



***EUVN_DA:
EUREF ACTION for
EUVN DENSIFICATION:
STATUS REPORT***

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A REMINDER: WHAT IS EUVN_DA ?

**JOINT EFFORT OF THE EUROPEAN NMA's TO
ESTABLISH A HOMOGENEOUS, DENSIFIED
CONTINENTAL GPS/LEVELLING NETWORK
RELYING ON THE EXISTING EUVN SOLUTION.**

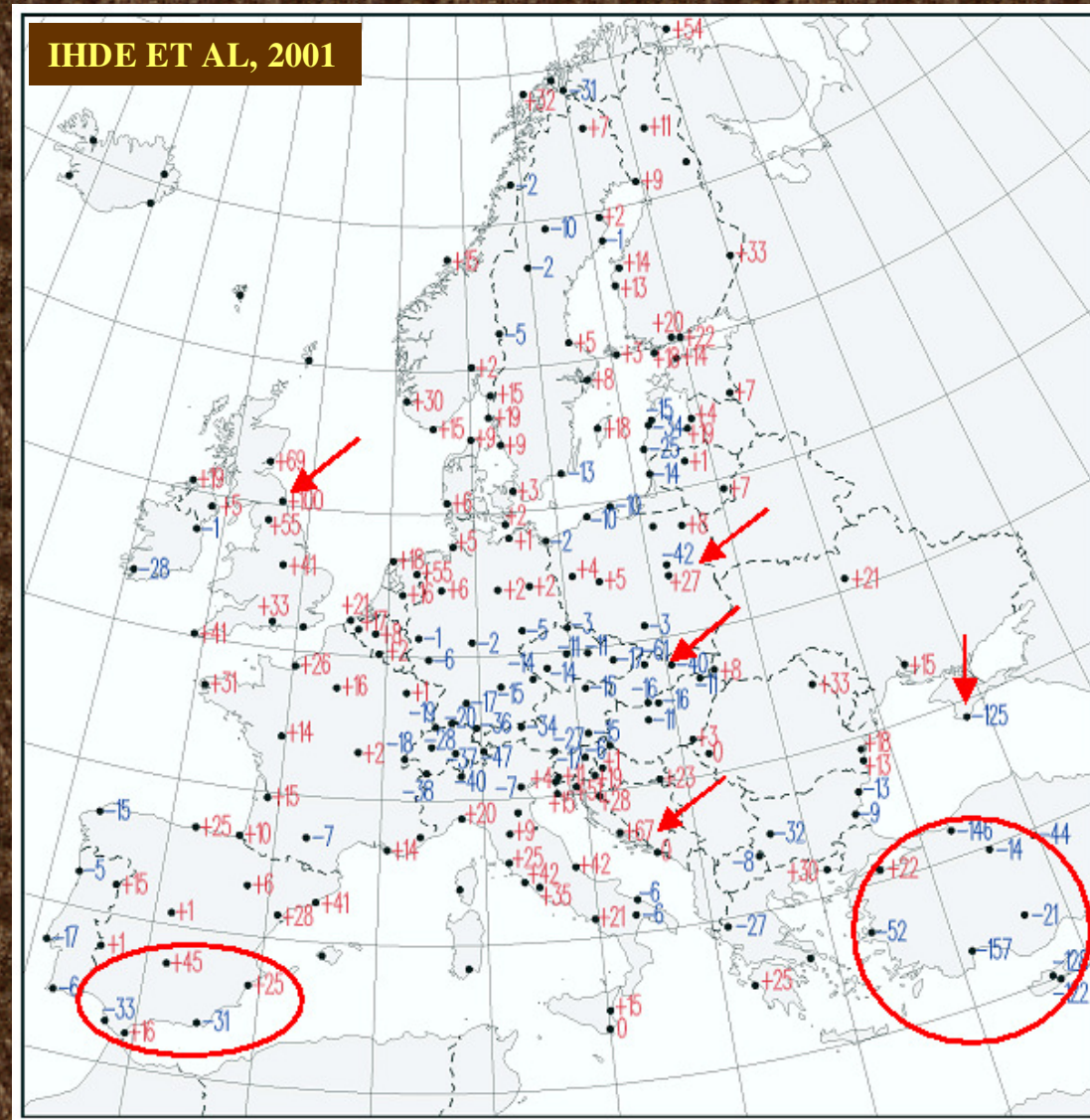


**REALIZATION OF THE DM-ACCURACY
CONTINENTAL HEIGHT REFERENCE SURFACE
CONSISTENT WITH ETRS89 AND EVRS.**

(RESOLUTION #4 DUBROVNIK).

WHY WE NEED DENSIFICATION?

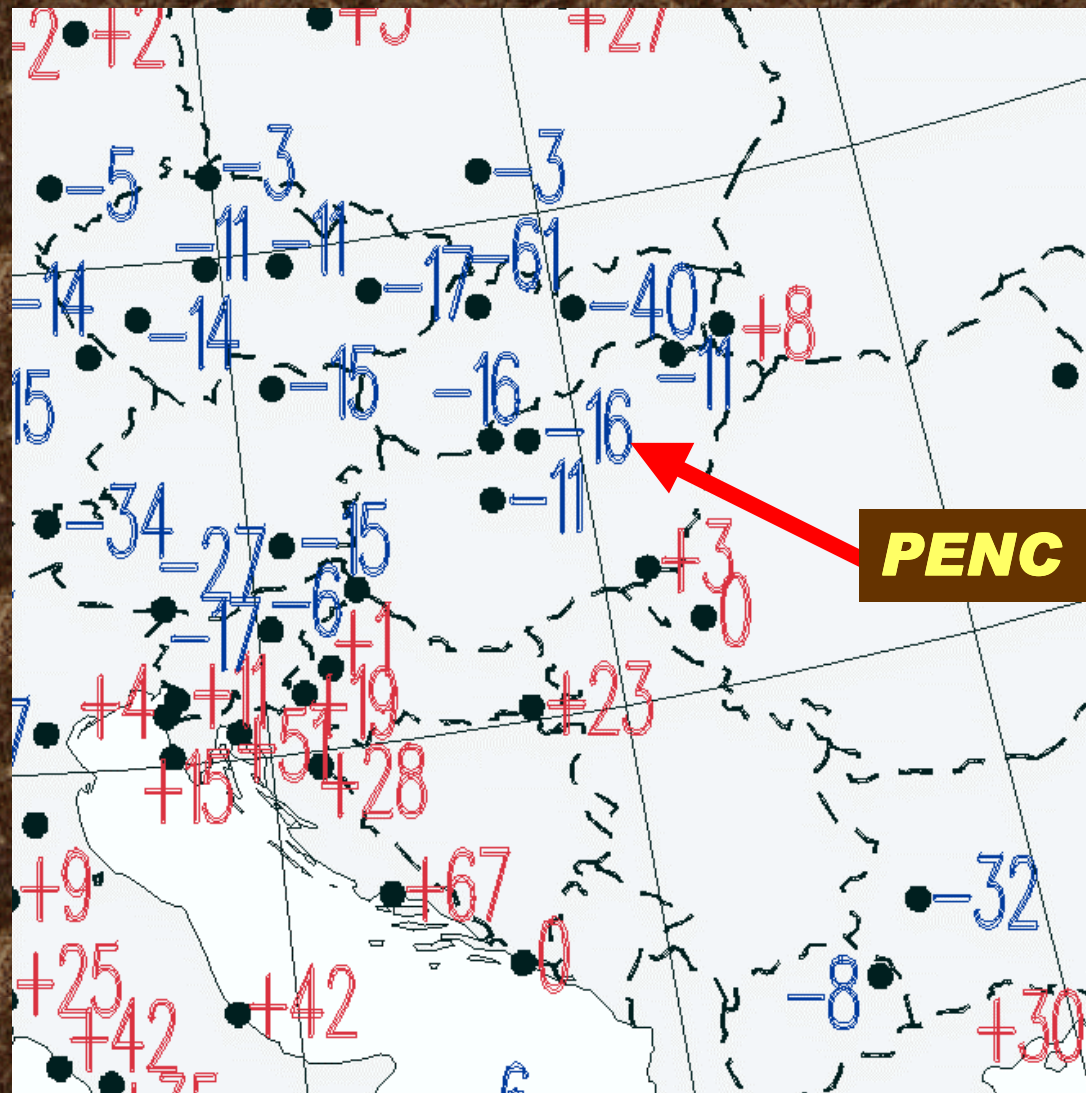
LONG WAVE
-GEOID
-LEVELING



OUTLIERS
- EXCENTRICITY

**THE SPARSE EUVN AND THE EGG97 IS NOT ELIGIBLE FOR
THE CONTINENTAL SUB-DM HEIGHT REFERENCE SURFACE !**

SENSITIVITY OF THE EGG97 - EUVN COMPARISON



GENERAL EUVN_DA RULES I

NETWORK GEOMETRY: (to minimize workload)

- ***M***EAN SITE SEPARATION : 100-50 km
- ***P***OSSIBLY USE EXISTING GPS AND/OR
LEVELLING MARKERS
- ***S***PECIAL INTEREST ON “PROBLEMATIC” REGIONS

GENERAL EUVN_DA RULES II

DATA REQUIREMENTS

GPS MEASUREMENTS

- REFERENCE SYSTEM (ETRS89 or ITRFyy - EPOCH)***
- OBSERVATION SESSION <24 hours ALSO ACCEPTED !***

LEVELLING

THE EUVN_DA MARKERS SHOULD BE CONNECTED TO UELN (EXISTING MEASUREMENTS MAY BE USED)

DATA SUBMISSION

TO EUVN/UELN DATA CENTRE

- CONSISTENCY CHECK / EVALUATION***
- COMPILATION OF NATIONAL SOLUTIONS***

GENERAL EUVN_DA RULES III

DATA COLLECTION

ACTION_A

DECEMBER 2003

- CLARIFICATION OF PRESENT EUVN DISCREPANCIES***
- COLLECTION OF EXISTING GPS&LEVELLING DATA***

ACTION_B

DECEMBER 2005

- NEW GPS/LEVELLING MEASUREMENTS***
- CREATION OF THE HEIGHT REFERENCE SURFACE (V 0.1)***

SUBMISSION FORMS

EUREF Technical Working Group

EUVN Densification Action

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EUVN_DA Working Group

GPS Data Form

Version 1.0

Date: _____

Station name: _____ 4-char EUVN_DA ID: _____ National site No.: _____
Location: _____ City/area: _____ Country: _____
Responsible agency (full address): _____

Reported by: _____ Telephone: _____ e-mail: _____

EUVN_DA GPS Marker

Official No. of other
Networks (e.g. EUREF): _____

GPS Marker Inscription: _____

GPS Marker Identifier : _____

Marker type, monumentation type, foundation: _____

Visibility of satellites above 15 degrees: _____

Possible sources of multipath, electromagnetic noise: _____

GPS Data Section

Date of the GPS campaign: _____ No. of sessions (24 hours): _____

GPS receiver: _____ Elevation cutoff: _____ degree

GPS antenna: _____ Sampling rate: _____ seconds

Processing software: _____ Orbit : _____

3D coordinates and accuracies:

X: _____ Y: _____ Z: _____

Reference frame: _____ Epoch: _____

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Levelling/Gravity Form

Version 1.0

Date: _____

This Form is valid for height difference measurements between GPS Marker and nearest EUVN or UELN Levelling Nodal Point. The information should be compatible with marker information in the GPS Data Form.

Station name: _____ 4-char EUVN_DA ID: _____ National site No.: _____
Location: _____ City/area: _____ Country: _____
Responsible agency (full address): _____

Reported by: _____ Telephone: _____ e-mail: _____

(A) EUVN_DA GPS Marker

Official No. of other
Networks (e.g. EUREF): _____

Ellipsoidal coordinates in ETRS89:

Latitude : _____ ° _____ ' _____ " Longitude : _____ ° _____ ' _____ "

Gravity value in ms^{-2} _____ Gravity system: _____

Approximate accuracy of gravity in 10^{-5}ms^{-2} (mGal): _____

(B) Nodal Point Marker

Official UELN No. : _____

Marker Inscription: _____

Marker Identifier : _____

Marker type, monumentation, foundation: _____

Ellipsoidal coordinates in ETRS89:

Latitude : _____ ° _____ ' _____ " Longitude : _____ ° _____ ' _____ "

Gravity value in ms^{-2} _____ Gravity system: _____

Approximate accuracy of gravity in 10^{-5}ms^{-2} (mGal): _____

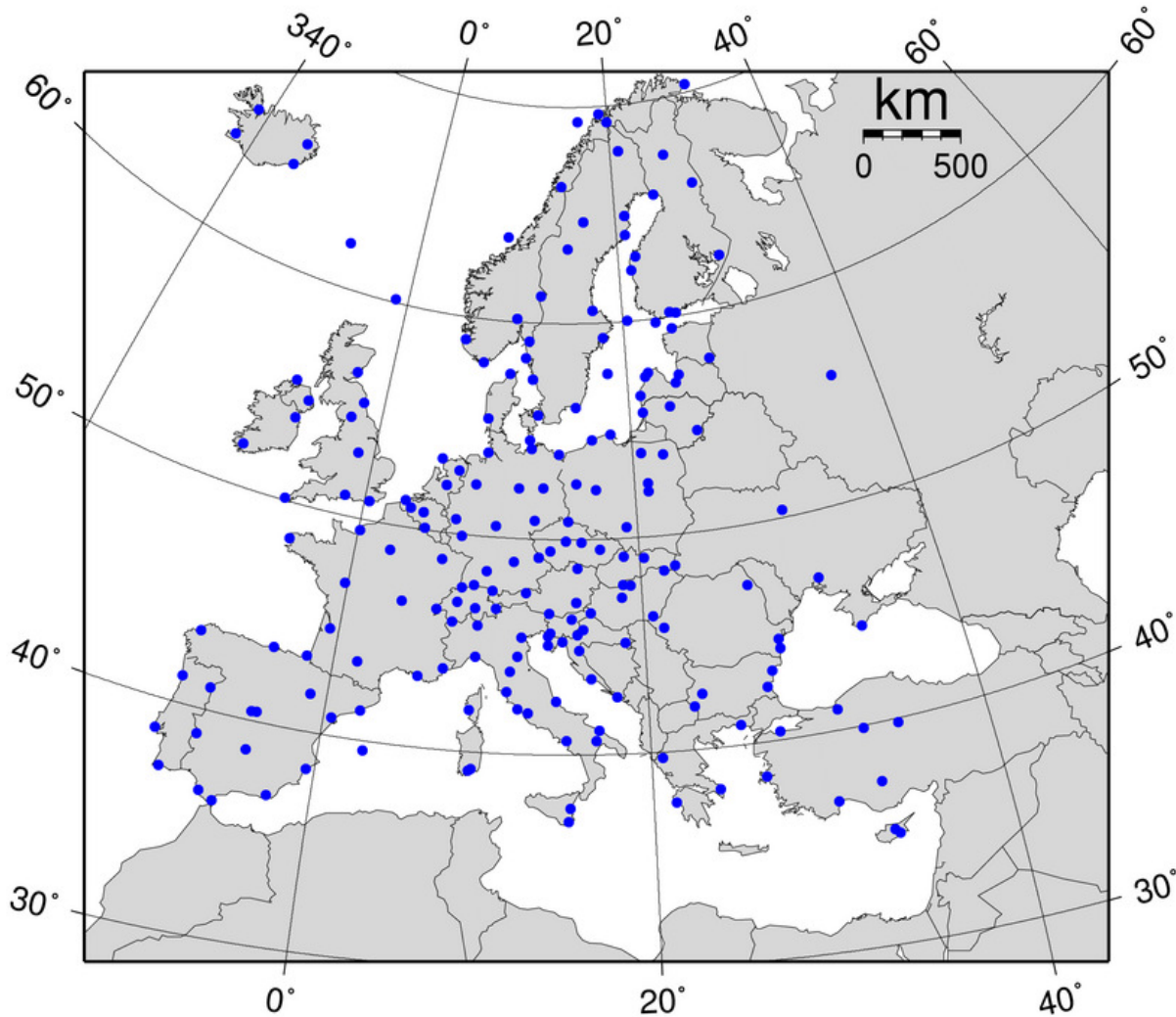
SUBMISSION FORMS UPDATE !

**A SIMPLIFIED EXCEL-BASED TABLE,
INCLUDING ALL RELEVANT INFORMATION**

GPS data details: Campaign, processing

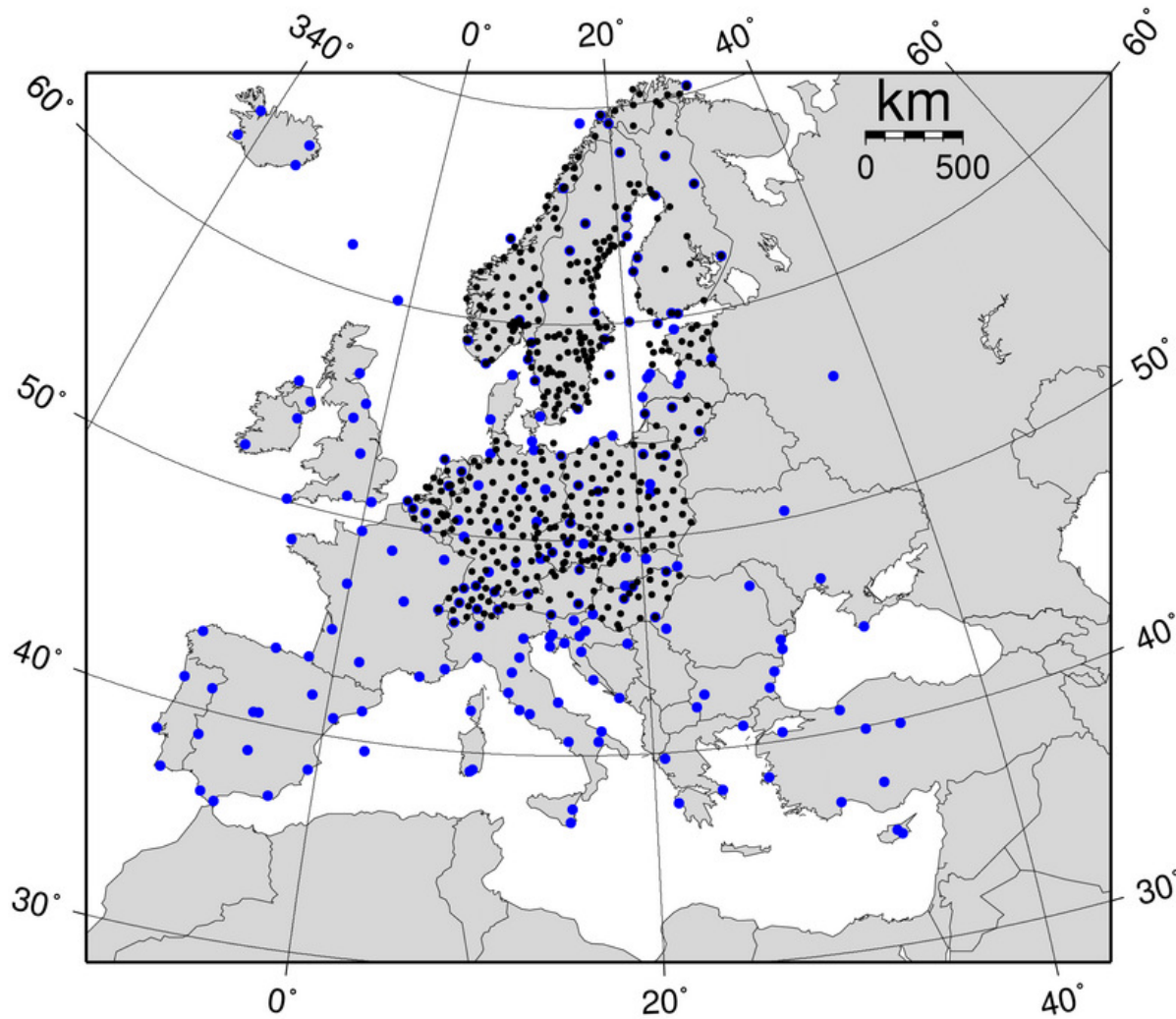
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EUVN SITE DISTRIBUTION

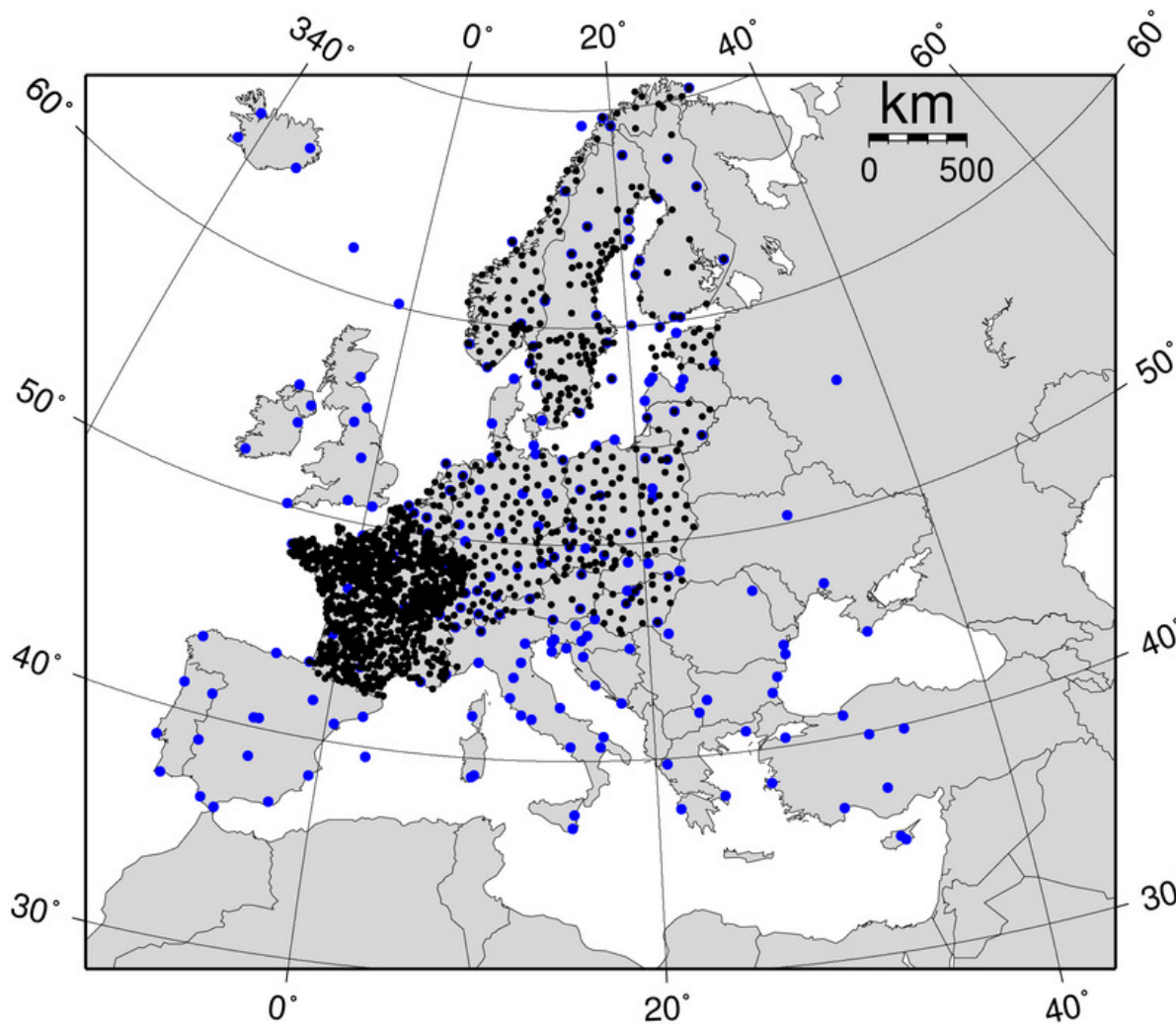


EUVN_DA

SITE DISTRIBUTION



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