Update on ATF2 simulation
Kicker response

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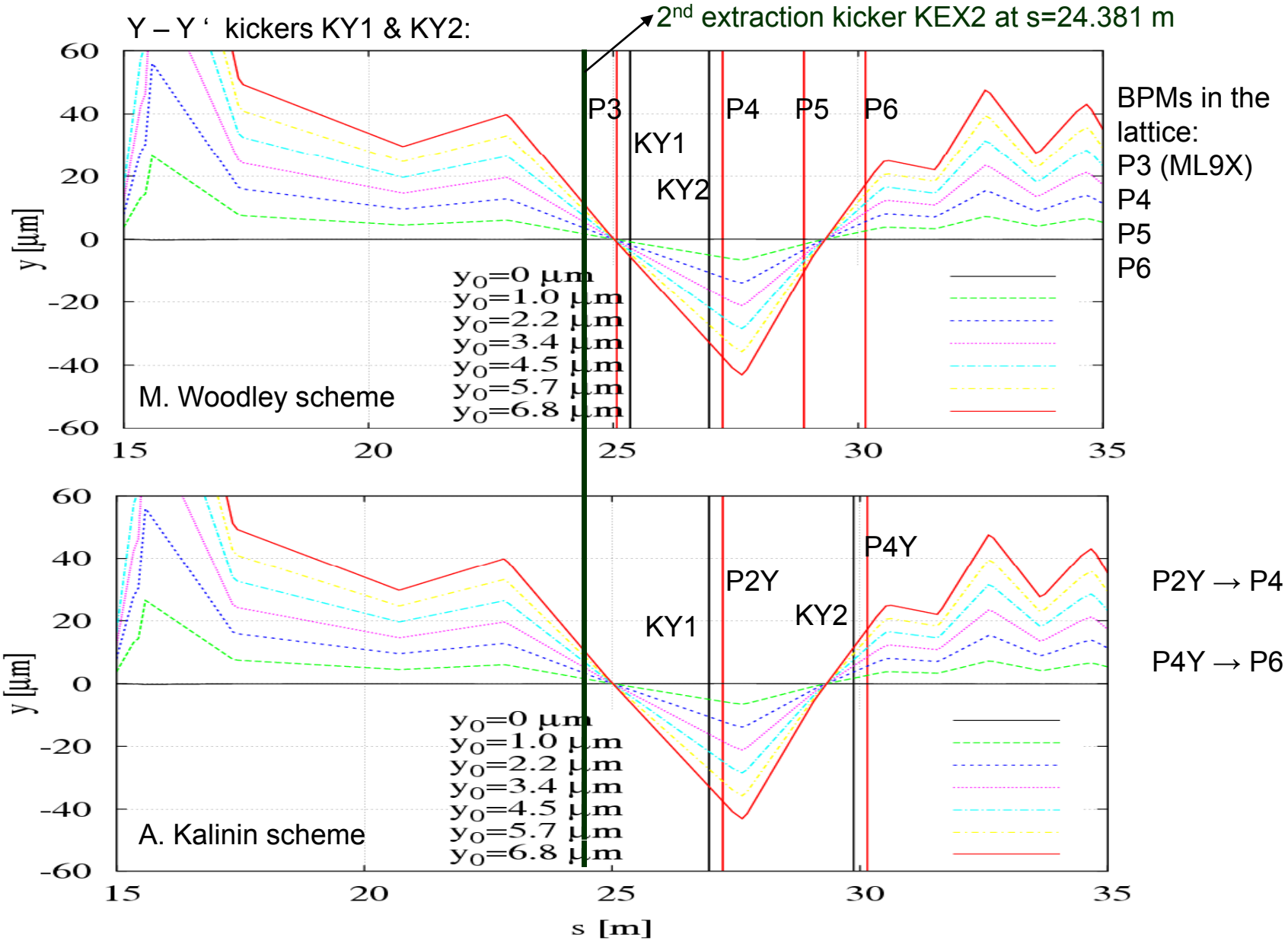
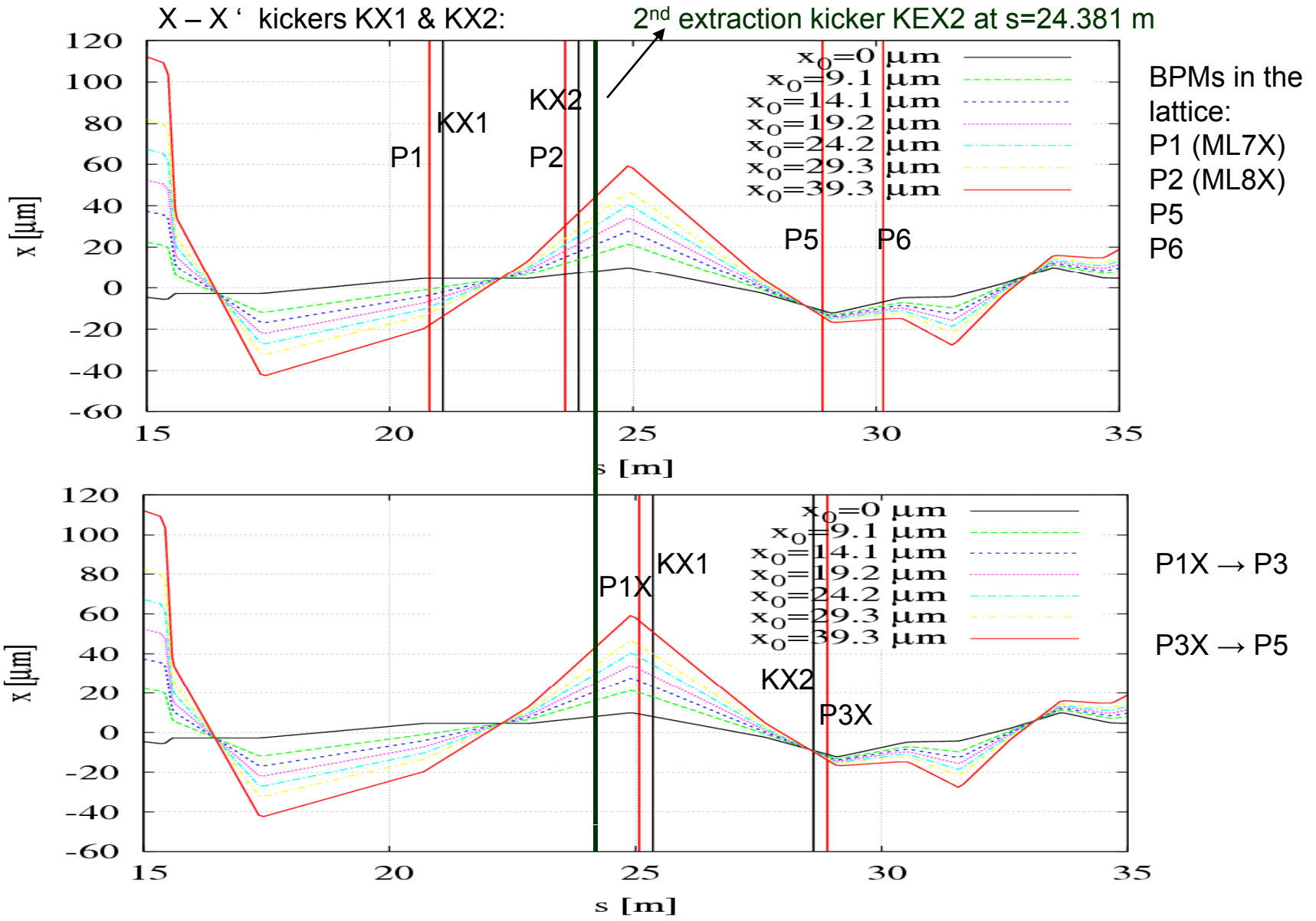
FONT meeting
November 30, 2007

Initial jitter propagation

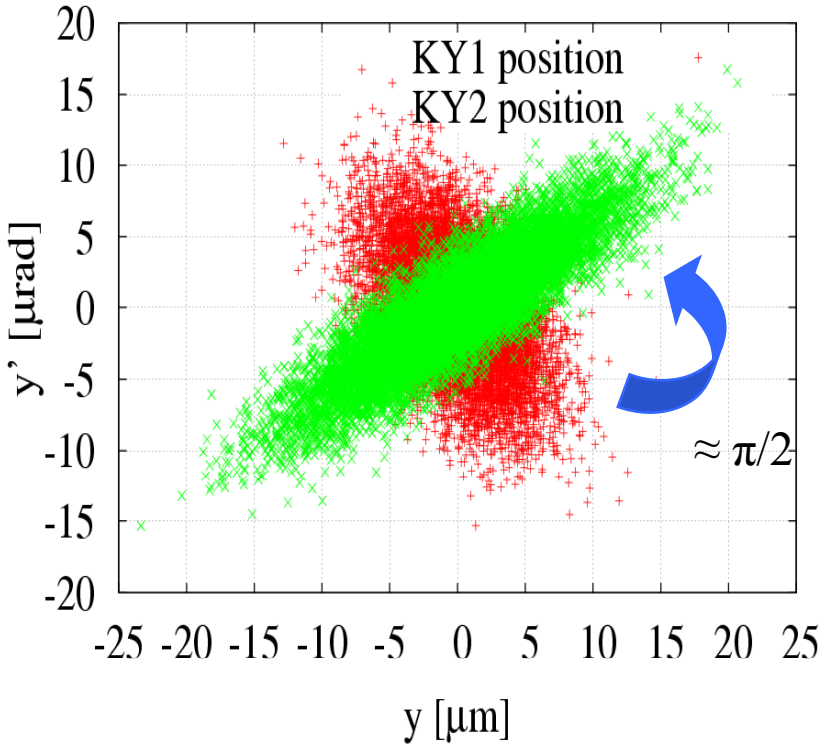


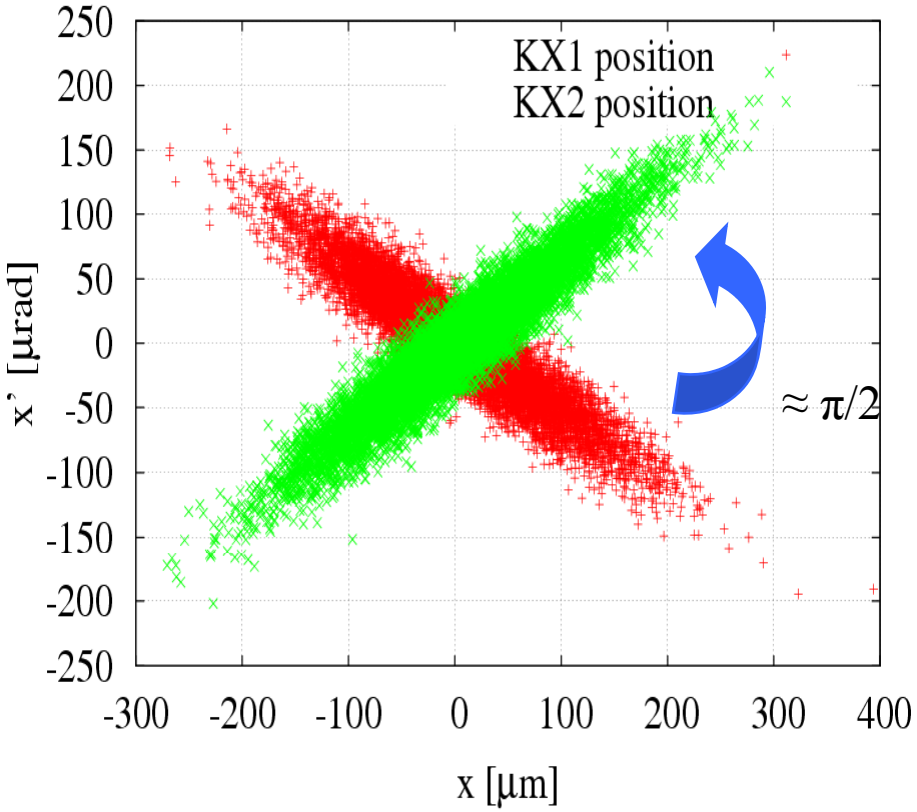
Initial jitter propagation



Phase advance between kickers

(M. Woodley scheme)

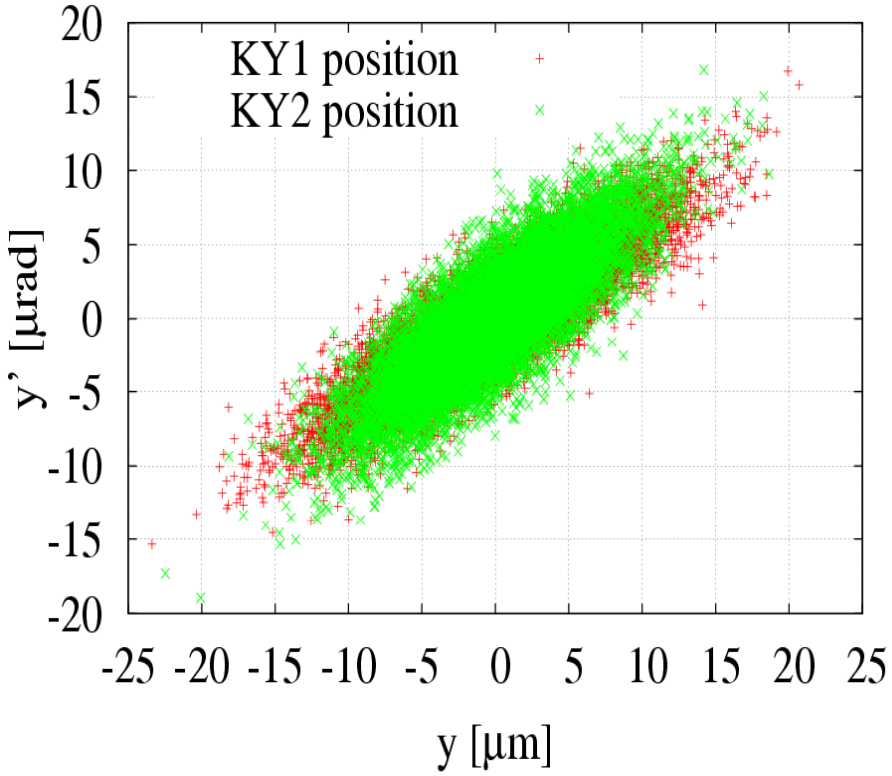


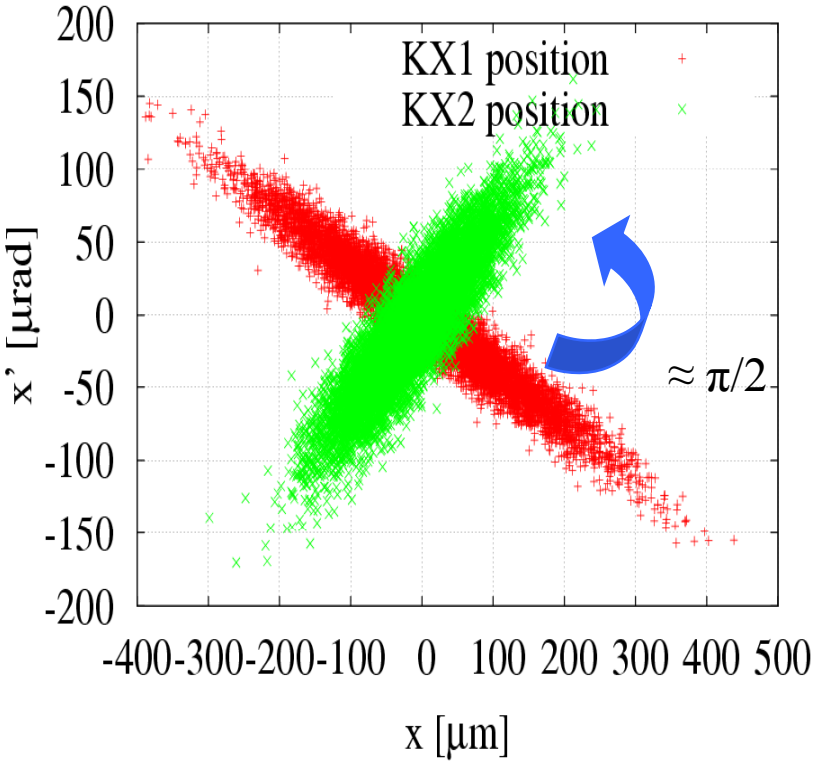


Phase advance between kicker pairs of $\approx \pi/2$

Phase advance between kickers

(A. Kalinin scheme)





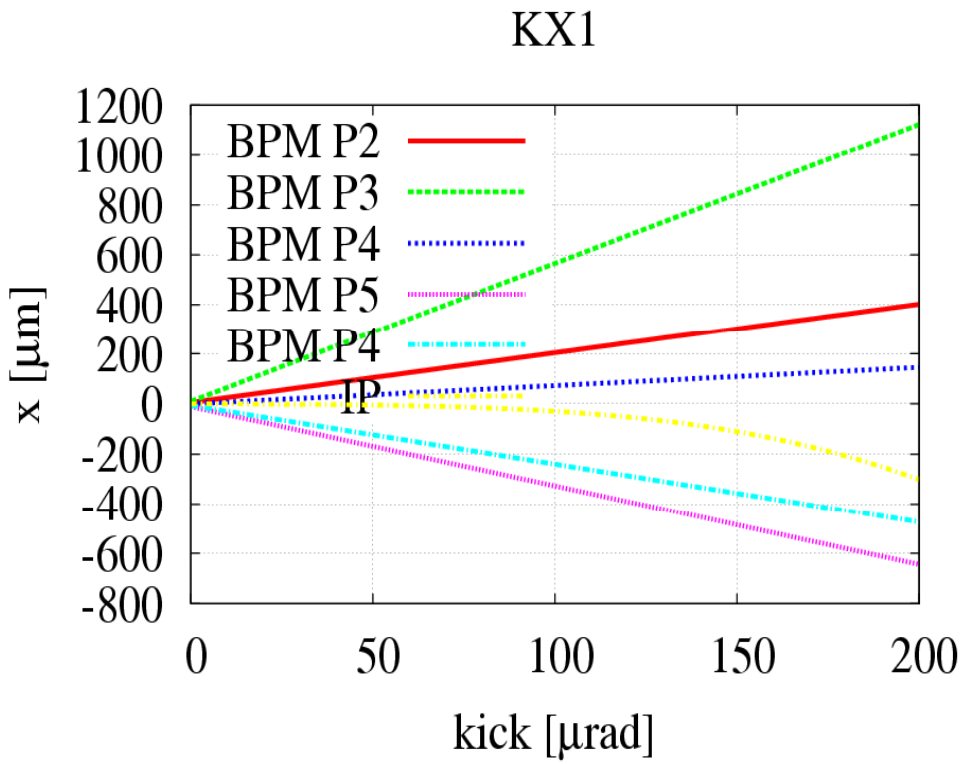
Phase advance between kicker pair KY1 & KY2 approximately of $\approx \pi$

Phase advance between kicker pair KX1 & KX2 of $\approx \pi/2$

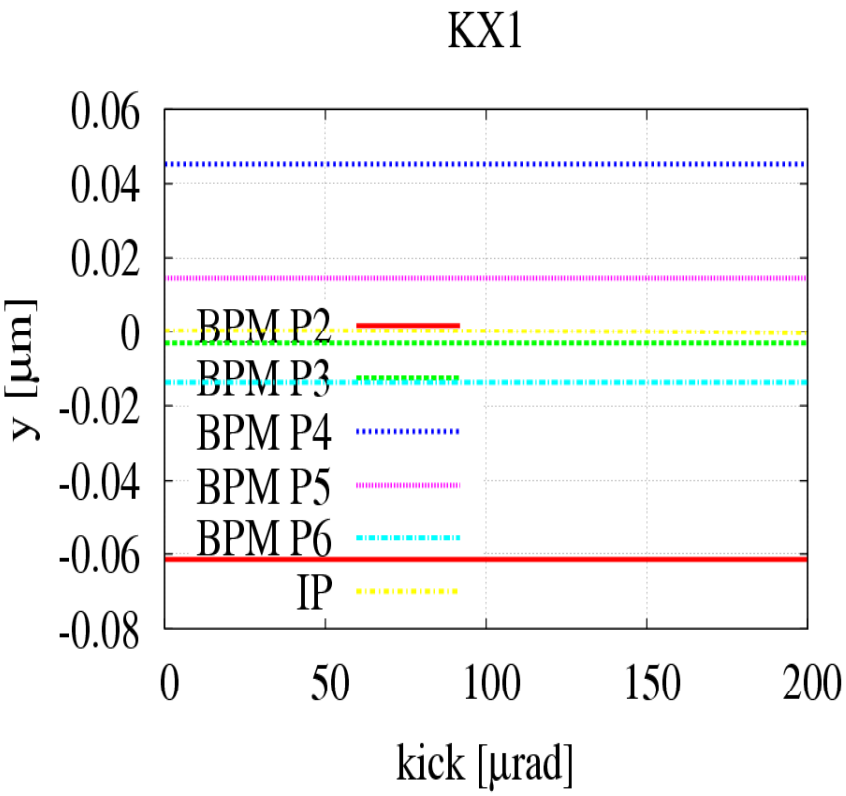
Kicker response in the downstream BPMs

Kicker KX1

(M. Woodley scheme)



KX1 kick > 100 urad → Nonlinear response at IP

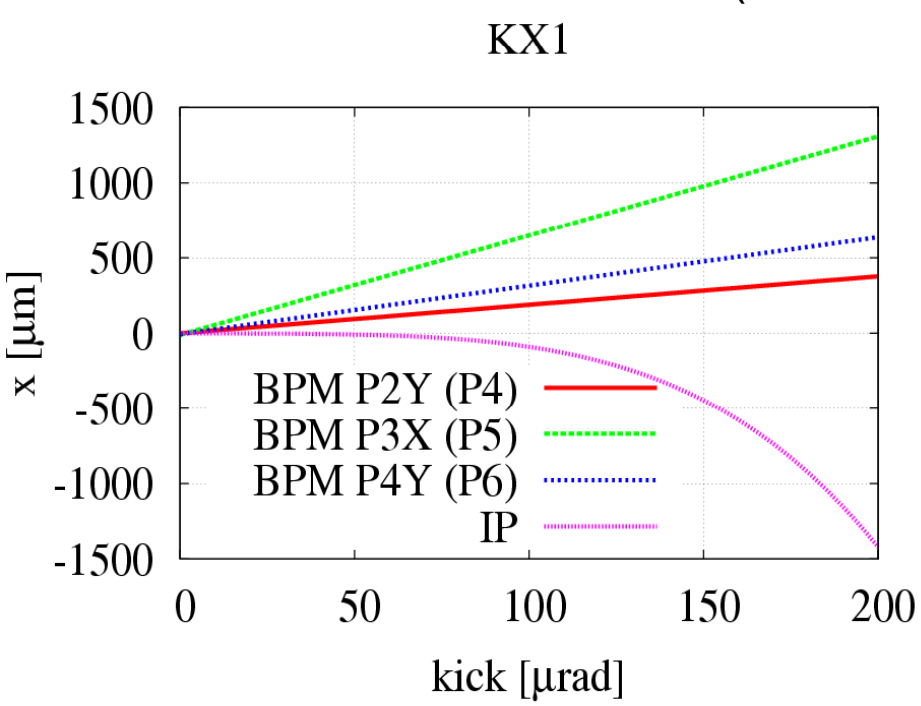


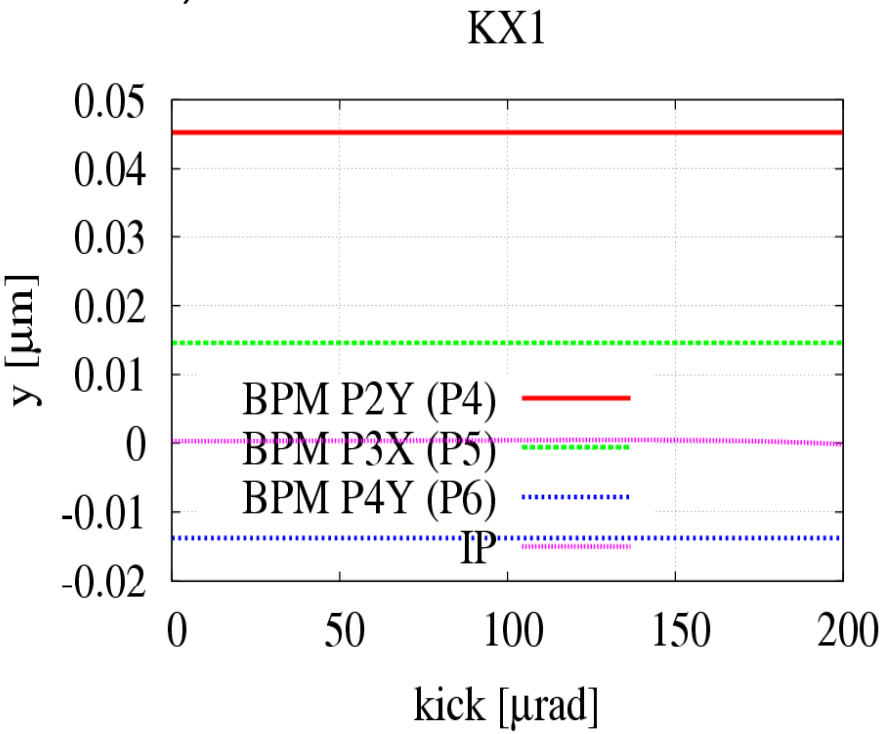
No effect on the vertical amplitude →
No x-y coupling

Kicker response in the downstream BPMs

Kicker KX1

(A. Kalinin scheme)





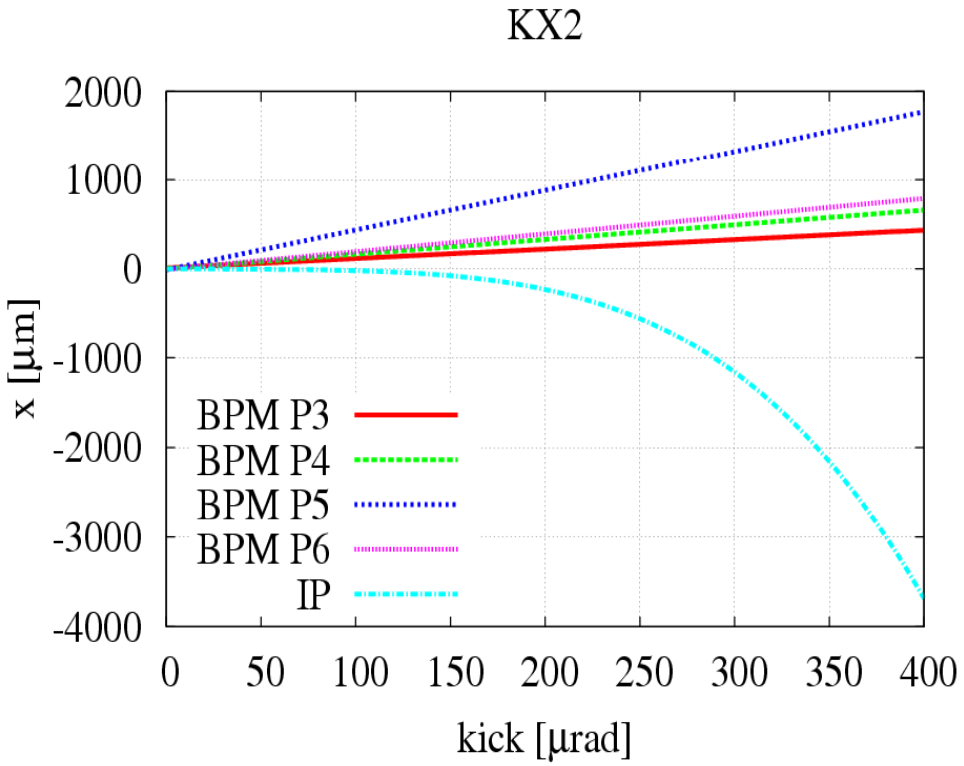
KX1 kick > 100 urad → Nonlinear response at IP

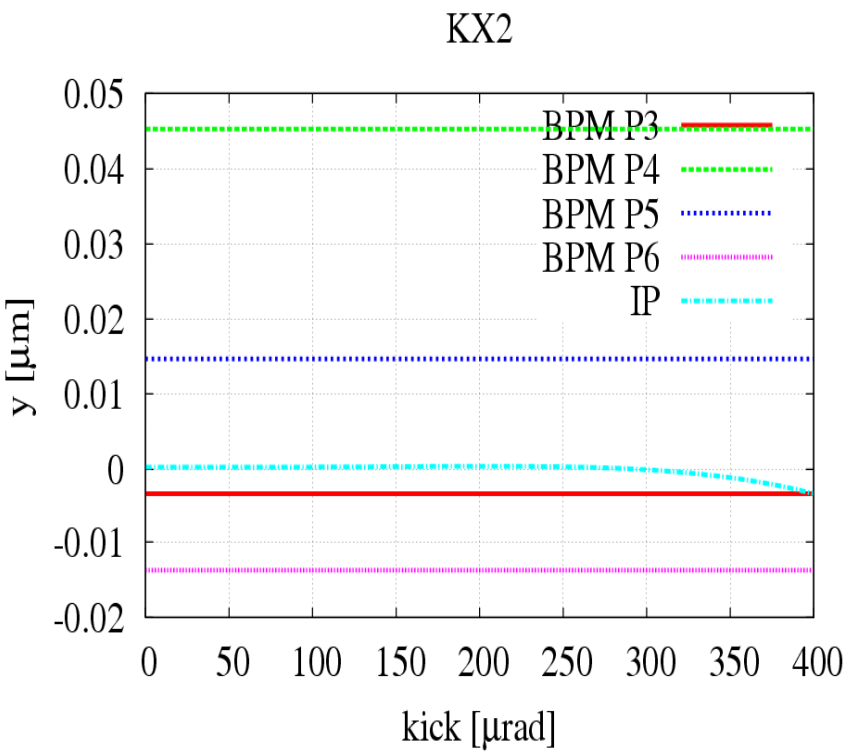
No effect on the vertical amplitude →
No x-y coupling

Kicker response in the downstream BPMs

Kicker KX2

(M. Woodley scheme)





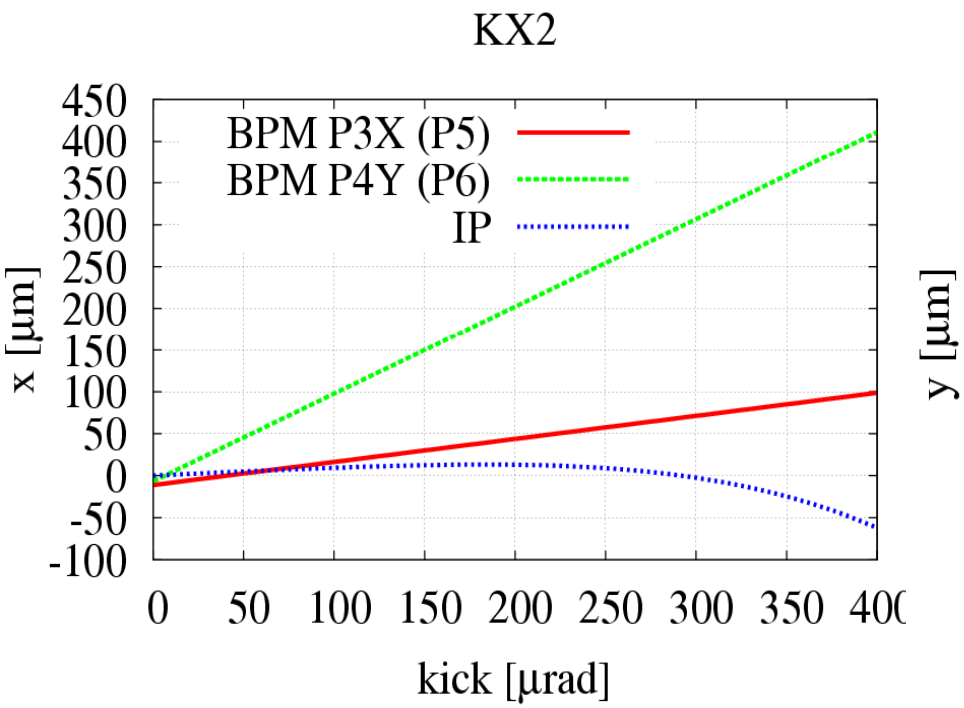
KX2 kick > 150 urad → Nonlinear response at IP

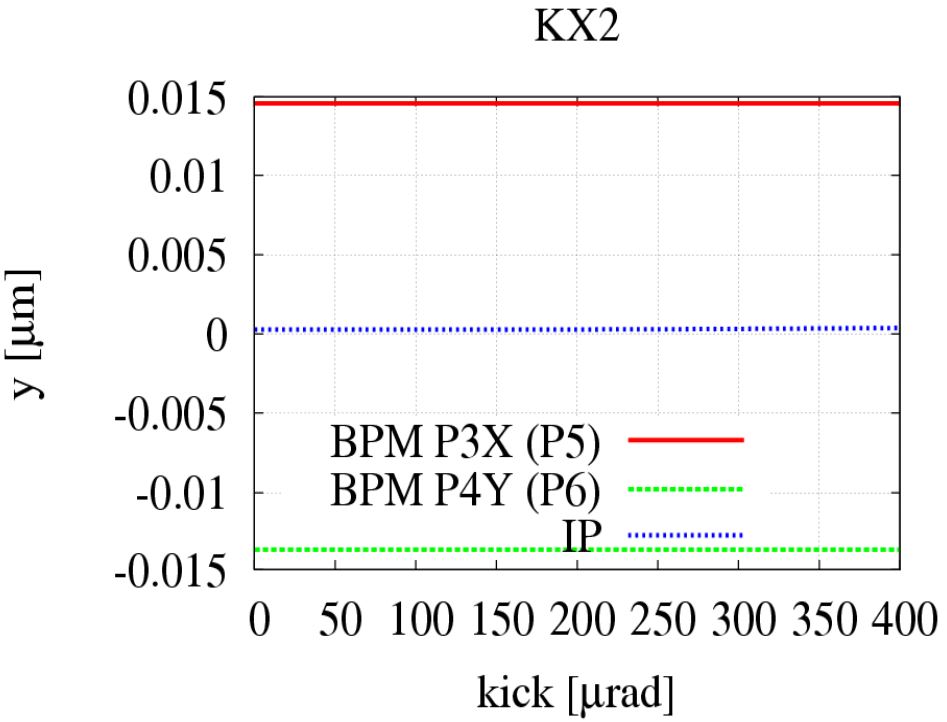
KX2 kick > 350 urad → x-y coupling at the IP

Kicker response in the downstream BPMs

Kicker KX2

(A. Kalinin scheme)





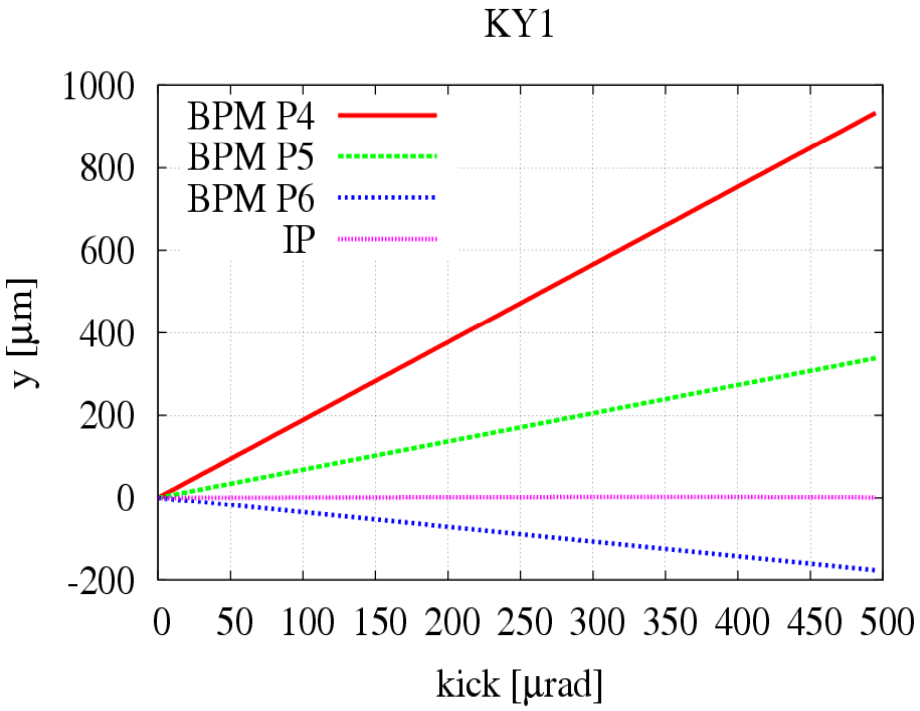
KX2 kick > 250 urad → Nonlinear response at IP

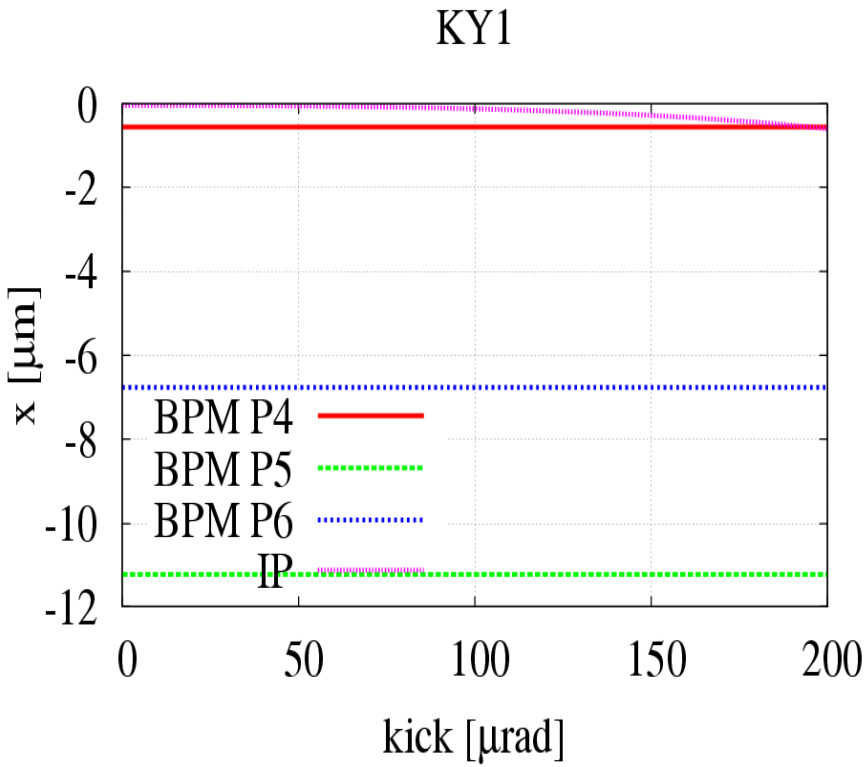
No effect on the vertical amplitude →
No x-y coupling

Kicker response in the downstream BPMs

Kicker KY1

(M. Woodley scheme)





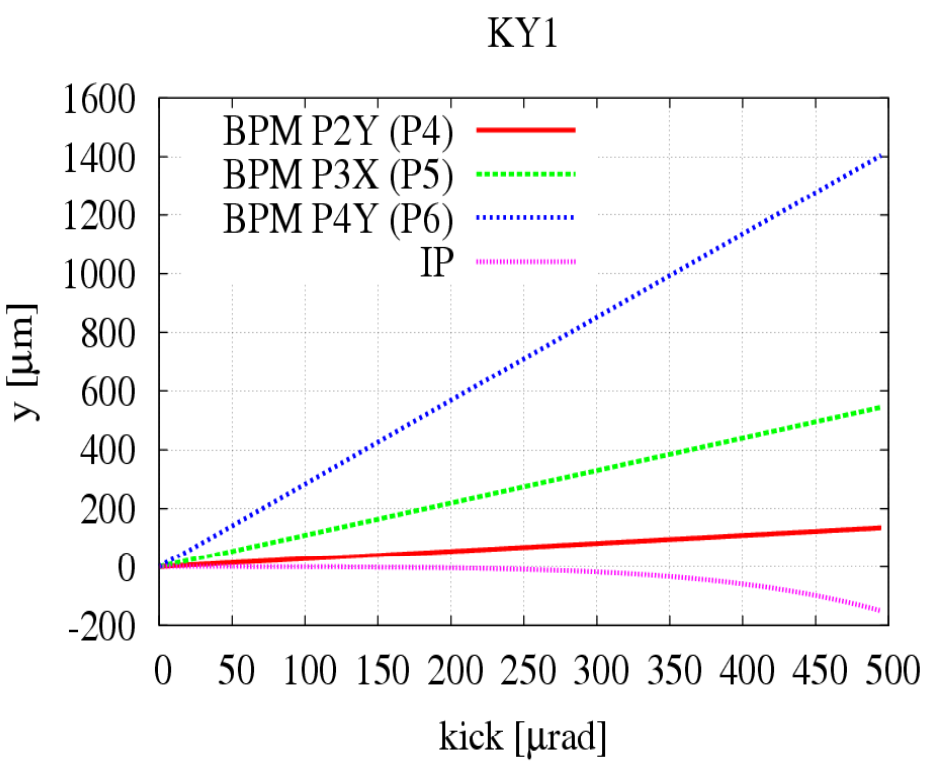
Linear response in a very wide range of kicker strengths

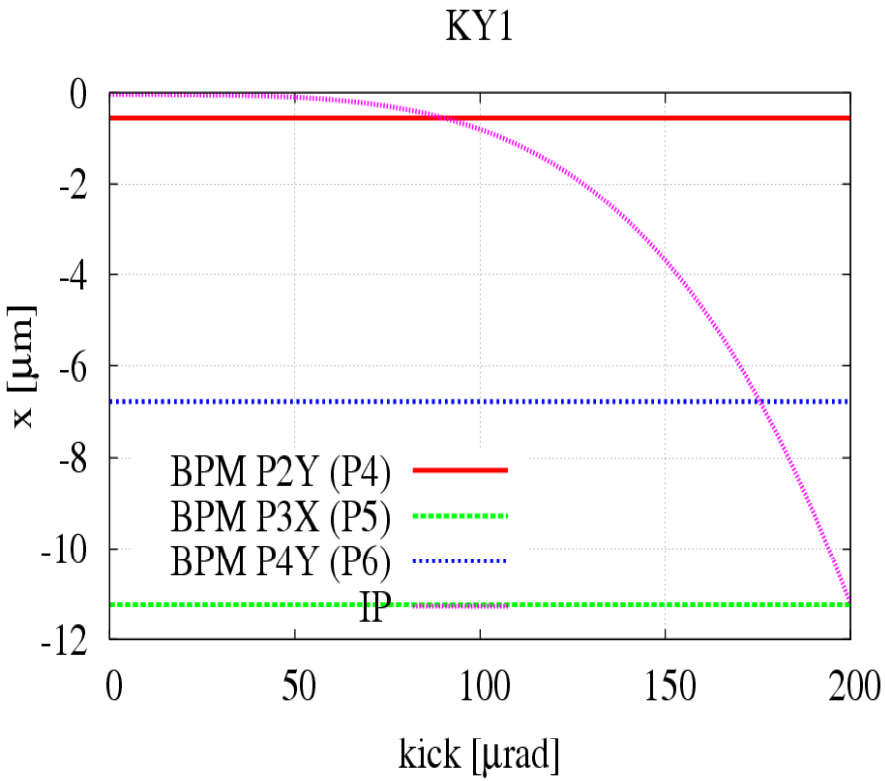
KY1 kick > 100 urad → x-y coupling at the IP

Kicker response in the downstream BPMs

Kicker KY1

(A. Kalinin scheme)



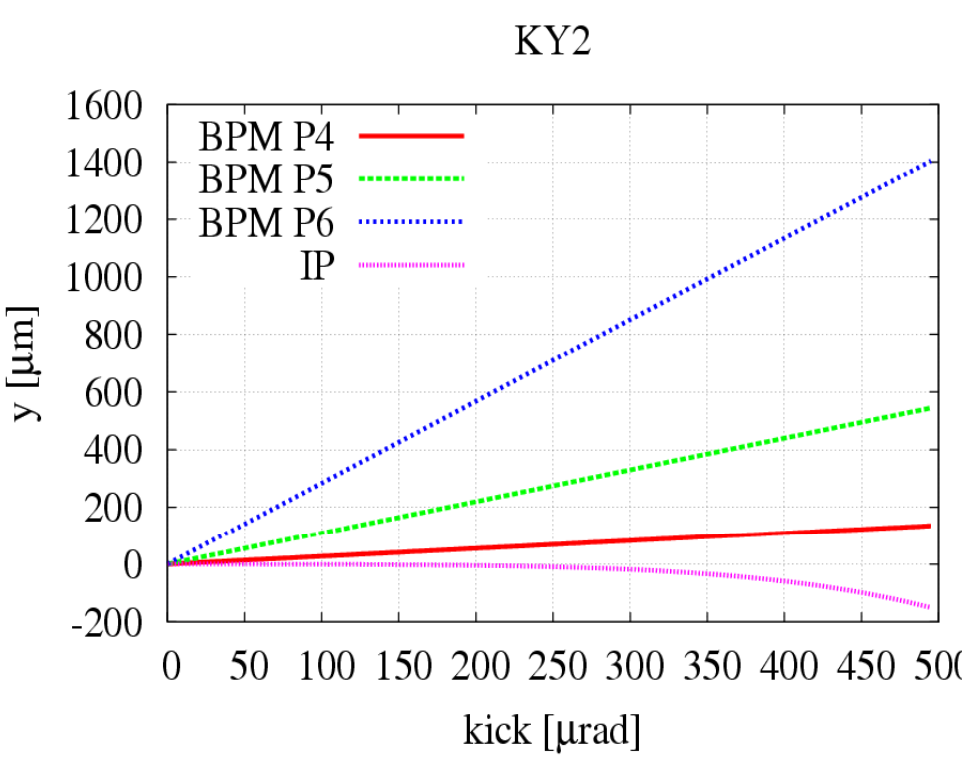


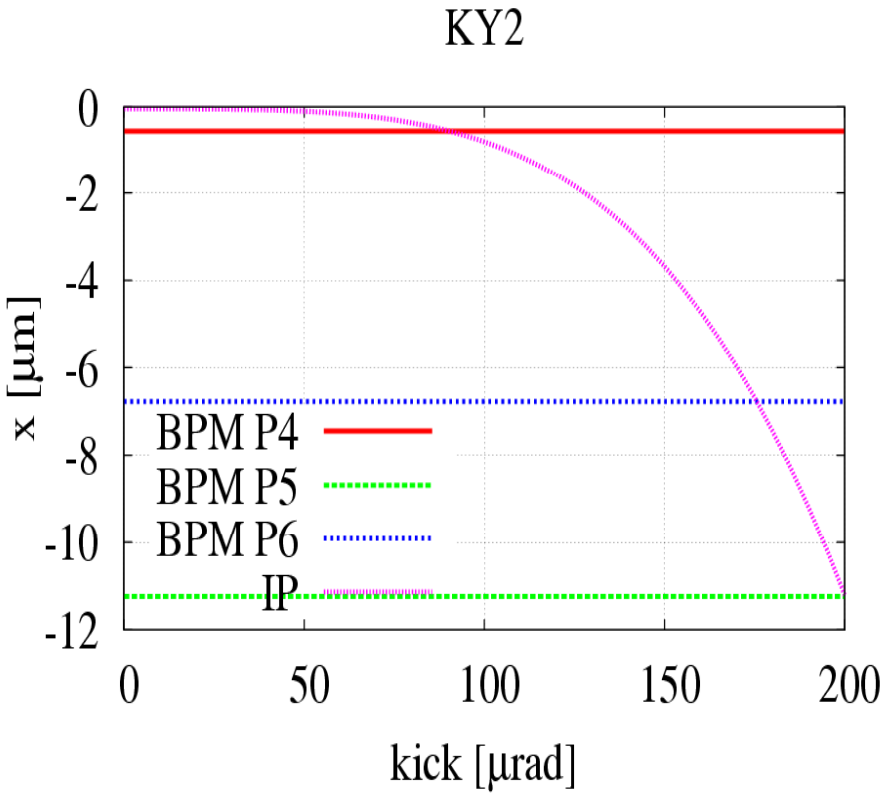
KY1 kick > 300 urad → Nonlinear response at IP

KY1 kick > 50 urad → x-y coupling at the IP

Kicker response in the downstream BPMs
Kicker KY2

(M. Woodley scheme)





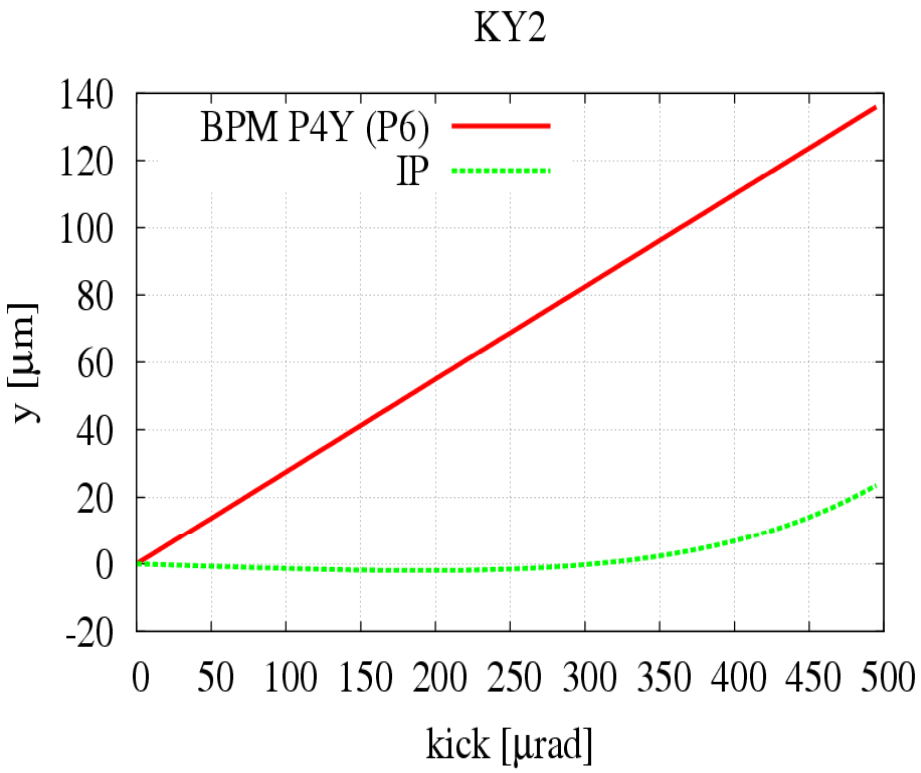
KY2 kick > 300 urad → Nonlinear response at IP

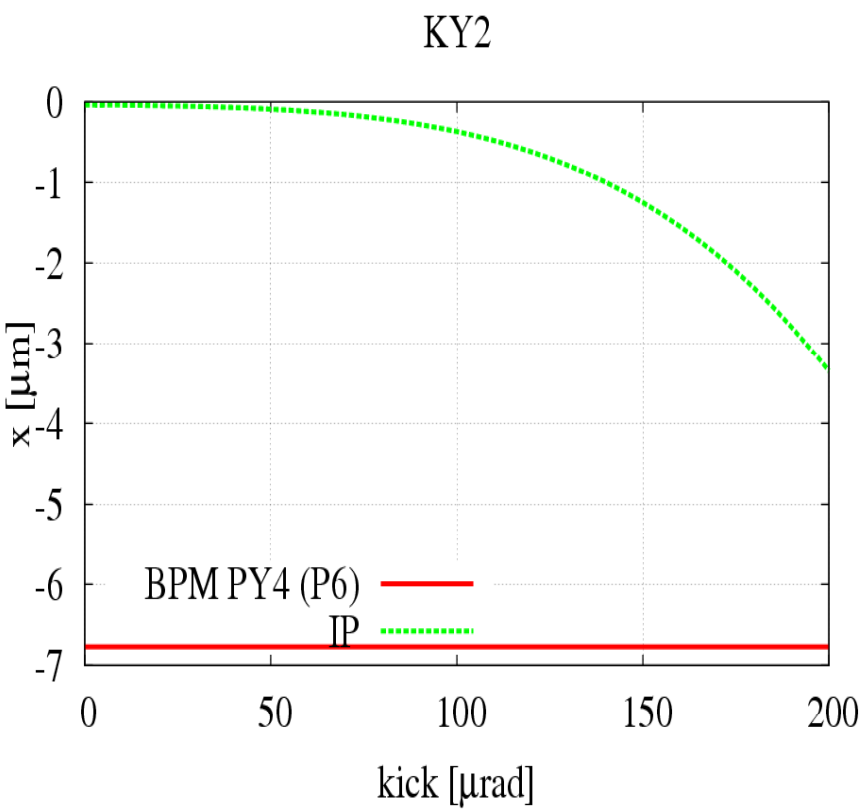
KY2 kick > 50 urad → x-y coupling at the IP

Kicker response in the downstream BPMs

Kicker KY2

(A. Kalinin scheme)





KY2 kick > 350 urad → Nonlinear response at IP

KY2 kick > 50 urad → x-y coupling at the IP