MAUNAKEA OBSERVATORIES

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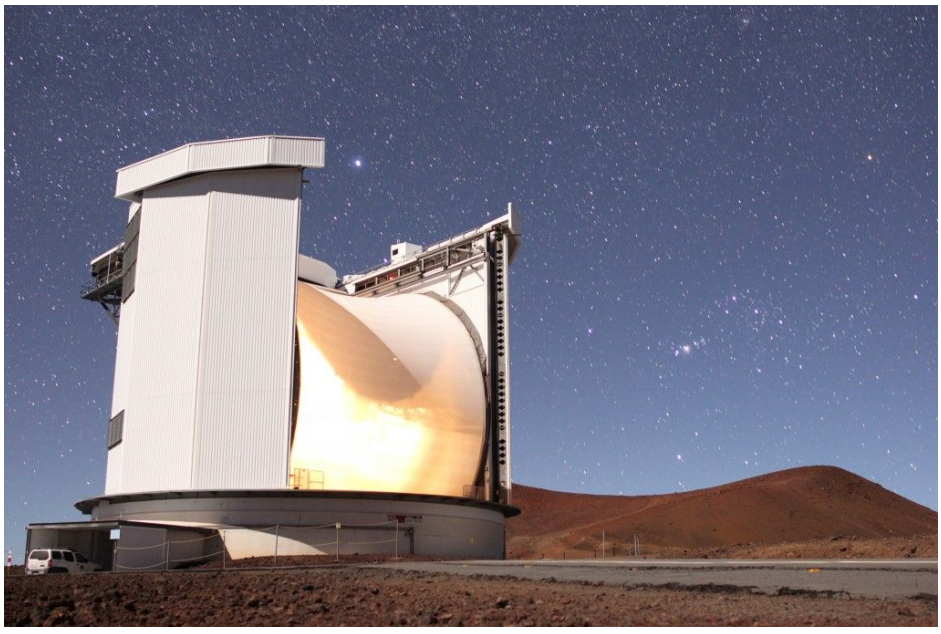
James Clerk Maxwell Telescope Discovers Flare 10 Billion Times More Powerful Than Those on The Sun

Hawai`i Telescope Captures Brightest Stellar Flare Ever Recorded
History-Making Flare Points To Origins Of Our Solar System



**MAUNAKEA, HAWAI`I —** The Hawai`i-based James Clerk Maxwell Telescope (JCMT) has discovered a stellar flare 10 billion times more powerful than the sun's solar flares, a history-making discovery that could unlock decades-old questions about the origin of our own sun and planets, giving insight into how these celestial bodies were born.

"A discovery of this magnitude could have only happened in Hawai`i," said Dr. Steve Mairs,

astronomer and lead investigator of the team that discovered the stellar flare. “Using the JCMT, we study the birth of nearby stars as a means of understanding the history of our very own solar system. Observing flares around the youngest stars is new territory and it is giving us key insights into the physical conditions of these systems. This is one of the ways we are working toward answering people’s most enduring questions about space, time, and the universe that surrounds us.”

The JCMT Transient Survey team recorded the 1,500-year-old flare using the telescope’s state-of the art high-frequency radio technology and sophisticated image analysis techniques. Identified by astronomer Dr. Steve Mairs, the original data was obtained using the JCMT’s supercooled camera known as “SCUBA-2”, which is kept at a frigid -459.5 degrees fahrenheit.

The flare is thought to be caused by a disruption in an intense magnetic field actively funneling material onto a young, growing star as it gains mass from its surroundings. The event occurred in one of the nearest star-forming regions to the Earth, the Orion Nebula. It lasted only a matter of hours.

Located near the summit of Maunakea, the JCMT is the largest and only telescope in the northern hemisphere capable of making this type of discovery. The stellar flare observation was made as part of a monthly tracking program from researchers from around the world who use the JCMT to observe nearly 1,000 nearby stars in the earliest stages of their formation.

About the Maunakea Observatories
The Maunakea Observatories are a collaboration of independent institutions with telescopes located on Maunakea on the island of Hawai‘i. Together, the Observatories make Maunakea the most scientifically productive site for astronomy world-wide. The Maunakea Observatories include: Caltech Submillimeter Observatory, Canada-France-Hawai‘i Telescope, Gemini International Observatory, James Clerk Maxwell Telescope (EAO), NASA Infrared Telescope Facility, Subaru Telescope, Submillimeter Array, United Kingdom Infrared Telescope, University of Hawai'i Hilo Educational Telescope, University of Hawai‘i 2.2 Meter Telescope, Very Long Baseline Array, W. M. Keck Observatory (Keck I and Keck II).

About James Clerk Maxwell Telescope
Owned by the East Asian Observatory, the James Clerk Maxwell Telescope (JCMT) is the largest astronomical telescope in the world designed specifically to operate in the submillimeter wavelength region of the spectrum. The JCMT has a diameter of 15m and is used to study our Solar System, interstellar and circumstellar dust and gas, and distant galaxies. It is situated near the summit of Maunakea, Hawai’i, at an altitude of 4092m. The JCMT Transient Survey team is an international collaboration of 80 astronomers led by Dr. Gregory Herczeg of Peking University (Kavli Institute for Astronomy and Astrophysics) and Dr. Doug Johnstone (National Research Council of Canada). The team has been monitoring 8 star forming regions in the Milky Way

monthly since December 2015. Their survey will continue through January 2020.

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