

Ionospheric Doppler measurements by means of HF-radar techniques

C. Bianchi, D. Altadill

Abstract

Studies of the dynamics of the ionosphere and its related phenomena are mainly based on Doppler Drift measurements. The time variation (ionisation/recombination) of plasma density, thermospheric wind and others can be observed by means of HF-radars. The technique of Doppler Drift measurements is a quite complex technique that is now affordable by means of an advanced ionospheric sounder. The combination of vertical sounding and interferometric Doppler detection discloses the Doppler sources. The echo signal contains the Doppler shift in frequency imposed on the wave carrier by each point source where the signal is reflected. Other phenomena like environmental noise and the intrinsic error of the measurements that, together with the change in time of the refractive index, affect the measurements in various ways impeding to better quantify the results.

Keywords

shift Doppler;ionosphere;plasma drift

Full Text:

PDF

References

DOI: <https://doi.org/10.4401/ag-3248>

Published by INGV, Istituto Nazionale di Geofisica e Vulcanologia - ISSN: 2037-416X

USER

Username
 Password
 Remember me

MOST VIEWED

- OPERATIONAL EARTHQUAKE FORECASTING....
- ObsPy – What can it do for data...
- Twitter earthquake detection:...
- Magnitude and energy of earthquakes
- Comparison between low-cost and...

AUTHOR GUIDELINES





EARLY PAPERS

- Vol 61, 2018

FAST TRACKS

- Vol 56, Fast Track 1, 2013
- Vol 57, Fast Track 2, 2014
- Vol 58, Fast Track 3, 2015
- Vol 59, Fast Track 4, 2016
- Vol 59, Fast Track 5, 2016
- Vol 60, Fast Track 6, 2017
- Vol 60, Fast Track 7, 2017
- Vol 61, Fast Track 8, 2018

ARTICLE TOOLS

-  Indexing metadata
-  How to cite item
-  Email this article (Login required)
-  Email the author (Login required)

ABOUT THE AUTHORS

Sezione Roma2, Roma, Italia

D. Altadill
Observatori de l'Ebre, Roquetes, Spain

JOURNAL CONTENT

Search

Search Scope

- Browse
- [By Issue](#)
 - [By Author](#)
 - [By Title](#)

Journal Help

KEYWORDS

Central Italy
 Earthquake GPS
 Historical seismology
 Ionosphere Irpinia
 earthquake Italy Mt. Etna
 Seismic hazard assessment
 Seismology UN/IDNDR
 earthquake earthquakes
 historical earthquakes
 ionosphere magnetic anomalies
 paleoseismology seismic hazard
 seismicity
 seismology

NOTIFICATIONS

- [View](#)
- [Subscribe](#)

USAGE STATISTICS INFORMATION

We log anonymous usage statistics. Please read the privacy information for details.