Consorzio Interuniversitario per la Fisica Spaziale

International School of Space Science

IL MIO VOLER CERCAR OLTRE LA META

L'AQUILA - ITALY

HOW THE MIDLATITUDE IONOSPHERE RESPONDS TO GEOMAGNETIC STORMS IN WINTER FROM 2012 TO 2015

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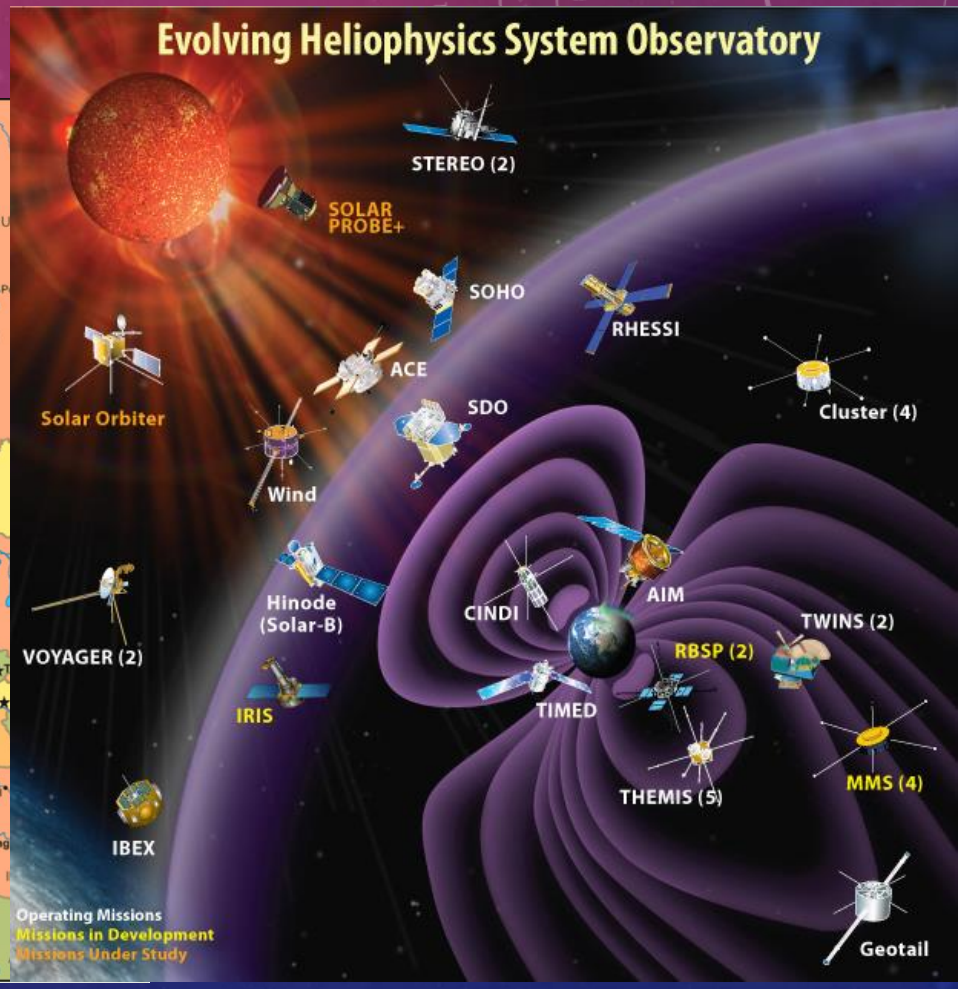
SOURCE OF DATA

1. Study Phase:

VISRC-2 Ionosonde, Széchenyi István Geophysical Observatory (NCK)

2. Study Phase



FIRST GOALS

1. **What is the response of the midlatitude ionospheric F2-layer to geomagnetic storms?**

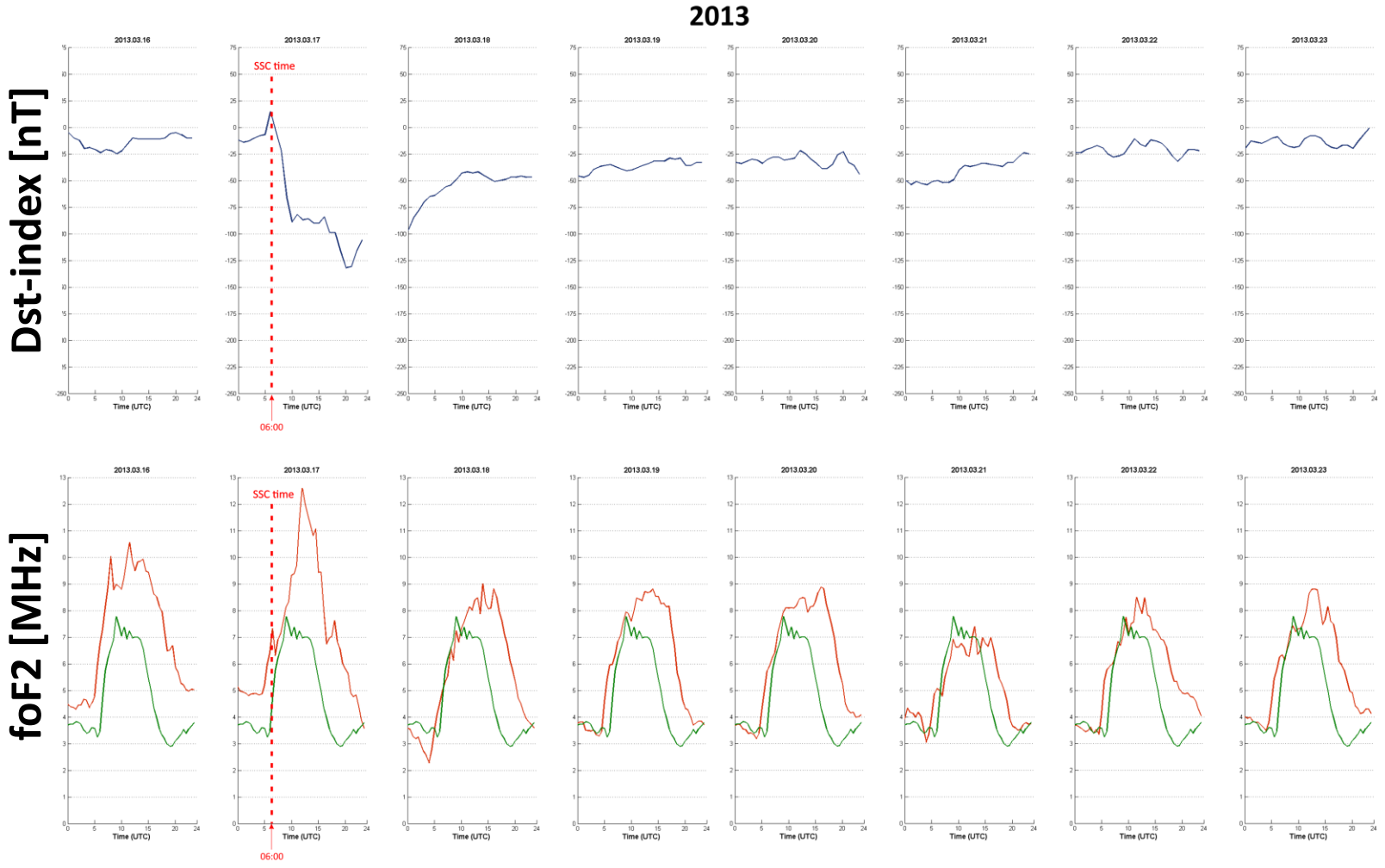
2. **How an ionospheric storm propagates over a North-South geomagnetic meridian?**

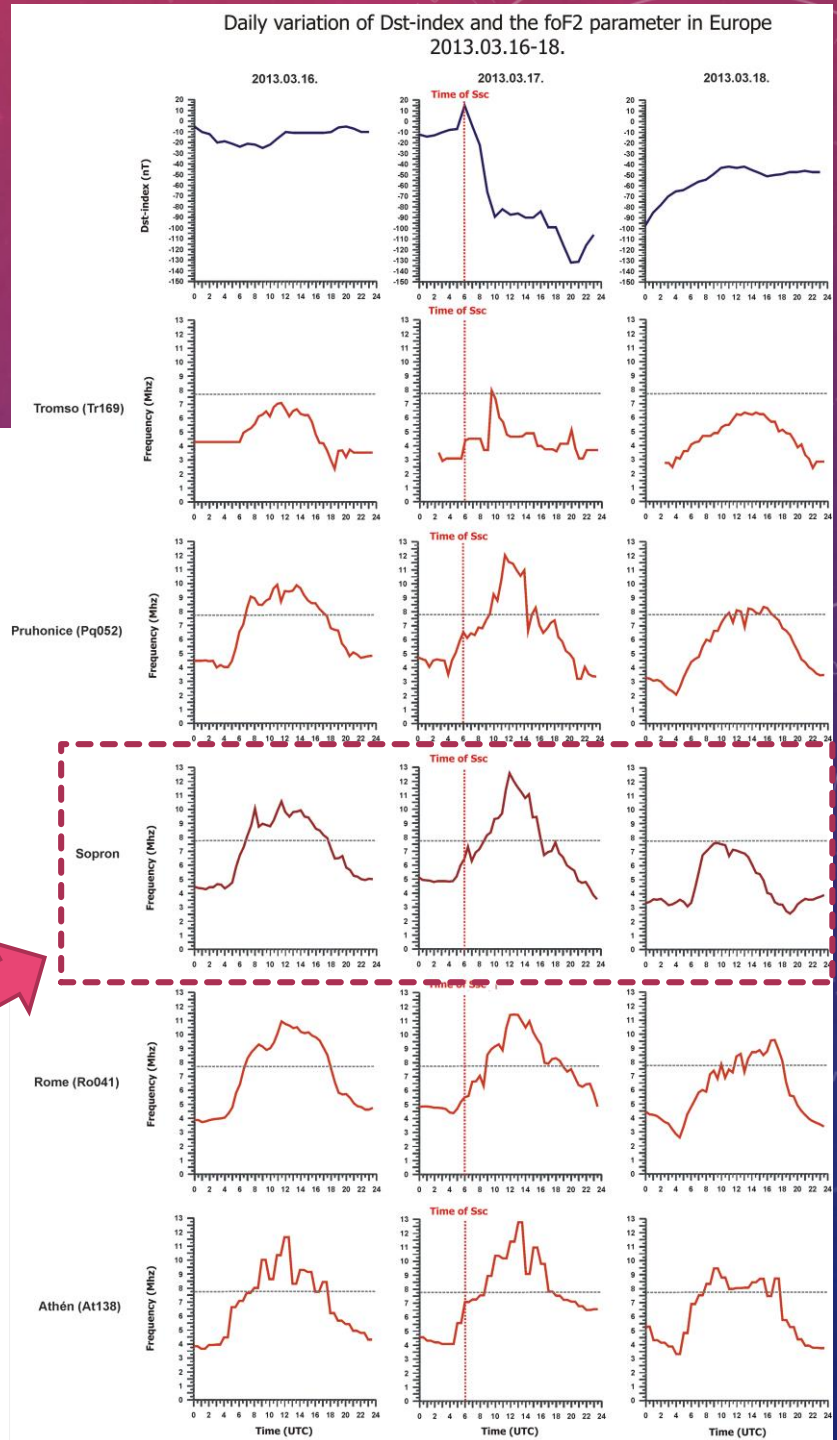
3. **How the occurrence of TIDs (Travelling Ionospheric Disturbances) and Spread-F phenomenas depend on the magnitude of geomagnetic activity?**

4. **How the daily number of TID occurences correlate to the appearance of Spread-F?**

1. RESULT:

EFFECTS OF THE GEOMAGNETIC STORM TO THE IONOSPHERE

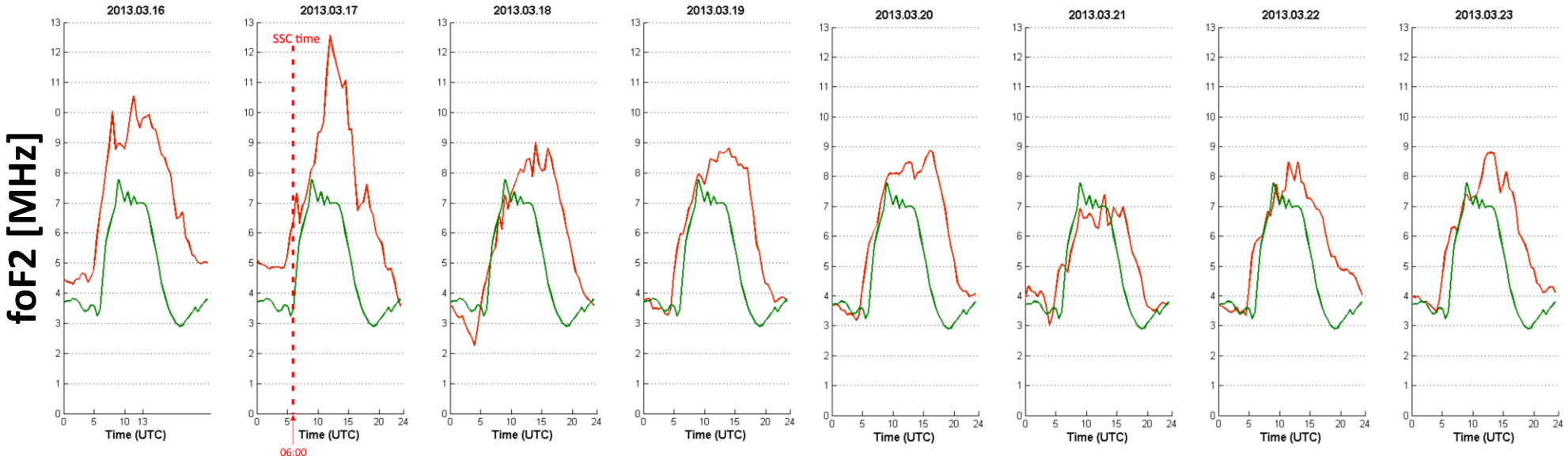




2. RESULT:

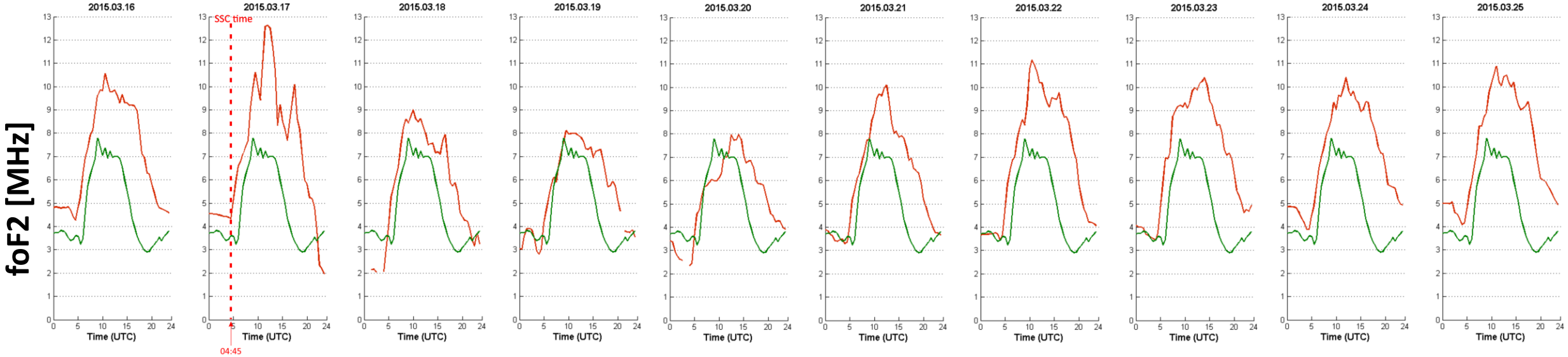
2013

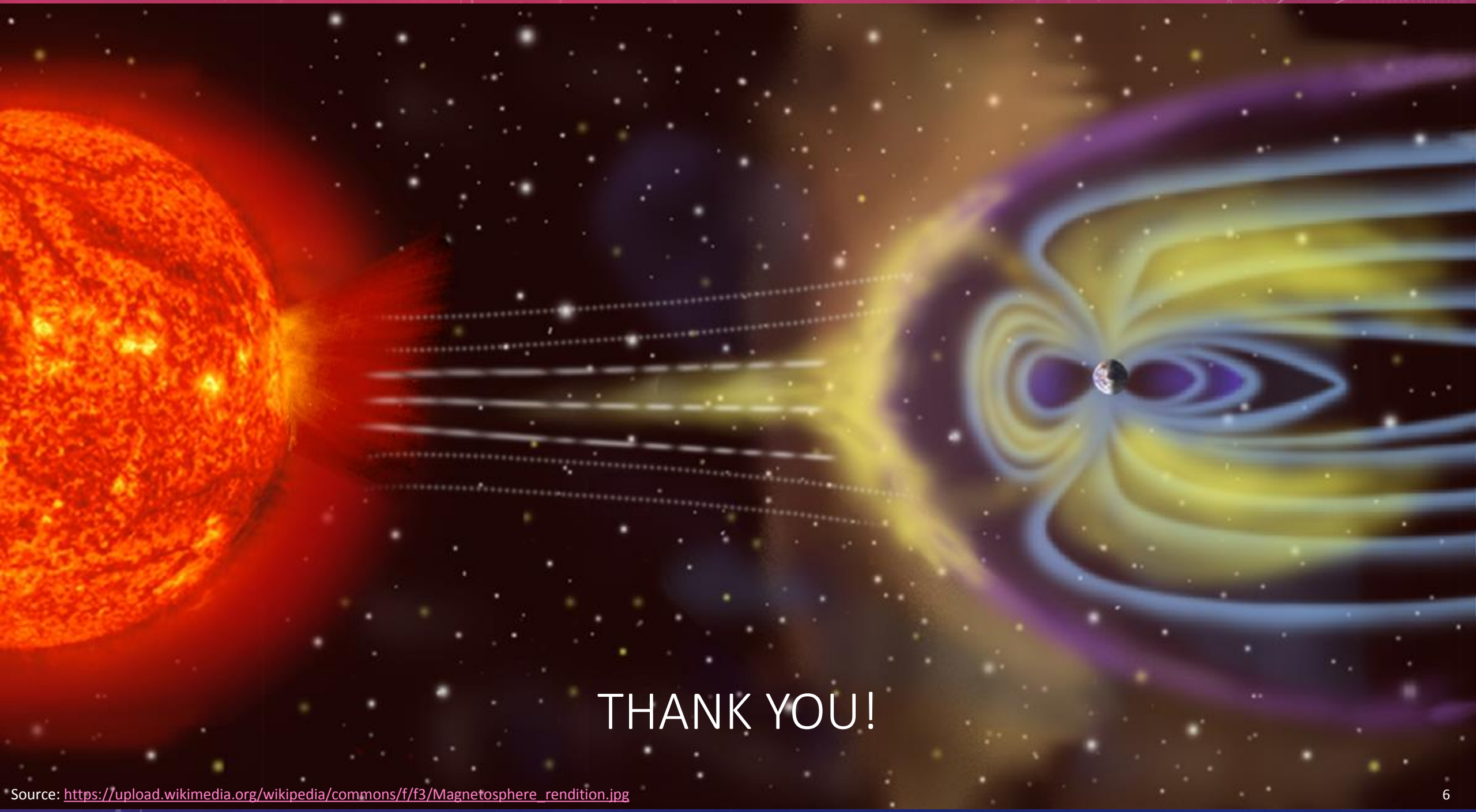
2013. March 16-23



2015

2015. March 16-25





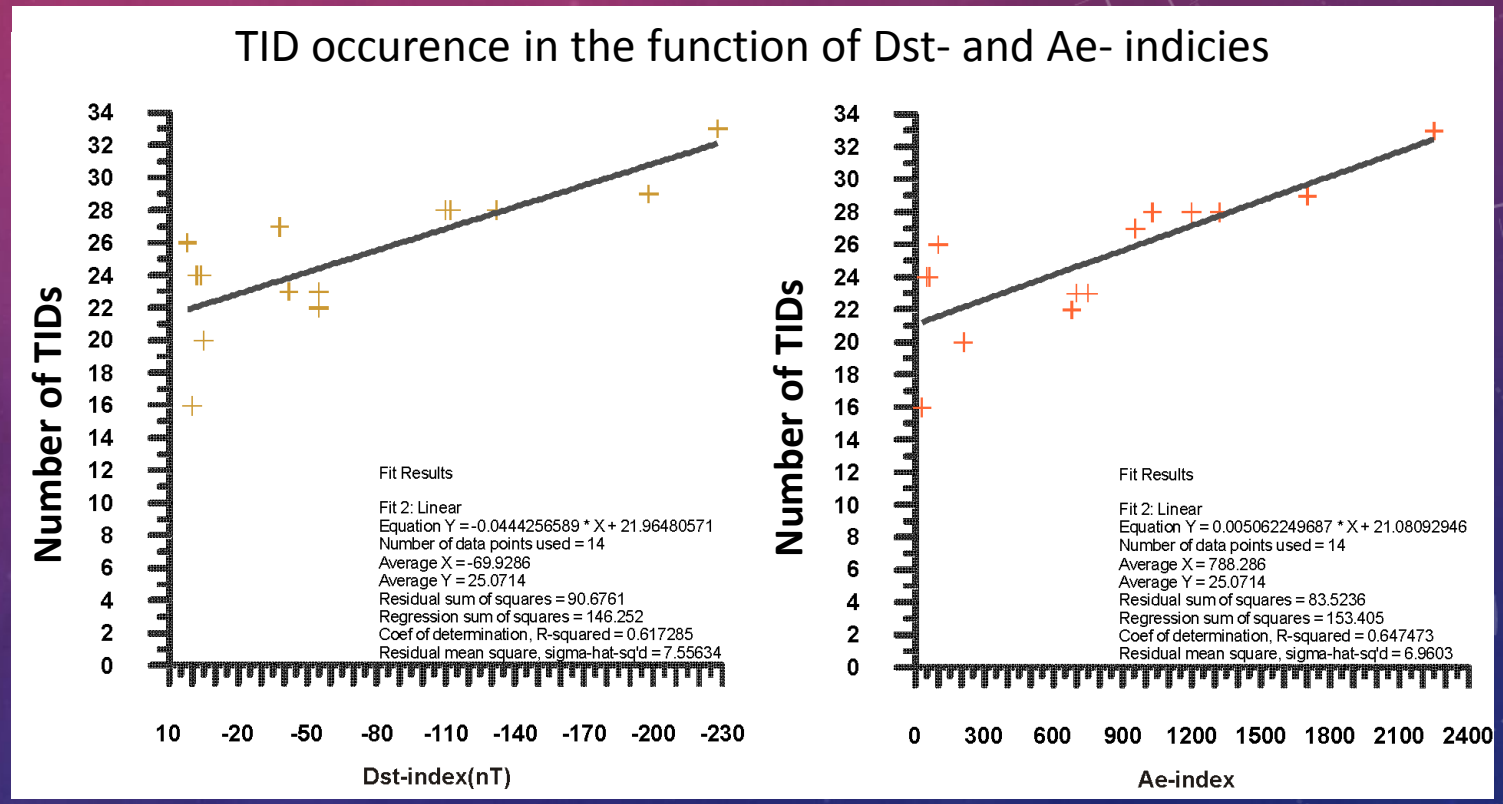
THANK YOU!

Source: https://upload.wikimedia.org/wikipedia/commons/f/f3/Magnetosphere_rendition.jpg

3. RESULTS:

THE DEPENDENCE OF THE OCCURENCE OF TID FROM GLOBAL DST-, AE-INDICIES

Here we can see, how the occurence of ***TID***s depend on the magnitude of the ***geomagnetic storm***



The ***magnitude of the geomagnetic storm*** increase with:

- the decrease of the ***Dst- index***, and
- the increase of the ***Ae-index***.