

VELOCITY FIELD ESTIMATED FROM HEPOS PERMANENT GNSS NETWORK IN GREECE, PRELIMINARY RESULTS.



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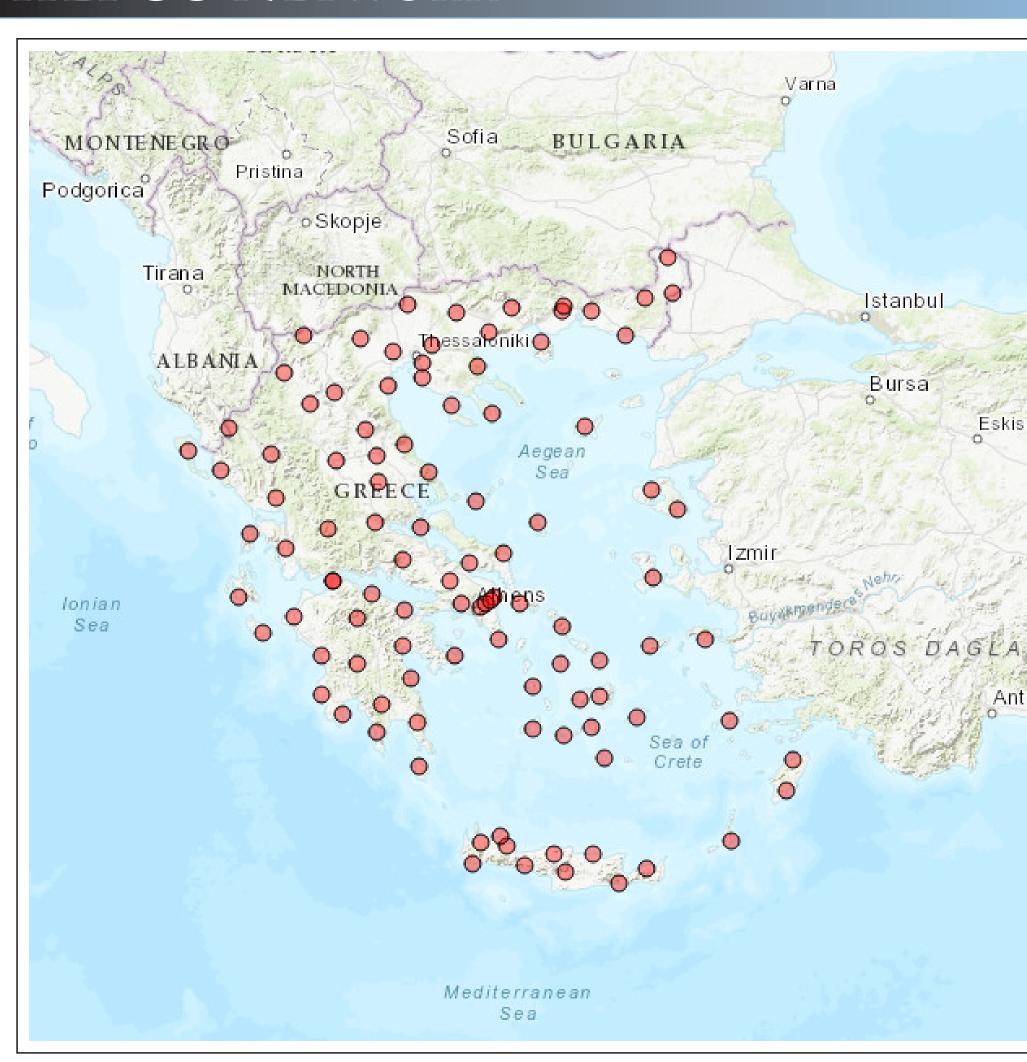
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INTRODUCTION

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HEPOS NETWORK



DATA ANALYSIS

The core tool/software is Bernese GNSS Software v5.2. Integration with

- MySQL database,
- **Python** module (product/data downloading, pre-processing, driving cron jobs, etc)
- **Time-series** analysis (integrated in routine processing on regular intervals)
- Strain Rates via StrainTool (on user demand)

Processing is consistent with EUREF standards (Guidelines for Analysis Centres).

- SINEX with required info/blocks,
- Reference frame IGb14,
- IERS Conventions 2010,
- IGS/CODE products,
- ocean loading corrections (FES2004),
- 3° elevation cut-off angle; elevation dependent weighting,
- GMF and/or VMF1; Chen-Herring gradient parameter,
- amiguities fixed (length-dependent algorithm),
- use GLONASS obs (when available)
- use ATX files (epn_14.atx) individual calibrations



VELOCITY FIELD

RESULTS AND DISCUSSION

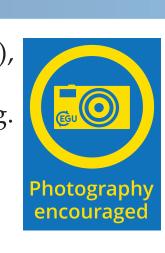
REFERENCES

Bos, M. S.,, Fernandes, R. M. S., Williams, S. D. P., and Bastos, L. (2013). Fast Error Analysis of Continuous GNSS Observations with Missing Data.J. Geod., Vol. 87(4), 351–360, doi:10.1007/s00190-012-0605-0.

Dach, R.,, Lutz, P. Walser, P. Fridez (Eds); 2015: Bernese GNSS Software Version 5.2. User manual, Astronomical Institute, University of Bern, Bern Open Publishing. DOI: 10.7892/boris.72297; ISBN: 978-3-906813-05-9.

Veis, G., Billiris, H., Nakos, B., and Paradissis, D. (1992), Tectonic strain in greece from geodetic measurements, C.R.Acad.Sci.Athens, 67:129–166

Wessel, P., W. H. F. Smith, R. Scharroo, J. F. Luis, and F. Wobbe, Generic Mapping Tools: Improved version released, EOS Trans. AGU, 94, 409-410, 2013



FUTURE RESEARCH

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