

Best of Last Week—Ditching dark matter, James Webb teaser pic, high-fat foods shrink brains

July 11 2022, by Bob Yirka

A test image from the James Webb Telescope—among the deepest images of the universe ever taken. Credit: NASA

It was a good week for physics as a pair of physicists with the University of St. Andrews, in the U.K., argued that [it is time to ditch dark matter](#)

[theory in favor of Milgromian dynamics](#), which requires no invisible matter—Indranil Banik and Hongsheng Zhao suggest the odd phenomenon observed in the dynamics of stars at the outer edges of galaxies is due to gravity behaving differently when it is very weak. Also, the European Organization for Nuclear Research announced that the Large Hadron Collider, which started back up in April after upgrades, [will soon run nearly full time at 13.6 trillion electronvolts for four years](#). And a team of physicists at the University of Edinburgh's School of Physics and Astronomy published mathematical calculations showing that [quantum communications across interstellar space should be possible](#).

In technology news, a team from the Army Research Laboratory and the University of California, San Diego's Shirly Meng group, developed [a liquefied gas electrolyte that could be used in temperature-resilient lithium-metal batteries](#). Also, a team with members from East China Normal University, Jilin University, Shanghai Tech University and Nanjing University developed [a flexible, all-perovskite tandem solar cell that operates with 24.7% efficiency](#). And a group at the Pacific Northwest National Laboratory developed [a new electrolyte that was able to increase the stability of high-voltage sodium-ion batteries](#). A team at the University of Buffalo developed [a new iron catalyst that could make hydrogen fuel cells affordable](#).

In other news, a team at the Friedman School of Nutrition Science and Policy at Tufts University found that [just 7% of the adult population in the U.S. has good cardiometabolic health](#), which the researchers described as a devastating health crisis. Also, the team at NASA working with the James Webb Telescope, released [a "teaser" picture of a part of the universe prior to the expected release of fully formed pictures of the deep universe this week](#). And finally, an international team of researchers found that [people who eat high-fat foods over the long term experience not just an expanded waistline but a shrinking brain](#).

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