

Observing Core-Collapse Supernova neutrinos in the Mediterranean sea

M.Colomer (Université de Paris, APC), M.Lincetto (Aix Marseille Univrsité, CPPM, CNRS)

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The next observation of MeV neutrinos from a Core Collapse Supernova (CCSN) will provide important new probes on the physical mechanism driving these extreme phenomena of the Universe. The KM3NeT neutrino telescopes deployed in the Mediterranean Sea, with the multi-PMT optical module technology and a large instrumented volume, will be able to detect neutrinos from a Galactic CCSN as an overall increase on the PMT counting rate. The detection principle and expected sensitivity will be presented in this contribution, as well as the real-time performances. The capability of the KM3NeT detectors to resolve the neutrino light-curve and energy spectrum, which can be of major importance for discriminating between the different models, will be also discussed on this presentation.