

# *RD52 status and plans (H8C)*

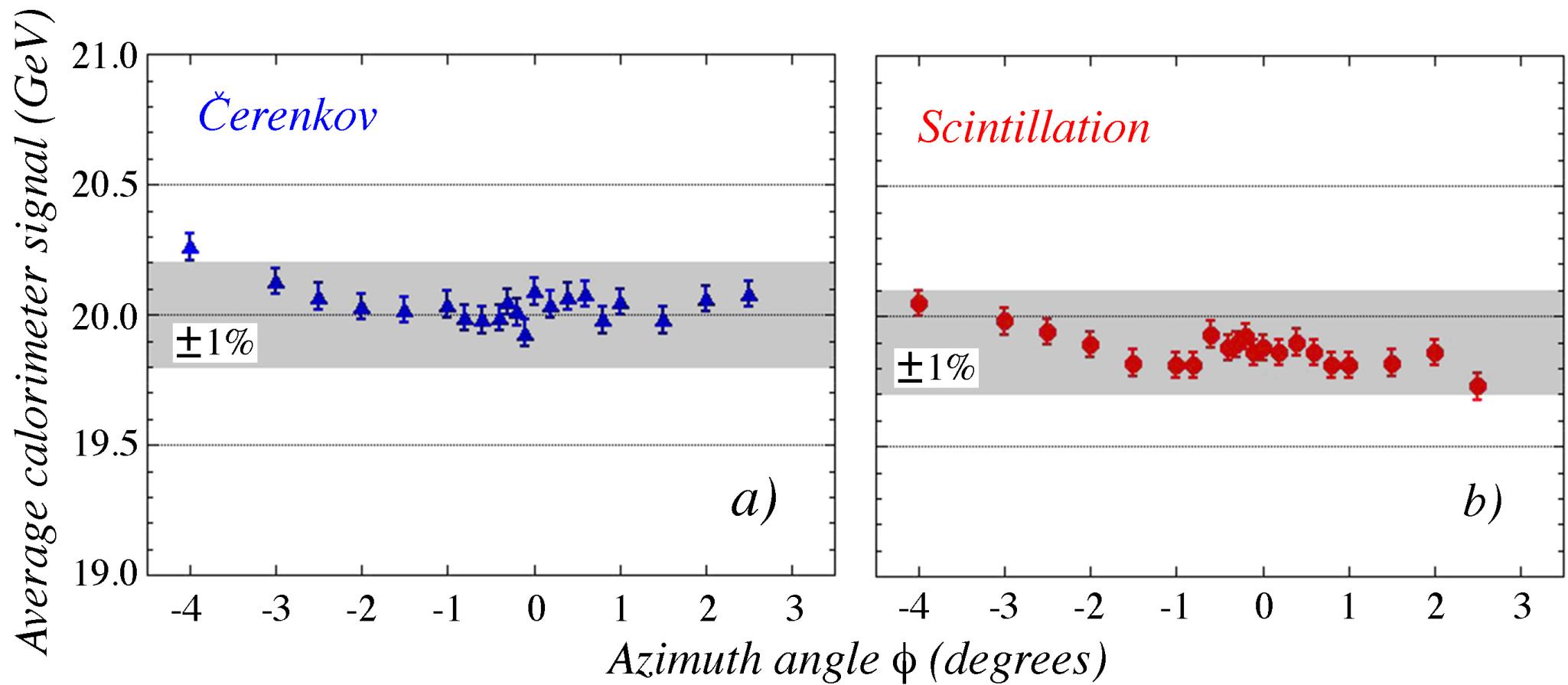
*Silvia Franchino, March 29, 2015*

- *Status analysis December 2014 data*
  - *Small-angle performance of dual -readout fiber calorimeter*
  - *Time structure measurements of  $e, \pi, \mu$  showers*
- *Plans for 2015*

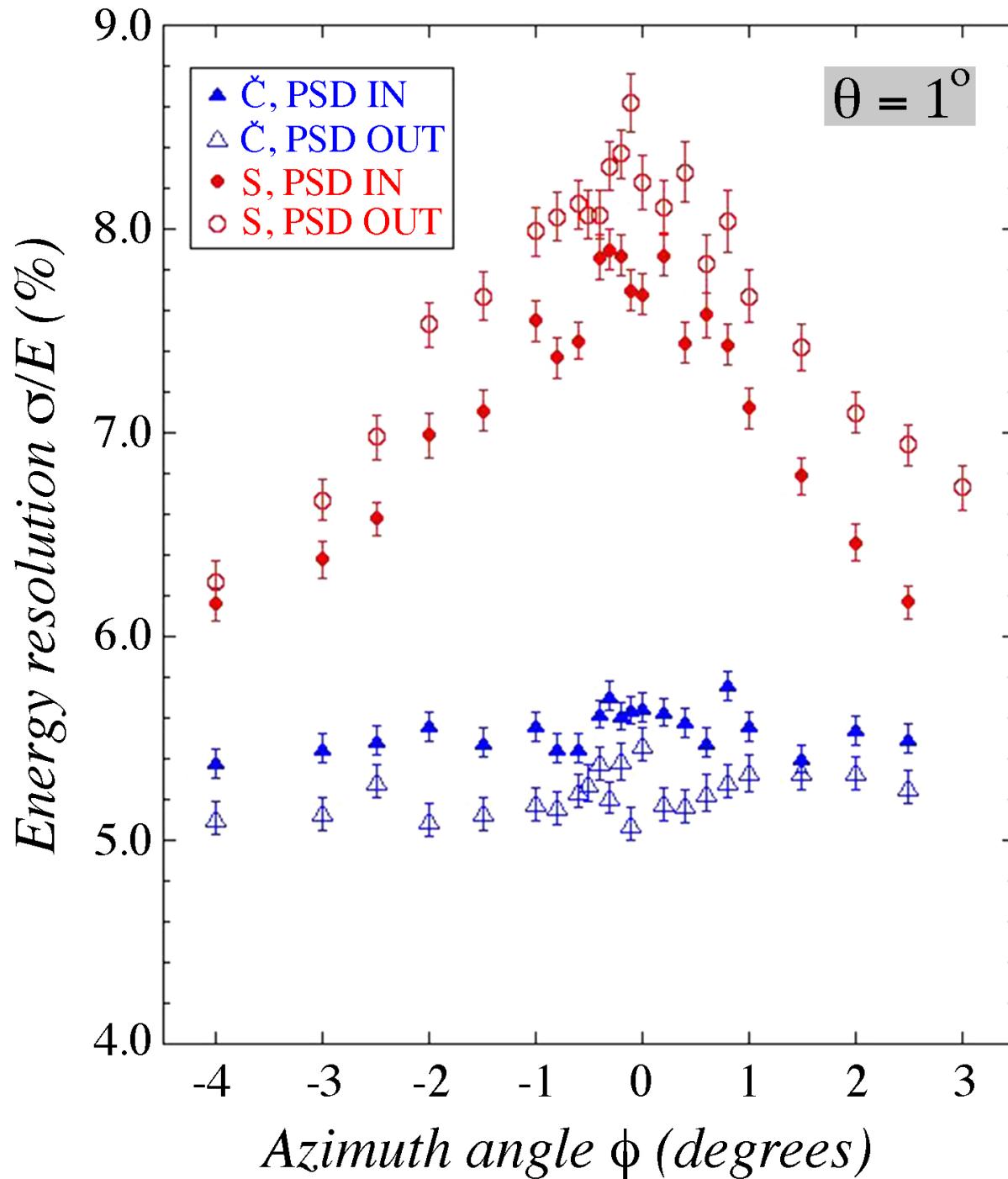
*Status of the analysis of Dec. 2014 data*

*Small-angle performance of dual-readout fiber calorimeter*

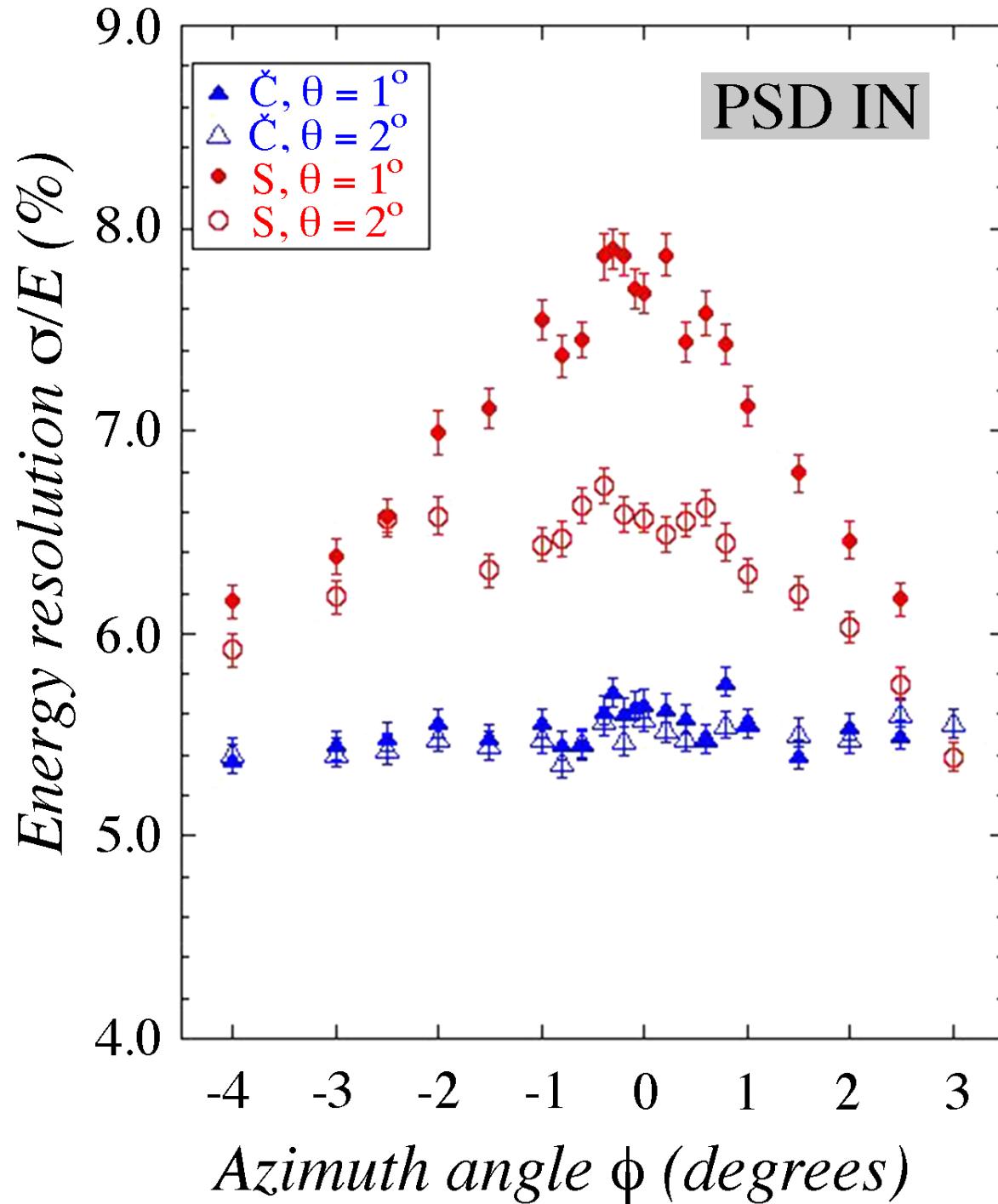
*Angular dependence of the calorimeter response*



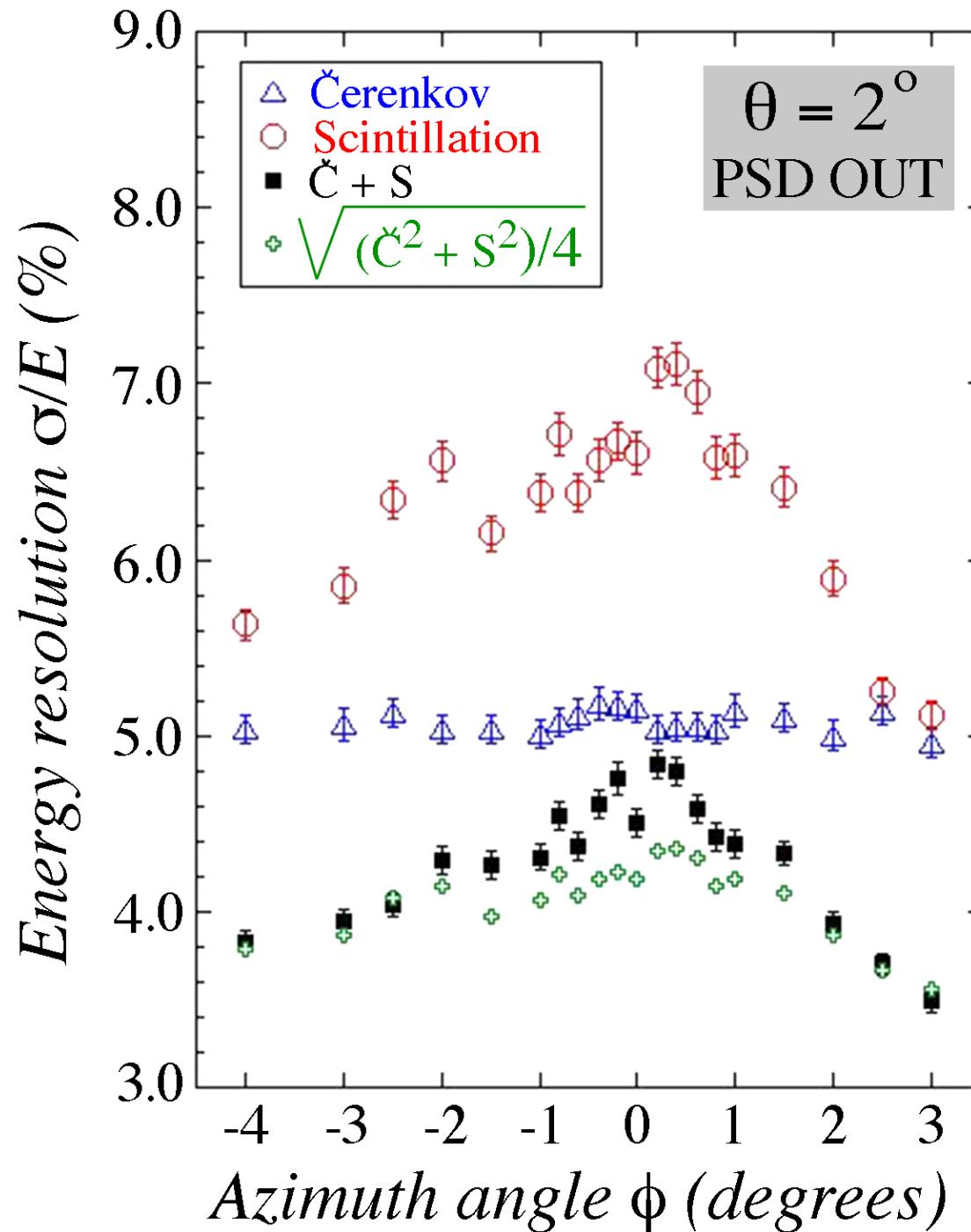
# *Angular dependence of the energy resolution*



# *Effect of changing tilt angle $\theta$ on energy resolution*



# *The energy resolution of the combined C+S signals*

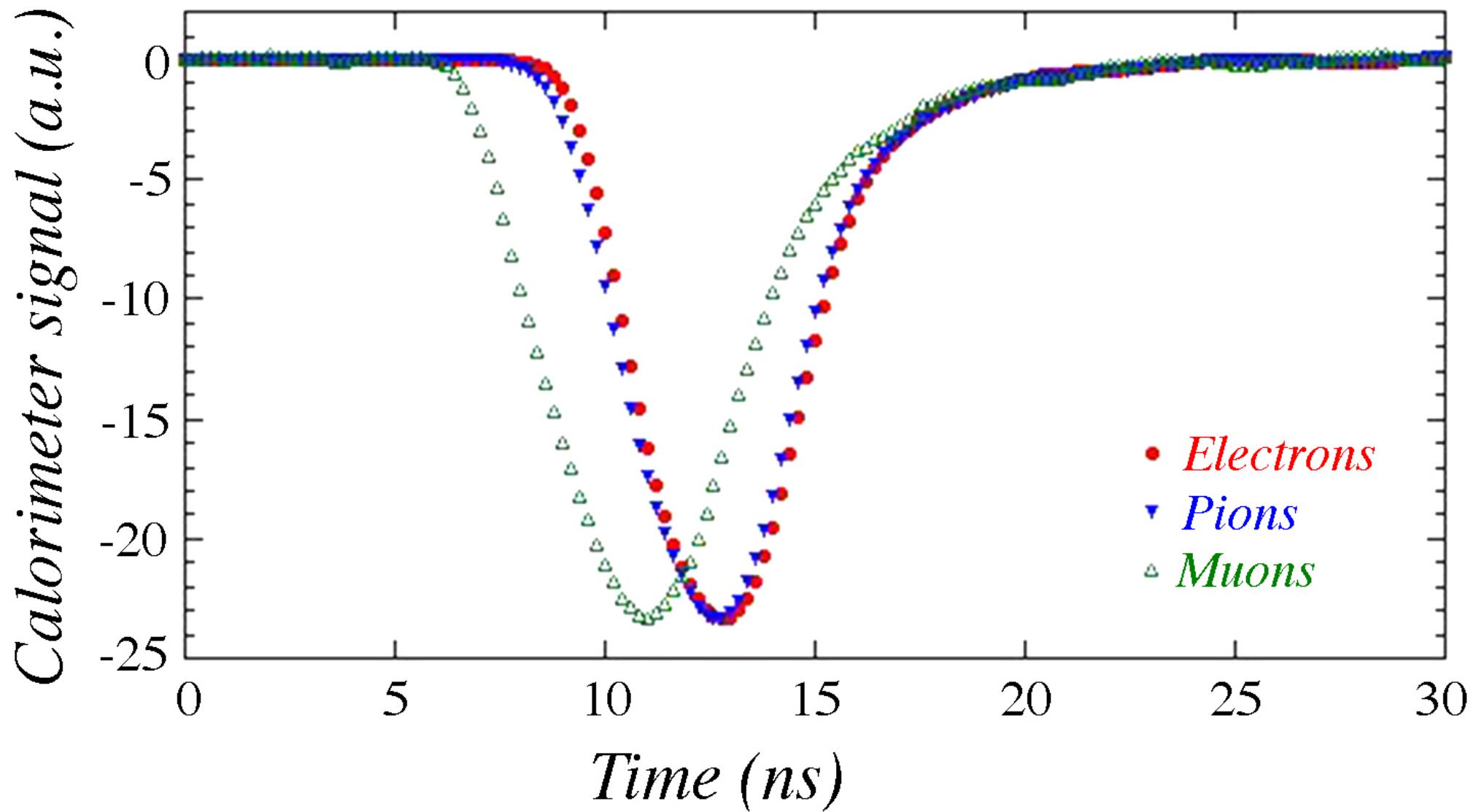


*Analysis of December 2014 data*

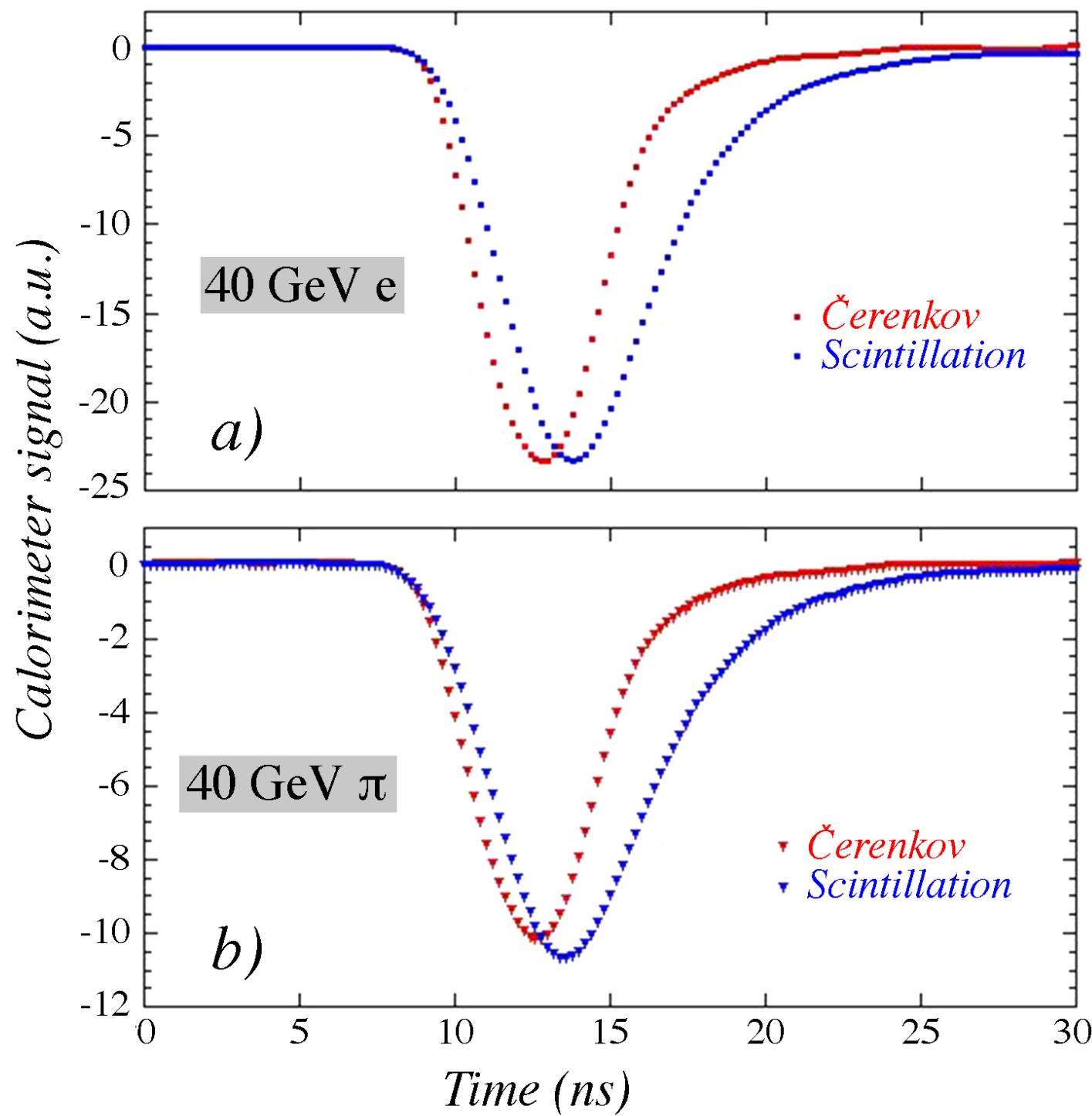
*Time structure of  $e, \pi, \mu$  showers*

# *Average calorimeter signals (40 GeV)*

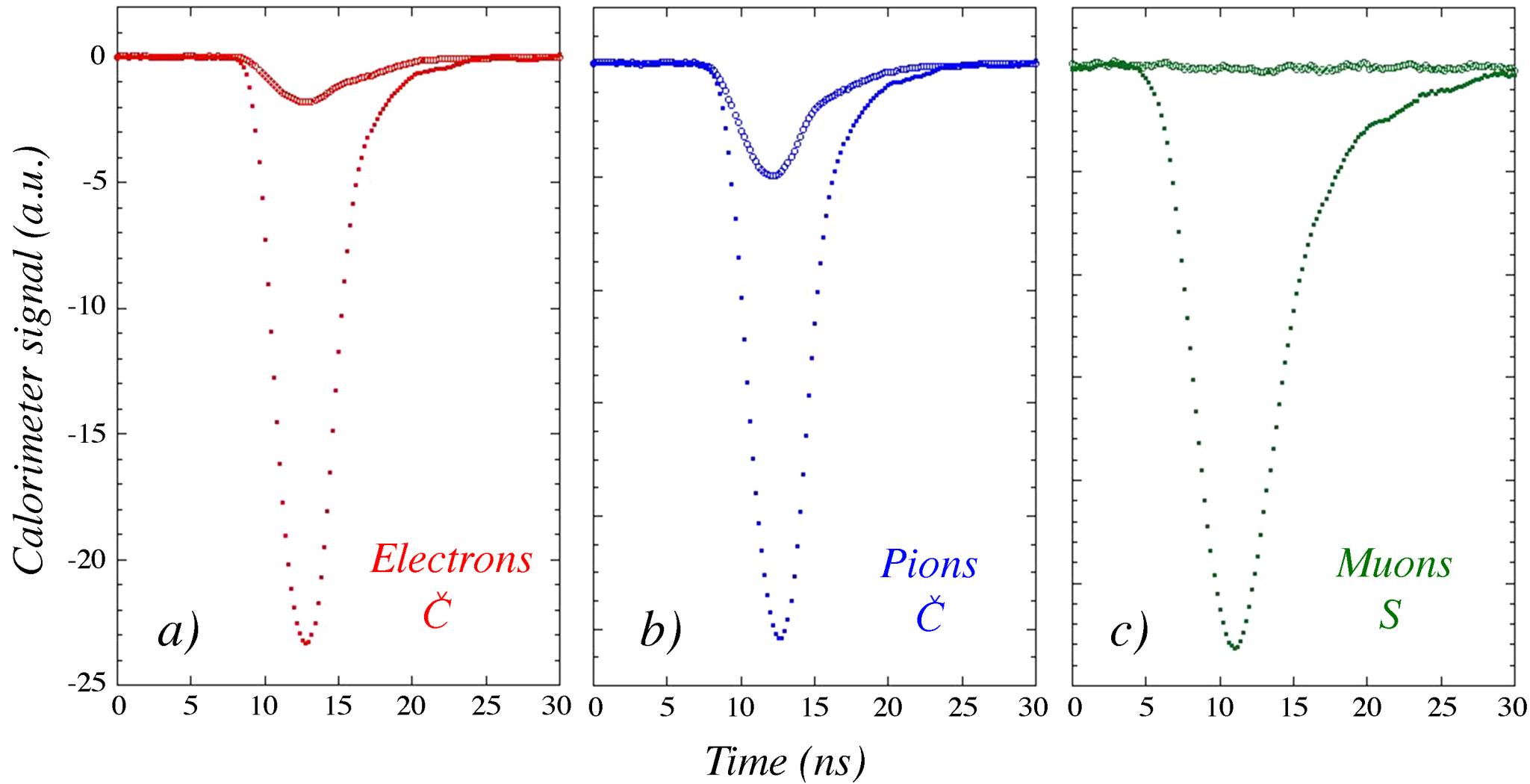
## *Čerenkov signals around the beam axis*



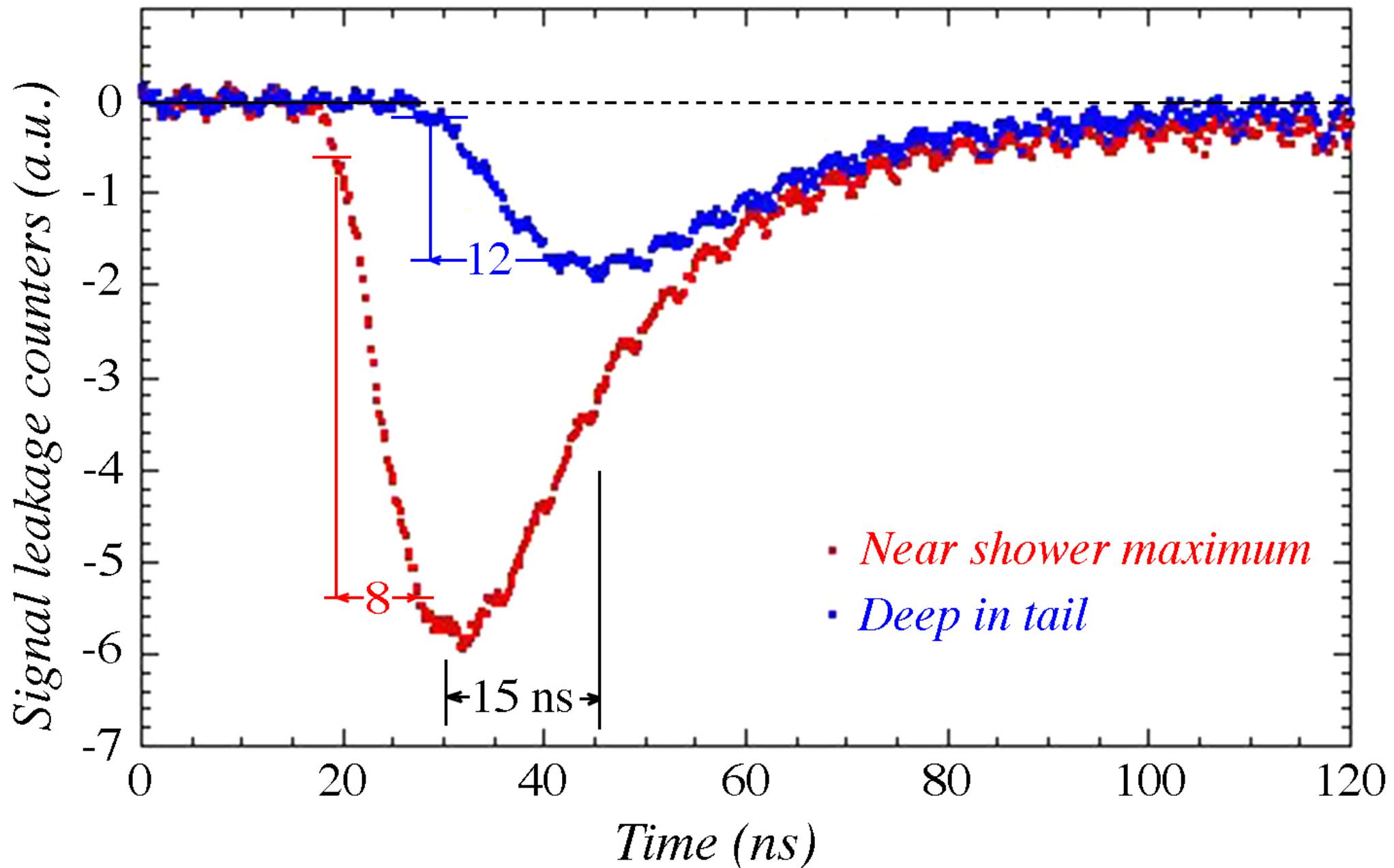
## *Comparison Čerenkov / Scintillation signals*



*Comparison on-axis / off-axis calorimeter signals*  
Tower 15 / Tower 21



## *Comparison signal shapes leakage counters*



## *Future plans (August 2015 beam tests)*

- *Picosecond time structure measurements of showers*
- *Differences between proton and pion showers*  
*(different average em shower content, longitudinal shape)*
- *Request:*
  - Start with 5 days of low-energy wobbling (20 GeV e beam)
  - Hadrons at energy for which effective  $p/\pi$  separation is possible
- *Plans for October depend on August results*