Luleå University of Technology

Polar Atmospheric Physics

F7014R

EISCAT Space Weather

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1 Introduction

example MISC **exampleMISC**.
example Book [1].
example article [2, p. 5]

2 GUISDAP software

In this section the raw EISCAT data is processed using the MATLAB software with the package GUISDAP. This is done for the 27th of October 2016 from 18:00 to 19:00. This solar weather event consisted of a series of solar flares and coronal mass ejections. The series of storms were the largest ever recorded by the GOES satellite (Geostationary Operational Environmental Satellite). Satellite-based systems and communications were affected, aircraft were advised to avoid high altitudes near the polar regions, and a one-hour-long power outage occurred in Sweden as a result of the solar activity. Auroras were observed at latitudes as far south as Texas and the Mediterranean countries of Europe.

3 Space weather event

In the rest of this document preprocessed data is used from the Halloween 2003 space weather event. This event took place from the 28th up to the 29th of October, with the main two peaks at 11:10 (28-10-2003) and 20:50 (29-10-2003) [3].

4 Conclusion

example MISC **exampleMISC**.
example Book [1].
example article [2, p. 5]

References

[1] European Space Agency, *JUICE assessment study report (yellow book)*. ESA/SRE, Dec. 2011.

[2] M. G. Kivelson, K. Khurana, and M.Volwerk, "The permanent and inductive magnetic moments of ganymede", *Icarus*, vol. 157, no. 2, pp. 507–522, 2002, ISSN: 0019-1035. DOI: https://doi.org/10.1006/icar.2002.6834. [Online]. Available: http://www.sciencedirect.com/science/article/pii/S001910350296834X.

[3] Wikipedia. (2003). Halloween solar storms, [Online]. Available: https://en.wikipedia.org/wiki/Halloween_solar_storms,_2003 (visited on 05/05/2019).