more matter than antimatter, solving one of the biggest mysteries in cosmology.

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“Astronomers Find a Third Galaxy Missing Its Dark

Matter, Validating a Violent Cosmic Collision Theory”

Dark matter makes up most of the mass in the Universe, but it’s not evenly distributed. Astronomers are finding examples where galaxies contain less dark matter than average, or more, and now they’re finding examples of galaxies that contain only dark matter, galaxies with the size and mass of the Milky Way but with 1/500th the number of stars, so you could see right through them to the galaxies behind. And now researchers have found their third example of this strange situation: a galaxy that’s almost entirely dark matter.

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“Our galactic neighbor is slowly coming apart”

The Large and Small Magellanic Clouds are dwarf satellite galaxies orbiting our Milky Way galaxy. Visible with the unaided eye from the Southern Hemisphere, these galaxies appear serene neighbors in southern skies.

But new research says the gravitational pull from the Large Magellanic Cloud is actually ripping the Small Magellanic Cloud apart.

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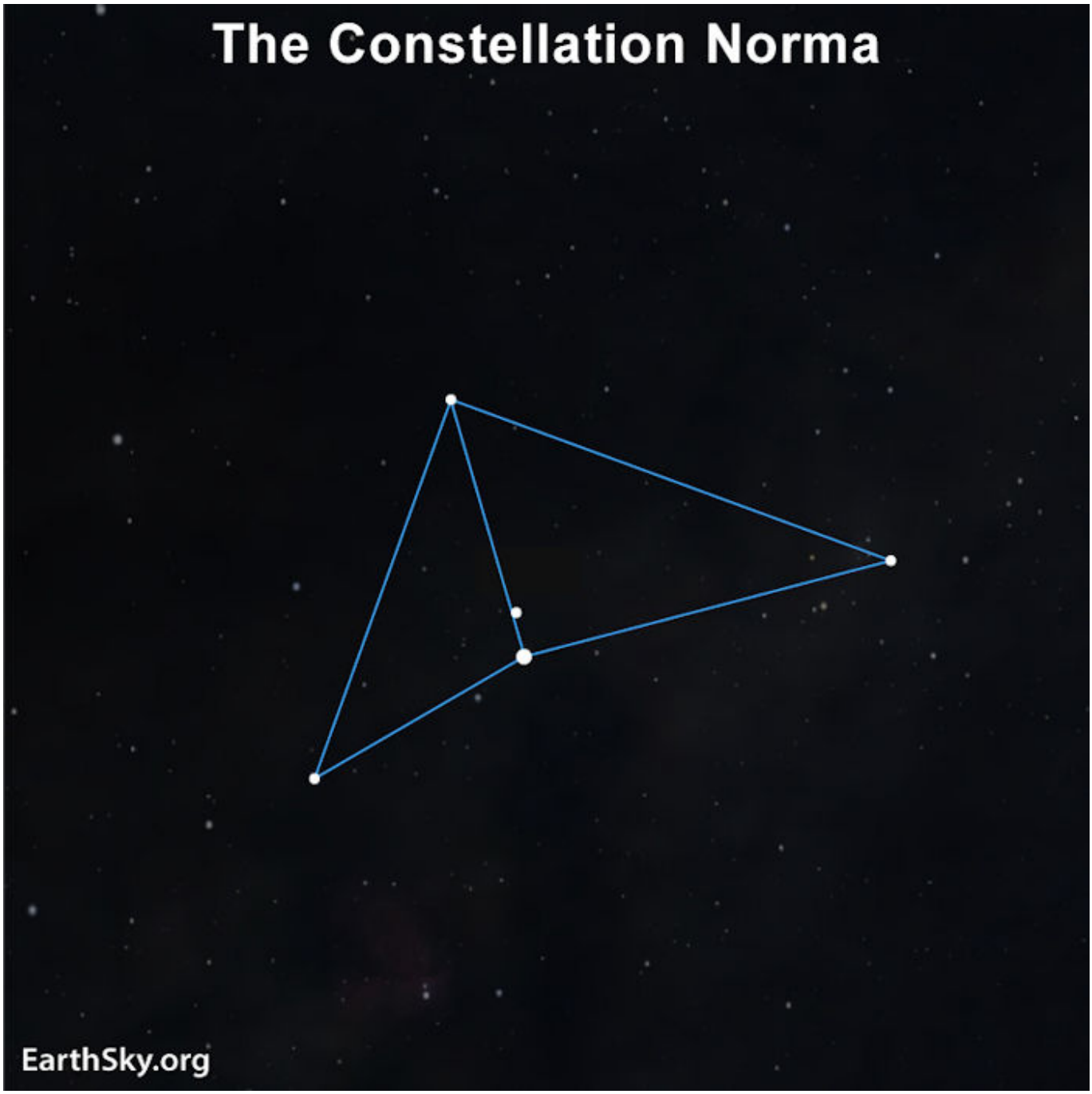
“The constellation Norma is home to the Great Attractor”



The Great Attractor is a massive gravitational *anomaly*: an invisible, unimaginably colossal amount of mass in space that astronomers did not expect to find. They know it's there because it's pulling on everything around it. It's like a cosmic tug-of-war champion, pulling millions of galaxies – including our own Local Group of galaxies – toward it.

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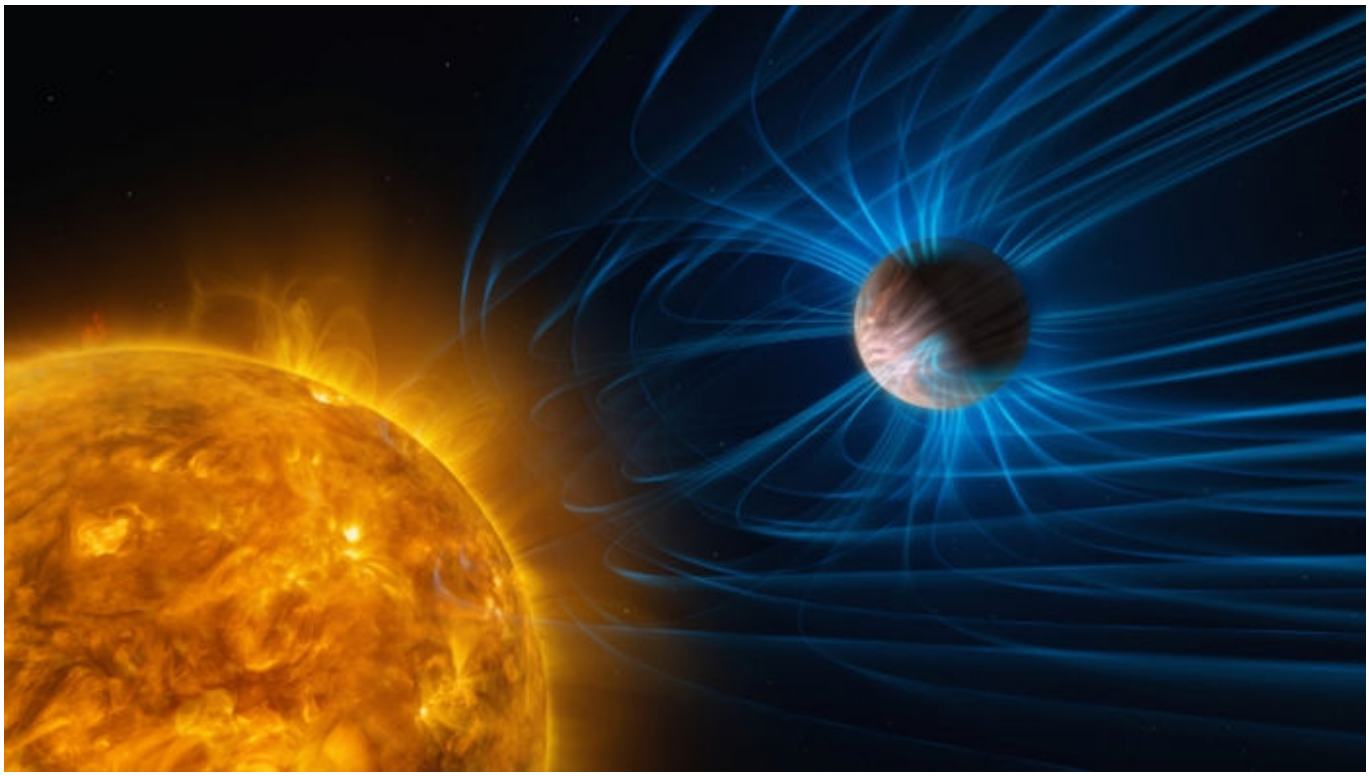
“Strongest hint yet of exoplanet magnetic fields”



Most planets in our solar system have magnetic fields. Earth’s magnetic field has played a crucial role in making our world habitable. Do worlds beyond our solar system have magnetic fields, too?

It seems highly likely, but evidence has been hard to come by … until now. This week, astronomers said they’ve found the strongest evidence yet for magnetism in exoplanets.

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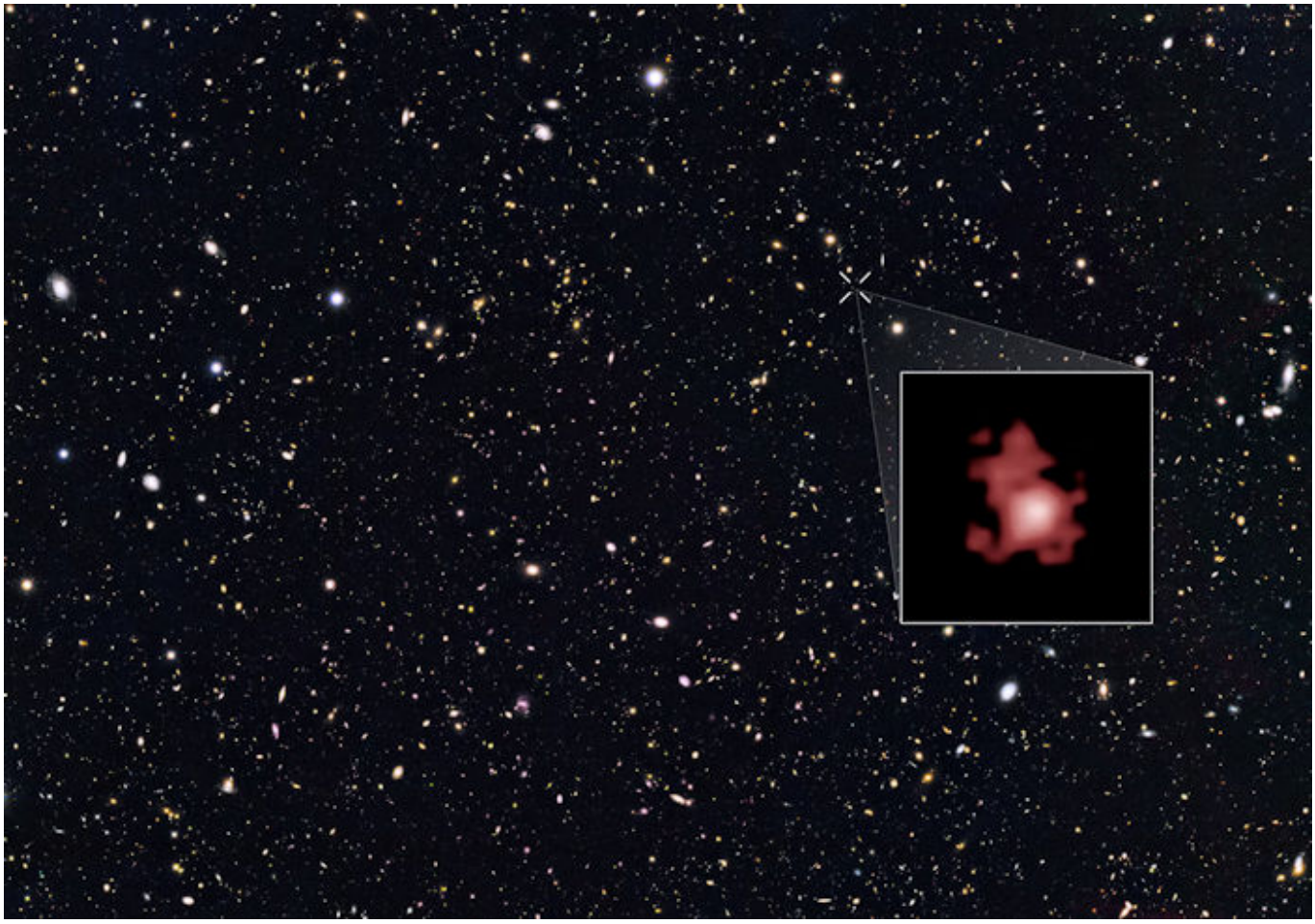
“Astronomers find compelling new evidence of the first stars formed after the Big Bang”



A faint glow of helium, hanging near one of the earliest known galaxies, may be the clearest sign yet that astronomers have finally caught the universe’s first stars in action.

The signal comes from a tiny object nicknamed Hebe, sitting about 3 kiloparsecs from GN-z11, a galaxy seen as it existed roughly 400 million years after the Big Bang.

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“Meet the Crystal Ball Nebula”

NOIRLab released this spectacular new image of the Crystal Ball Nebula this month. The Gemini North telescope captured it from atop Mauna Kea in Hawaii. The Crystal Ball Nebula lies about 1,500 light-years away in the direction of the constellation Taurus the Bull. This exquisite ball of gas and dust encircles a dying star and its companion.

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