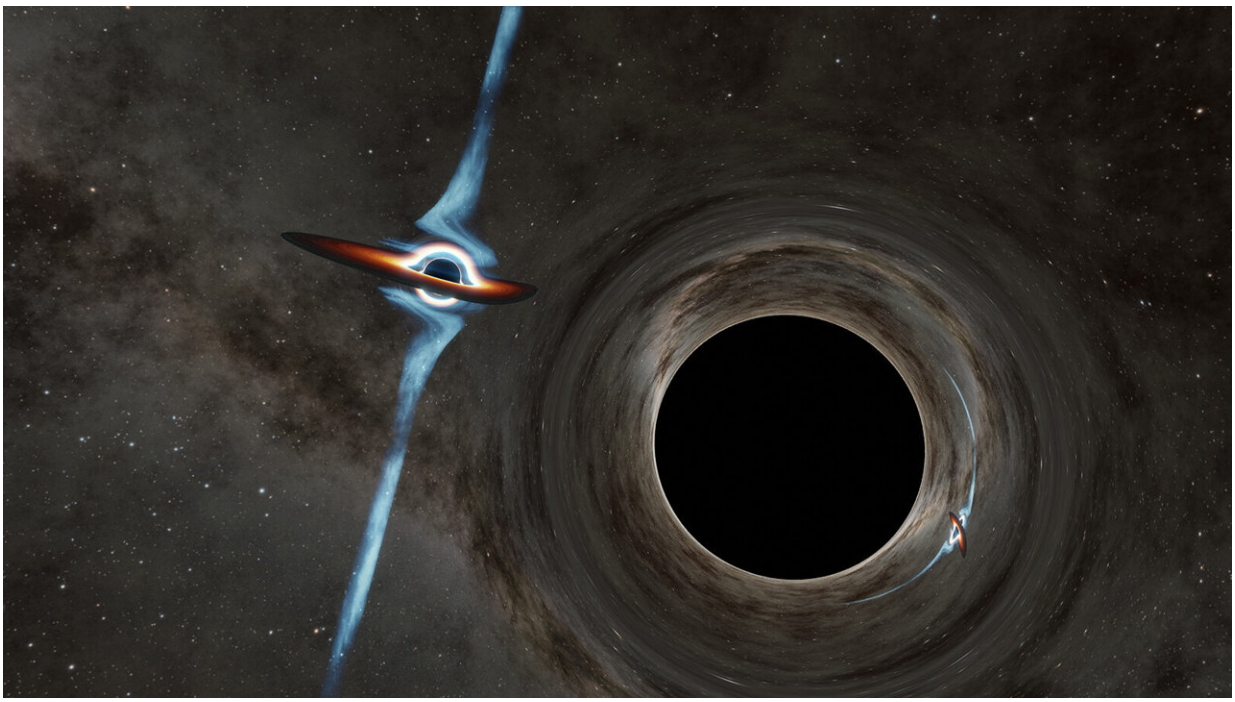
Best of Last Week – Black holes dancing, a magnetic phase of matter, veggies do not prevent cardiovascular disease

February 28 2022, by Bob Yirka



This artist's concept shows two candidate supermassive black holes at the heart of a quasar called PKS 2131-021. In this view of the system, gravity from the foreground black hole (right) can be seen twisting and distorting the light of its companion, which has a powerful jet. Each black hole is about a hundred million times the mass of our sun, with the black hole in the foreground being slightly less massive. Credit: Caltech/R. Hurt (IPAC)

It was a good week for space science, as an international team found two colossal black holes locked in dance at the heart of a galaxy. Initial data suggests they orbit around each other every two years. Also, another international team mapped more than a quarter of the northern sky using the Low Frequency Array and revealed 4.4 million galaxies.

In technical news, a team with members from Chemnitz University of Technology, Leibniz Institute for Solid State and Materials Research and Changchun Institute of Applied Chemistry developed the world's smallest battery and used it to power a computer the size of a grain of dust. And a team at the University of Arizona developed a method to automatically generate radar-camera datasets for deep learning applications, based on a highly accurate object detection algorithm and an association technique to label a radar point-cloud. Also, a team at the University of Canberra found that online privacy has become a source of inequality based on geographical location. And a collaboration between teams at the University of Denver, DreamFace Technologies, and the University of Colorado found that artificial emotional intelligence could change senior users' perceptions of social robots.

In other news, a team at the U.S. Department of Energy's Brookhaven National Laboratory found evidence of an exotic magnetic phase of matter. And a collaboration between researchers at the Max Planck Institute for Medical Research, the Max Planck Bristol Center for Minimal Biology and the University of Bristol created minimalistic SARS-CoV-2 virions and discovered the spike protein switching mechanism for the virus. Also, a team with members from MIT, Stockholm University and the SLAC National Accelerator Laboratory developed a new, inexpensive catalyst that speeds the production of oxygen from water.

And finally, a collaboration between the Nuffield Department of Population Health at the University of Oxford, the Chinese University of

Hong Kong, and the University of Bristol found evidence suggesting that eating vegetables does not protect against cardiovascular disease.

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