

## Performance of CATIROC : ASIC for smart readout of large photomultiplier arrays

*Wednesday, 28 November 2018 14:50 (20 minutes)*

CATIROC is an ASIC designed to read large photomultiplier areas for neutrinos experiments. This “System-on-Chip” is a very innovative concept as it sends out only relevant data by network to the central data storage, minimizing the links and the cost. The ASIC integrates 16 independent channels, with a self-triggering capability down to 1/3 photoelectron (50 fC). It then provides time measurement better than 0.5 ns and charge measurement over 13 bits, up to 100 pC with two gains. Data are converted internally over 10 bits and read-out at 80 MHz. The chip has been chosen by the JUNO collaboration to readout the 25,000 small photomultipliers of the experiment.

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