Measurement of scattered electrons from trapped Xe ions

Wang Shuo
Tohoku University
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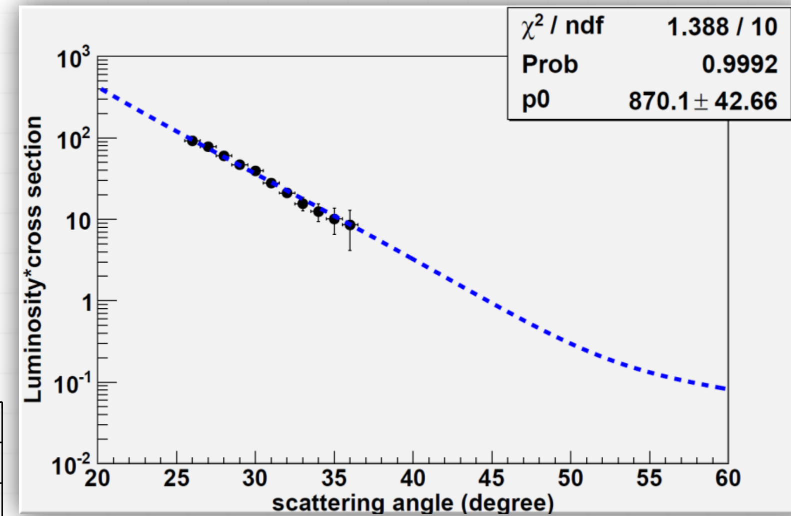
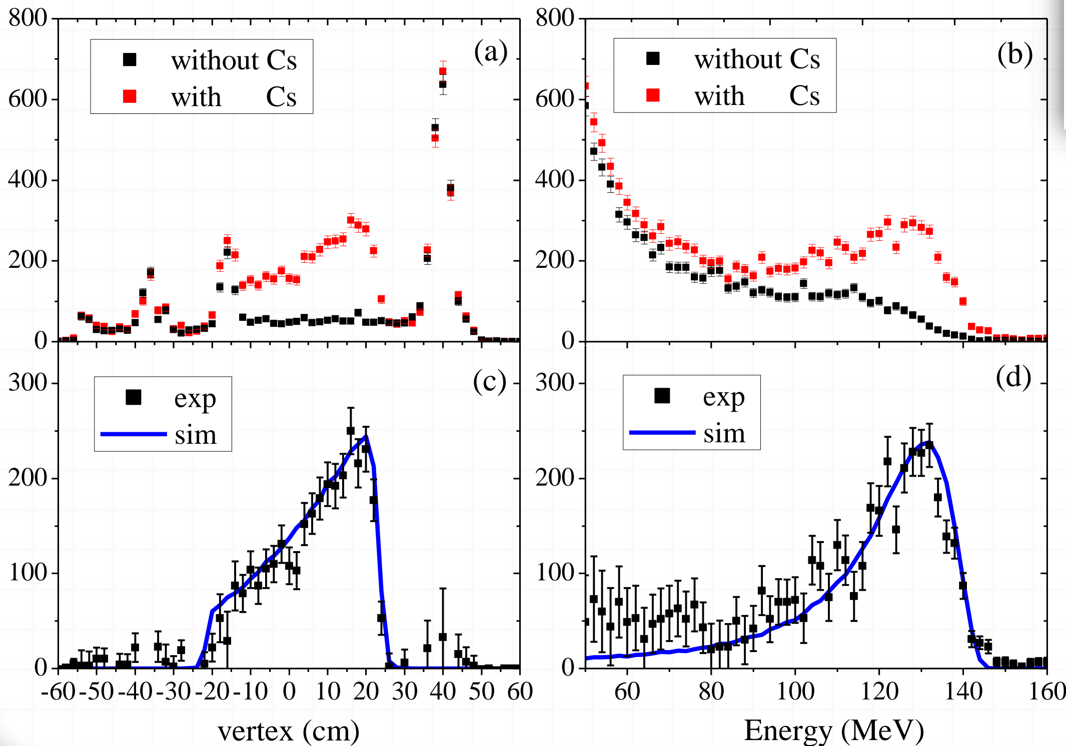
Results of trapped Cs ion experiment

The design value of SCRIT region is 50 cm (-25 cm ~ 25 cm).

In the simulation, the trapped Cs ions are uniformly distributed.

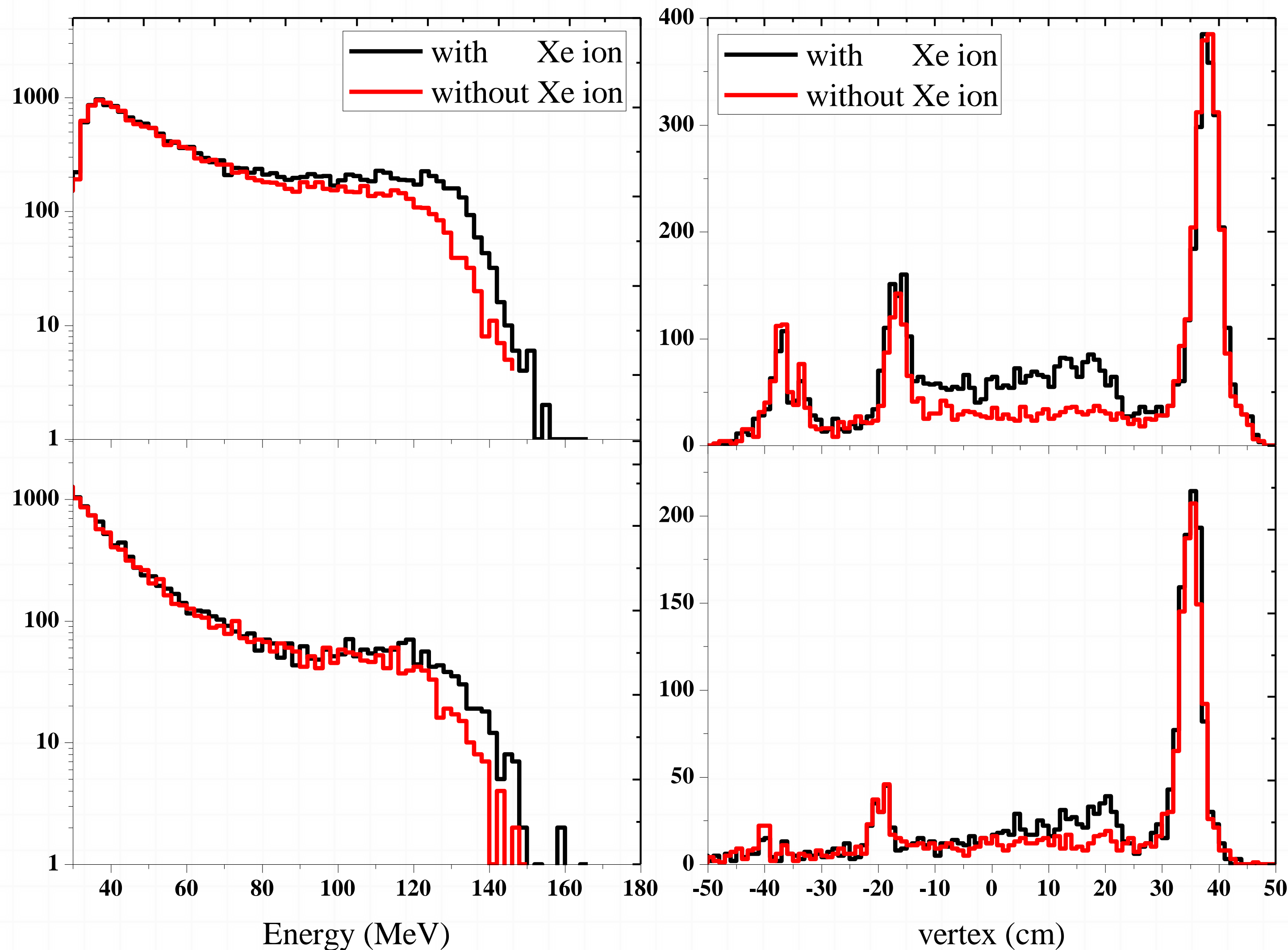




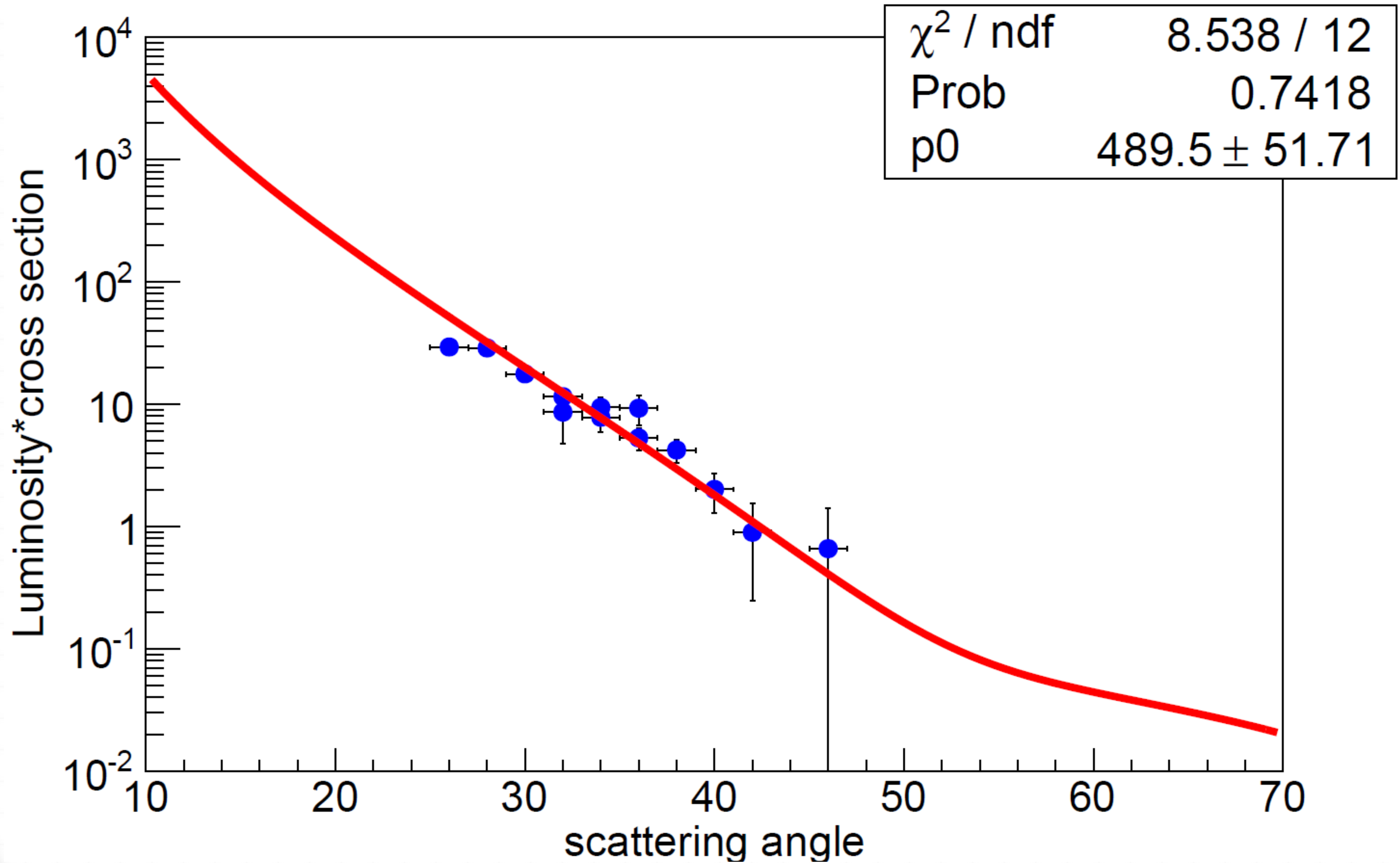
L~10^{27} $cm^{-2}s^{-1}$@200mA

Results of trapped Xe ion experiment

Measurement time ~3.8 hours **CsI: 1400 and BaF_2: 270**

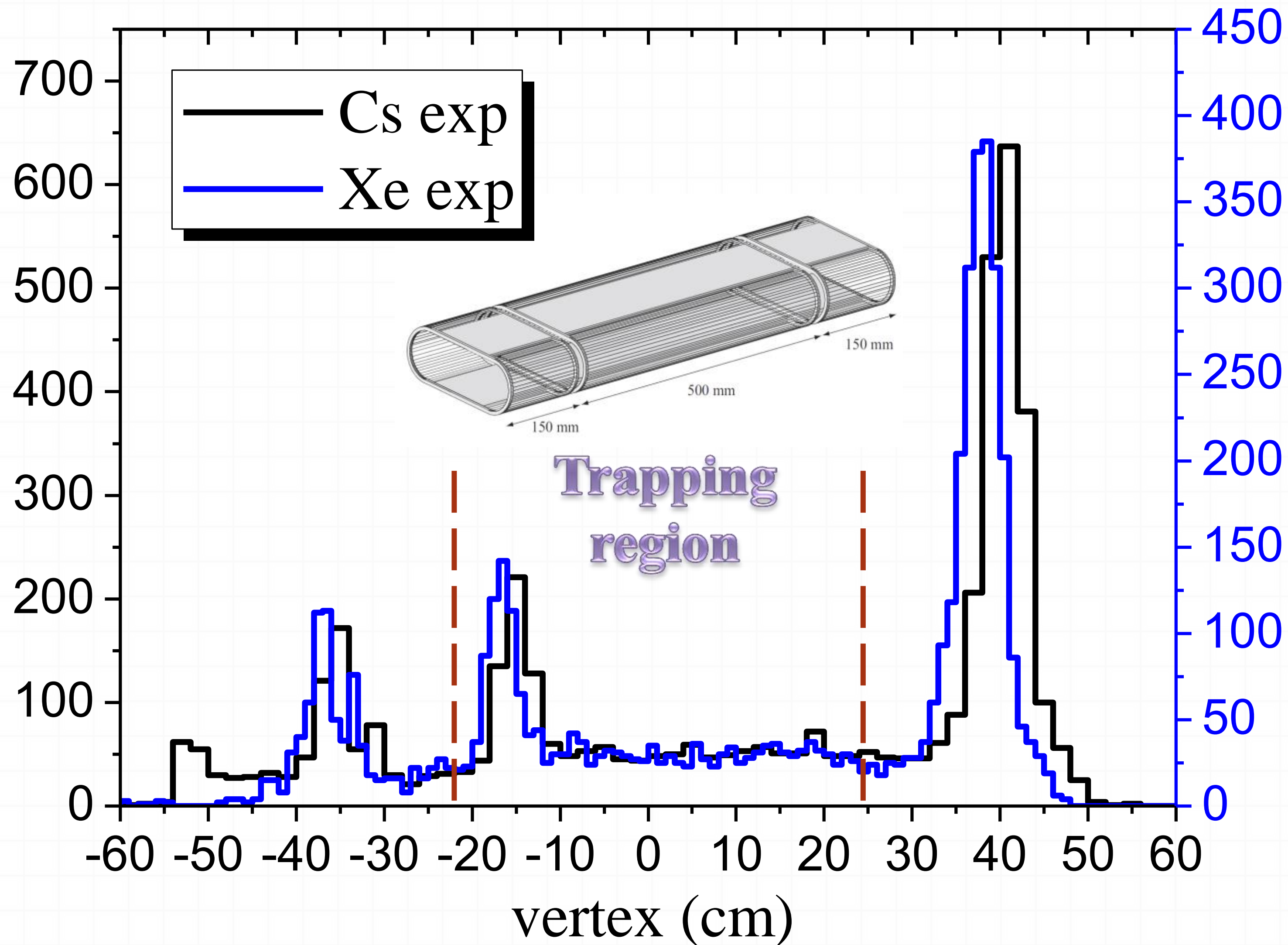


Angular distribution of ^{132}Xe

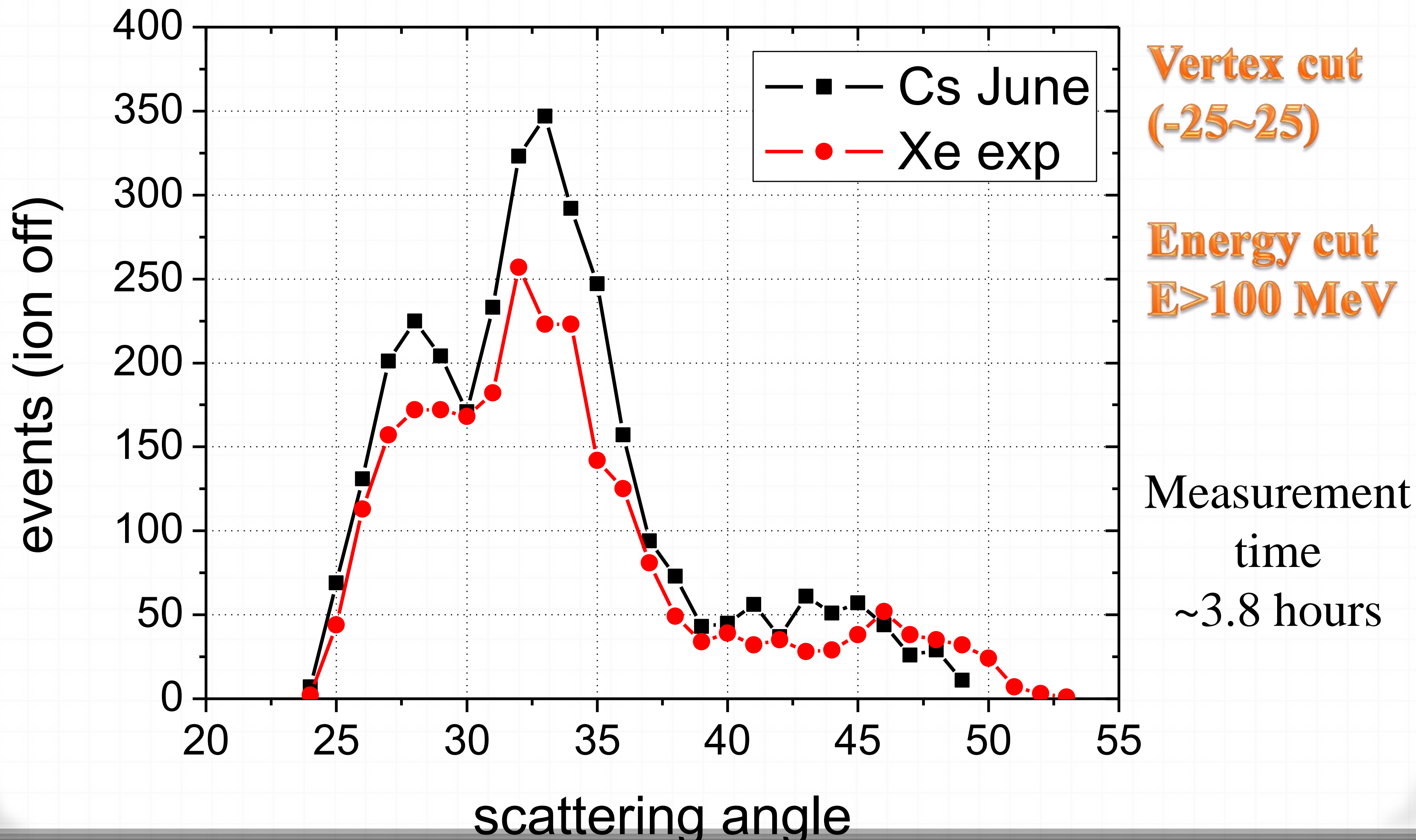


Background study of scattered electrons in Cs and Xe experiments

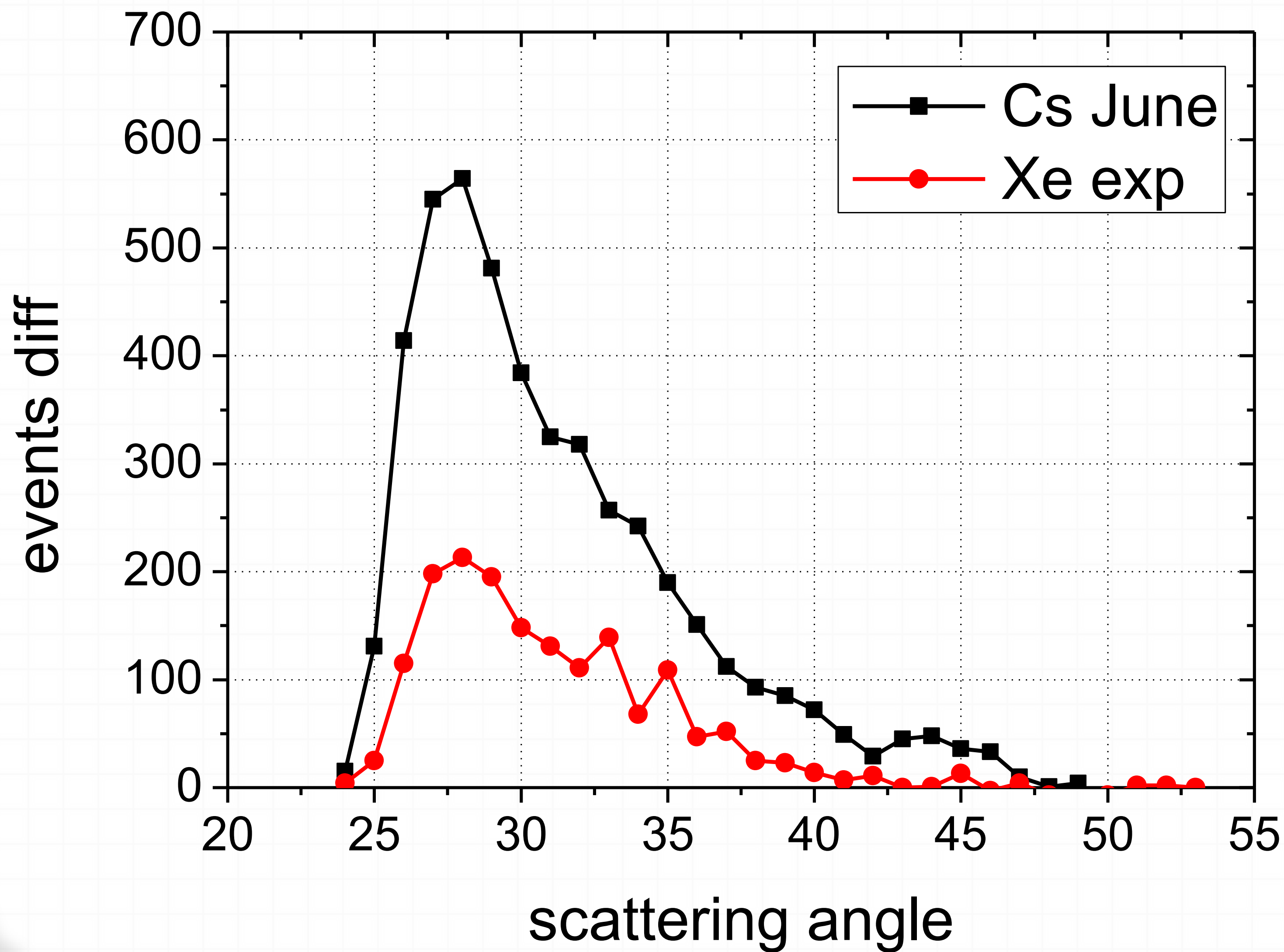
Vertex distribution without ion trapping



Background compare between Cs and Xe experiment



Elastic events compare between Cs and Xe experiment

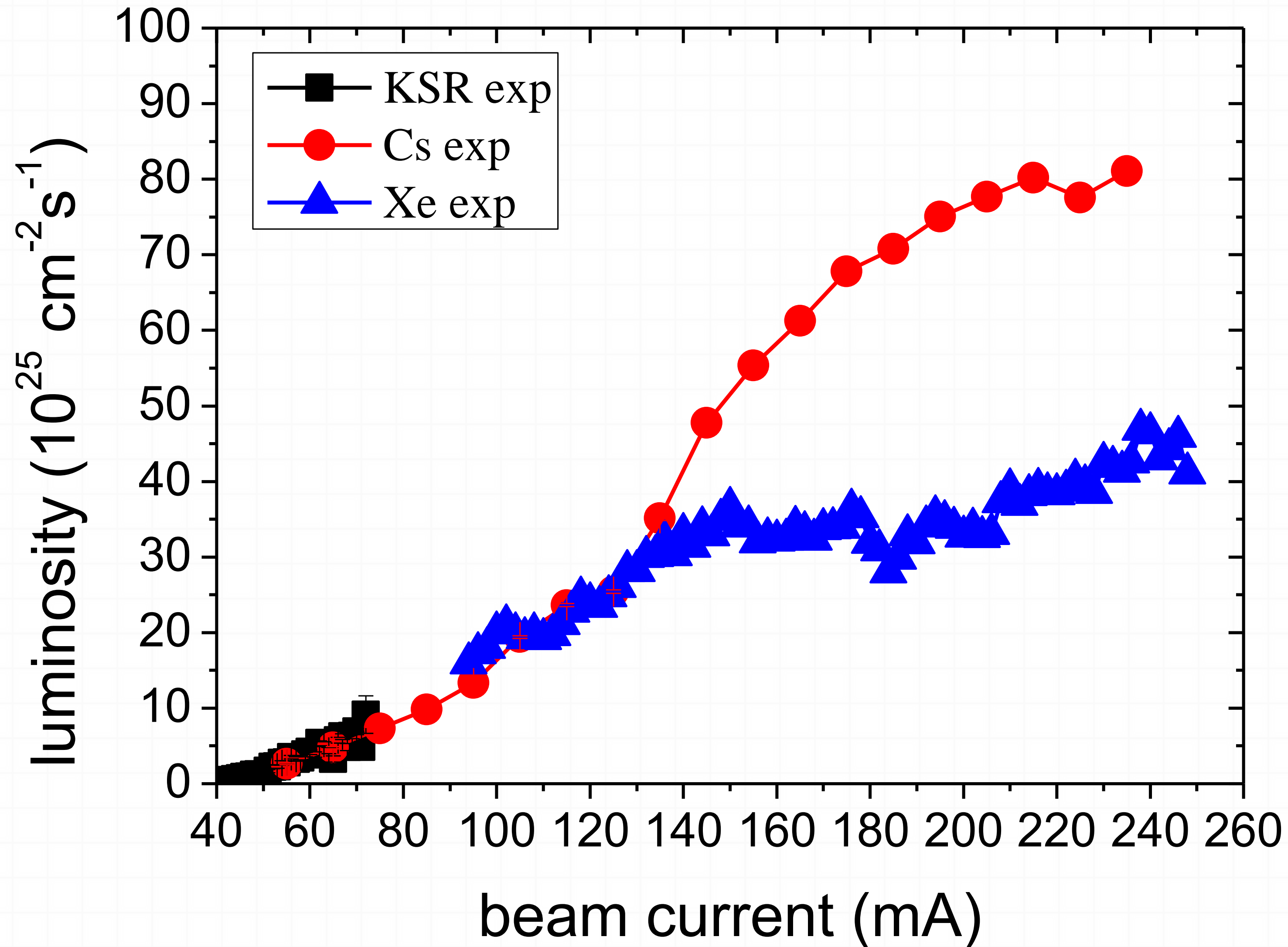


Vertex cut (-25~25)

Energy cut E>100 MeV

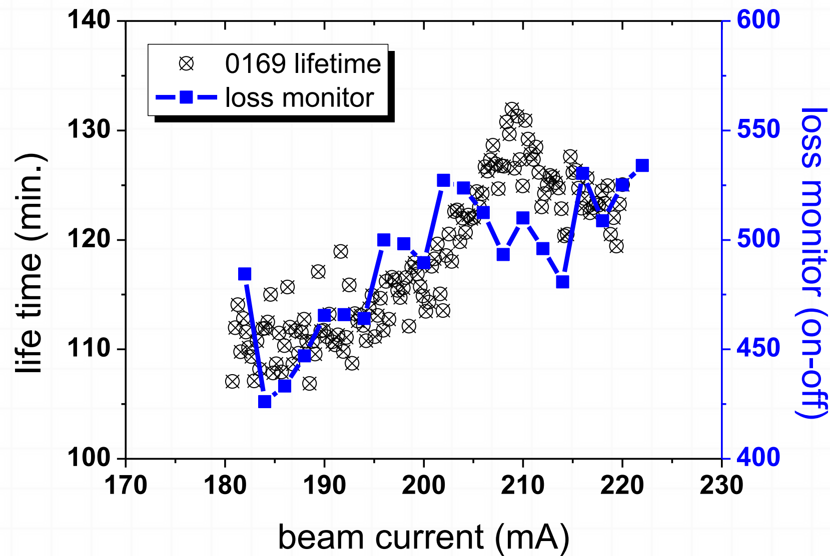
Measurement time ~3.8 hours

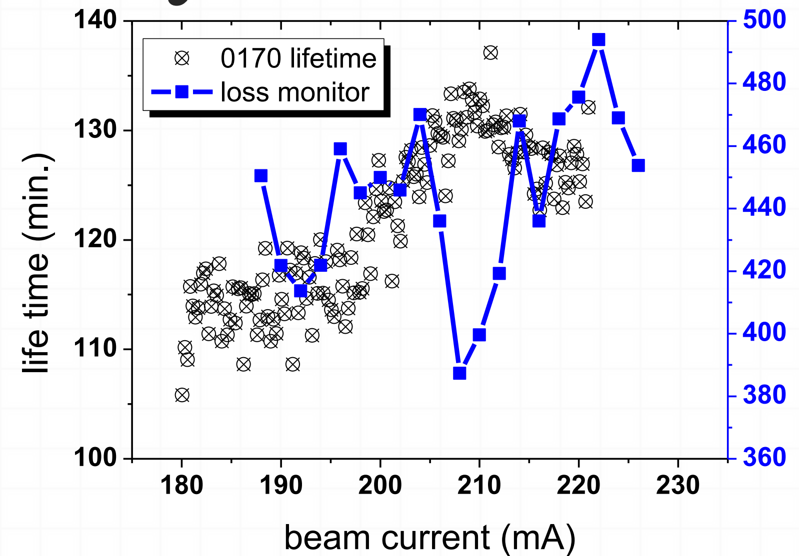
Luminosity achieved in SCRIT R&D experiments

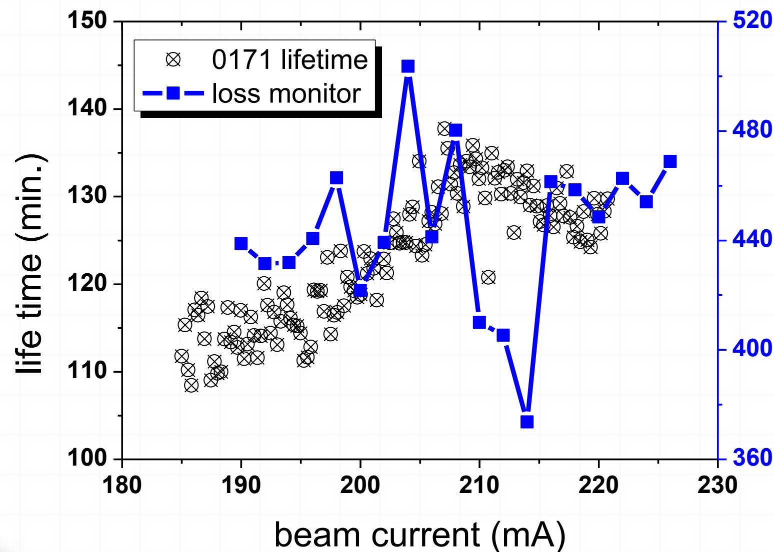


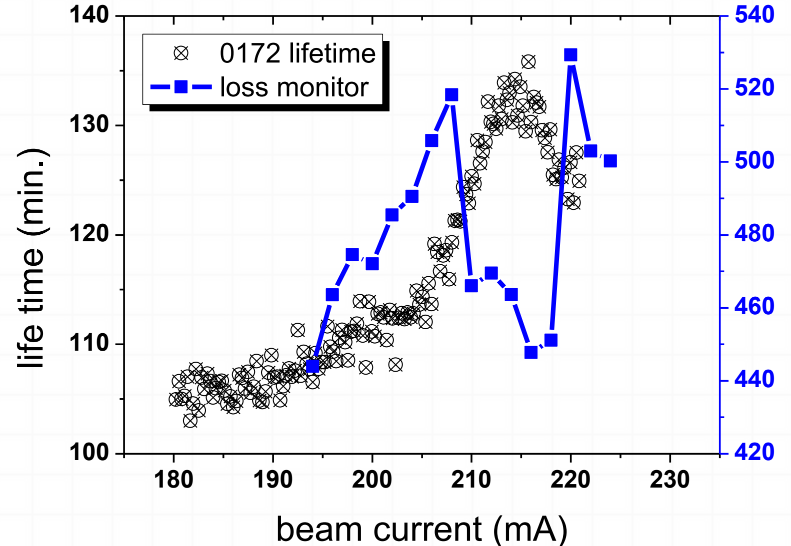
Study of electron beam condition for higher luminosity

Electron beam condition with luminosity

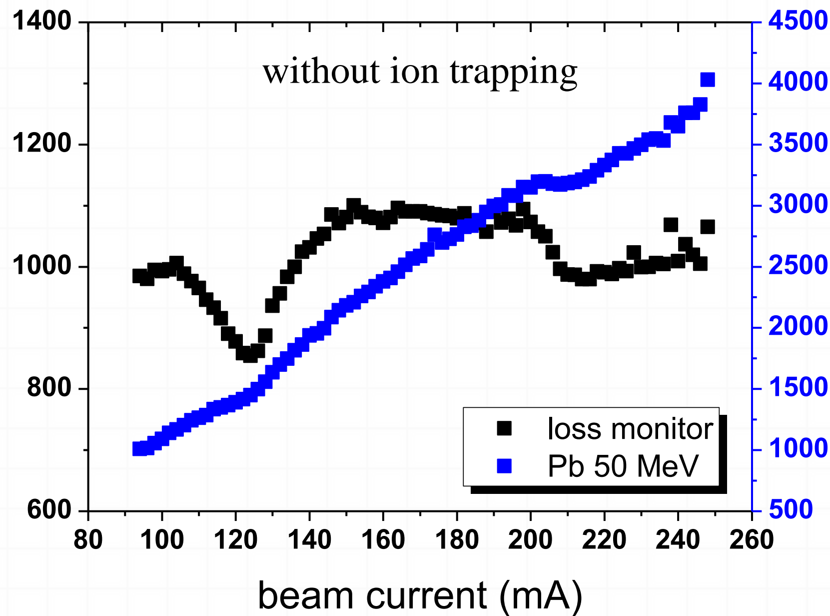


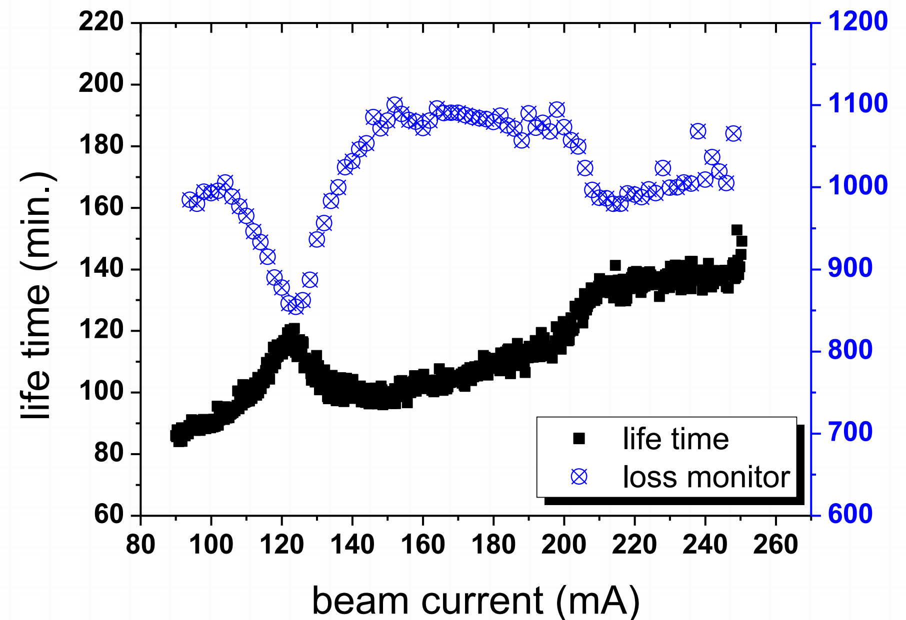


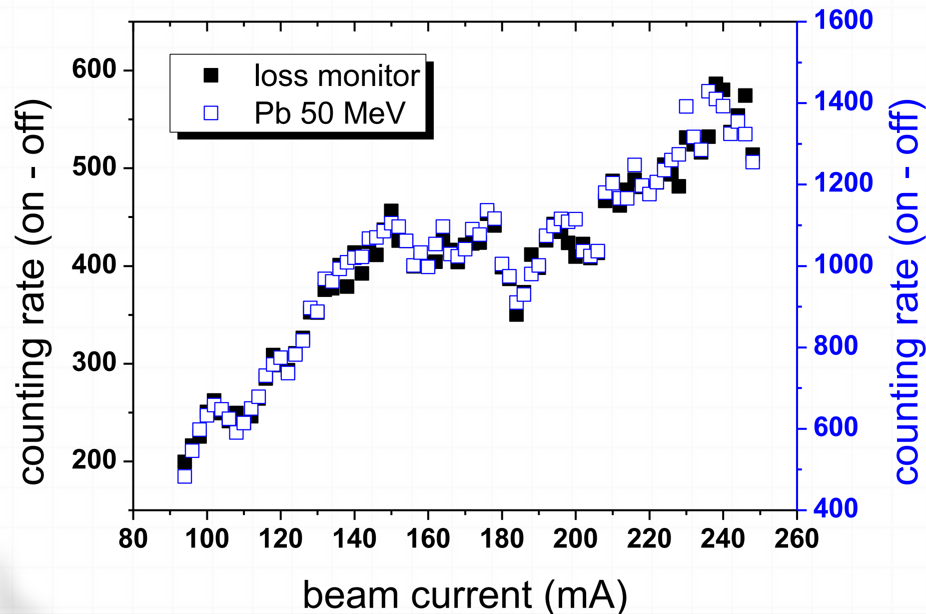


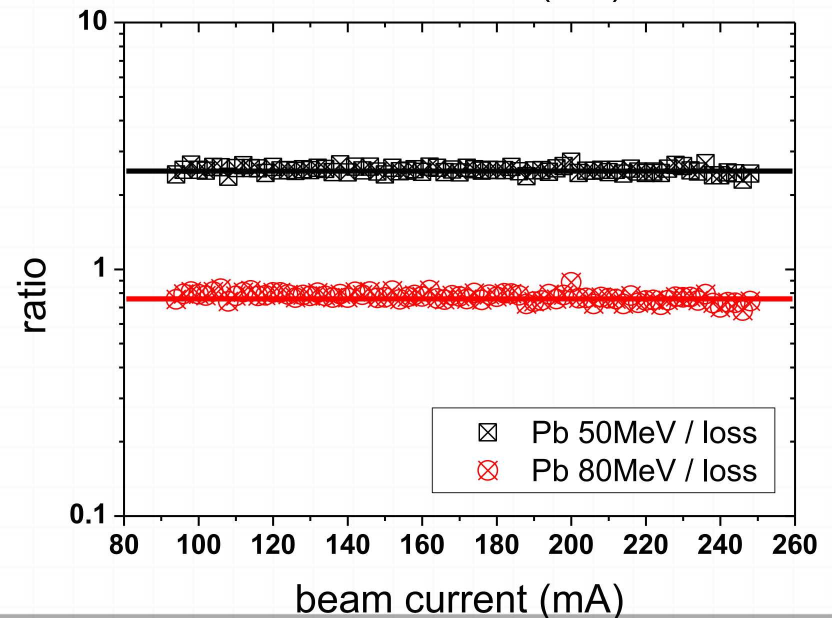


loss monitor and Pb detector









Pb detector and beam current