THE PHYSICS COLLOQUIUM

Thursday, 23 March 2017, 4:00 p.m.
Nijenborgh 4, Lecture Hall 5111.0080

Terrestrial Radiation Events as Global Time Markers

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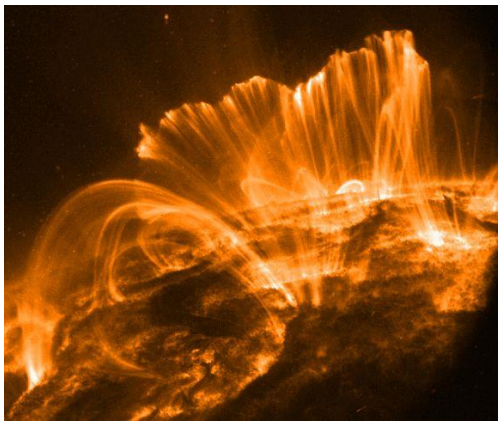
In the years 775 and 994 AD, the Earth was struck by intense bursts of radiation, most likely as a result of enormous solar storms. The impacts caused the production of radiocarbon in the atmosphere to increase dramatically. The years of the events are precisely known because the uplifts in radiocarbon were detected in tree-rings of known growth year. Many more such tree-rings are now being tested to determine the regularity of the events, especially as a recurrence in modern times would be devastating for satellite and telecommunication systems.



However, because the events can be exactly dated, and occur simultaneously all around the world, the uplifts in radiocarbon also present a new opportunity for high-precision dating.

Indeed, they may prove decisive in resolving the chronologies of ancient civilisations, such as the Maya and the Egyptians. ECHOES (Exact Chronology of Early Societies) is an ERC-funded project based at the CIO, which aims to find the radiocarbon increases in both known-age tree-rings and in archaeological artefacts, thus allowing the objects to be dated to the exact calendar year.

Join us for coffee starting 3:30 p.m. Refreshments will be served after the lecture.
For more information contact the host: Ulrike Dusek (u.dusek@rug.nl)
Website: http://www.rug.nl/research/vsi/colloquia/