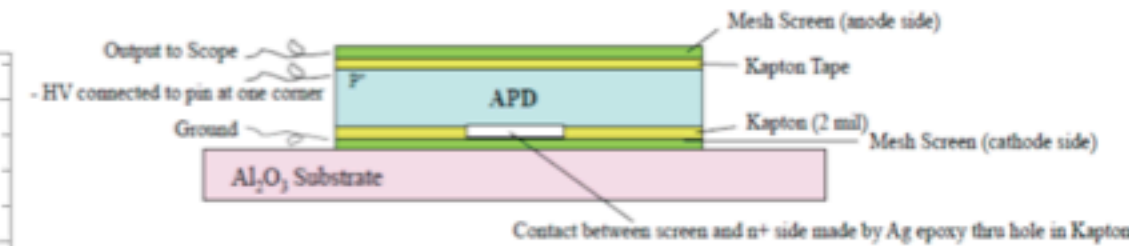
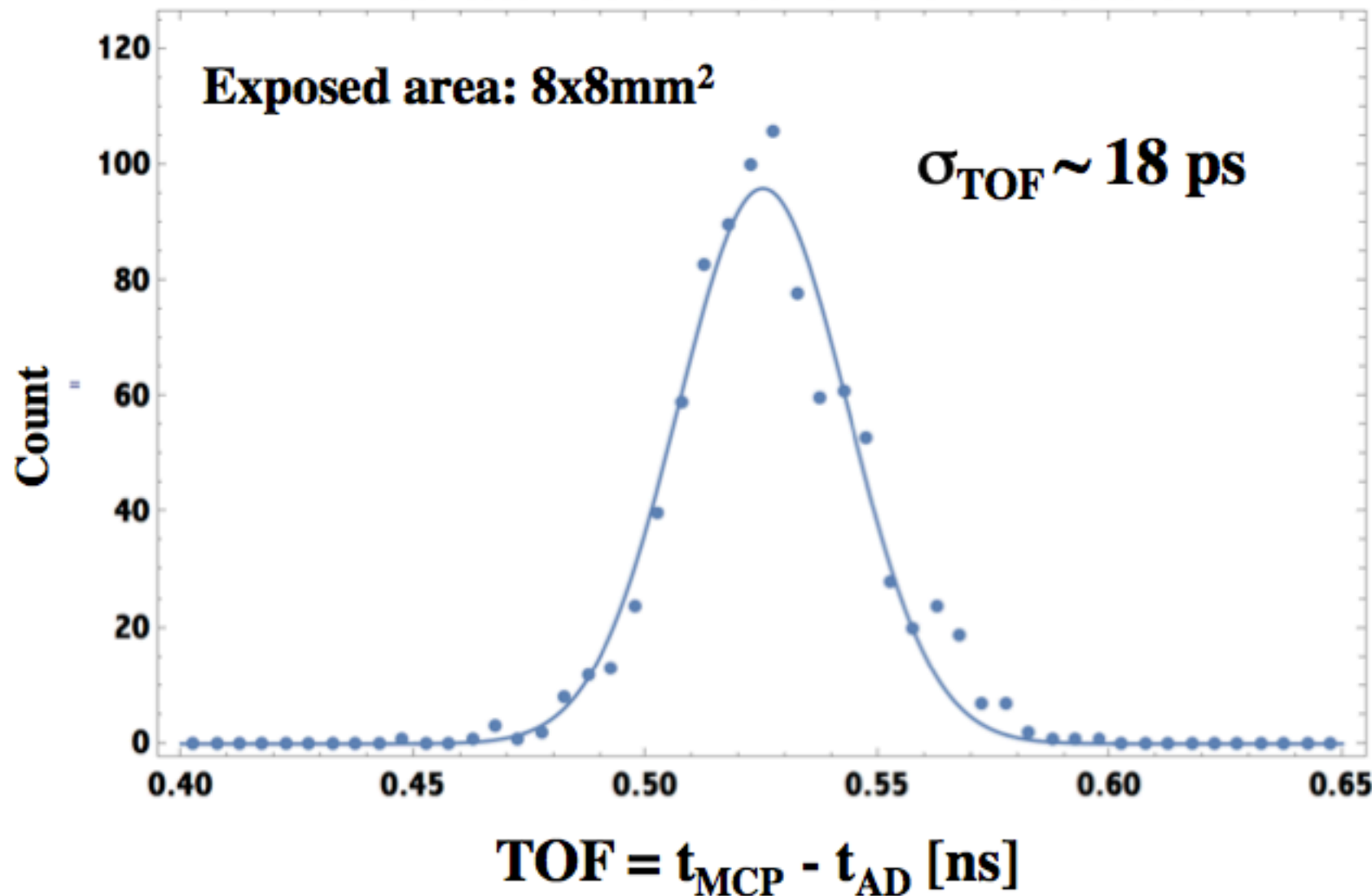


Si detectors: Medium Gain Avalanche Diodes (AD)

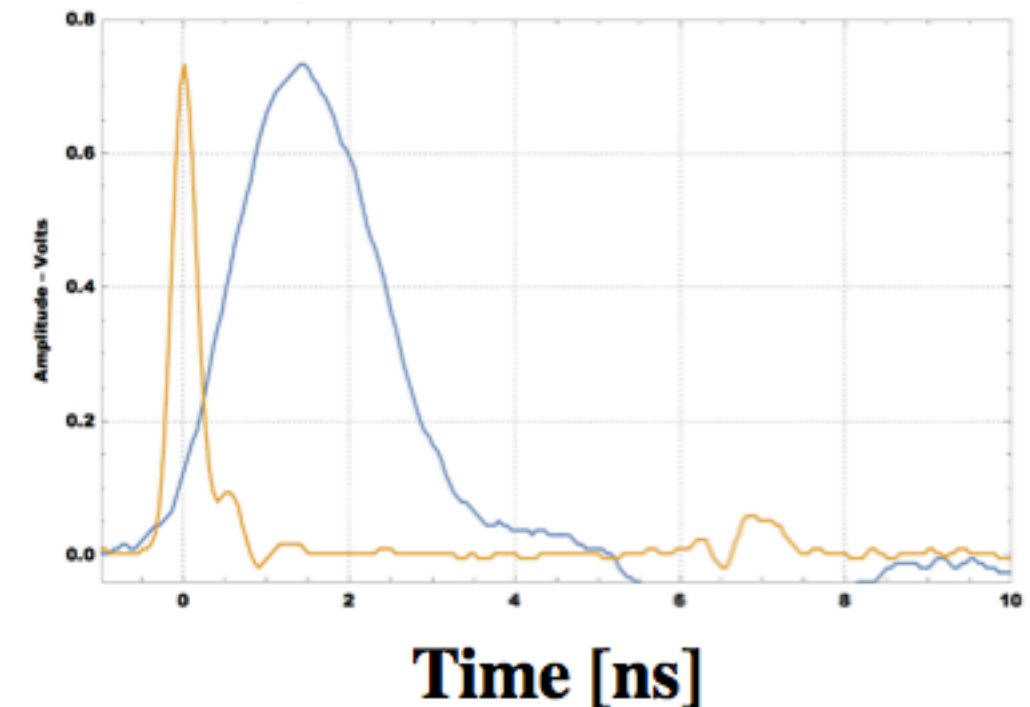
Sebastian White et al., private communication, July 2016

Very preliminary !!

Beam test result:



MCP vs. AD risetimes:



- **Very preliminary timing resolution between AD and MCP: $\sigma_{\text{TOF}} \sim 18 \text{ ps}$**

- **To get a timing resolution as MCP-PMT, the Si S/N ratio has to be $\sim 5\times$ better.**
- **This is impressive result and this approach has some chance to succeed.**