

'Magnetic activity affects climate'

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BANGALORE: The Sun is stranger than you think!

Recent research has suggested that the magnetic activity in the Sun, 150 million kms from Earth, can have a bearing on cloud formation and thus influence the climate.

The interplay between cosmic rays and the magnetic activity of the Sun which takes place at the edge of the Earth's atmosphere was best explained to the audience by none other than the person who first theoretically predicted the presence of the solar wind whose validity has been proven today through direct observations by artificial satellites.

Prof Eugene Newman Parker from the University

of Chicago captivated the audience at the Indian Institute of Astrophysics, with his lecture on "The Sun, space, cosmic rays and climate," in which he described how a magnetically active Sun can lead to a warmer climate on Earth.

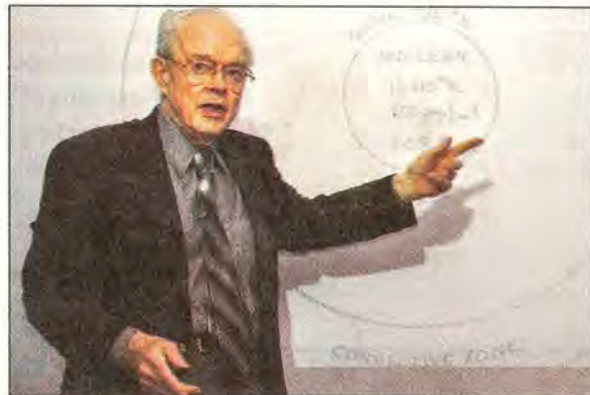
It goes like this, leaving out all the technical and mathematical details. The magnetic activity of the Sun vary over years. A magnetic active Sun would mean more magnetic lines of force on the surface of the Earth. This in turn scatters the cosmic rays hitting the earth. Cosmic rays are known to create ions in the atmosphere. The ions act as seed for cloud formation. Lesser cosmic rays would mean lesser clouds and a warmer Earth.

Prof Parker has been

one of the leading authority on the solar wind and the effects of magnetic fields in space for the last five decade. His work has increased understanding of the solar corona, the solar wind, the magnetic fields of both earth and sun, and their complex electromagnetic interactions.

Prof Parker revolutionised solar physics in the 1960s with his deduction that there must be a constant, supersonic flow of plasmas from the Sun. His theory that the plasma flow was supersonic was met with stiff resistance from the scientific community. However, the validity of that prediction was proven several years later through direct observations by artificial satellites.

Concluding his lecture,



Prof Eugene Norman Parker University of Chicago giving the lecture on 'The Sun, Space, Cosmic Rays and Climate' during the presentation of Vainu Bappu Memorial Award to him at the Indian Institute of Astrophysics in Bangalore on Thursday.

Prof Parker said latest scientific data now infer the magnetic activity in the distance stars could also influence the climate on Earth.

Prof Parker was also conferred with the Vainu Bappu Memorial award in recognition for his contribution to astronomy.