



Lab Sessions for the 2nd INFIERI Summer School
Paris
July 2014

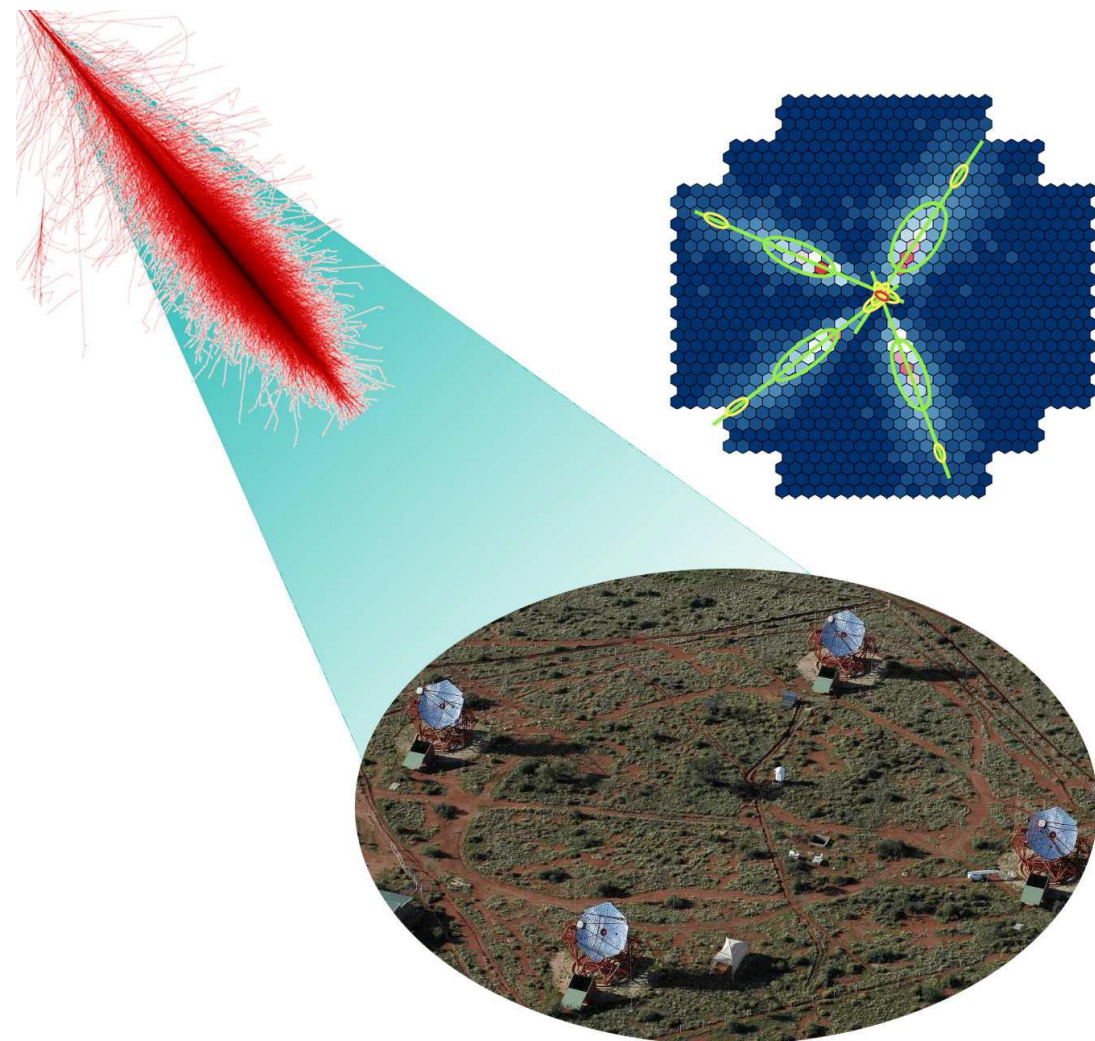
Andrea De Franco

Imaging Gamma Ray sky with Cherenkov light

Alexander Pollak

FPGA designs using Simulink and CASPER

Imaging Atmosphere Cherenkov Technique (IACT)



$\gamma \rightarrow e^- + e^+$ at 15-30 km agl
 $e^{+/-} \rightarrow \gamma + e^{+/-}$ 10 km in length

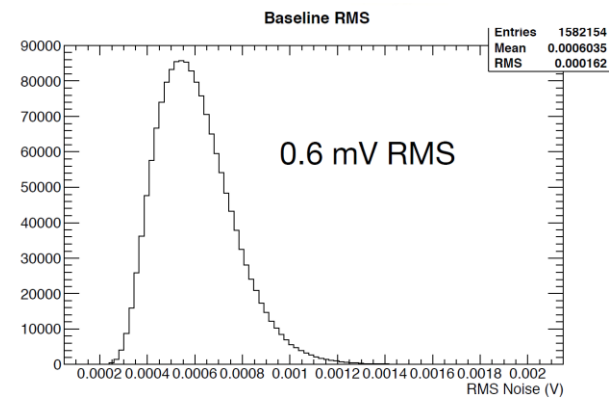
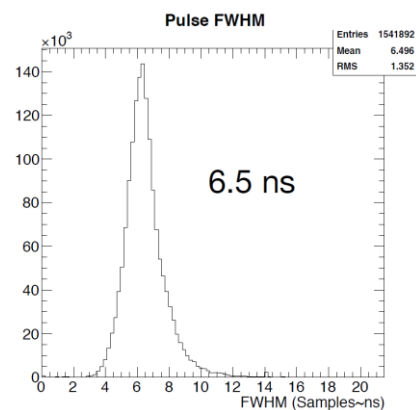
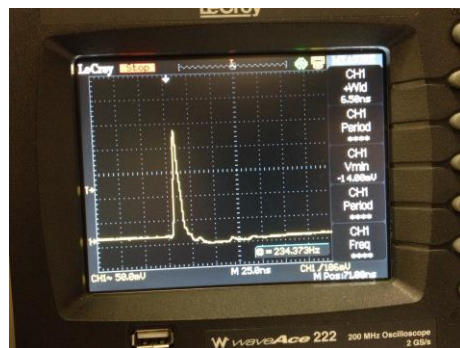
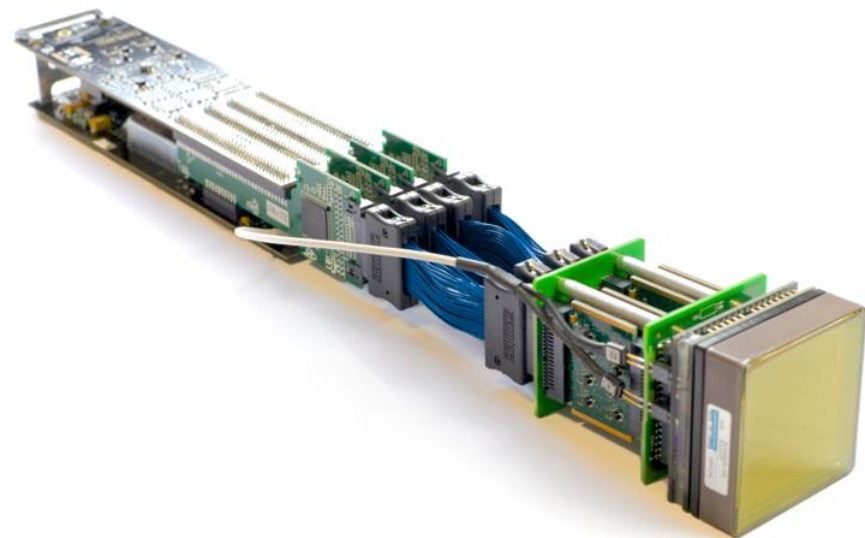
$e^{+/-}$ with $v > c/n \rightarrow$ Cherenkov light
Optical photons pool $\sim 100\text{m}$ radius

n° photon $\rightarrow E(\gamma)$
Image shape $\rightarrow \gamma$ direction

Photosensor module for CTA camera

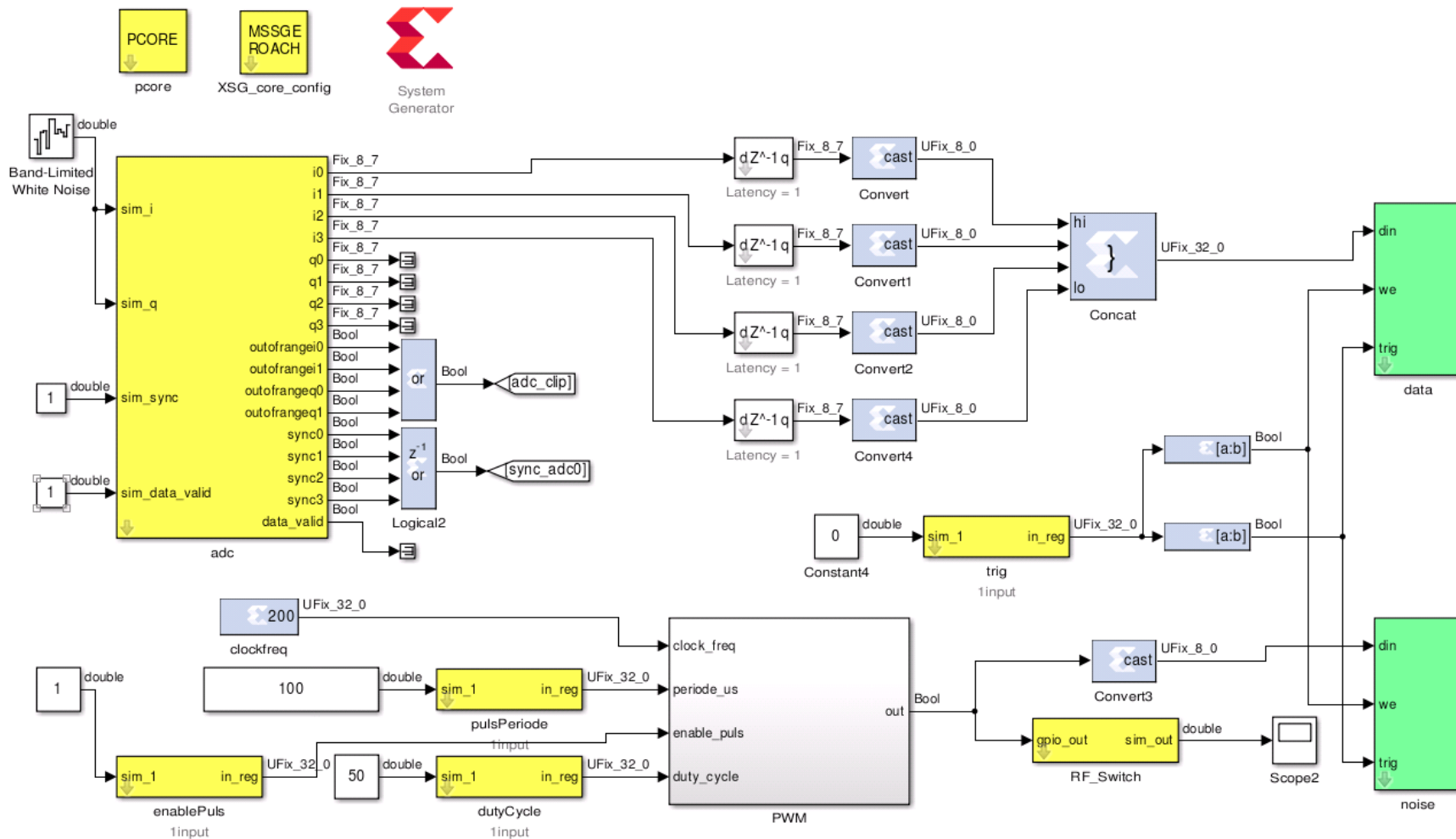


Characterization of the TARGET module with an MAPM and a light source



CASPER

Collaboration for Astronomy Signal Processing and Electronics Research



Hardware Platform



ROACH

Reconfigurable Open Architecture Computing Hardware

