

Best of Last Week—Wave activity on Titan, safety of autonomous vehicles, genetic link to coffee drinking

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It was a good week for space science as an international team of astrophysicists studying data from the James Webb Space Telescope observed a [mature quasar at cosmic dawn](#), which they described as a

black hole of inexplicable mass. Also, another international team of researchers studying data from the JWST investigated the [origins of the Crab Nebula](#) hoping to solve inconsistencies between an electron-capture supernova theory and observations of the nebula. And a team of geologists at MIT studying data from Cassini found [wave activity on Titan](#) that might be strong enough to erode the coastlines of lakes and seas on Saturn's largest moon.

In technology news, a combined team of electrical engineers from Fraunhofer Institute for Systems and Innovation Research ISI and Karlsruhe Institute of Technology found that the rapidly declining costs of batteries and fuel cells could soon [facilitate the electrification](#) of heavy-duty vehicles. And a team of engineers at the University of Manchester developed a design for a [record-breaking robot](#) that can jump twice the height of Big Ben. The team used mathematics, computer simulations and laboratory experiments to develop a design with an optimum size, shape, and arrangement of parts. Also, a multi-institutional team of engineers developed a new catalyst that they claim unveils the [hidden power of water](#) for green hydrogen generation. And a pair of engineers at the University of Central Florida found that autonomous vehicles [are generally safer](#) than those driven by humans except under two conditions—at dawn/dusk or when turning.

In other news, a team of medical researchers in the U.K. conducted an immune response study and explained why some people [do not get COVID-19](#)—an innate immune response related to having the HLA-DQA2 gene. Also, a team of Earth scientists at California Institute of Technology discovered that more types of bacteria [produce greenhouse gases](#) than previously thought. And finally, a team of researchers from Schulich School of Medicine and Dentistry and the University of California San Diego, found [a link](#) behind genetics and the amount of coffee a person drinks.

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