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Title:	Global Ionospheric TEC Mapping: Space Weather Monitoring & Geolocation Accuracy Improvement
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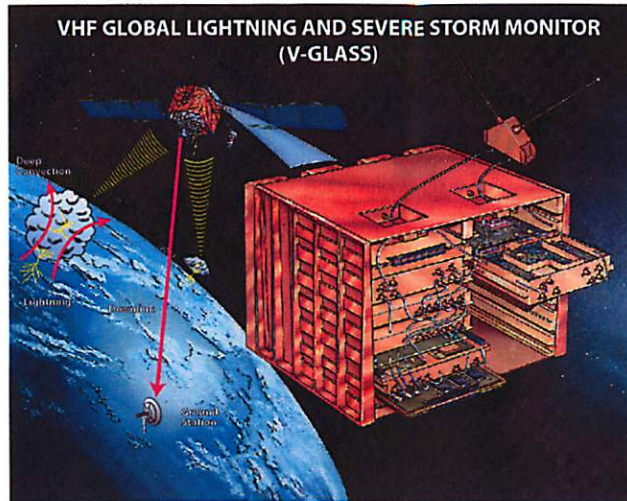


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# Global Ionospheric TEC Mapping: Space Weather Monitoring & Geolocation Accuracy Improvement

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## PLATFORM

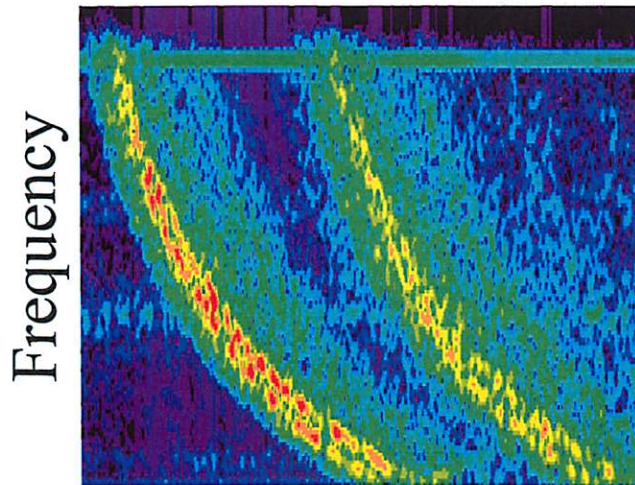
Platform: GPS/S2 Constellation  
(currently 9 Block IIR BDWs  
and 3 Block IIF BDVs)

Additional Launches: 2013 – 2017

## DATA SETS

Total Electron Content (TEC) Monitoring  
Global Lightning Mapping  
Space Environment Monitoring  
(On-board Discharges and Meteors)

## On orbit (FORTE) lightning observation



Frequency  
dependent  
time delay  
in signal is  
due to TEC.

Required  
analysis can  
provide  
global TEC  
map.

## Capabilities include:

- Data Sets derived from globally persistent MEO GPS constellation
- Assimilative ionospheric modeling capability

Note: RF Geolocation (especially in HF/VHF) requires precise knowledge of the ionosphere