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Commodity, FPGA based, front end electronics for underwater neutrino telescopes

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Usually the front end electronics required for a neutrino telescope, are electronics that perform waveform capture of analogue signals, optionally enforcement of a local triggering algorithm and transmission of the data to the shore. We show how a commodity system which employs COTS devices, like FADCs and FPGAs, can be used to perform such tasks to be used for multiple OMs' synchronous signal digitization at 250Ms/s with 8 - bit resolution. The transmission link to shore is implemented via a standard communication protocol (Gbit Ethernet through fibre). We describe the hardware and preliminary results from tests carried out at the Nestor Institute for Astroparticle Physics.

Auteur principal: M. ATHANASOPOULOS, Theodoros (NOA / IAF Nestor)

Orateur: M. ATHANASOPOULOS, Theodoros (NOA / IAF Nestor)

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