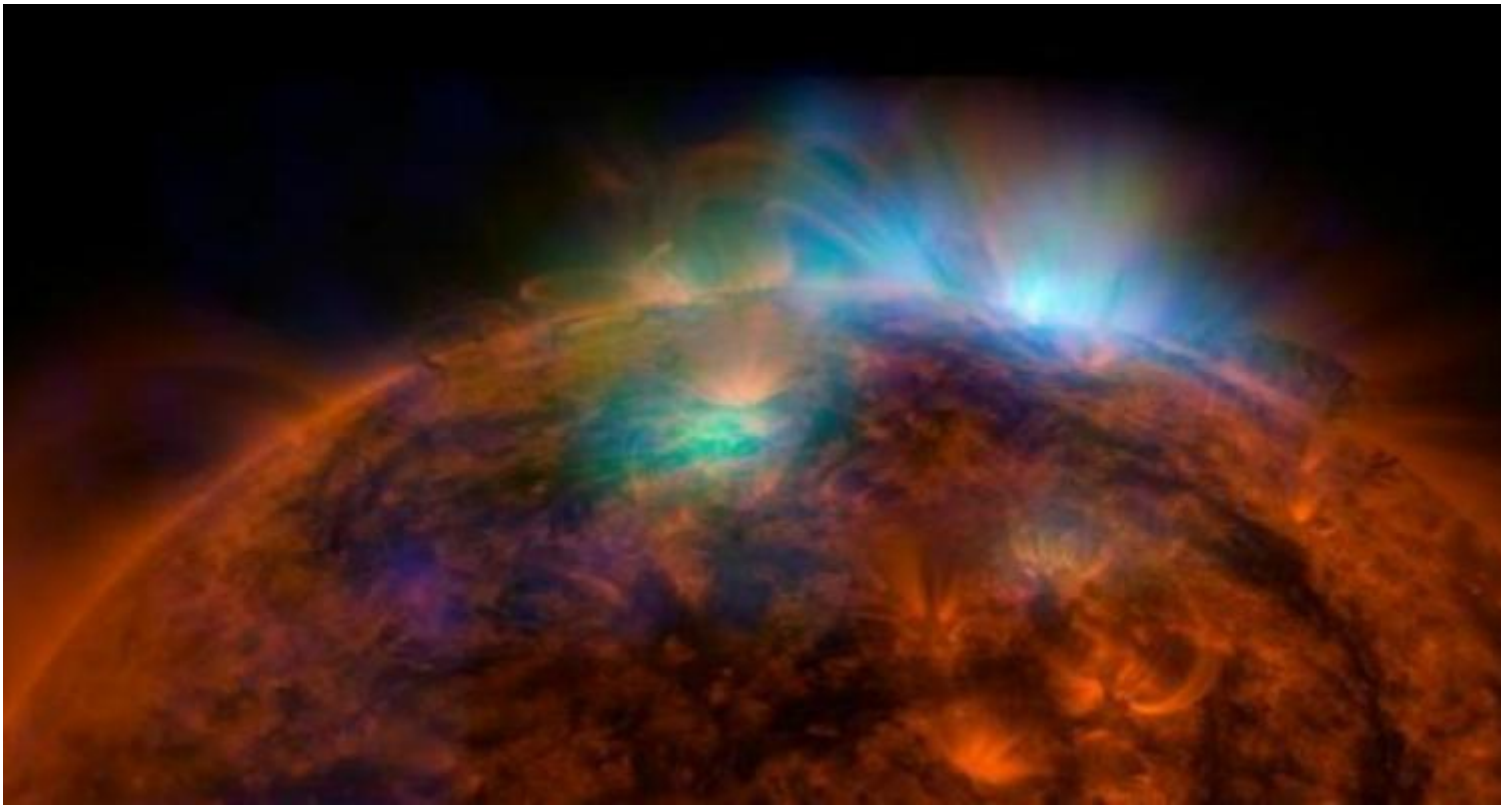
The Sun also has Seasons Says New Research



Colorado, U.S. April 10 (RHC) The Sun also experiences variation in its seasons with periods of waxing and waning, over a time period that spans approximately two years, according to the newest research published by Nature Communications.

The study was conducted by the National Center for Atmospheric Research (NCAR) and reveals how understanding ‘seasonal’ changes could allow researchers to better predict patterns of solar wind activity.

“What we’re looking at here is a massive driver of solar storms,” said the study’s lead author, Scott McIntosh, director of the High Altitude Observatory of the National Center for Atmospheric Research of Boulder, Colorado.

This quasi-annual variation seems to be the result of changes on the bands of each solar hemisphere’s magnetic fields. These bands are also instrumental in shaping the 11-year solar cycle, which is part of a 22 year cycle.

These overlapping bands are controlled by the rotations of the Sun’s interior. As they move across the Sun’s northern and southern hemispheres, solar activity reaches a peak around 11 months and afterwards it steadily wanes.

McIntosh says these quasi-annual variations are not unlike regions on Earth that have two seasons, like rainy and dry seasons.

With data derived from NASA satellites along with ground-based observatories, researchers tracked solar wind flow as well as violent activity like solar flares coming off the solar surface. These bands traveled throughout the Sun with a cycle of 330 days.

Researchers made use of advanced computer simulations and also more detailed observations in order to further understand the critical impact that these bands have on solar activity. A network of satellites orbiting the Sun could significantly improve our understanding of solar activity and help us prepare power systems accordingly.

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