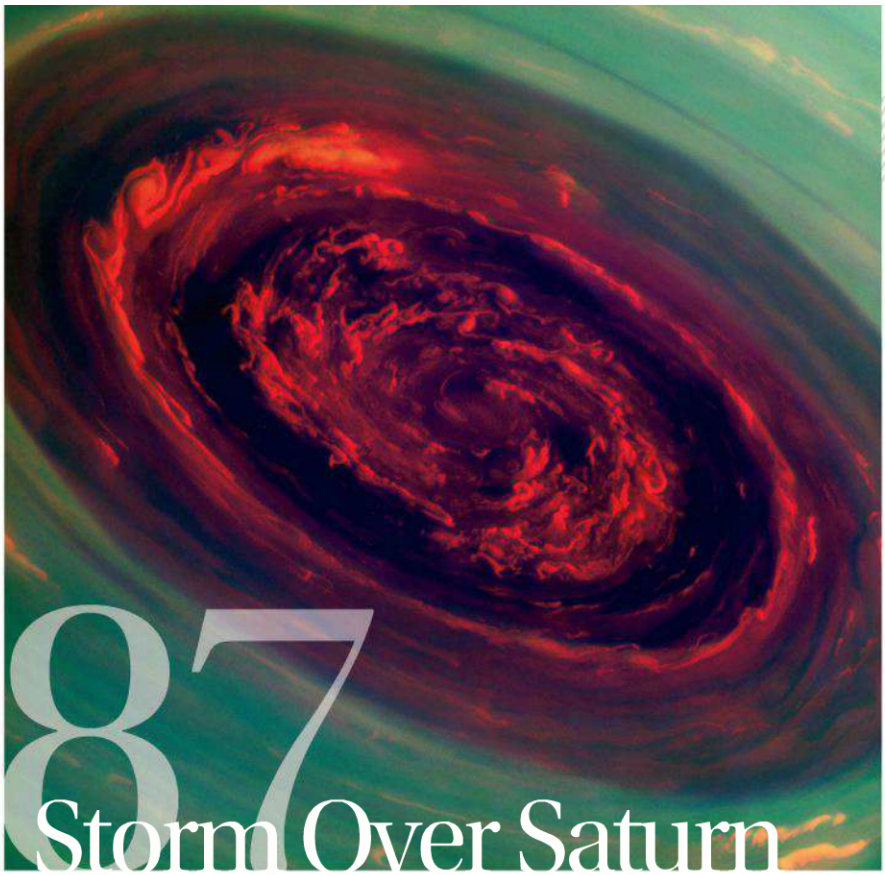


87 Storm Over Saturn

A MONSTROUS Saturnian storm rages in living color.

With a whirl of color, a massive hurricane-like system swirls over Saturn's north pole in a video released by NASA in April. Although the Cassini spacecraft first detected the ongoing weather phenomenon shortly after arriving at the planet in 2004, a visible-light view had to wait until after August 2009, when sunlight returned to Saturn's north hemisphere after the long winter. The false-color images show a monstrous storm 20 times as large as an average Earth hurricane — the eye alone is 1,250 miles across — with winds reaching 300 mph. — GEMMA TARLACH

88 When Continents Collide

Geologists mapping seismic activity and underwater topography off the coast of Portugal say the tectonic forces that once split and spread the ancient supercontinent Pangea across the surface of the globe appear to be shifting into reverse, setting our existing continents on an eventual collision course.

While constructing a new tectonic map of the area, Monash University geologist João Duarte observed an inkling of a fracture in the normally intact and inactive plate that underlies the Atlantic Ocean. Such a fracture, says Duarte, is evidence of an "embryonic subduction zone," where a new edge is formed, then forced under the remainder of the plate, into the Earth's molten mantle. This process pulls the continents on the surface closer together. His findings, published in *Geology* in June, provide a possible explanation for the creation of midplate subduction zones that have long eluded plate tectonic theorists, and suggest that oceanic closing may already be underway in the Atlantic.

The slow process of continental spreading and reassembly has occurred only three times in Earth's history, and we've got another 220 million years to go before Europe and the Americas reunite, so don't start planning your trans-Atlantic road trip just yet. — BREANNA DRAXLER

89 An Activist's Tragic End

"Information is power. But like all power, there are those who want to keep it for themselves." The opening sentence of the Guerilla Open Access Manifesto captured the worldview of its author, Aaron Swartz, the computer programmer and activist for open access to information who killed himself in January 2013 at age 26.

Whereas national security leakers Julian Assange and Edward Snowden publicized government secrets, Swartz focused on information that was already public, but only available for a price. Swartz thought it should be free. He used library accounts to obtain and then make available millions of court records from the Public Access to Court Electronic Records system, which charges for access to documents. When he did the same with JSTOR, a digital repository for scholarly articles, federal authorities began a criminal investigation; Swartz was indicted in 2011.

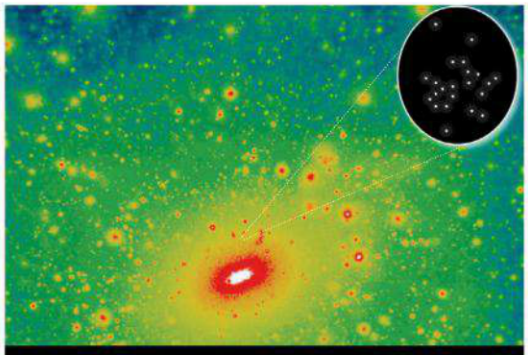
Friends and fellow activists say this investigation, and the fear of a lengthy prison sentence, caused Swartz to take his own life. His death became a rallying cry for those who promote open access for research, government documents and other publicly funded information. — SHARON WEINBERGER

AARON SWARTZ, an Internet activist facing threat of prison, took his life in January.

TOP: NASA/JPL-CALTECH/SSI. BOTTOM: SAGE ROSS/PICTURE-ALLIANCE/DPA/AP IMAGES

90 The Tiniest Galaxy in the Universe

Astronomers can measure a galaxy's mass by how stars move within it: The faster they move, the more massive it is. With this knowledge, a University of California, Irvine, team found that Segue 2, discovered in 2009, weighs at most 150,000 times more than our sun — the puniest galaxy known. (Our normal-size Milky Way is 10 million times more massive.) Segue 2 is probably just one of many such astronomical miniatures orbiting the Milky Way, says UCI astronomer Evan Kirby: "Simulations predict that there should be tens of thousands of these things." —LIZ KRUESI

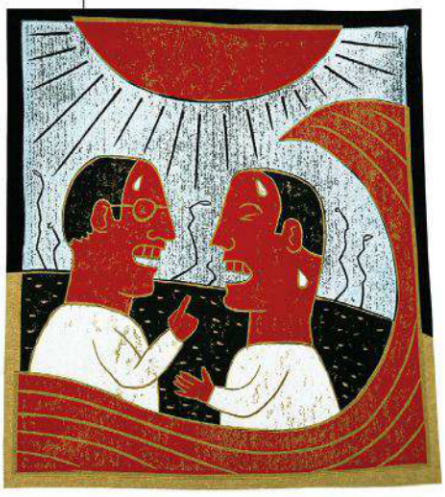


SEGUE 2, the smallest known galaxy, is just one of many similar diminutive galaxies astronomers expect to find around the Milky Way, as shown in this colorful simulation.

91 Climate Change May Lead to More Wars

Police chiefs have long observed that on sweltering summer nights, crime rates go up. Now a University of California, Berkeley study links climate-change-induced weather patterns — sizzling heat, droughts, torrential rains — with increases in ethnic clashes, riots and wars.

Agricultural economist Marshall Burke and his colleagues conducted a meta analysis of 60 previous studies that looked at climatic events and their link to human conflict, including the fall of the Mayan Empire, civil conflicts in Africa, ethnic clashes in India, road rage in the U.S. and even the type of pitches thrown during Major League Baseball games when temperatures rise. The researchers then used a mathematical model that combined the conflict data with temperature and rainfall projections through 2050 to come up with predictions about the likelihood of climate-related violence in the future.



What they found: War and civil unrest may spike by up to 56 percent between now and 2050, while acts of aggression — murder, assault, domestic violence — could increase by 16 percent.

The study was published in *Science* in August, but some experts are skeptical. "It's a tremendous leap to draw these conclusions — that climate change is linked to violence — and factors such as economics, technology, poverty, group dynamics, cultural nationalism and personalities play significant roles in outbreaks of war," says William Martel, an international securities expert at the Fletcher School of Law and Diplomacy at Tufts University.

While UC Berkeley researchers haven't identified the exact link between higher temperatures and aggression, they point out that scarcer resources — a likely outcome of droughts, floods and other extreme weather — can lead to economic strife and food shortages, and those desperate situations can enhance the propensity for social conflict.

"Climate affects economic productivity, institutions and human physiology," says Burke. "It's likely that climate is important for conflict precisely because it shapes so many of these other factors that also affect conflict." —LINDA MARSA

TOP: GARRISON-KIMMEL, BULLOCK/UNIVERSITY OF CALIFORNIA, IRVINE. BOTTOM: IMAGES.COM/CORBIS