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Author: Mr. Eren Gorur

International Space University (ISU)/University of South Australia, Australia,
eren.gorur@community.isunet.edu

Ms. Alexandra Ryan

International Space University (ISU)/University of South Australia, Australia,
alexandra.ryan@community.isunet.edu

Ms. Fiona Collins

International Space University (ISU)/University of SA, Australia, fiona.collins@community.isunet.edu

OUR TURBULENT SUN: EMERGING TOOLS FOR DISASTER MANAGEMENT IN THE GLOBAL
SOUTH.

Abstract

Space weather events such as Coronal Mass Ejections (CMEs) can have significant and adverse effects on socioeconomic, environmental, and political systems. Our technologically reliant society has made us increasingly dependent on space-based infrastructure, rendering us especially vulnerable to these space weather events. Specifically, there is scope for reducing the evident risk to economic stability and its social ramifications. The economic, disaster management, and space sectors are in key positions to address these concerns. This paper presents key recommendations and solutions to reduce the space weather threat.

The paper recommends the following solutions to mitigate our vulnerability to a CME-type event:

- A technical solution to maintain terrestrial cellular telecommunications networks
- An improvement in proactive space weather prediction by equipping future communications satellites in geostationary orbit with detection sensors
- Engage the insurance and finance industries to support pre-emptive action in order to minimize economic loss in the event of a disaster
- Encourage a conference aimed at the production of broad national recommendations for space weather management preparedness by nation-states in coordination by UN-SPIDER
- Provide a geomatics solution for integration of various data sources in order to provide rapidly actionable information to disaster management teams when required