

EPOS GNSS - Description of the Products

1 Details of processing options for Strain Rate products

1.a Default strain rate product: LM

EUROPEAN PLATE OBSERVING SYSTEM – GNSS products LM Analysis Center Strategy Summary	
Analysis center	Lantmäteriet Lantmäterigatan 2 80182 Gävle Sweden
Contact	Email: geodesi@lm.se
Software used	StrainTool (Anastasiou et al., 2019a,b)
Preparation date	10-03-2021
DOI	10.23701/sr
Modification dates	10-03-2021: release of preliminary strain rate product (10.23701/sr.0001) 05-05-2023: release of intermediate strain rate product (10.23701/sr.0002)
Date last complete data analysis	
Automatic updates of the time series	within 4 weeks after upload of new EUREF-EPOS velocity field
MODEL PARAMETERS	
Spatial coverage	Europe (11.75°W-34.75°E; 34.25°N-70.75°N)
Data format	Grid
Grid size	0.5° x 0.5°
Data time span	Same as input velocity field
Data editing	If necessary, outlier removal after visual inspection
Plate motions	Automatically removed in the software algorithm
Calculation method	Shen et al. (2015)
Spatial weight	Depends on spatial distribution of stations in the input velocity field
D parameter lower limit	1
D parameter upper limit	Depends on spatial distribution of stations in the input velocity field
Reference frame	Same as input velocity field
REFERENCES	
Anastasiou D., Ganas A., Legrand J., Bruyninx C., Papanikolaou X., Tsironi V., and Kapetanidis V. (2019a). Tectonic strain distribution over Europe from EPN data. EGU General Assembly 2019, Geophysical Research Abstracts, Vol. 21, EGU2019-17744-1	
Anastasiou D., Papanikolaou X., Ganas A., and Paradissis D. (2019b). StrainTool: A software package to estimate strain tensor parameters (Version v1.0). Zenodo. DOI: 10.5281/zenodo.3239497.	
Shen, Z.-K., Wang, M., Zeng, Y., and Wang, F. (2015). Strain determination using spatially discrete geodetic data. Bull. Seismol. Soc. Am. 105(4), 2117–2127, DOI: 10.1785/0120140247.	