

# Nonlinearity of SiPMs

Vasiliy Morgunov

ITEP, Moscow



DESY, 28 April 2005

The copy of this talk one can find at the <http://www.desy.de/~morgunov>

## How to get almost linear SiPM response

**Apply a simple function to its amplitude**

**The function can be imaged as additional amplifier (black-box)**

**The linearization procedure has no any deal with the calibration.**

**It works with SiPM amplitude only.**

**After the simplest linearization the SiPM response became to be linear inside  $\pm 10\%$ .**

**Calibration is the next step and it will be easy**

**because after the second order linearization the SiPM response became to be linear inside  $\pm 2\%$ .**

# Linearity

SiPM responses



