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

Author(s): Heavner, Matthew J.
Suszczynsky, David M.

Intended for: collaboration development



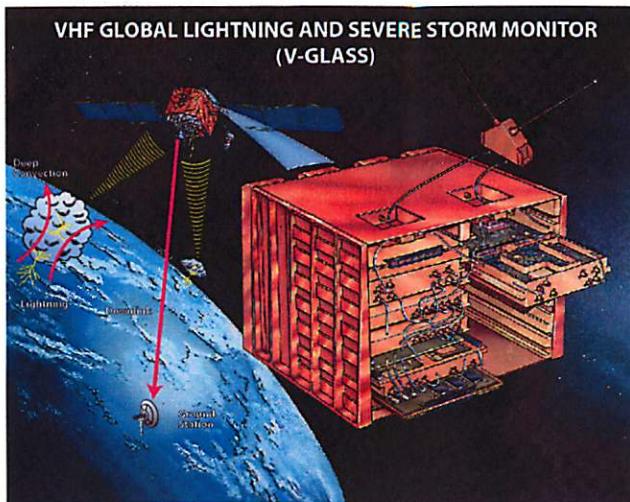
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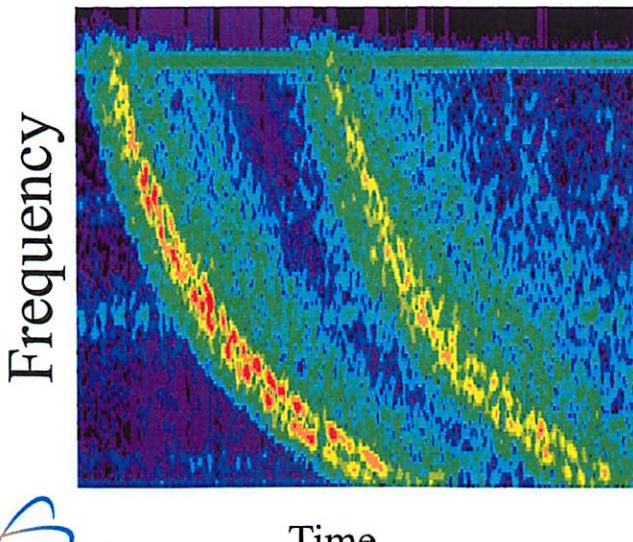
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Global Ionospheric TEC Mapping: Space Weather Monitoring & Geolocation Accuracy Improvement

Matt Heavner, D. Suszcynsky
heavner@lanl.gov



On orbit (FORTE) lightning observation



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EST. 1943

Frequency
dependent
time delay
in signal is
due to TEC.

Required
analysis can
provide
global TEC
map.

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)

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