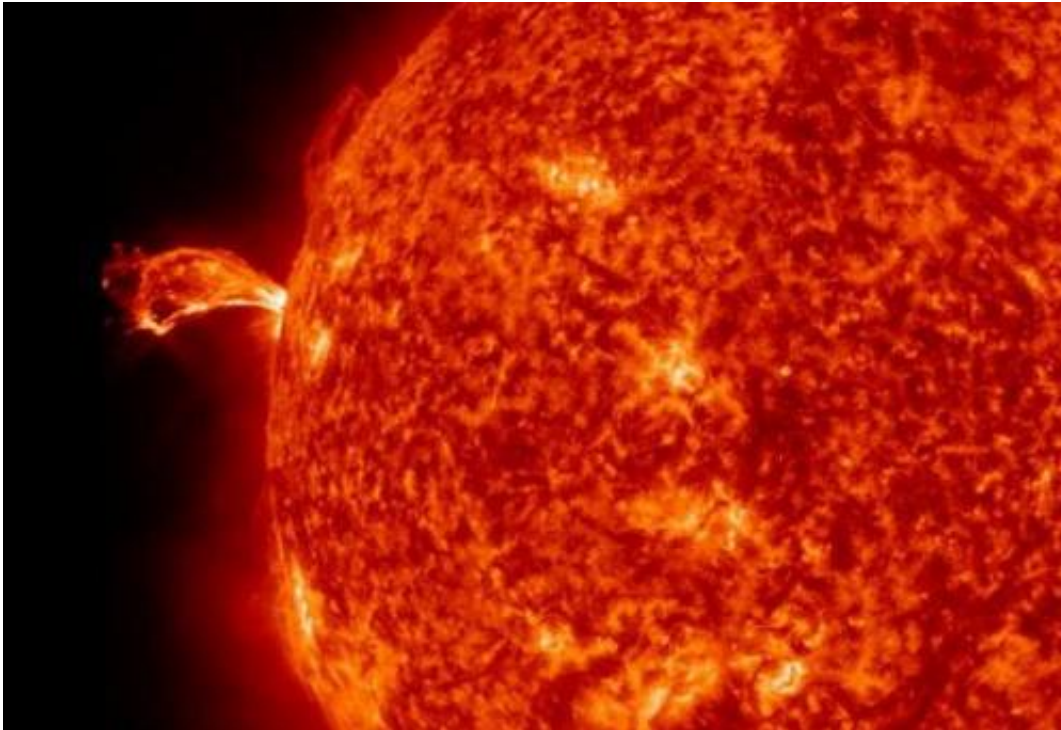


# The Sun spits out a coronal mass ejection

April 17 2012, By Nancy Atkinson

---



A CME from the Sun on April 15, 2012. Credit: Solar Dynamics Observatory

Ever squirted water out of your mouth when playing in a swimming pool or lake? This Coronal Mass Ejection (CME) release by the Sun on April 15, 2012 looks reminiscent of such water spouting.

But this burst of [solar plasma](#) being hurled from the eastern limb of the Sun is more like an explosion, as such CMEs can release up to 100 billion kg (220 billion lb) of material, and the speed of the ejection can

reach 1000 km/second (2 million mph) in some flares. Scientists at the Solar Dynamics Observatory say some of the explosions approach the power in one billion hydrogen bombs! In this video, the Sun hurled a cloud of plasma towards the STEREO B spacecraft and SDO captured the event in a couple of different wavelengths.

Coronal Mass Ejections (CMEs) are balloon-shaped bursts of solar wind rising above the solar corona, expanding as they climb. Solar plasma is heated to tens of millions of degrees, and electrons, protons, and heavy nuclei are accelerated to near the speed of light. The super-heated electrons from CMEs move along the [magnetic field lines](#) faster than the solar wind can flow. Rearrangement of the magnetic field, and [solar flares](#) may result in the formation of a shock that accelerates particles ahead of the CME loop.

Source: [Universe Today](#)

Citation: The Sun spits out a coronal mass ejection (2012, April 17) retrieved 20 July 2024 from <https://phys.org/news/2012-04-sun-coronal-mass-ejection.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.