

# Thursday, October 1, 2026

Morning Science Briefing • Thu, 01 Oct 2026 16:20:52 GMT • 4:45

**Maya:** Good morning, and welcome to the Morning Science Briefing for Thursday, October first. I'm Maya.

**Devon:** And I'm Devon. We've got five big stories today, Maya, from artificial intelligence making biological discoveries to the first direct photo of a baby planet still wrapped in its gas cocoon.

**Maya:** Plus our space weather segment with a geomagnetic storm watch for tomorrow. Let's start with the story that has scientists buzzing about what AI can do in a lab.

**Devon:** Anthropic says its Claude A I model has discovered an entirely new enzyme system that looks a lot like CRISPR, the revolutionary gene-editing tool. Roughly nine hundred and fifty Claude agents worked mostly on their own for about twenty-one and a half hours, wrote their own search code, and combed through a massive D N A database hunting for unusual reverse transcriptases.

**Maya:** They started with around two hundred thousand candidates and narrowed it down to a system that can cut, copy, and paste D N A. Now, big caveat, this is a preprint, not yet peer reviewed, and nobody knows yet what the system actually does or whether it will be useful.

**Devon:** Right, Stanford's Le Cong summed it up perfectly when he said the experiments are still in the queue while the P R is already live. But even so, this is being cited as a landmark moment for A I driven biological discovery. Announced September twenty-third, covered by Smithsonian Magazine this week.

**Maya:** Next, a breakthrough in how our cells recycle themselves. Researchers at the Telethon Institute of Genetics and Medicine in Italy have finally identified the molecular machinery that switches on T F E B, a master regulator of the cell's recycling system.

**Devon:** T F E B controls lysosomes and autophagy, the cell's cleanup crew, and it's been a prized therapeutic target for years, but nobody knew how to switch it on directly. The team, led by Gennaro Napolitano, showed that when lysosomes are stressed, two enzymes called T B K one and U L K one modify a protein named F N I P one through a chain that starts at a proton pump and an adaptor protein, and that sends T F E B into the cell's nucleus to start cleanup.

**Maya:** They also found a dark side. In follicular lymphoma, mutations in part of that proton pump cause persistent T F E B activation that helps tumor cells survive when nutrients run low.

**Devon:** The practical payoff is that this opens up new druggable targets upstream of T F E B, with potential for rare genetic diseases, cancer, and disorders where toxic waste builds up in cells. Published in Nature on September thirtieth.

**Maya:** Now a materials science story with a marine twist. Scientists have engineered bacteria to make high strength silk by borrowing fragments of mussel foot protein.

higher than earlier recombinant silk work, with simple one step purification.

**Devon:** Stronger than steel by weight, made by bacteria, and inspired by mussels.

Published in Nature Communications on September twenty-seventh.

**Maya:** Let's go cosmic. Astronomers have confirmed the first microblazar in the Milky Way, an object whose existence was predicted for about thirty years but which hid behind interstellar dust.

**Devon:** The system, called I R A S eighteen two nine three minus zero nine four one, sits about twelve thousand light years away. It's a black hole roughly ten times the mass of the sun, orbiting a hot massive star every eleven point three eight days, firing plasma jets at about seventy-five percent of the speed of light, with one jet aimed almost directly at Earth.

**Maya:** The other jet slammed into a molecular hydrogen cloud a hundred light years out, creating a hotspot where particles accelerate to peta electron volt energies, roughly a hundred times more powerful than the Large Hadron Collider. That makes it a candidate source of the galaxy's most energetic cosmic rays.

**Devon:** The international team from A S T R O N, J I V E, the University of Amsterdam, and led from the University of Ja  n in Spain clinched it with multi wavelength radio imaging. Published in Astronomy and Astrophysics, announced September twenty-second.

**Maya:** And the most photogenic story of the week: the first direct image of a planet still forming inside its swirling gas cocoon.

**Devon:** Using ALMA's sixty-six radio dishes, an international team led by Dr. Myriam Benisty of the Max Planck Institute for Astronomy captured WISPIT two b, a planet about five times the mass of Jupiter, sitting fifty-seven astronomical units from its star, four hundred and thirty light years away, wrapped in swirling gas that shows the blue and red shifts of material being pulled in.

**Maya:** The same image caught its companion, WISPIT two c, which carved a full cavity in the disk while the smaller planet carved a narrower gap. These dynamics had only ever been simulated on computers before, never actually seen.

**Devon:** A landmark for accretion theory. Published in the Astrophysical Journal Letters on September thirtieth.

**Maya:** Now our space weather segment. The sun is almost eerily quiet this morning. No significant flares in the past twenty-four hours, just two decaying sunspot regions, and no Earth directed coronal mass ejections in the imagery.

**Devon:** Earth's magnetic field is calm too, with the Kp index down at zero to one. That's the calm before the storm, because NOAA's Space Weather Prediction Center still has a G one minor geomagnetic storm watch in effect for tomorrow, Friday October second.

**Maya:** A coronal mass ejection launched September twenty-eighth is expected to deliver a glancing blow arriving around midday Friday. If the storm materializes, peak conditions are forecast for the morning hours, and aurora could be visible across

at Earth, and a baby planet caught on camera.

**Devon:** And eyes on the solar wind tomorrow for that storm watch. Thanks for listening, and we'll see you tomorrow morning.

**Maya:** Have a great Thursday.