Best of Last Week: Trouble with Hubble, artificial photosynthesis, red meat's role in colorectal cancer

June 21 2021, by Bob Yirka



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It was a good week for space science as new calculations by a team with members from Helmholtz-Zentrum Dresden-Rossendorf and Russia Perm National Research Polytechnic University supported an expanded planetary hypothesis for the sun's many cyclical fluctuations—their new work showed that planet's tidal forces in the solar system play a role. Also, officials at NASA reported trouble with the Hubble Space Telescope—a payload computer stopped working. And an international team of researchers solved the mystery of Betelgeuse's dip in brightness—its light was partially obscured by a cloud of dust.

In technology news, a team at Stanford University estimated the prevalence of CCTV cameras in large cities around the globe—they developed a computer vision algorithm to estimate the spatial distribution of surveillance cameras by analyzing Google street view data. Also, a combined effort between researchers at North Carolina State University and North Carolina Central University showed that when power grid systems combine solar power generation with energy storage, the end result can be greater than the sum of its parts. And Yulia Puskhar, a biophysicist at Purdue University demonstrated a possible breakthrough in developing an artificial photosynthesis device—she has been copying the natural process by building artificial leaf analogs that collect light and split water molecules to generate hydrogen. Also, a team at Ruhr-Universität Bochum working with colleagues from France and Norway, found that a backdoor algorithm used in mobile phone encryption from the 1990s, still exists.

In other news, a large international team of researchers affiliated with the LIGO Laboratory brought a human-scale object to a near standstill, and in so doing, reached a quantum state—the object was first measured with extreme precision and then mirrors and electromagnets were used to apply an equal and opposite force. Also, an international team of researchers announced that they had created an mRNA vaccine that vielded full protection against malaria in mice.

And finally, if you continue to eat red meat as part of your diet, you may

want to check out the results of a study by a team with members affiliated with multiple institutions in the U.S.—they found <u>biological</u> <u>links between red meat and colorectal cancer</u>.

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