ASPERA photodetection workshop
Munich, 21-22 October 2010

KM3NeT: Short Overview

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ERLANGEN CENTRE FOR ASTROPARTICLE PHYSICS

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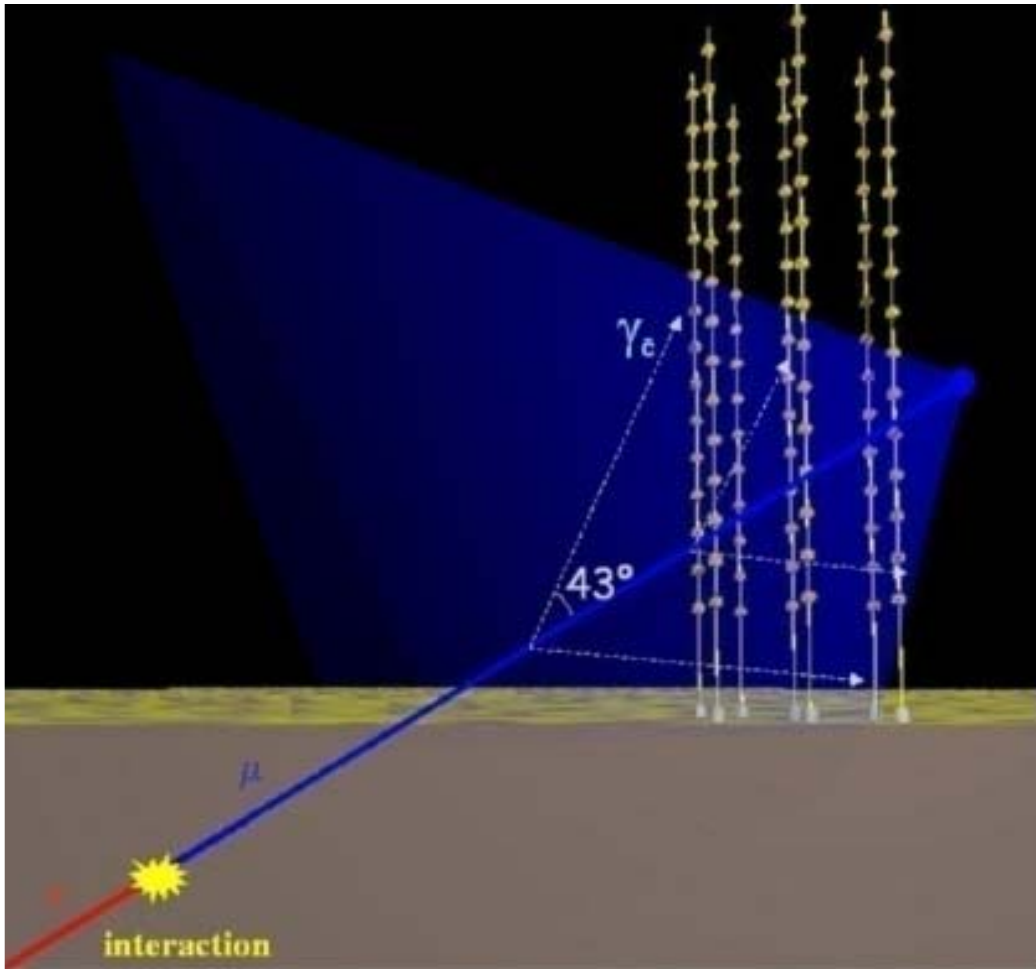
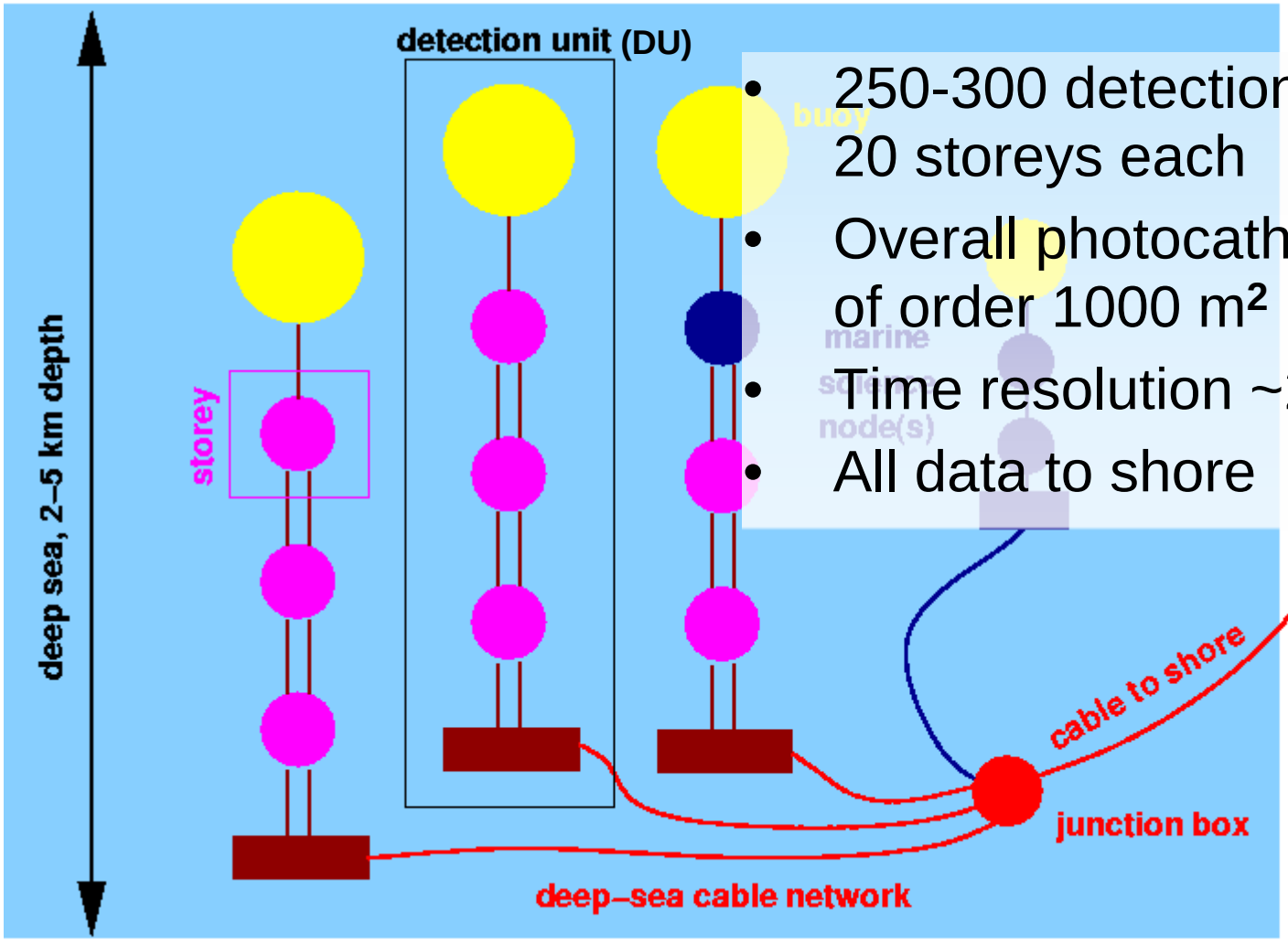
KM3NeT

What is KM3NeT ?

- Future cubic-kilometre scale neutrino telescope in the Mediterranean Sea
- Exceeds Northern-hemisphere telescopes by factor ~50 in sensitivity
- Exceeds IceCube sensitivity by substantial factor
- Focus of scientific interest: Neutrino astronomy in the energy range 1 to 100 TeV
- Provides node for earth and marine sciences



The KM3NeT Research Infrastructure (RI)



- 250-300 detection units, 20 storeys each
- Overall photocathode area of order 1000 m²
- Time resolution ~2ns
- All data to shore

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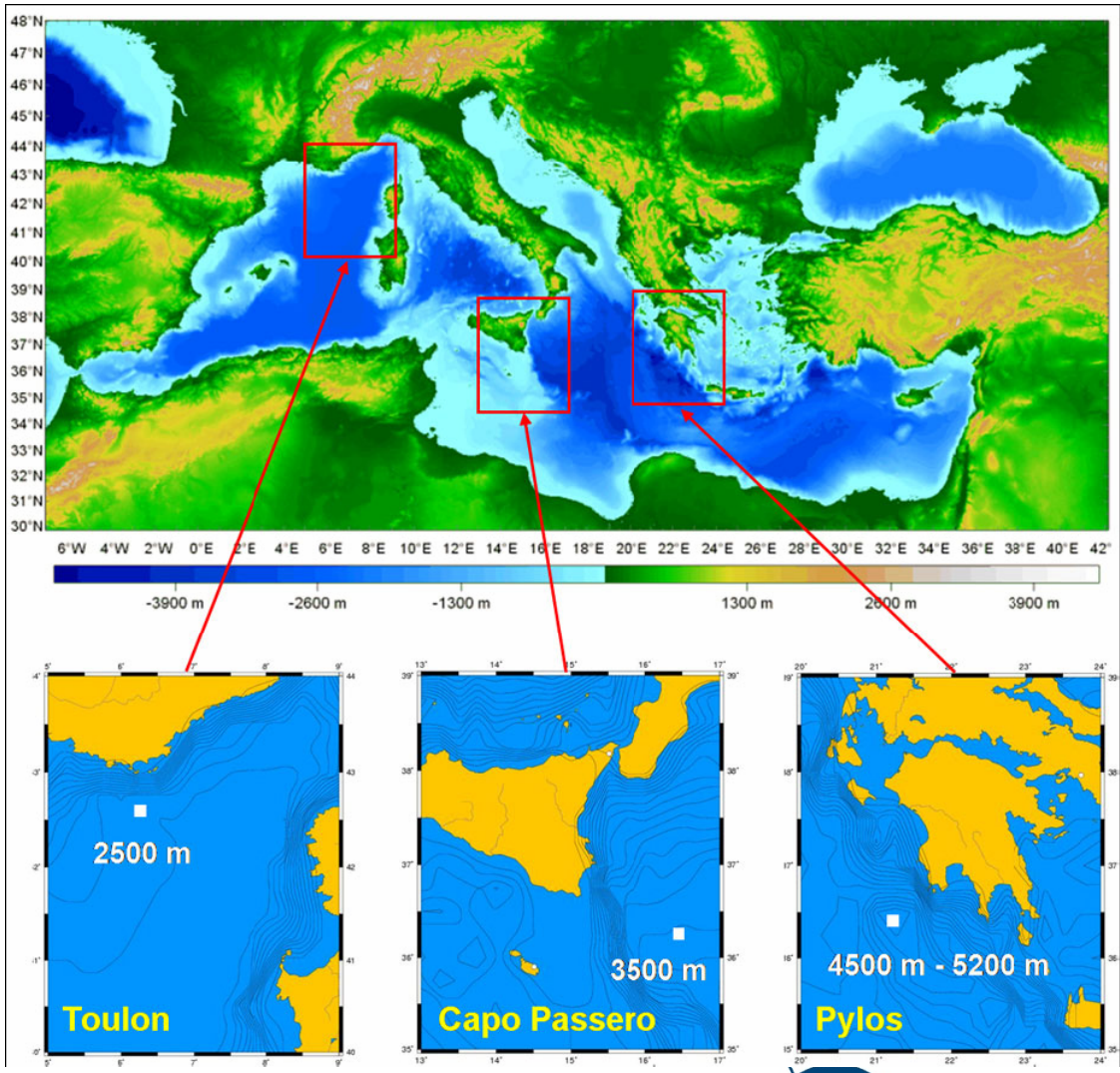
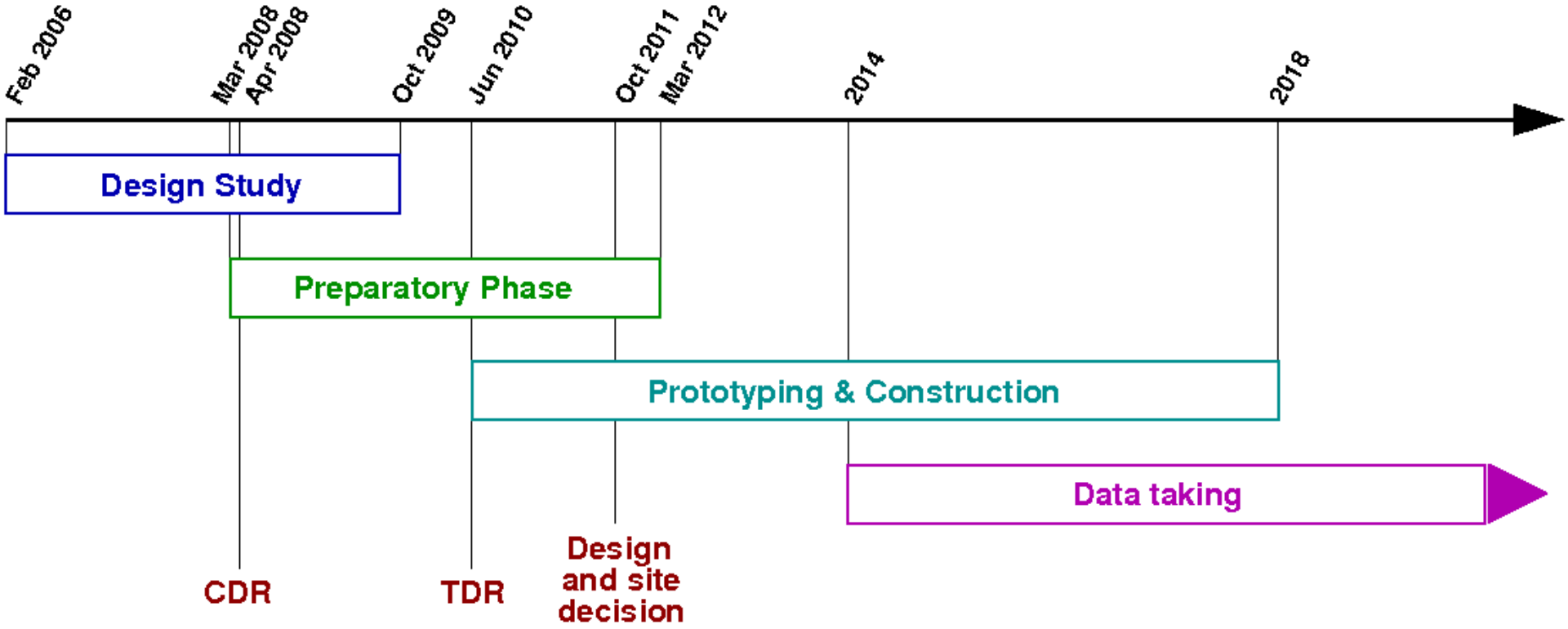
Candidate Sites

- Locations of the three pilot projects:
  - ANTARES: Toulon
  - NEMO: Capo Passero
  - NESTOR: Pylos
- Long-term site characterisation measurements performed
- Site decision requires scientific, technological and political input



Timeline



Note: Construction plans subject to the availability of funding

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