o Telescoo.

Sea Operations for "km³" neutrino telescope



NESTOR COLLABORATION

5-8 October 2003 NIKHEF - Amsterdam

Deployment considerations

- Modular system with built in redundancy
- Detector configuration

Towers (NEMO, NESTOR) Strings with many light sensor points per deployment per depth level

Strings (ANTARES) Strings with several light sensor points per deployment

- Connections to be made
 - in air (NESTOR)

> in underwater (ANTARES, NEMO)

 Use ships of opportunity and non highly specialized surface vessels for deployment

- Use locally available transport vessels
- •Retrievable and expandable

.... Deployment considerations

 Use ships of opportunity and non highly specialized surface vessels for deployment

- Use locally available transport vessels
- Use of bathyscaphs or ROVs ?
 - > NO (NESTOR)
 - > YES (ANTARES, NEMO) Dynamic positioning
- Vessels with dynamic positioning
- Short base line detector positioning
- Sea state working conditions up to 4+ beaufort

NESTOR tower









Under Construction: to be commissioned at Pylos next spring



Central well-ballasted platform
Dynamic position, keeping station ±5m
Operational up to wind/sea state force 4 beaufort
Heave compensating winches
Each side 51m long



Star on the surface and just below, during deployment

















NESTOR



Conclusions

ANTARES (with IFREMER) have shown that they can deploy string like detector with success

NEMO believe that they can deploy tower like detector

NESTOR have shown that they can deploy tower like detector with sucess

We can deploy jointly the km3 Very Large Volume v Telescope

VLV?T Workshop - 5-8 October 2003 - NIKHEF, Amsterdam

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