

Supporting Information for

Solar wind-magnetosphere-ionosphere coupling and its impact on equatorial ionospheric electrodynamics during the 23 March 2023 geomagnetic storm: Effect of sudden decrease of solar wind dynamic pressure

Guan Le¹, Guiping Liu¹, and Endawoke Yizengaw², Chin-Chun Wu³, Yihua Zheng¹, Sarah Vines^{4,5}, Natalia Buzulukova^{1,6}

¹NASA Goddard Space Flight Center, Greenbelt, MD (guan.le@nasa.gov)

²The Aerospace Corporation, El Segundo, CA

³Naval Research Laboratory, Washington, DC

⁴Applied Physics Laboratory, Laurel, MD

⁵Now at Southwest Research Institute, San Antonio, TX

⁶University of Maryland, College Park, MD

Contents of this file

Figures S1

Introduction

This supporting information provides the AMPERE observations of global magnetic field perturbations and large-scale field-aligned current maps before and after the negative pressure pulse at 1440 UT on 23 March 2023.

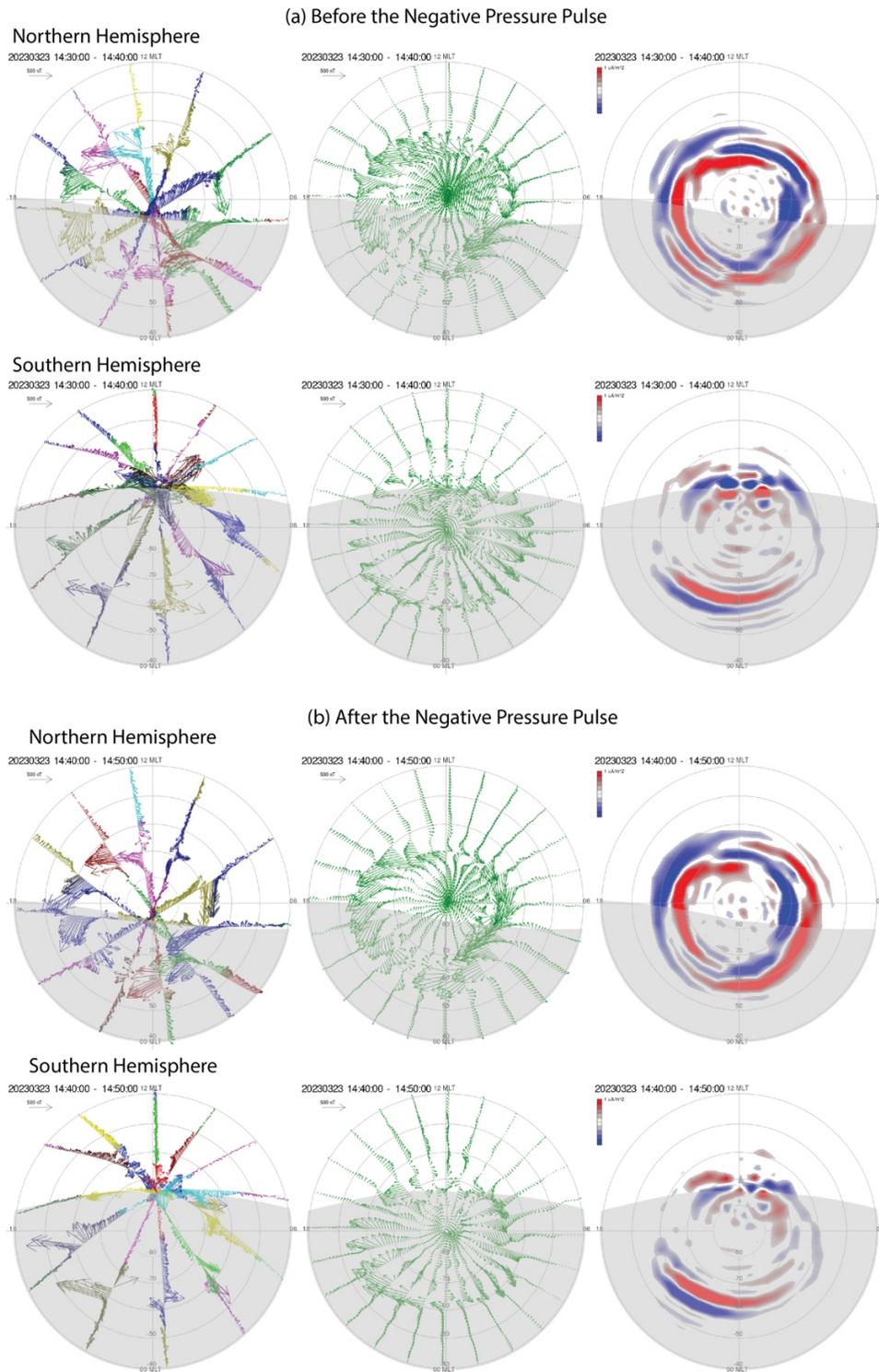


Figure S1. AMPERE global maps of observed magnetic field perturbations (left), fitted magnetic field perturbations (middle), and derived large-scale field-aligned currents patterns (right): (a) Before the negative pressure pulse 1430-1440 UT; (b) After the negative pressure pulse 1440-1450 UT.