

FOR IMMEDIATE RELEASE

Hermanus, Western Cape, 23/10/2014

Space Weather: A Risk to World Economy and Society

We often take for granted that the technology we have become so accustomed to relying on daily can be affected not only by weather on Earth but also by more extreme weather in space.

An extreme space weather event, or solar superstorm, is one of a number of potentially high impact, but low probability natural hazards. In response to a growing awareness by governments, extreme space weather now features as an element of national risk assessment in numerous countries.

Solar superstorms can have detrimental effects on the power grid, satellites, avionics, and aircraft over polar regions, High Frequency (HF) radio communication, mobile telephones and GPS systems, to name a few. Space weather has consequently been identified as a risk to the world economy and to society. In the UK solar storms are listed as the fourth most serious threat on the National Risk Register and are recognised as having a potential significant impact on the UK's critical national infrastructure.

According to a risk report by Lloyds on the impact of space weather on earth and business a severe space weather event presents a systemic risk. For example, a loss of power could lead to a cascade of operational failures that could leave society and the global economy severely disabled.

The report also states "businesses at risk from space weather need access to relevant expertise. It is critical to have access to measurements and forecasts that allow businesses to adapt to and mitigate the effects of space weather."

In an effort to create awareness around the impacts of space weather in Africa, the South African National Space Agency (SANSa), recently hosted a space weather information sharing session at the South African Astronomical Observatory in Cape Town. SANSa is spearheading space weather research for Africa, particularly focusing on South Africa, and is collaborating with key industries to aid in mitigating the impact of solar superstorms.

"With societies growing dependency on technological systems it has become vital to monitor the effects of space weather" said SANSa Space Science MD, Dr Lee-Anne McKinnell. "SANSa aims to provide the right information, in the right format, at the right time, to the right people, to enable and facilitate the right decisions in regard to space weather related issues."

As the only space weather monitoring centre in Africa, SANSa provides an important service to the nation by monitoring the Sun and its activity, providing space weather forecasts, warnings, alerts, and environmental data on space weather conditions to government and key private-industries in Africa. The information sharing session was aimed at initiating dialogue and engagement with relevant stakeholders to allow SANSa to further develop appropriate and user driven space weather products and services.

"Space weather is a global issue, but the impact can be regional," says Dr McKinnell. The effects can be regional because of the different technologies used in different places, and the economic make-up of a country or region.

Building protection into systems at risk so they can withstand the extremes of space weather or adjusting systems at risk in advance to reduce the impact during an event are just two ways to manage the risks associated with space weather.

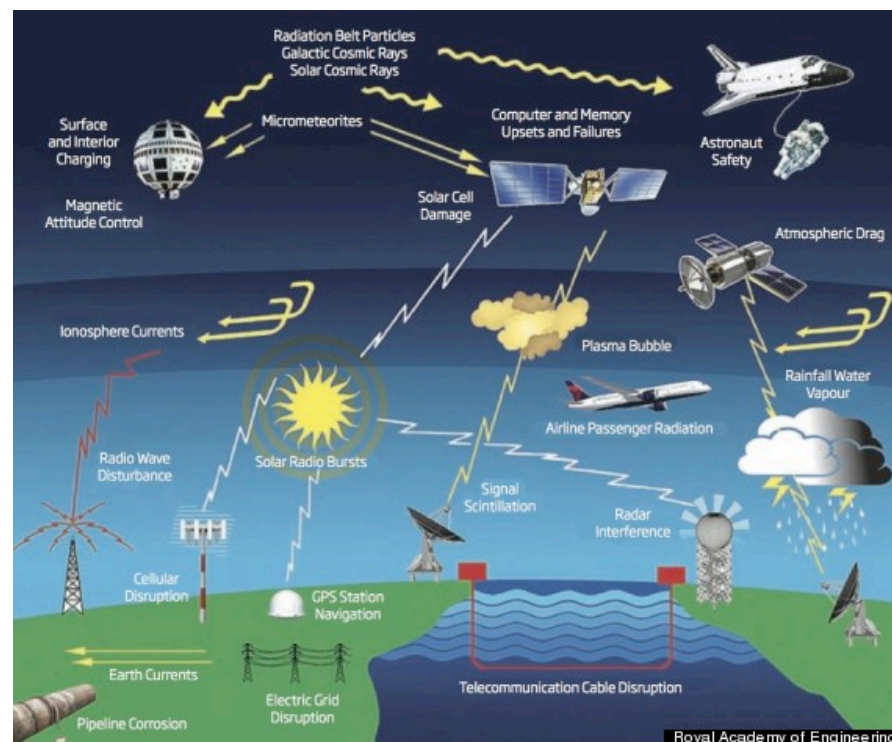
"The most important social and economic aspects of space weather are related to being aware of and possibly avoiding, the consequences of space weather events through efficient warning systems that allow for preventive measures to be taken" concluded Dr McKinnell.

For more info on space weather see <http://spaceweather.sansa.org.za/>

Lloyd's 360° Risk Insight Space weather: it's impact on Earth and implications for business
http://www.lloyds.com/~media/lloyds/reports/360/360%20space%20weather/7311_lloyds_360_space%20weather_03.pdf

National Risk Register of Civil Emergencies

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/211867/NationalRiskRegister2013_amended.pdf



Different aspects of space weather have a variety of impacts on our technology in space and on Earth.

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