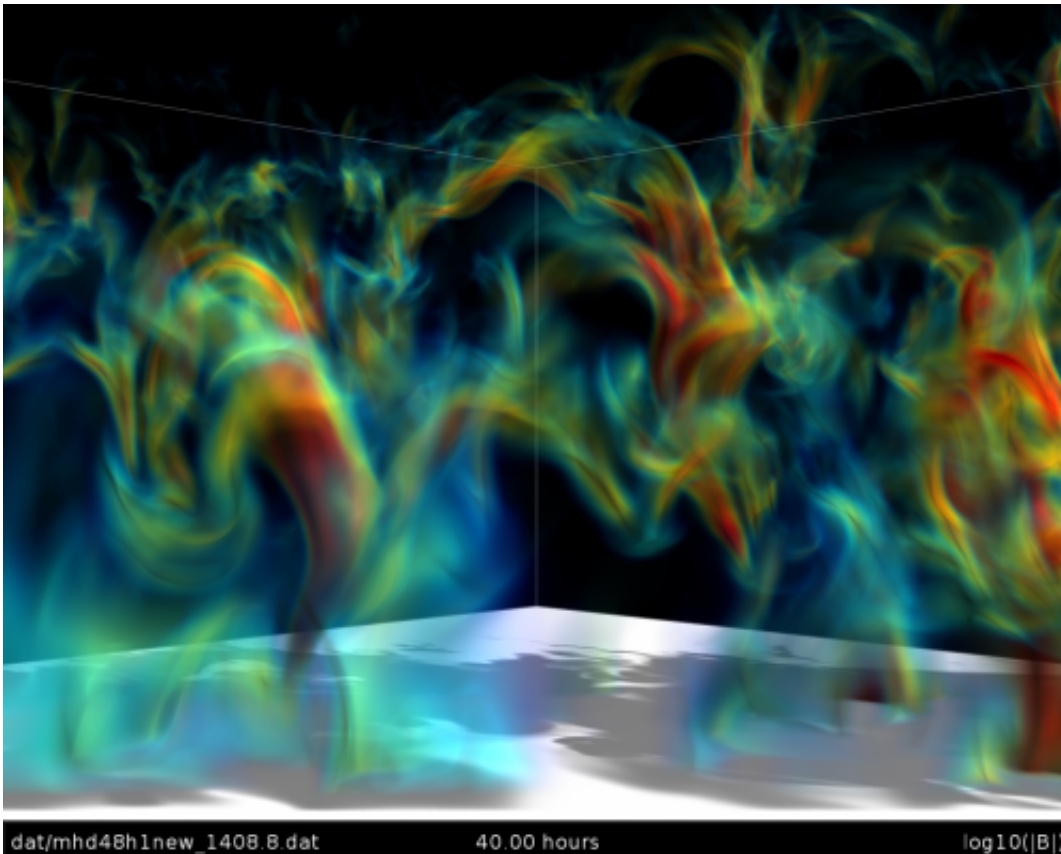


Image: Supercomputer simulation of magnetic field loops on the Sun

November 26 2014



Credit: Robert Stein, Michigan State University; Timothy Sandstrom, NASA/Ames

Magnetic fields emerging from below the surface of the sun influence the solar wind—a stream of particles that blows continuously from the sun's atmosphere through the solar system. Researchers at NASA and its

university partners are using high-fidelity computer simulations to learn how these magnetic fields emerge, heat the sun's outer atmosphere and produce sunspots and flares.

This visualization shows magnetic field loops in a portion of the sun, with colors representing [magnetic field](#) strength from weak (blue) to strong (red). The simulation was run on the Pleiades supercomputer at the NASA Advanced Supercomputing facility at NASA's Ames Research Center in Moffett Field, California.

The knowledge gained through simulation results like this one help researchers better understand the sun, its variations, and its interactions with Earth and the solar system.

Provided by NASA

Citation: Image: Supercomputer simulation of magnetic field loops on the Sun (2014, November 26) retrieved 9 April 2024 from

<https://phys.org/news/2014-11-image-supercomputer-simulation-magnetic-field.html>

<p>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.</p>
--