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“Space tornadoes” cause Northern Lights, claim scientists

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Washington, April 24 (ANI): New observations by a suite of five NASA space probes has reportedly solved the mystery of the Northern Lights, attributing the cause of the natural phenomenon to powerful currents generated by giant electrical tornadoes in outer space.

The probe cluster, called Time History of Events and Macroscale Interactions during Substorms (THEMIS), indicate that these “space tornadoes” span a volume as large as Earth and produce electrical currents exceeding 100,000 amperes.

THEMIS recorded the extent and power of these electrical funnels as the probes passed through them during their orbit of Earth.

Ground measurements showed that the space tornadoes channel the electrical current into the ionosphere to spark bright and colorful auroras, such as the Northern Lights, on Earth.

Space tornadoes are rotating plasmas of hot, ionized gas flowing at speeds of more than a million miles per hour, far faster than the 200 m.p.h. winds of terrestrial tornadoes, according to Andreas Keiling, a research space physicist at the University of California, Berkeley’s Space Sciences Laboratory.

Both terrestrial and space tornadoes consist of funnel-shaped structures. Space tornadoes, however, generate huge amounts of electrical currents inside the funnel.

“These currents flow along twisted magnetic field lines from space into the ionosphere where they power several processes, most notably bright auroras such as the Northern Lights,” Keiling said.

While these intense currents do not cause any direct harm to humans, on the ground they can damage man-made structures, such as power transformers.

The THEMIS spacecraft observed these tornadoes, or “flow vortices,” at a distance of about 40,000 miles from Earth.

Simultaneous measurements by THEMIS ground observatories confirmed the tornadoes’ connection to the ionosphere. (ANI)

