

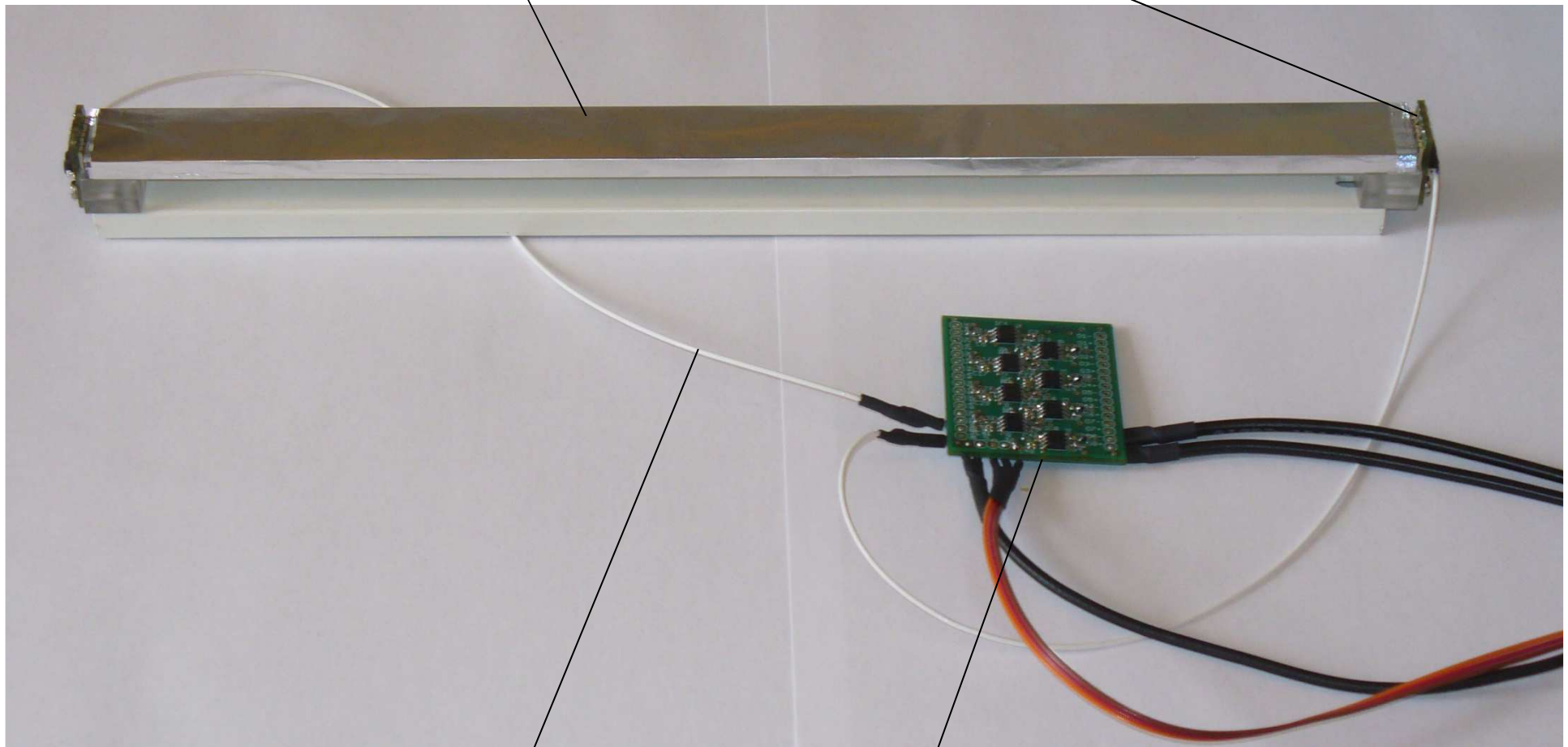
News from Krakow on Sci-rods

Jerzy Smyrski
Jagiellonian University

New prototype

BC-420: 5 x 20 x 300 mm³

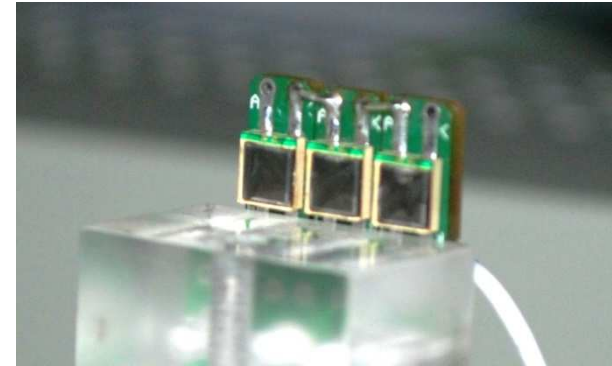
3x SiPM: Hamamatsu S12572-050P



Concentric cable 50 VMTX,
diameter 1.17 mm

Preamp. card: 8 channels, AD8000 circuits,
dimensions: 38 x 46 mm²

Read out

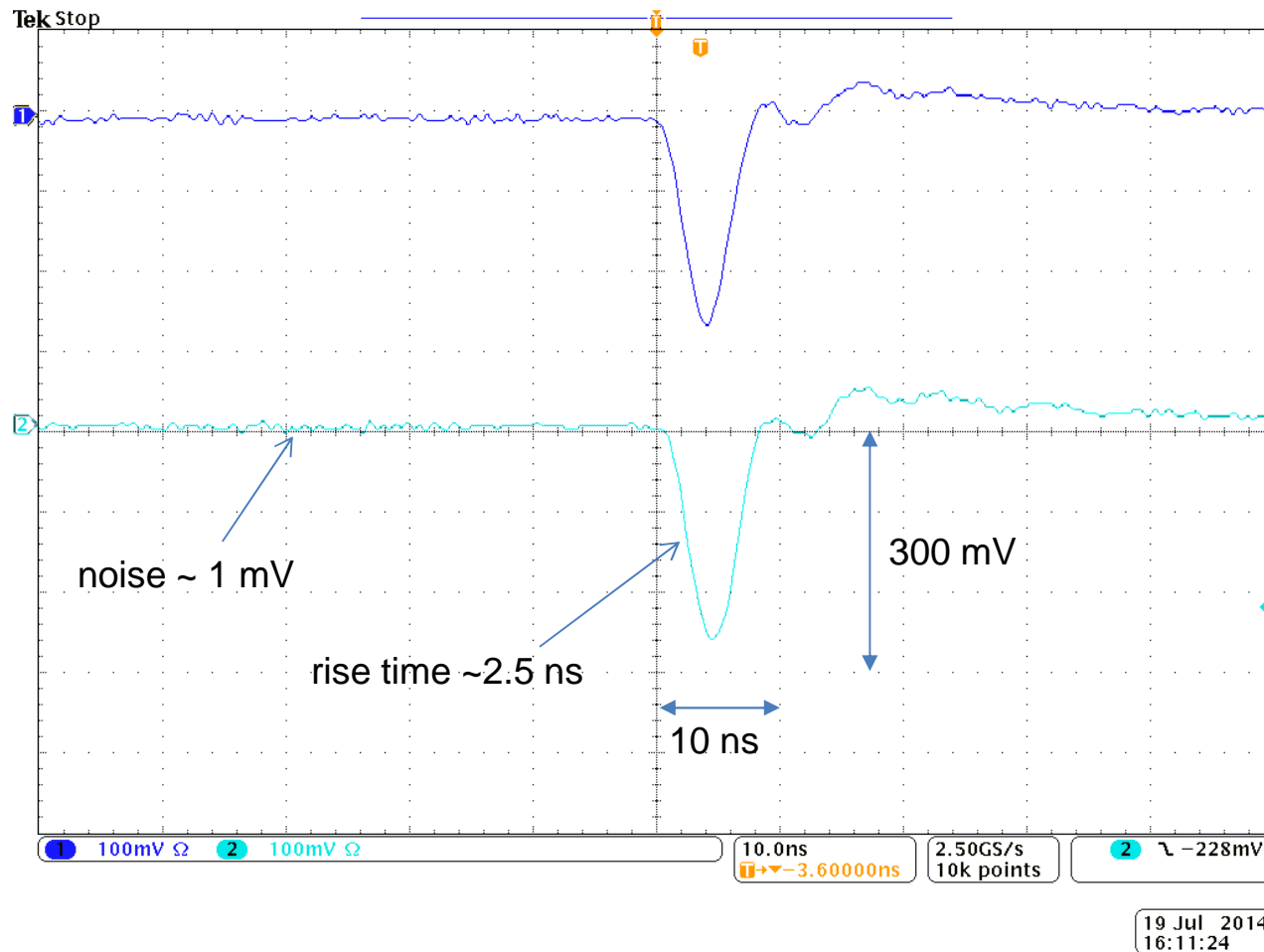


Active area: $3 \times 3 \text{ mm} \times 3 \text{ mm} = \mathbf{27 \text{ mm}^2}$
Sci-rod end face: $5 \text{ mm} \times 20 \text{ mm} = \mathbf{100 \text{ mm}^2}$

- Three SiPMs (Hamamatsu S12572-050P) connected in series,
 $V_{\text{op}} = 3 \times 67 \text{ V} = 201 \text{ V}$,
advantage: shorter pulses, faster rise time compared to
parallel connection or to single SiPM
- Preamps placed outside active area – connections from SiPMs
to preamps are done with long, thin concentric cables

(solutions adopted from P. W. Cattaneo et al., arXiv:1402.1404v1)

Pulses with electrons from ^{90}Sr



We have started measurements of time resolution

Concept of TOF hodoscope

Two layers of Sci-Rods shifted by half of rod width and length:

- easy relative calibration of the rods
- better time resolution compared to single layer

