

CERN
May 13th 2009

UA9 Simulation Meeting

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What we have

What we have

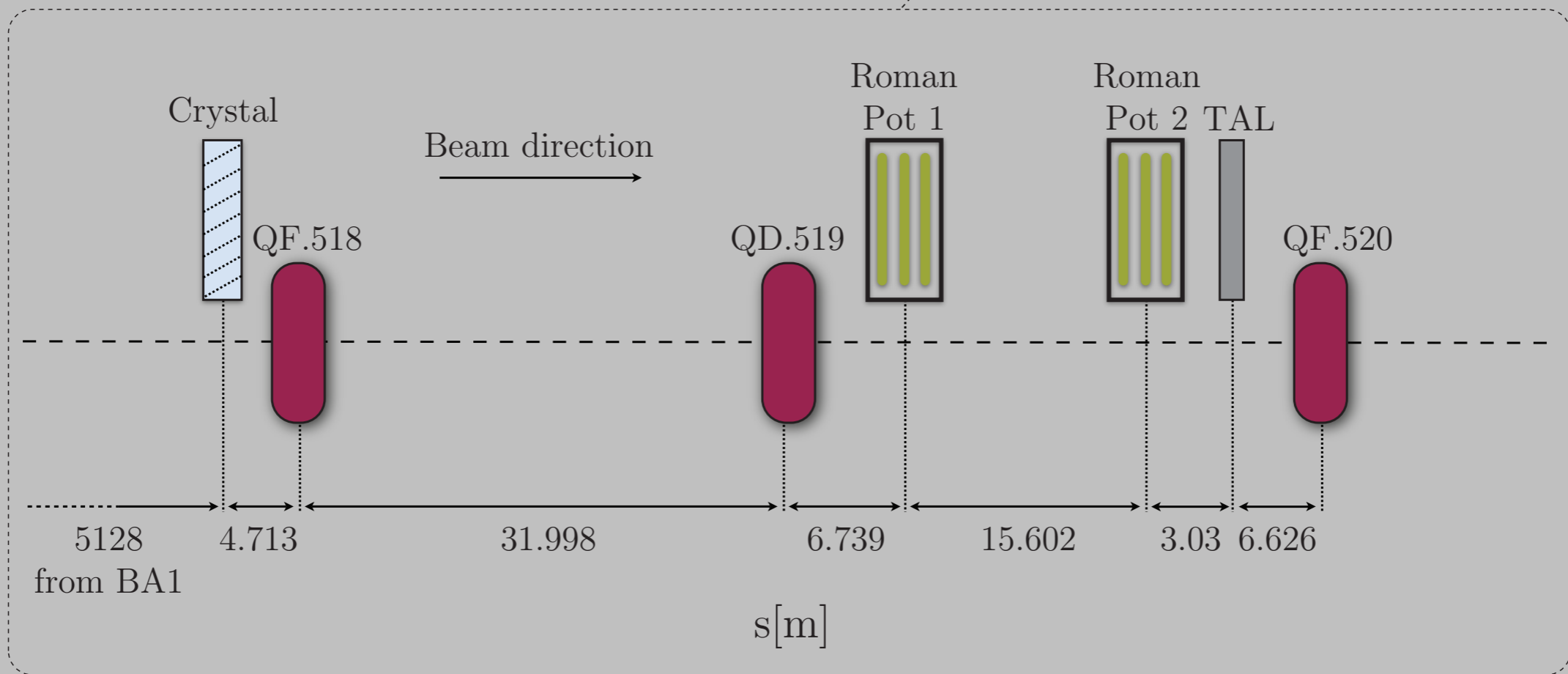
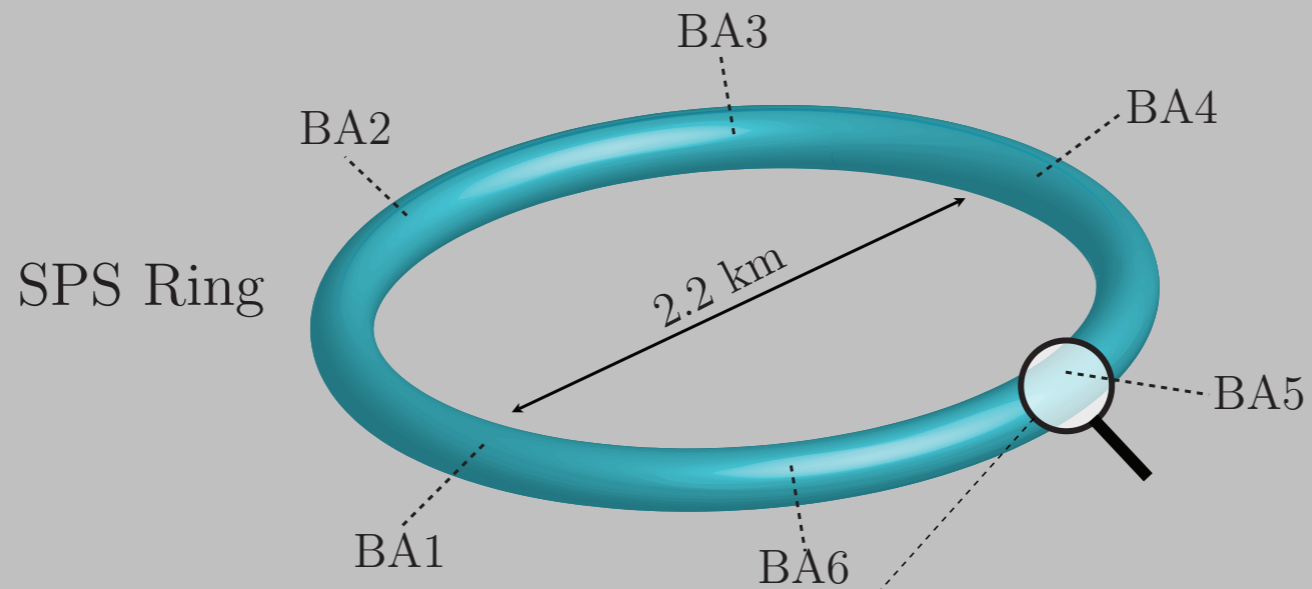
Tracking code for SPS based on linear machine (6x6 matrices) plus nonlinear thin elements for sextupoles and octupoles.
(Emanuele Laface)

Crystal emulator based on evaluation of probability.
(Said Hassan)

Roman pot multiple scattering.
(Davide Bolognini)

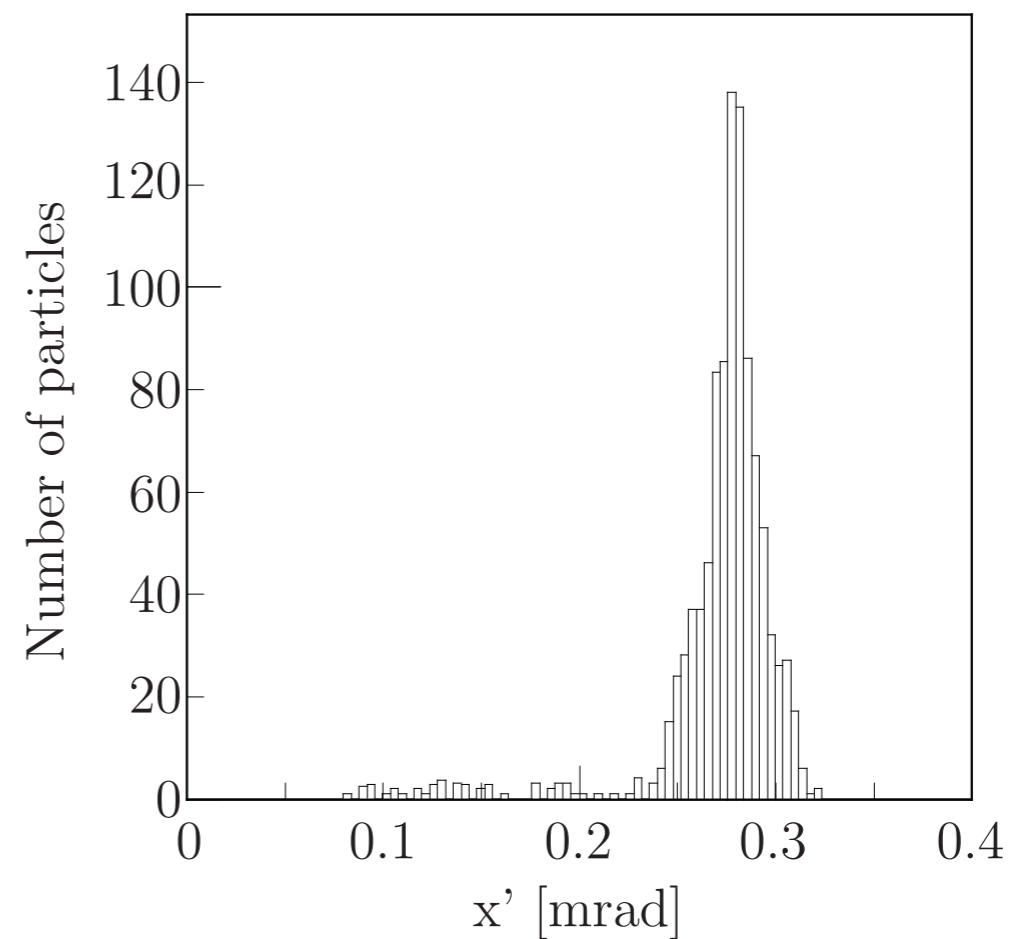
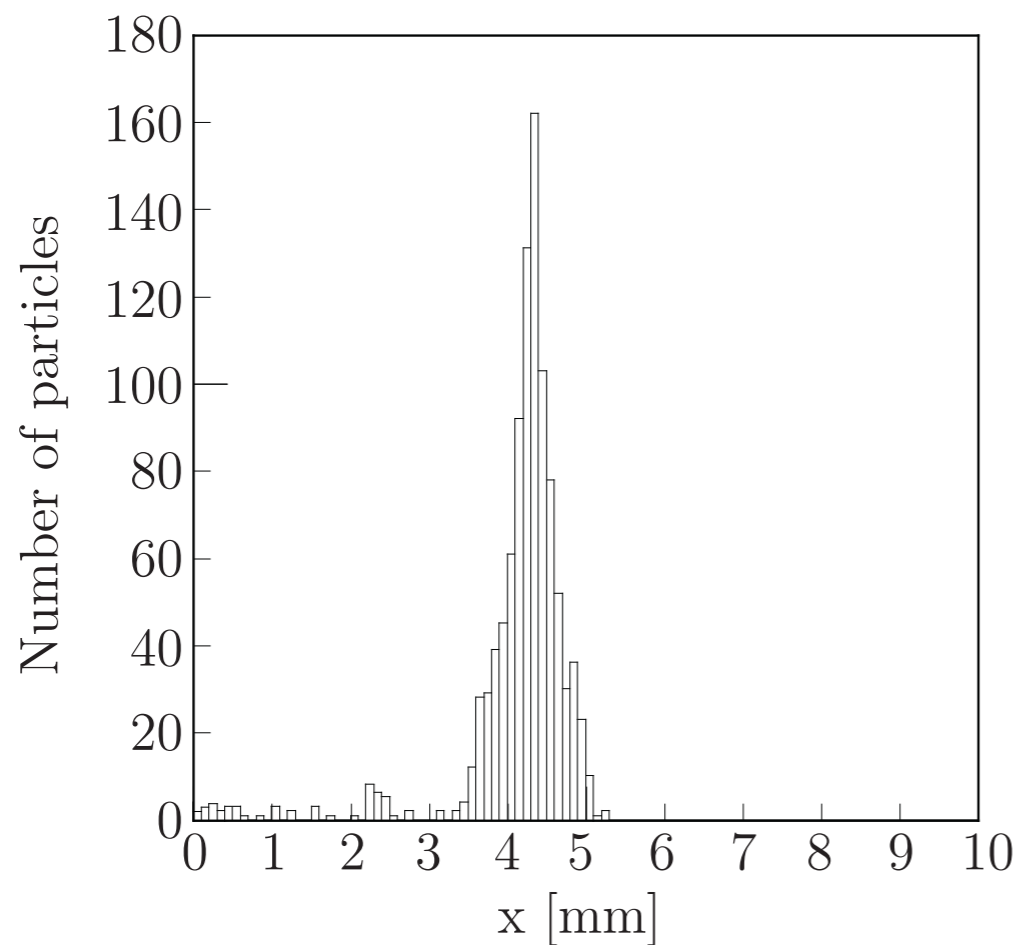
Dumper for emittance grow-up.
(Gianluca Cavoto)

UA9 Layout



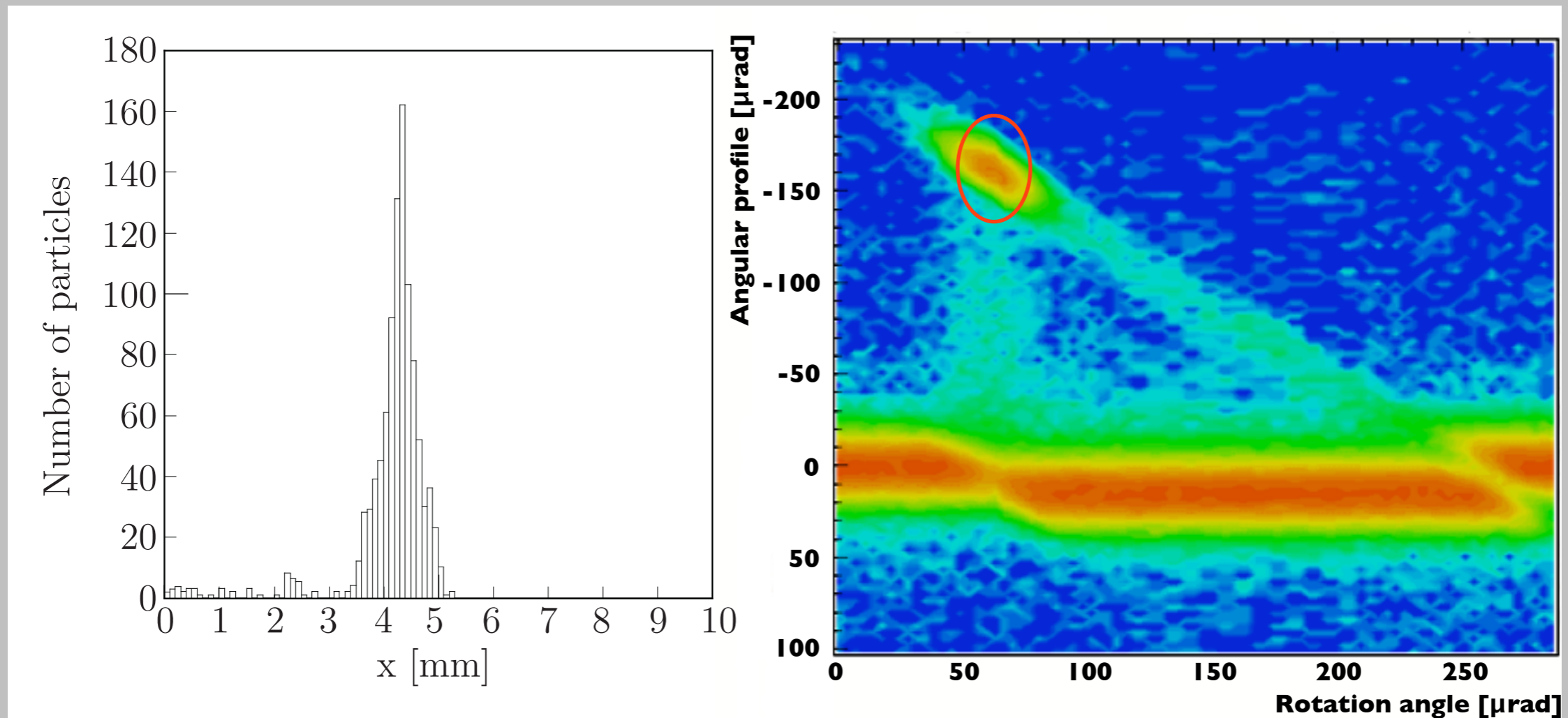
UA9 Simulation results

Single turn simulation, signal on Roman Pot I.
Crystal is aligned to work in channeling mode.

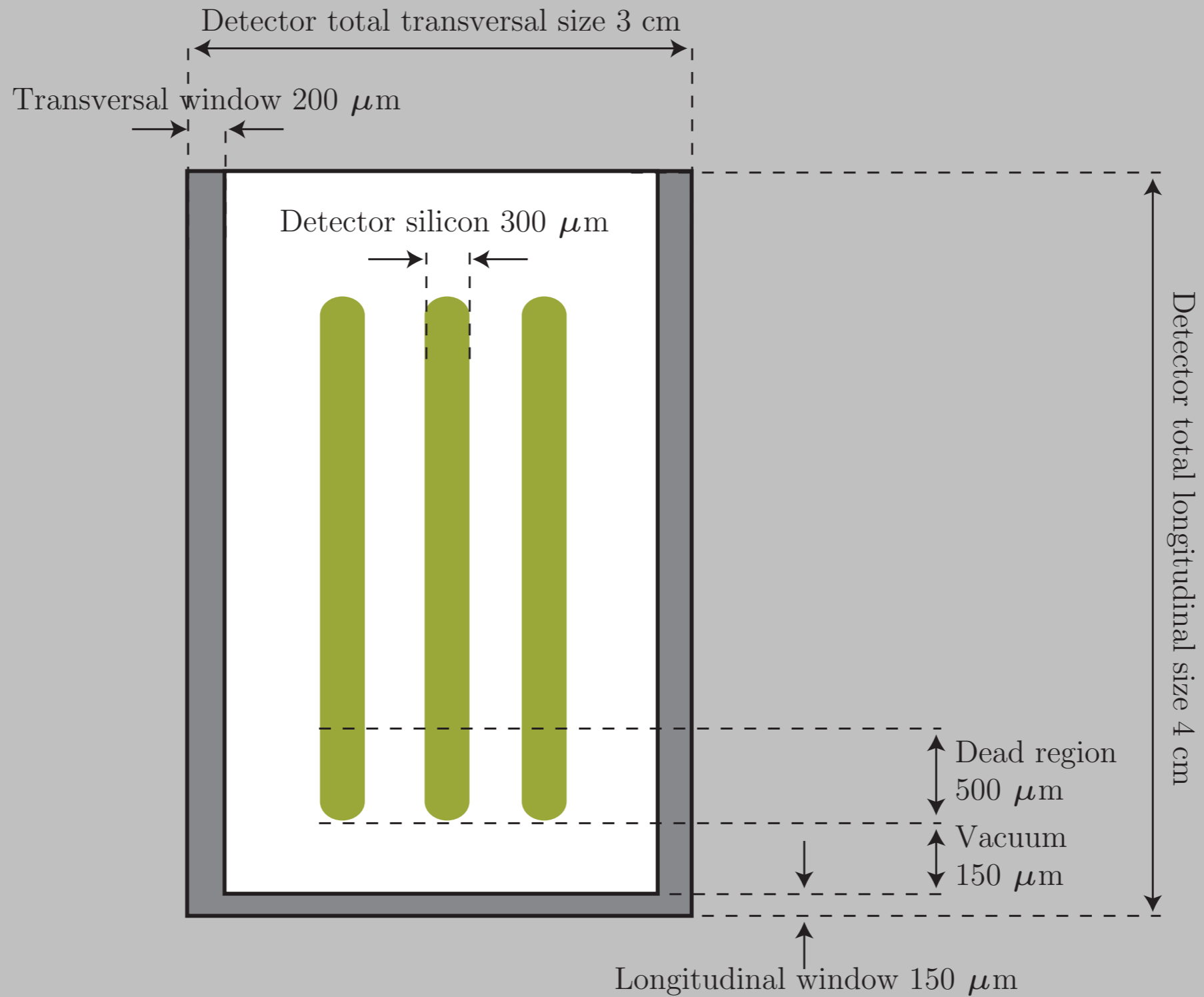


UA9 Simulation results

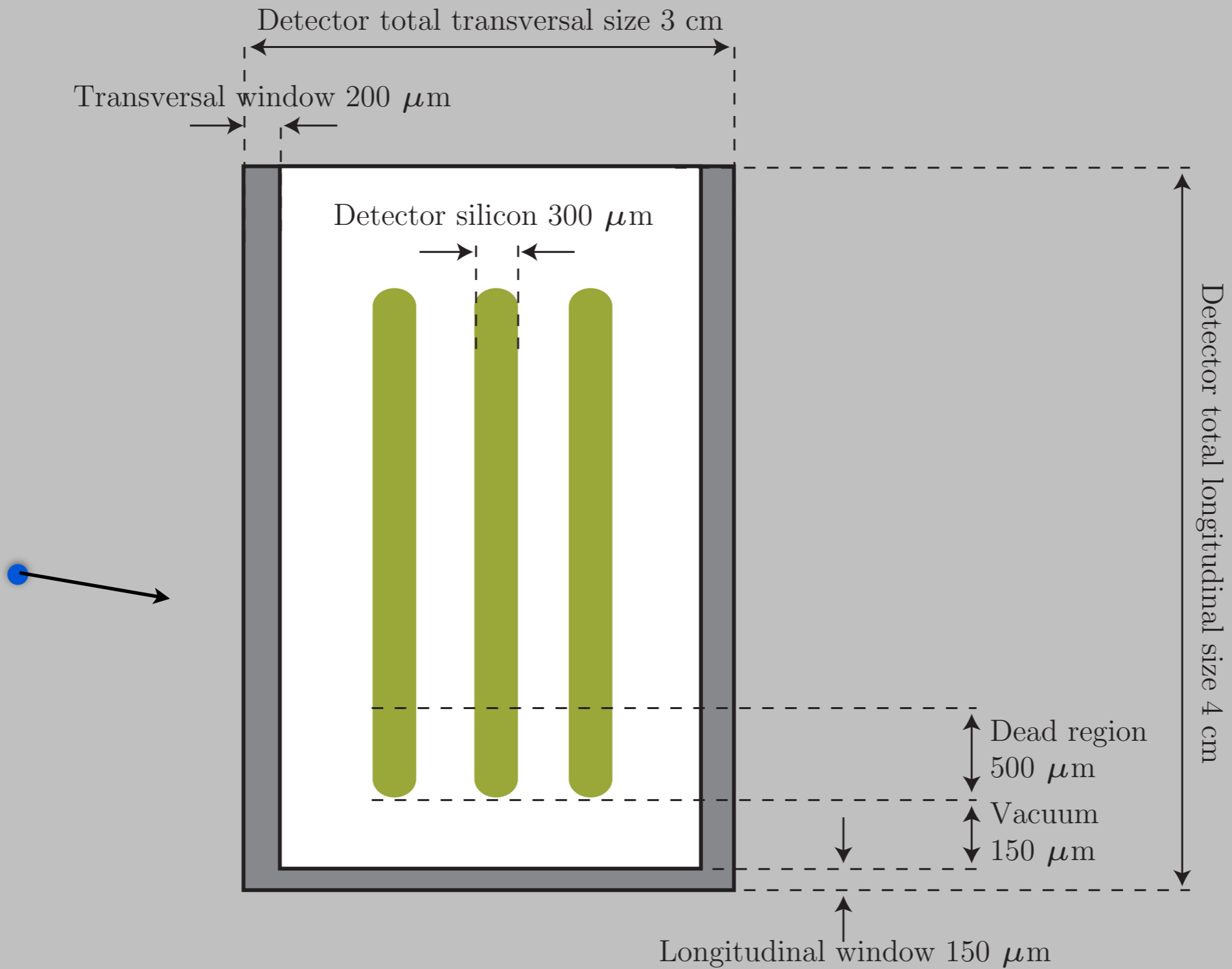
Single turn simulation, signal on Roman Pot I.
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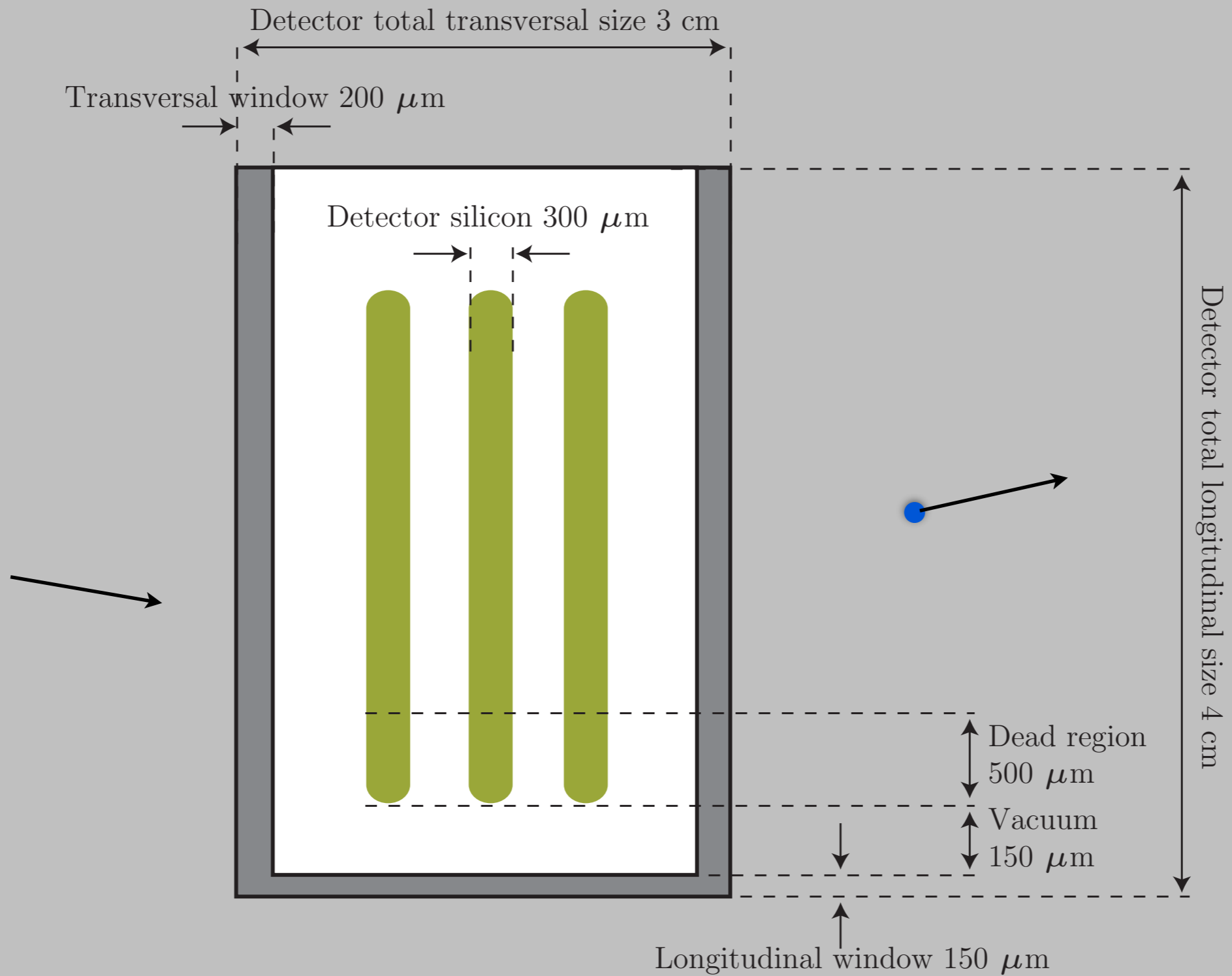
Roman Pot



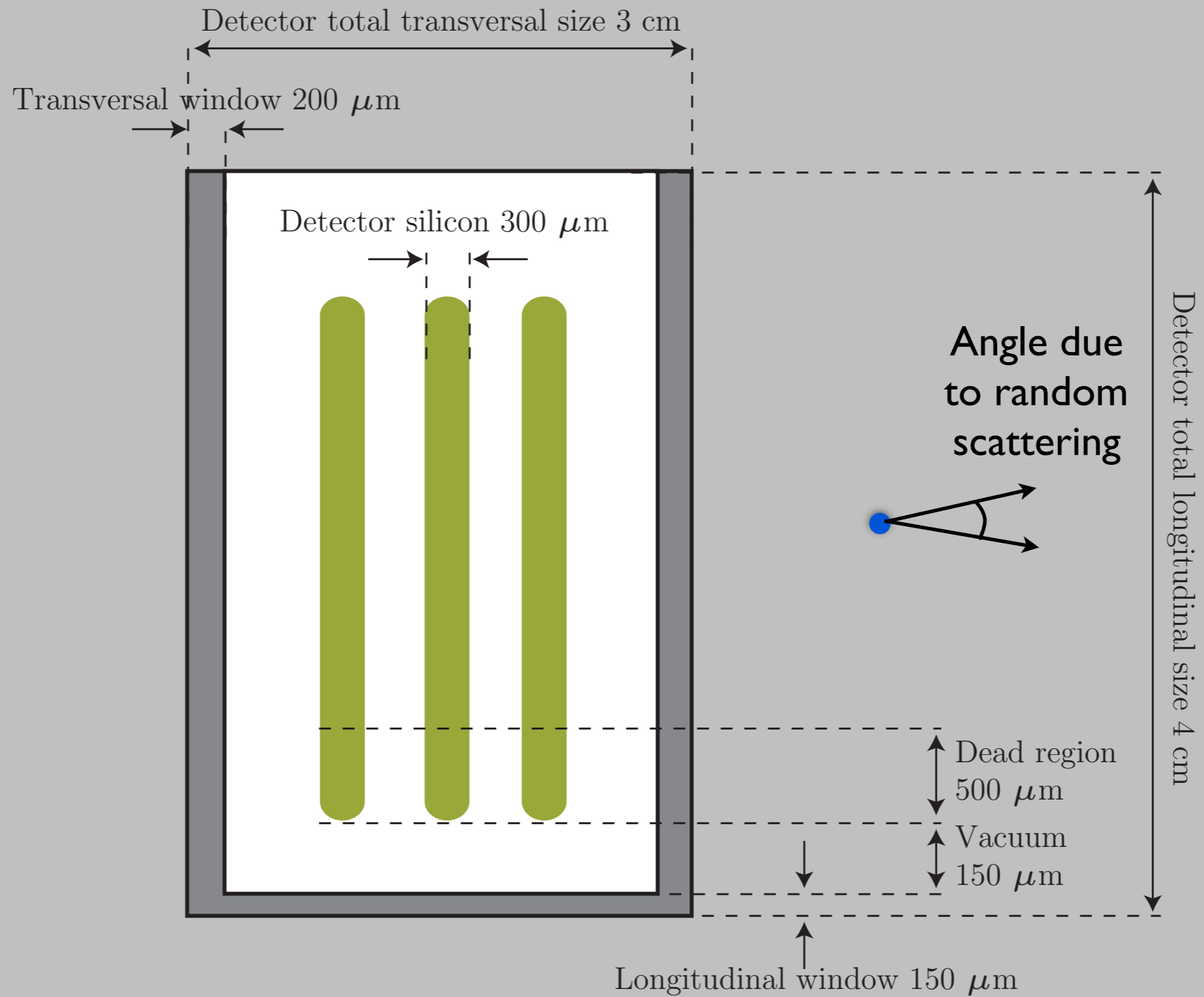
Roman Pot



Roman Pot



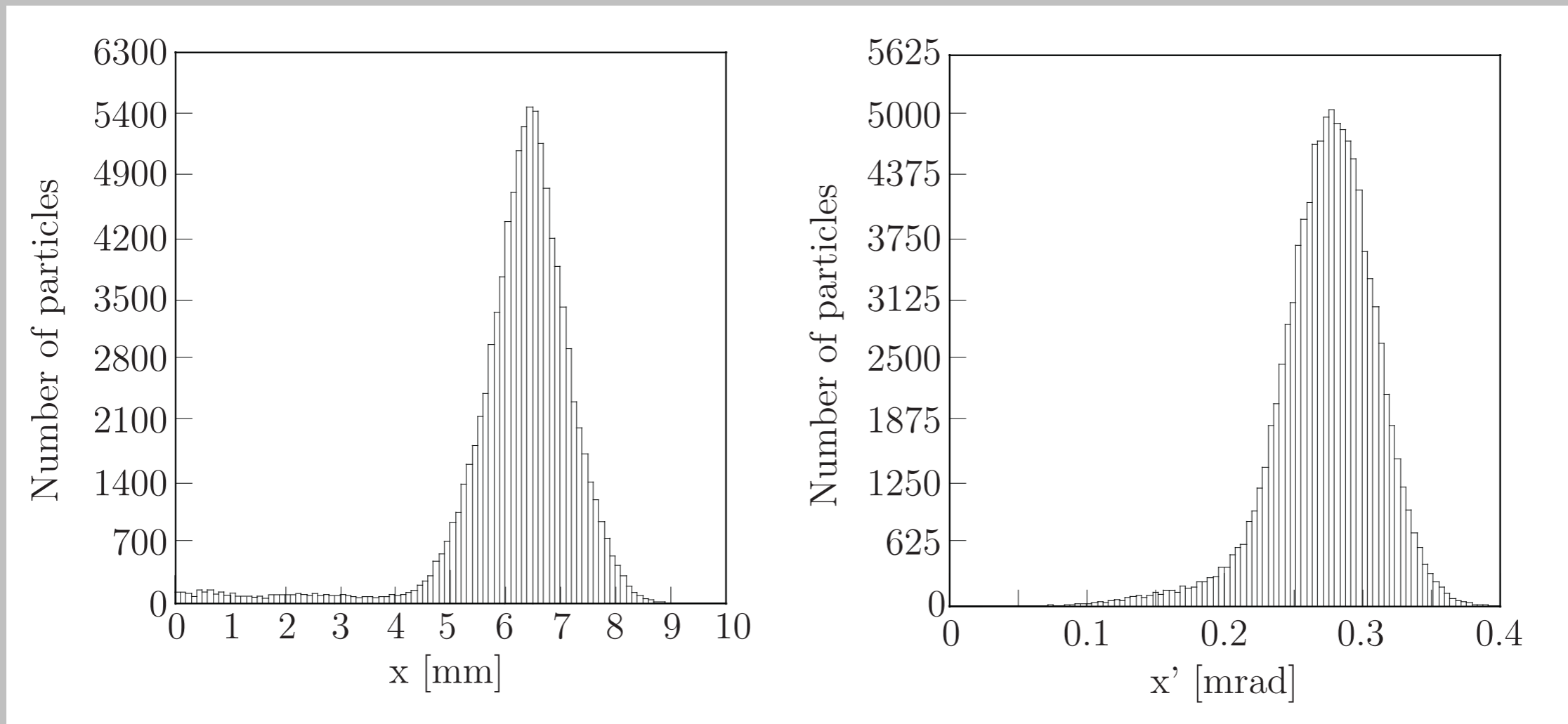
Roman Pot



UA9 Simulation results

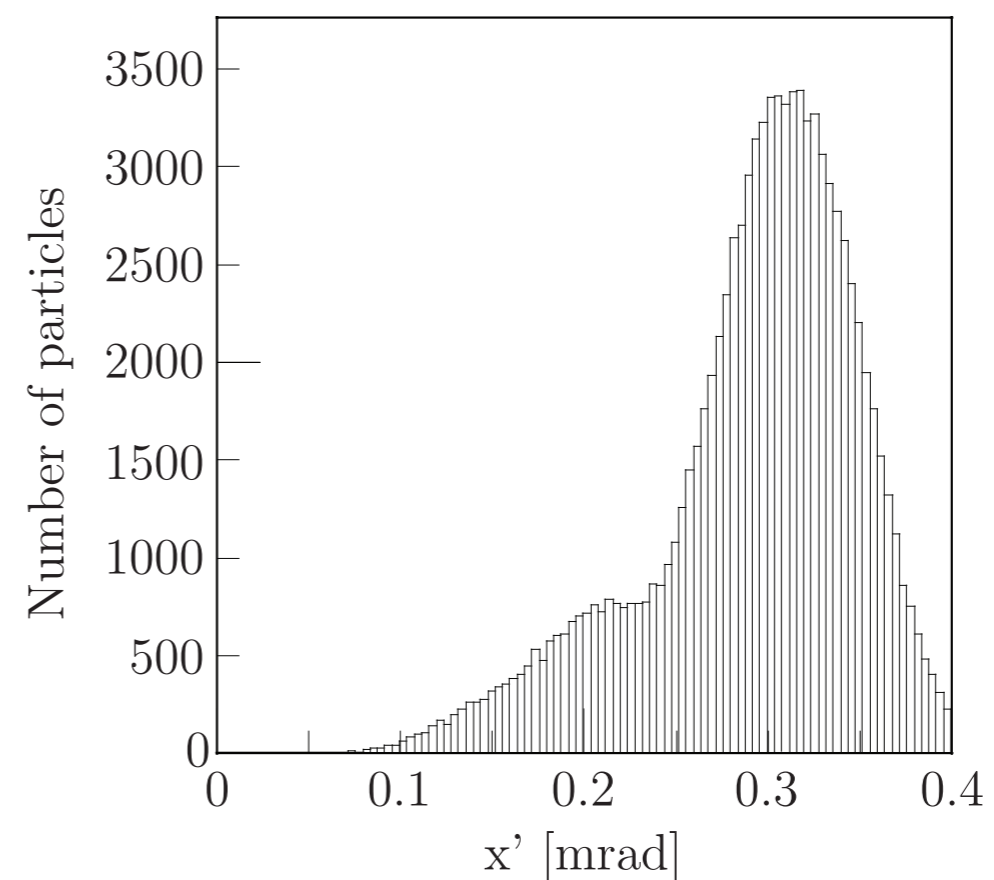
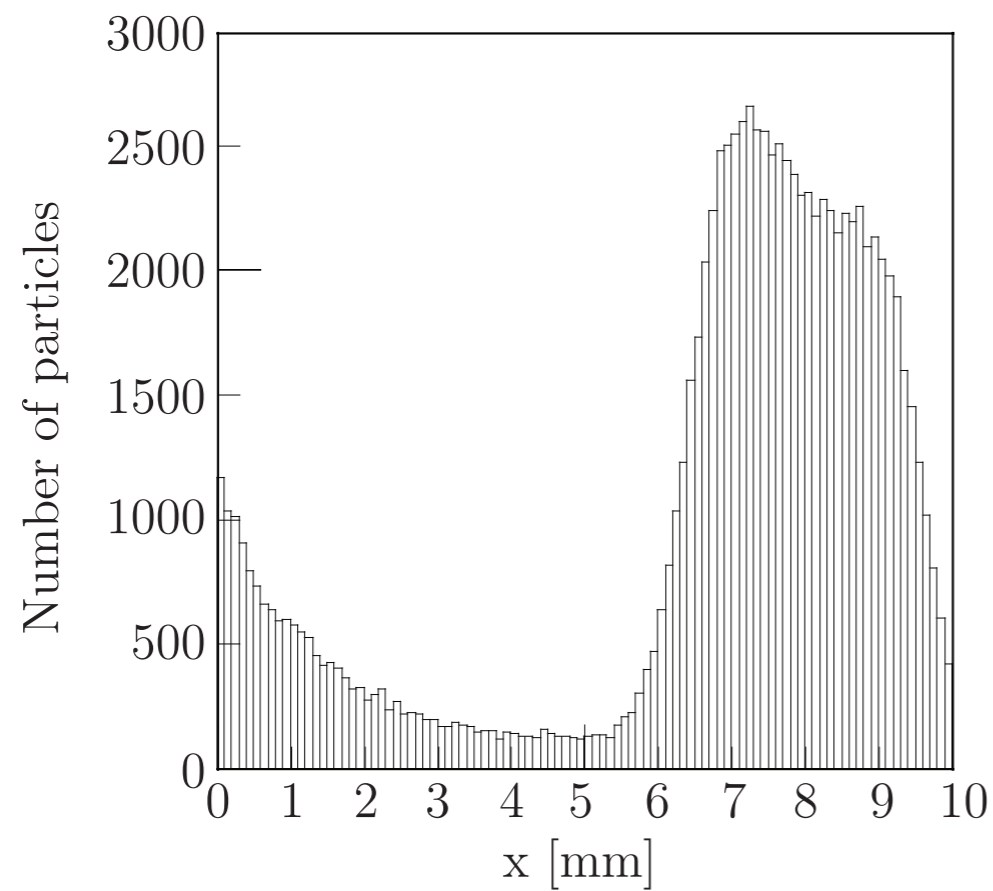
Multi turn simulation, signal on TAL.

Crystal is aligned to work in channeling mode.



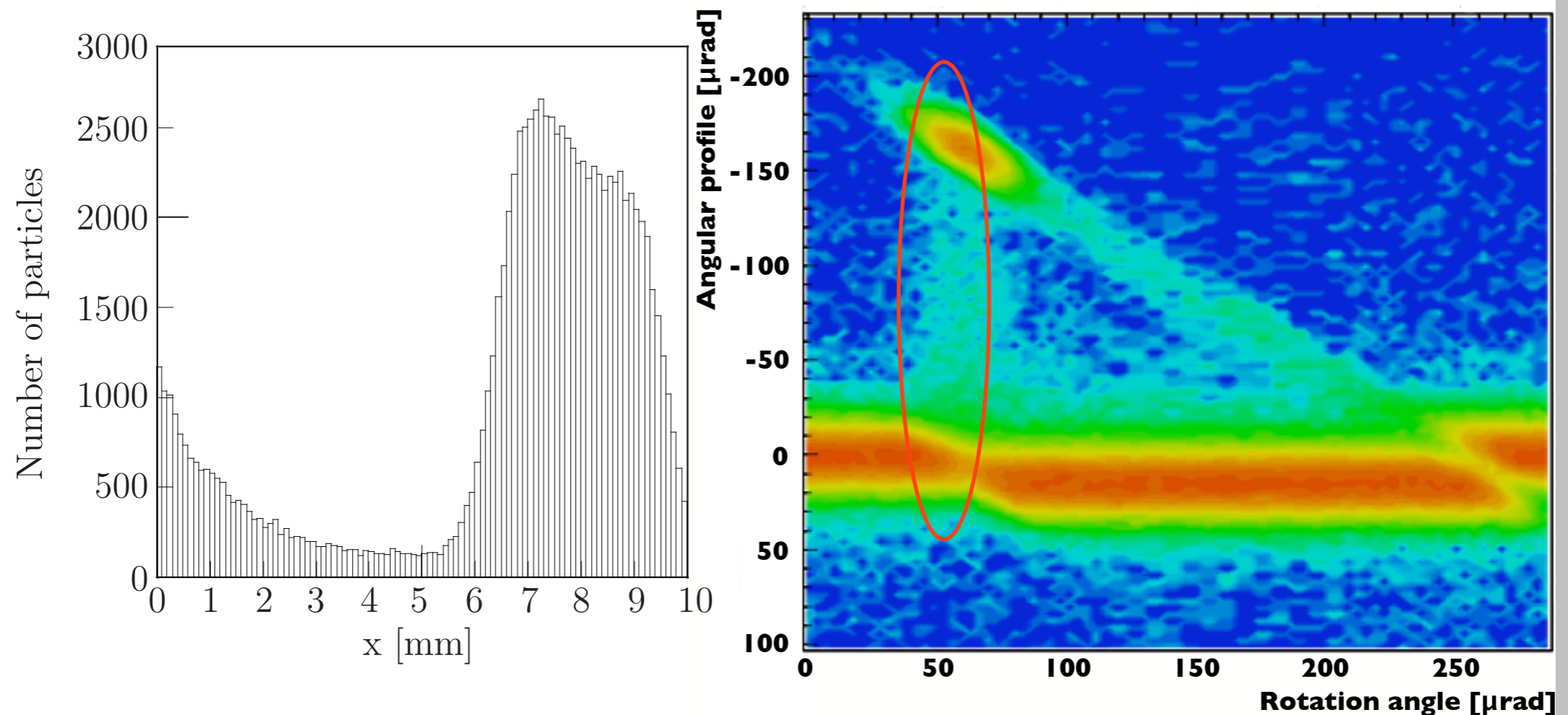
UA9 Simulation results

Multi turn simulation, signal on TAL.
Crystal is misaligned of $20\ \mu\text{rad}$ with respect to the channeling.



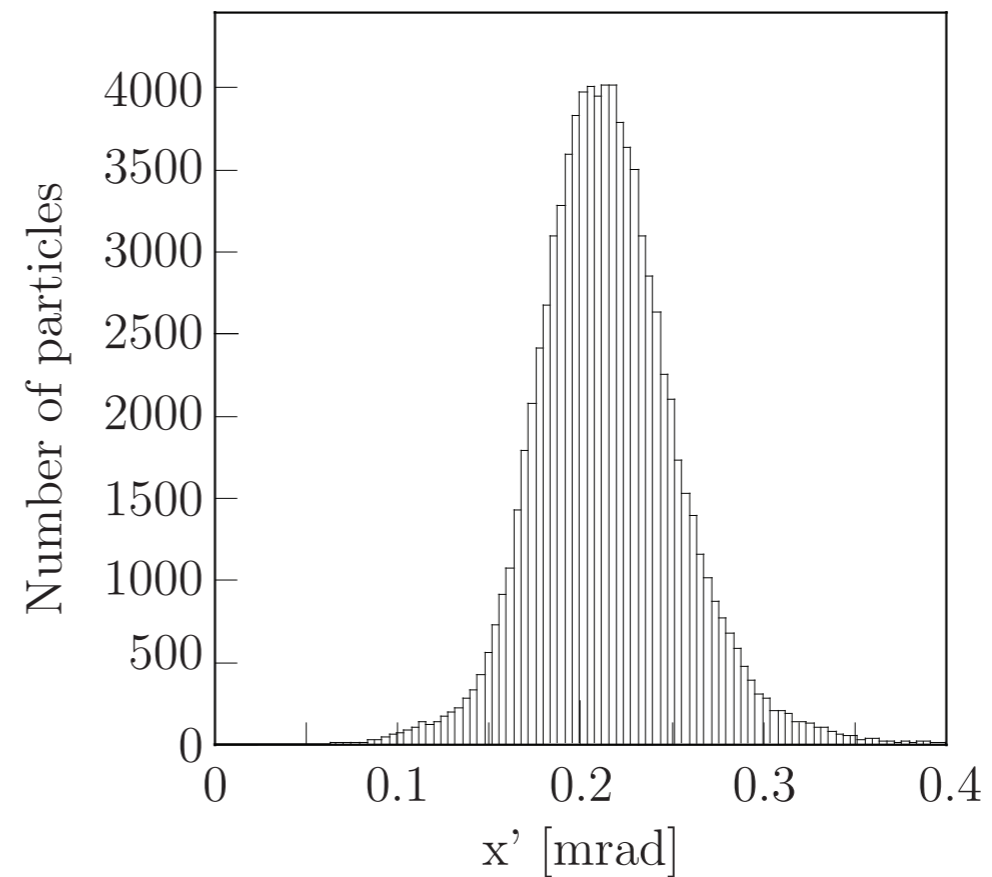
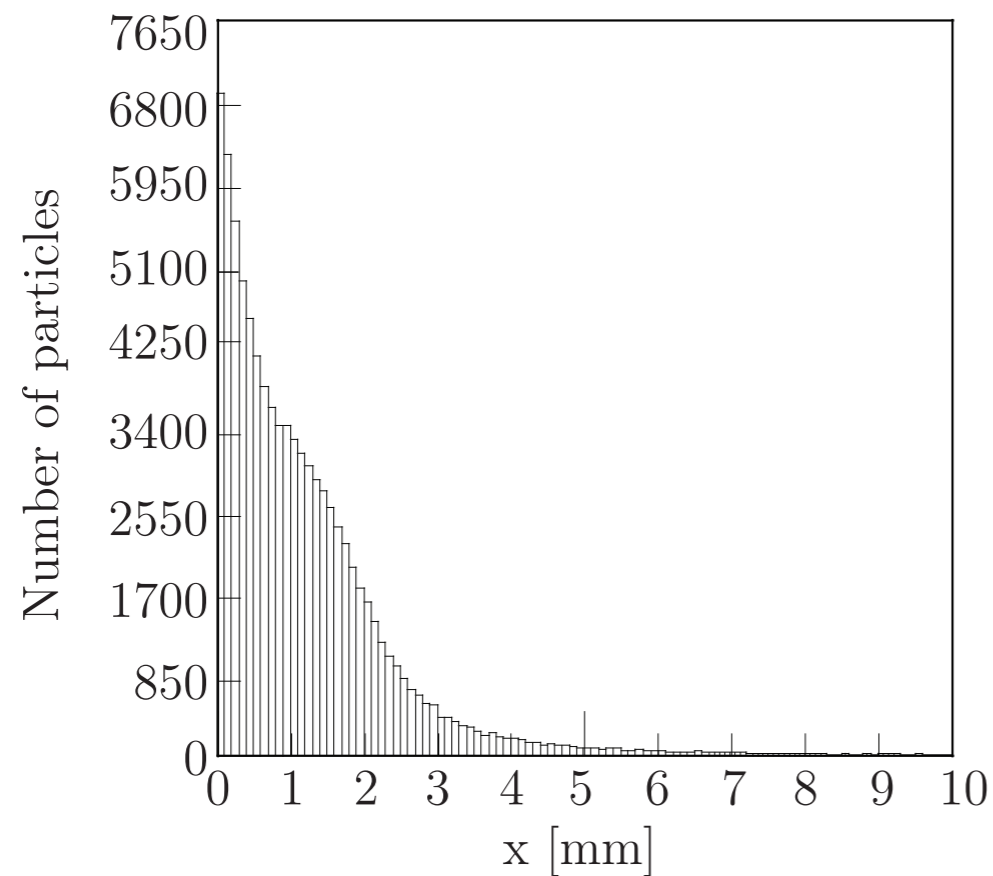
UA9 Simulation results

Multi turn simulation, signal on TAL.
Crystal is misaligned of $20 \mu\text{rad}$ with respect to the channeling.



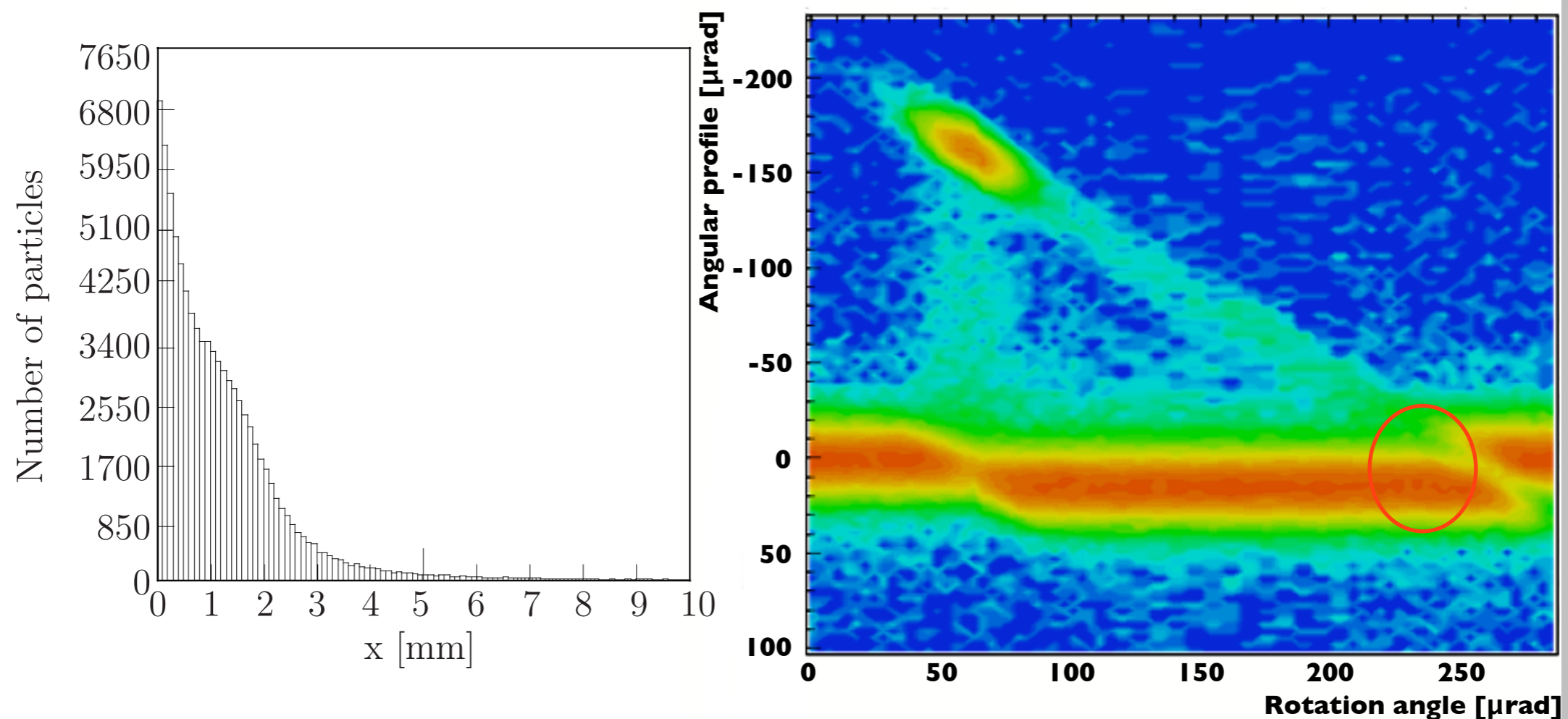
UA9 Simulation results

Multi turn simulation, signal on TAL.
Crystal is rotated of $-200 \mu\text{rad}$ with respect to the channeling, the effect of volume reflection is visible.

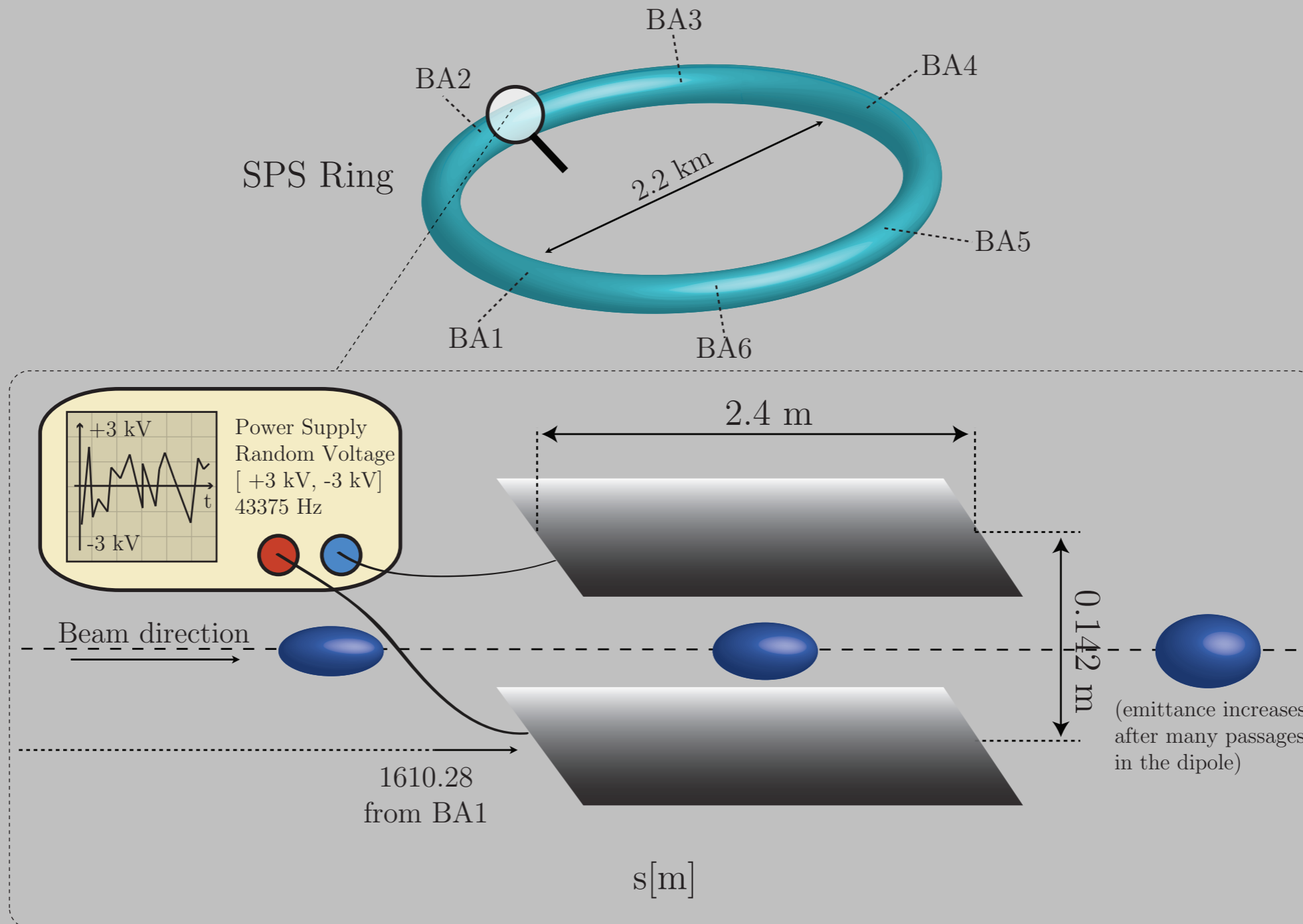


UA9 Simulation results

Multi turn simulation, signal on TAL.
Crystal is rotated of $-200 \mu\text{rad}$ with respect to the channeling, the effect of volume reflection is visible.

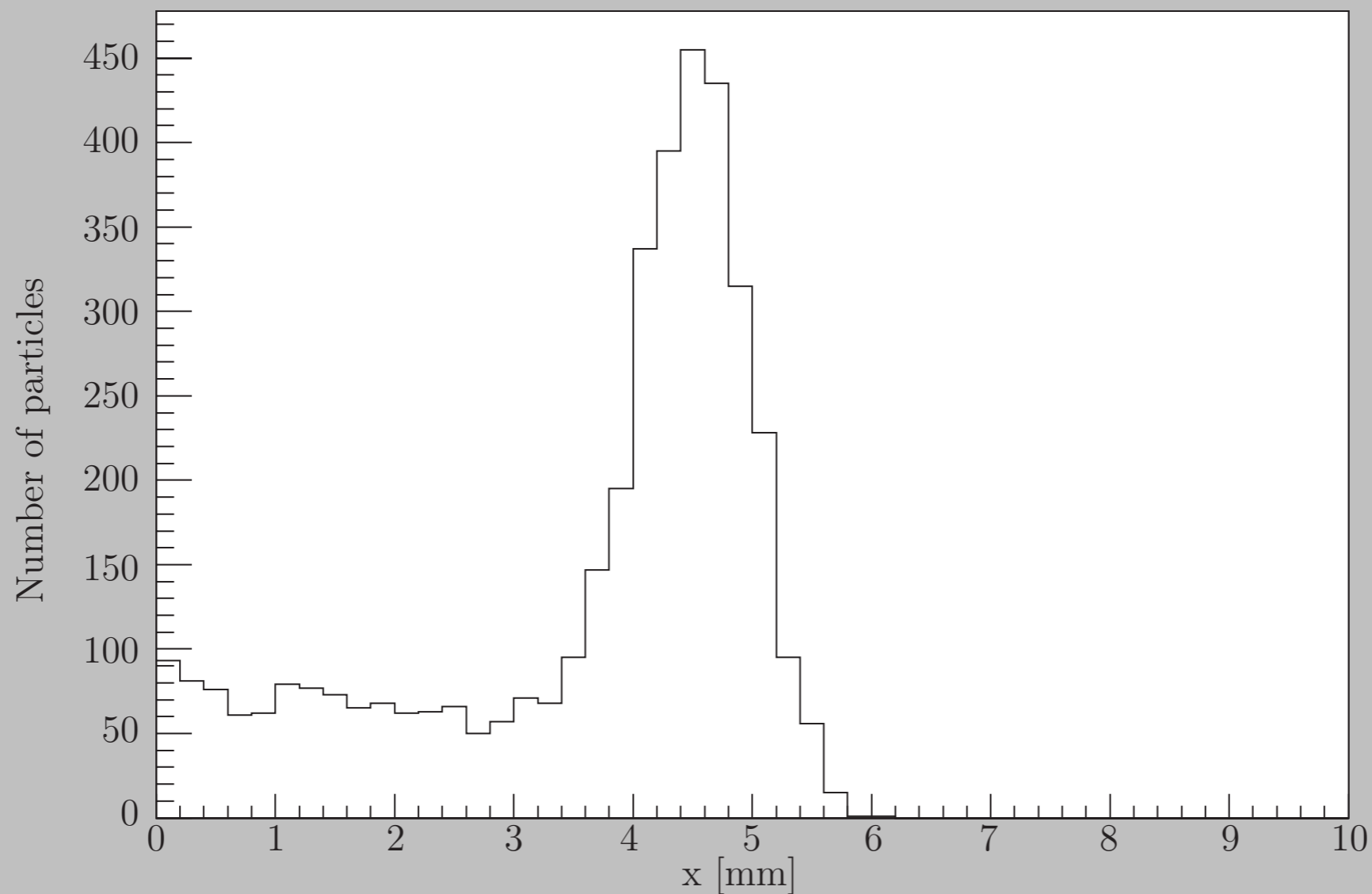


Dumper



UA9 Simulation results

Signal on Roman Pot I with dumper.



References

References

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