

# Wireless Power and Data Acquisition System for Large Instrumentation Systems

*Friday, 16 August 2013 13:00 (1h 30m)*

I will present the development of a new prototype wireless data acquisition system with the intended application to read-out

instrumentation systems having thousands of channels. The data acquisition and control is based on a compliant implementation of 802.11 based

hardware and protocols. Our case study is for large detectors containing photomultiplier tubes. We have explored both free-space optical and radio frequency options for wireless power transfer. The front-end circuitry, including a high-voltage power supply is powered wirelessly thus creating an all-wireless detector readout.

We have successfully tested the system as a single detector module that is power wirelessly and then sends data wirelessly. I will cover the performance of this all-wireless prototype system and how a large scale implementation of the system might be realized.

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