NEAREST
Workpackage 3

Seismological monitoring

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

NEAREST Meeting, Lisbon, 17th – 18th May 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
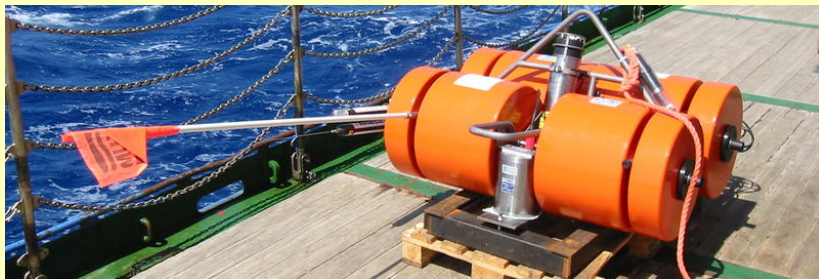
Expected Results:

- ▶ 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

Postdoc:

- ▶ Dr. Wolfram Geißler
- ▶ Employment: 1st October 2006
- ▶ Cruise preparation
- ▶ Instrument preparation (calibration, etc.)
- ▶ Test of new software releases

Task 3.1: Application for the broadband OBS

- Application for the OBS at the German instrument pool √
- Planning of the cruise for the deployment of the OBS √

Task 3.2: Cruise preparation

- Ordering of consumables (anchor, batteries, etc.) √
- Ordering of sub-contracted technicians for deployment cruise √
- Ordering of mobilisation, transportation and insurance of the OBS √
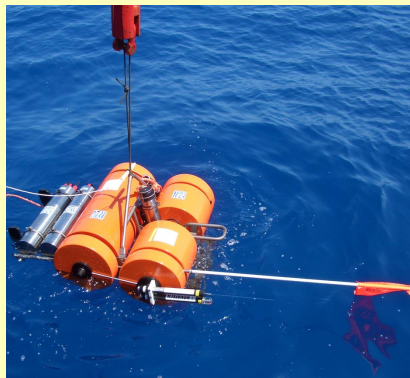
Task 3.3: OBS deployment

- Preparation of the OBS onboard the ship
- Deployment of the OBS
- Writing a cruise report
- → Deliverable D7

Cruise schedule

- RV Urania Leg 2
- Start: 25th August 2007
  Port: Portimao / Faro
- End: 4th September 2007
  Port: Portimao / Faro

Who will join the cruise?

- ▶ At least six, best eight participants needed
- ▶ Chief scientist from ISMAR?
- ▶ AWI: Dr. Wolfram Geißler (Postdoc), Xin Li (PhD Student)
- ▶ KUM: 2 technicians for preparation and deployment of OBS

Station location

- ▶ Problem of fishery
  $\rightarrow$ depth $> 1500\,\mathrm{m}$
- ▶ Which areas are most interesting?
  $\rightarrow$ seismicity maps
  $\rightarrow$ source area map

Seismicity 1997–2000

Legend:
- station from first proposal
- canceled station from first proposal (due to water depth)
- station proposed by AWI (according to previously planned network)l
- station from first proposal (maybe to be canceled due to water depth)
- additional station if station on Gorringe Bank has to be canceled