National Aeronautics and Space Administration



## GEOMAGNETICALLY NDUCED GURRENTS

## Coronal Mass Ejection (CME)

**Geomagnetically Induced Currents (GICs)** can result from geomagnetic storms—a type of space weather event in which Earth's magnetic field is rattled by incoming magnetic solar material. Most GICs are triggered by coronal mass ejections (1), or CMEs, which interact with the magnetic field around Earth (2) and cause it to rattle. The quick-changing magnetic fields create GICs through a process called electromagnetic induction (3). GICs can flow through railroad tracks, underground pipelines, and power grids. In extreme cases, they can cause blackouts.

## Earth's Geomagnetic Field





Though widespread permanent damage to power systems is unlikely, extreme storms can cause blackouts over extended areas. That's why NASA and other federal agencies work with the power and insurance industries to develop plans and standards for dealing with GICs.

## GICs CAN RUN THROUGH ANY LONG METAL STRUCTURE

