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Calibration of the KM3NeT detector

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As of today, The KM3NeT detector comprises today more than 540 Optical Modules (approximatively 17000 31"photomultiplier tubes, PMTs) deployed in the abysses of the Mediterranean Sea. KM3NeT is designed to search for astrophysical high energy neutrino signals through detection of Cherenkov photons emitted along the paths of the charged particles produced in high energy neutrino interactions.

The equalisation of gain and time synchronisation of the PMT array and monitoring of the positions of the optical modules are the main tasks to be accomplished by the detector calibration.

In this talk the present the calibration methods, principles, tools and results at state of the art. In details we will discuss: the White Rabbit-based architecture for time calibration and recent transition from broadcast to point-to-point implementation; the custom acoustic positioning system and recent results from laser beacon and newly designed calibration lines equipped with oceanographic probes

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