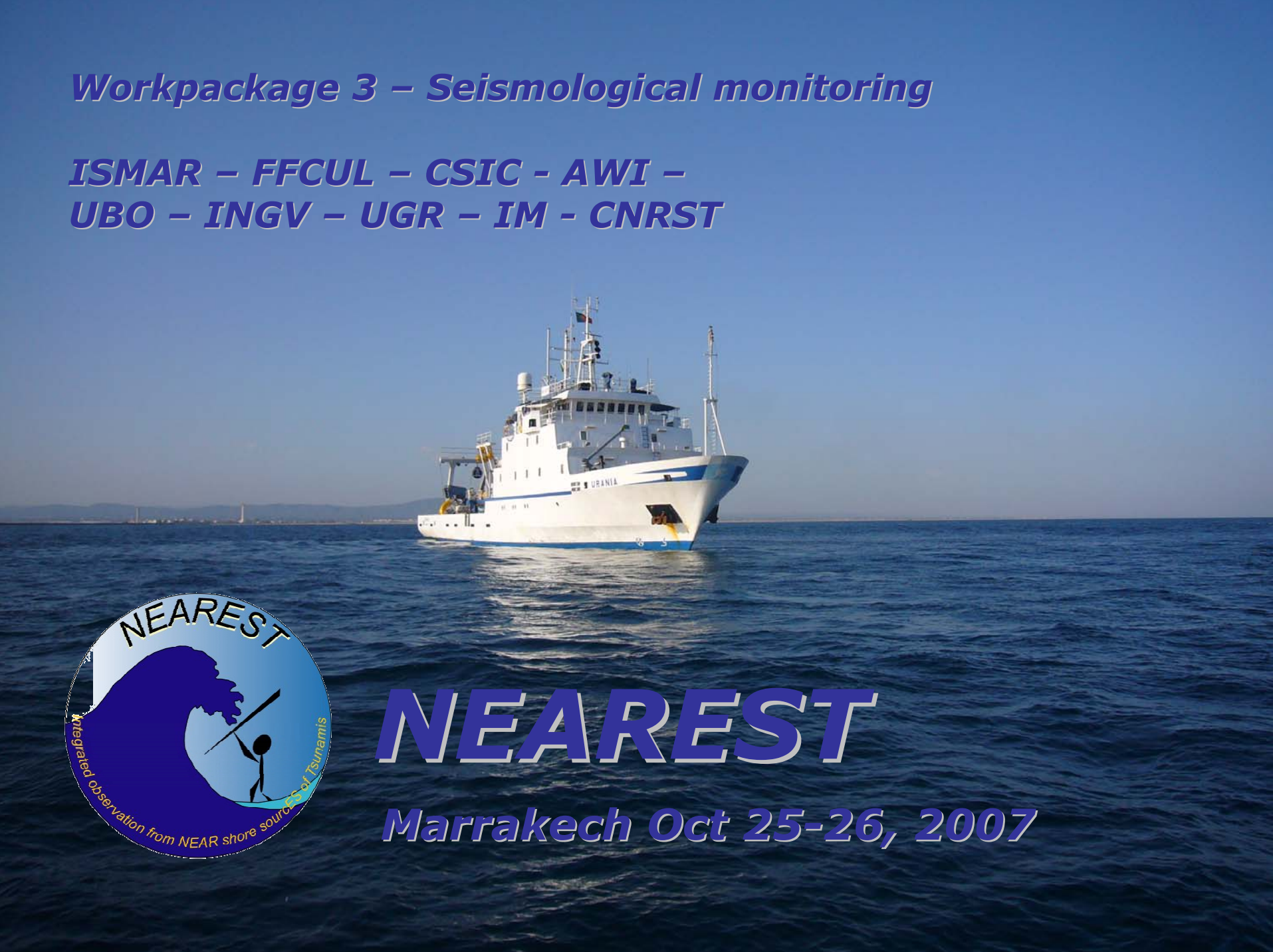
Workpackage 3 – Seismological monitoring

ISMAR – FFCUL – CSIC - AWI – UBO – INGV – UGR – IM - CNRST



NEAREST

Marrakech Oct 25-26, 2007

Active faults as tsunamigenic sources

Previous investigations only with onshore stations
No detection of earthquakes M<2.5 - activity poorly known
No precise hypocenter locations - kinematics poorly known

Deployment of 24 broadband ocean-bottom seismometer (OBS) for 12 months in the Gulf of Cadiz

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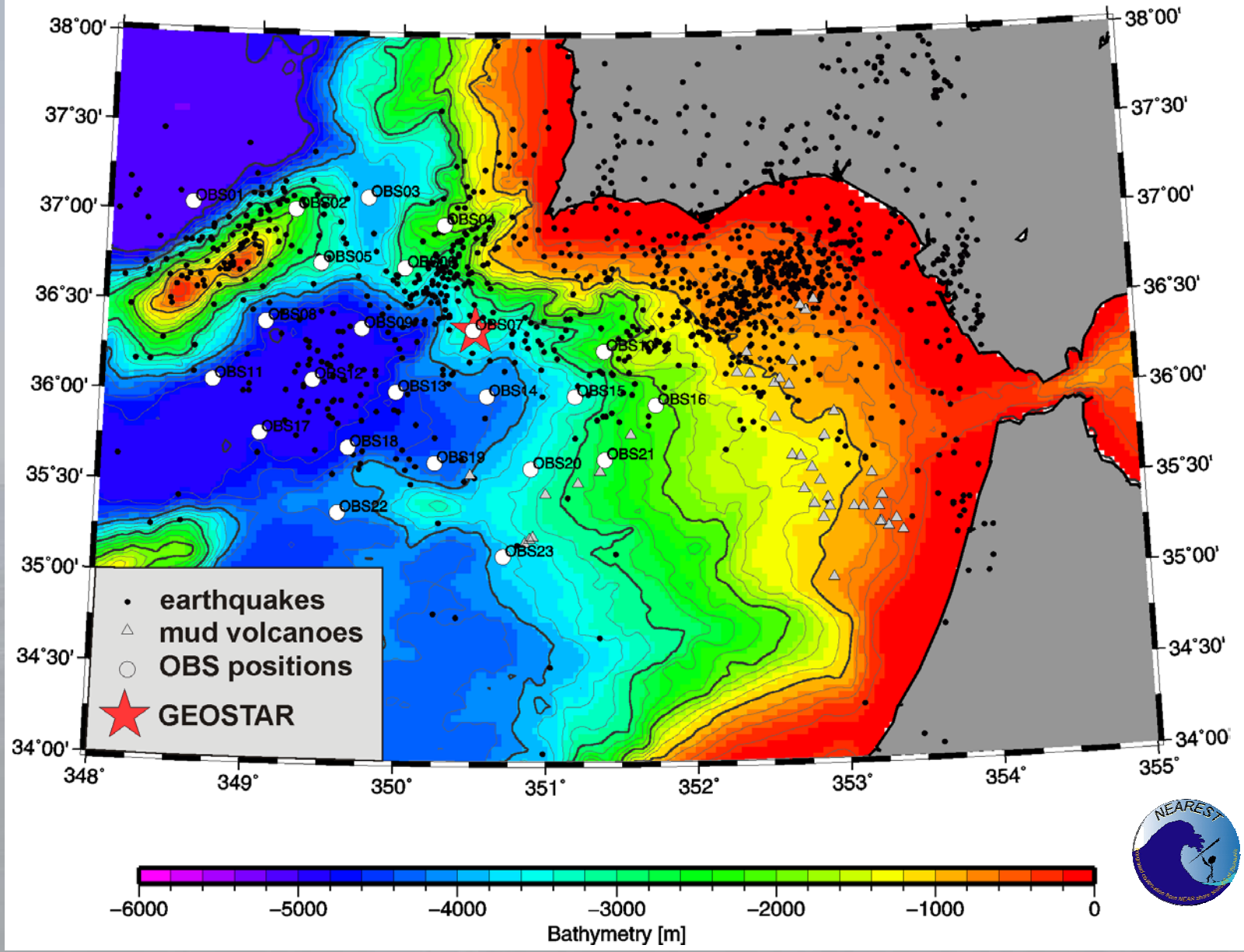
Expected Results:

Enhanced monitoring of seismicity of offshore fault zones
Completion of existing geoscientific data
Better insight into the seismic risk of the Gulf of Cadiz
Location reliability of future early warning system

NEAREST - Gulf of Cadiz 2007/2008



DEPAS - German instrument pool for amphibian seismology

Güralp CMG-40T
HTI-04-PCA/ULF
GEOLON MCS 20

LOBSTER

***L**ongterm **O**cean **B**ottom **S**eismometer for **T**sunami and **E**arthquake **R**esearch*

Technical details LOBSTER (K/MT 510)

Seismometer:	*Güralp CMG-40T, 60s - 50 Hz*
Hydrophone:	*HighTechInc HTI-04-PCA/ULF, 100 sec - 8 kHz*
Recorder:	*SEND Geolon MCS, 24 bit, 1 - 1000 Hz, 20 GB*

Recording parameters

Batteries:	*132 Li power cells*
Sample rate:	*100 Hz*
Gain:	*4 for hydrophone channel*
	1 for seismometer channels
Levelling:	*every 15 days*
Disk space:	*20 GB → space for 10 to 11 months*

Faro port

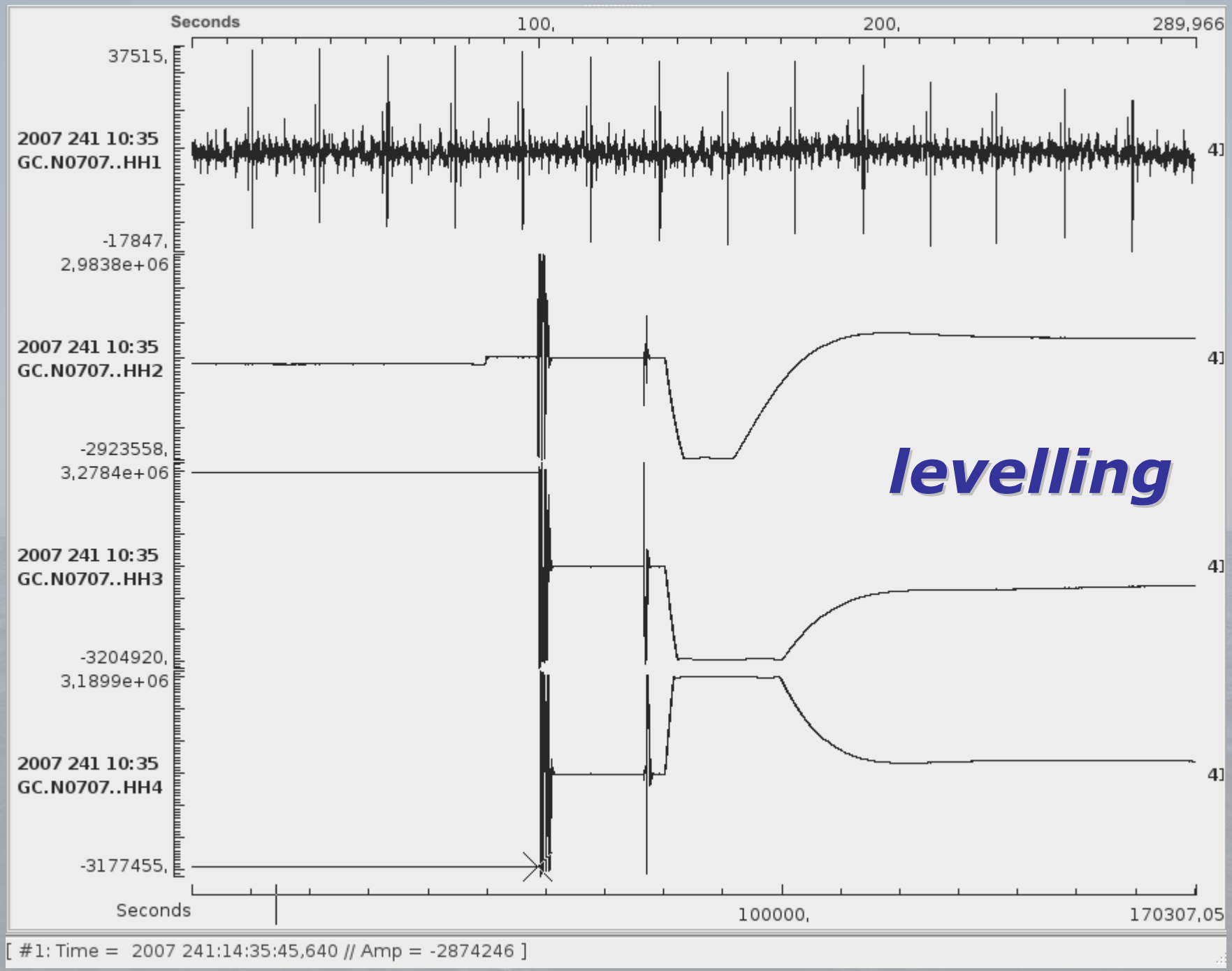
releaser test

storage

onboard

deployment

recovery



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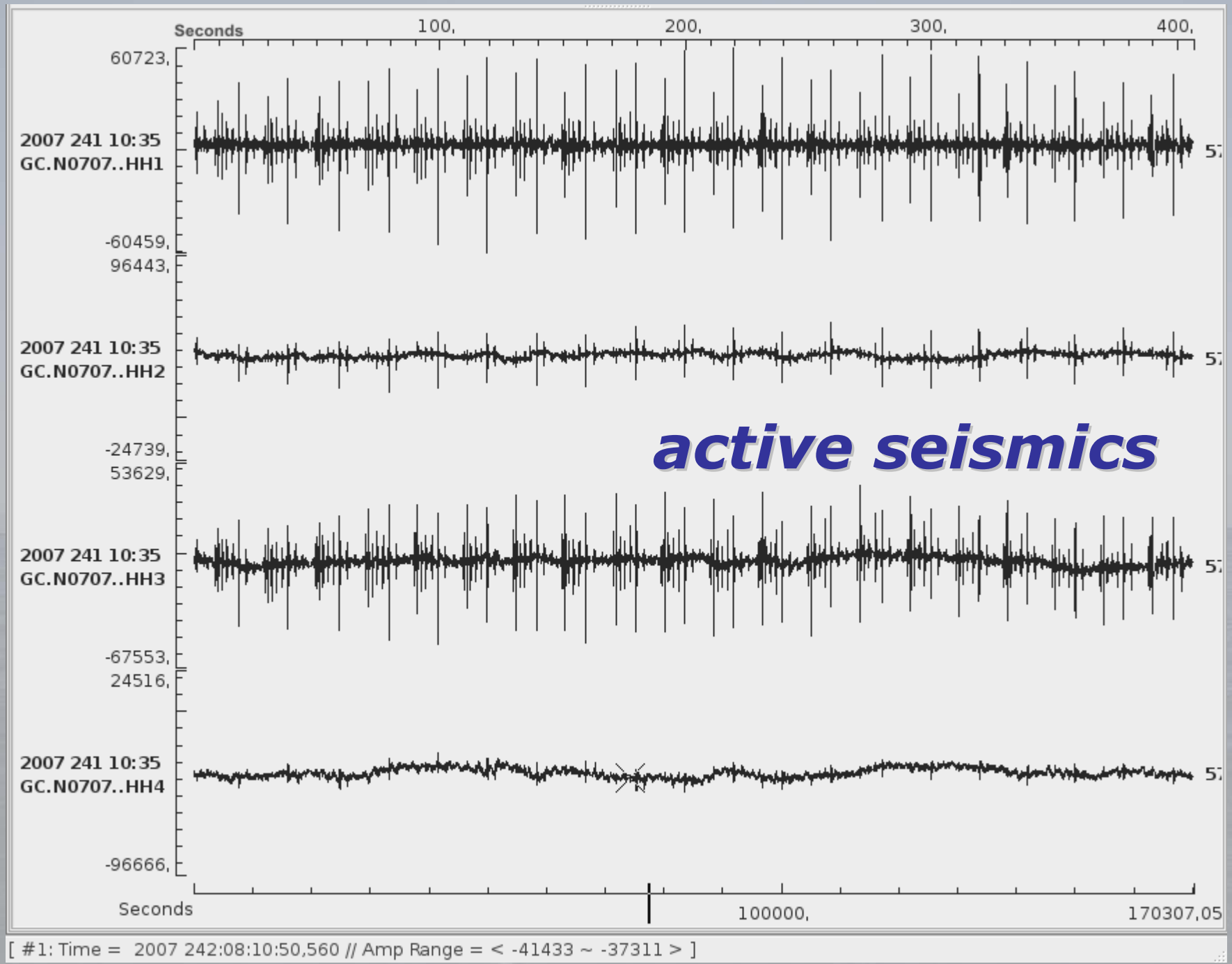
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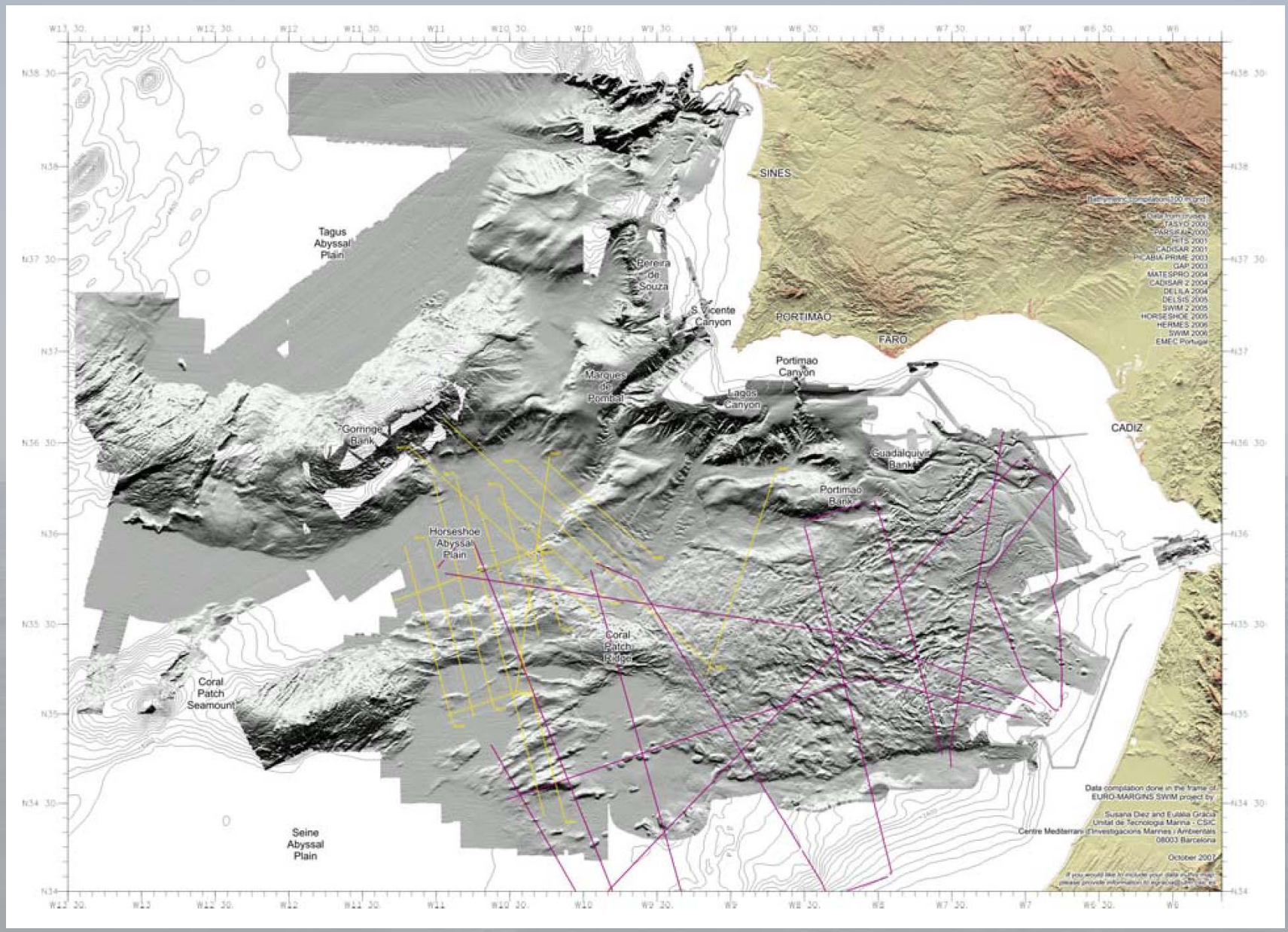
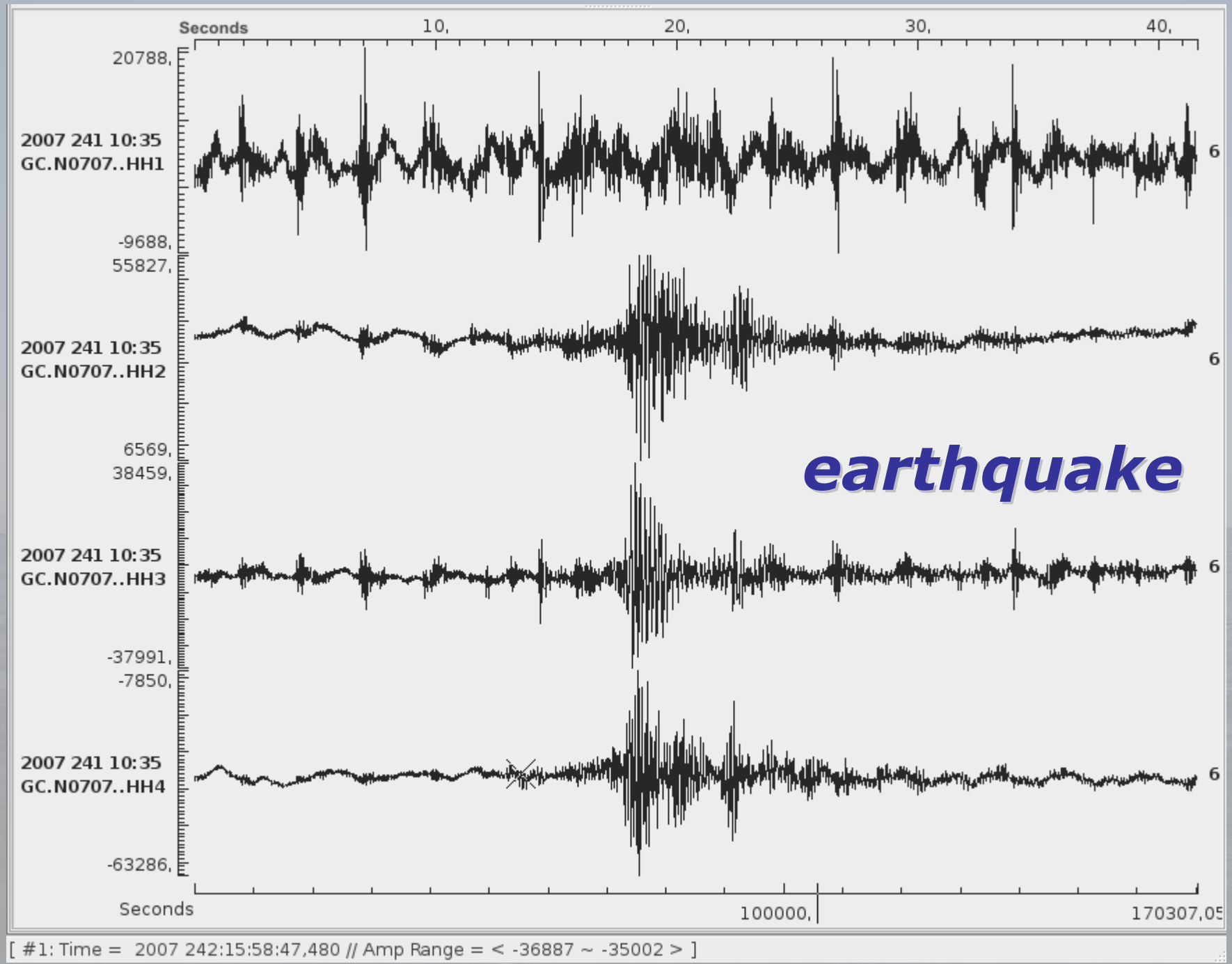
MCS RV Atalante (Aug 23rd – Sep 8th, 2007)





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Progress towards objectives

Task 3.1 – Application for the broadband OBS

application for the BB-OBS at the German instrument pool
planning/execution of the cruise for the deployment of BB-OBS

Task 3.2 – Preparation of the cruises

ordering of consumables (anchor, batteries, etc.) (KUM, Kiel)
ordering of sub-contracted technicians for deployment (KUM, Kiel)
ordering of mob/demobilisation, transportation and insurance

Task 3.3 – Cruise for deployment of the broadband OBS

preparation of OBS on land in Faro and onboard RV Urania
cruise with RV Urania, Faro-Faro August 28th - September 4th 2007
deployment of the OBS August 29th – September 2nd 2007
cruise report

Next tasks

Task 3.4 – Cruise for recovery of the broadband OBS

Task will start in 2008

Task 3.5 – Pre-processing and database compilation

Task will start in 2008

Task 3.6 – Processing and interpretation of the OBS data

Task will start in 2008/09

Deviations from the project work programme, and corrective actions taken/suggested

Test measurement with 1 OBS at GEOSTAR site (2 days)

Problem with 2 OBS during deployment
→ Planned to be deployed until end of November

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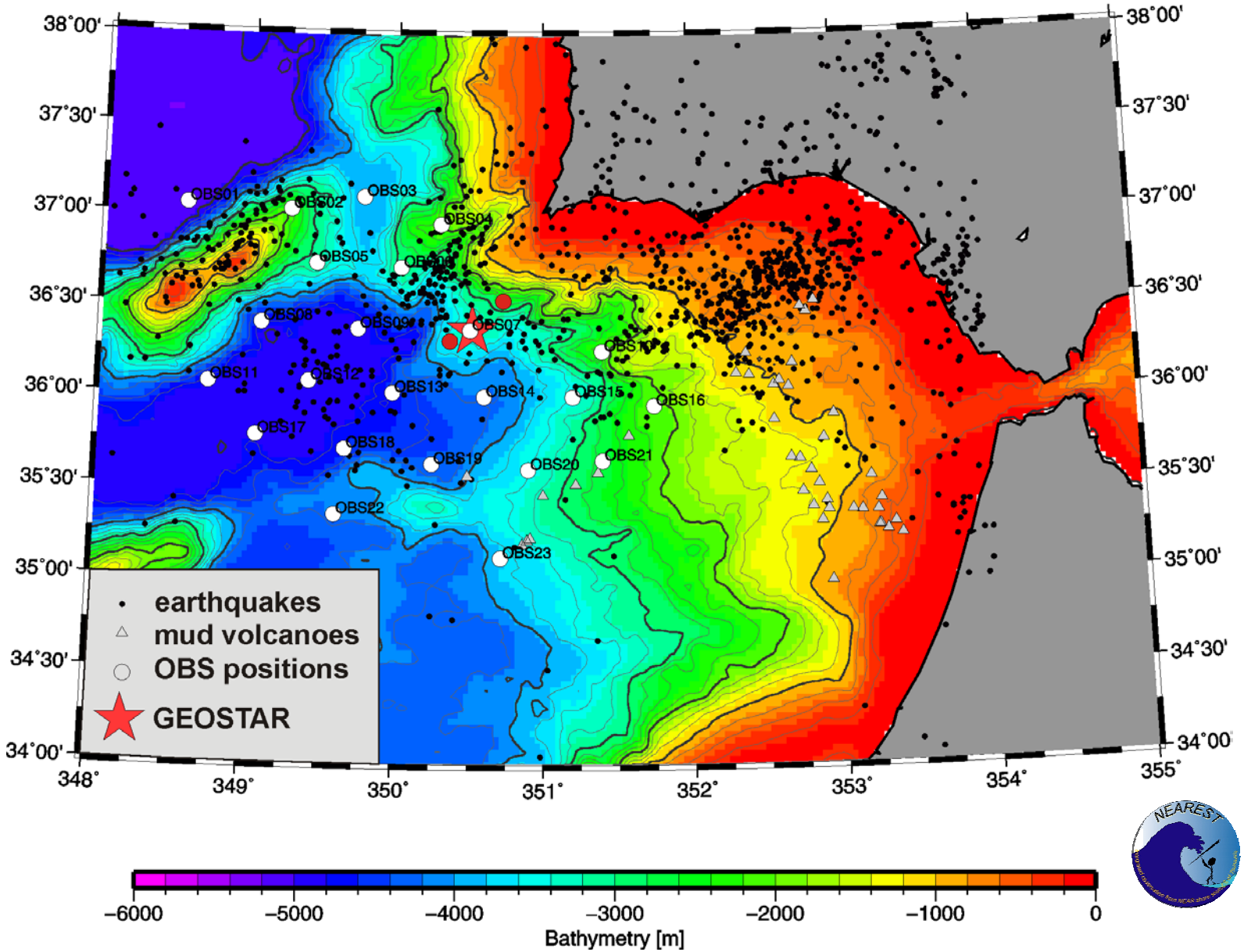
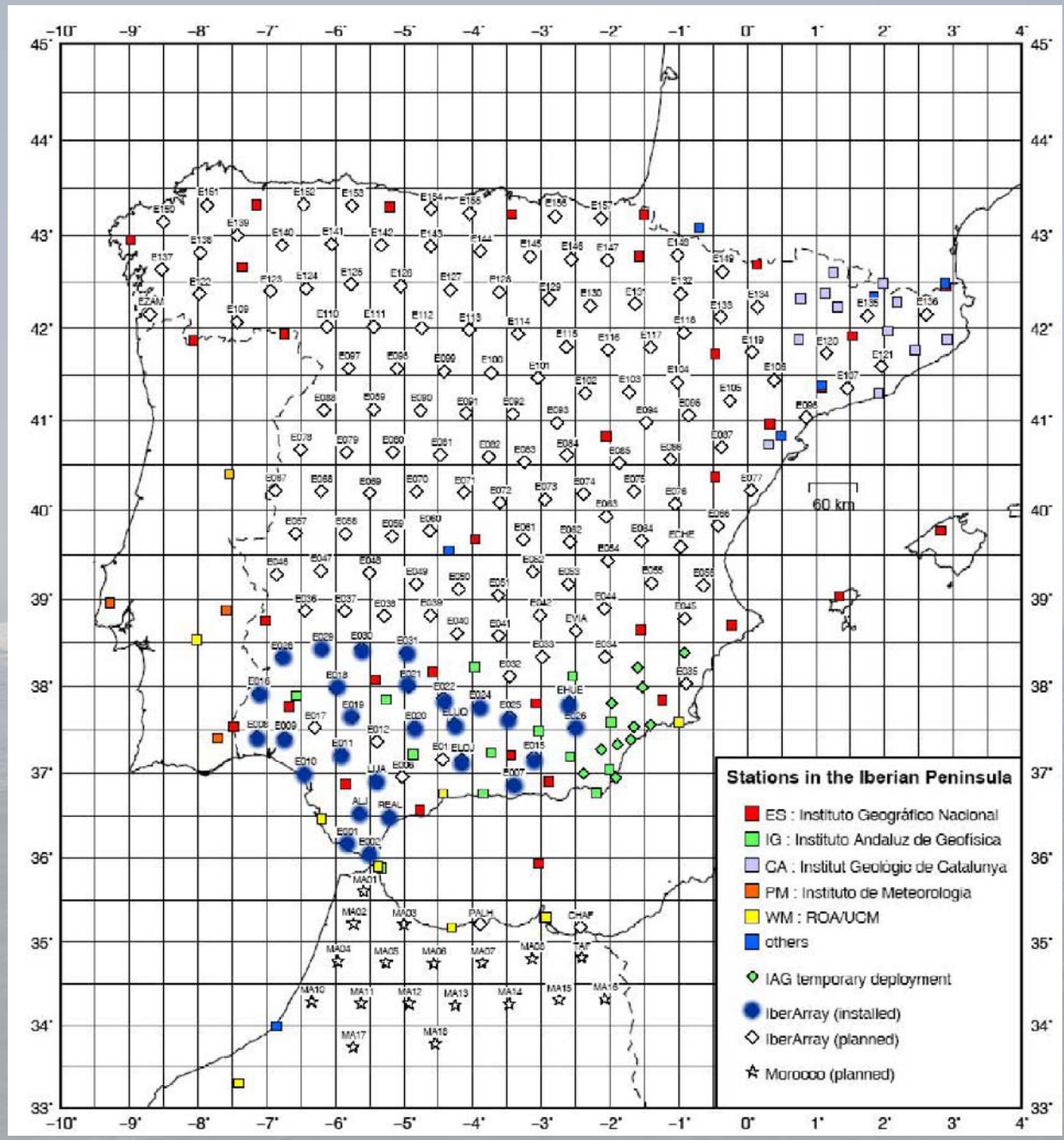


TopoIberia

IberArray

Tasks for 2nd year:

- *agreement of data exchange*
- *compilation of other available data*




NEAREST
Integrated observation from NEAR shore sources of Tsunamis
Thank You