

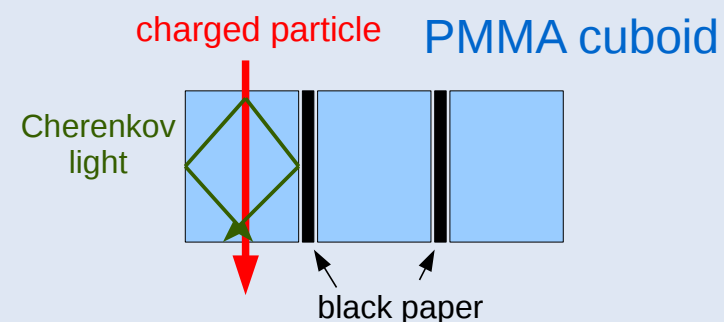
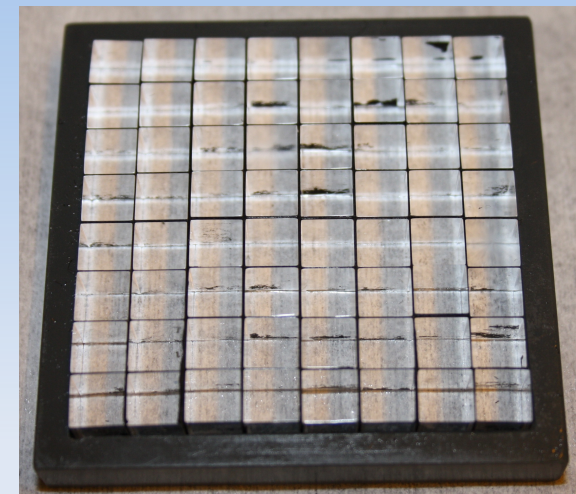
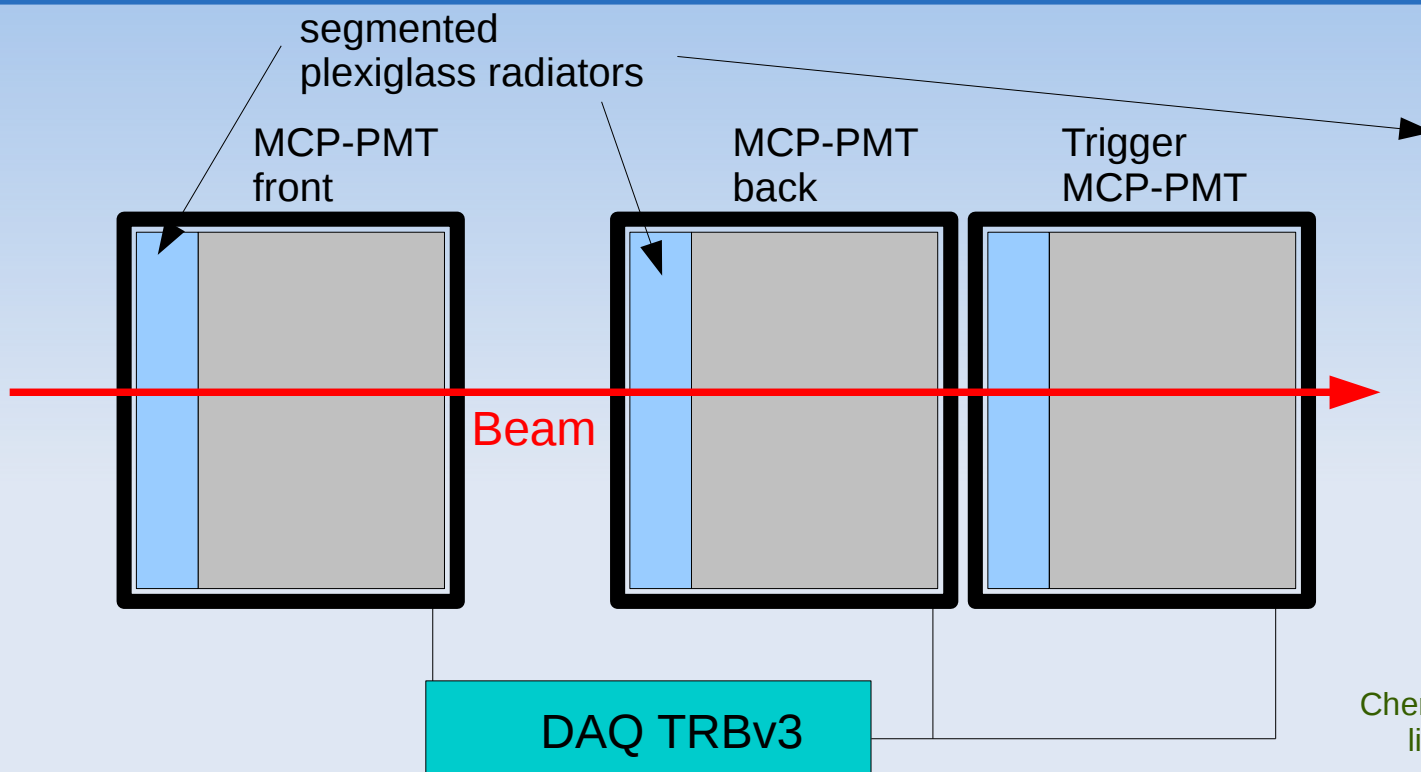
Results of MCP-ToF at GSI Testbeam in June 2014

*F. Uhlig, A. Britting, W. Eyrich, A. Lehmann
Universität Erlangen-Nürnberg*

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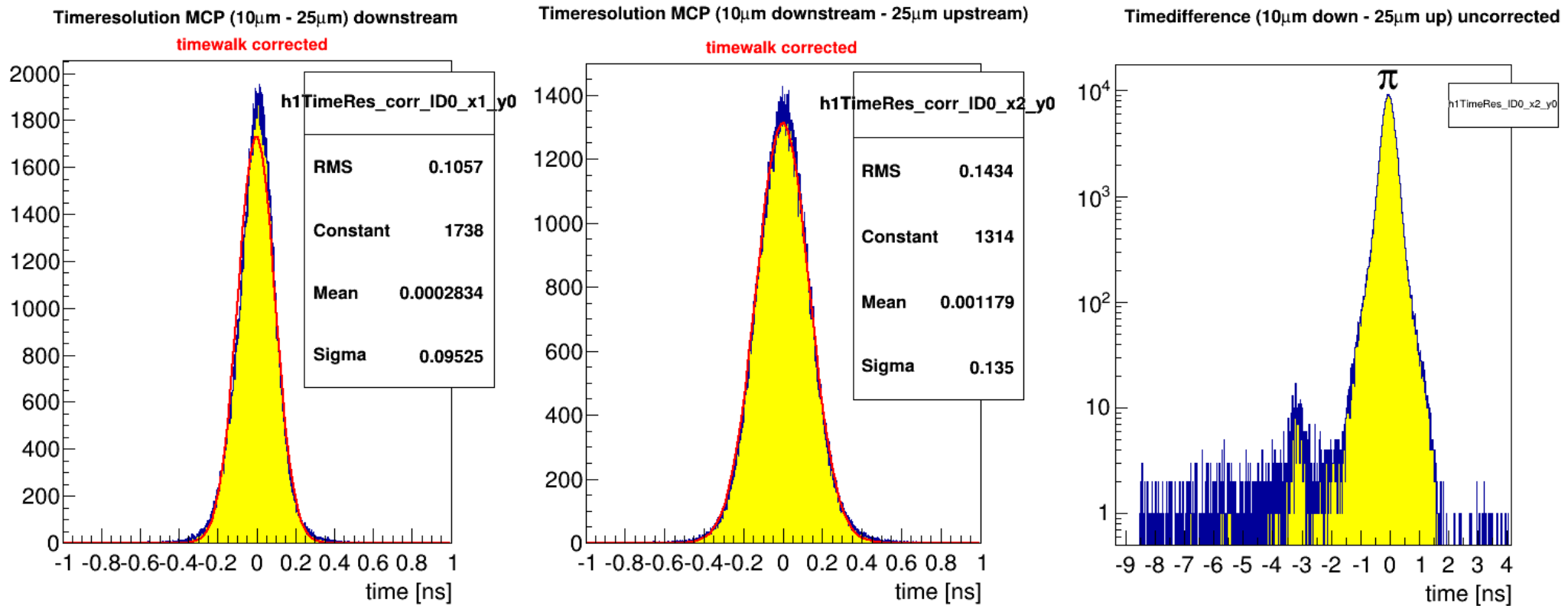


MCP-TOF Setup



- two MCPs (Photonis XP85012 (25 μ m pores), XP85112 (10 μ m pores)) with segmented (8x8 pixel, 6x6mm²) plexiglass radiator (1cm)
- 64 channels (MCP front, back) and MCP-Out (sum of all 64 channels) signal of sensors read out with PaDiWa and TRB boards
- PID (ToF) and tracking (segmented plexiglass radiators)

Time resolution of MCP-TOF (GSI 2014)



- Pion beam with 1.7 GeV/c momentum; distance between MCP 13.5m
- **timeresolution of timedifference** (timewalk corrected, MCP-Out signal)
 $\sigma = 95\text{ps}$ (both MCPs downstream, distance $\sim 20\text{cm}$) resp. 135ps (10-25 μm) / 141ps (25-25 μm)
(MCP distance 13.5m) \rightarrow in good agreement with previous testbeam results
- **timeresolution of single MCPs** (timewalk corrected, MCP-Out signal)
 $\sigma = 62\text{ps}$ (10 μm downstream), 72ps (25 μm downstream) and 120ps (25 μm upstream)
- **PID**: timedifference plot (right) shows no significant peak beside pions; timedifference between pion/proton = 6.2 ns and pion/K = 1.7 ns