

THE SCOOP

The August Newsletter is OUT!!!

Scientist of the Month

Paul A. M. Dirac

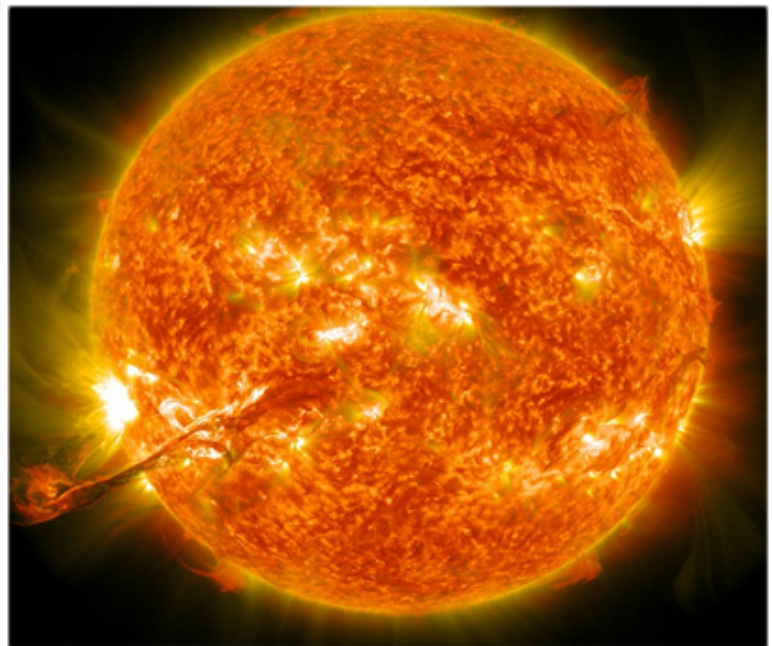
"Hopes are always accompanied by fears, and, in scientific research, the fears are liable to become dominant."

Scientist Birthday:

August 08th, 1902

Trivia about the scientist

Paul Dirac was one of the greatest theoretical physicists in history. He completely reshaped quantum mechanics with the astounding Dirac Equation. The Dirac Equation explained the behavior of electrons and foretold the existence of antimatter.



Discovery in the month August, 2018:

As the saying goes, everything old is new again. While the common phrase often refers to fashion, design, or technology, scientists at the University of New Hampshire have found there is some truth to this mantra even when it comes to research. Revisiting some older data, the researchers discovered new information about the shape of coronal mass ejections (CMEs) - large-scale eruptions of plasma and magnetic field from the sun that could one day help protect satellites in space as well as the electrical grid on Earth.

"Since the late 1970s, coronal mass ejections have been assumed to resemble a large Slinky – one of those spring toys - with both ends anchored at the sun, even when they reach Earth about one to three days after they erupt," said Noe Lugaz, research



Dirac was also able to infer the existence of vacuum polarization, revealing that what we once believed was empty space is actually awash with short-lived particle-antiparticle pairs

associate professor in the UNH Space Science Center. "But our research suggests their shapes are possibly different."

Knowing the shape and size of CMEs is important because it can help better forecast when and how they will impact Earth. While they are one of the main sources for creating beautiful and intense auroras, like the Northern and Southern Lights, they can also damage satellites, disrupt radio communications and wreak havoc on the electrical transmission system causing massive and long-lasting power outages. Right now, only single point measurements exist for CMEs making it hard for scientists to judge their shapes. But these measurements have been helpful to space forecasters, allowing them a 30 to 60 minute warning before impact. The goal is to lengthen that notice time to hours - ideally 24 hours - to make more informed decisions on whether to power down satellites or the grid.

Previous Discovery & Invention in the month of August-

1935 - William Coolidge obtained a patent for the cathode ray tube, a critical ingredient of TV and other electronic applications.

The development of electronic television systems was based on the development of the cathode ray tube (CRT). A cathode ray tube aka picture tube was found in all electronic television sets up until the invention of the less bulky LCD screens.

*Company of the month-***Gujarat Fluoro Chemicals Ltd:**

Gujarat Fluoro Chemicals Ltd was founded in the year 1987. It is headquartered in Inox Towers, Noida Uttar Pradesh. It is one of the largest producers of refrigerants, chloromethanes, and polytetrafluoro-ethylene. The company is listed on both stock exchange of India- NSE and BSE.

Meme of the month-