

## **Basic statistics of charge and time measurements from photo-sensors (Block 5)**

*Friday, 23 July 2021 12:00 (1h 15m)*

**Abstract:** In this lecture, we will take a detailed look at the functioning and analysis of a common detector used in particle and nuclear physics. We will go through a detailed calculation of what we expect from a sensitive photo-multiplier tube used to detect photons.

We will perform a statistical analysis of the charge spectrum, gain fluctuations, the measurement of time, and statistics of counters. We will learn to use methods from probability and statistics that are applicable for many other circumstances.

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