Lightning on Other Planets

Earth isn't the only world that has lightning.

An artist's impression of lightning in Jupiter's northern hemisphere.

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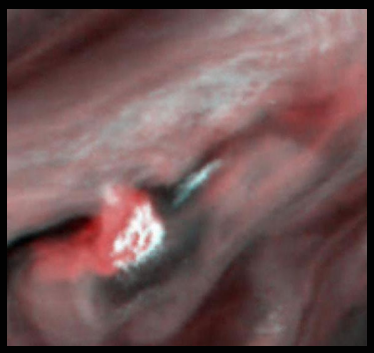

Storms on Jupiter illuminated by lightning strikes, taken by NASA's Galileo spacecraft.

Planets other than Earth also experience lightning, including Venus, Jupiter, and Saturn. And research has shown that intense electrical storms might even exist on exoplanets far beyond the solar system. Lightning bolts can form when positive and negative charges separate within clouds. The air between the charges acts as an insulator, but when the charges build up enough to overcome this insulator, there is a rapid discharge of electricity that we know as lightning. Lightning is an important phenomenon on our planet and others because its energy can break molecules into smaller pieces. These fragments of molecules can then combine in new ways, changing the chemistry of a planet's atmosphere and potentially its ability to support life.