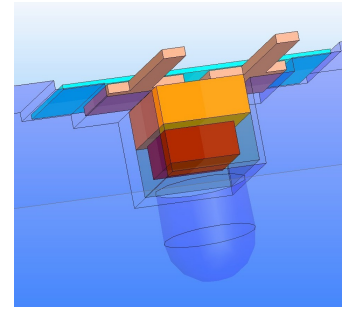
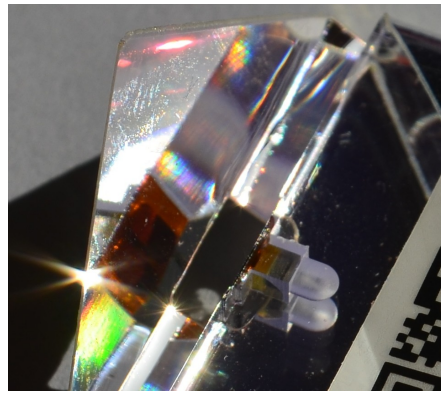
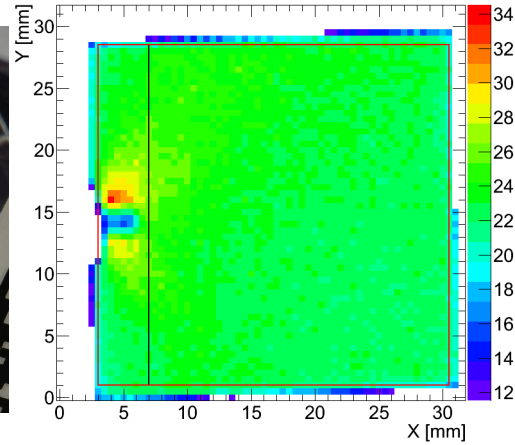
UHH Tile design

	Gain [e-]	DCR	Cross talk	dV_{BD}/dT	N of pixels
KETEK	0.7 x 10^6	0.2 Mcps	5%	20 mV/deg	2300
CPTA	0.7-2 x 10^6	1 Mcps	~ 1%	20 mV/deg	798



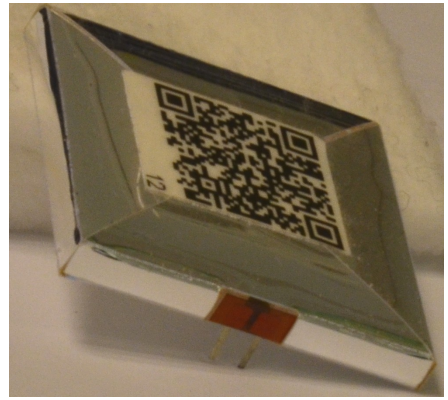
- 1200 KETEK PM1125 SMD mounted (delivery w/ more than 2 months delay)
- SMD mounting soldered on copper pins
- Glued on kapton foil





The tile:
- Bicron BC-400 Polyvinyltoluene
- 423 nm central wavelength
- 0.9 ns rise time, 2.7 ns pulse width (FWHM)
- Optimized coupling for easy production and light yield homogeneity

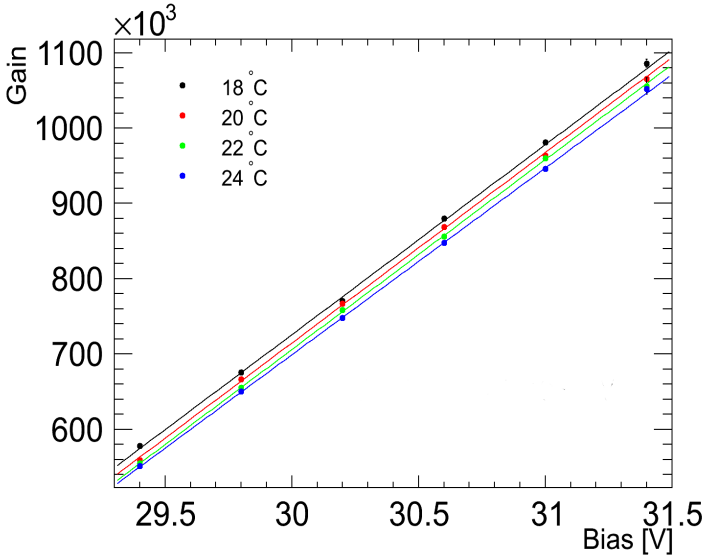
- Tiles are wrapped with 3M Vikuiti reflector foil
- Foil cut with laser cutter and mechanically wrapped around the tile
- Fixed with sticker with QR code for unique identification



Twelve tiles commissioned up to now

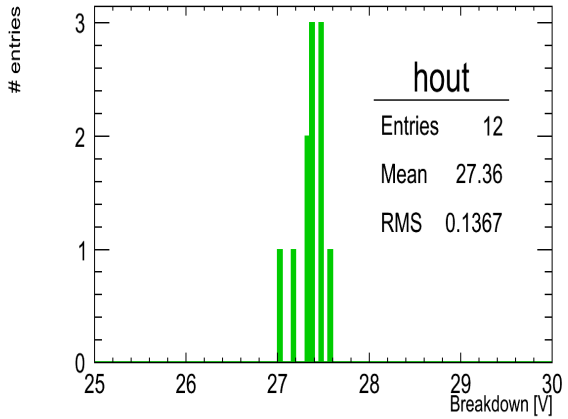
SiPM characterization

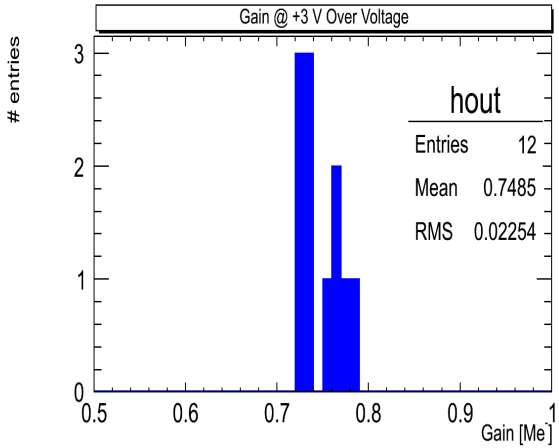
SiPMs are undergoing basic operational parameters characterization

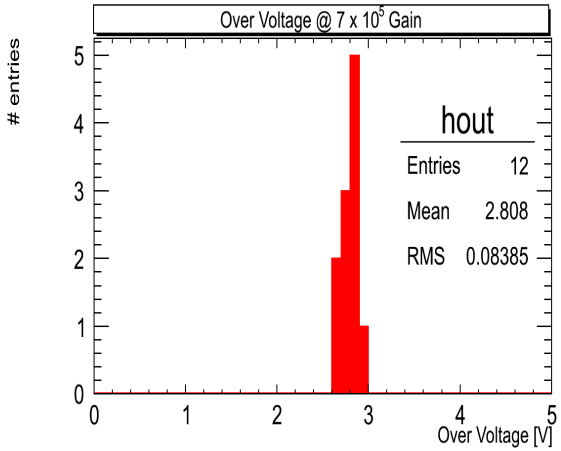


Voltage scan of gain measurements are performed
Data are fitted with linear law:
- Breakdown voltage extrapolated from fit
- operational parameters obtained from fit

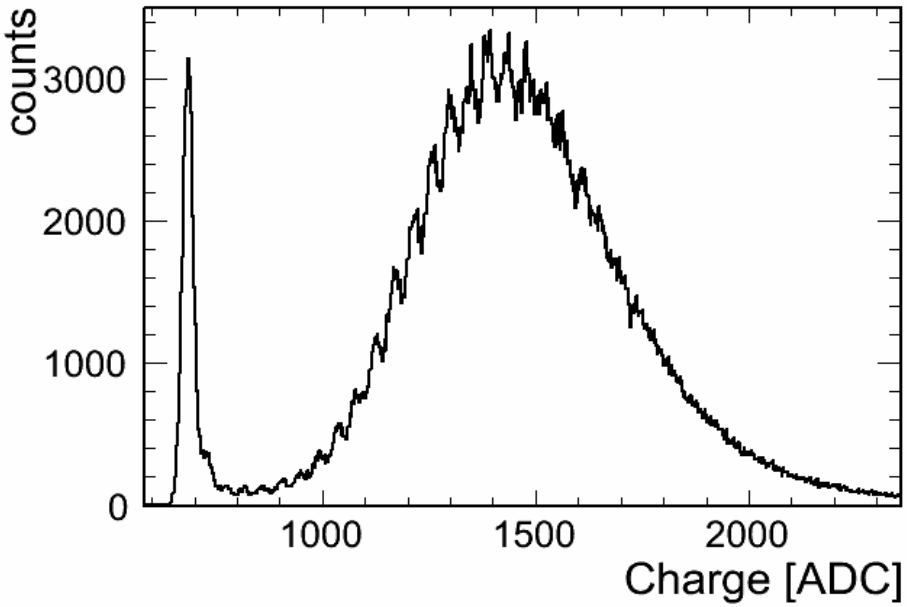
Spread of breakdown voltage and gain at fixed over voltage (at 20 ºC)







Tile quality



Light Yield measurements still ongoing

Preliminary results:

LY ~ 16 p.e./MIP

Dark noise rate estimated from DCR spectra

Preliminary results:

DCR < 20 cps for 0.5 MIP threshold