



NEMO-SN1 (western Ionian Sea, off Eastern Sicily): Example of architecture of a cabled observatory

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NEMO-SN1, located in the Western Ionian Sea off Eastern Sicily (at 2100 m depth, 25 km off the harbour of Catania), is a prototype of a cabled deep-sea multiparameter observatory, the first real-time operating in Europe since 2005. NEMO-SN1 is one of the node of the incoming European large-scale research infrastructure EMSO-European Multidisciplinary Seafloor Observatory, the network of seafloor and water column observatories recommended by ESFRI (European Strategy Forum on Research Infrastructures, <http://cordis.europa.eu/esfri/roadmap.htm>). EMSO addresses the long-term monitoring of environmental processes related to ecosystems, climate change and geo-hazards.

NEMO-SN1 is also an important test-site for the realisation of KM3NET (Kilometre-cube Underwater Neutrino Telescope), another large-scale research infrastructure included in the ESFRI Roadmap.

NEMO-SN1 has been recently enhanced thanks to Italian resources and to the EC project ESONET NoE that has funded the LIDO Demonstration Mission and a Technological Test (<http://www.esonet-emso.org/esonet-noe/>).

NEMO-SN1 is devoted to the neutrino detection, the geophysical and environmental monitoring, specifically the long-term monitoring of earthquakes and tsunamis and the characterisation of the ambient noise, marine mammal sounds and anthropogenic sources.

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