

New H8 SCT Trigger System

Z. Doležal, V. Vorobel, J.
Černý and J. Švejda
Charles University, Prague

Basic information

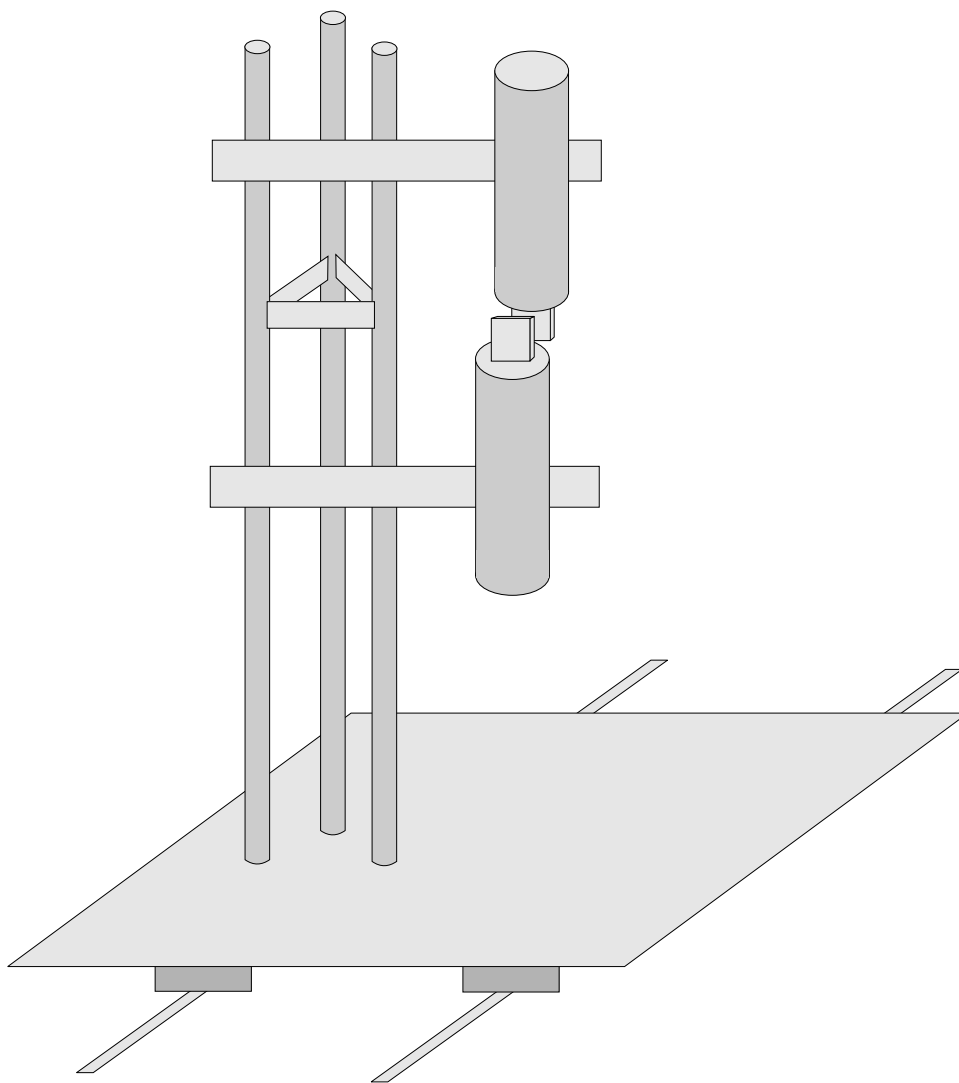
Why new trigger system?

- insufficient **timing resolution** of the existing scintillator signal (few ns) for the 25 ns structured beam
- insufficient **robustness** of the scintillator support and **no position reproducibility**

New solution

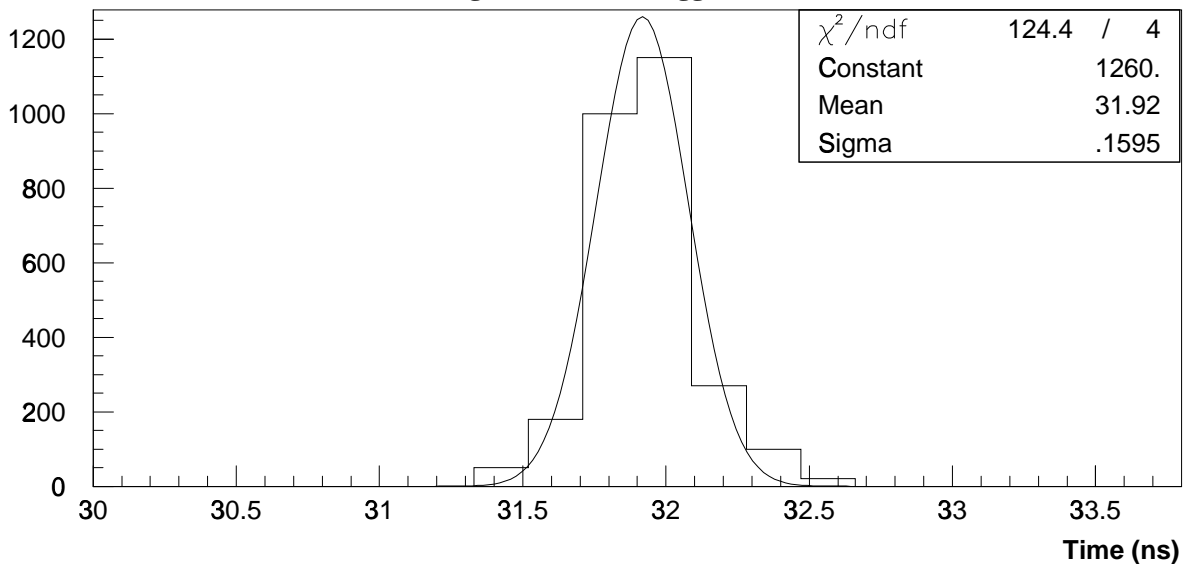
- 2 plastic scintillators produced in Charles University optical workshop
- 2 Philips XP2020 PM's from Prague lab
- mechanical support designed at CU and manufactured in VAKUUM PRAHA (former university mechanical workshop)

Mechanical Overview

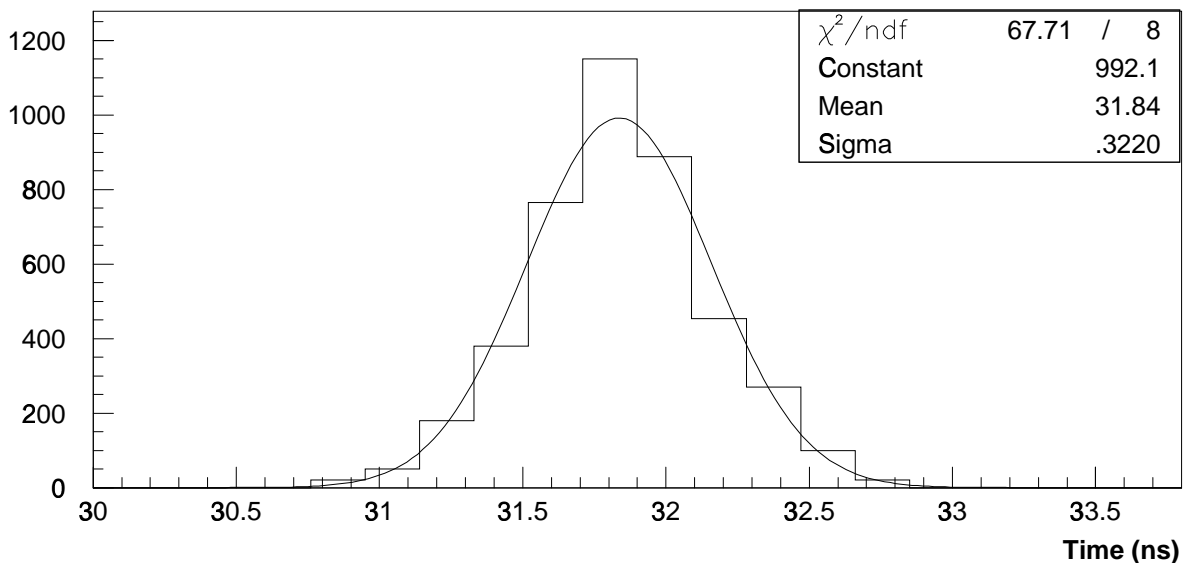


Time Resolution

Timing resolution of trigger scintillators



Constant-fraction Discriminator Tennelec TC 454



Leading-edge Discriminator LeCroy

$\text{Sigma (CFD)} = 0.16 \text{ ns}$