

Best of Last Week—Earth may have had rings, an improved nuclear battery, a new approach to defibrillation

September 23 2024, by Bob Yirka

Two different architectures of radiophotovoltaic batteries. Credit: *Nature* (2024).
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It was a good week for space science, as a trio of Earth scientists at Monash University found evidence that Earth may have had [a ring](#)

[system](#) 466 million years ago—in studying plate tectonics during the Ordovician period, Andrew Tomkins, Erin Martin and Peter Cawood found that the positions of 21 asteroid impacts were located within 30 degrees of the equator. And a team of astronomers at California Institute of Technology discovered the [largest black hole jets](#) ever observed blasting hot plasma well beyond their own host galaxy.

In technology news, a team of materials scientists at Princeton University developed a [tougher type of concrete](#) inspired by bone structure. And a team of engineers at Tokyo Metropolitan University revealed a [new electrochemical cell](#) for use in turning carbon dioxide into a green fuel. Also, a team of physicists and engineers affiliated with several institutions in China developed an extremely small [nuclear battery](#) up to 8,000 times more efficient than its predecessors. And a team of robotics engineers at Zhejiang University, in China, demonstrated a magnetically driven [soft robot](#) with high-speed jumping abilities—the magnetically driven robots were able to jump more than 108 body lengths, with a takeoff velocity of 2 meters per second.

In other news, an international team of psychologists found that people tend to [underestimate the income of the top 1%](#), possibly because of what they describe as "scope insensitivity." And a team of engineers and medical researchers at the University of Hong Kong developed a next-generation wearable continuous [glucose monitoring system](#) for diabetes management that they claim represents a major advancement in wearable health technology. Also, a team of engineers and biologists from Kyushu University, in Japan, and Chulalongkorn University, in Thailand, discovered a possible explanation for the "[missing plastic problem](#)"—coral skeletons. And finally, a team of engineers at Oregon Health and Science University, working with a team from Tualatin Valley Fire and Rescue, and Washington County Public Health developed a [new approach to defibrillation](#) that might soon improve cardiac arrest outcomes.

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