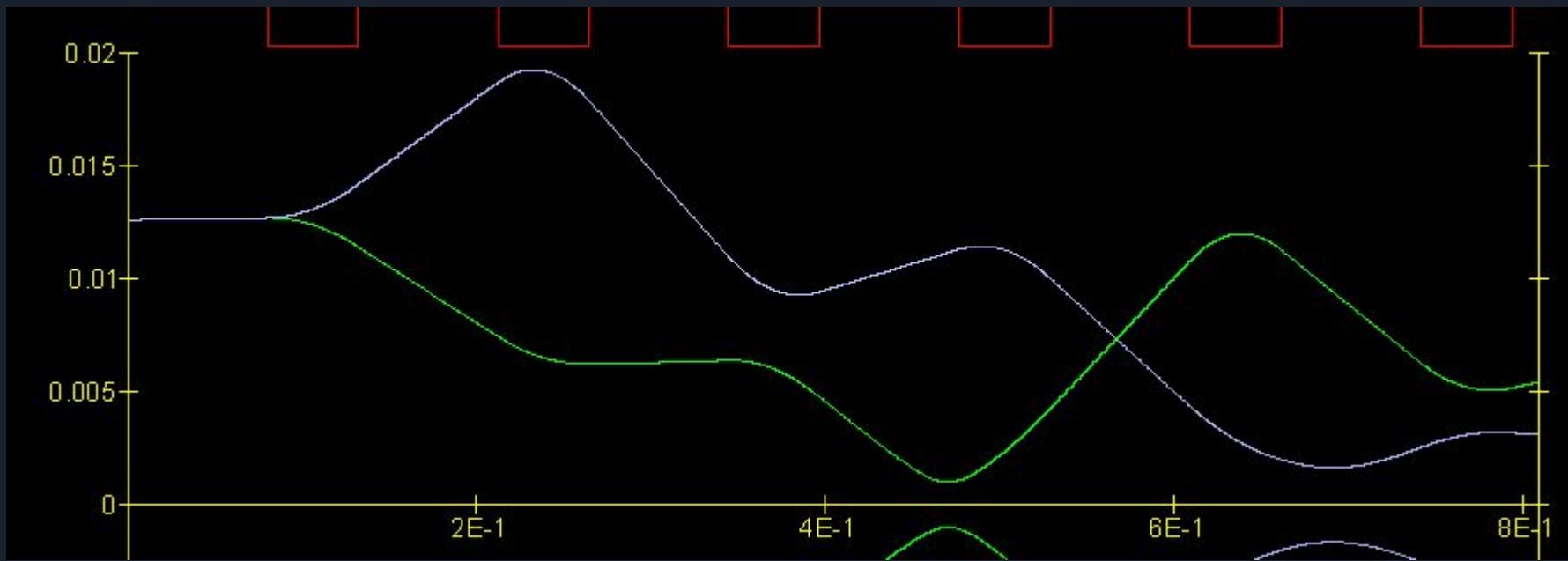


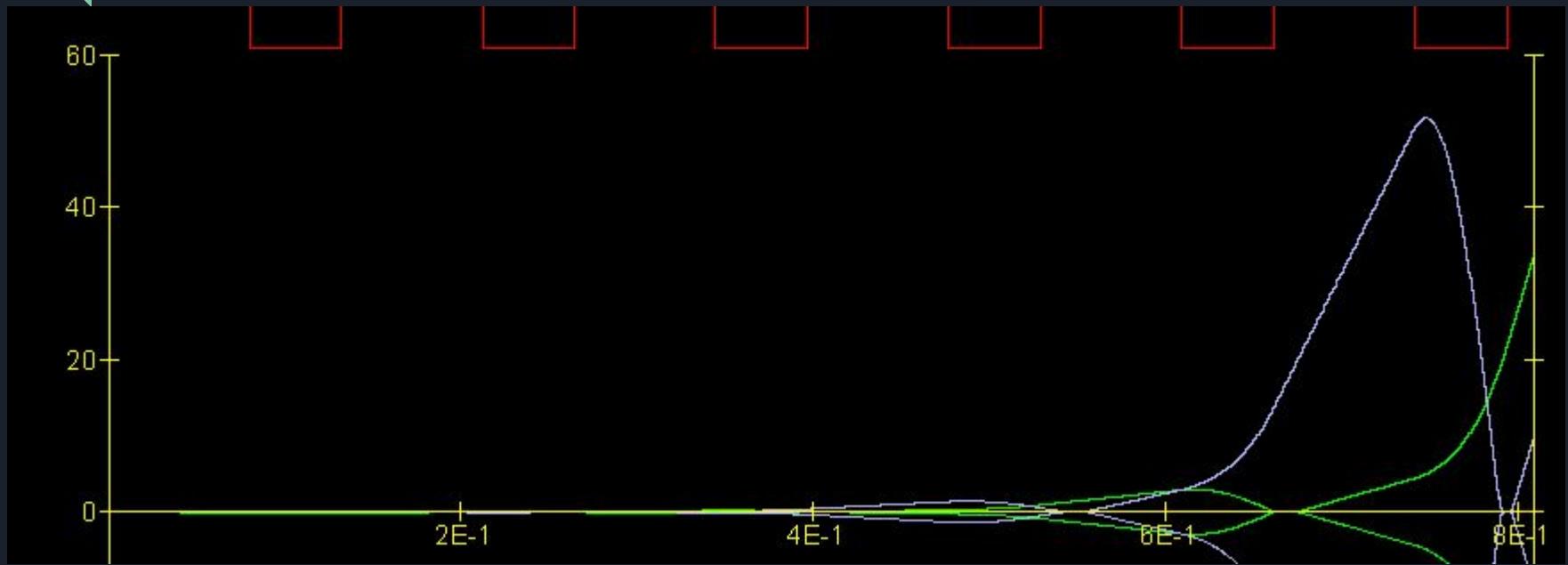


Java

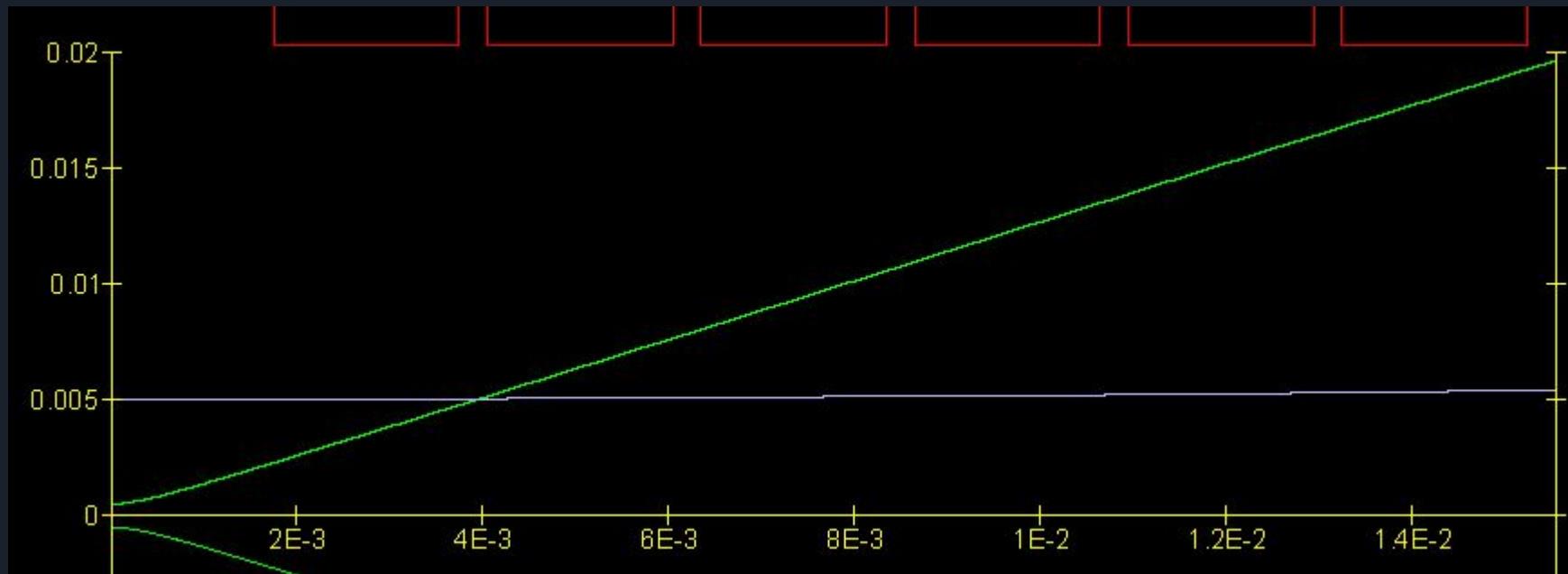
test-1-matching 0.3mm--scale-up100x-6q-longDriftB.in



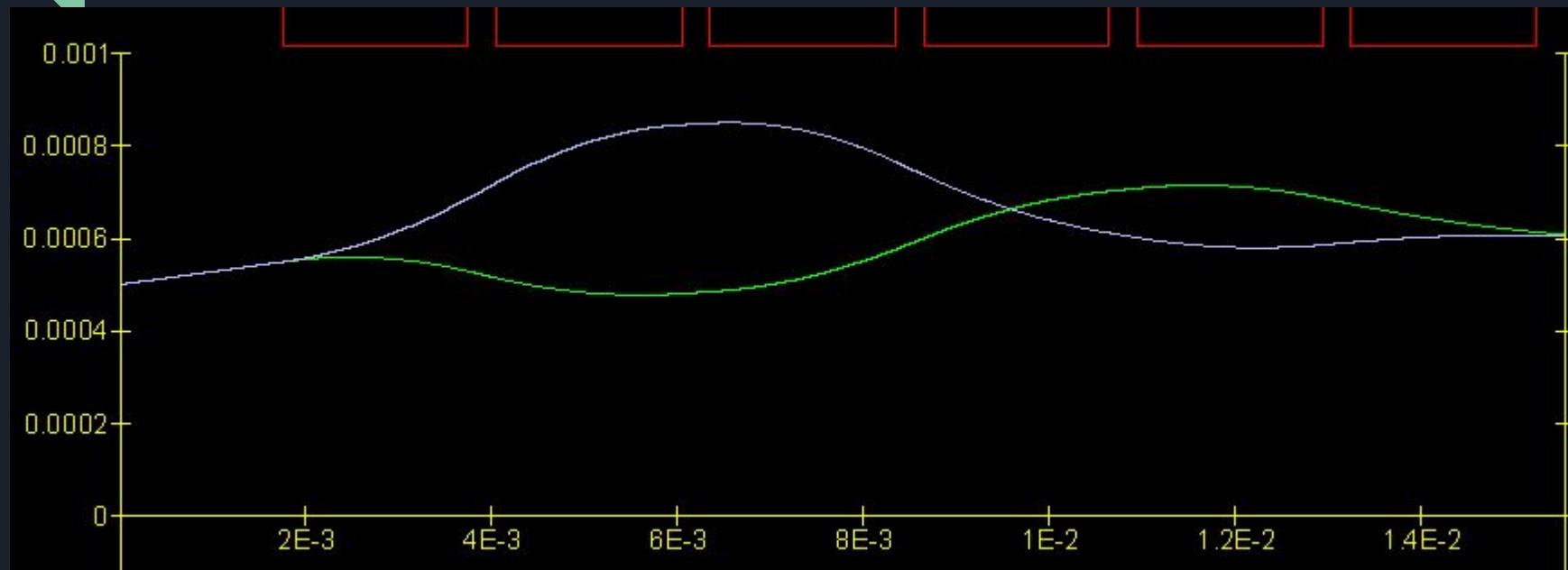
test-2-matching 0.3mm--scale-up100x-6q-longDriftB



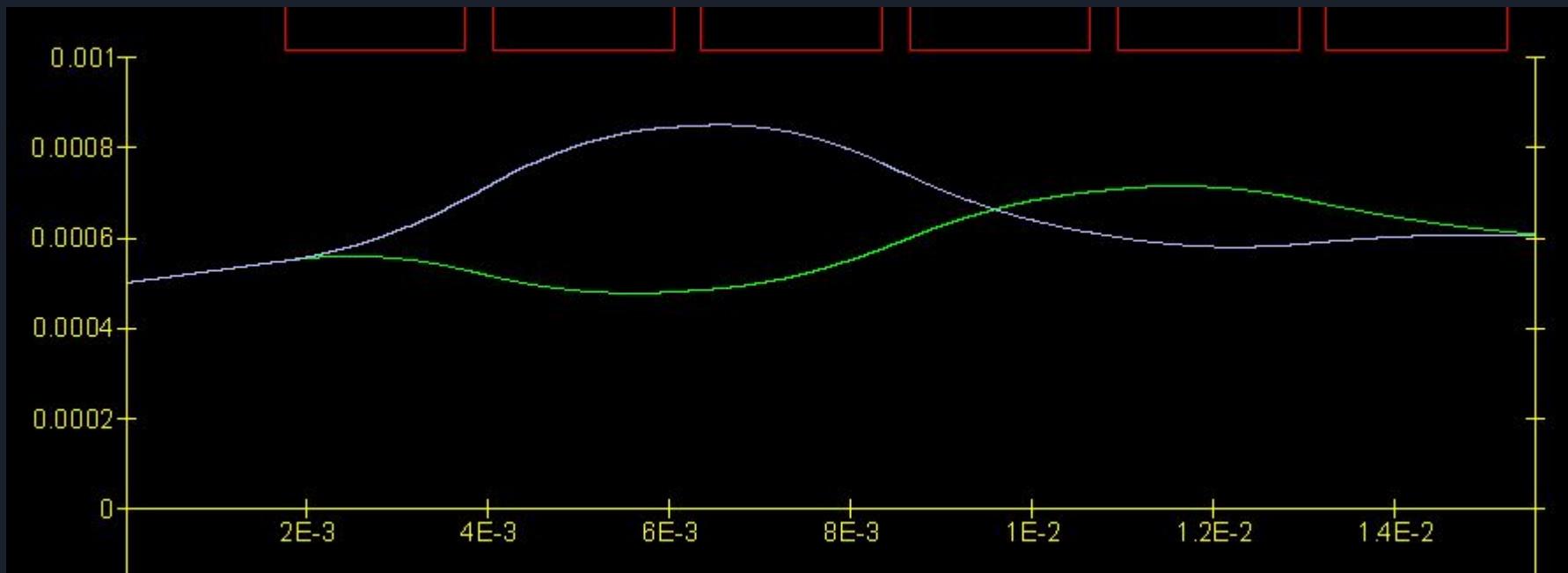
test-3-matching 0.3mm--scale-up100x-6q-longDriftB



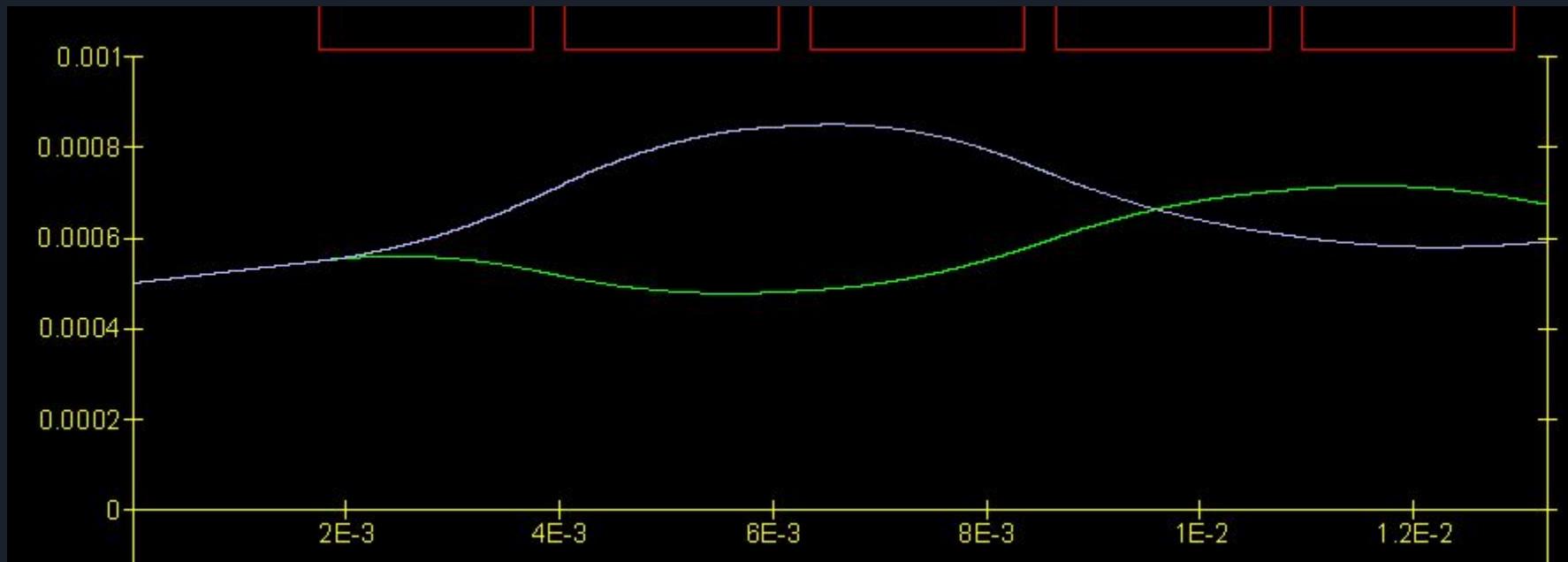
test-4-matching 0.3mm--scale-up100x-6q-longDriftB



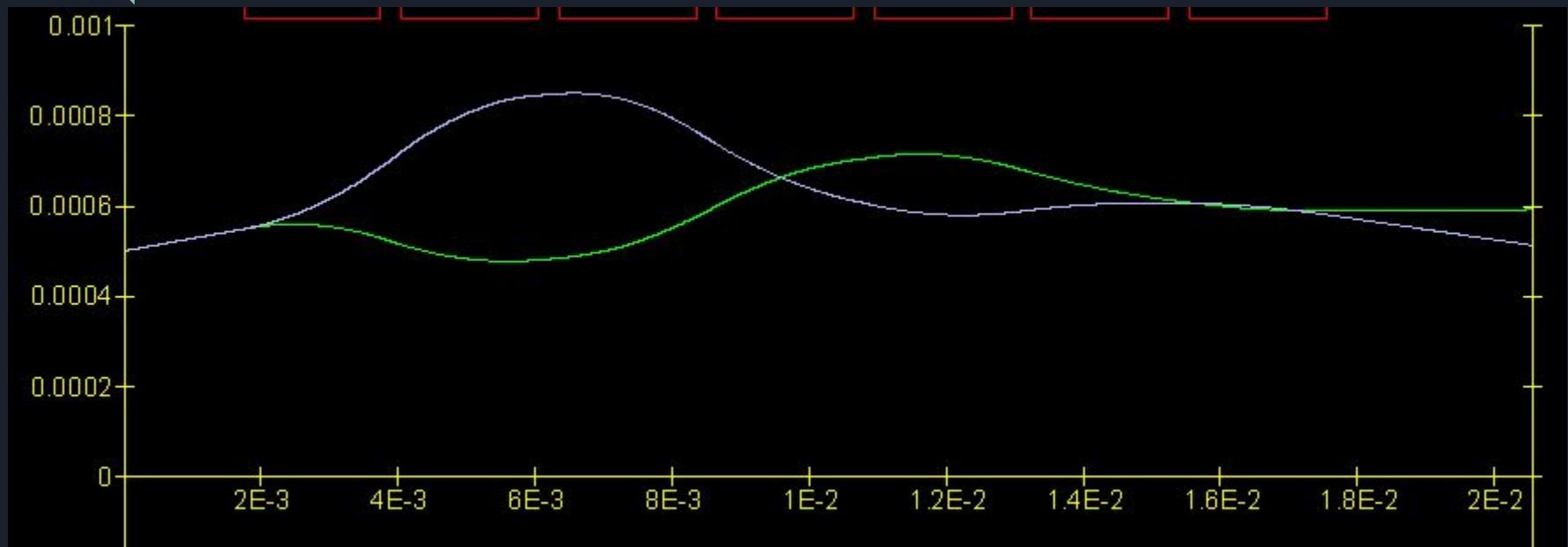
matching 06-09-2020 8kV-6quad-1mm



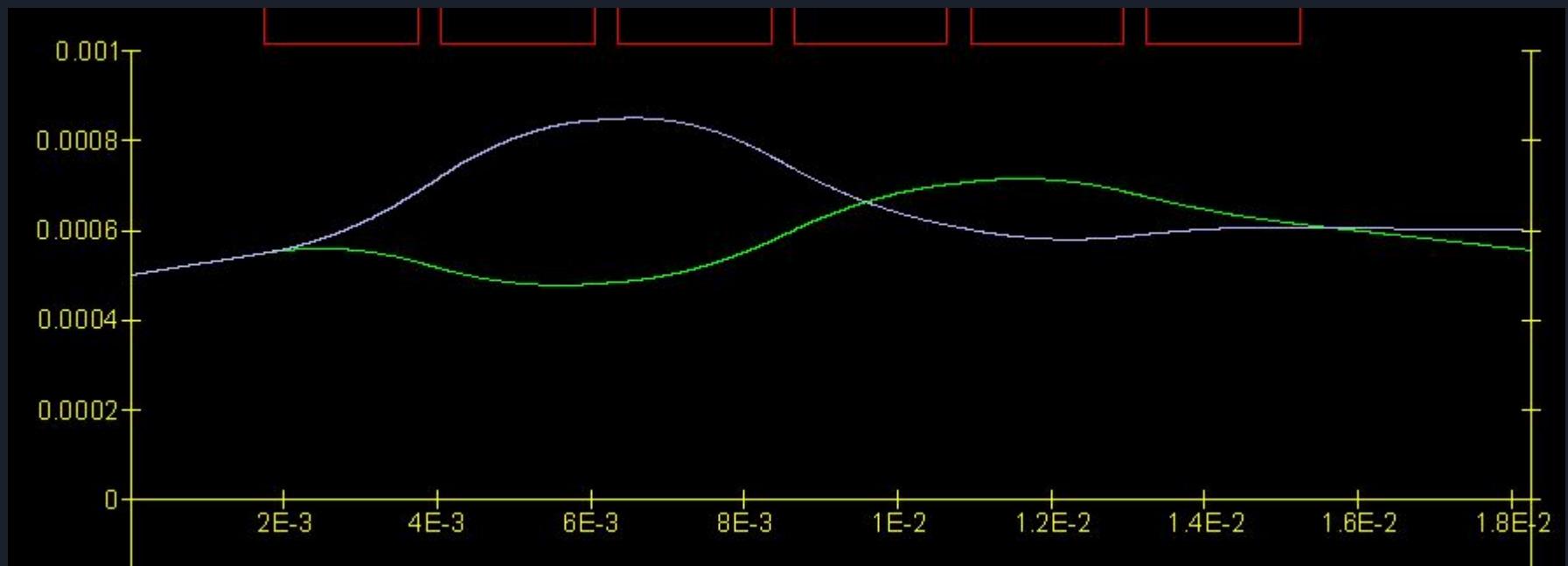
matching 06-09-2020 8kV-5quad-1mm



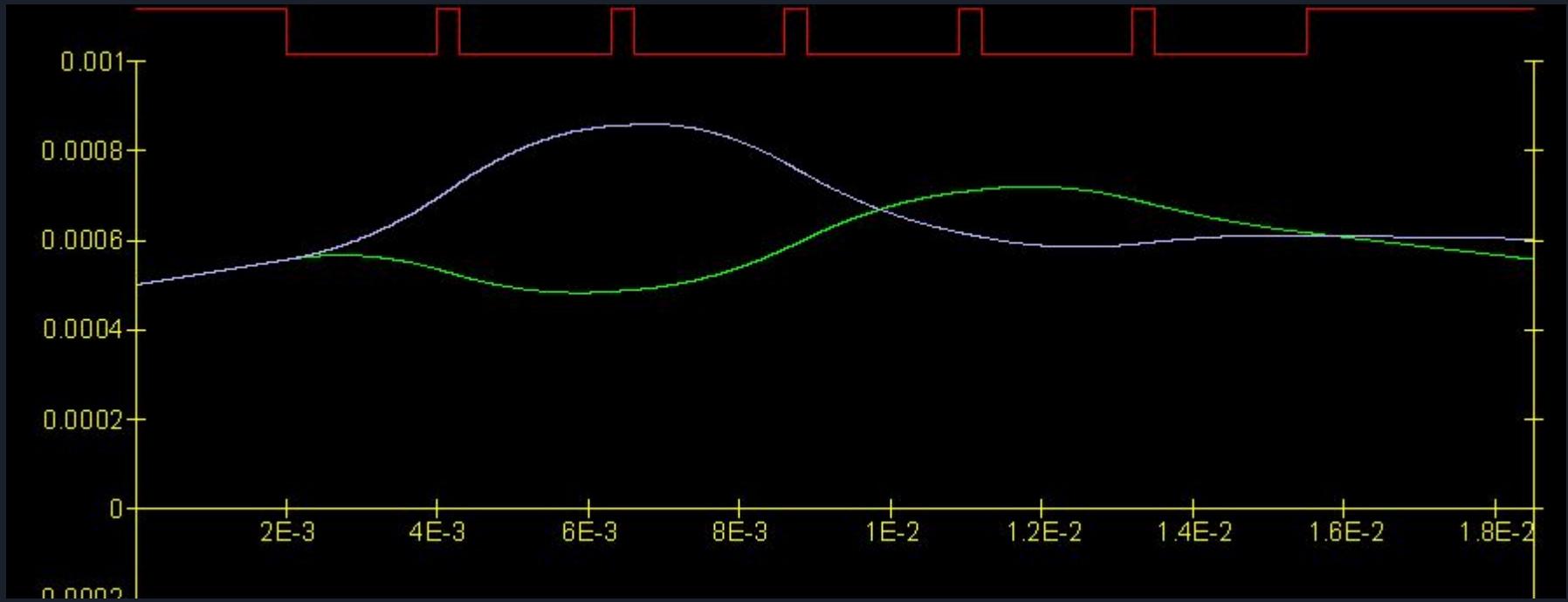
matching 06-09-2020 8kV-7quad-1mm.in



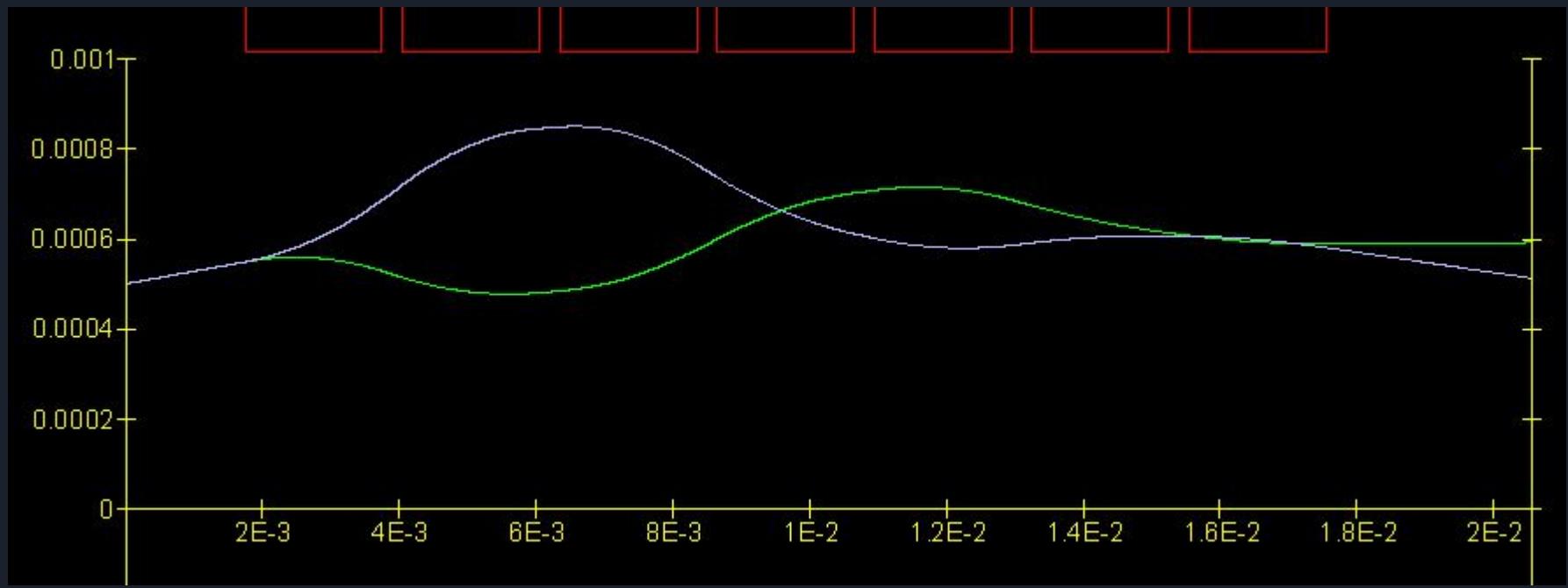
matching 06-09-2020 8kV-6quad-1mm-longer final drift.in



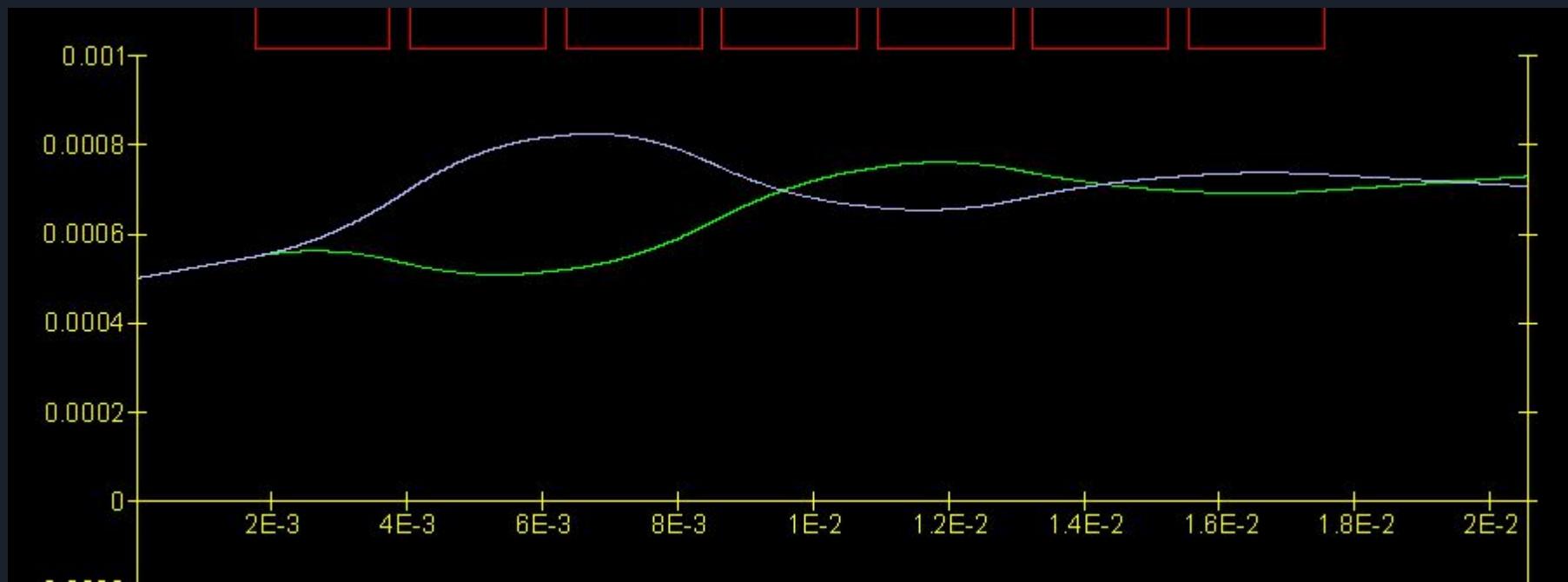
matching 06-09-2020 8kV-6quad-1mm-longer final drift
adjusting first drift.in



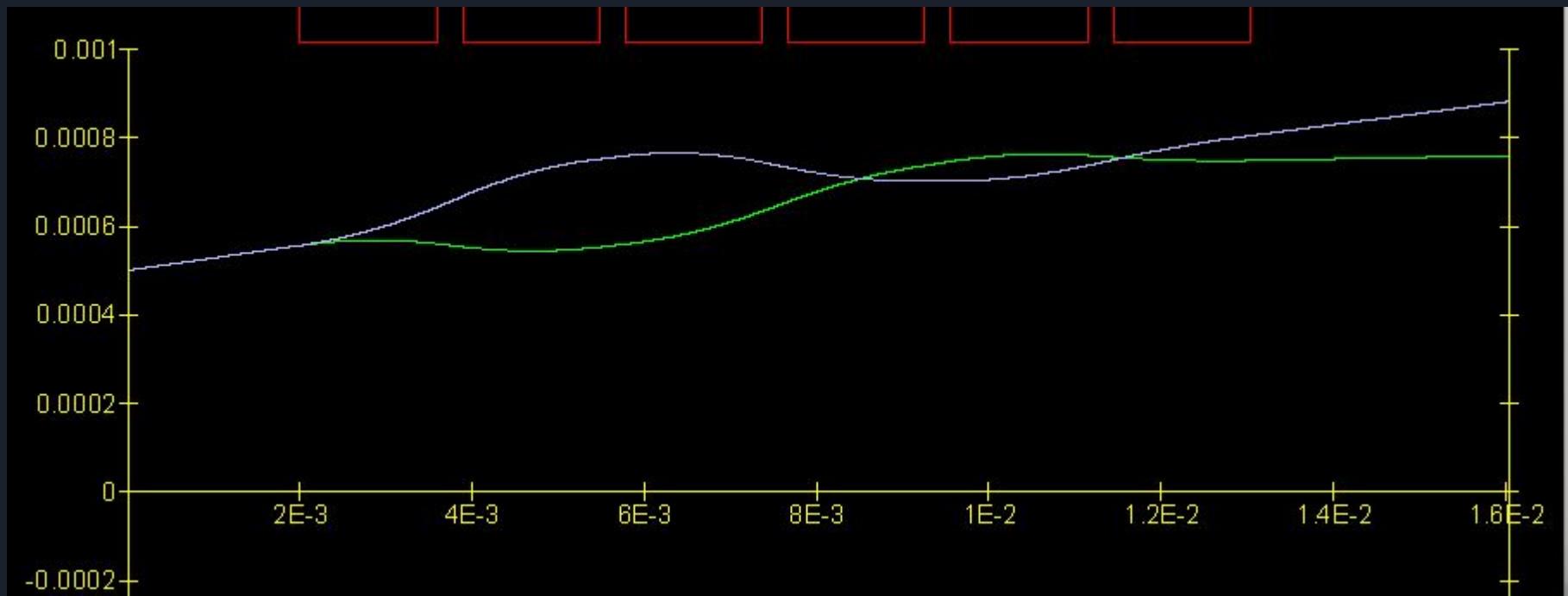
matching 06-09-2020 8kV-7quad-1.1mm



matching 06-09-2020 8kV-7quad-1.1mm smaller radius test
1.in



matching 06-09-2020 8kV-6quad-1.1mm ap-1.59mm thick.in

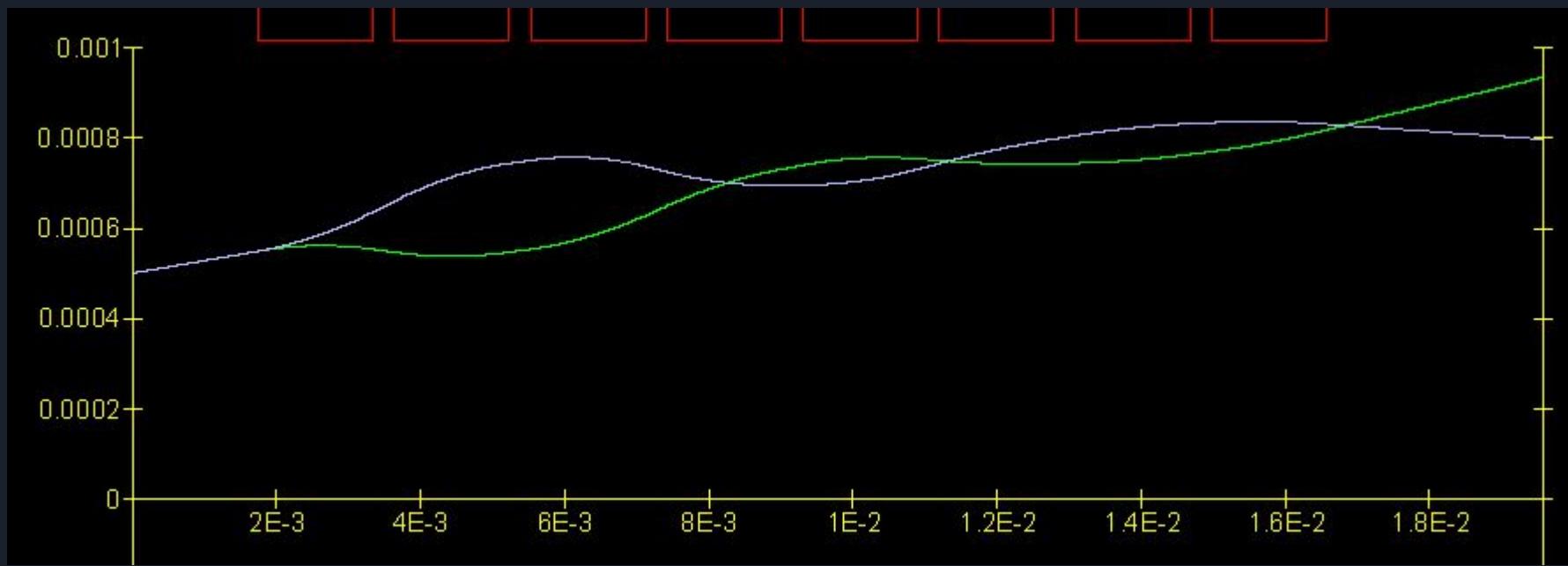




matching 06-09-2020 8kV-6quad-1.1mm ap-1.59mm
thick-esq as variable.in

(Does not load, cannot use variables in these input files, must use numbers)

matching 06-10-2020 8kV-8quad-1.1mm ap.in

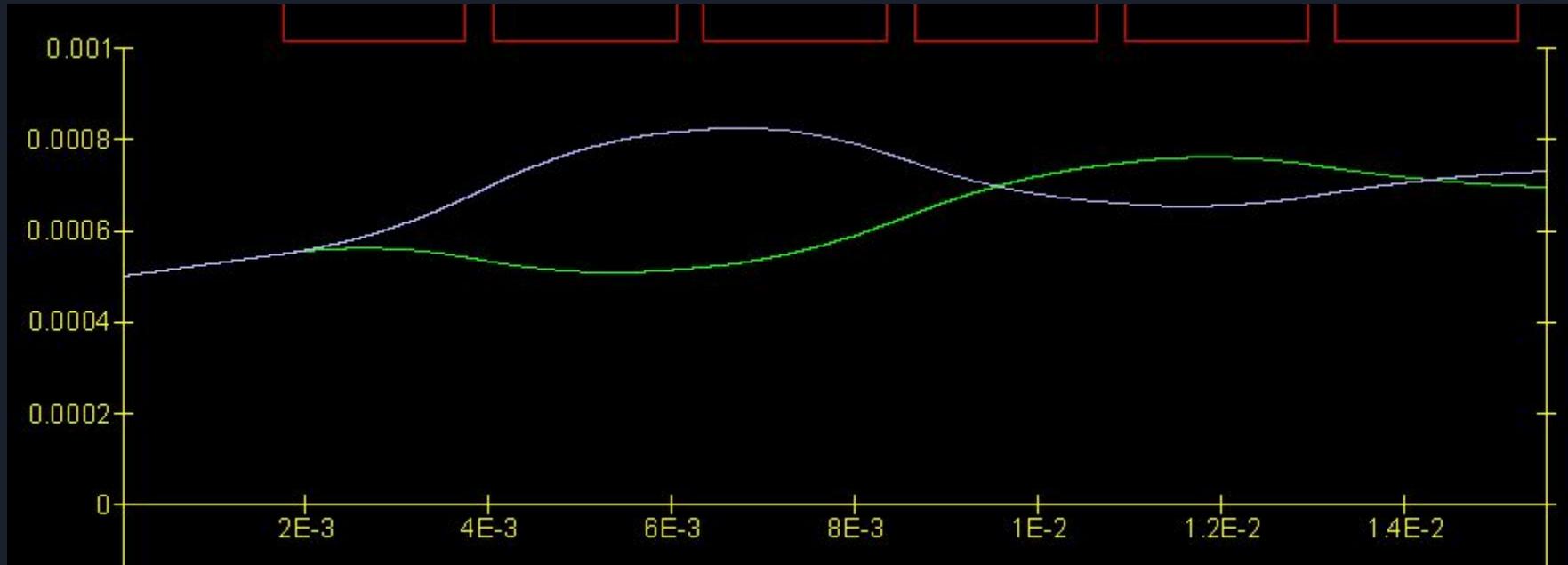




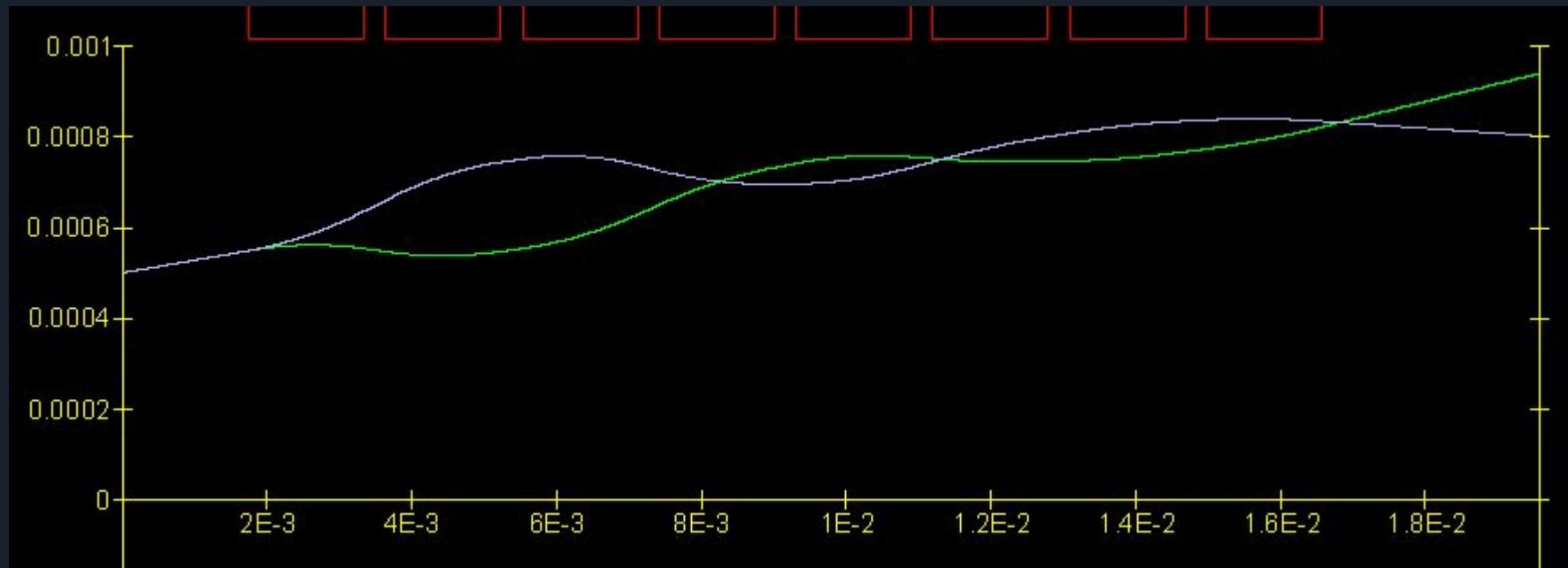
matching 06-09-2020 8kV-6quad-1.1mm ap-1.59mm thick
test no drft.in

(Does not load, not enough parameters listed in input)

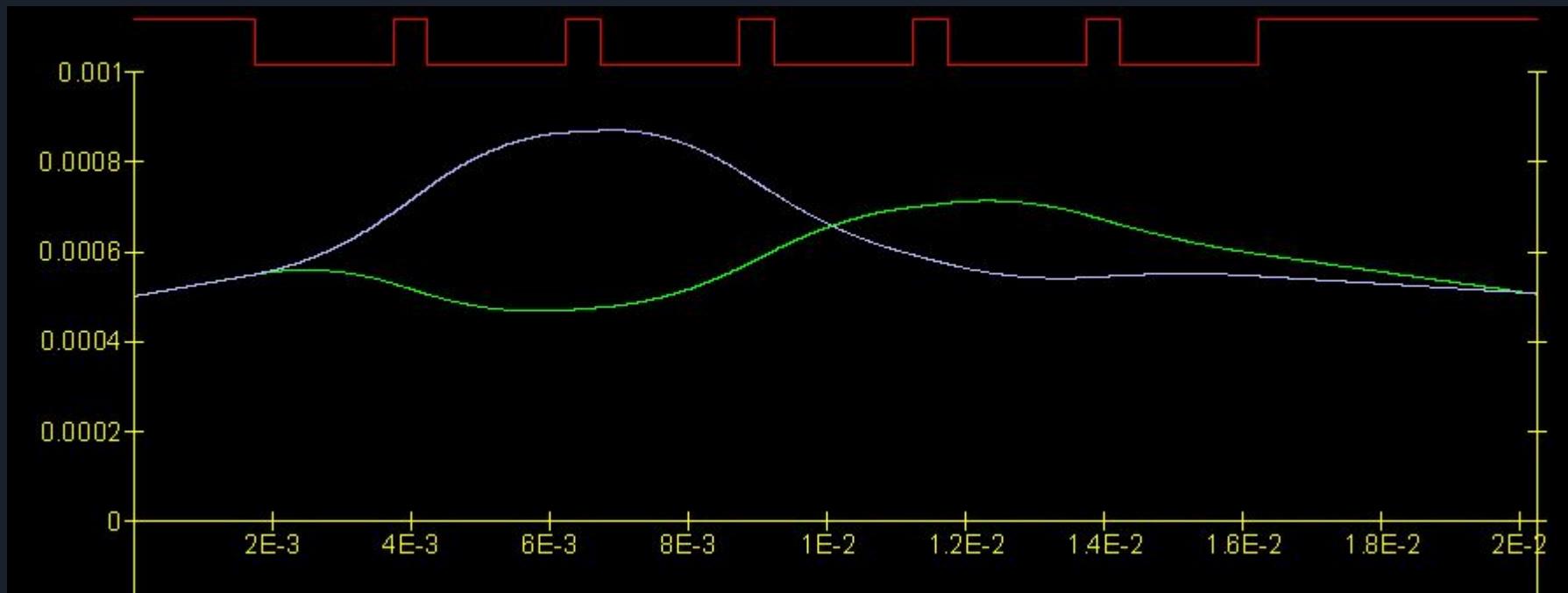
test-5-matching 0.3mm--scale-up100x-6q-longDriftB-1.1
ap.in



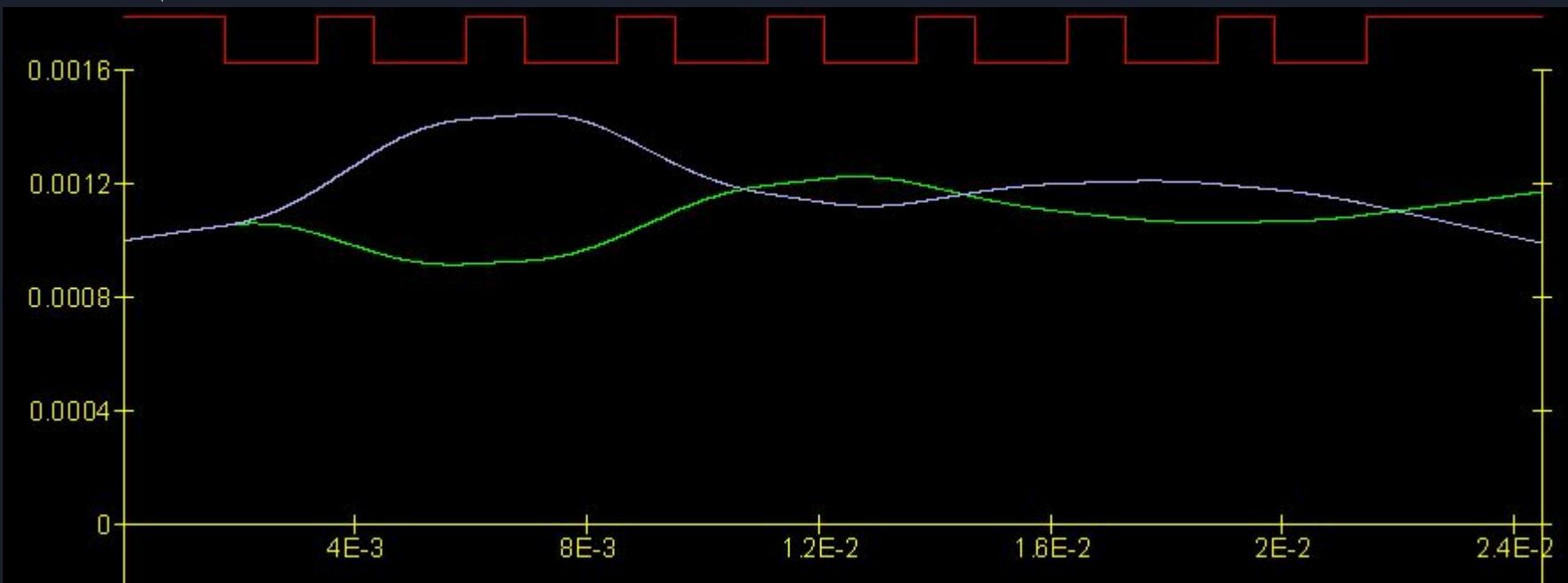
matching 06-10-2020 8kV-8quad-1.1mm ap-updated current
and emit.in



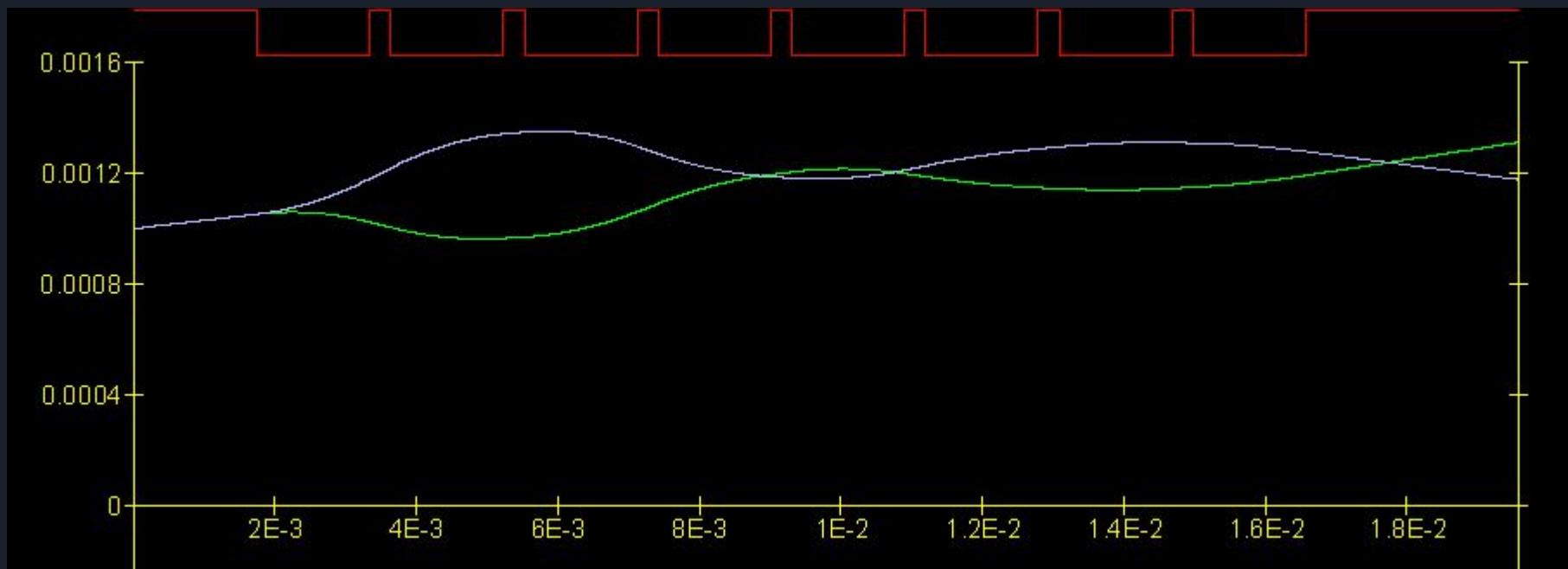
test-6-matching 0.3mm--scale-up100x-6q-longDriftB-0.5mm gaps.in



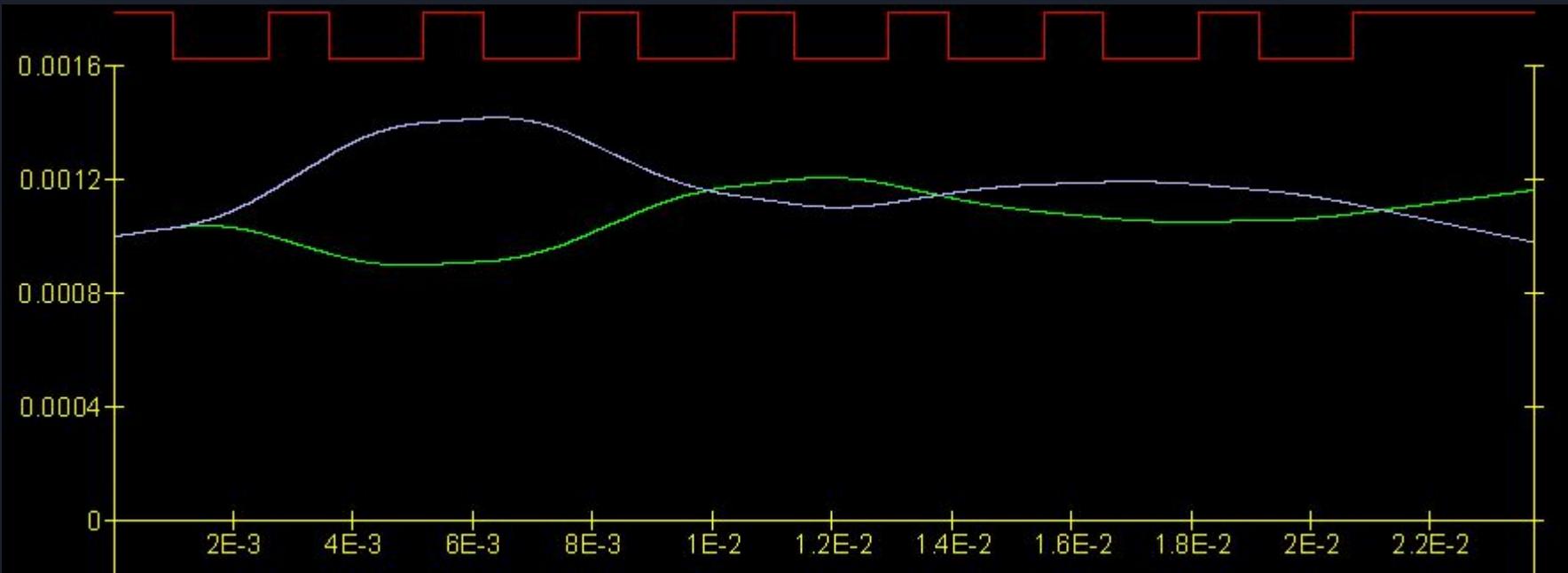
matching 06-19-2020 1mm 30mrad.in



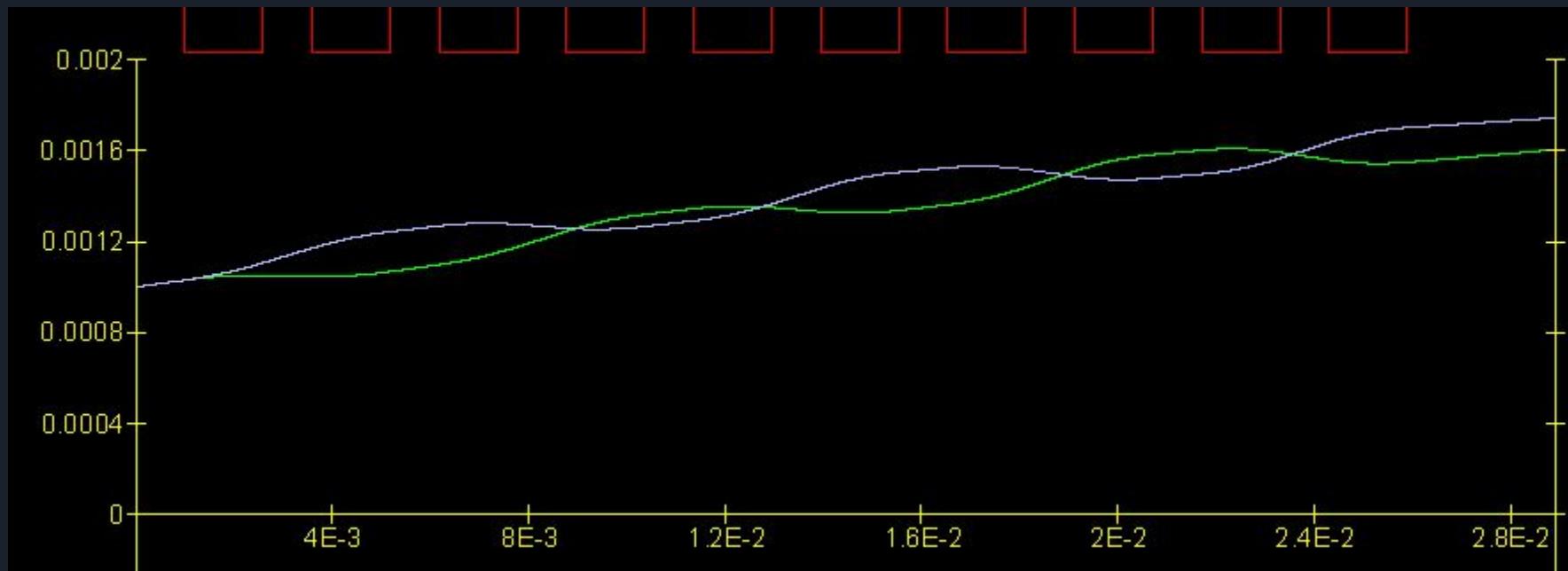
matching 06-19-2020 1mm 30mrad 0.3mm gap.in



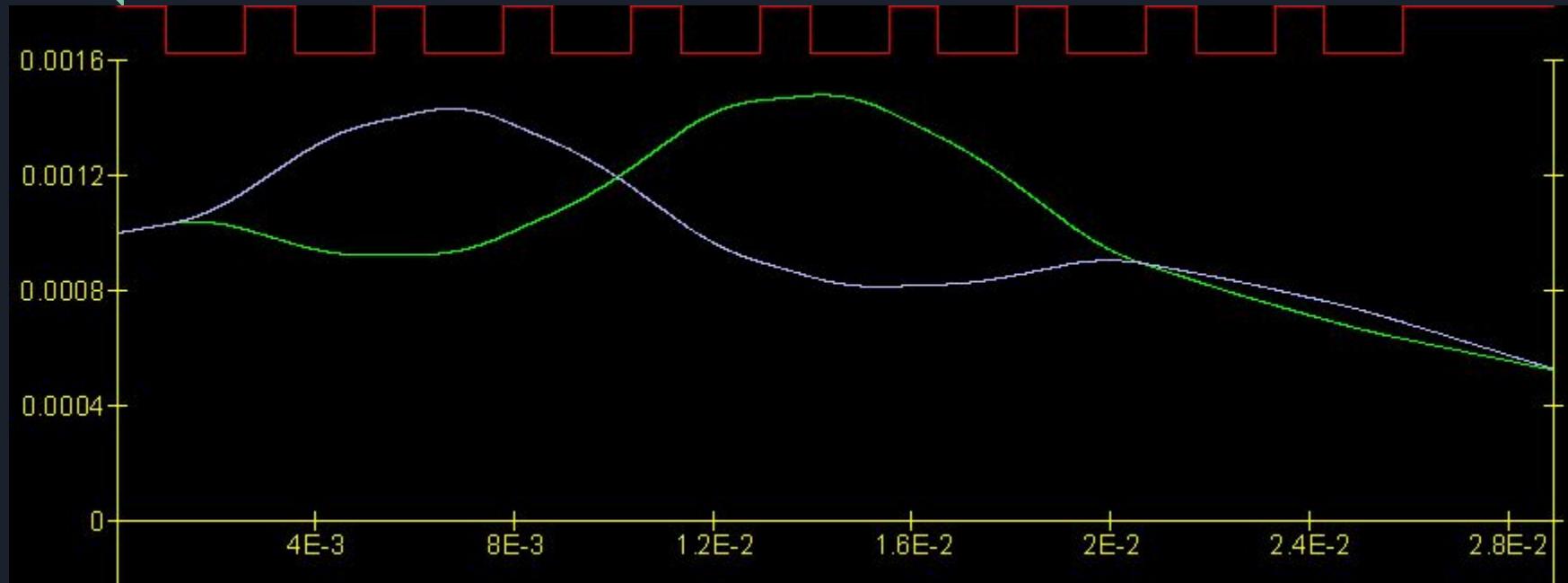
matching 06-19-2020 1mm 30mrad 1mm gap



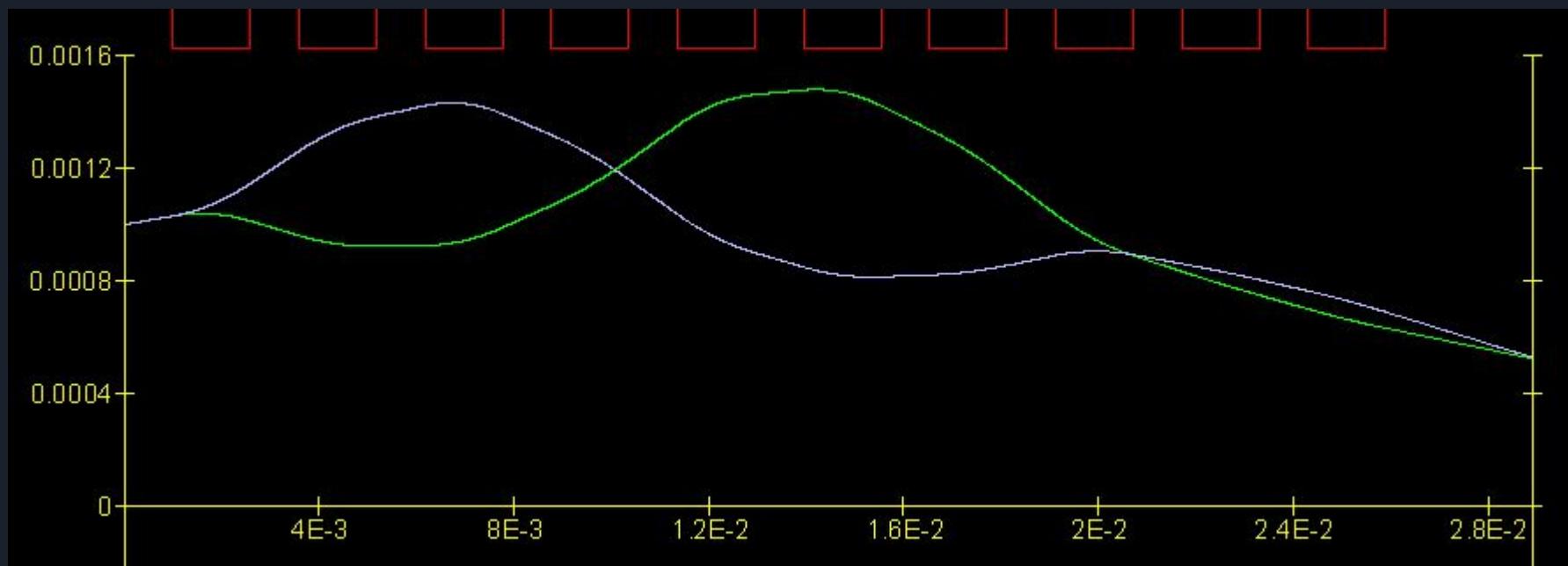
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 10quad.in



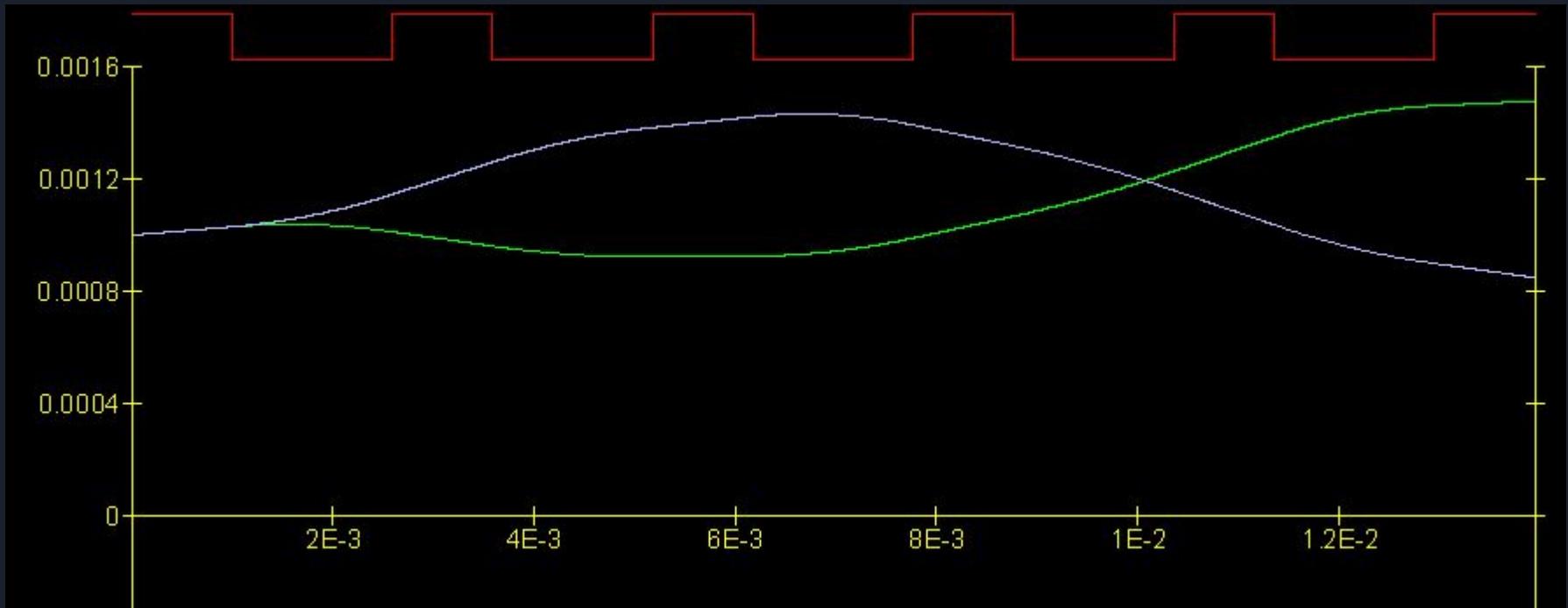
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 10quad
in.in



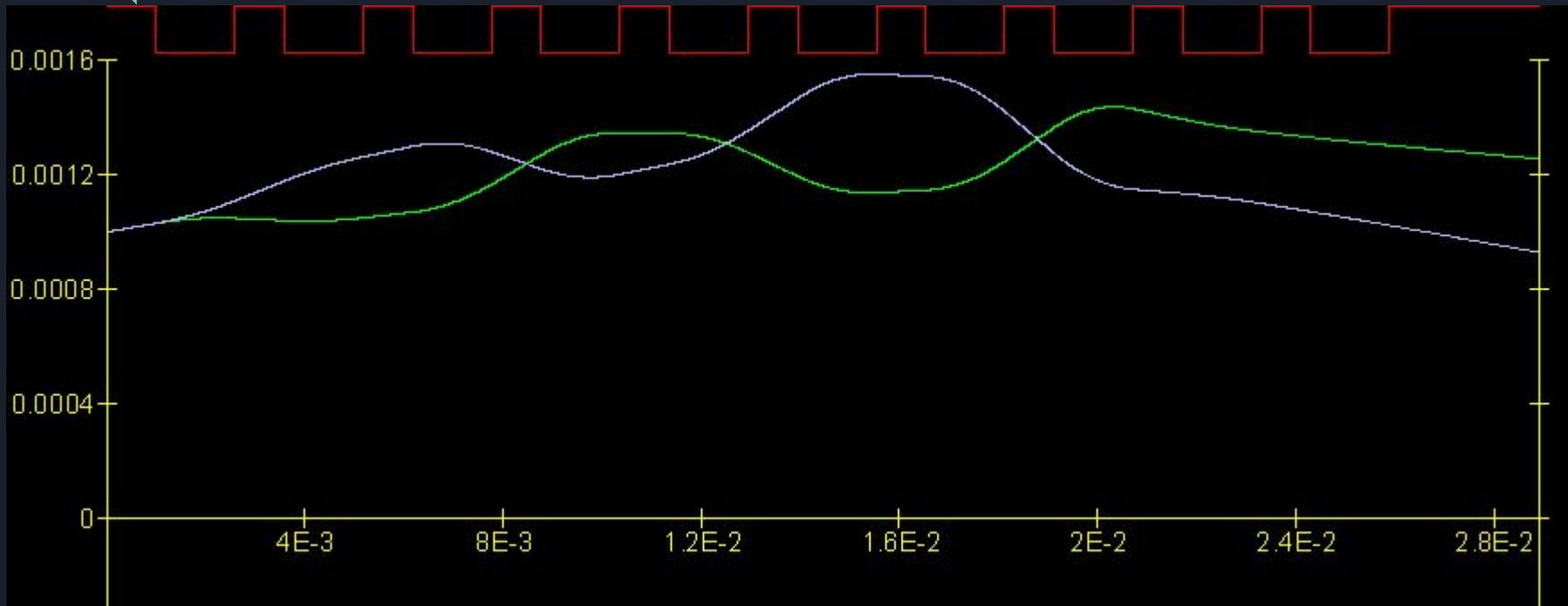
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 10quad
in2.in



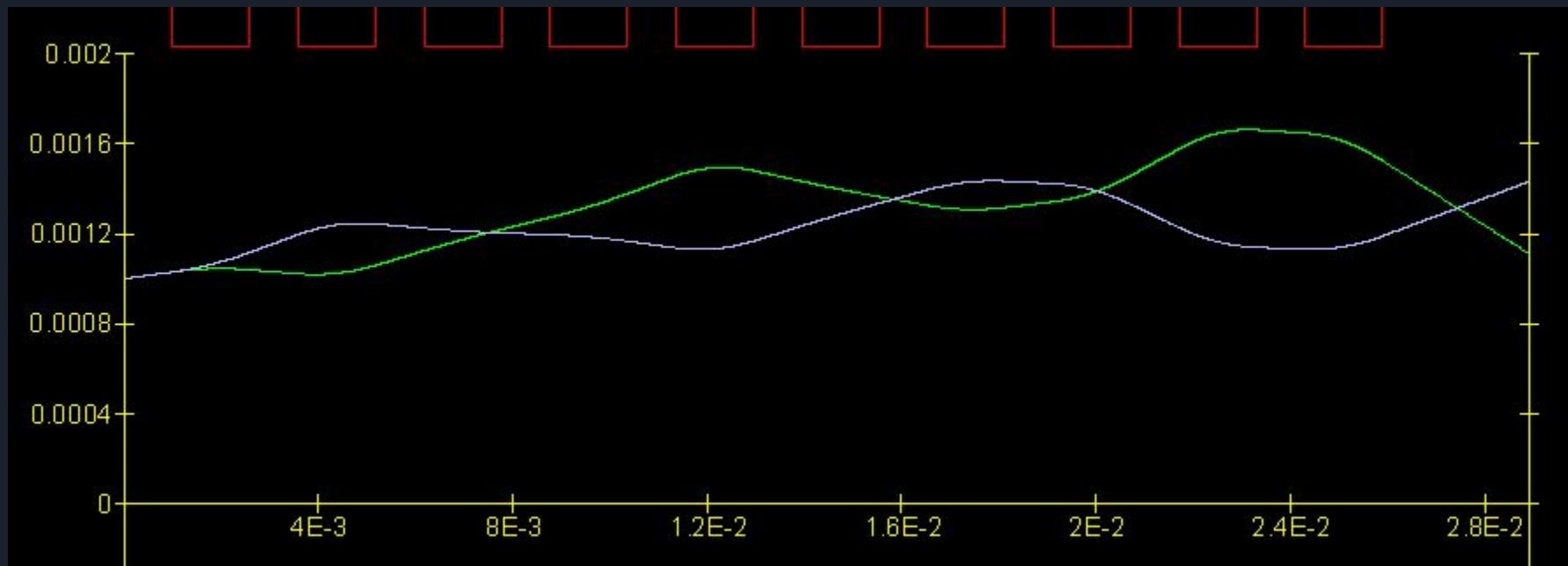
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 5quad
from in2.in



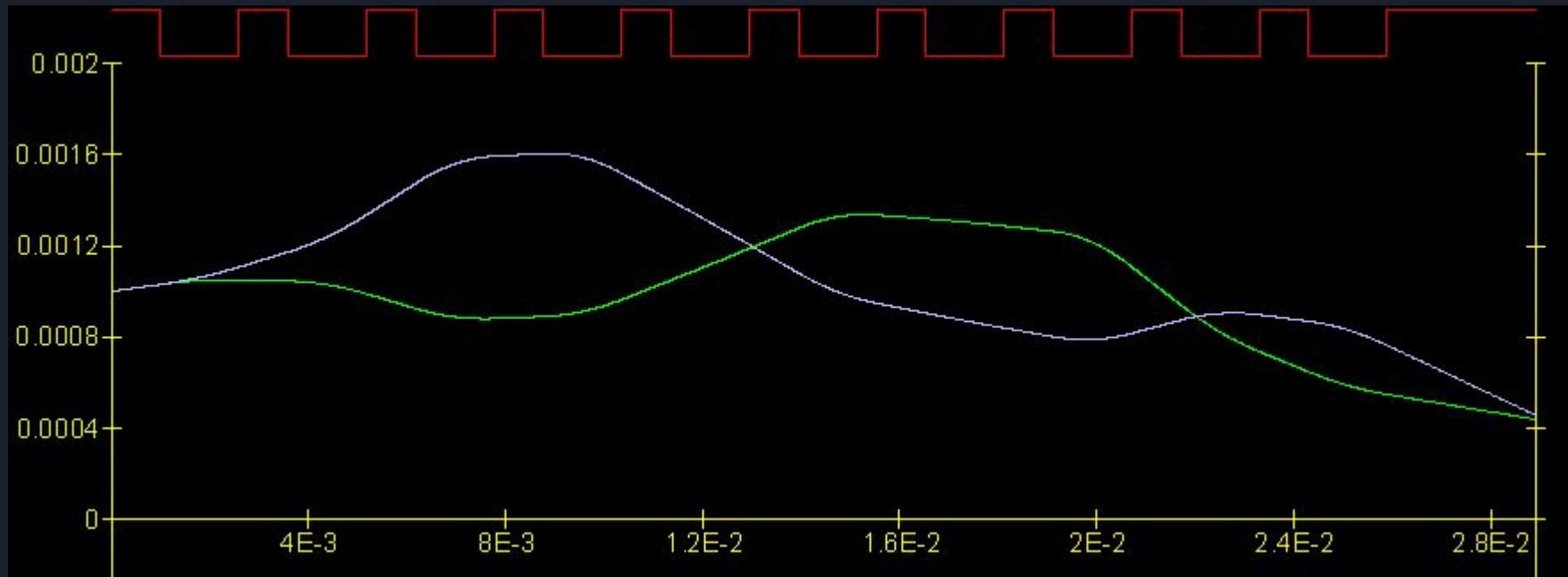
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 10quad
in3.in



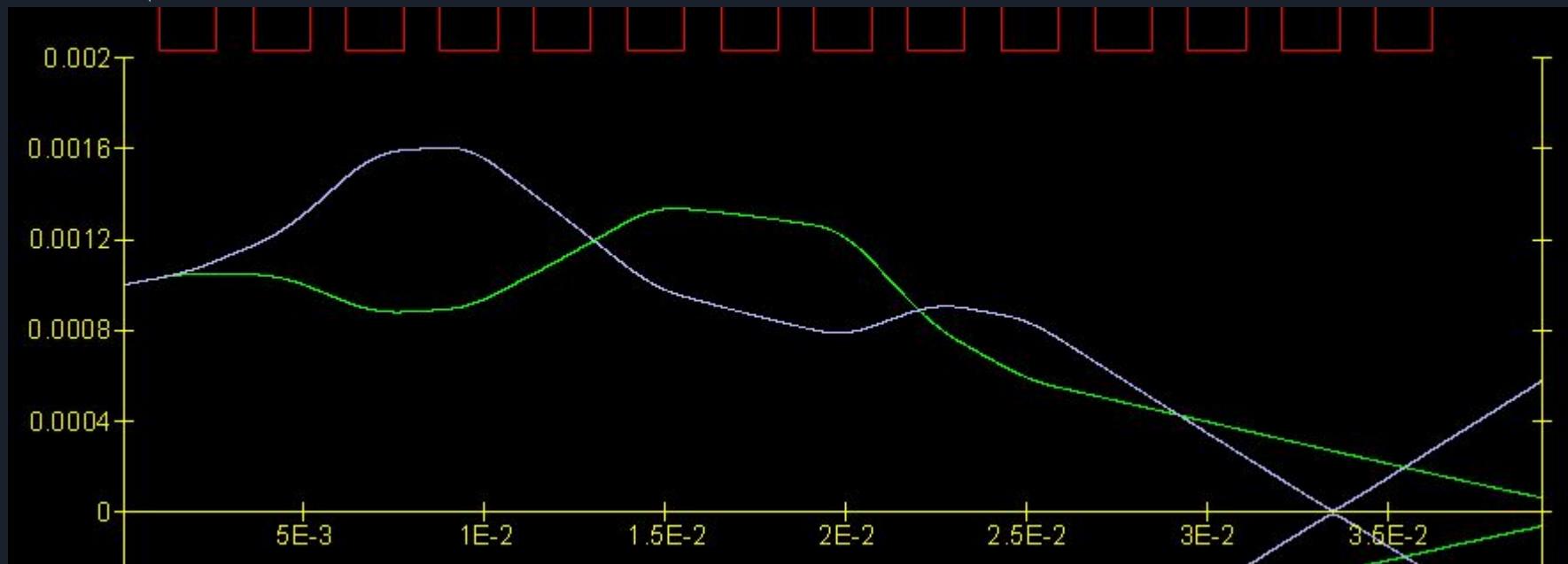
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 10quad in
4.in



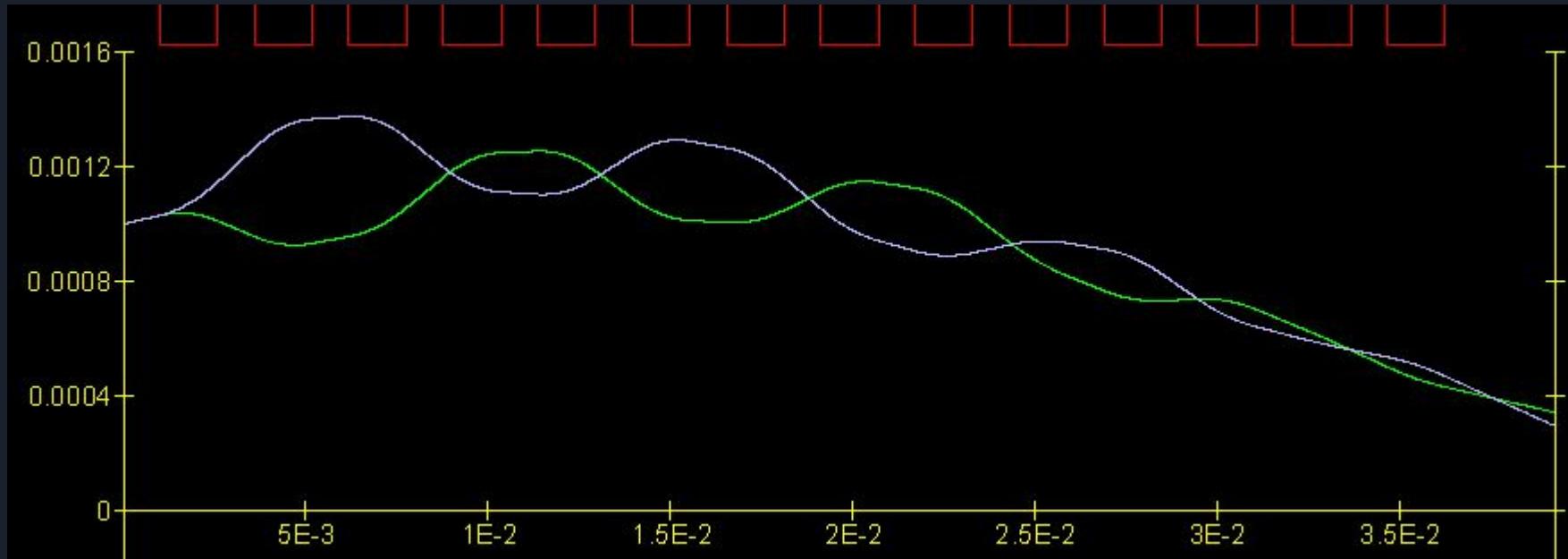
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 10quad
1.6mm max down to 0.4mm.in



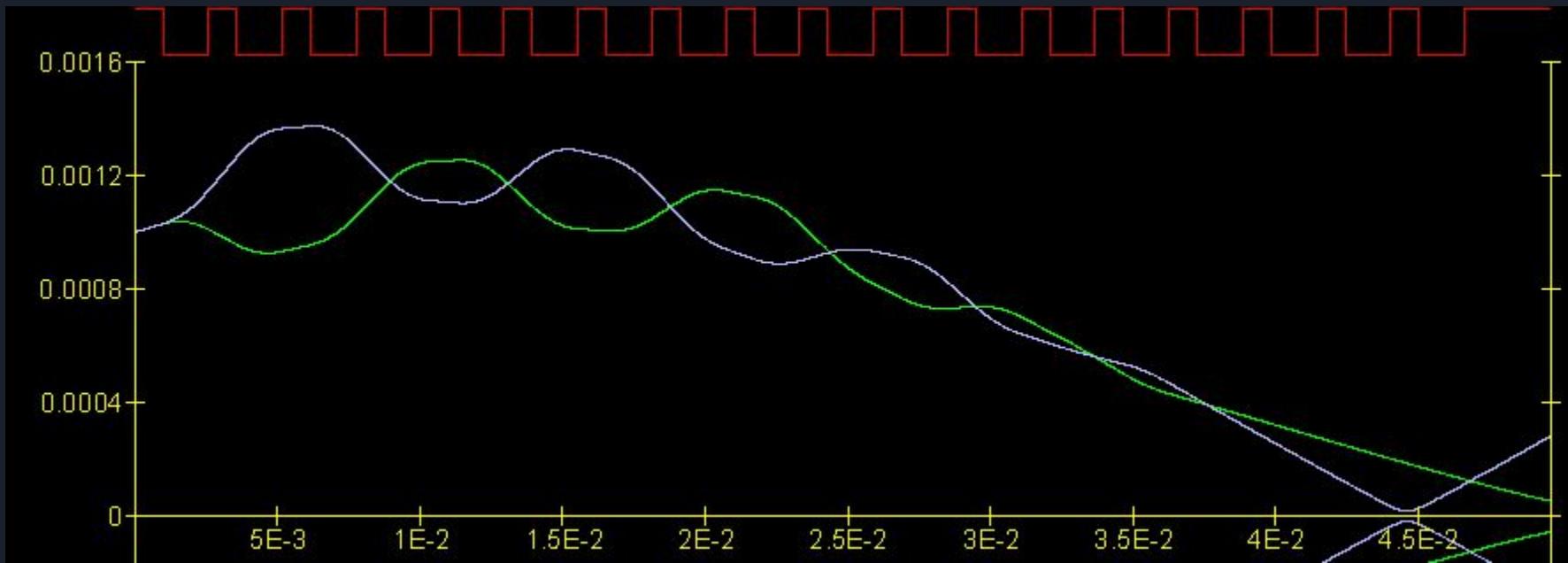
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 14quad.in



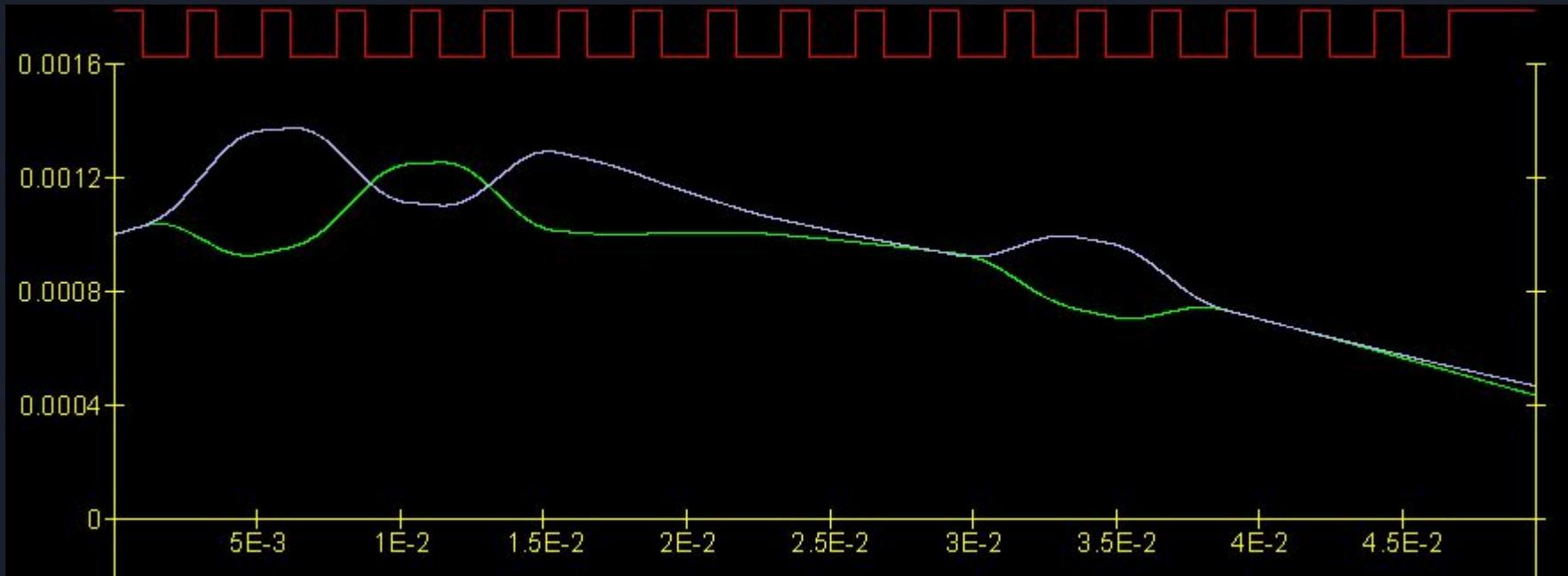
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 14quad
lots of oscillation 14mm down to 5mm.in



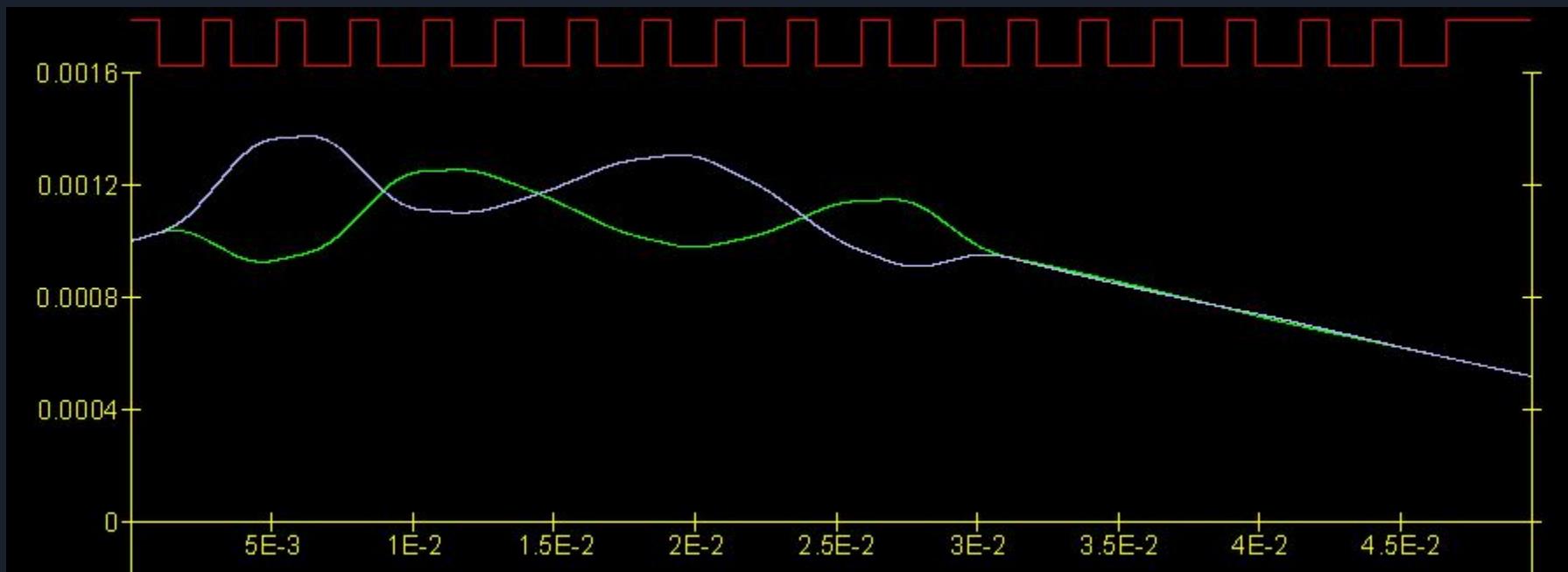
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation 14mm down to 5mm.in



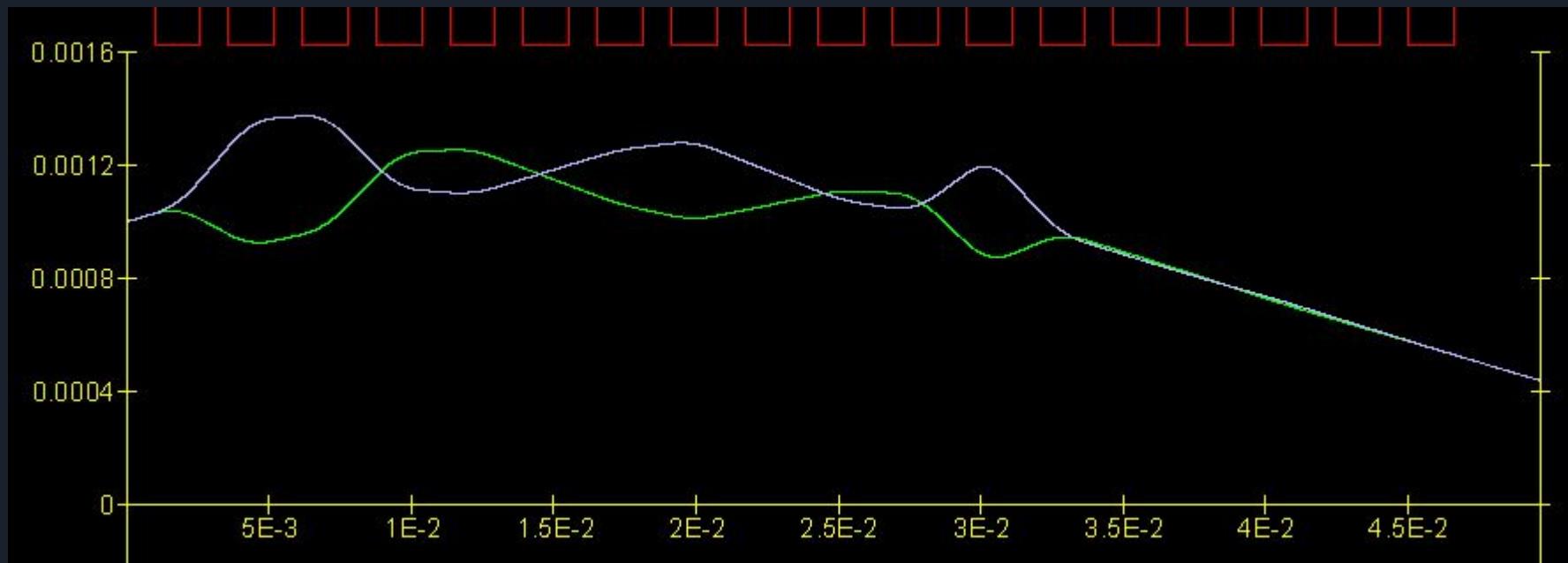
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation 14mm down to 5mm oscillation in middle.in



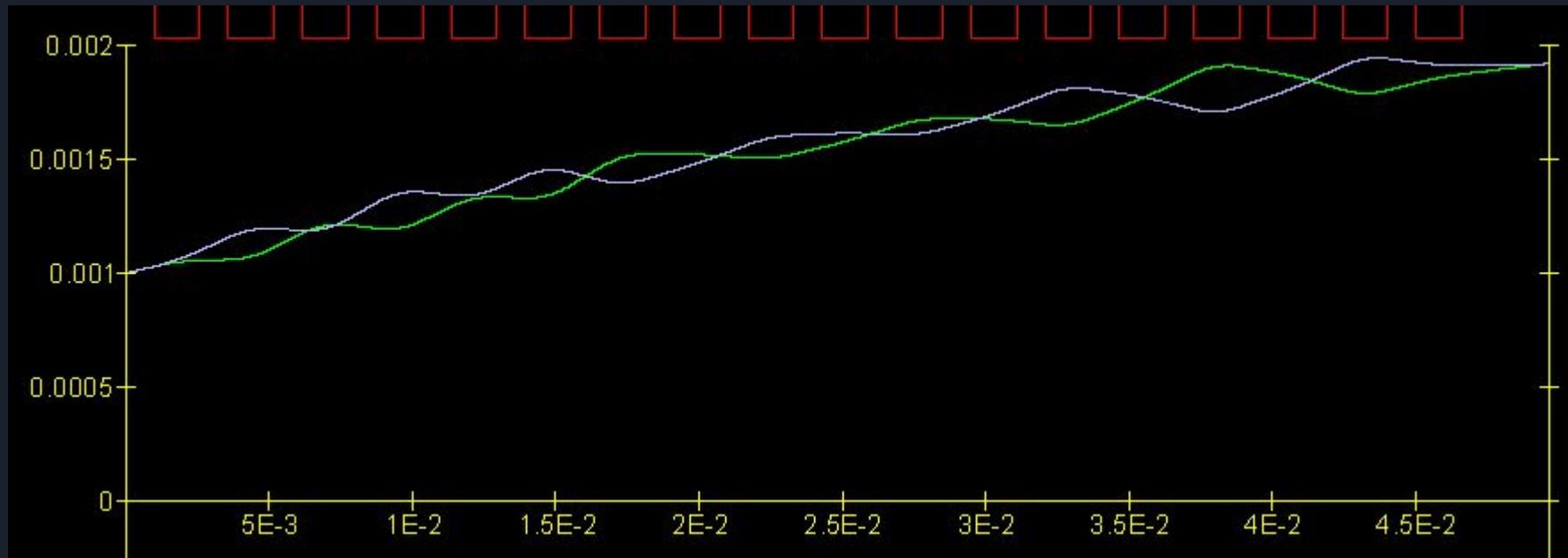
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation 14mm down to 5mm better osc and
straight.in



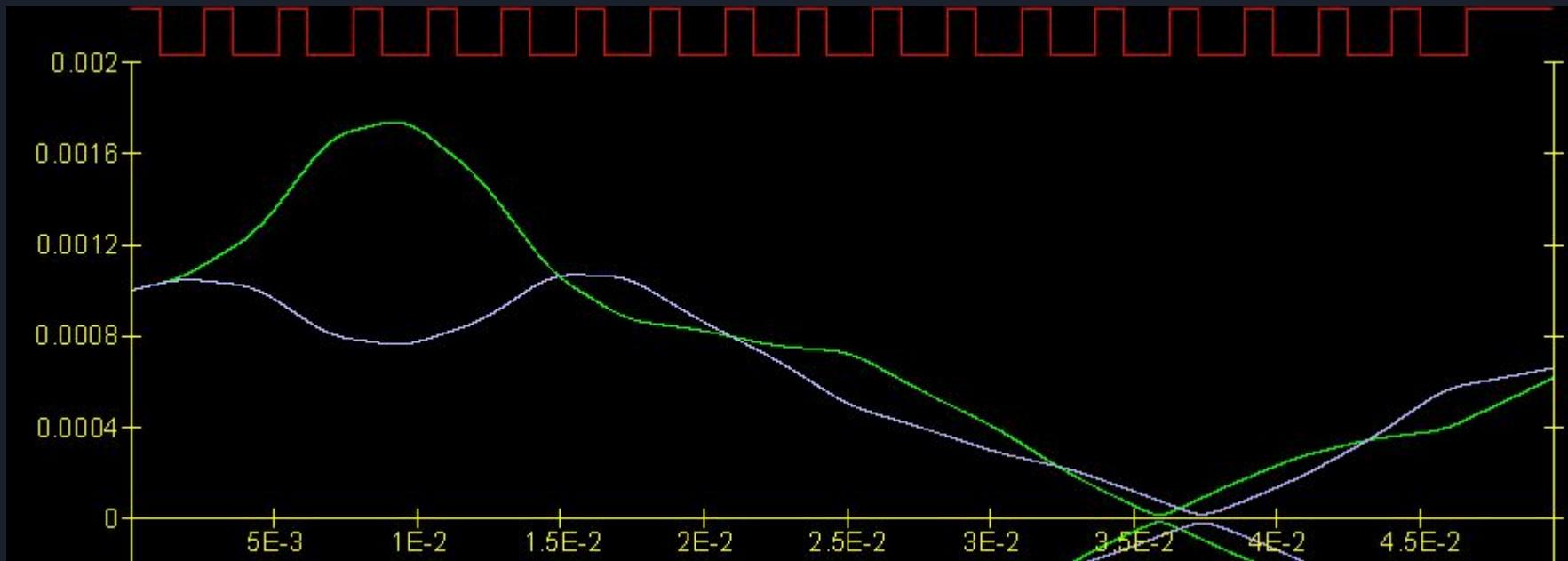
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation 14mm down to 5mm better osc and straight
30mrad at end.in



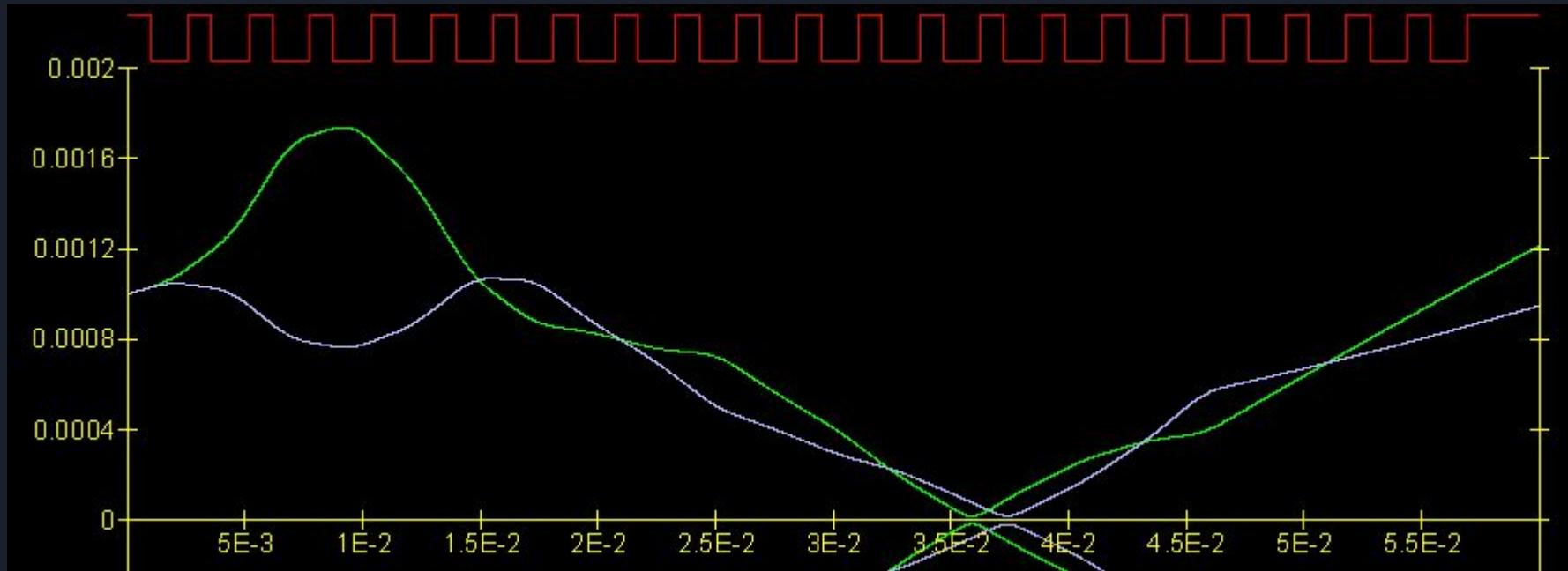
matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
oscillations up to end.in



matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
one bounce up to 0.5mm.in

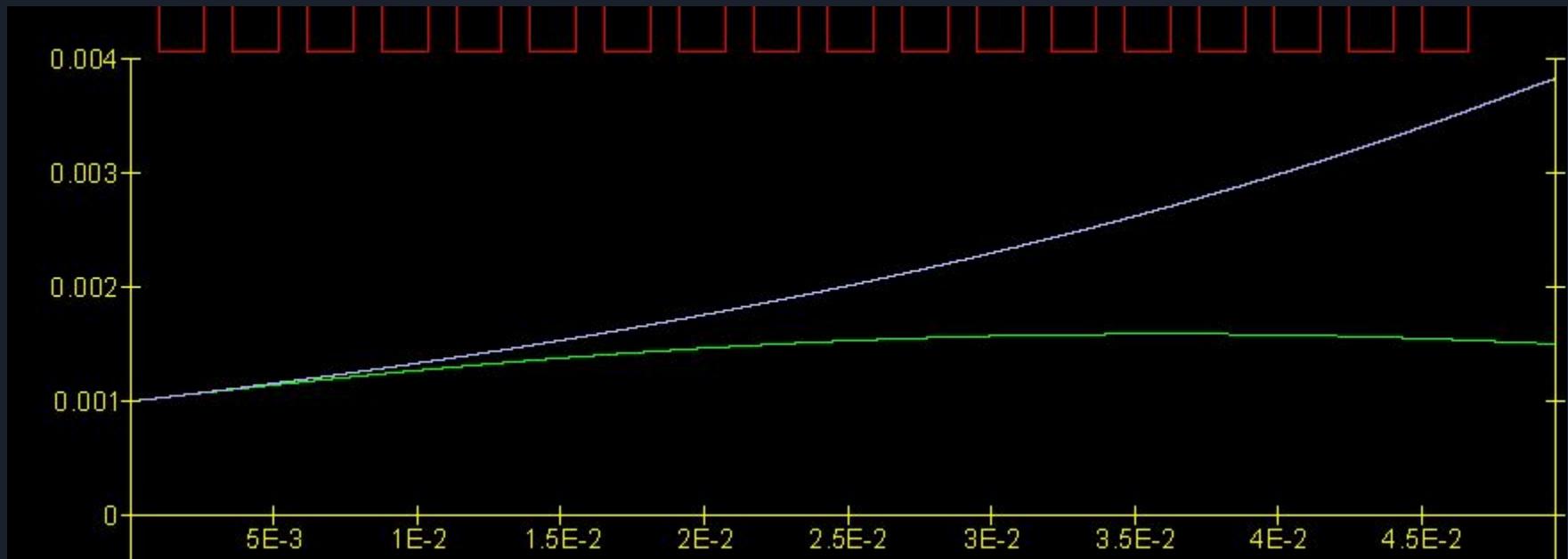


matching 06-22-2020 1mm 30mrad 1mm gap 8keV 22quad
one bounce up to 0.5mm.in

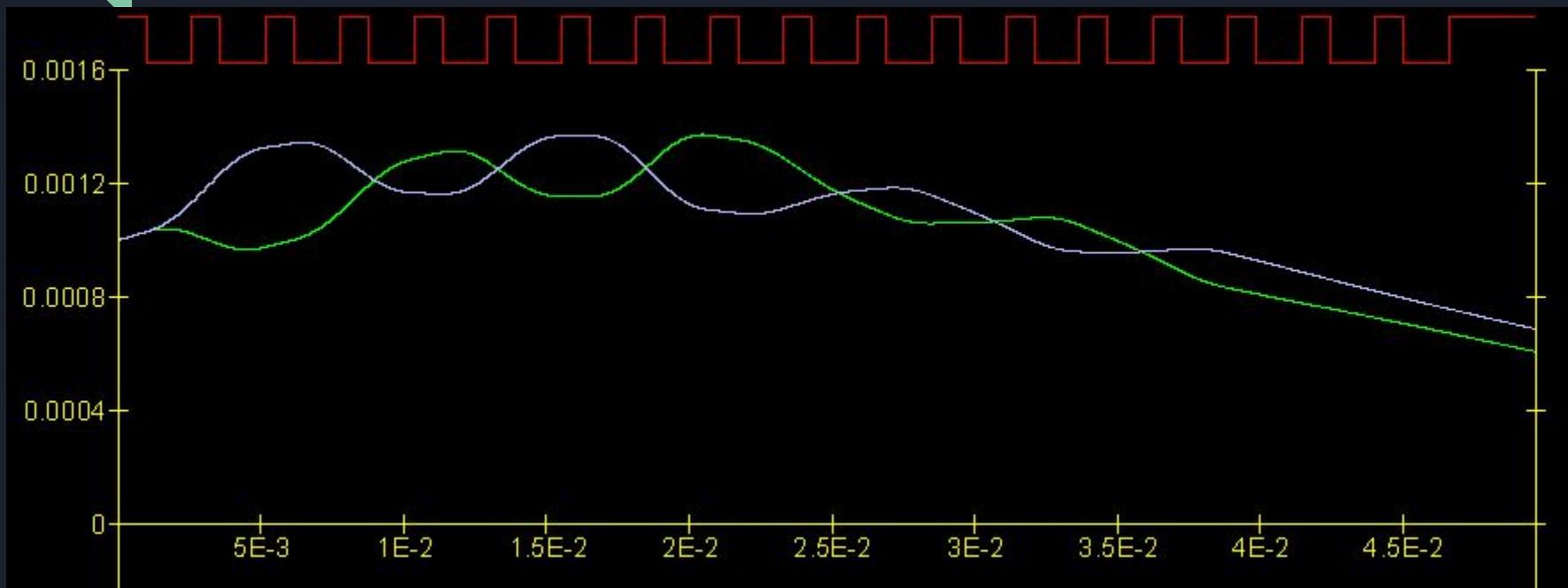


matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
blank.in

(Used to initialize subsequent files)

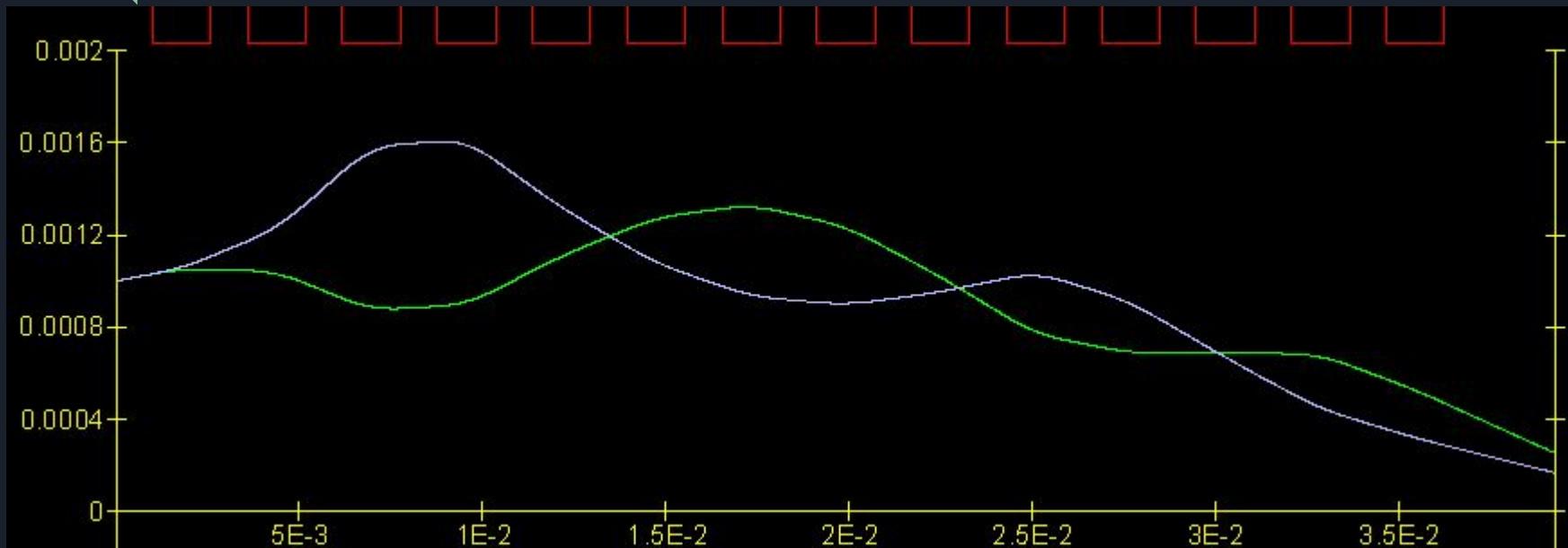


matching 06-22-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation angled down to continue.in

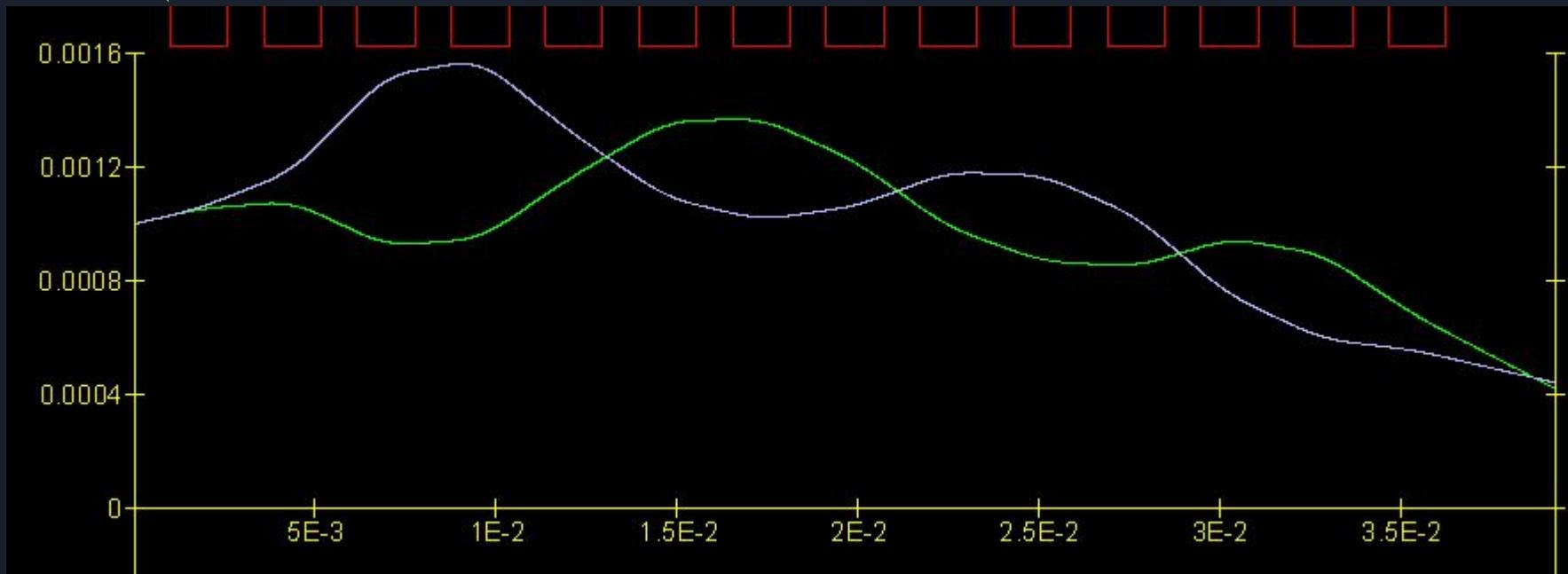


$z = 4.962\text{E-}2 \text{ m}$; $a = 6.0881\text{E-}4 \text{ m}$; $a' = -2.1423\text{E-}2 \text{ rad}$; $b = 6.8835\text{E-}4 \text{ m}$; $b' = -2.3222\text{E-}2 \text{ rad}$.

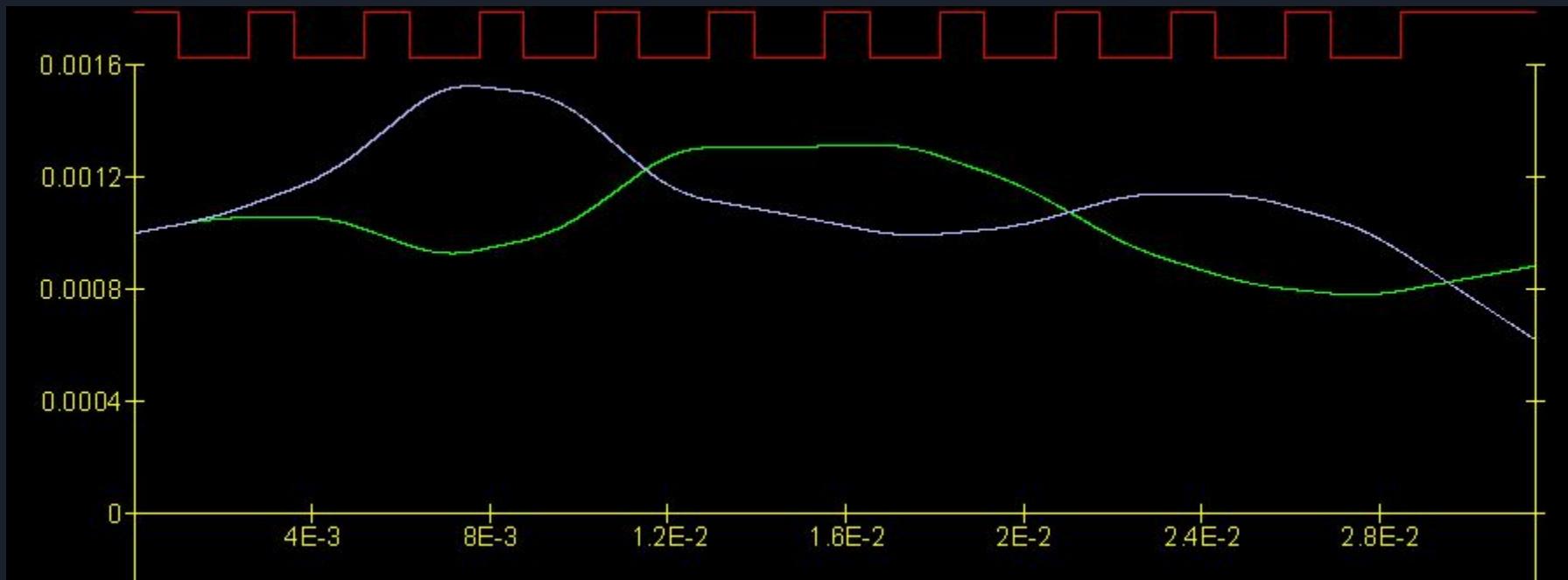
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 14quad
max 16mm down to 3mm.in



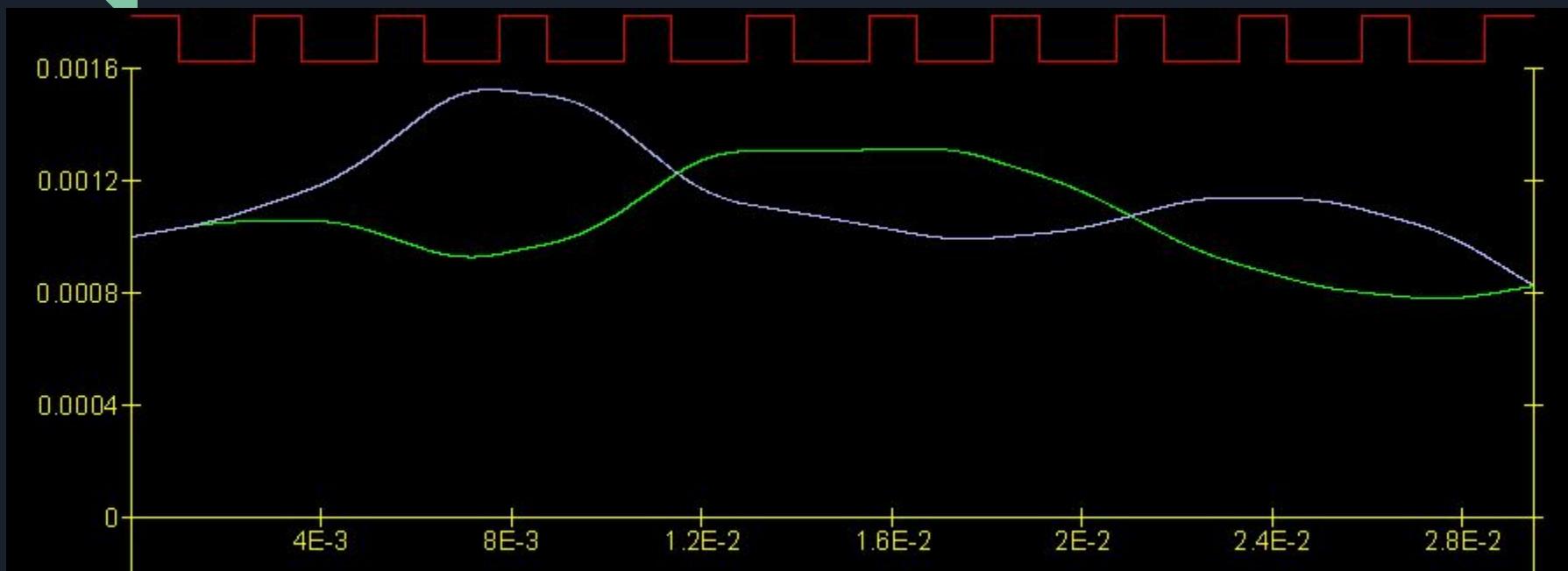
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 14quad
max 16mm down to 5mm.in



matching 06-23-2020 1mm 30mrad 1mm gap 8keV 11quad
max 16mm down to match at 0deg.in

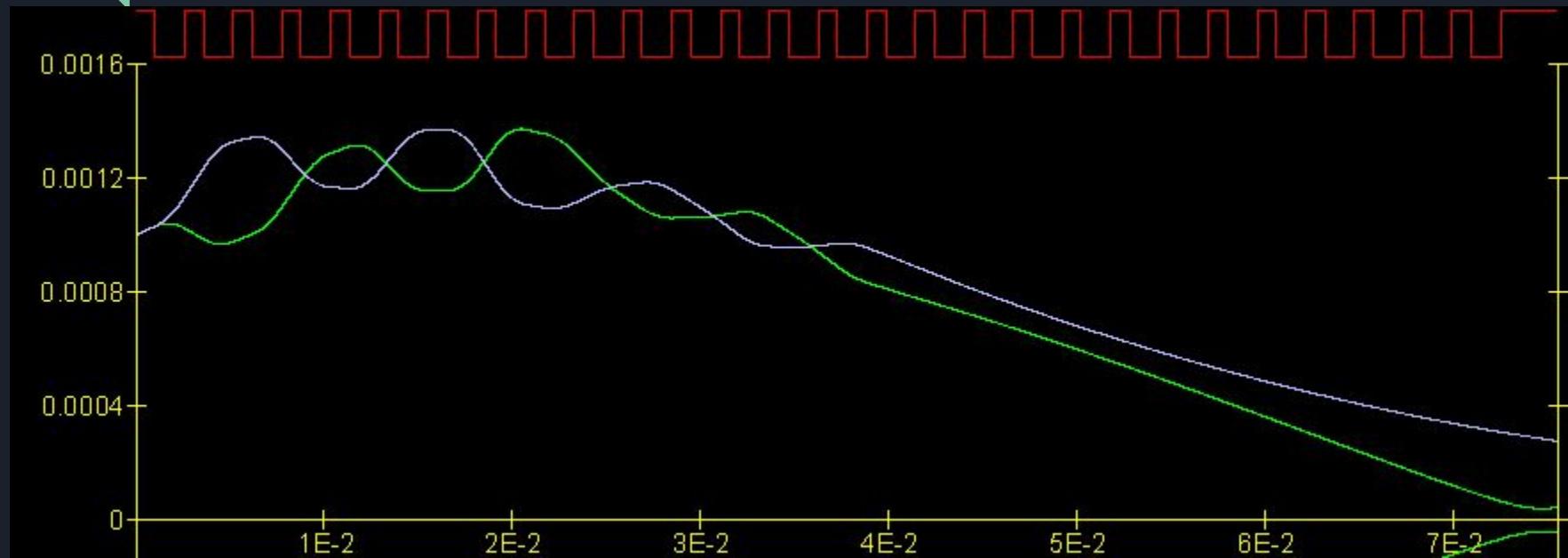


matching 06-23-2020 1mm 30mrad 1mm gap 8keV 11quad
max 16mm down to match at 0deg 2.in

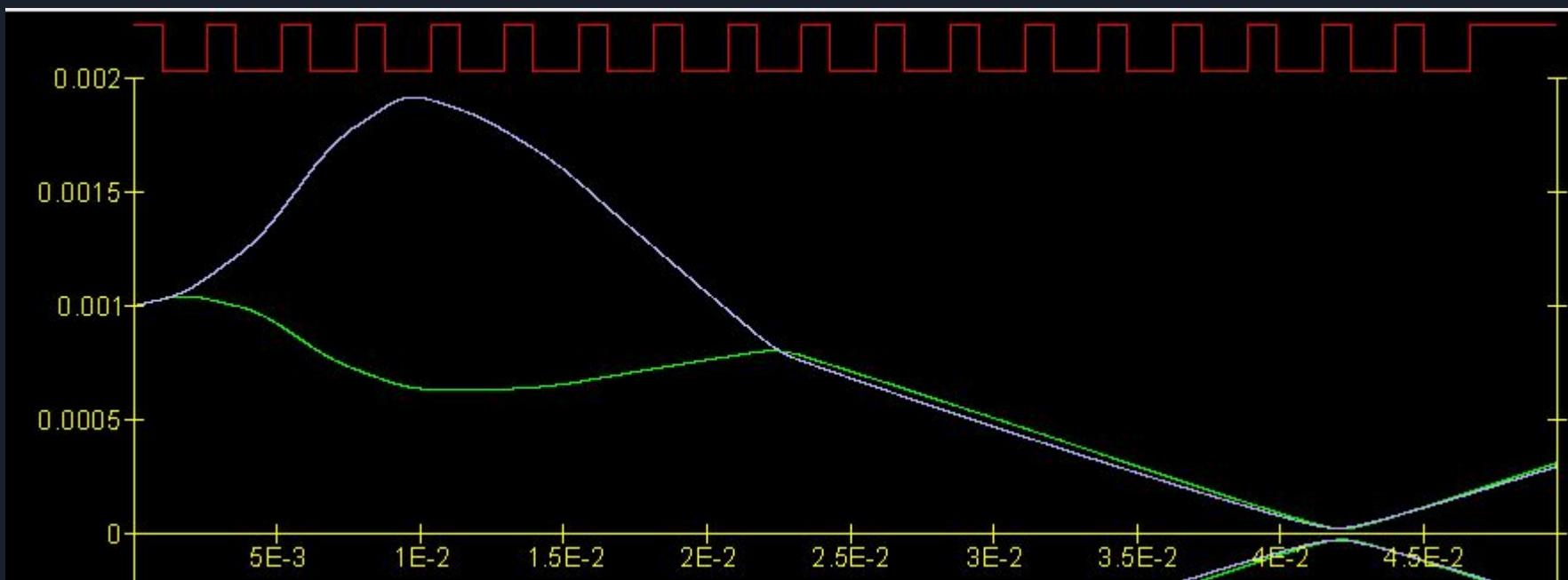


$z = 2.949\text{E-}2 \text{ m}$; $a = 8.2369\text{E-}4 \text{ m}$; $a' = 2.8821\text{E-}2 \text{ rad}$; $b = 8.2829\text{E-}4 \text{ m}$; $b' = -1.0377\text{E-}1 \text{ rad}$.

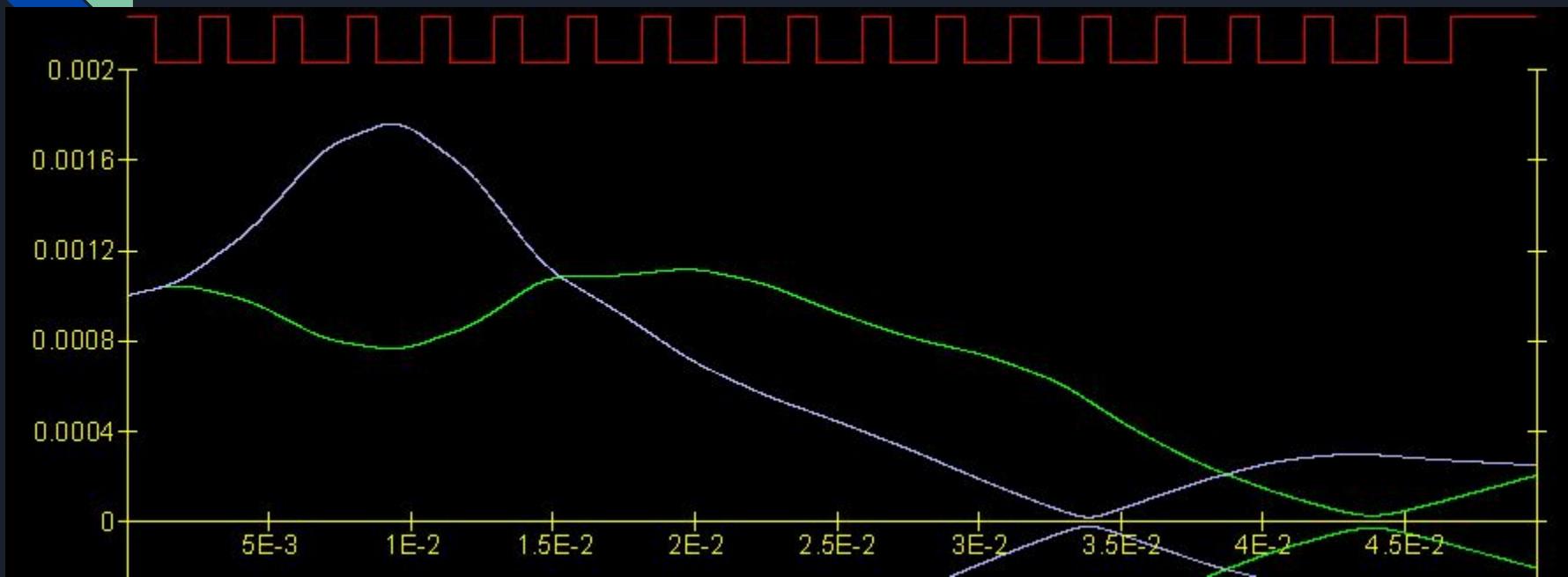
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 23quad
lots of oscillation angled down to continue.in



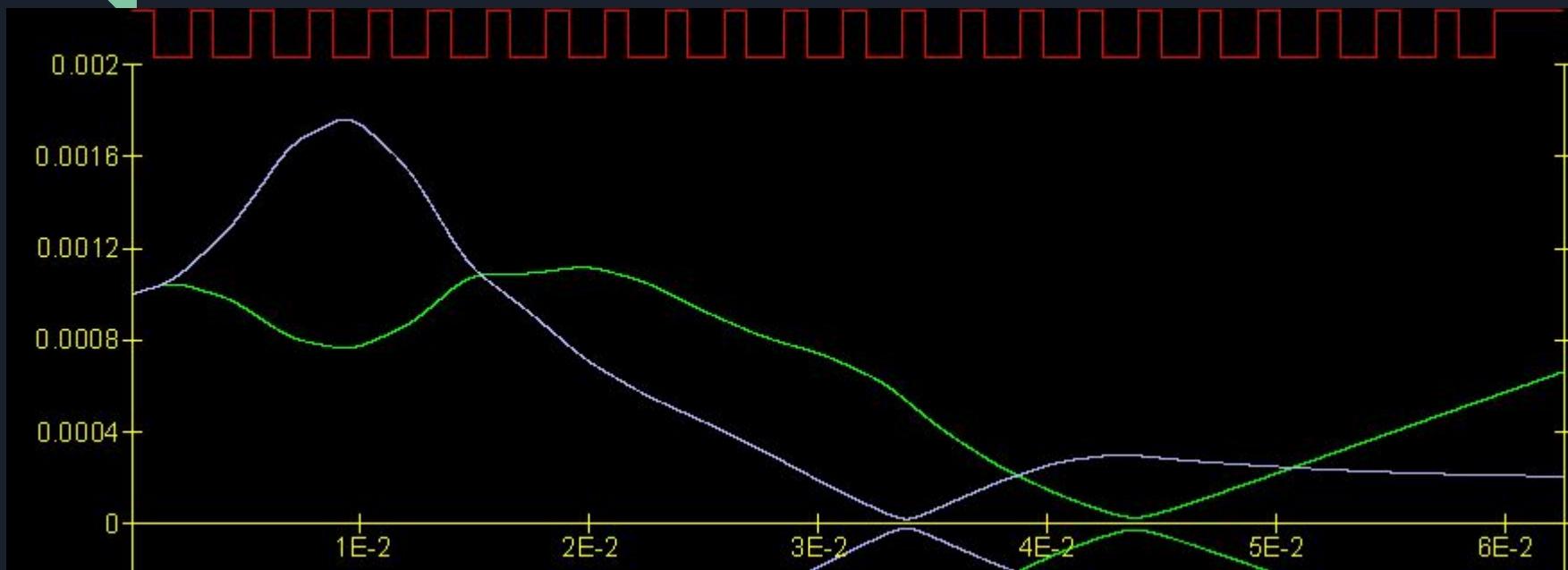
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 18quad
quick up and down.in



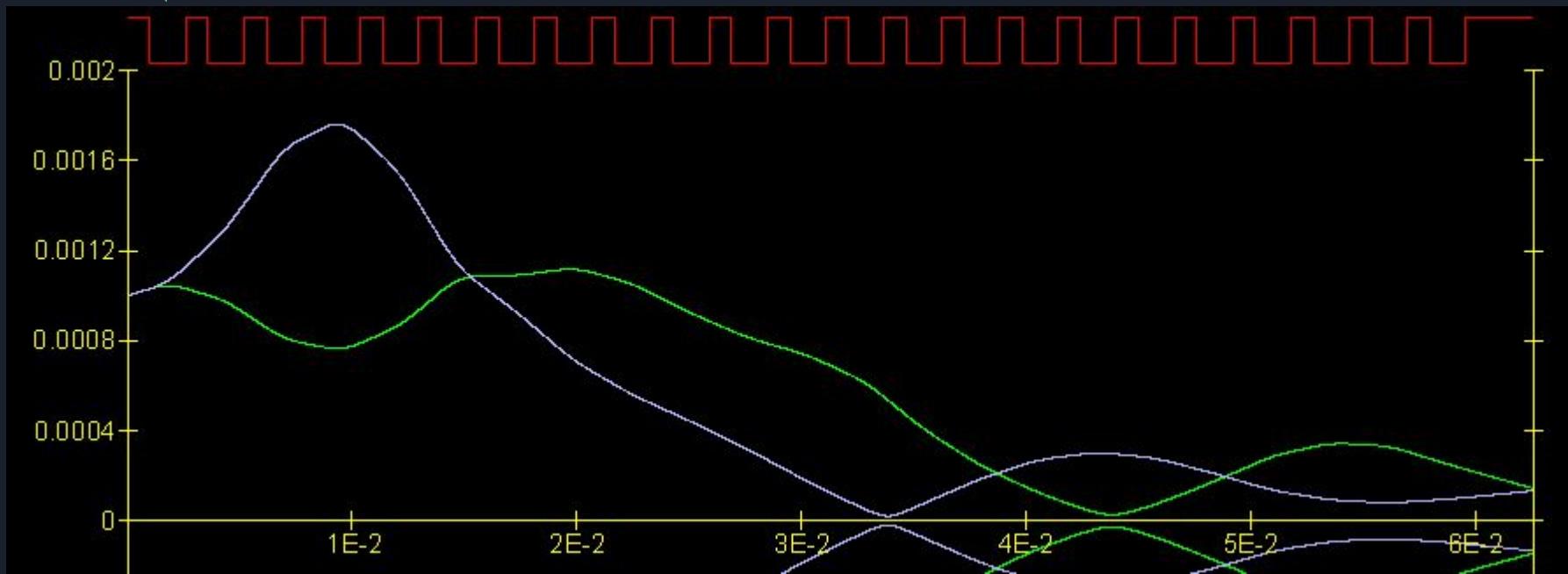
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 18quad
quick up and down ready for more.in



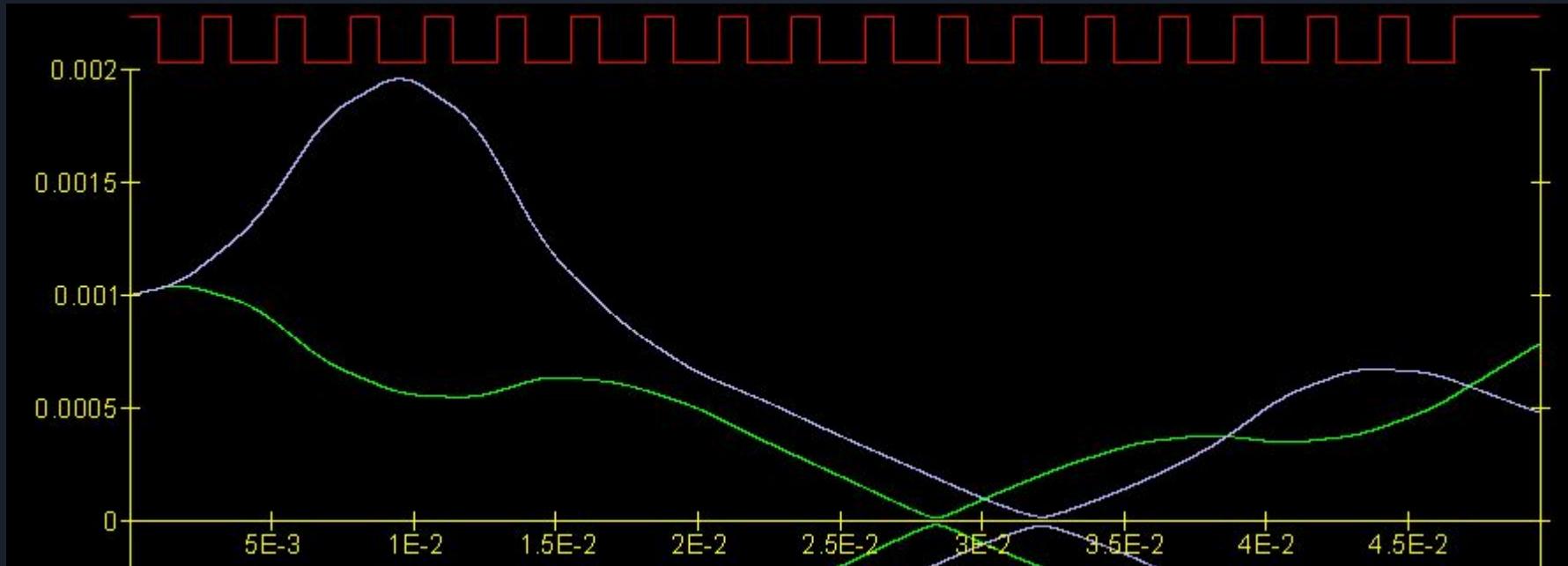
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 23quad
quick up and down ready for more.in



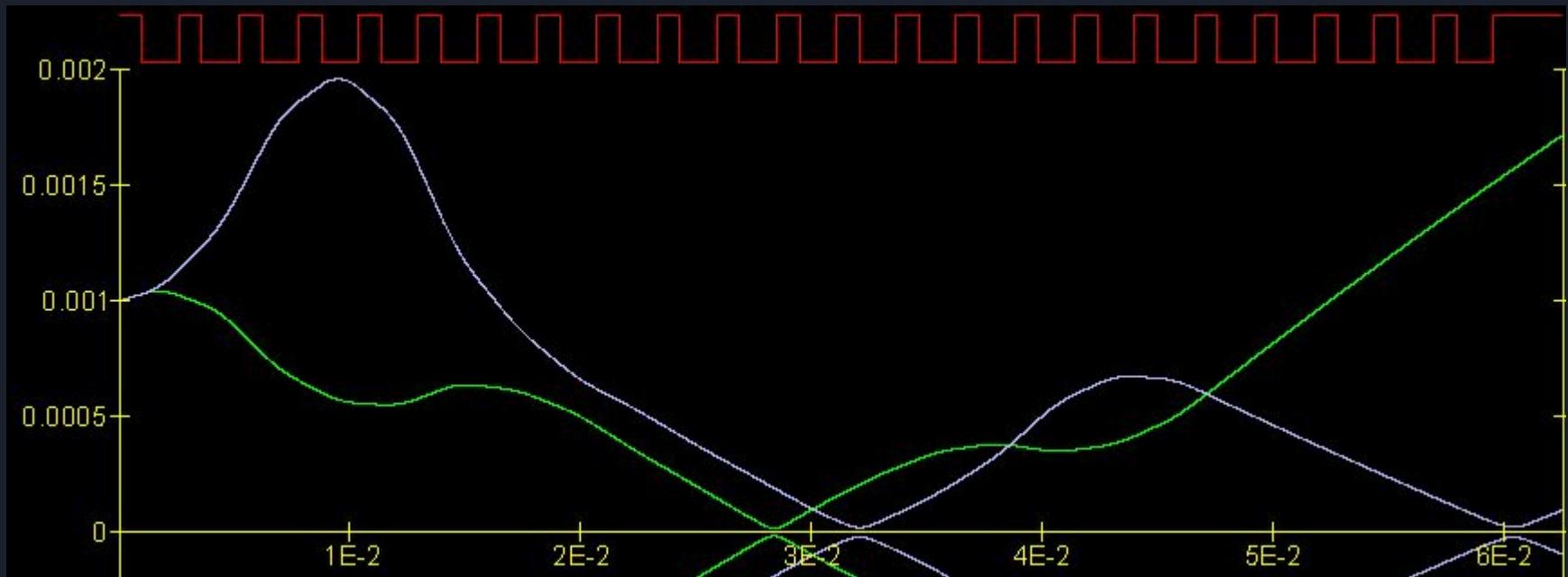
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 23quad
quick up and down matched-oscillating at 0.14mm.in



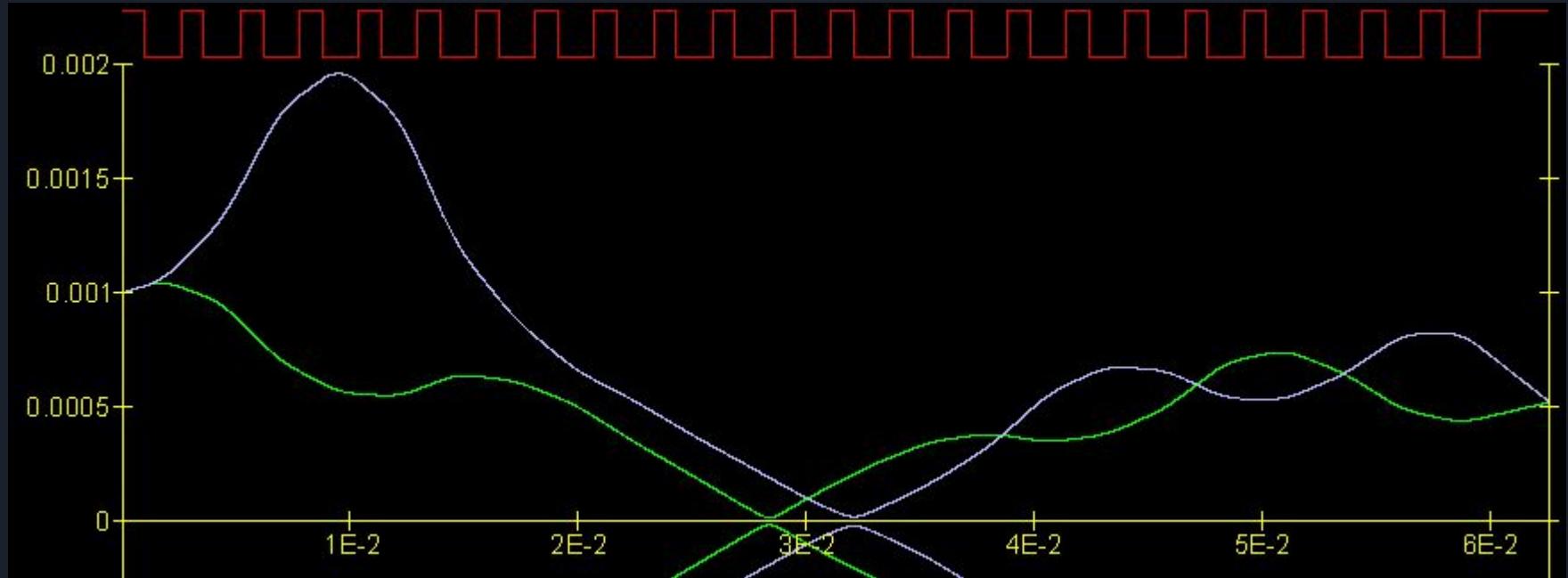
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 18quad
quick drop but back up.in



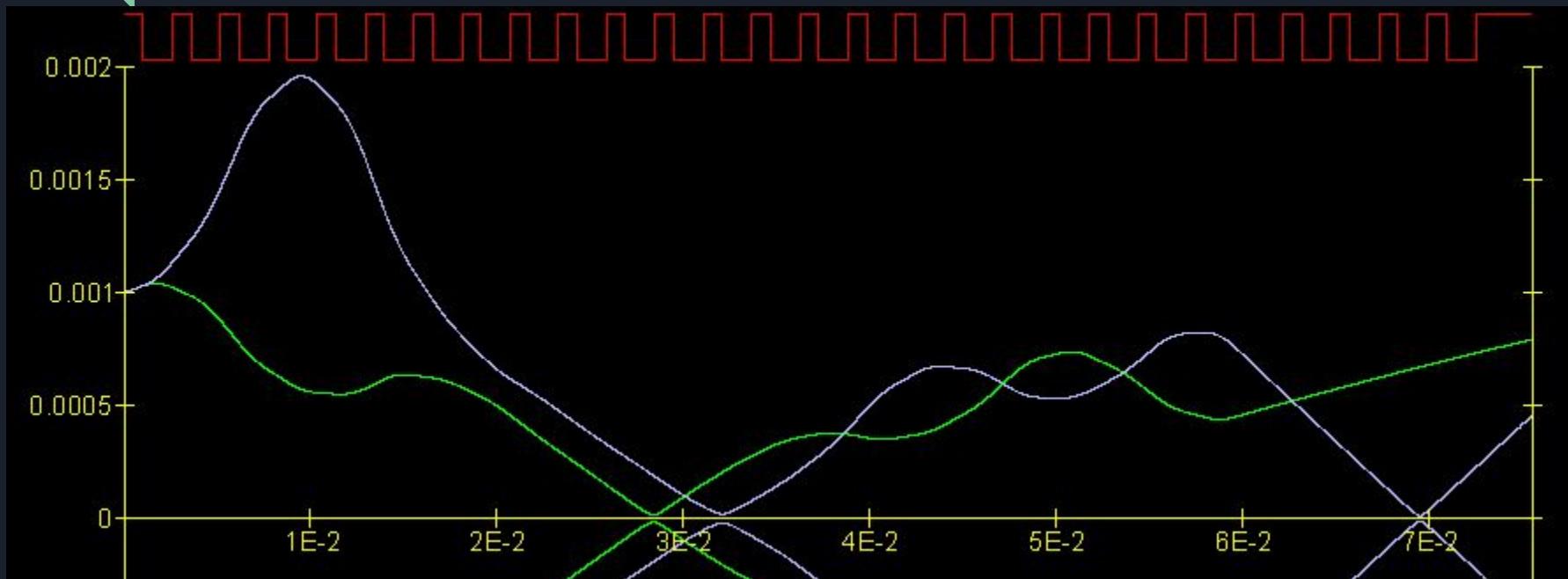
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 23quad
quick drop but back up.in



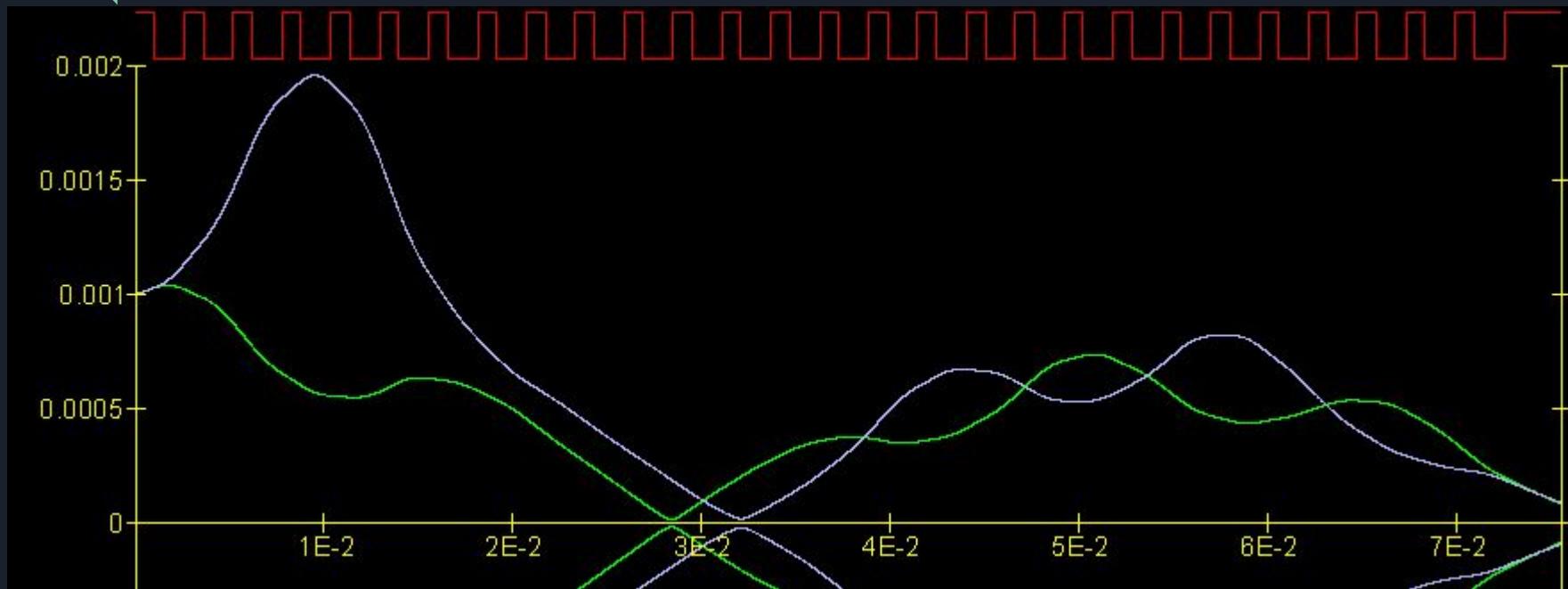
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 23quad
quick drop but back up now down.in



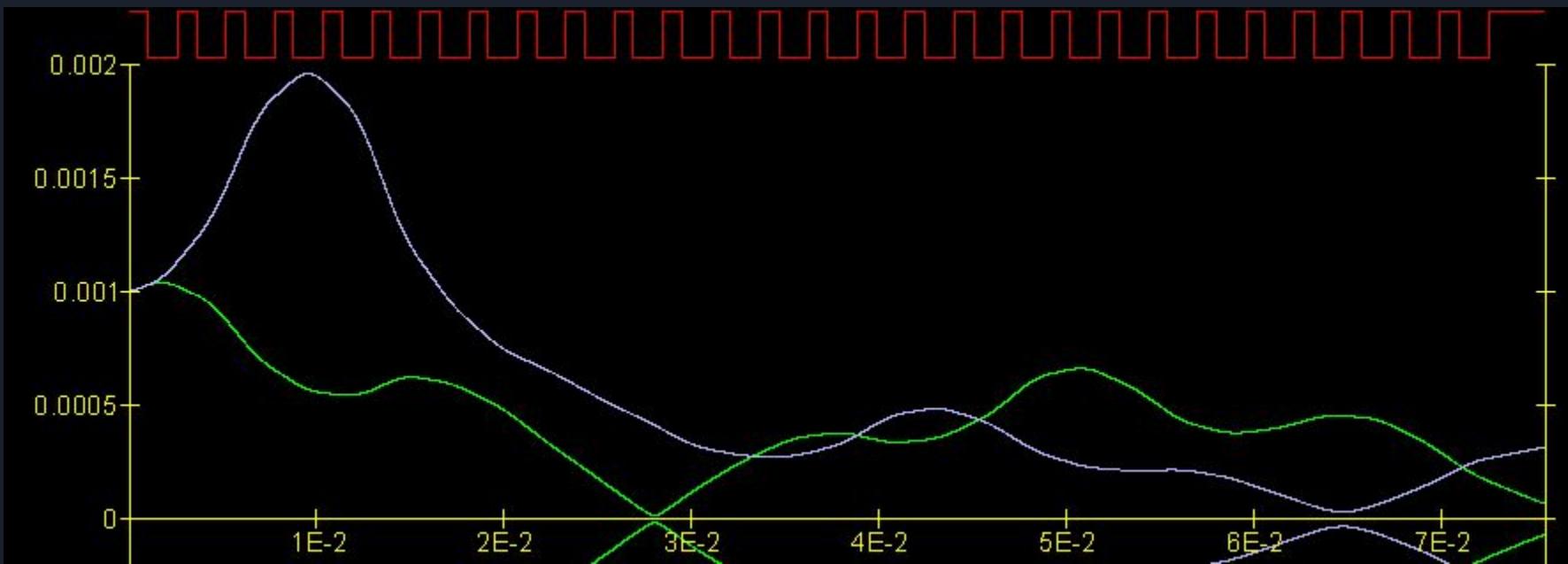
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 28quad
quick drop but back up now down.in



matching 06-23-2020 1mm 30mrad 1mm gap 8keV 28quad
quick drop then bounce matched at 0.009mm and -30mrad.in



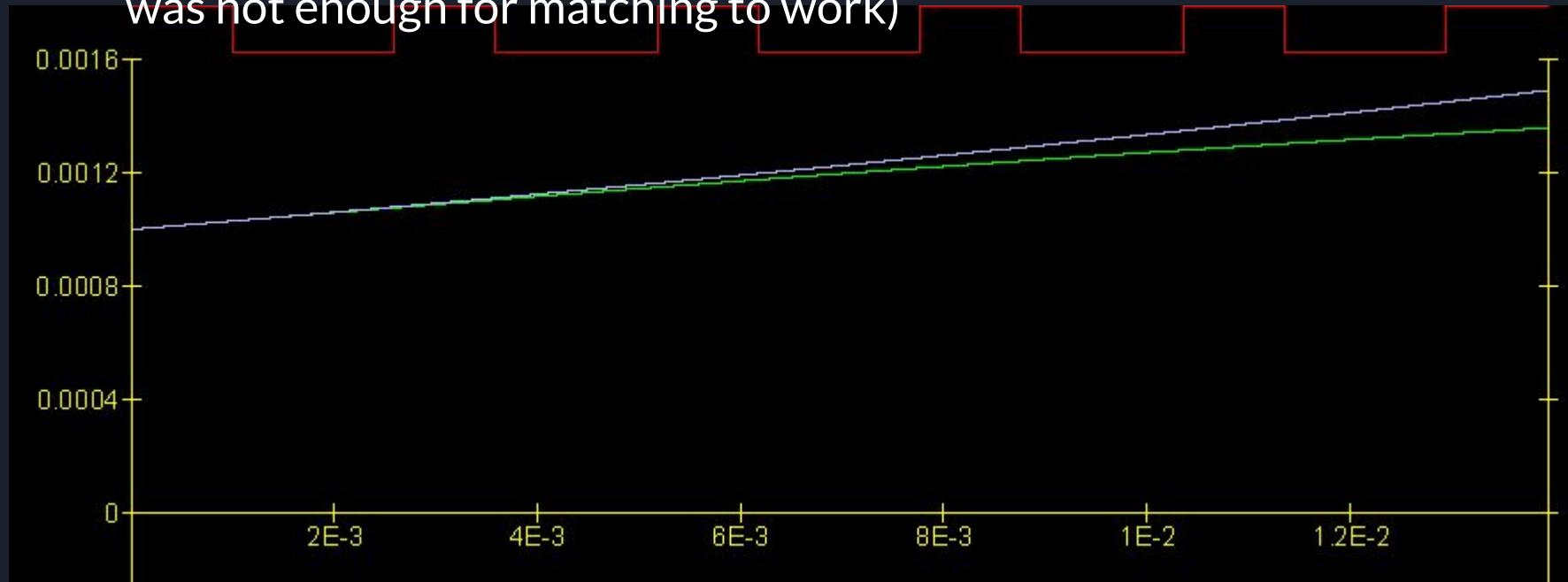
matching 06-24-2020 1mm 30mrad 1mm gap 8keV 28quad
quick drop then bounce matched at 0.009mm and -30mrad
only one bounce.in



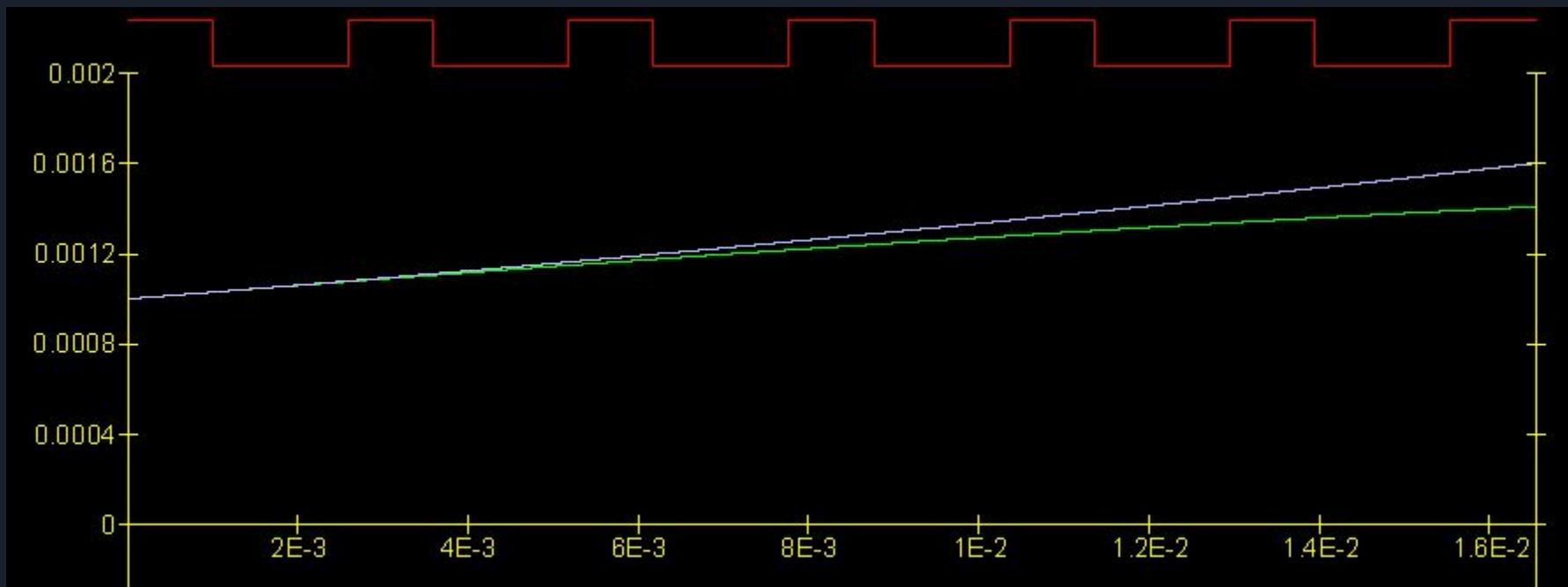
matching 06-24-2020 1mm 30mrad 1mm gap 8keV 5quad

blank.in

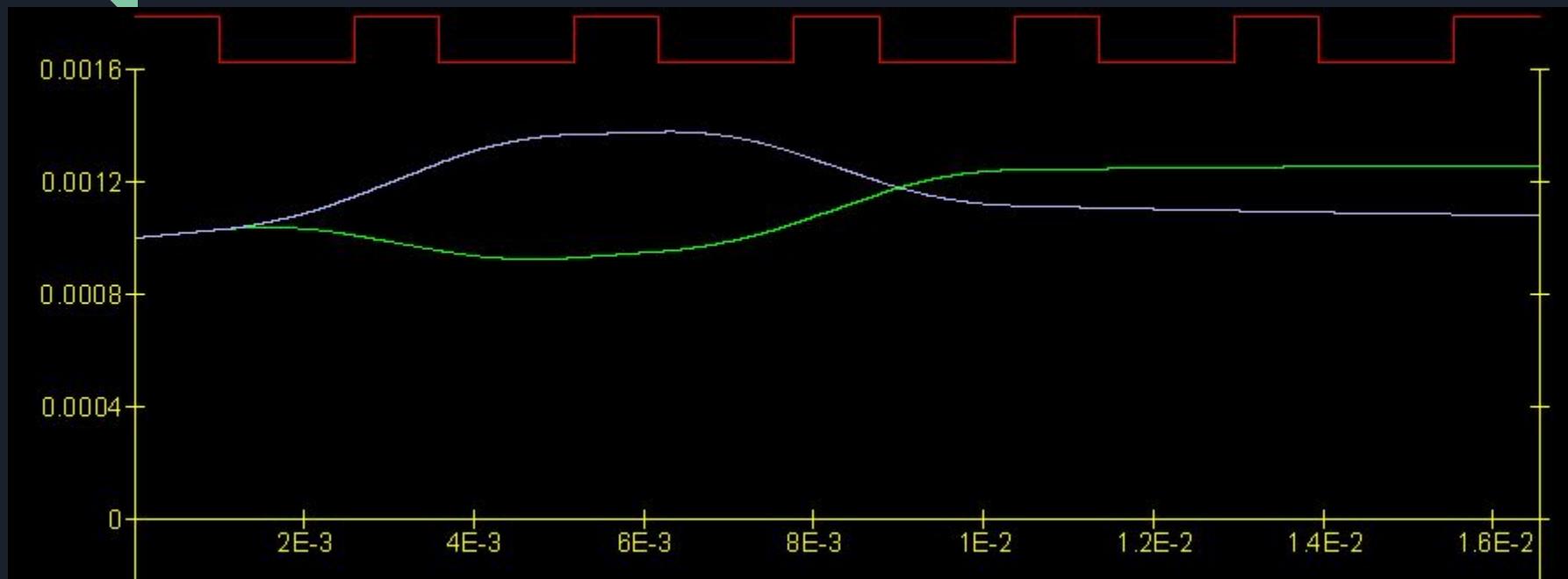
(Was going to be used to initialize later files, but actually 5ESQs
was not enough for matching to work)



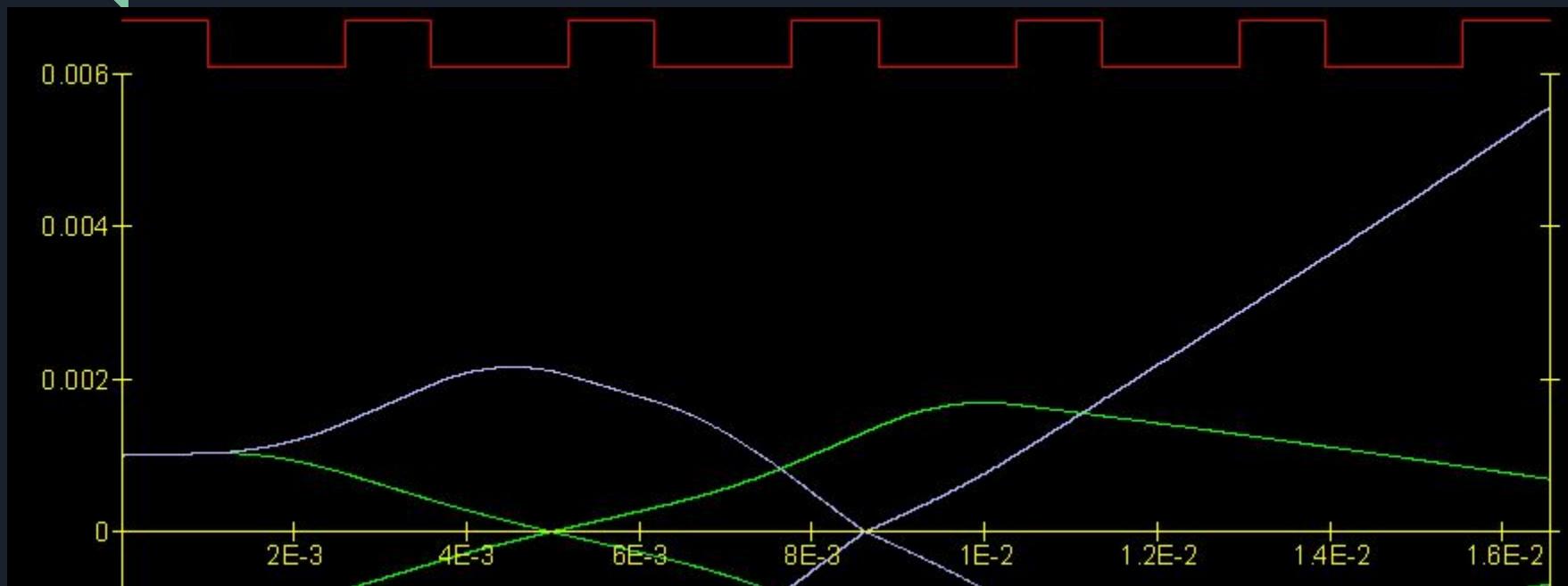
matching 06-24-2020 1mm 30mrad 1mm gap 8keV 6quad
blank.in
(Used to initialize later files)



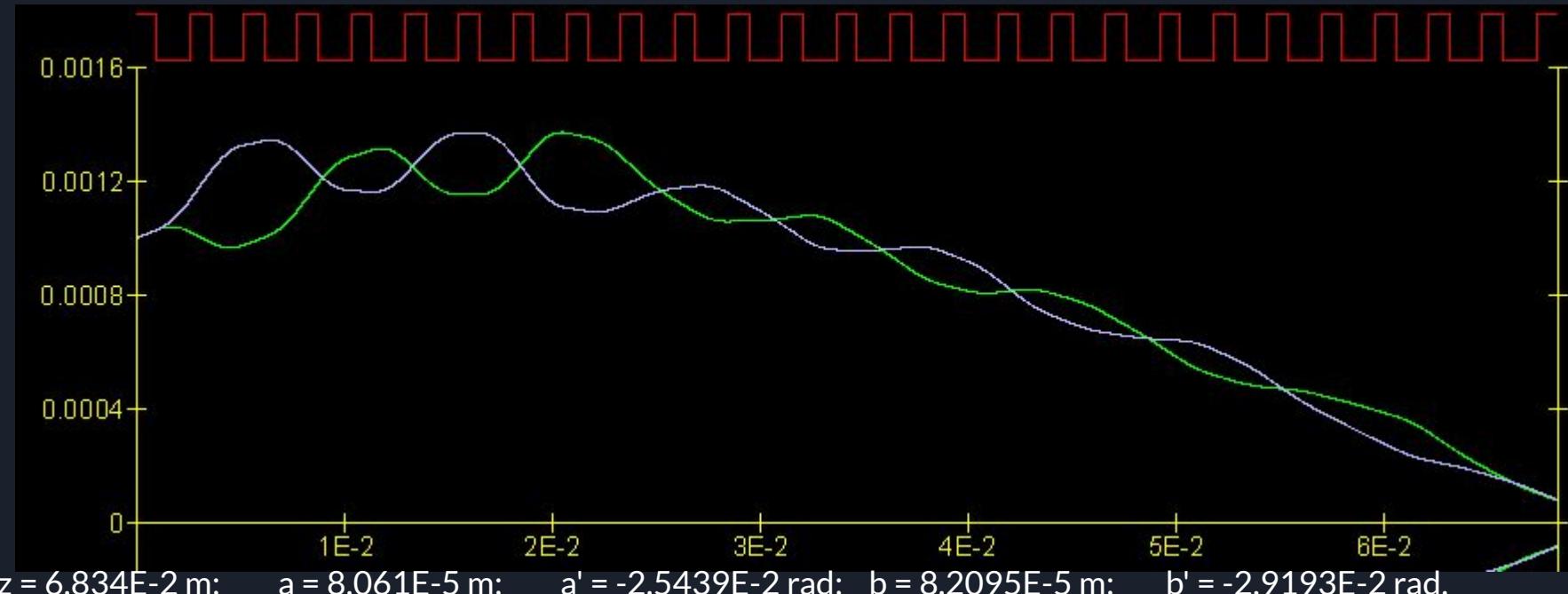
matching 06-24-2020 1mm 30mrad 1mm gap 8keV 6quad
500s 1.1ap.in



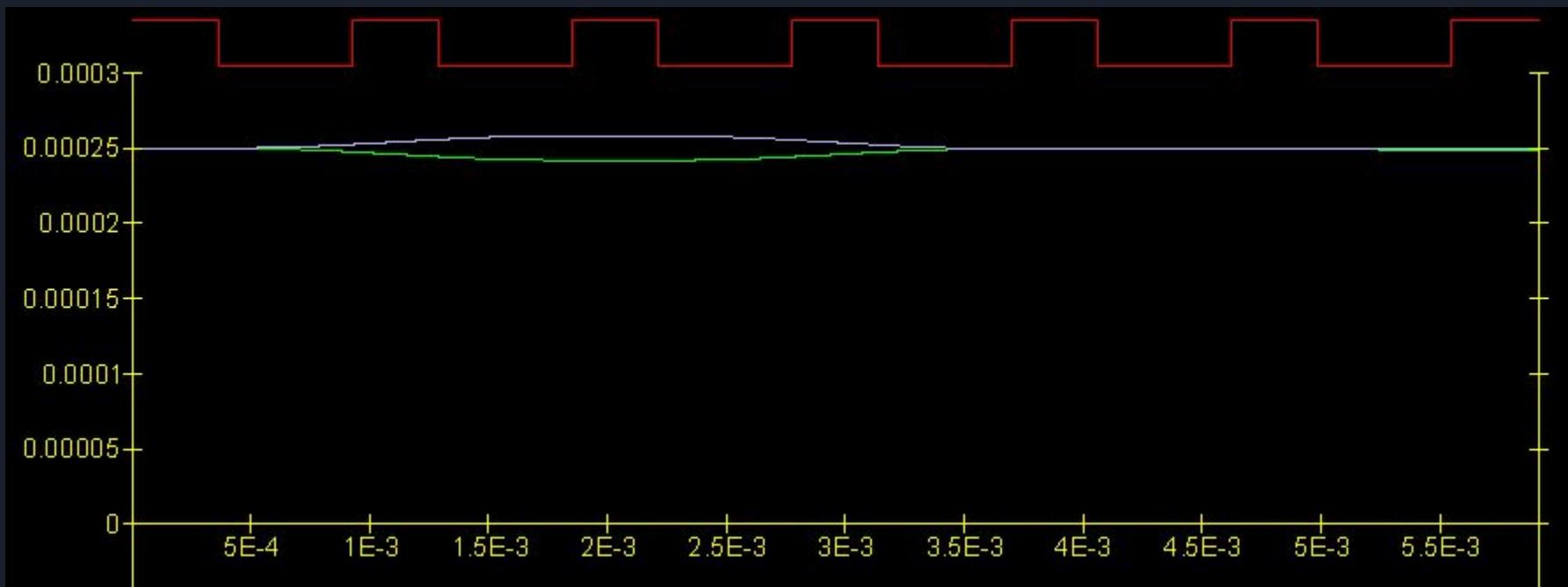
matching 06-24-2020 1mm 30mrad 1mm gap 8keV 6quad
500s 0.5ap.in



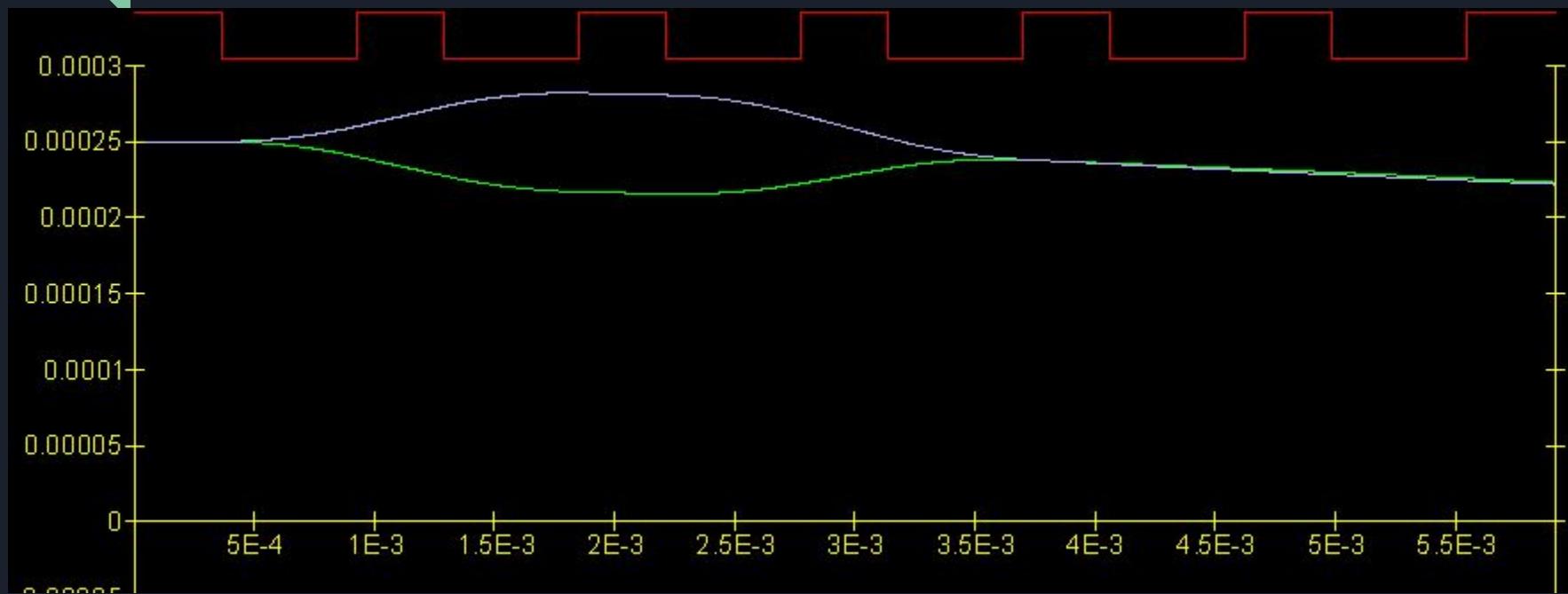
matching 06-23-2020 1mm 30mrad 1mm gap 8keV 23quad
matched to 30mrad.in



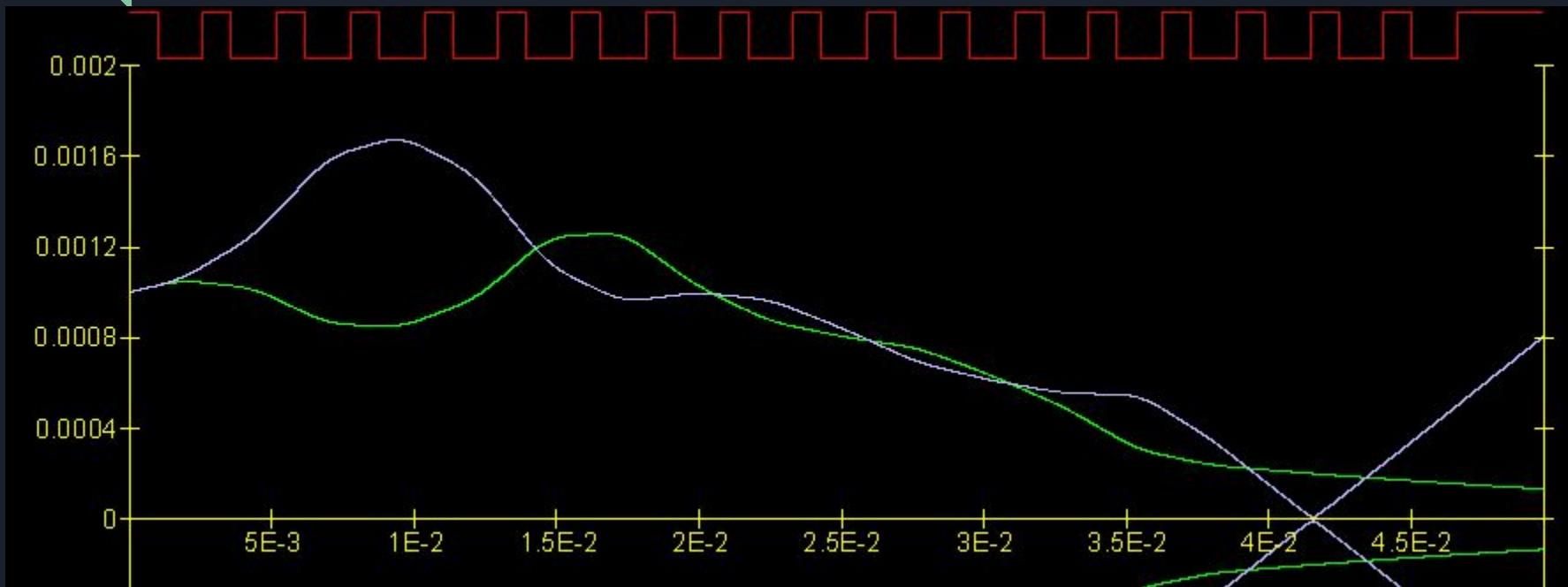
matching 06-25-2020 from Fig2 0.25mm 0mrad 500s 1.0ap.in



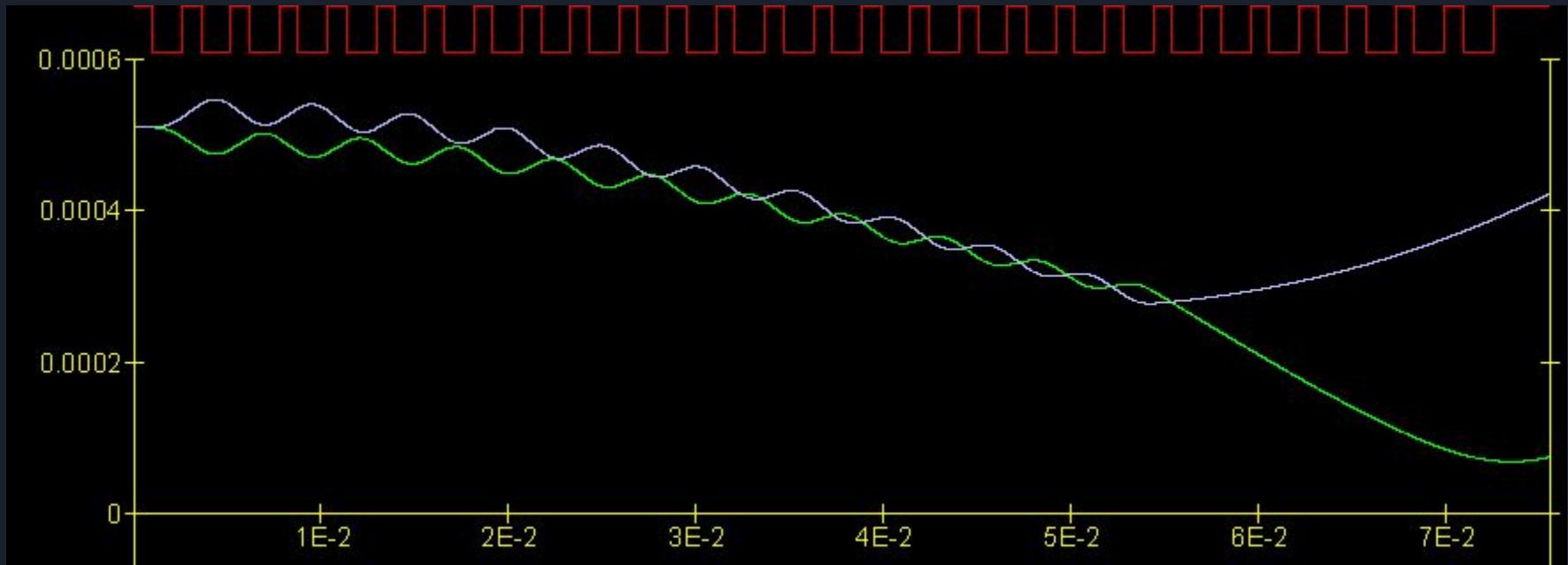
matching 06-25-2020 from Fig2 0.25mm 0mrad 500s
0.5ap.txt



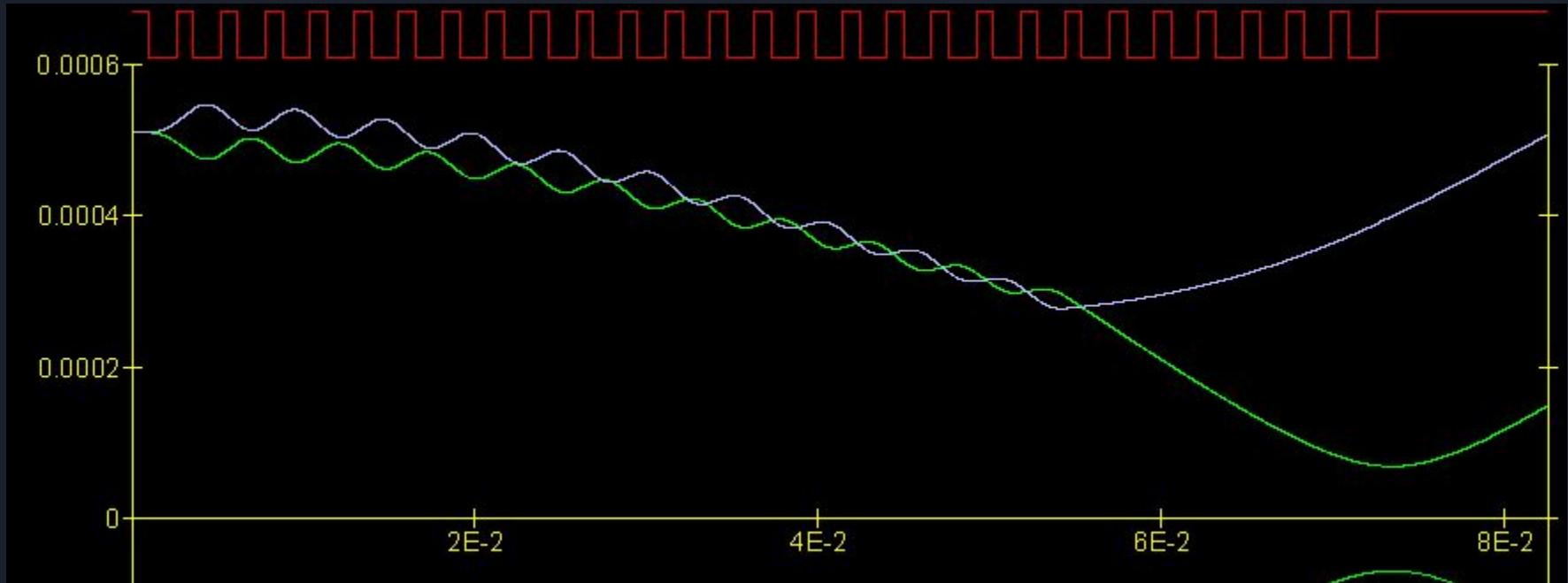
matching 06-26-2020 1mm 30mrad 1mm gap 8keV 18quad
some work with focusing.in



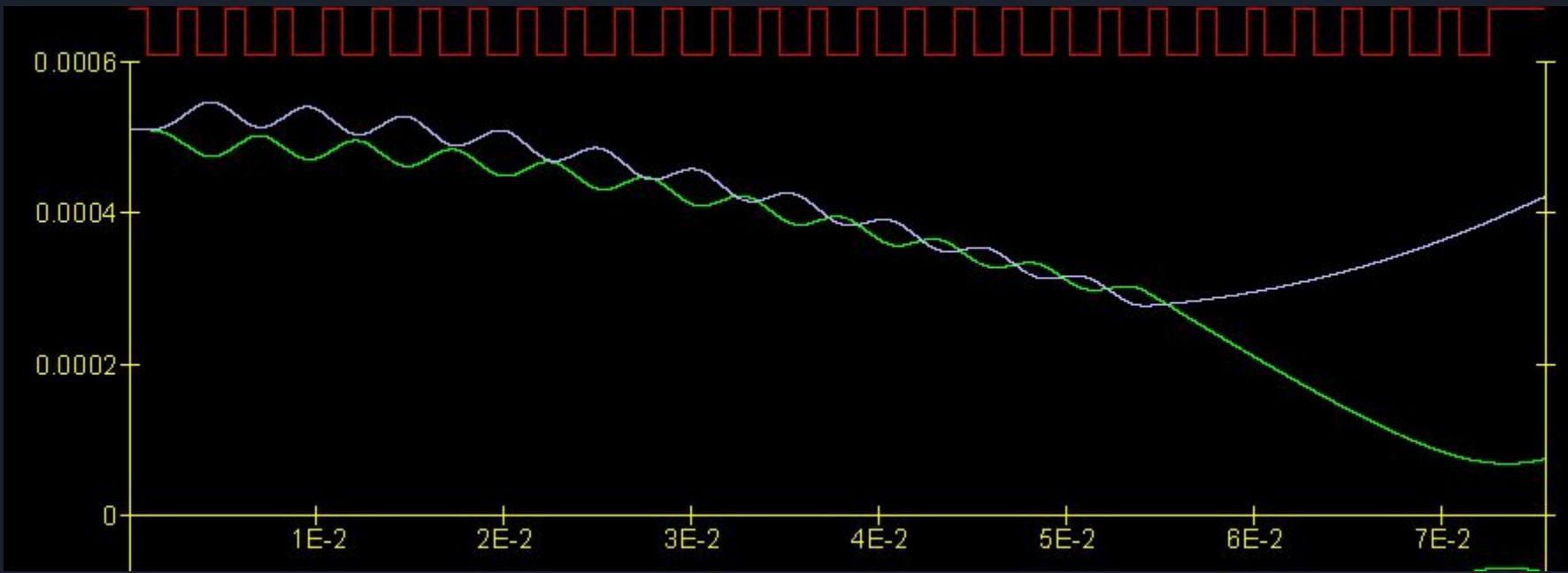
matching 06-26-2020 0.5mm 0mrad 23quad testing and
seeing upward trend without bounce.in



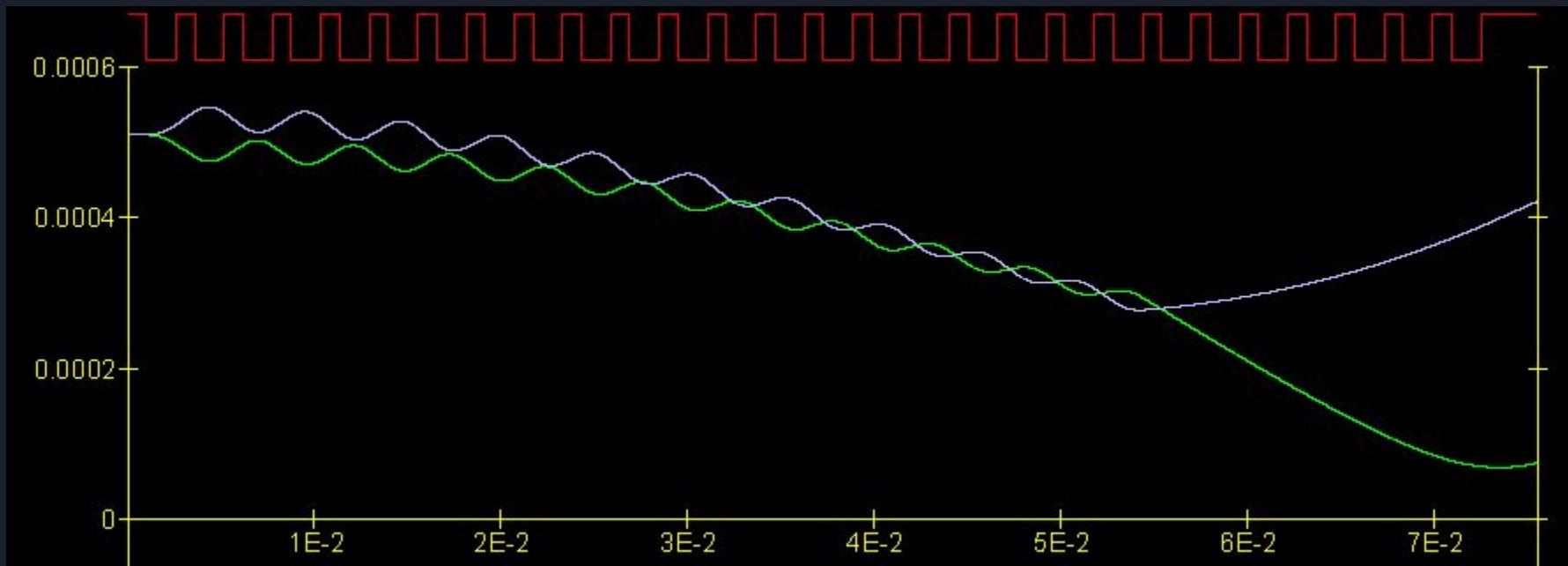
matching 06-26-2020 0.5mm 0mrad 23quad testing and
seeing upward trend without bounce longer drift at end.in



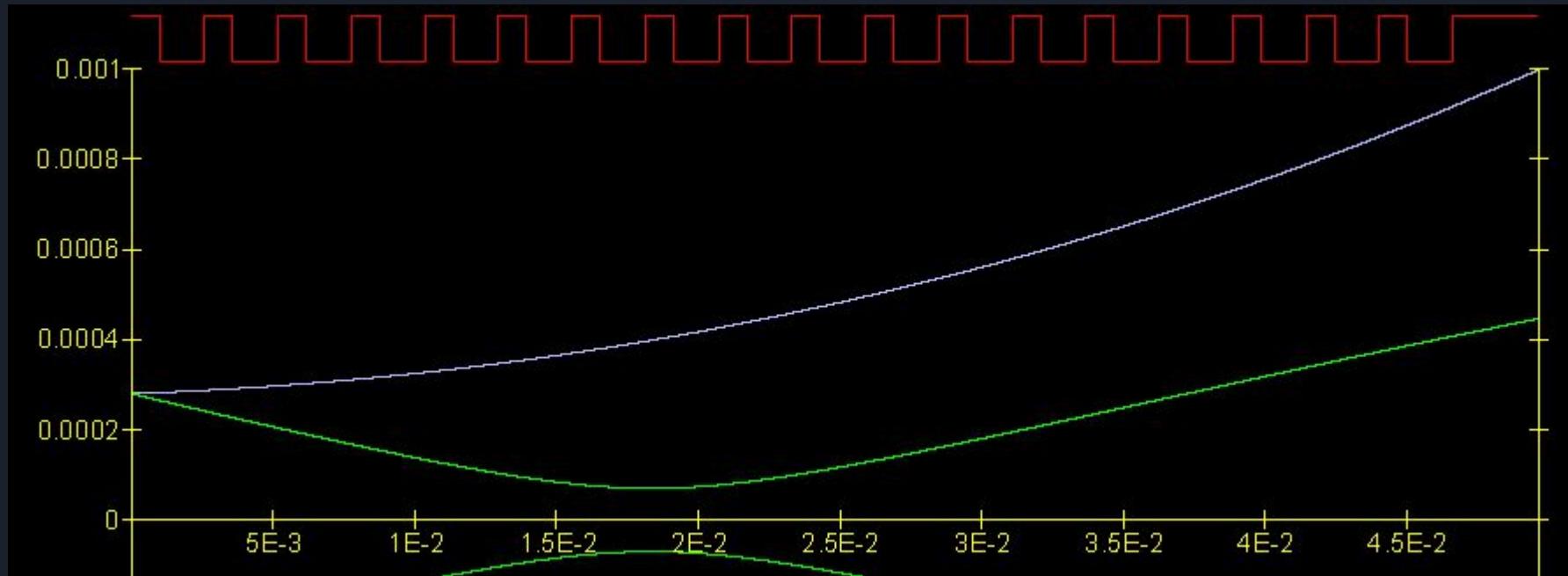
matching 06-26-2020 0.5mm 0mrad 23quad testing and
seeing upward trend without bounce test2.in



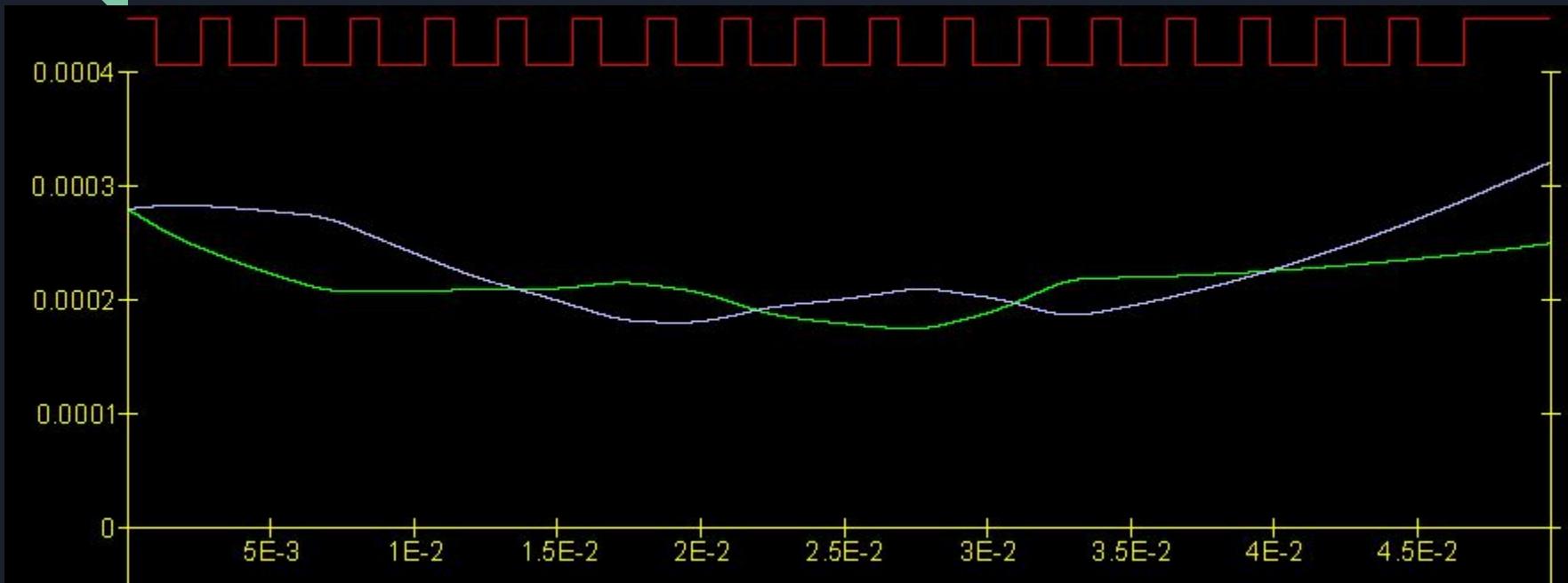
matching 06-26-2020 0.5mm 0mrad 23quad testing and
seeing upward trend without bounce test2 1000elements.in



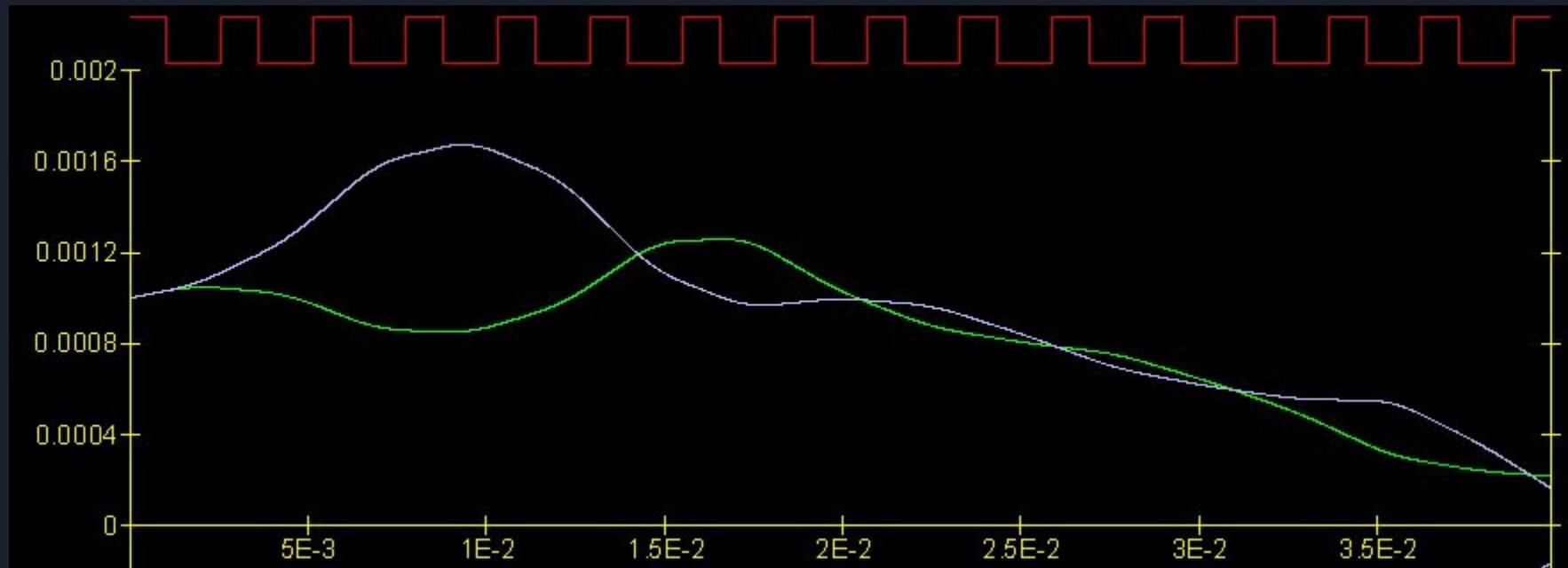
matching 06-26-2020 1mm 30mrad 1mm gap 8keV 18quad
from first reflected no bounce.in



matching 06-26-2020 1mm 30mrad 1mm gap 8keV 18quad
from first reflected no bounce with good down and up.in



matching 06-26-2020 1mm 30mrad 1mm gap 8keV 15quad
trying to match to reflect1.in



$z = 3.985E-2$ m;

$a = 2.1804E-4$ m;

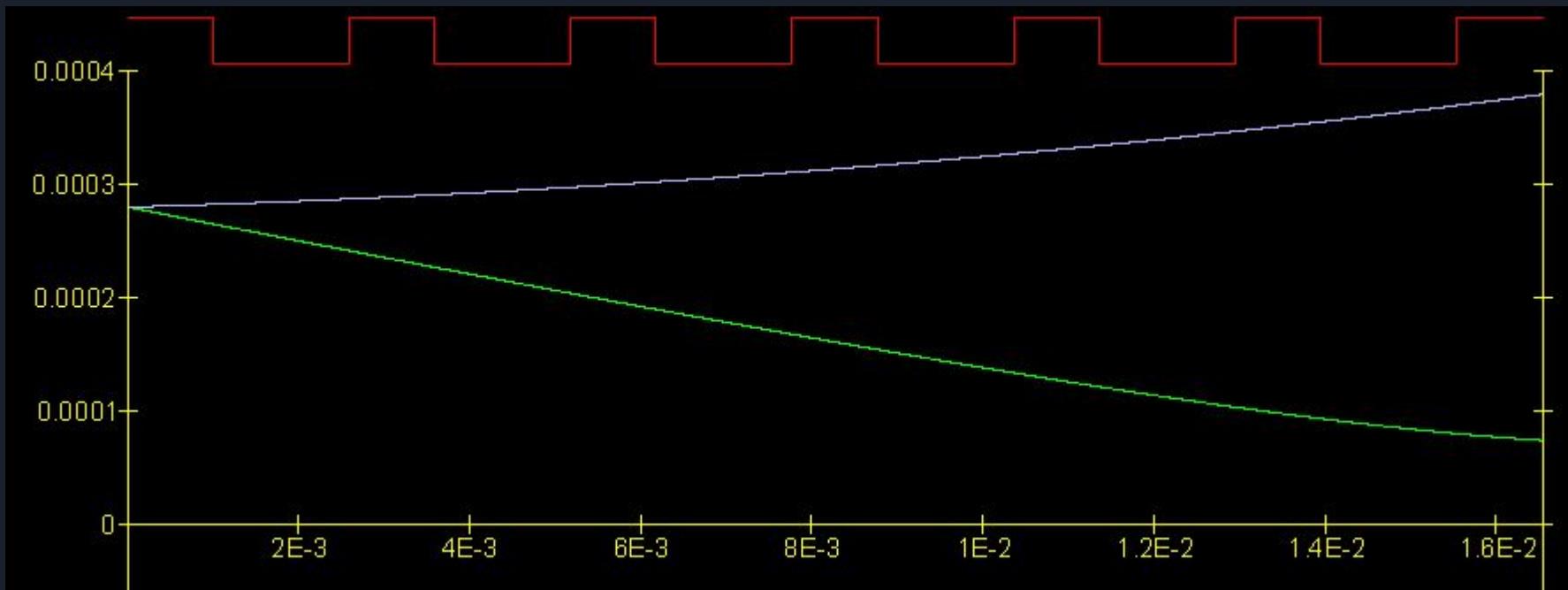
$a' = -1.0159E-2$ rad;

$b = 1.6743E-4$ m;

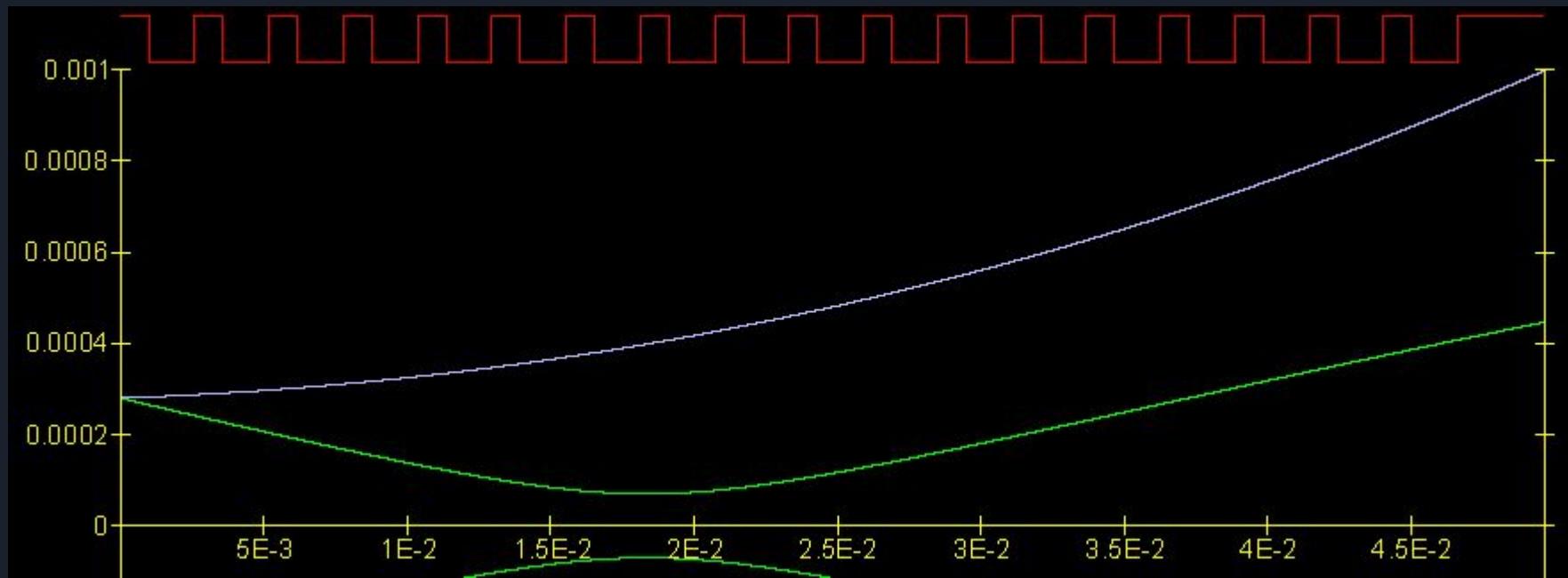
$b' = -9.8556E-2$ rad.

(not good - too high)

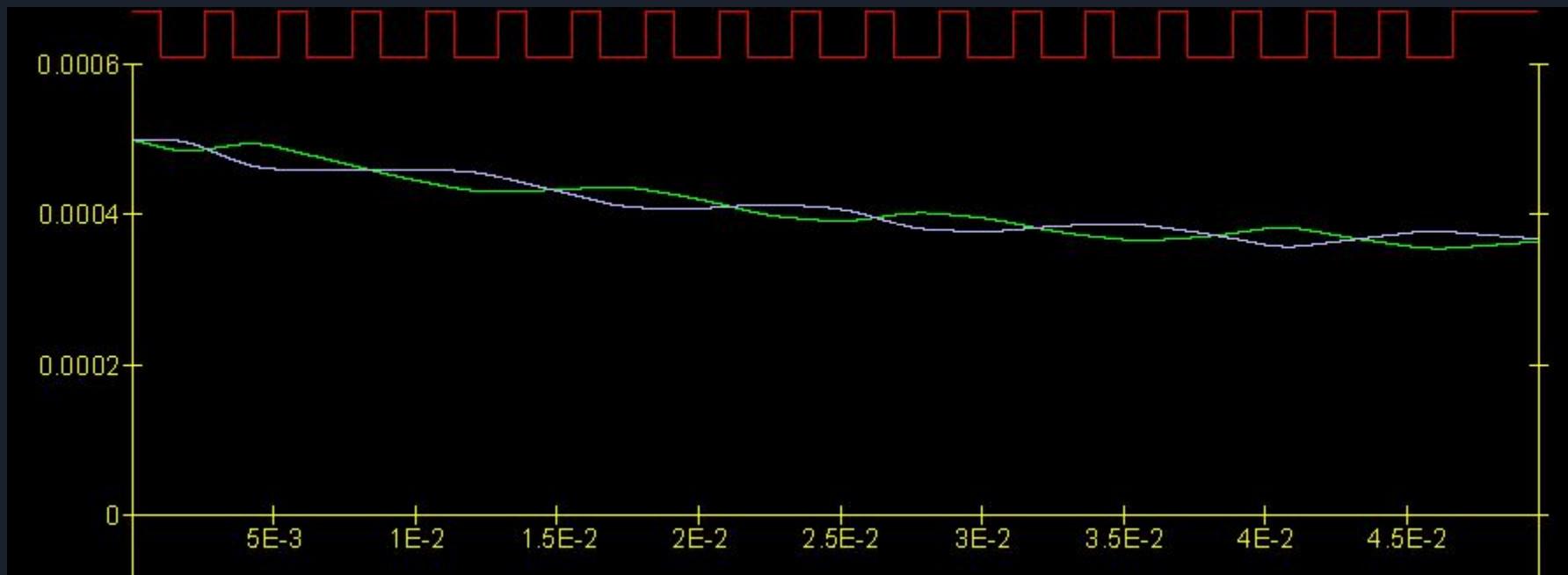
matching 06-29-2020 6quad from first reflect.in



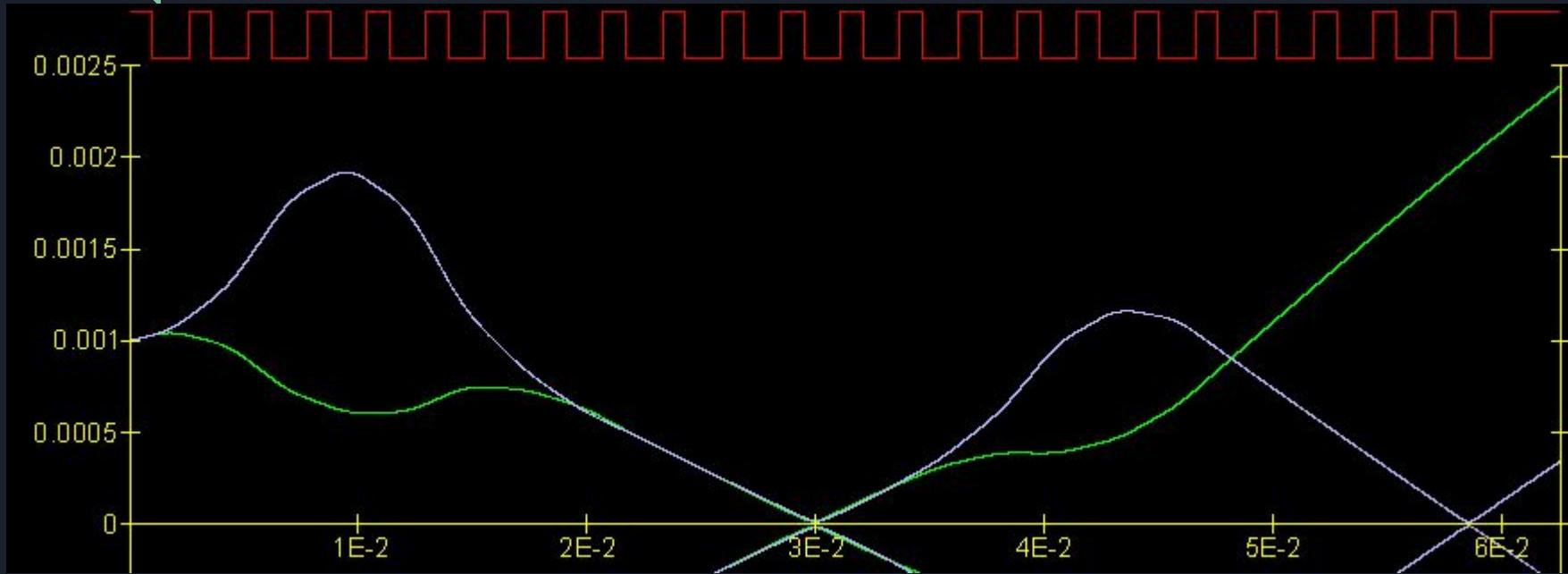
matching 06-29-2020 18quad from first reflect.in



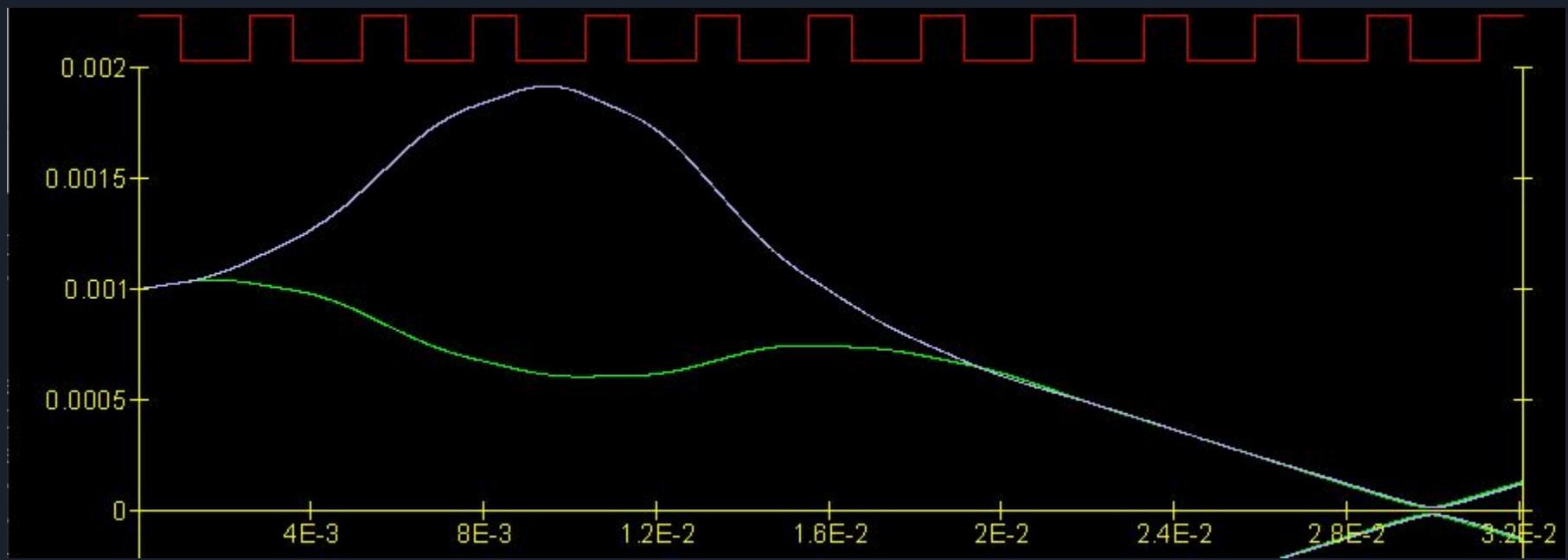
matching 06-29-2020 18quad matched from 0.5mm to
0.36mm.in



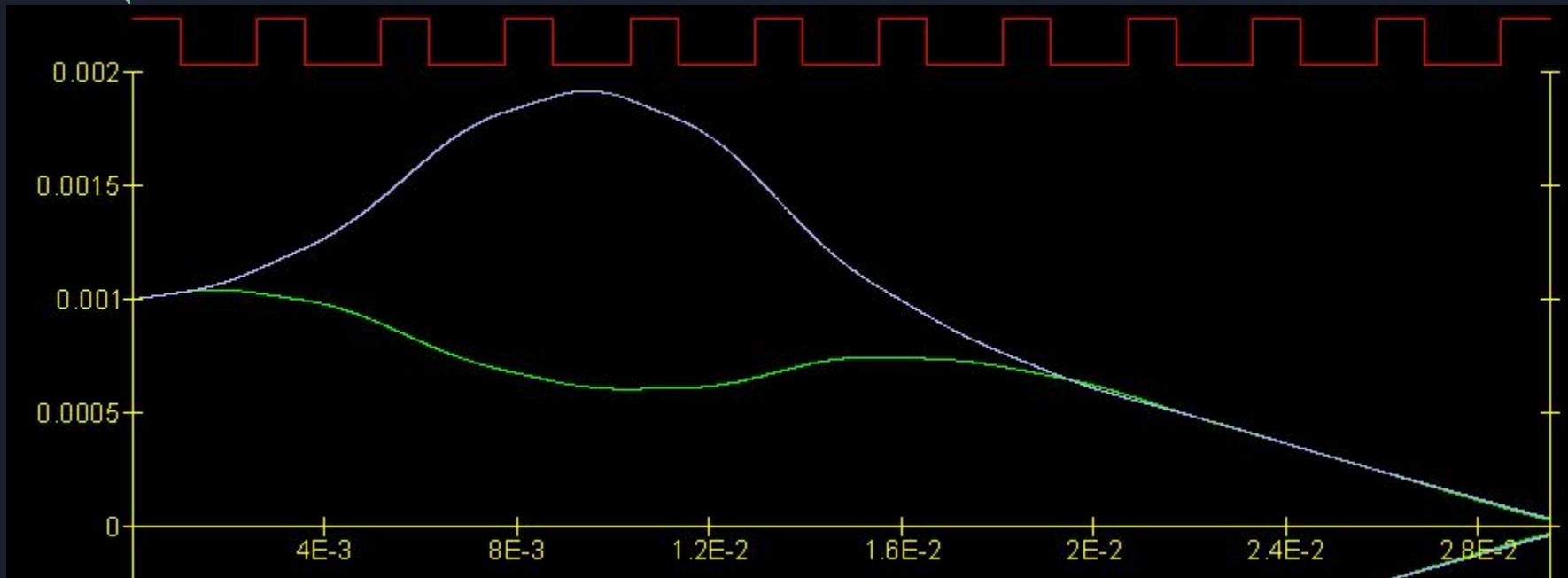
matching 06-29-2020 1mm 30mrad 1mm gap 8keV 23quad
quick drop to see angle.in



matching 06-29-2020 1mm 30mrad 1mm gap 8keV 12quad
quick drop to see angle.in

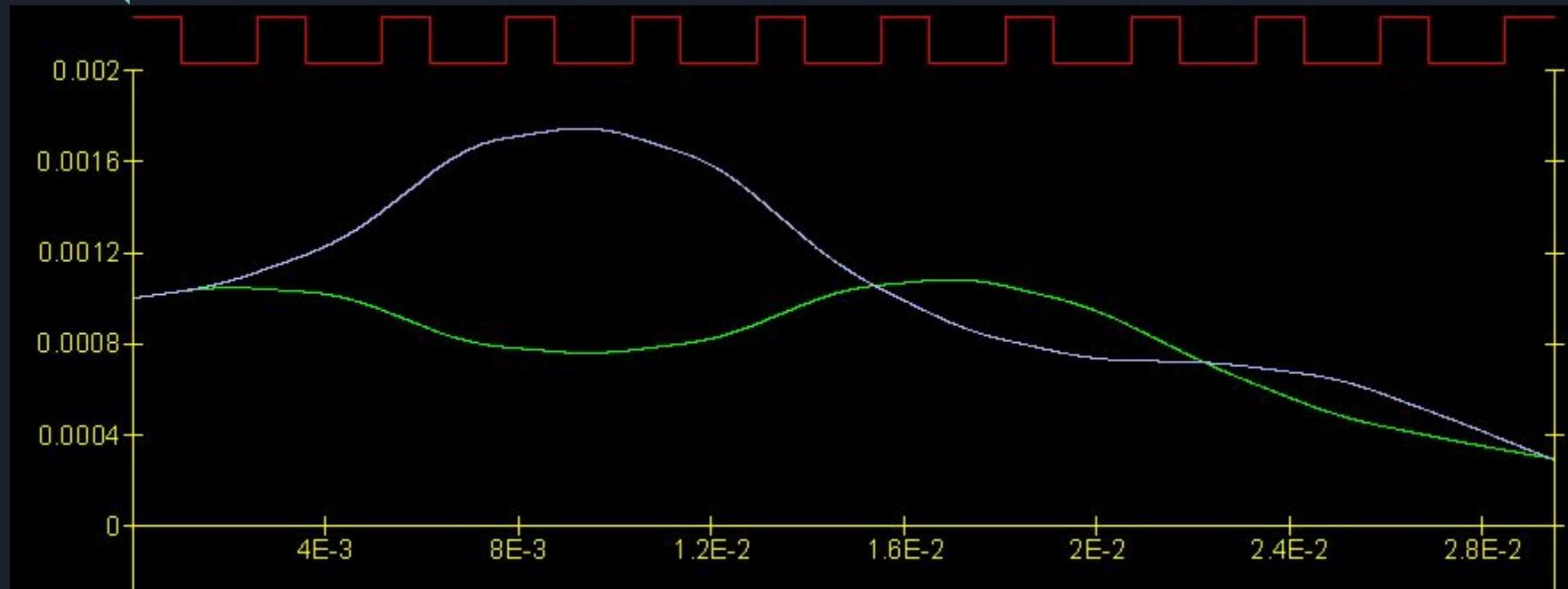


matching 06-29-2020 1mm 30mrad 1mm gap 8keV 11quad
quick drop to see angle.in



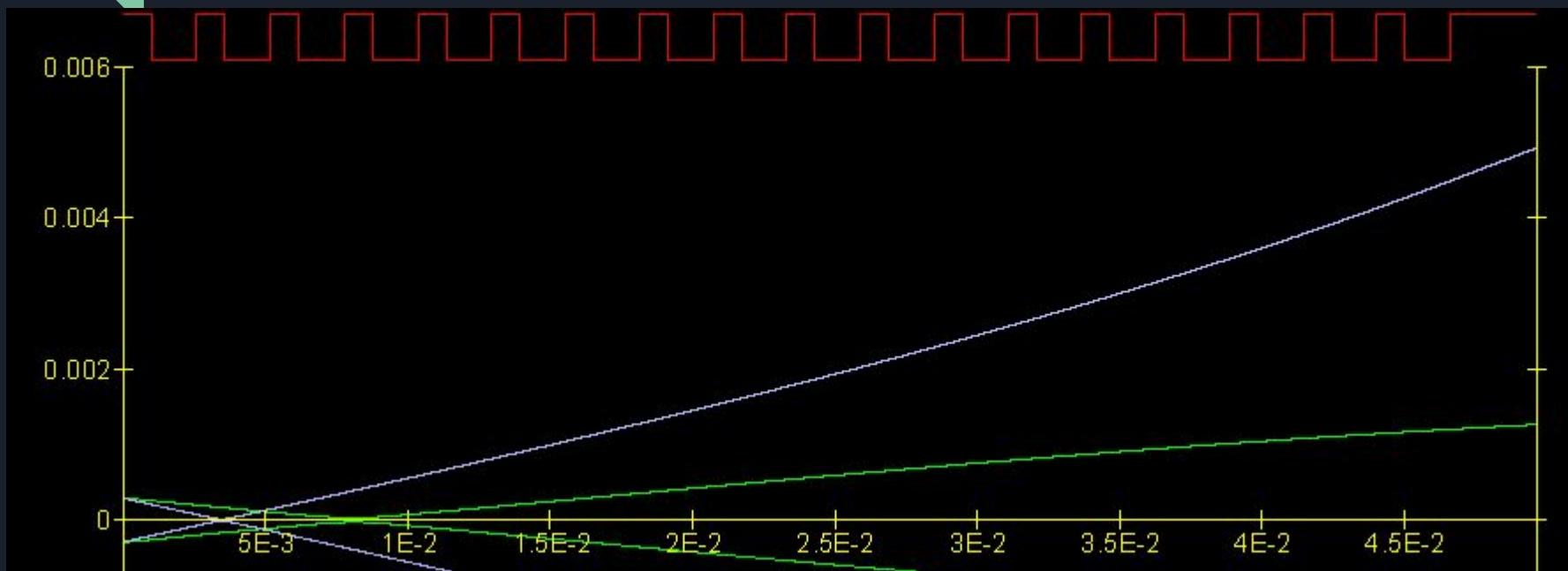
$z = 2.949\text{E-}2 \text{ m}$; $a = 2.9921\text{E-}5 \text{ m}$; $a' = -5.1577\text{E-}2 \text{ rad}$; $b = 3.7464\text{E-}5 \text{ m}$; $b' = -5.3658\text{E-}2 \text{ rad}$.
(not small enough)

matching 06-29-2020 1mm 30mrad 1mm gap 8keV 11quad
quick drop seeing some oscillations.in

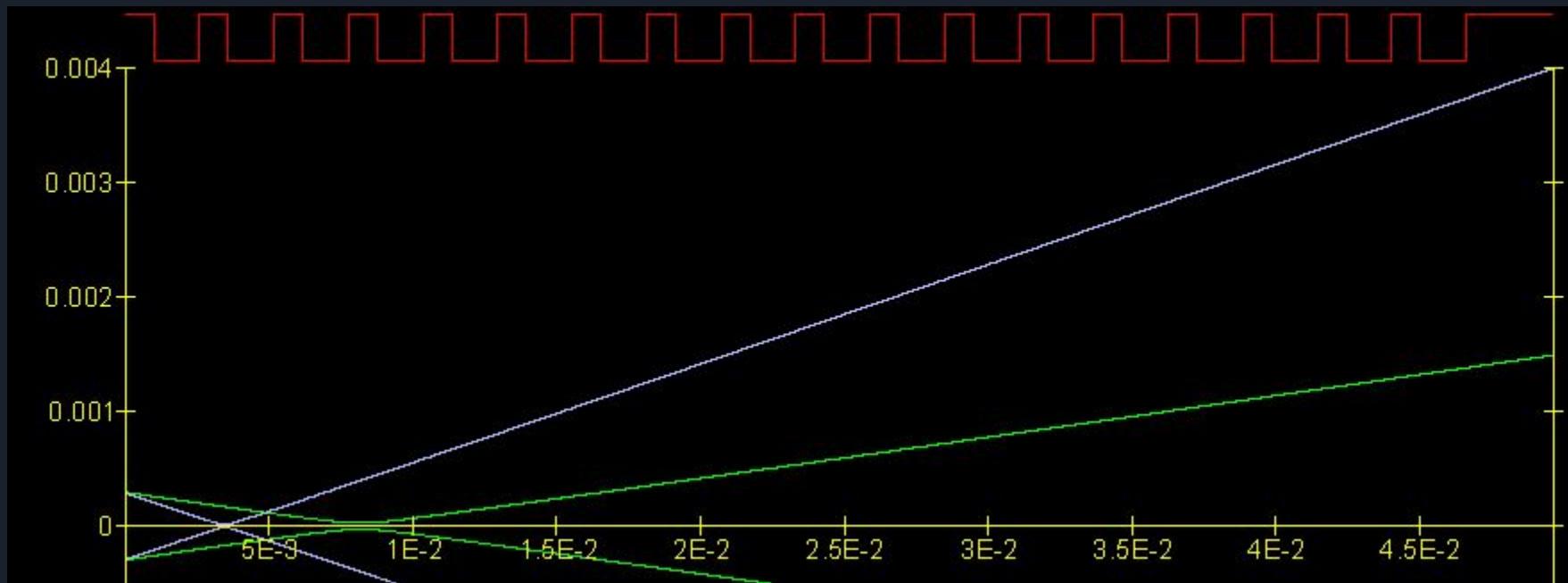


matching 06-29-2020 18quad from quick drop osc.in

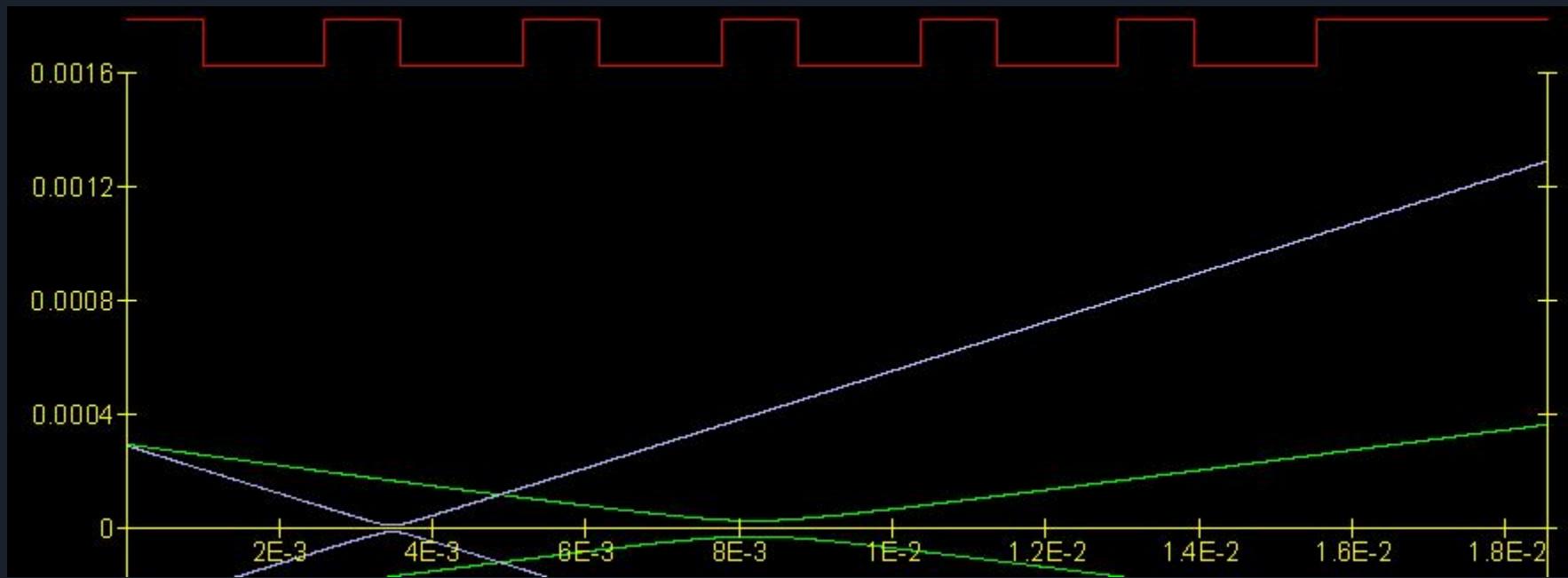
(Not sure what is going on with these next few)



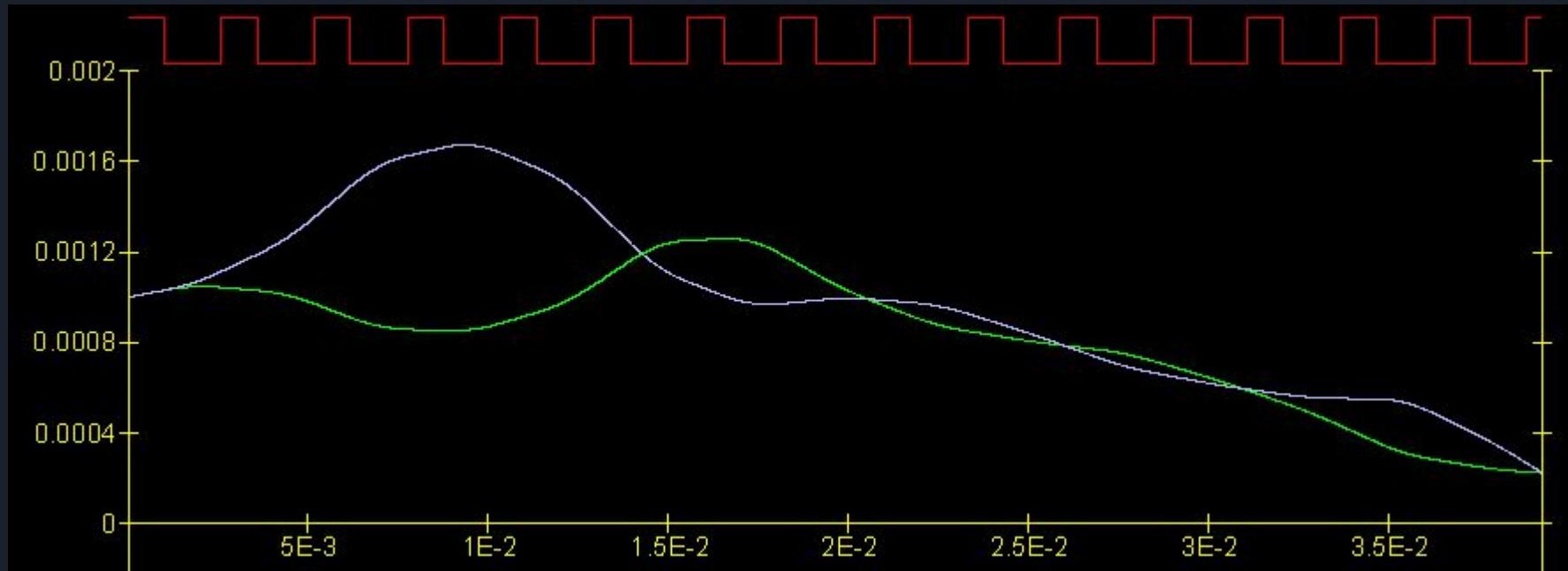
matching 06-29-2020 18quad from quick drop osc zeros.in



matching 06-29-2020 6quad from quick drop osc zeros.in



matching 06-29-2020 1mm 30mrad 1mm gap 8keV 15quad
trying to match to reflect1 shorter last drift.in



$z = 3.925E-2$ m;

$a = 2.2421E-4$ m;

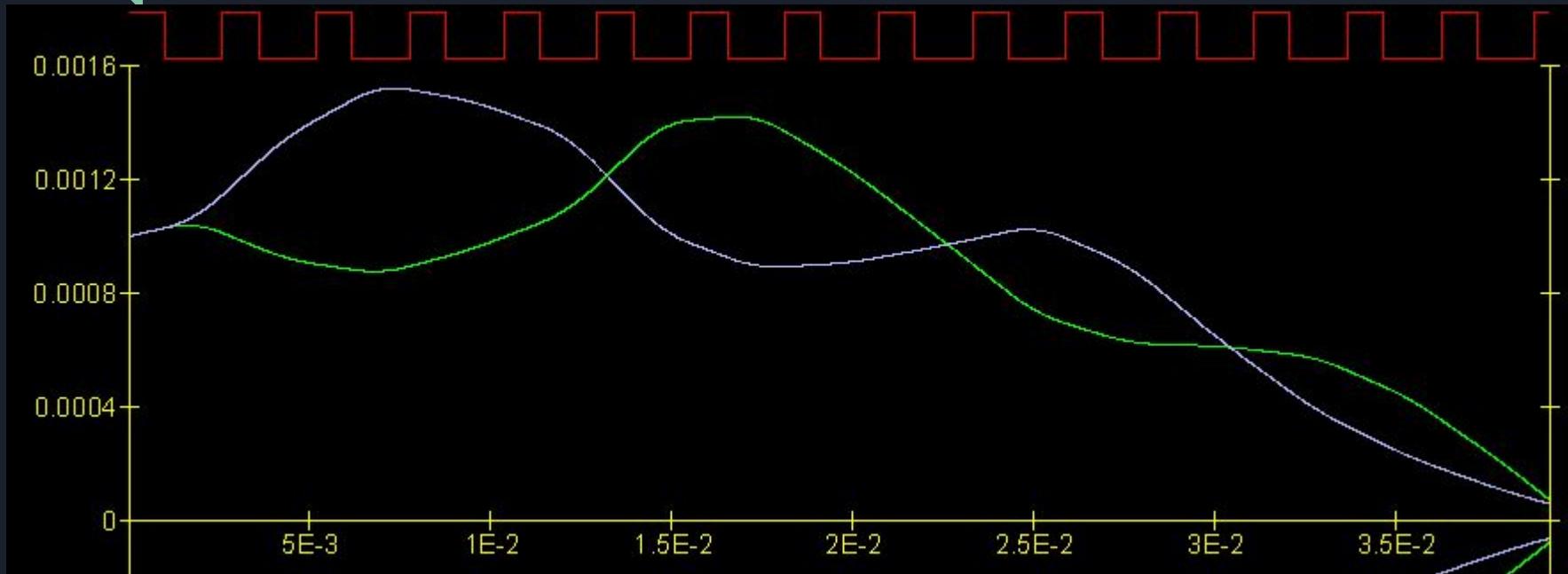
$a' = -1.0373E-2$ rad;

$b = 2.2664E-4$ m;

$b' = -9.8794E-2$ rad.

(not small enough)

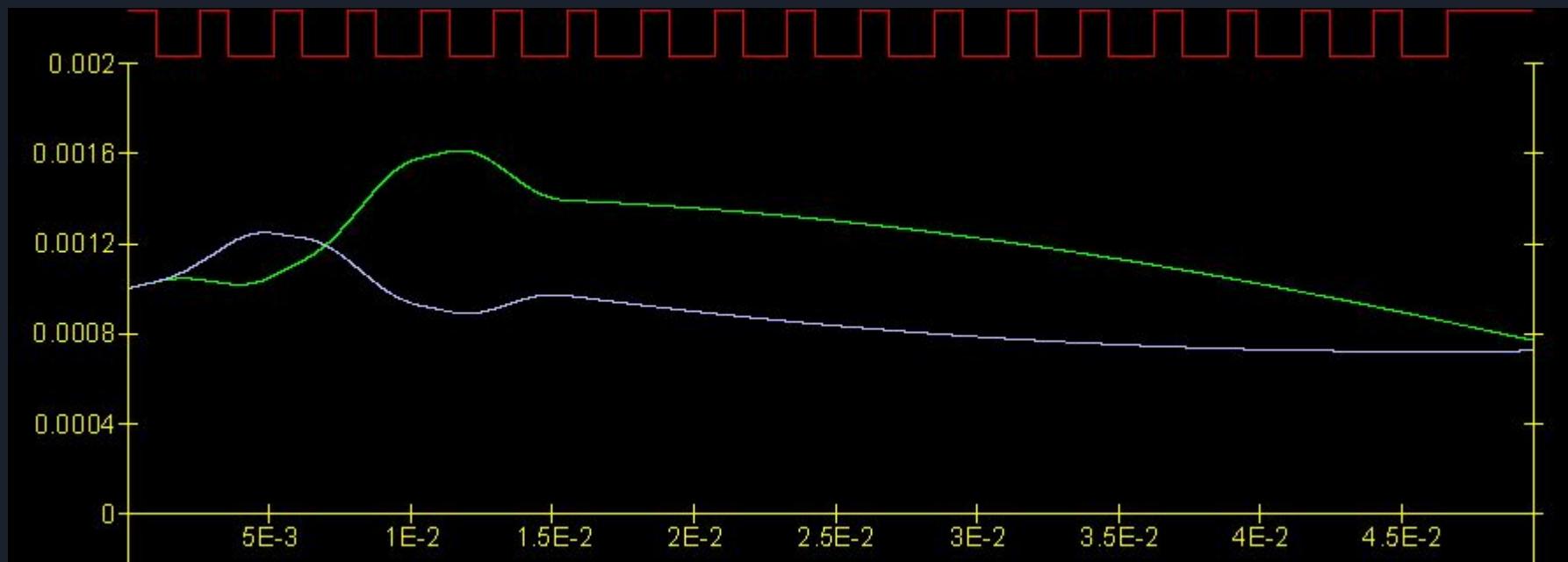
matching 06-29-2020 1mm 30mrad 1mm gap 8keV 15quad
trying to match to reflect1 shorter last drift decreased more
down.in



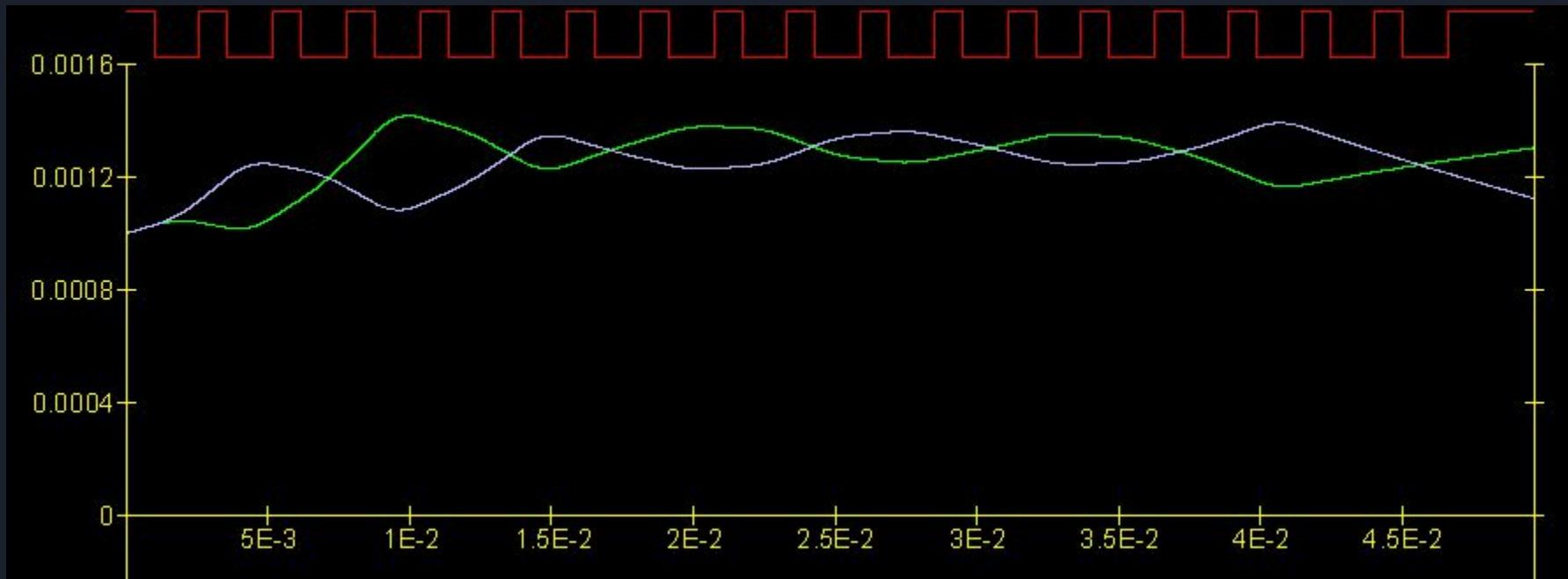
$z = 3.925\text{E-}2 \text{ m}; \quad a = 7.5475\text{E-}5 \text{ m}; \quad a' = -9.947\text{E-}2 \text{ rad}; \quad b = 6.109\text{E-}5 \text{ m}; \quad b' = -3.4424\text{E-}2 \text{ rad.}$

(still not small enough, just switched places)

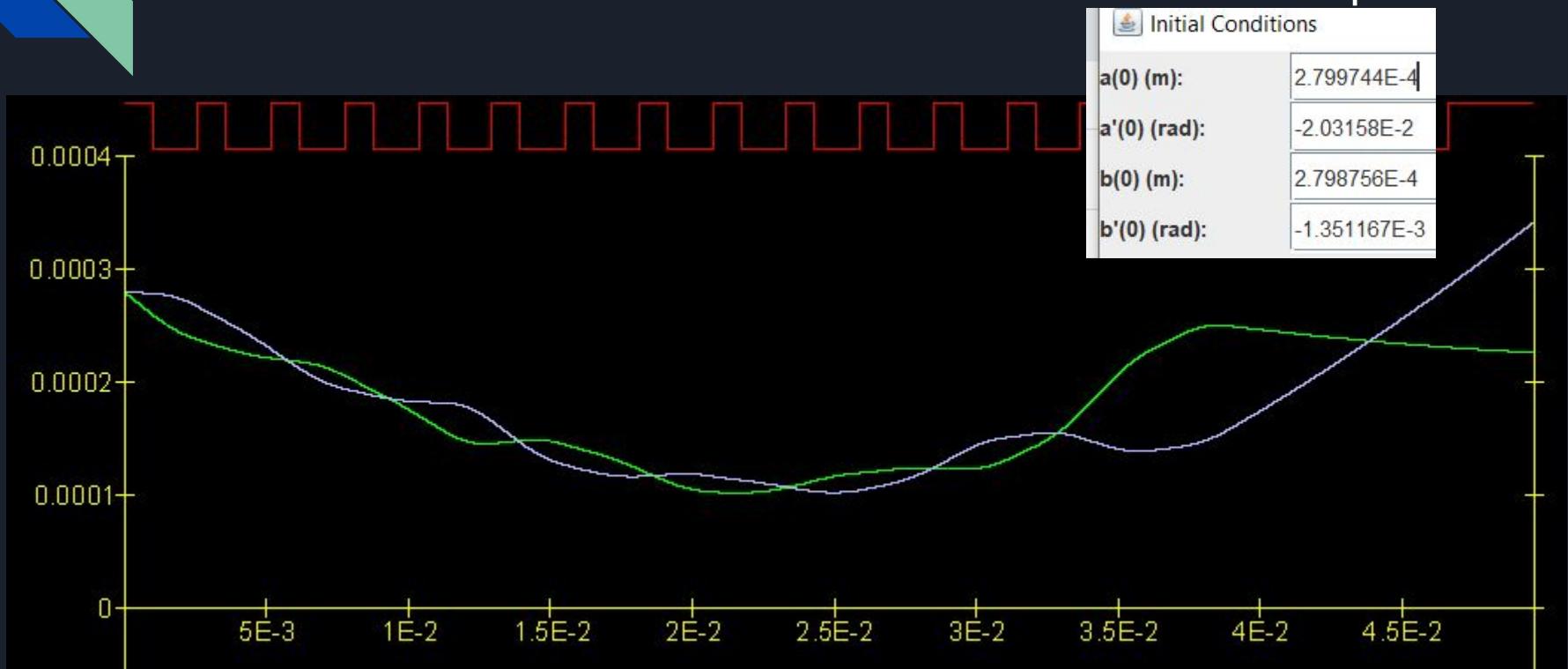
matching 06-29-2020 1mm 30mrad 1mm gap 8keV strange
hard start then straght.in



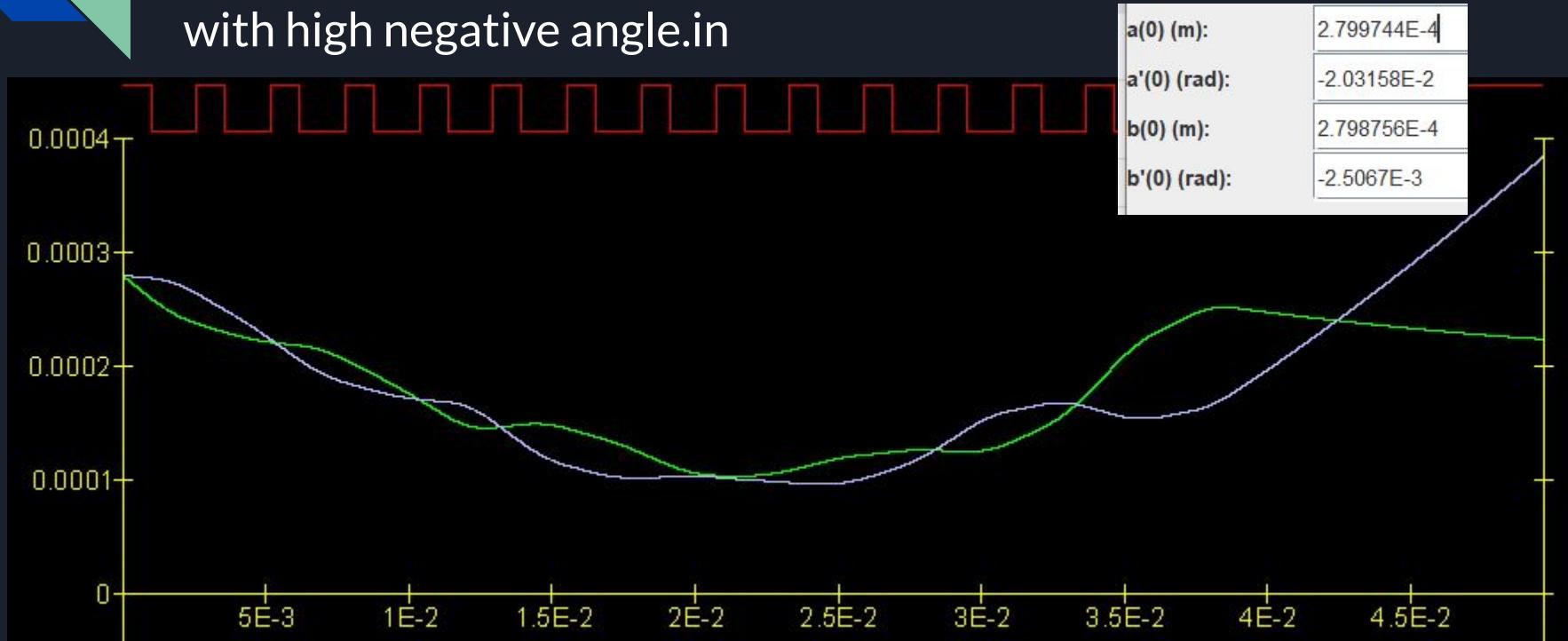
matching 06-29-2020 1mm 30mrad 1mm gap 8keV osc but
start too high.in



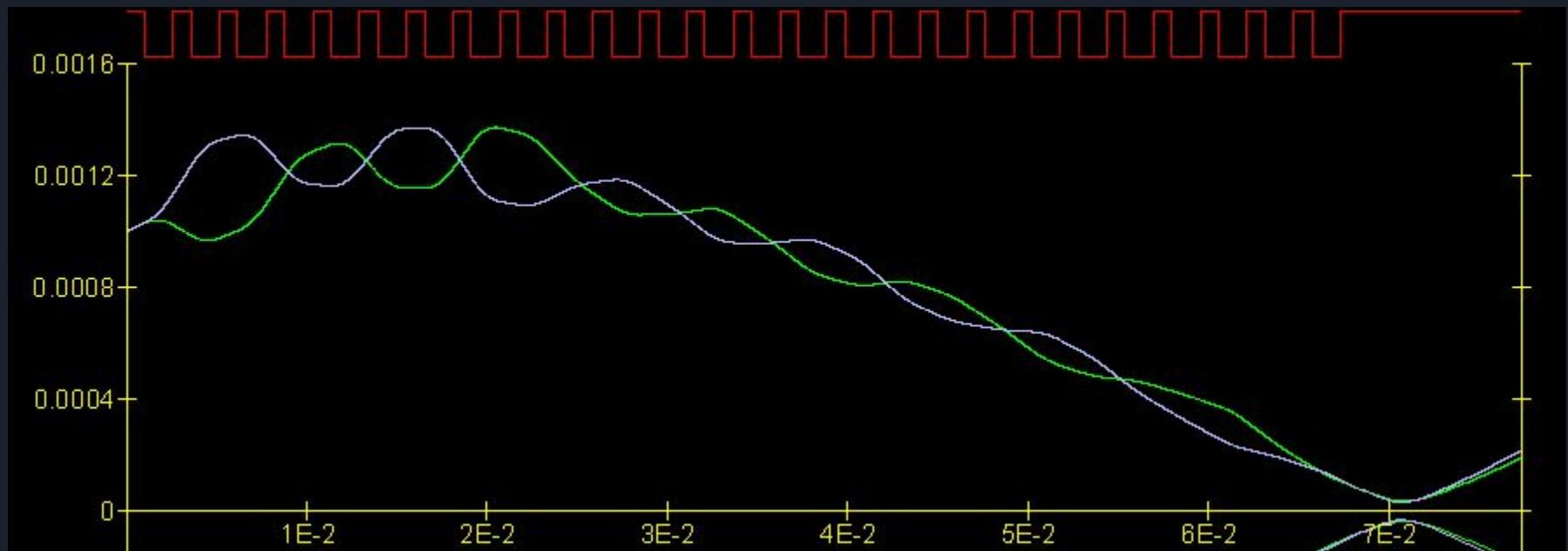
matching 06-29-2020 1mm 30mrad 1mm gap 8keV 18quad
from first reflected no bounce semi matched down then up.in



matching 06-29-2020 1mm 30mrad 1mm gap 8keV 18quad
from first reflected no bounce semi matched down then up
with high negative angle.in



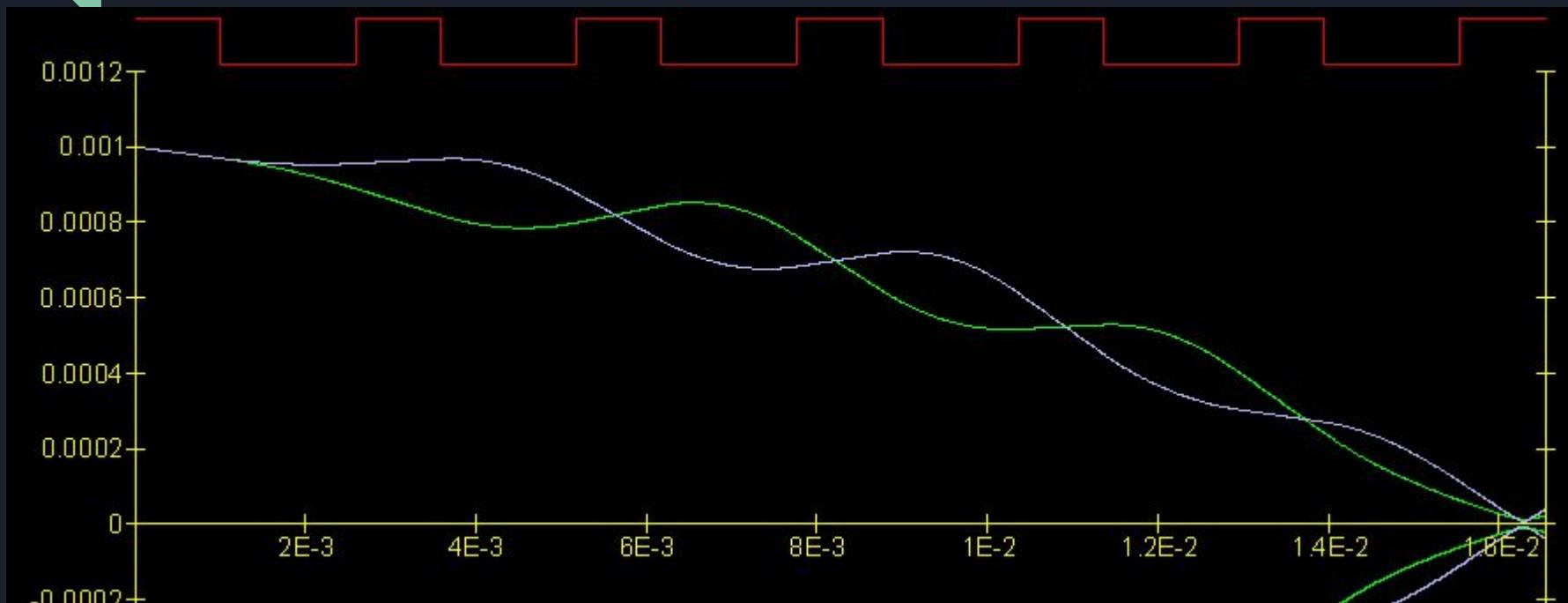
matching 06-30-2020 1mm 30mrad 1mm gap 8keV 23quad
test to see angle.in



$z = 7.734\text{E-}2 \text{ m}; \quad a = 1.8609\text{E-}4 \text{ m}; \quad a' = 2.9019\text{E-}2 \text{ rad}; \quad b = 2.1285\text{E-}4 \text{ m}; \quad b' = 3.2968\text{E-}2 \text{ rad.}$

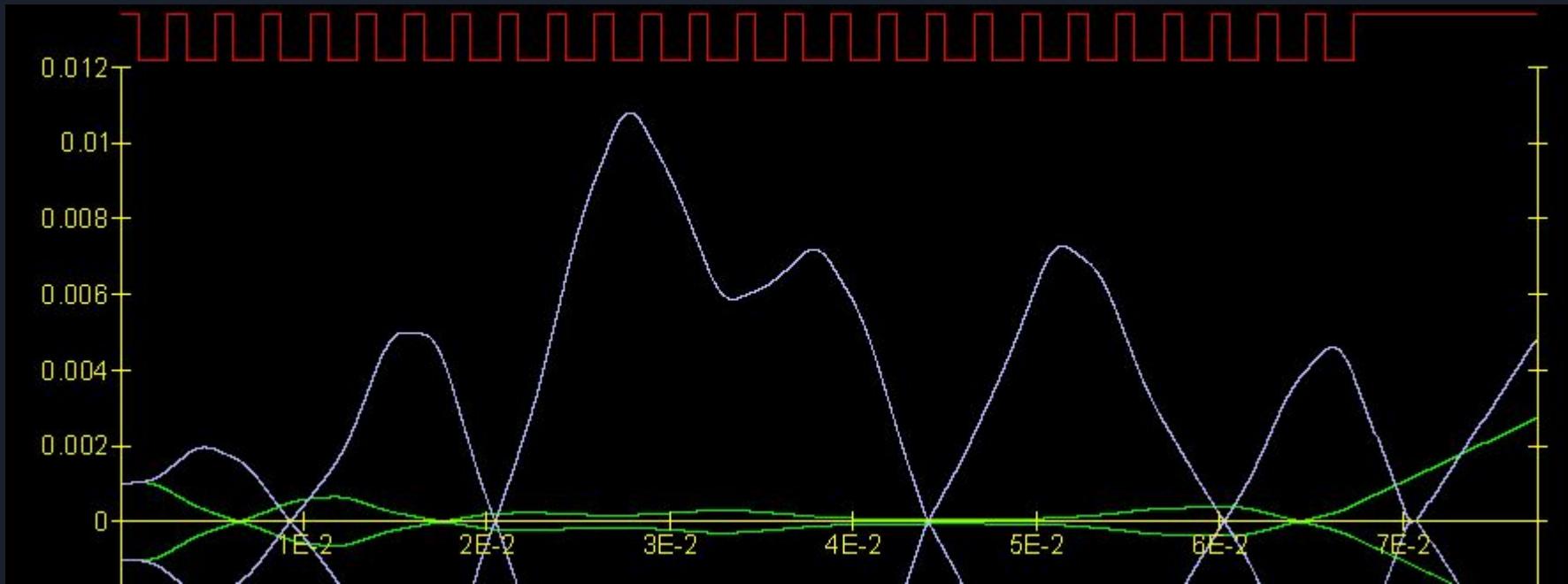
(not bad, a little too high)

matching 06-30-2020 1mm -30mrad 1mm gap 8keV 6quad
esqs at peaks.in

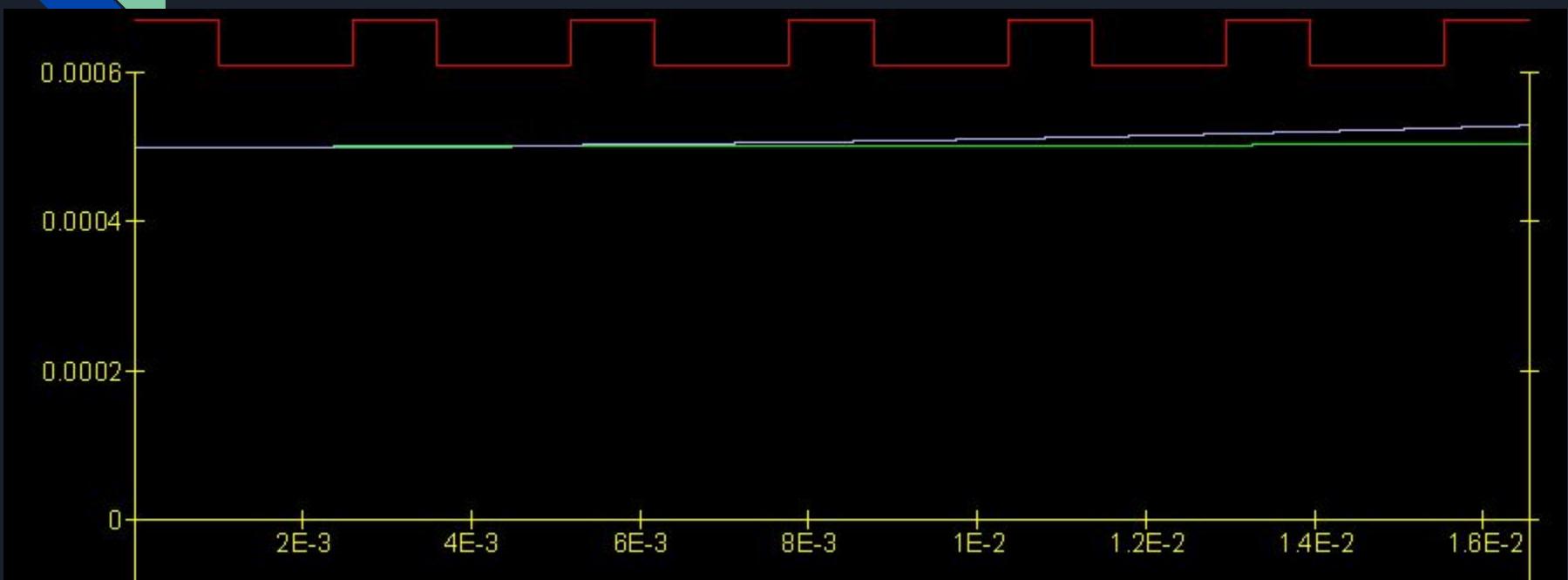


$z = 1.654\text{E-}2 \text{ m};$ $a = 2.2123\text{E-}5 \text{ m};$ $a' = 6.7518\text{E-}2 \text{ rad};$ $b = 3.8585\text{E-}5 \text{ m};$ $b' = 1.4791\text{E-}1 \text{ rad.}$
(much too big)

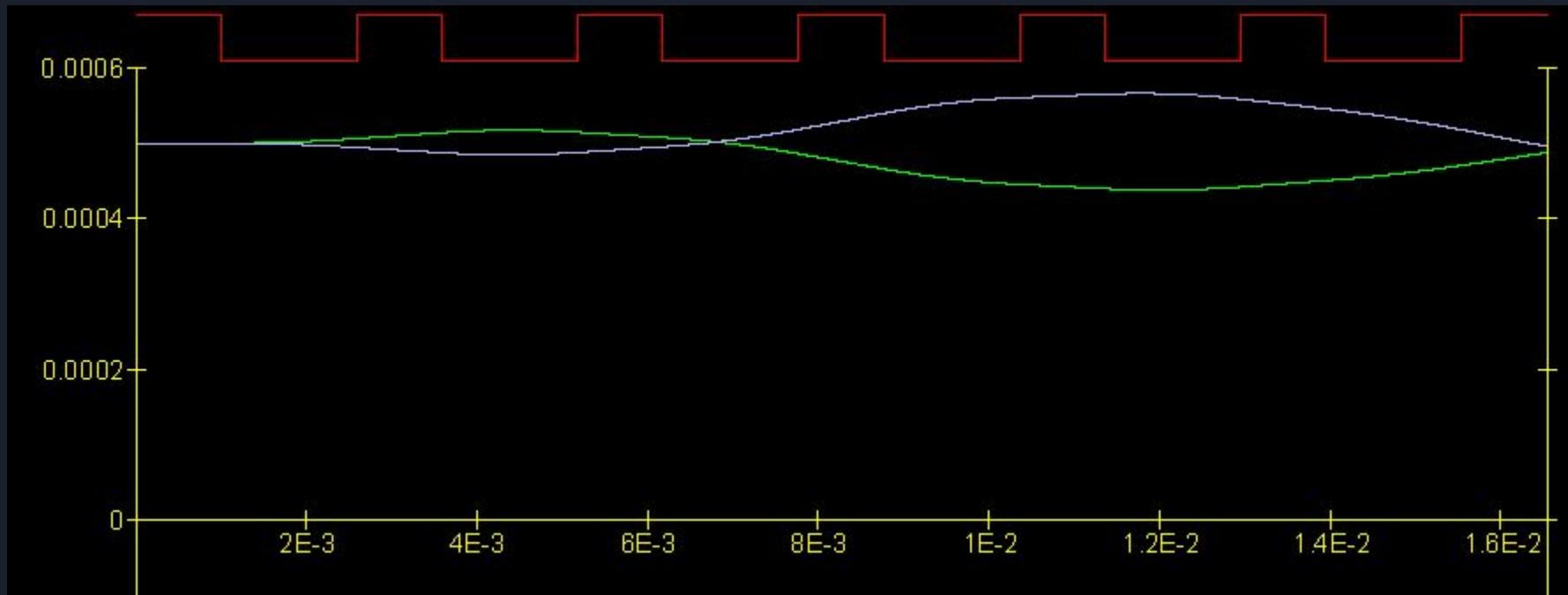
matching 07-01-2020 1mm 30mrad 1mm gap 8keV 23quad
from test to see angle - ap 0.5mm.in



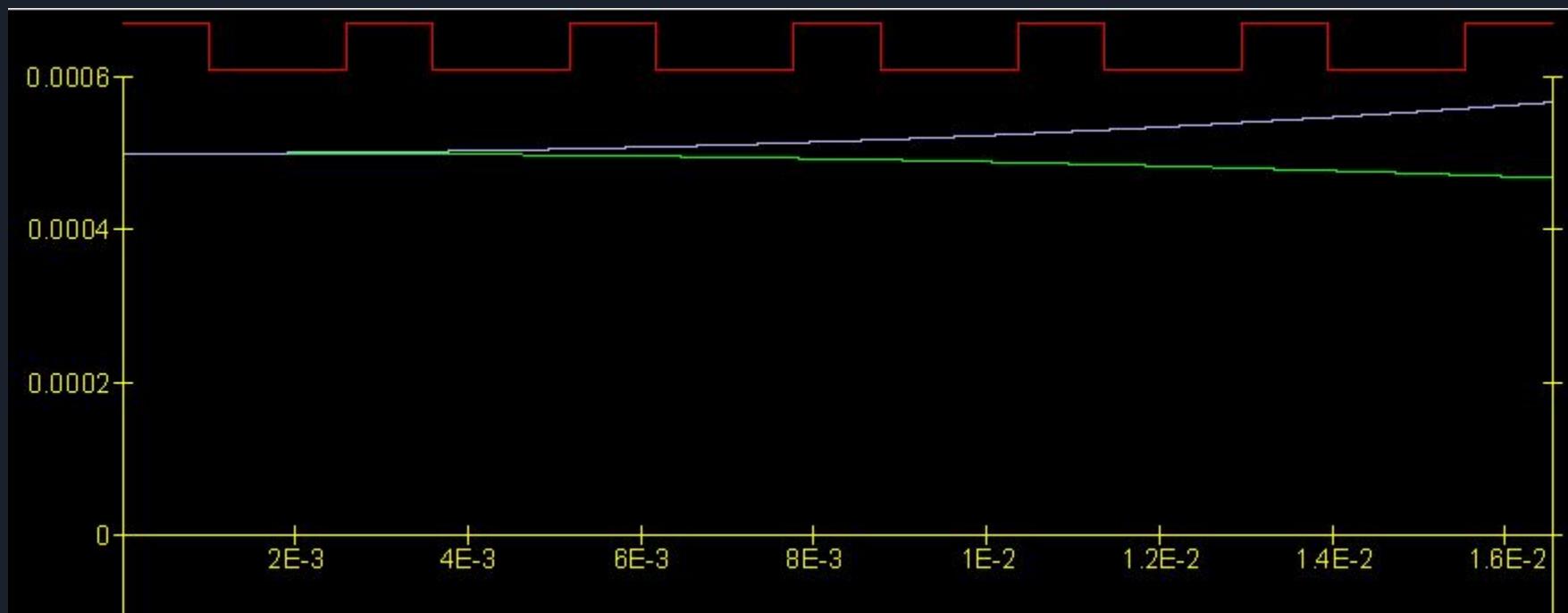
matching 07-01-2020 0.5mm 0mrad 1mm gap 8keV 6quad
blank 2mm ap.in



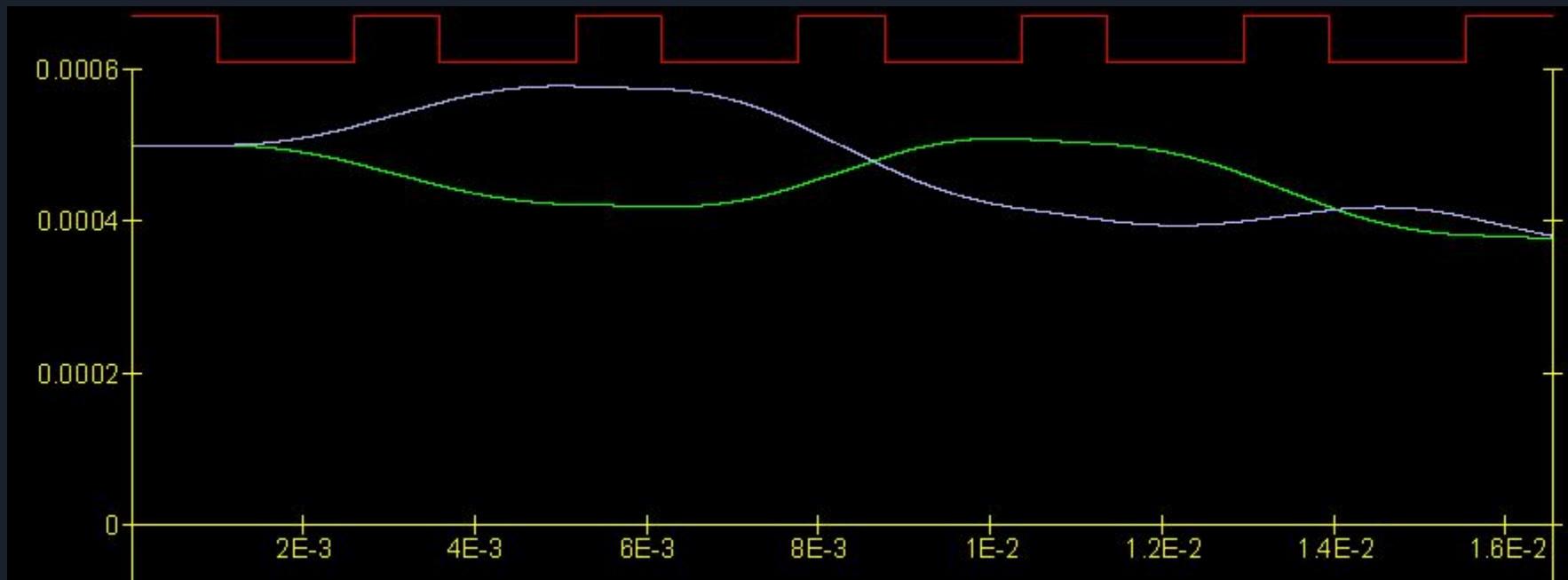
matching 07-01-2020 0.5mm 0mrad 1mm gap 8keV 6quad
2mm ap hardly changes at all.in



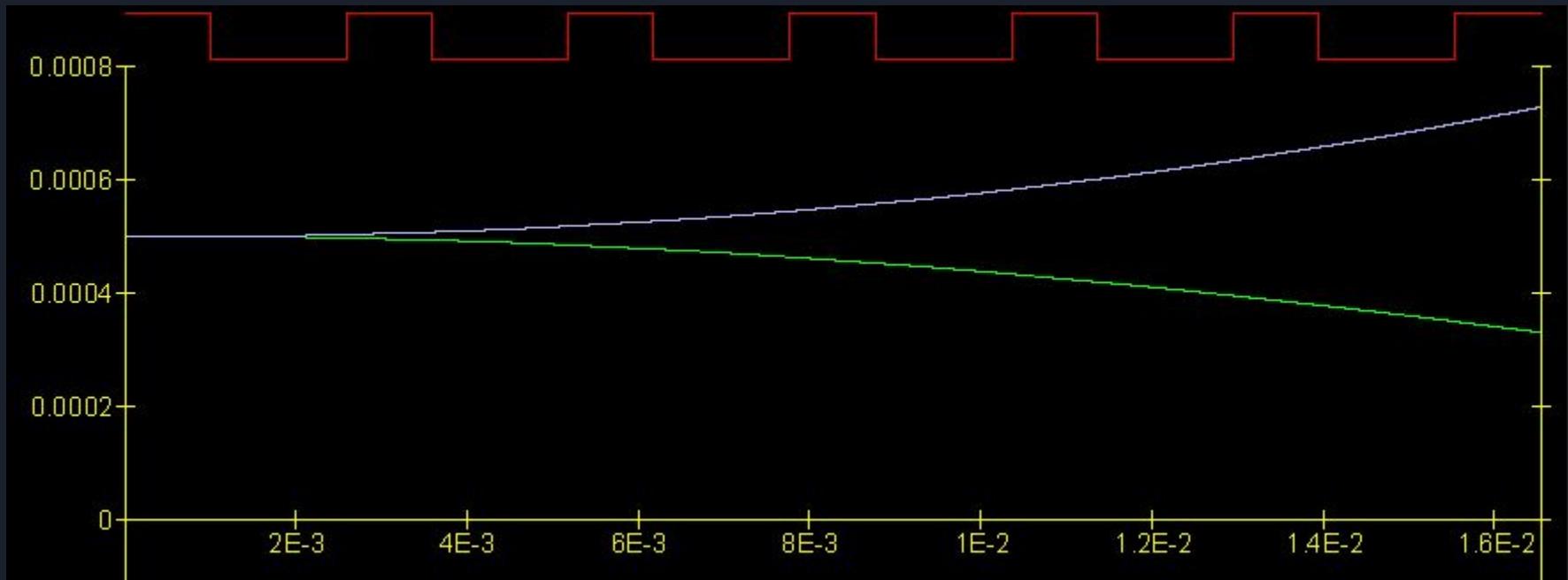
matching 07-01-2020 0.5mm 0mrad 1mm gap 8keV 6quad
blank 1mm ap.in



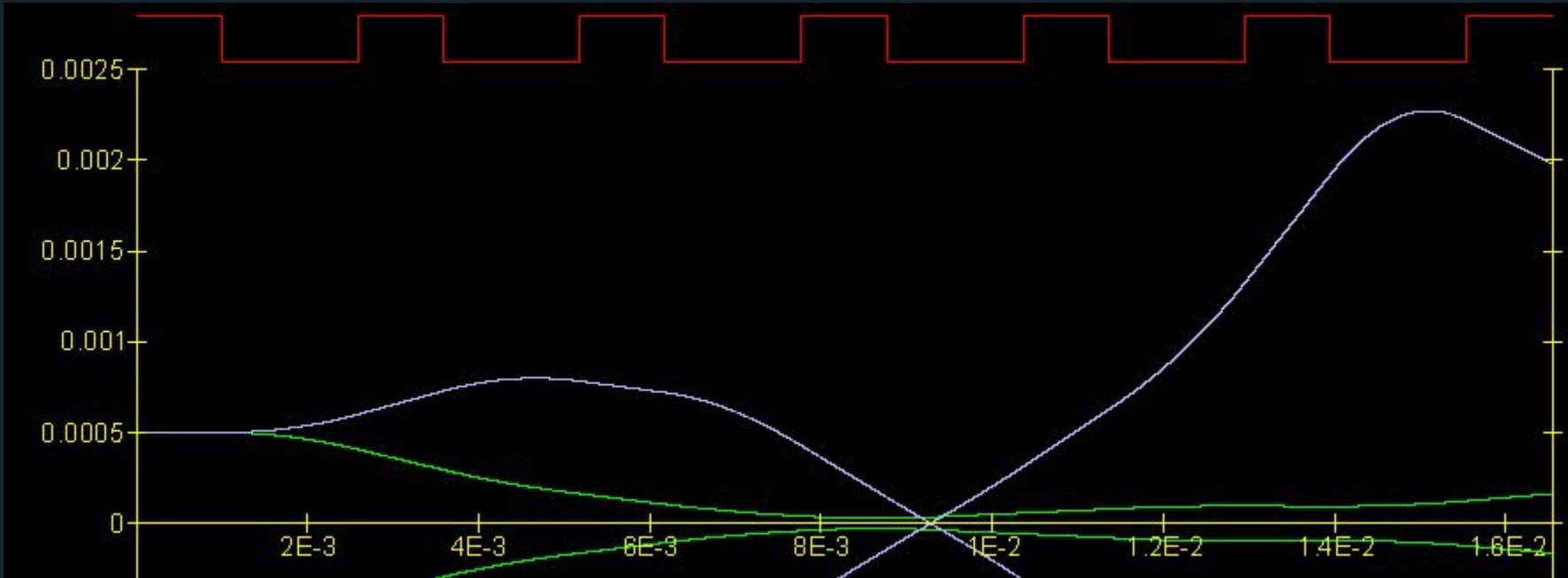
matching 07-01-2020 0.5mm 0mrad 1mm gap 8keV 6quad
1mm ap changes much more down.in



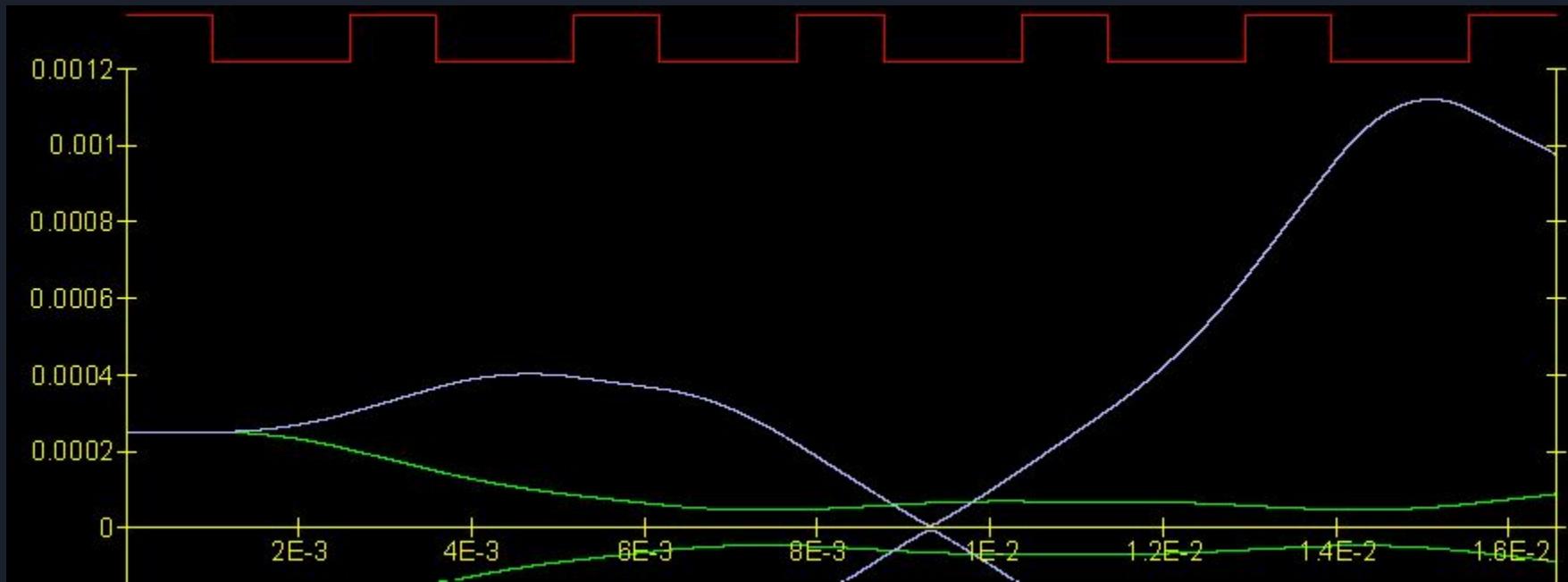
matching 07-01-2020 0.5mm 0mrad 1mm gap 8keV 6quad
blank 0.5mm ap.in



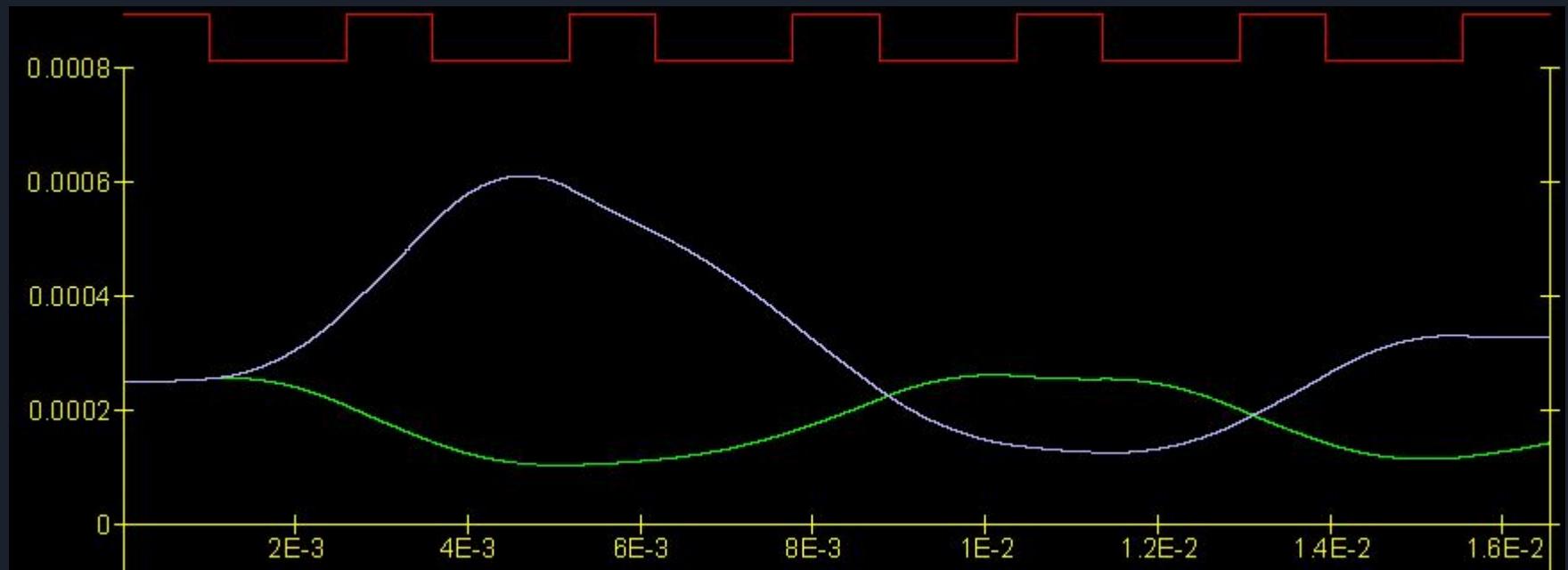
matching 07-01-2020 0.5mm 0mrad 1mm gap 8keV 6quad
0.5mm ap crossover happens much faster.in



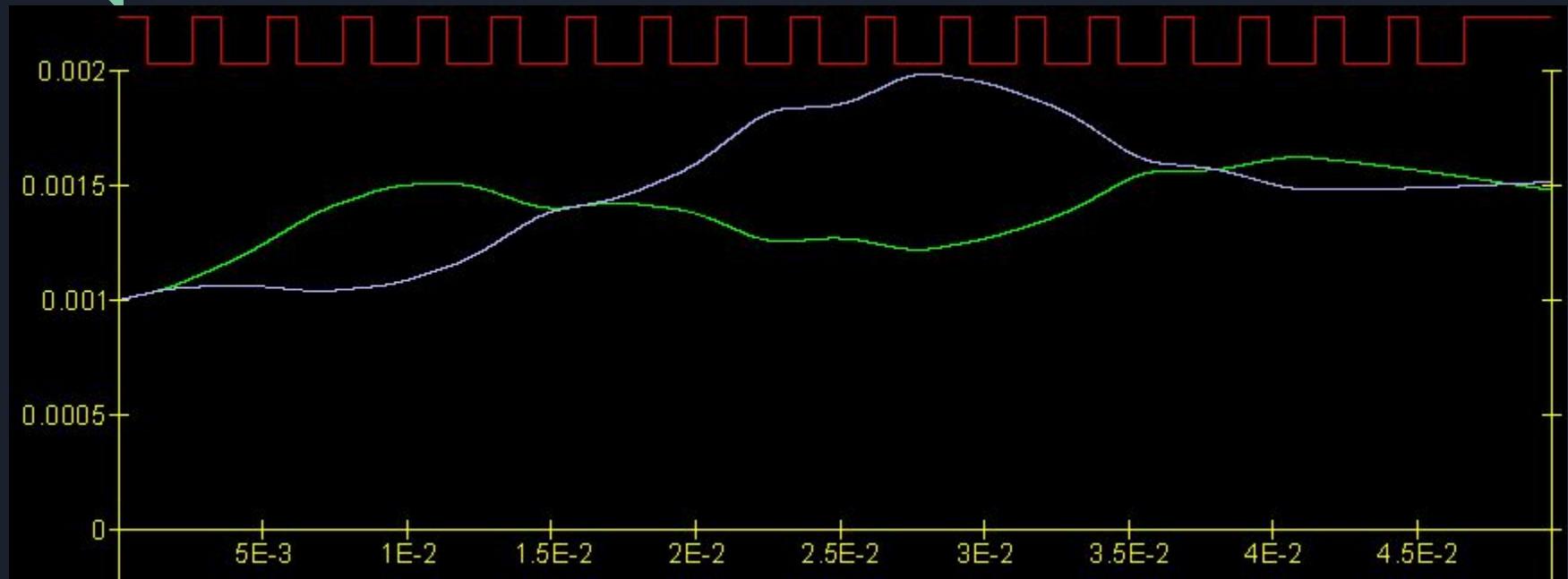
matching 07-01-2020 0.25mm 0mrad 1mm gap 8keV 6quad
0.5mm ap crossover happens much faster trying smaller initial
radius.in



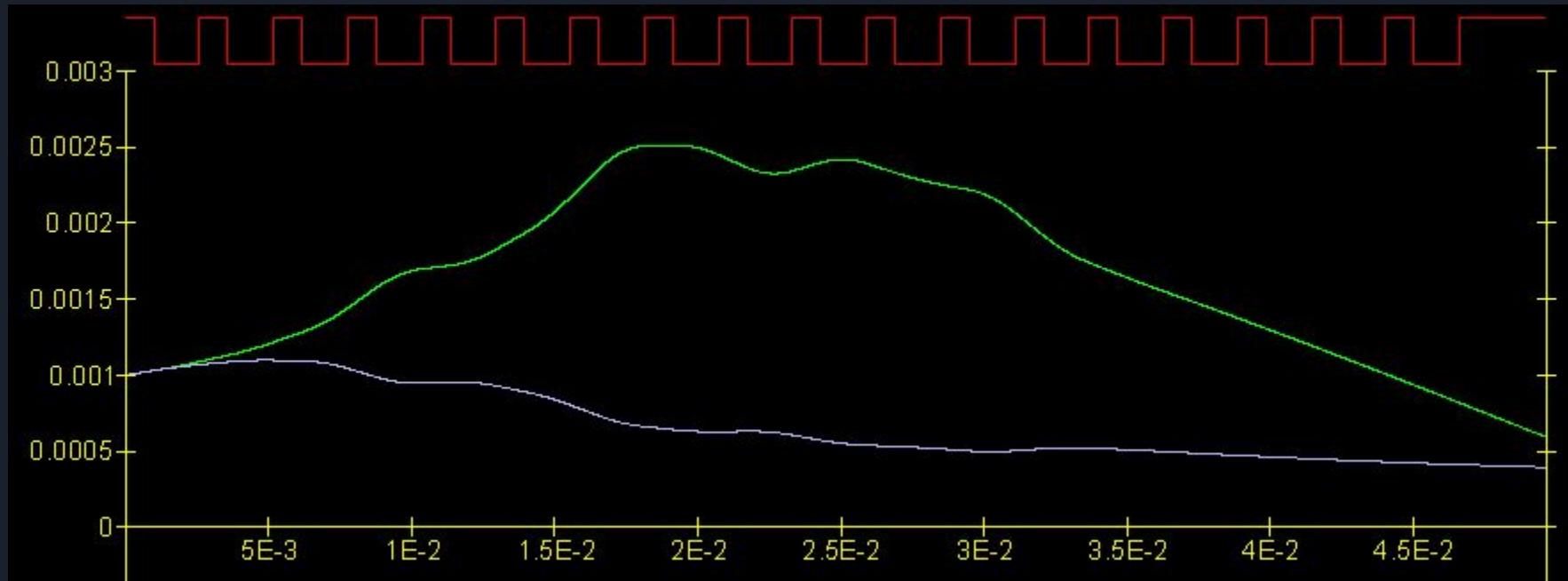
matching 07-01-2020 0.25mm 0mrad 1mm gap 8keV 6quad
0.5mm ap 5E-4 current trying to recreate fig2.in



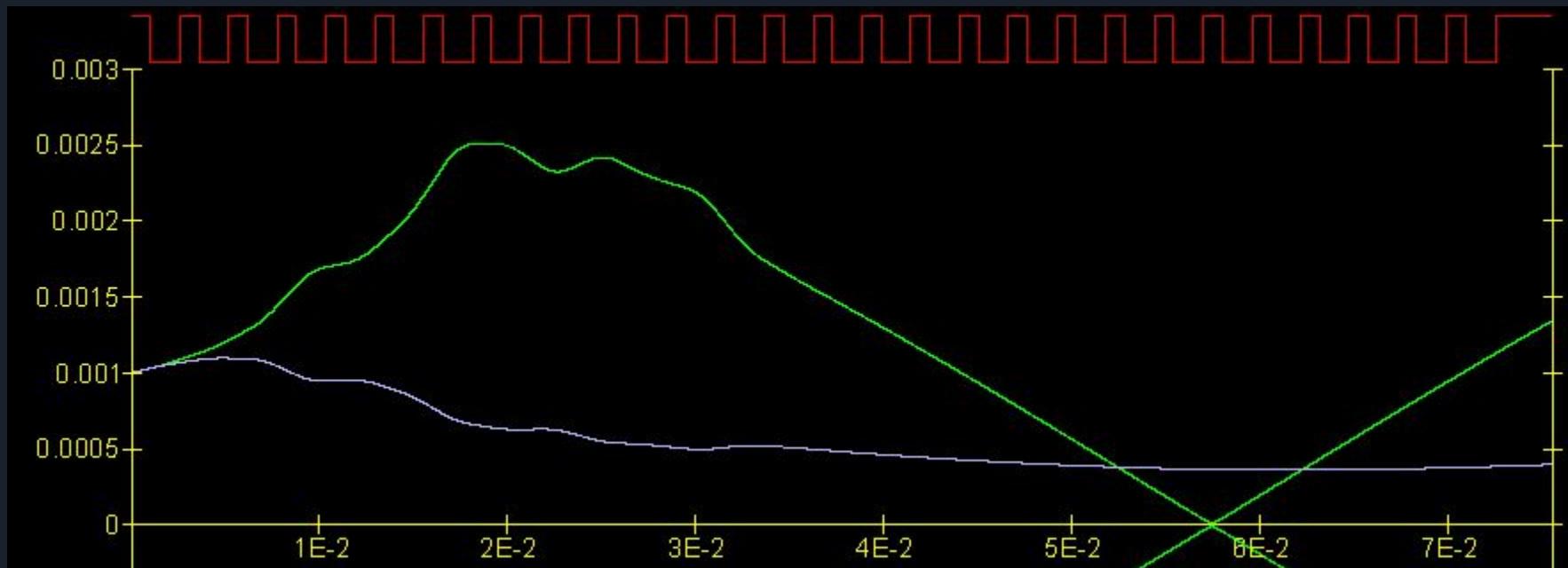
matching 07-01-2020 1mm 30mrad 1mm gap 8keV 18quad
strong peak then flatten high.in



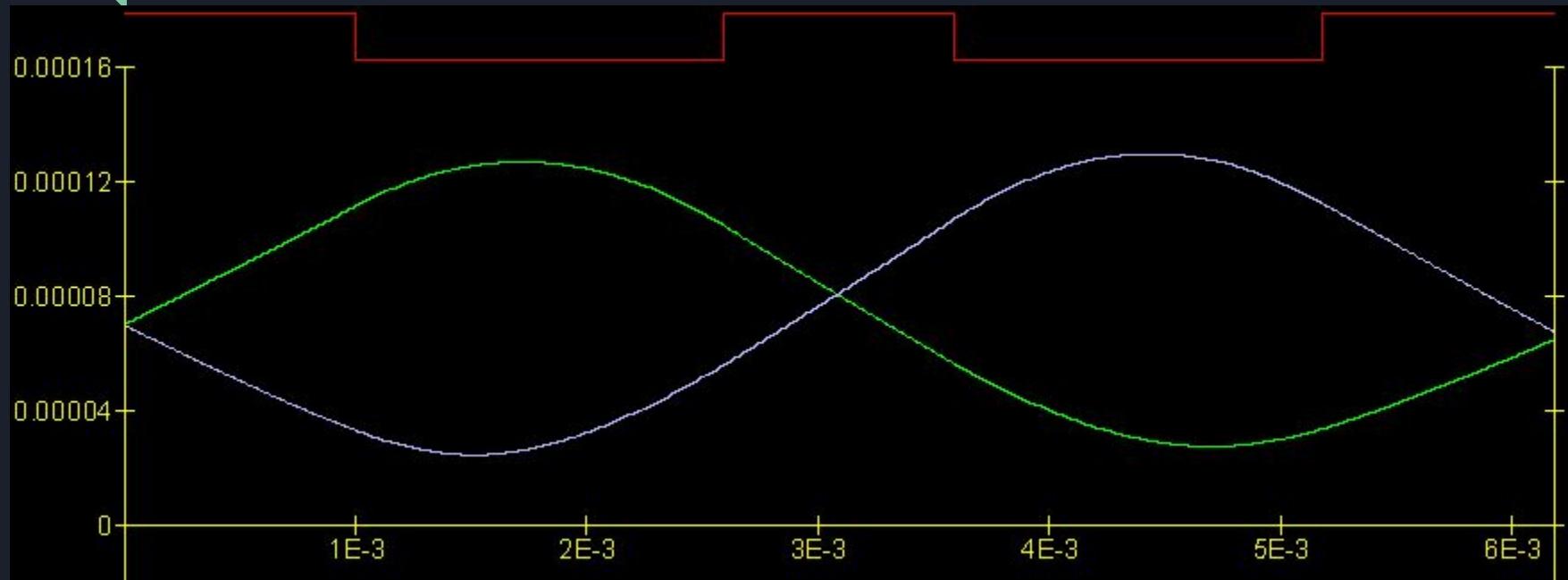
matching 07-01-2020 1mm 30mrad 1mm gap 8keV 18quad
large start half flat.in



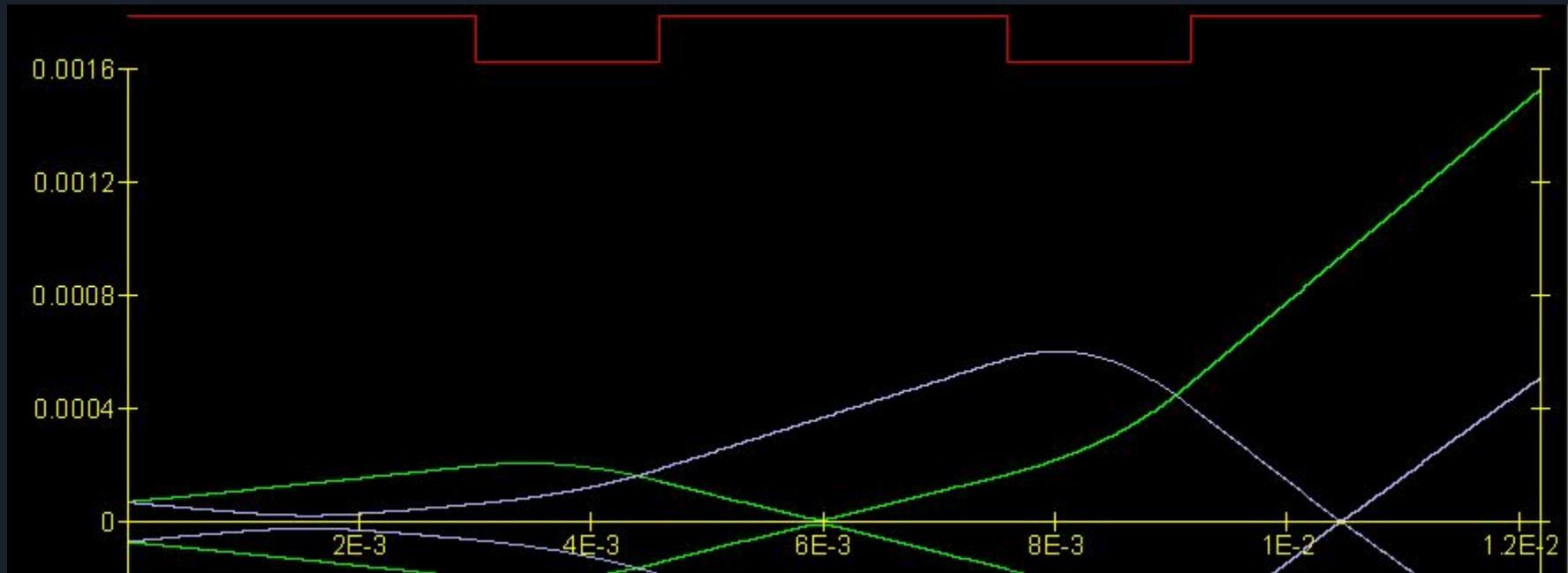
matching 07-01-2020 1mm 30mrad 1mm gap 8keV 28quad
large start half flat.in



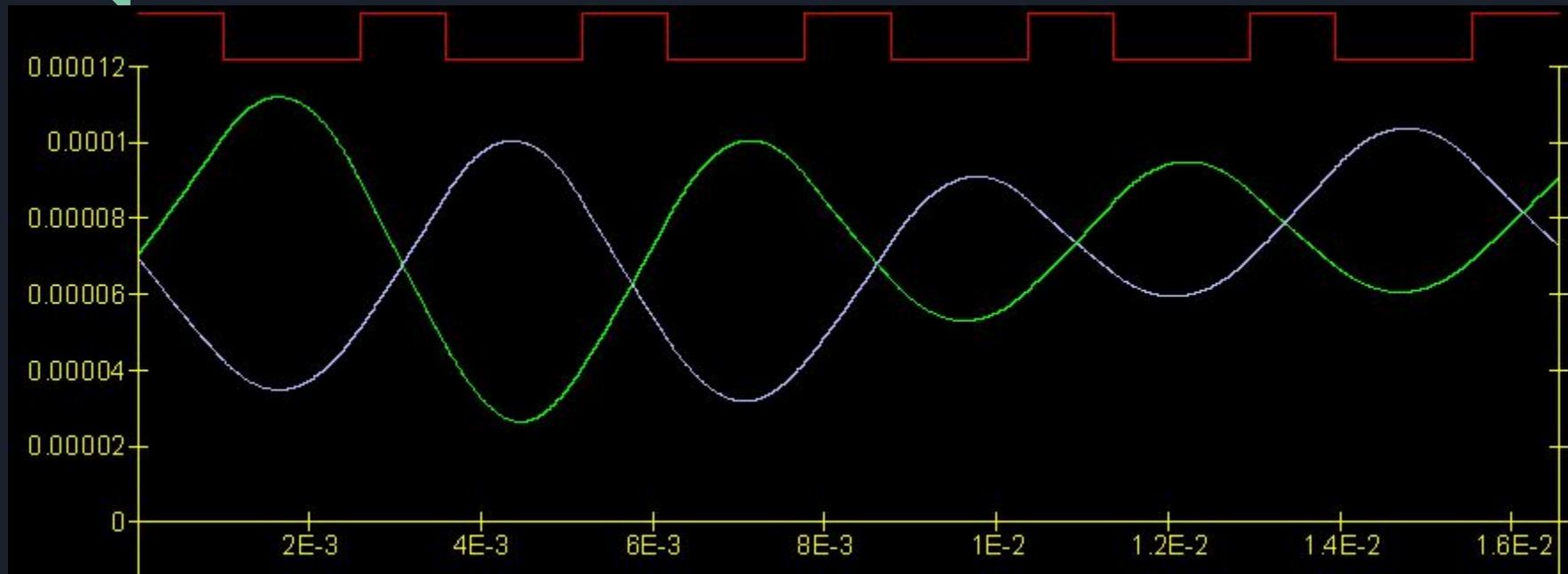
matching 07-02-2020 1mm 30mrad 1mm gap 8keV 2quad
peri osc high voltages.in



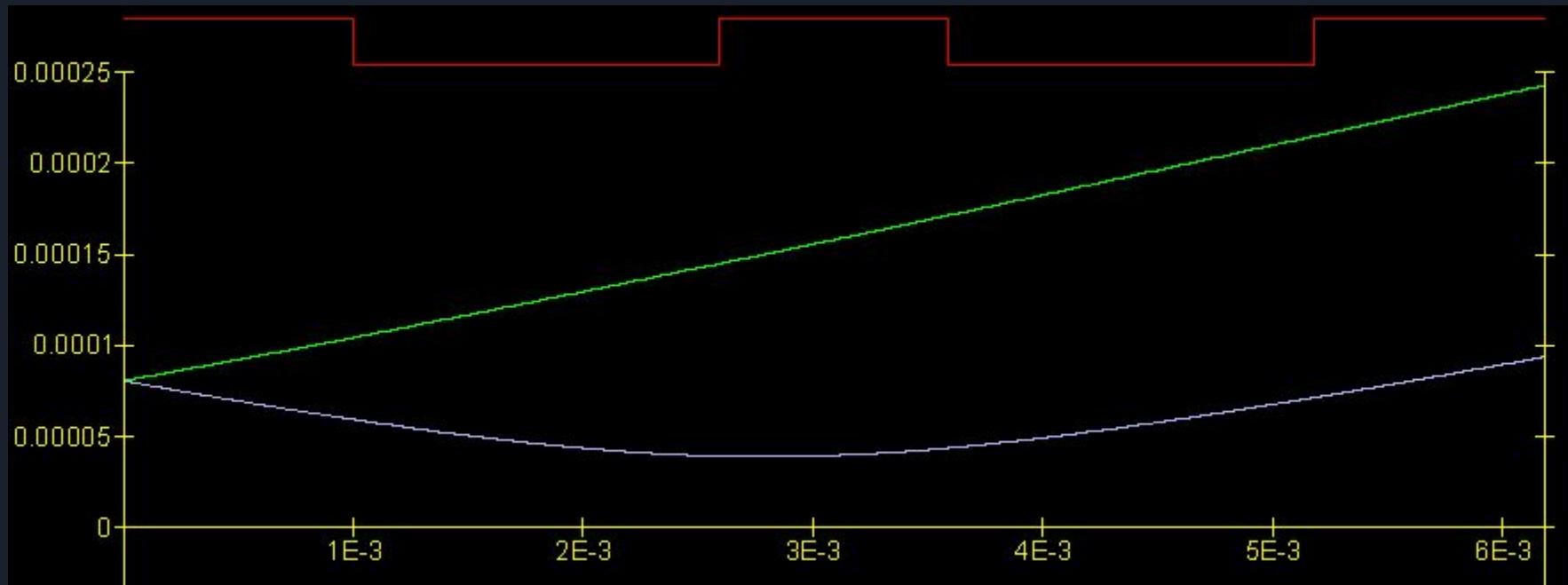
matching 07-02-2020 1mm 30mrad 1mm gap 8keV 2quad
peri osc high voltages 3mm drift.in



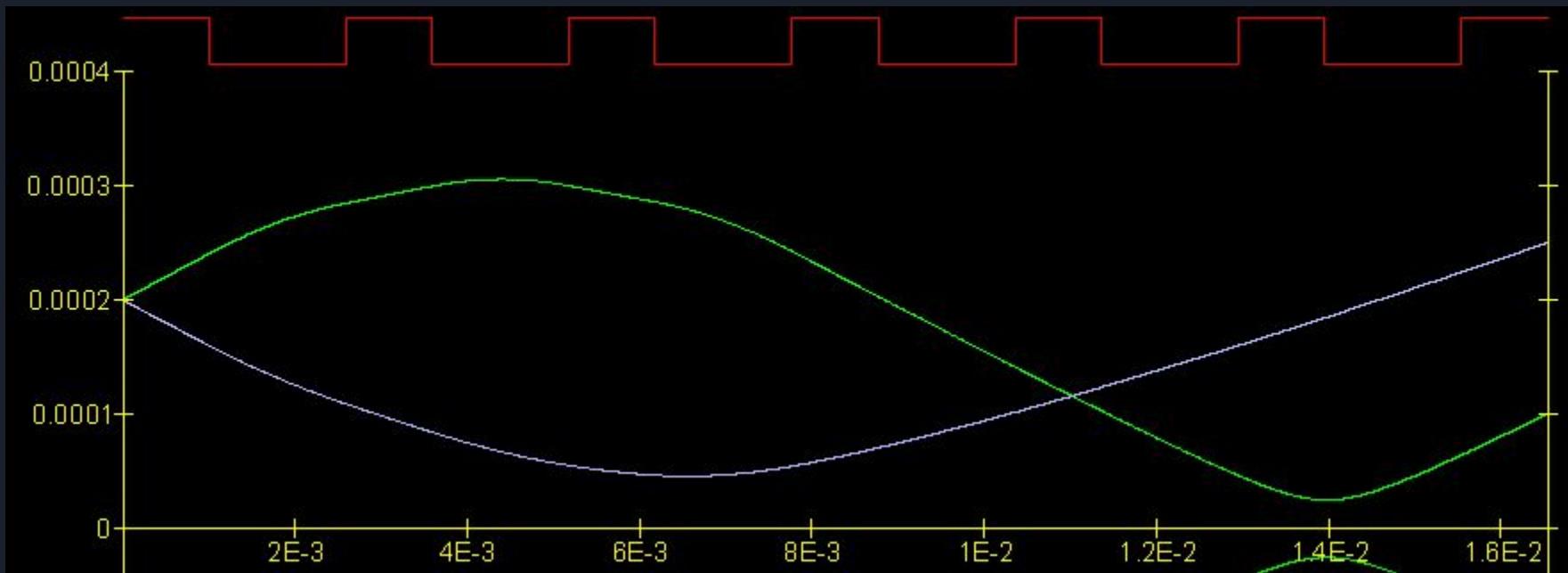
matching 07-02-2020 .07mm 1mm gap 8keV 6quad low match
powerful voltage.in (all are 3000-4000V)



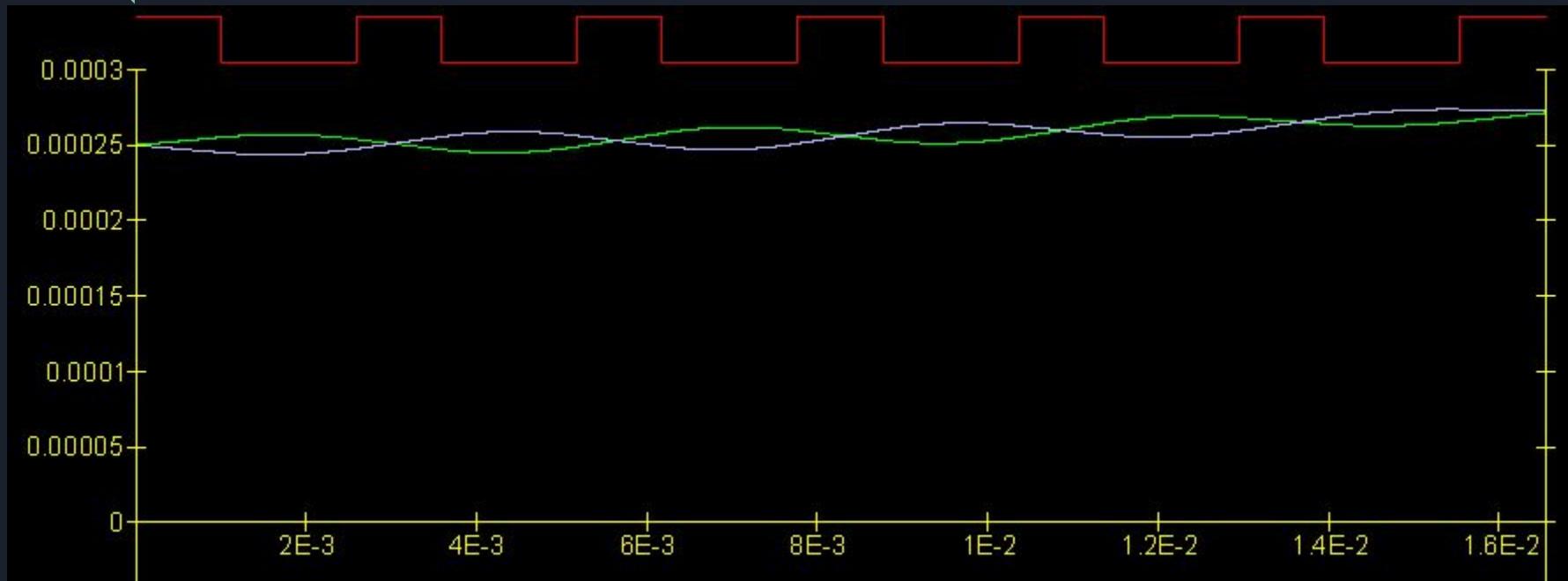
matching 07-02-2020 0.08mm 26mrad 1mm gap 8keV 2quad
test.in



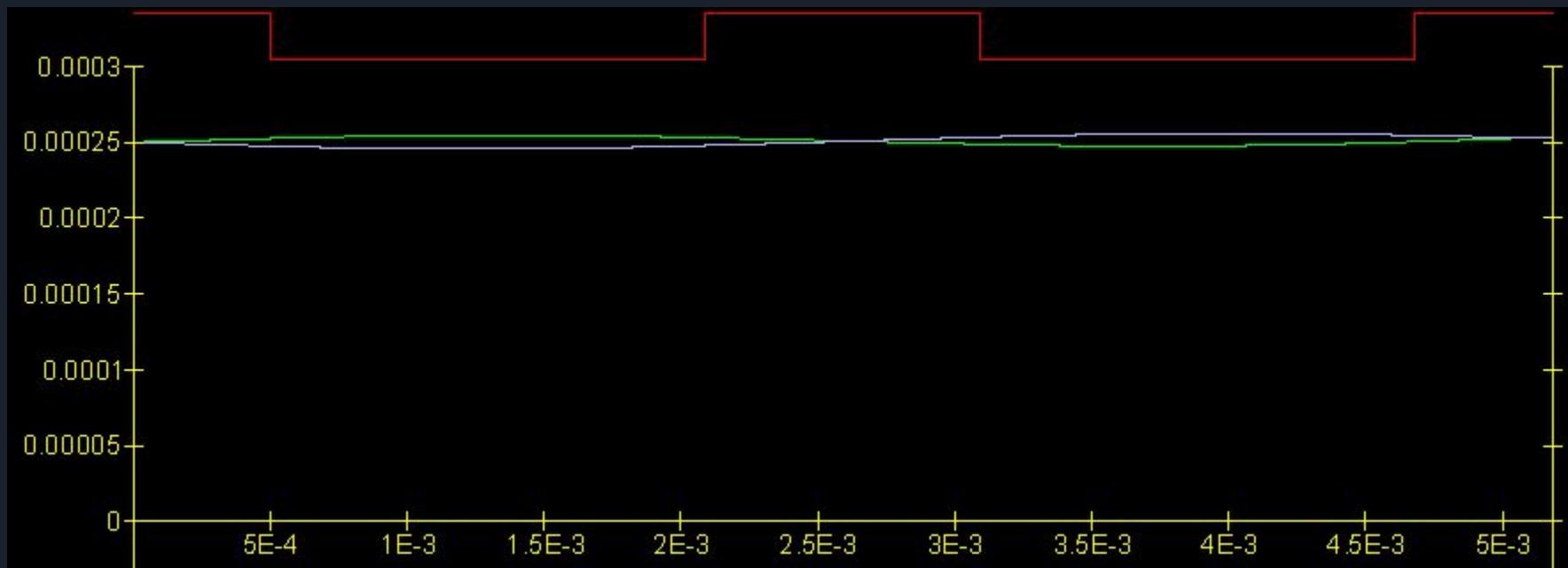
matching 07-04-2020 0.2mm 40mrad 1mm gap 8keV 6quad
starting to get osc with 600s.in



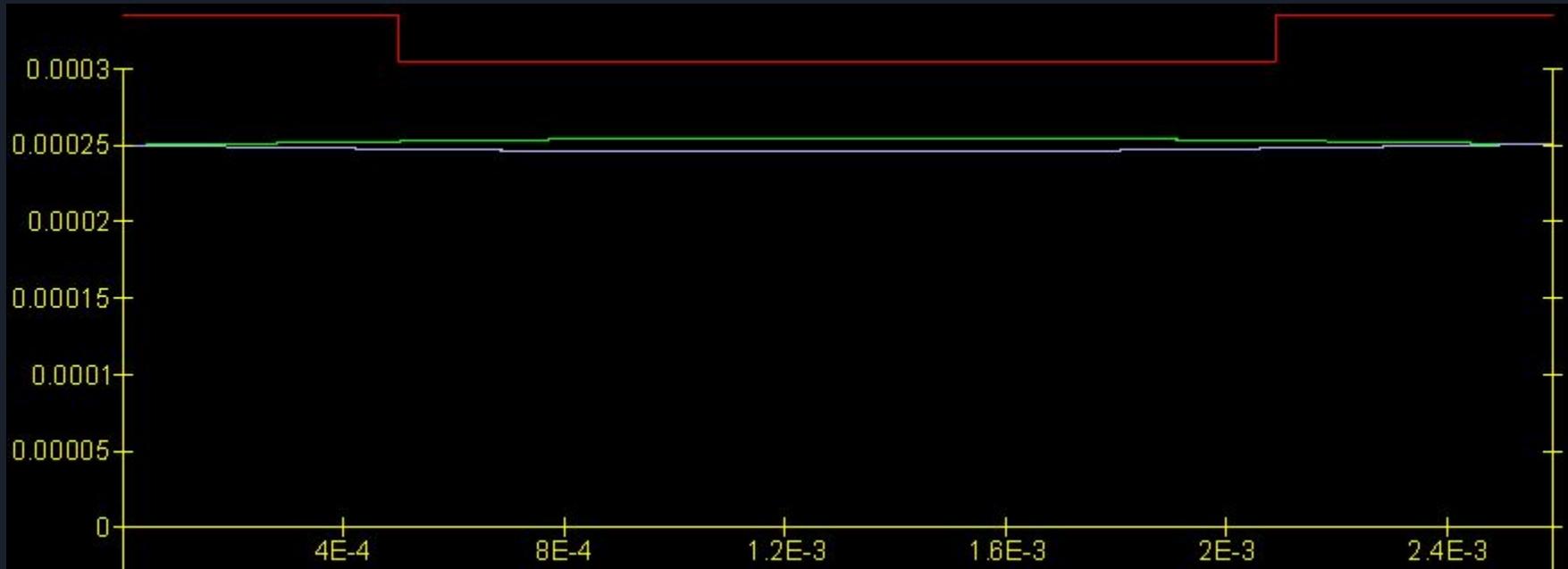
matching 07-04-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam.in



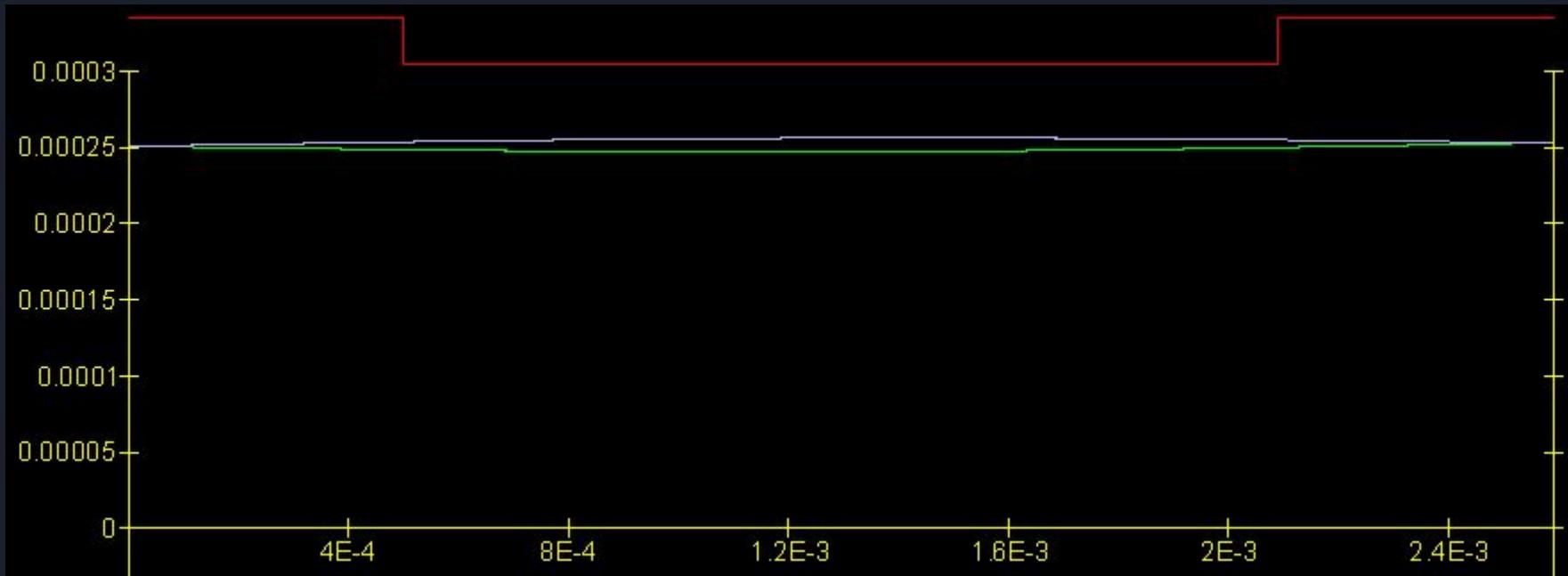
matching 07-04-2020 1mm 30mrad 1mm gap 8keV 2quad
0.5mm gap on each side almost matched.in



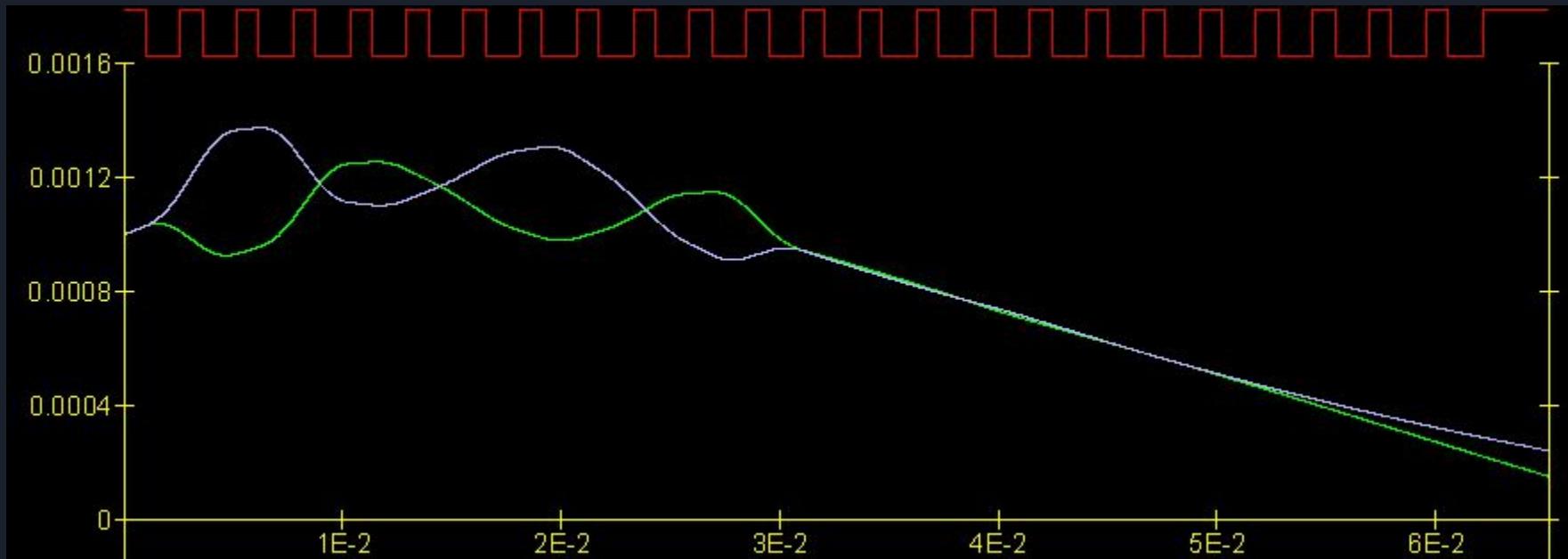
matching 07-04-2020 1mm 30mrad 1mm gap 8keV 1quad
0.5mm gap on each side found first voltage.in



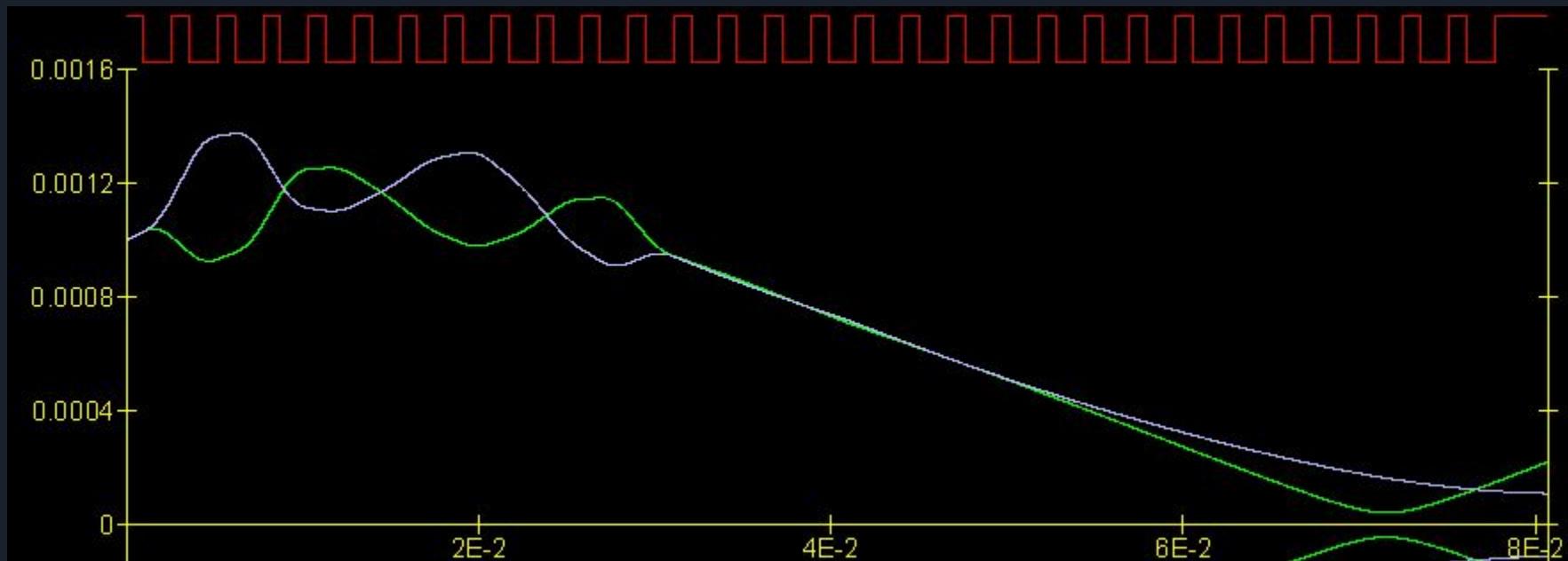
matching 07-04-2020 1mm 30mrad 1mm gap 8keV 1quad
0.5mm gap on each side found second voltage.in



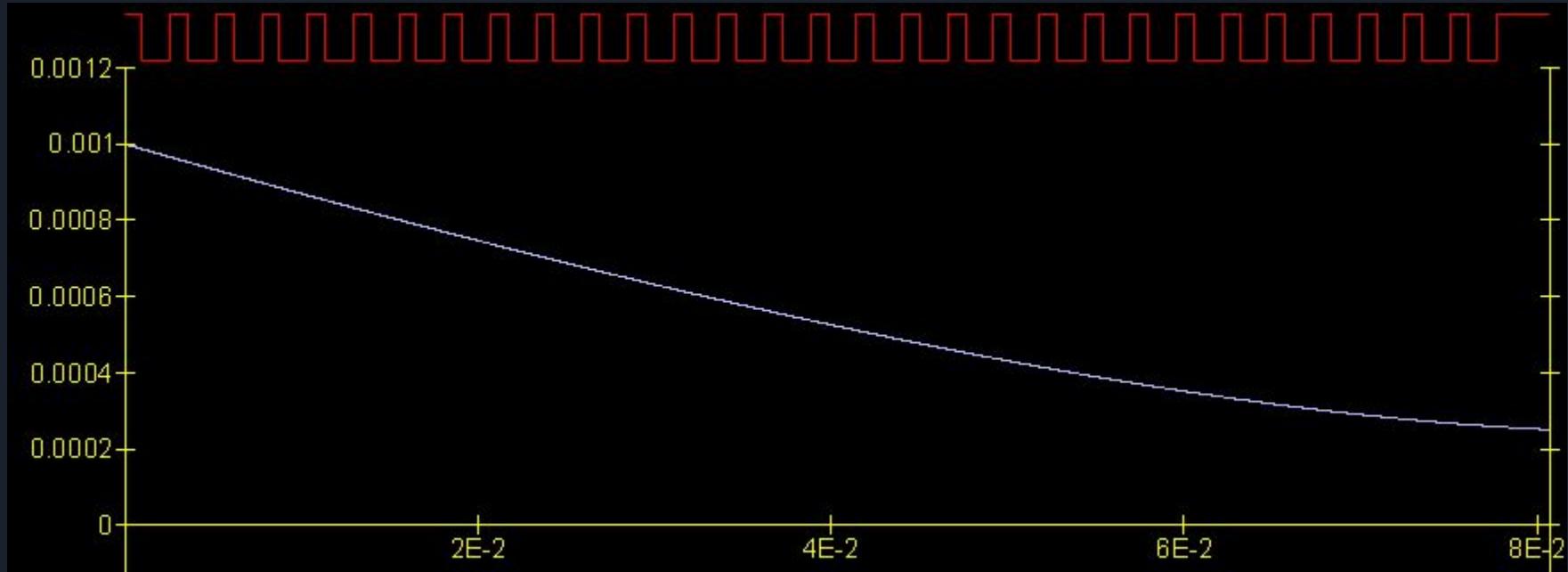
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
from - lots of oscillation 14mm down to 5mm better osc and
straight.in



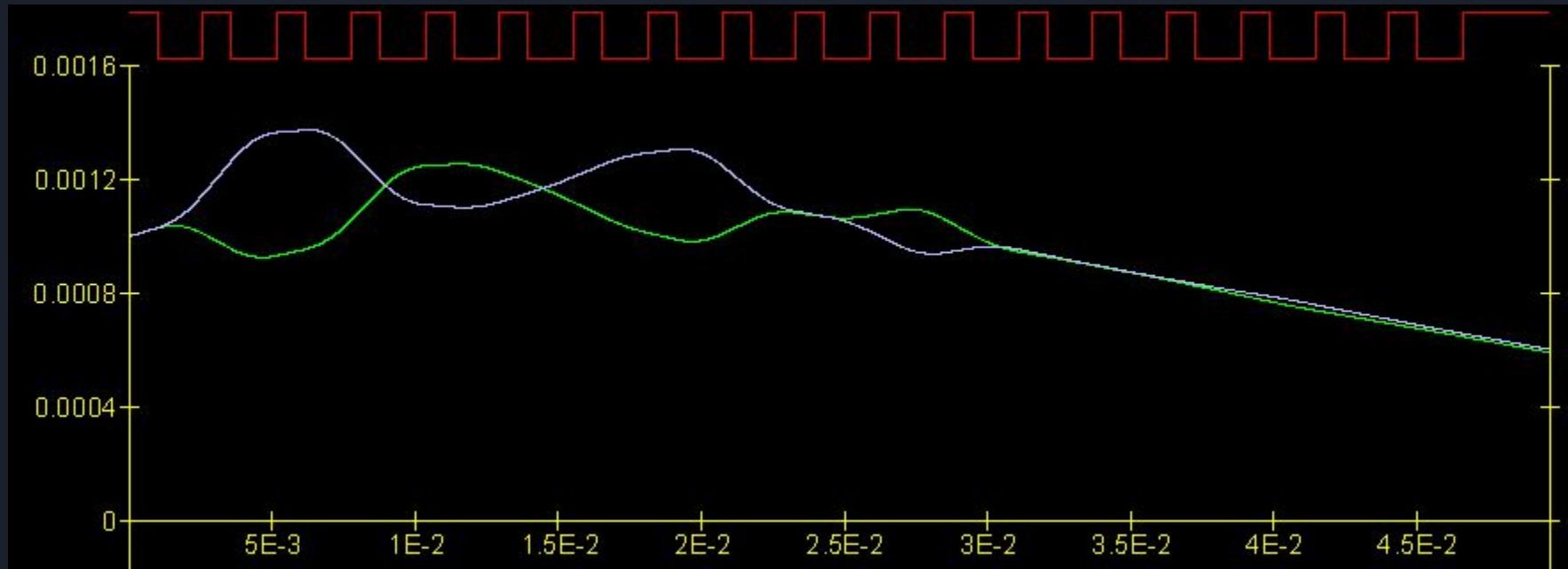
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 30quad -
from - lots of oscillation 14mm down to 5mm better osc and
straight.in



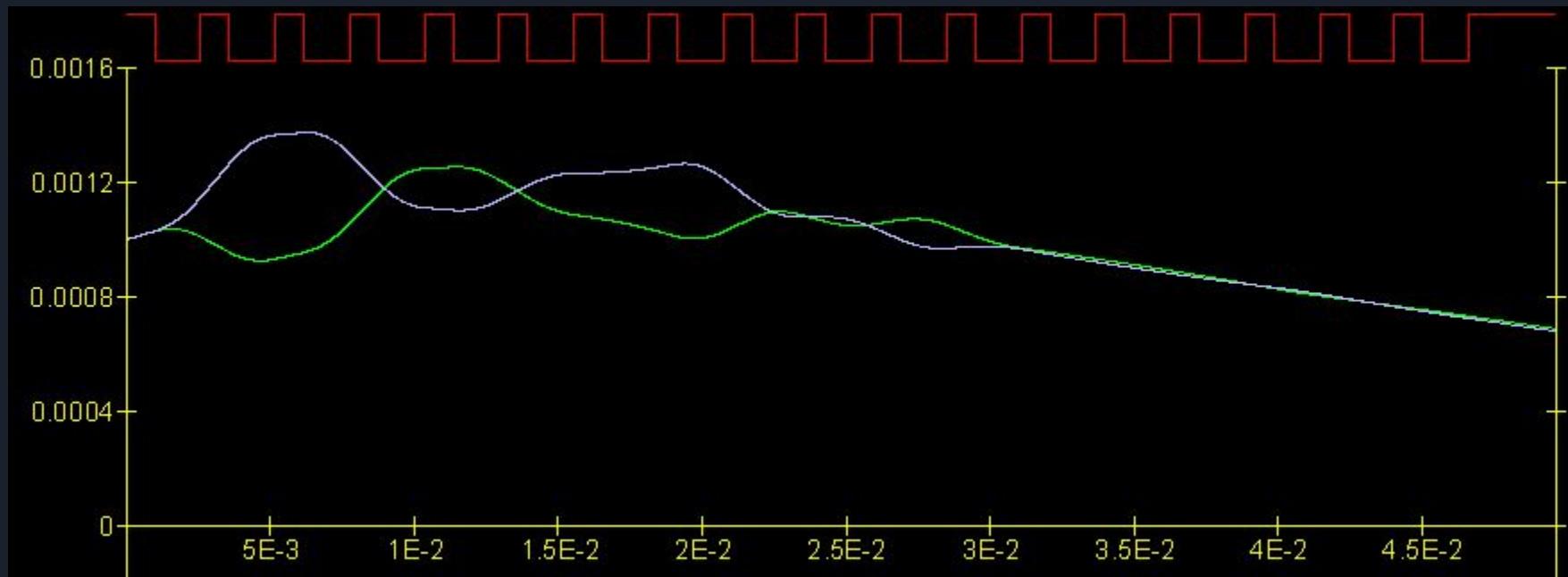
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 30quad
from -30mrad to 0.25mmin



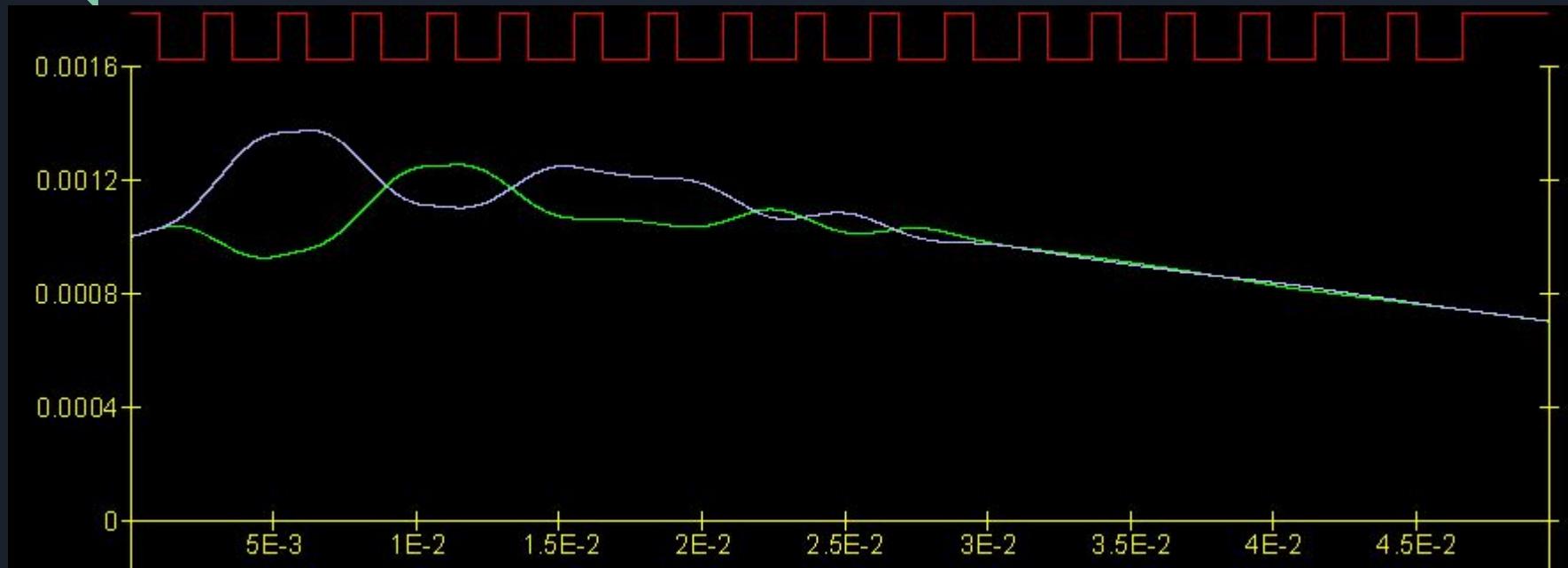
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation - from- 14mm down to 5mm better osc and
straight- down to 18mrad.in



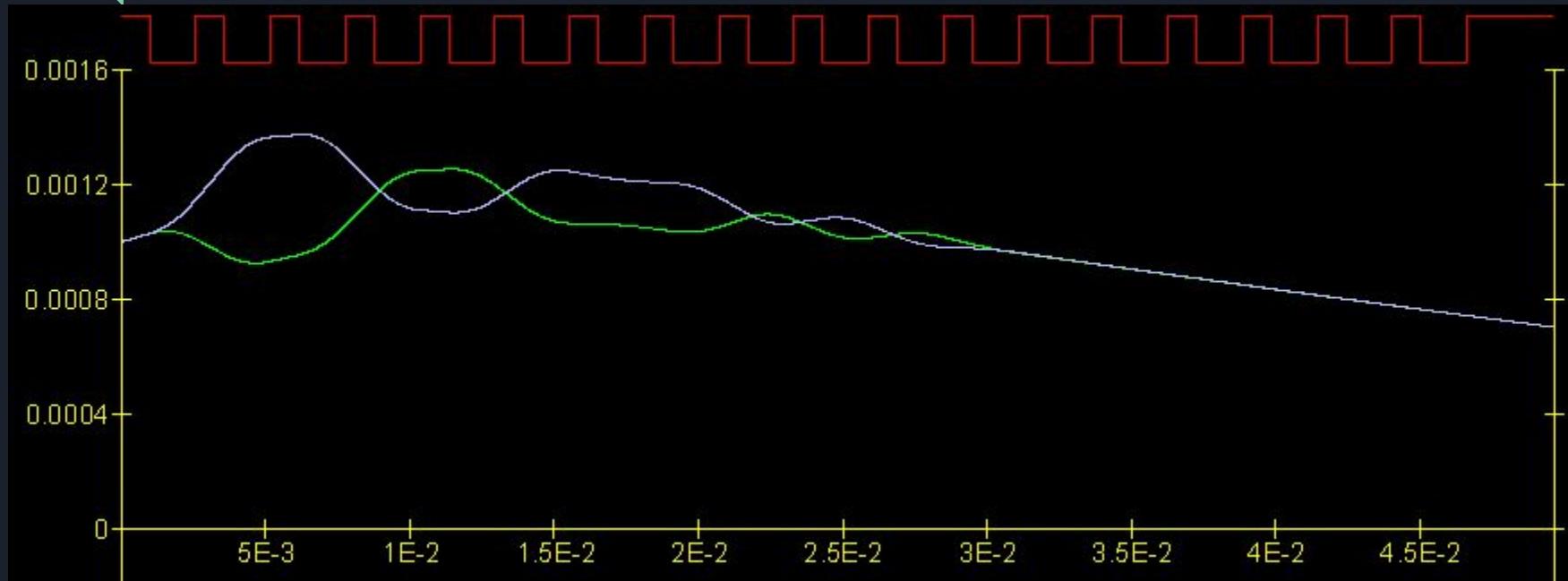
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
lots of oscillation - from- 14mm down to 5mm better osc and
straight- down to 14mrad.in



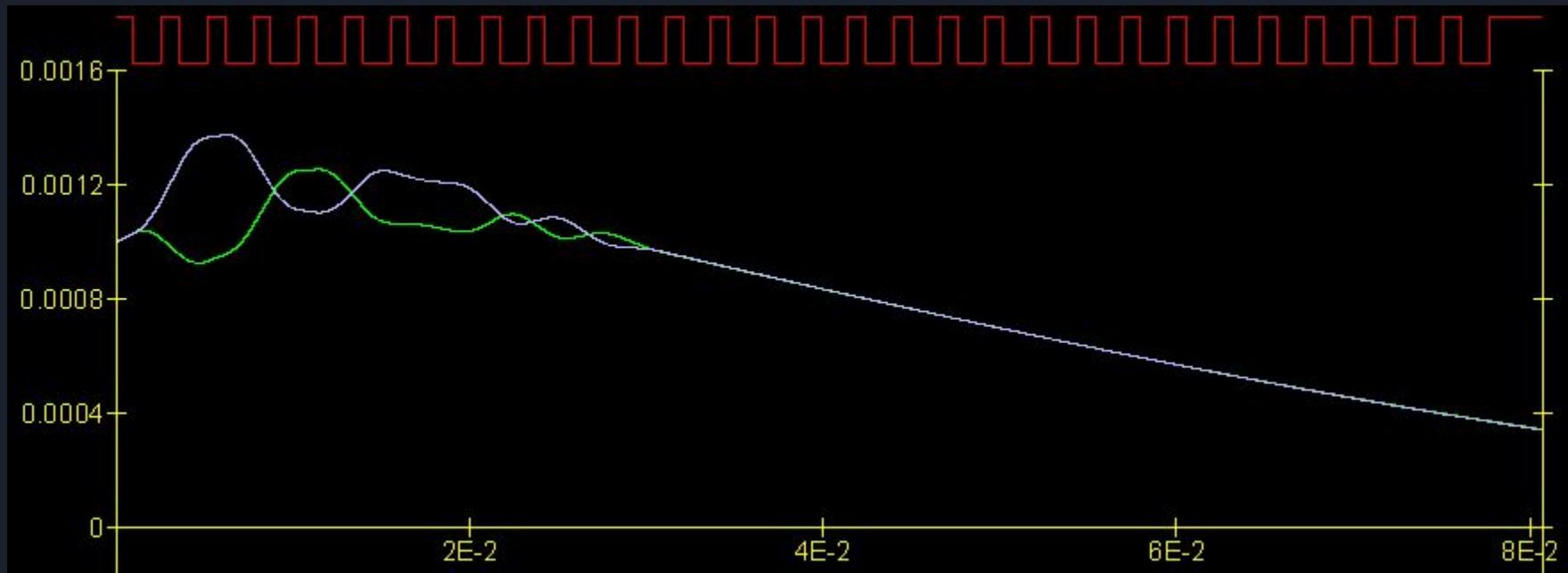
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
down to 13.3mrad.in



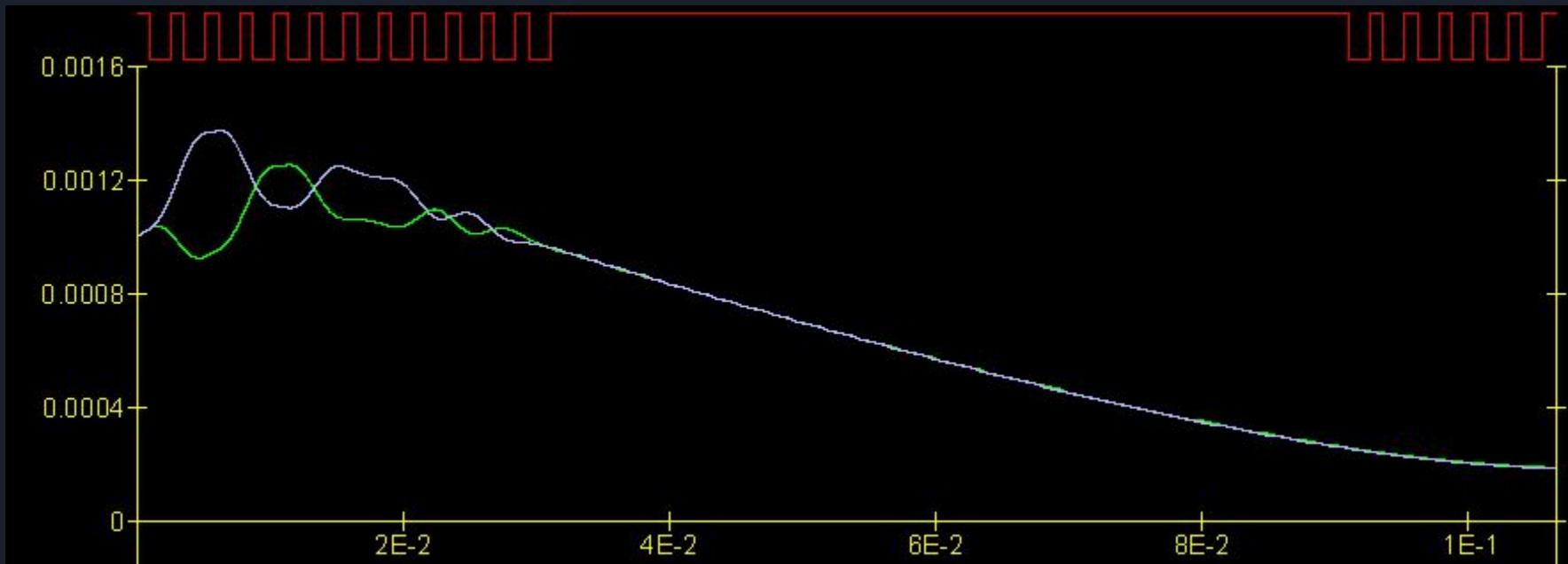
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
down to 13.3mrad with 0s at end.in



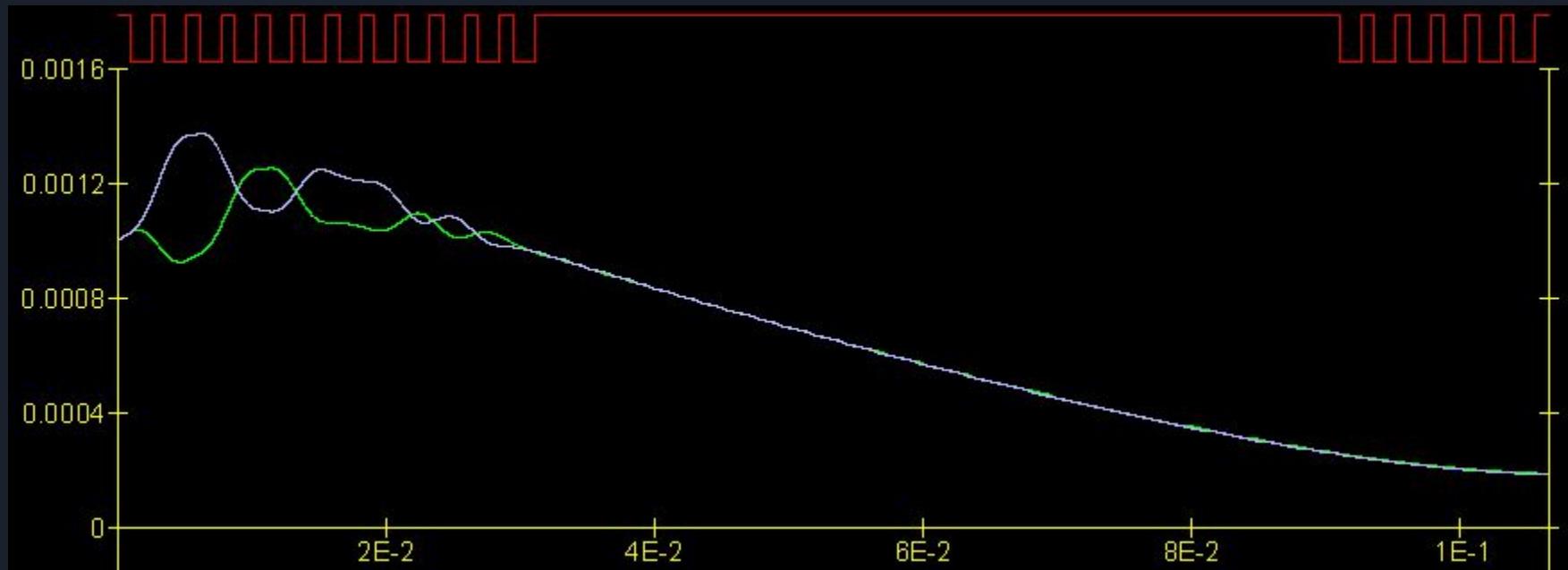
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 30quad
down to 13.3mrad with 0s at end.in



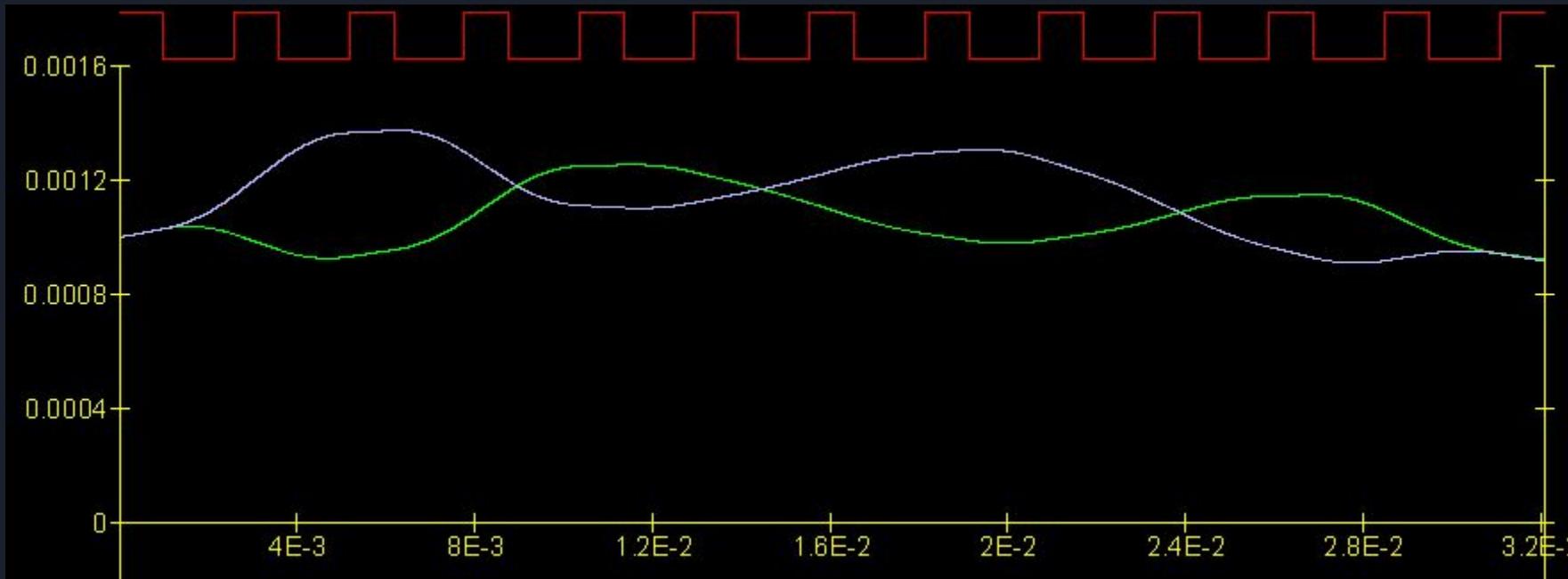
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
down to 13.3mrad with 0s at end longer middle drift.in



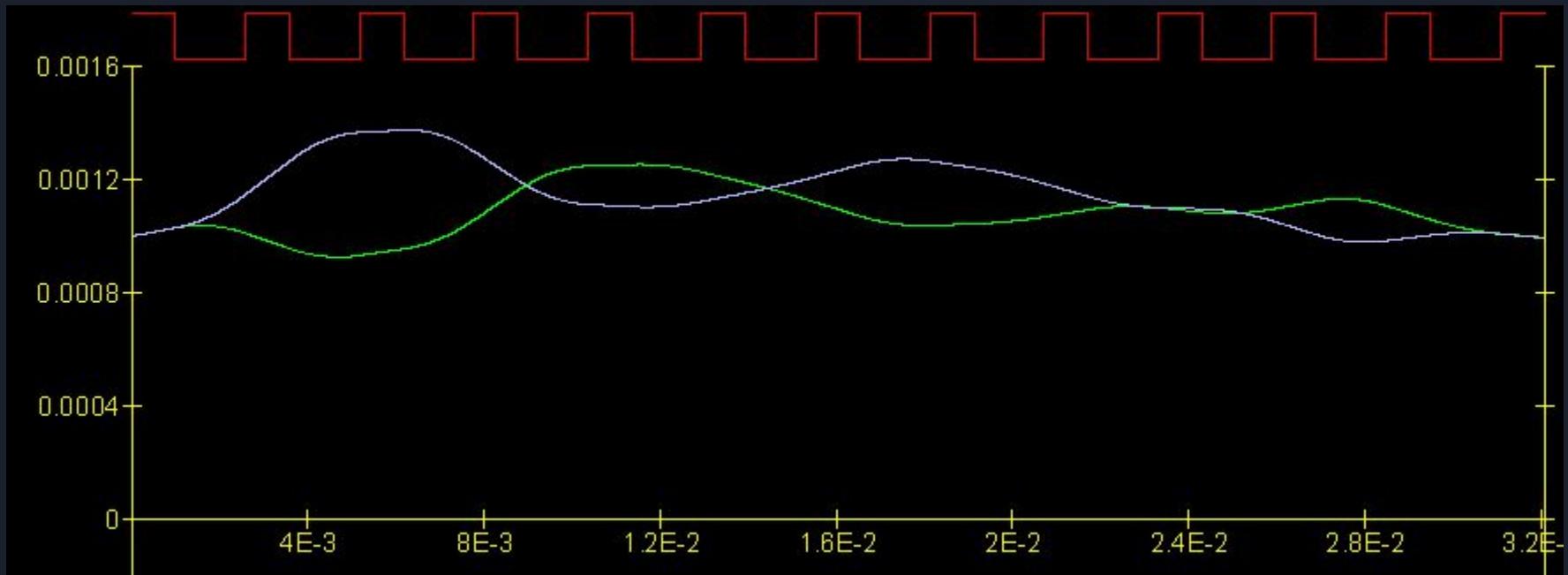
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 18quad
down to 13.3mrad with 0s at end longer middle drift 6cm but
now too low.in



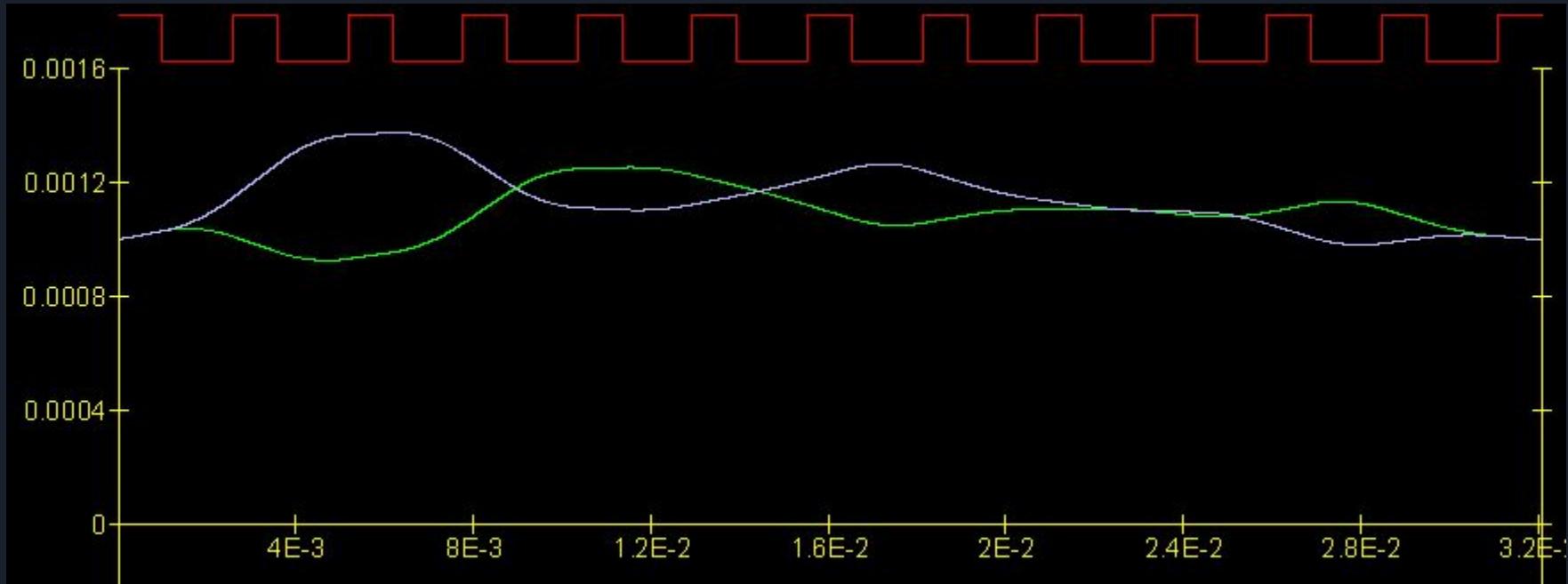
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
from - lots of oscillation 14mm down to 5mm better osc and
straight try to make to 1mm.in



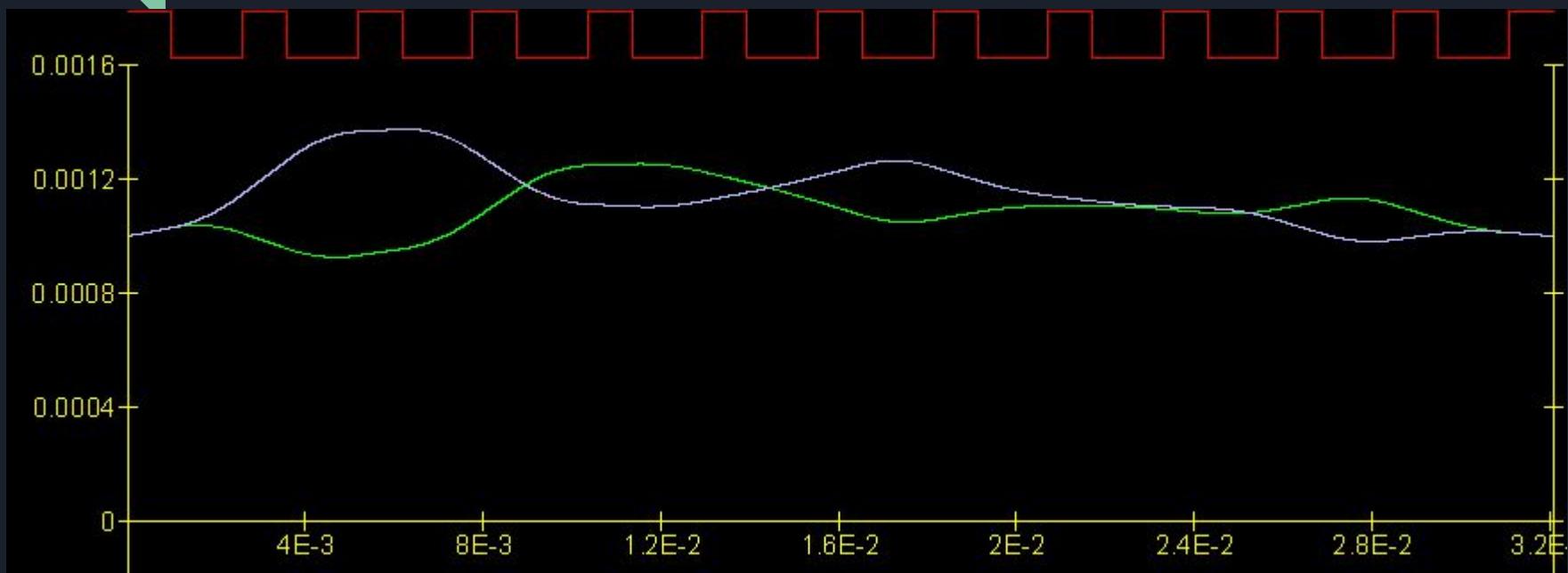
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
made to almost 1mm almost -13.3mrad.in



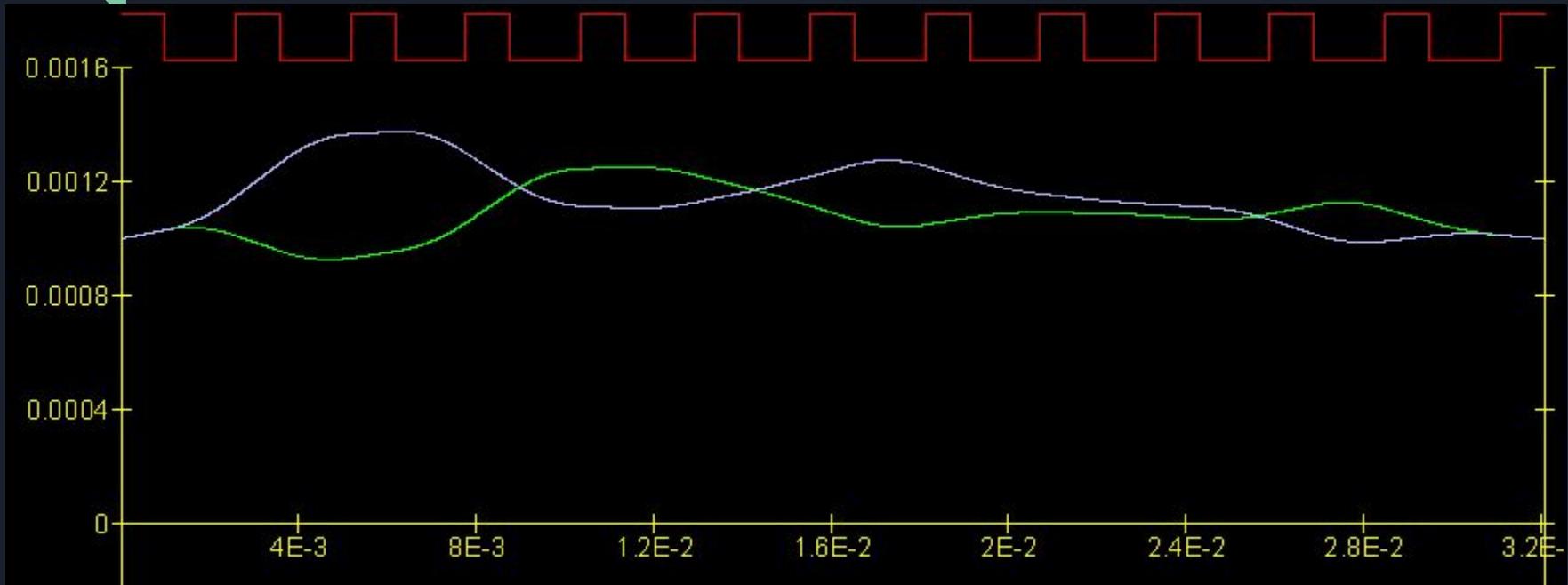
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
made to almost exactly 1mm and -13.3mrad.in



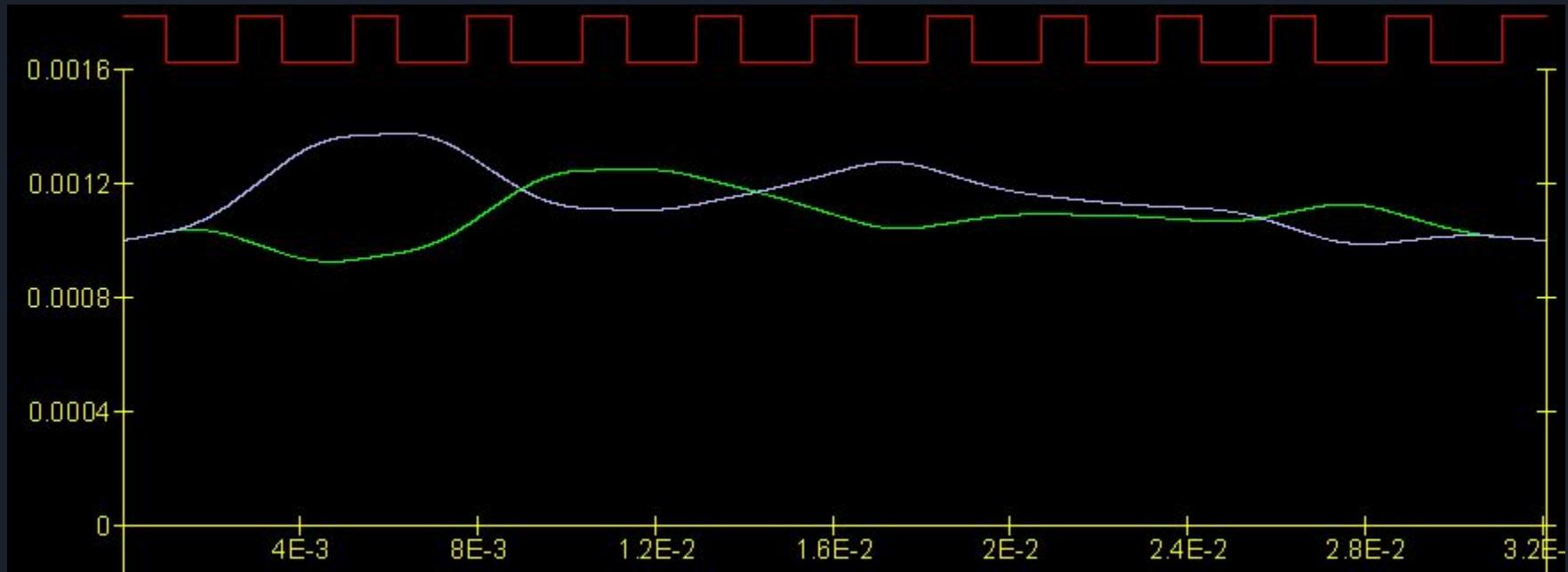
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
EXACTLY 1mm and -13.3mrad.in



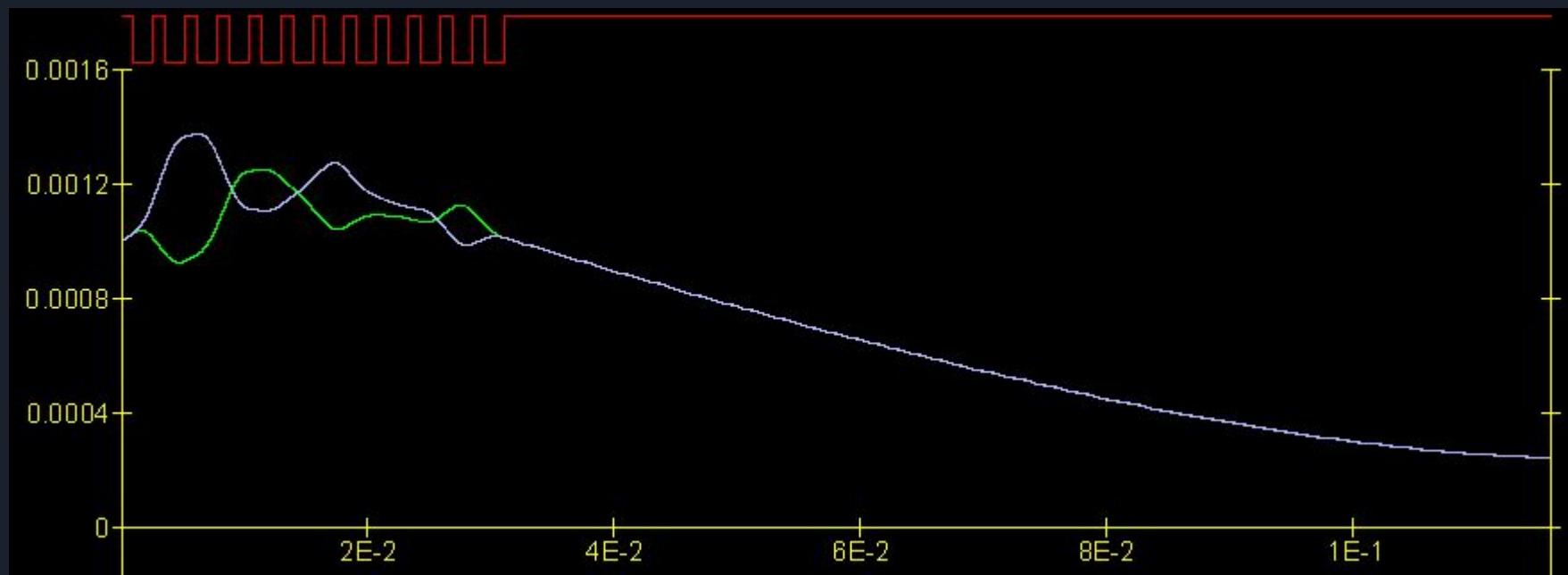
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less almost exactly 1mm and -13.3mrad.in



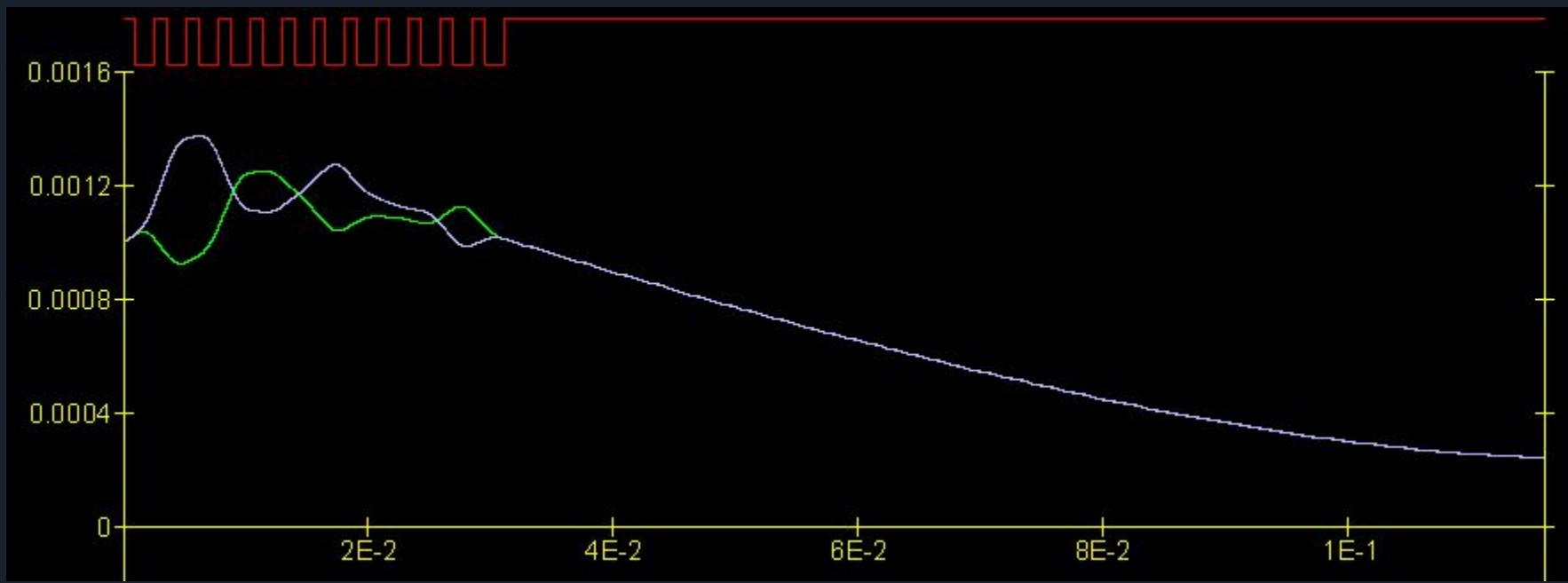
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less EXACTLY 1mm and -13.3mrad.in



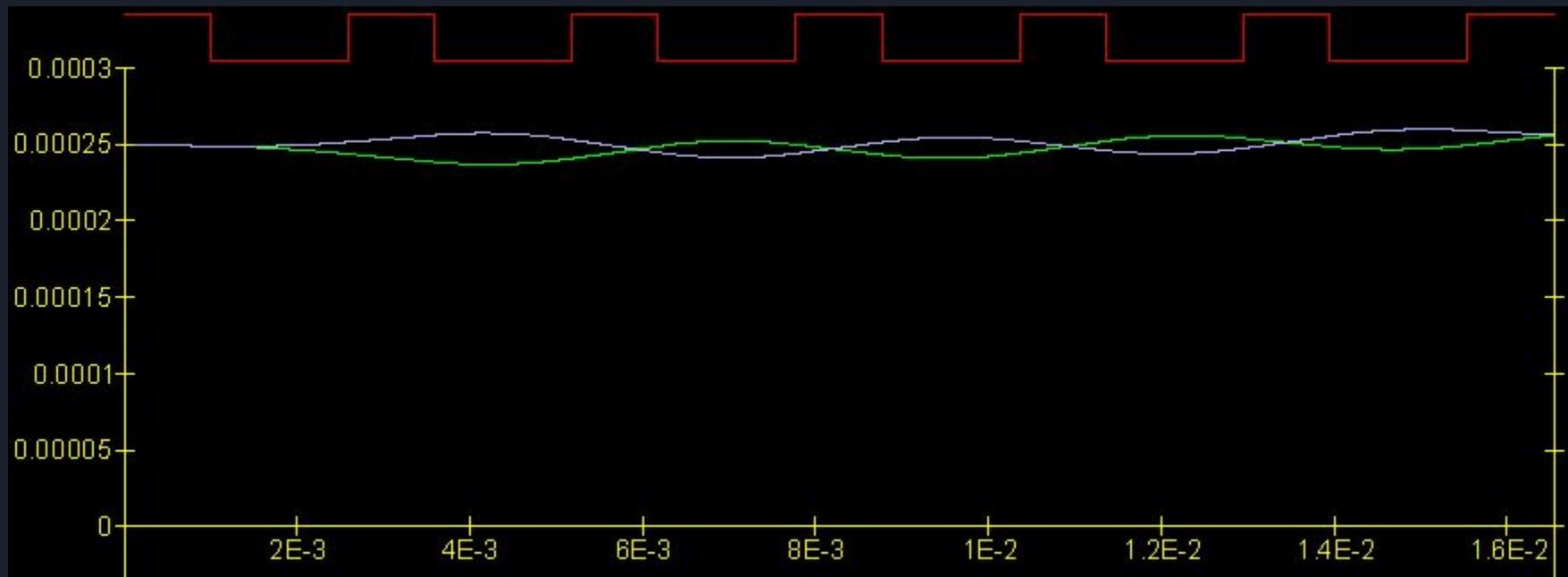
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less EXACTLY 1mm and -13.3mrad - long end
drift.in



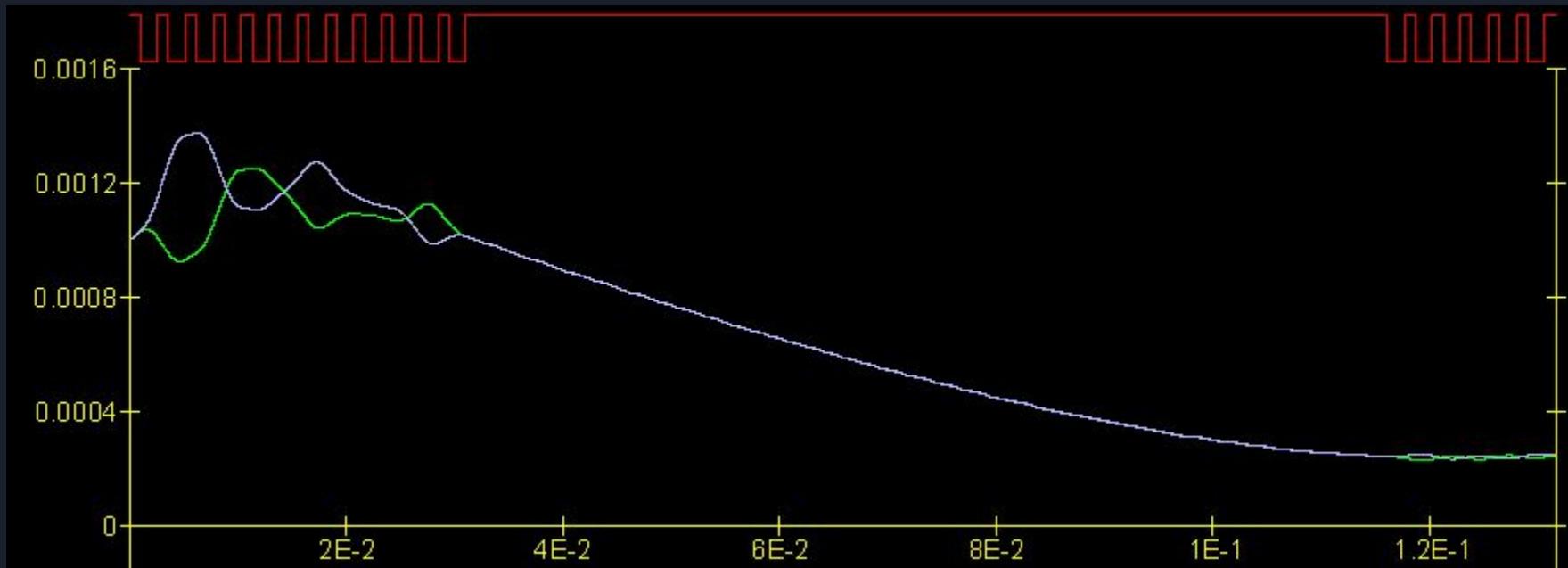
matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less EXACTLY 1mm and -13.3mrad - long end
drift 8.5cm down to 0.24mm.in



matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam from both -1.3mrad.in



matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less - 1mm and -13.3mrad - combined first
and second.in

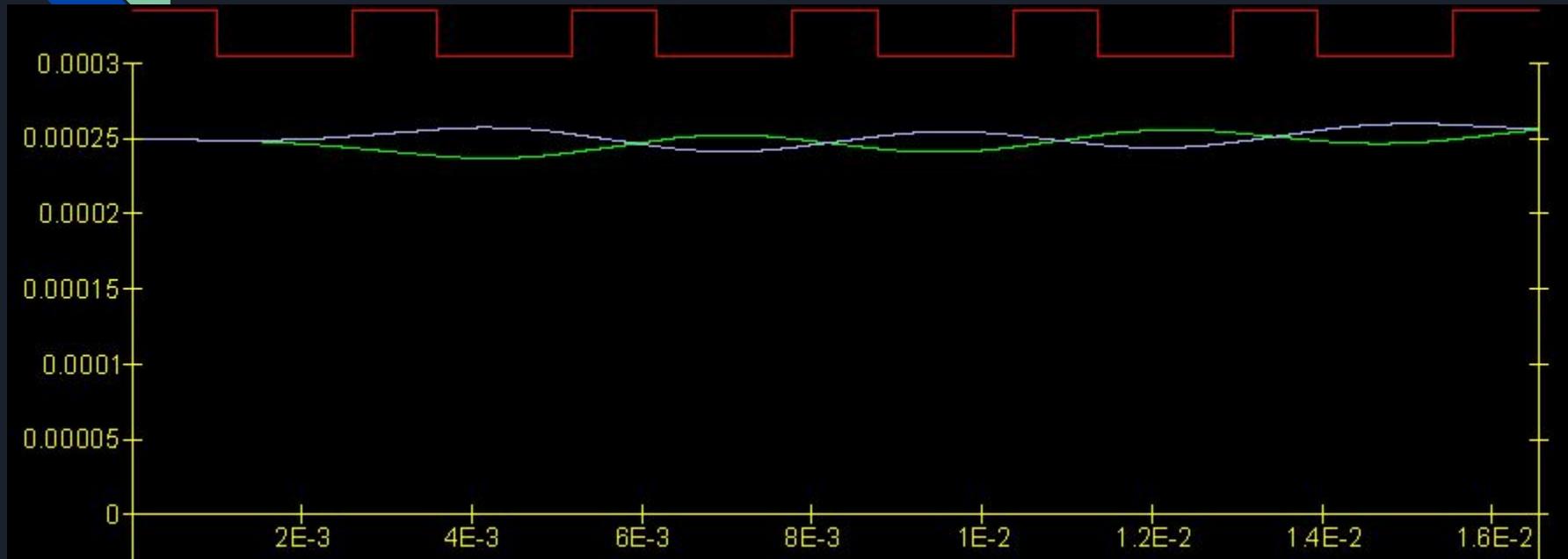




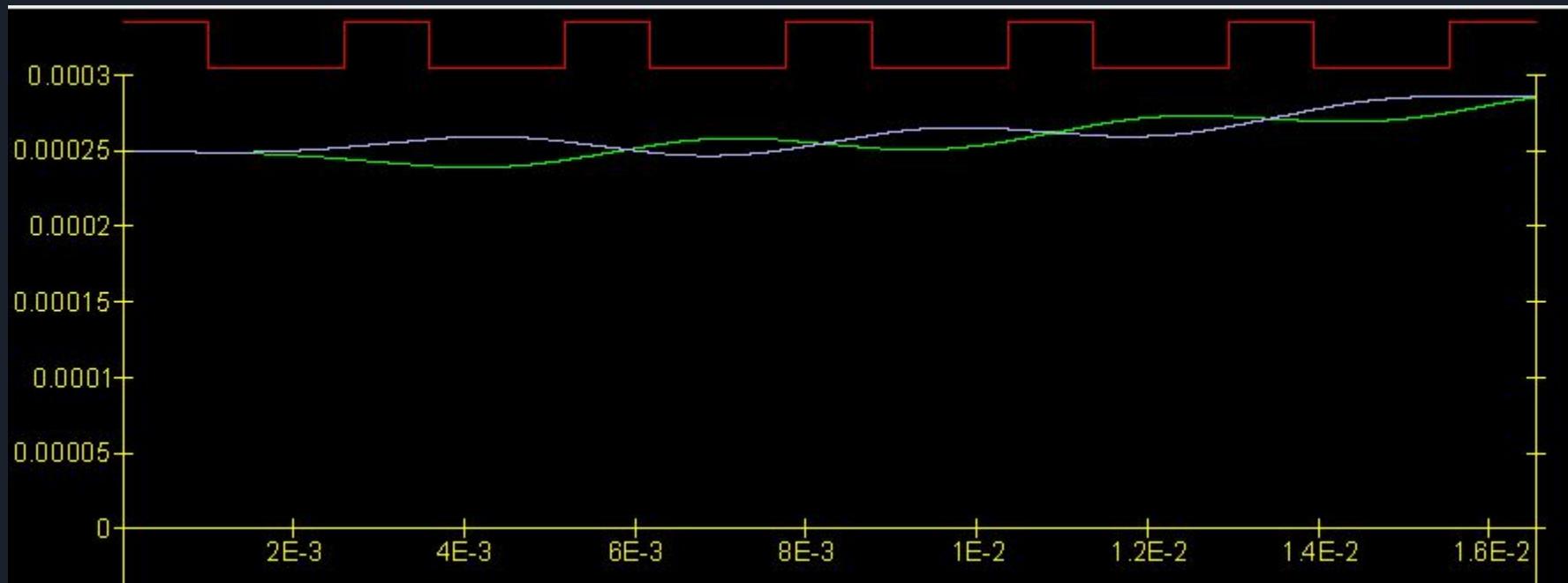
After meeting 7/6

Testing whether emittance or current dominated

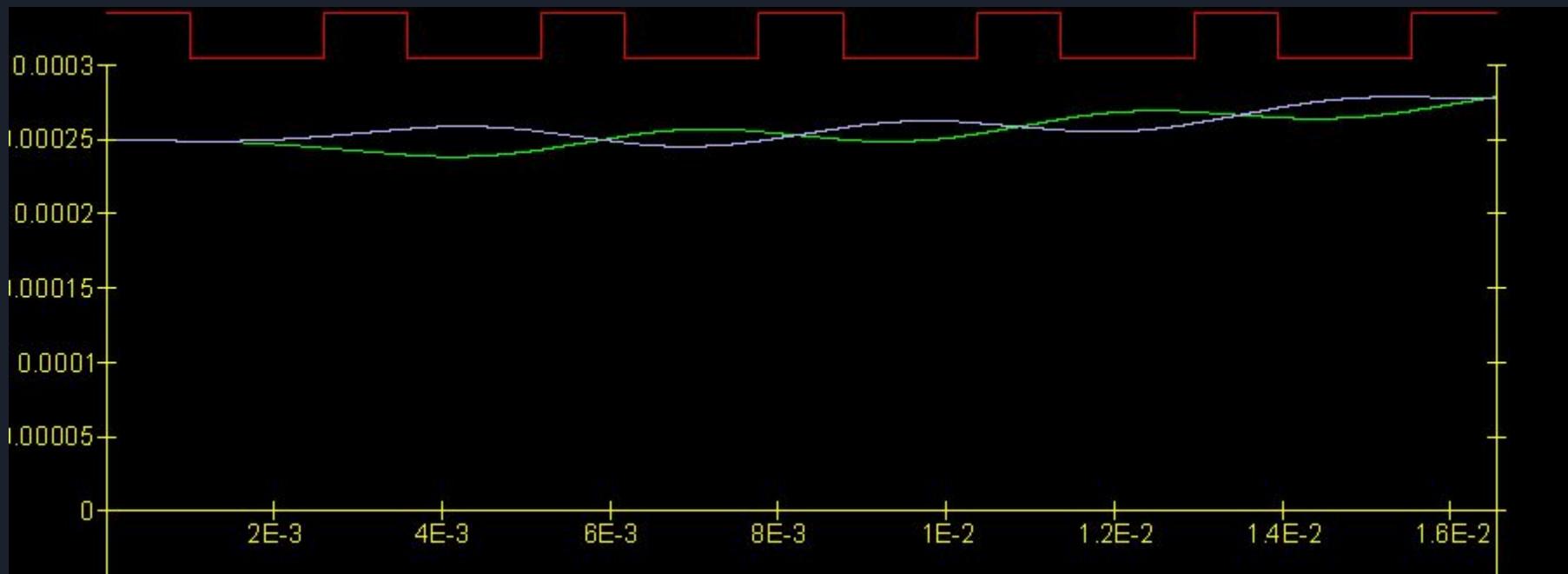
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - standard.in



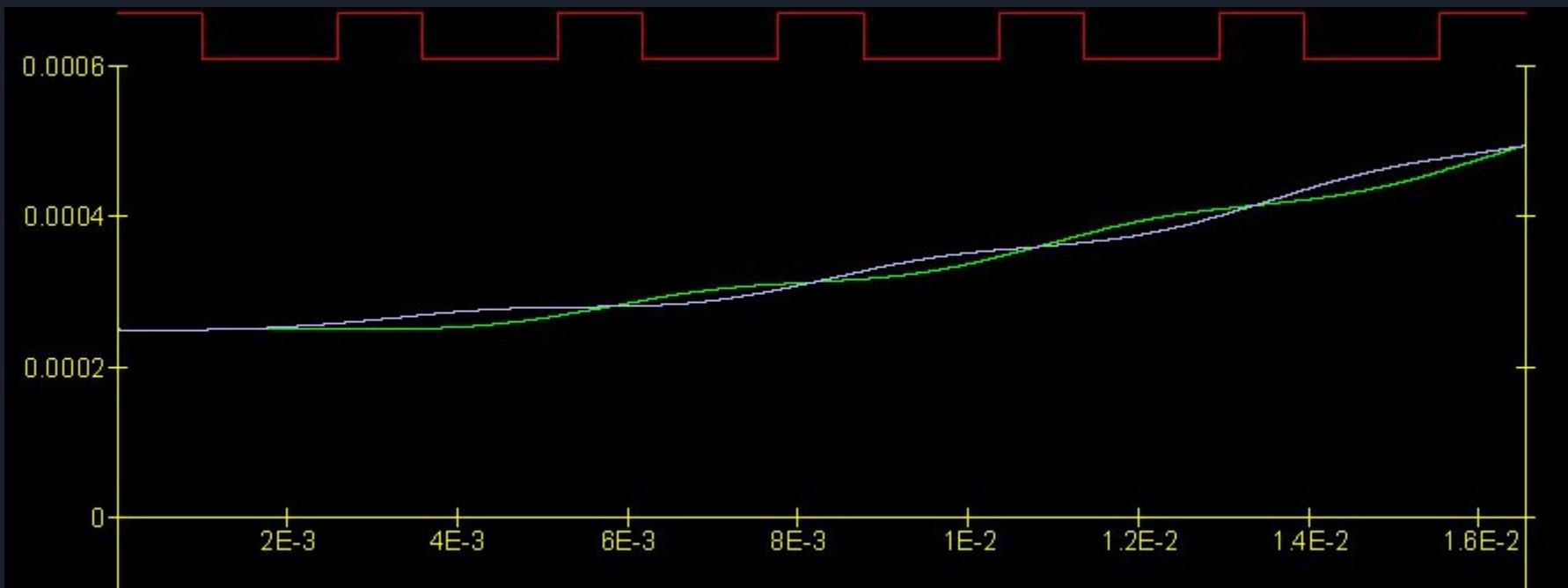
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - doubled
current.in



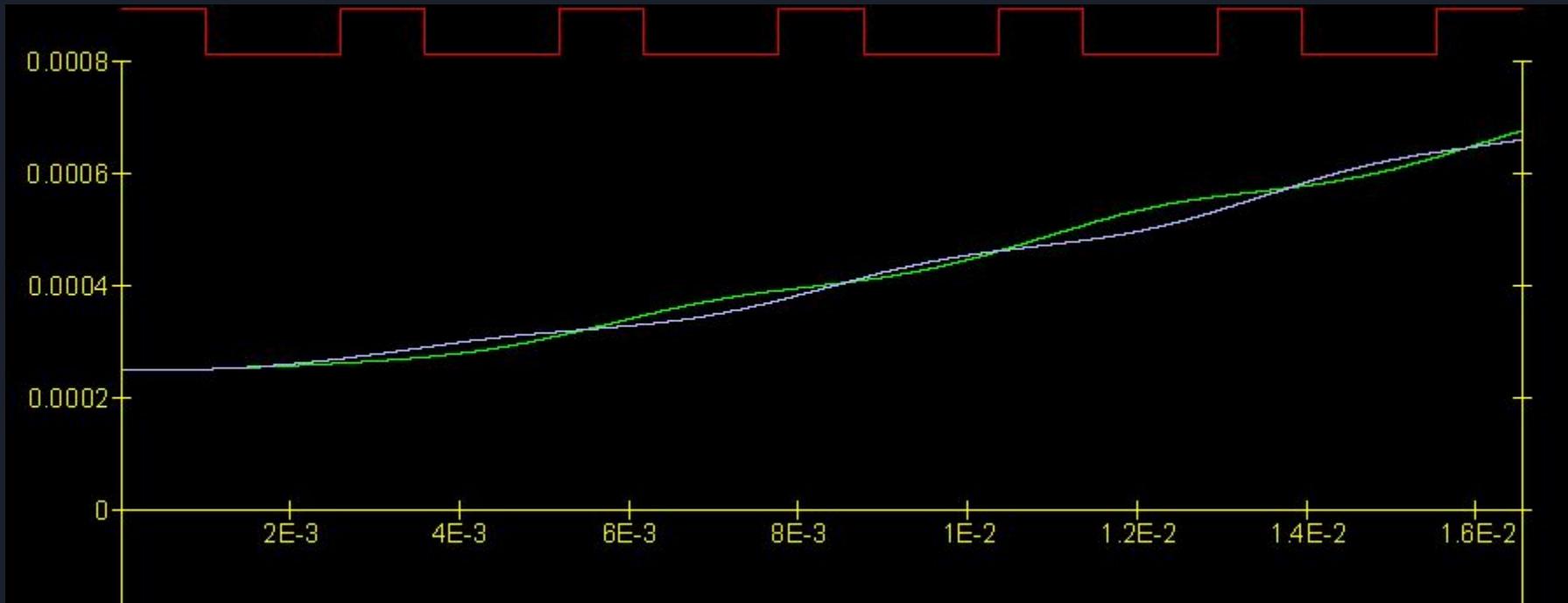
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - doubled
emit.in



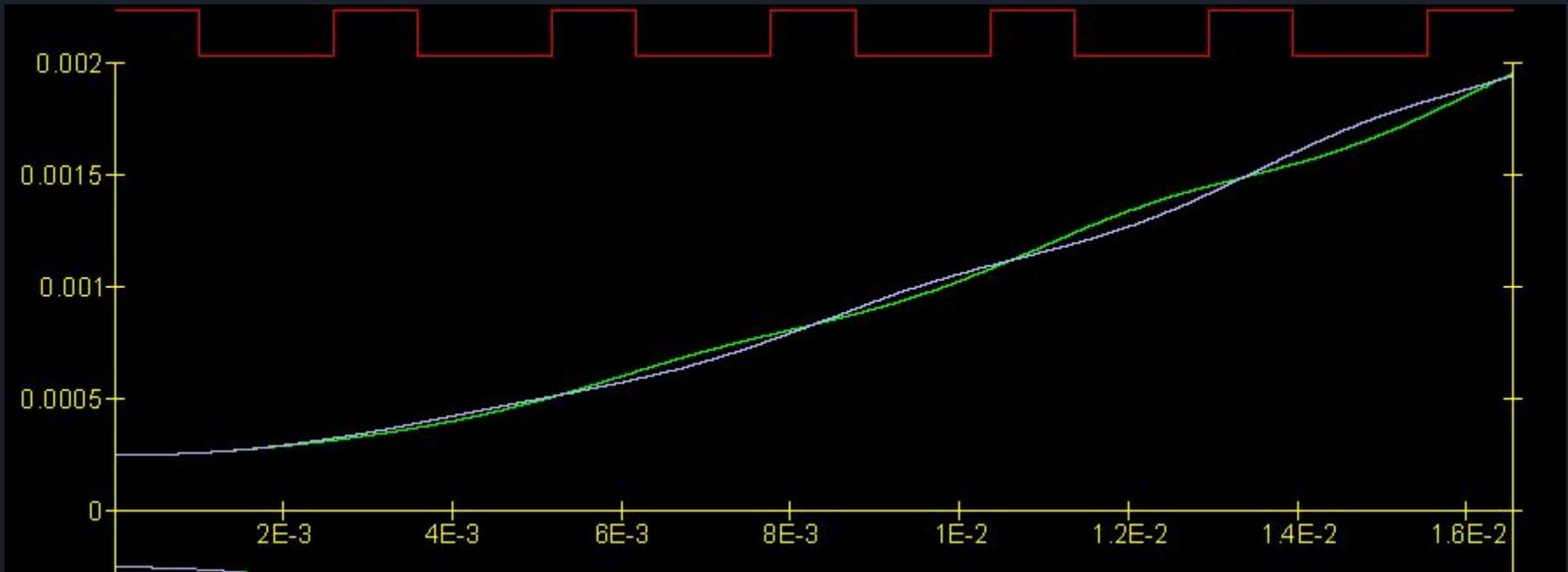
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - 10x
current.in



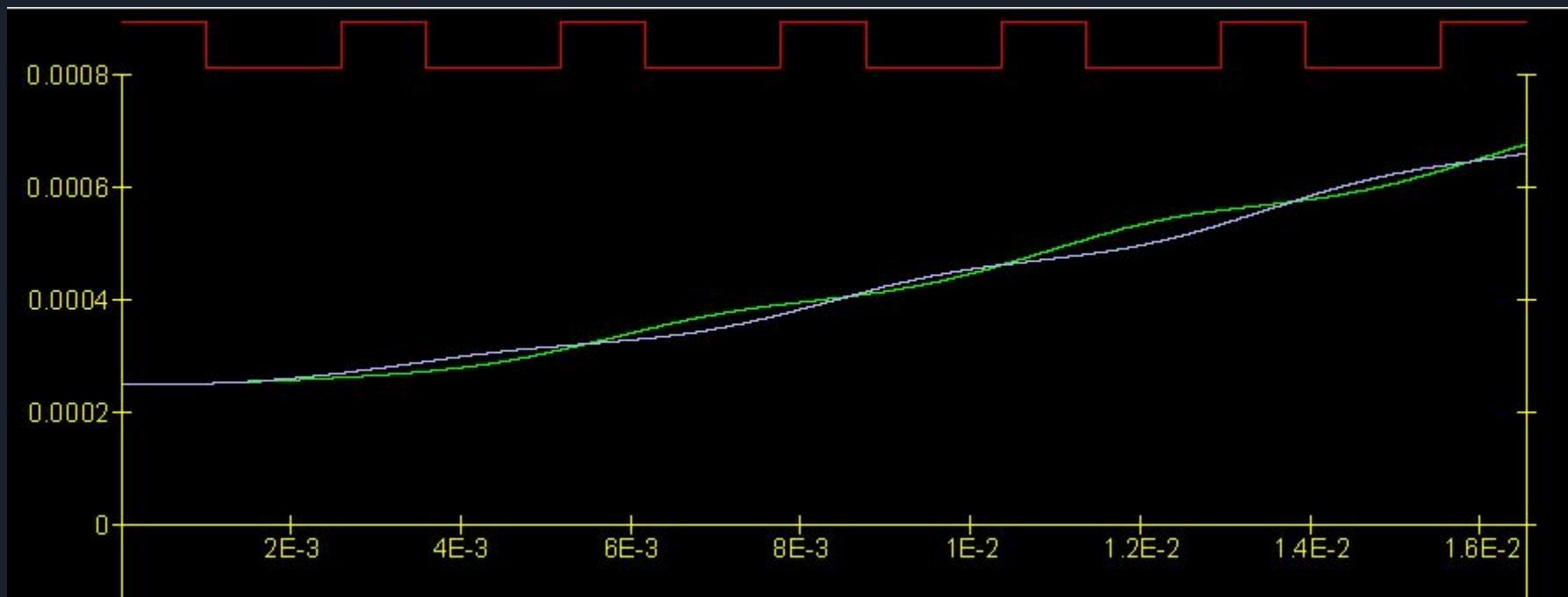
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - 10x emit.in



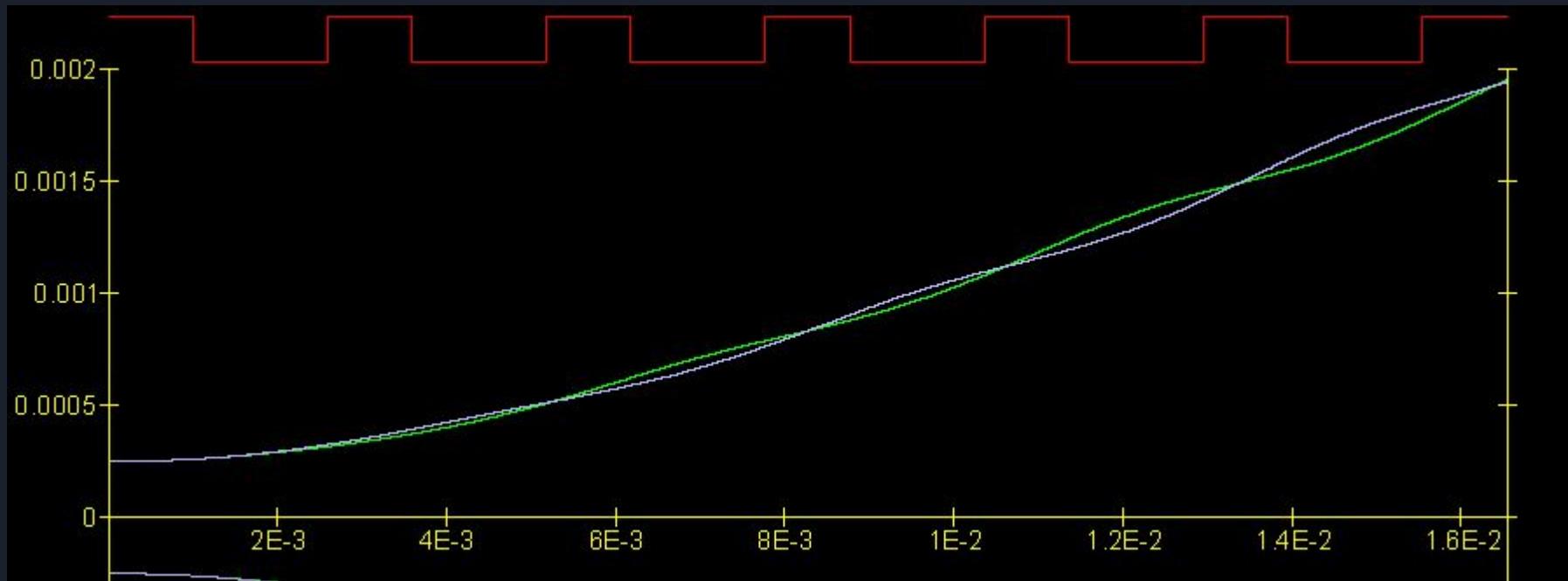
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - 100x curr.in



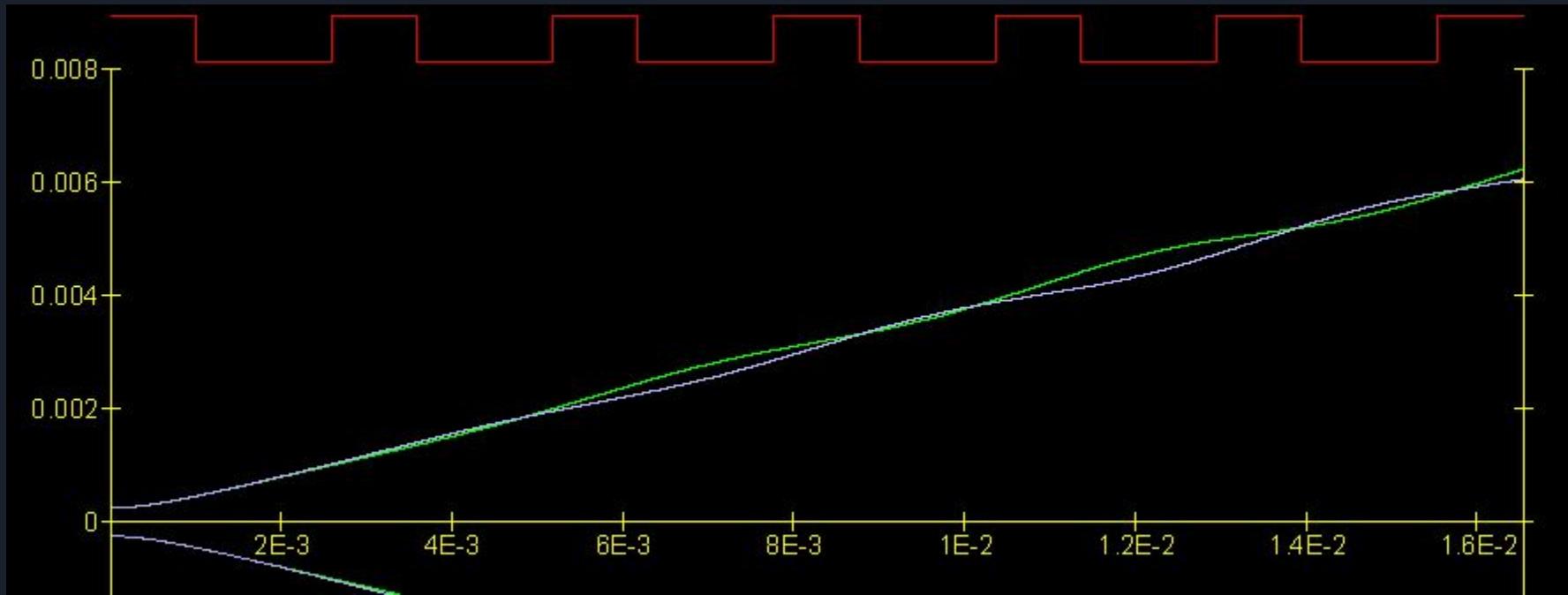
matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - 10x emit.in



matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - 100x curr.in

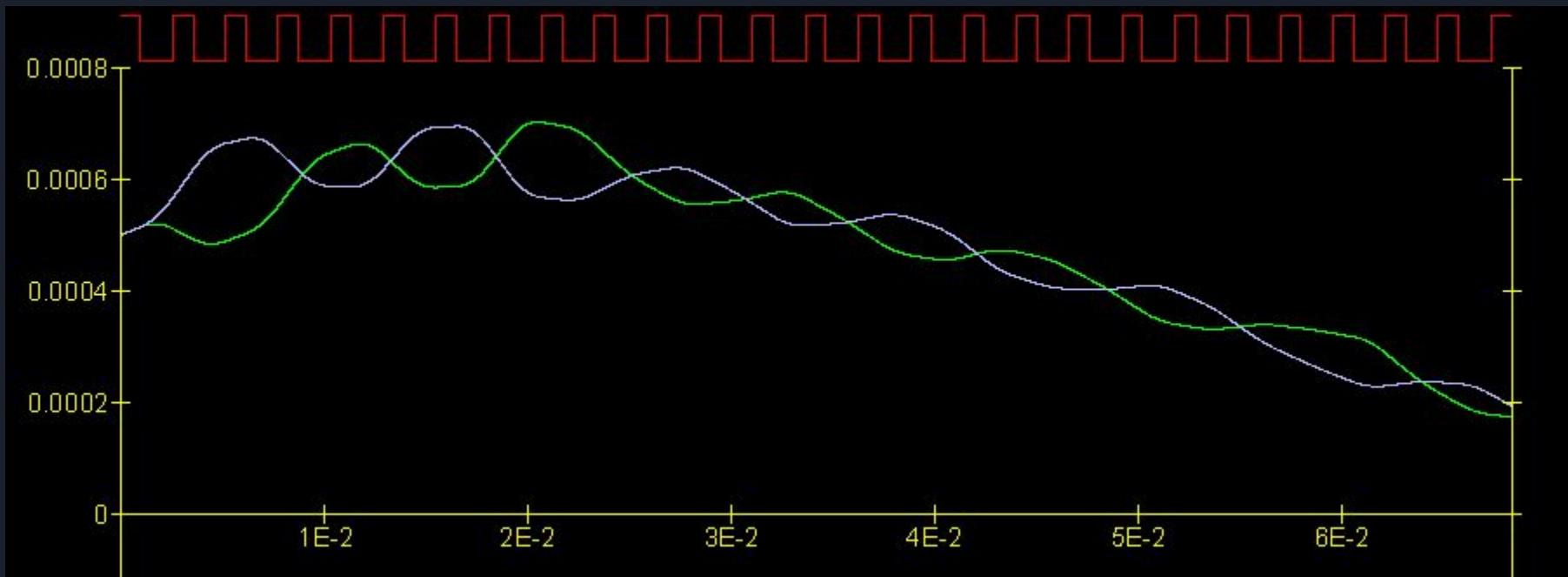


matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam - test for emit or current - 100x emit.in

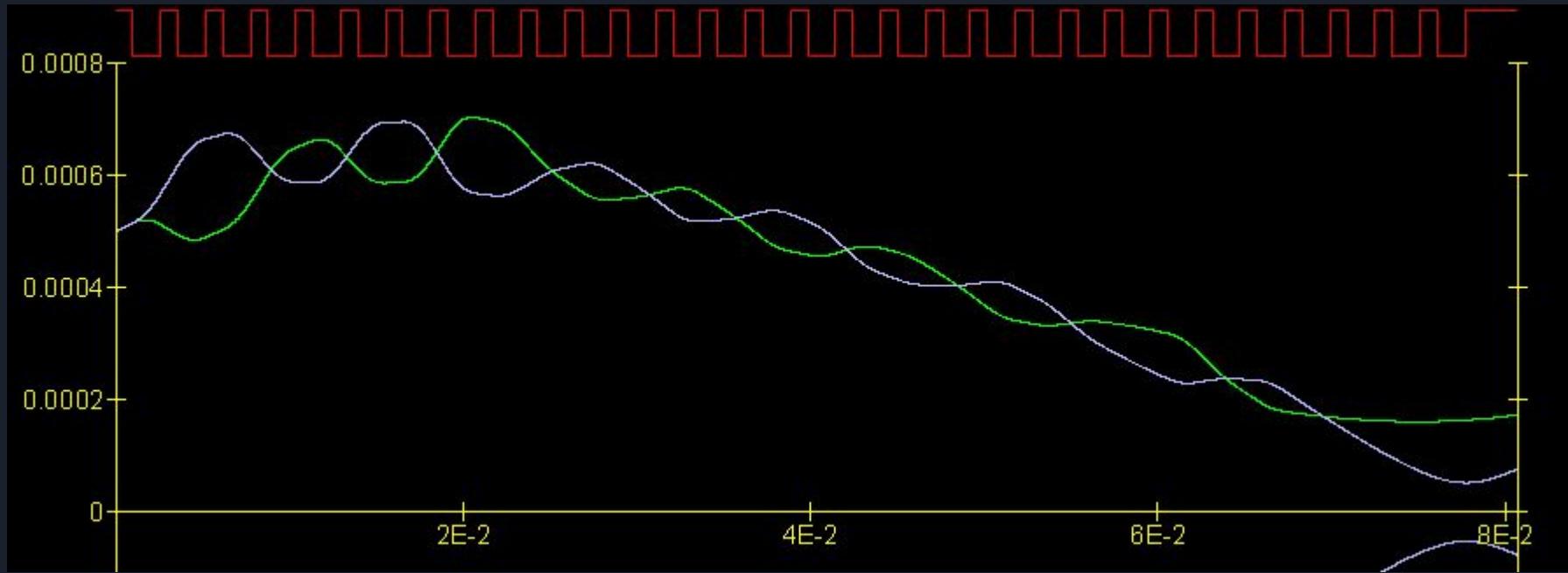




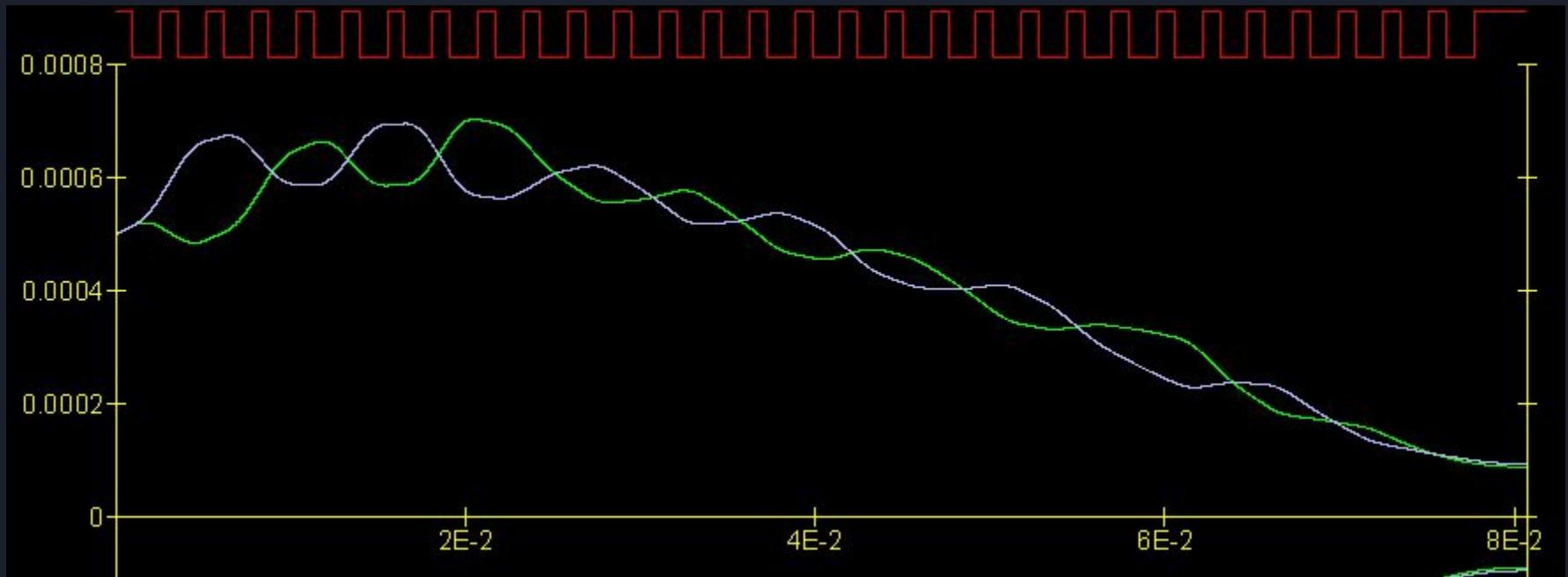
matching 07-08-2020 0.5mm 15mrad 1mm gap 8keV
23quad.in



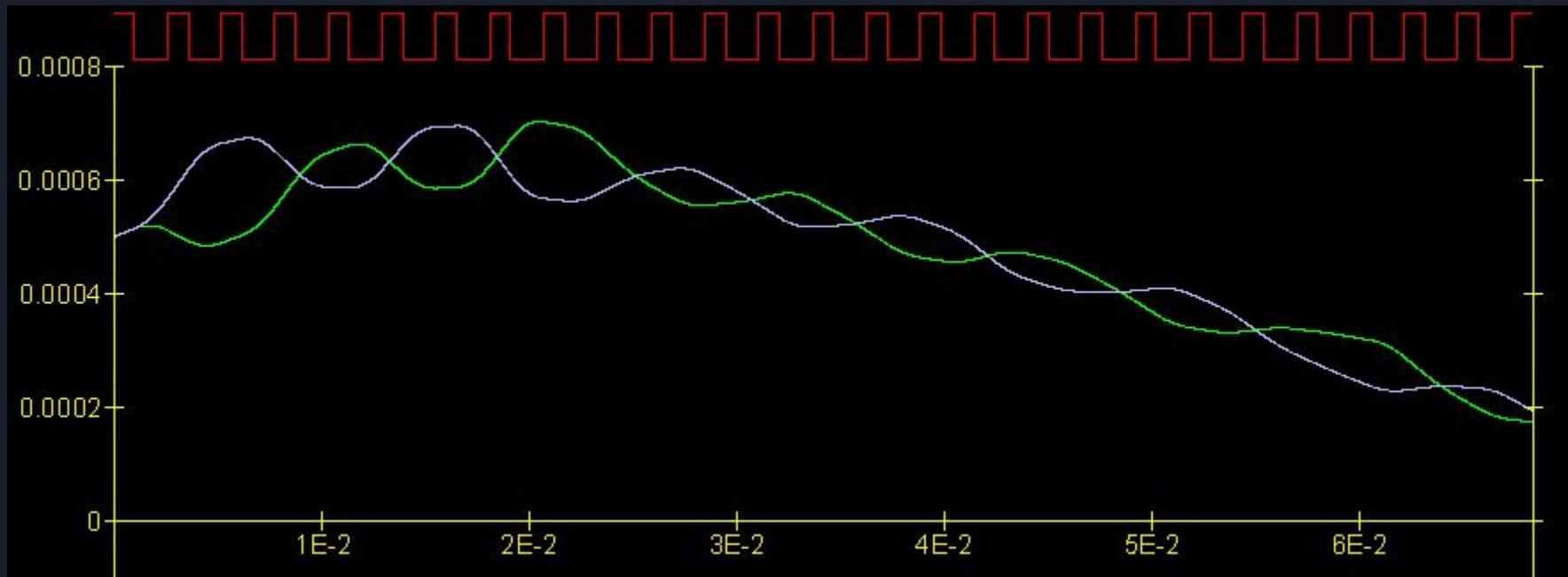
matching 07-08-2020 0.5mm 15mrad 1mm gap 8keV
30quad.in



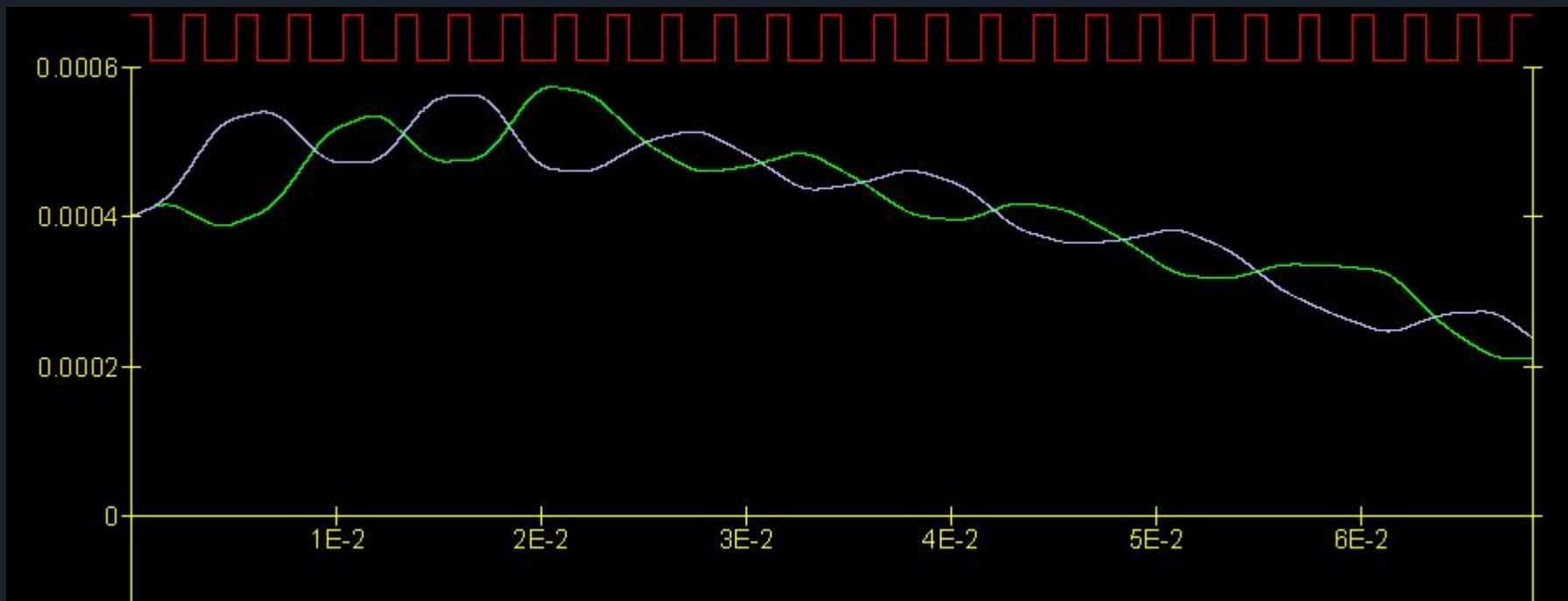
matching 07-08-2020 0.5mm 15mrad 1mm gap 8keV 30quad
matched to 0.9mm.in



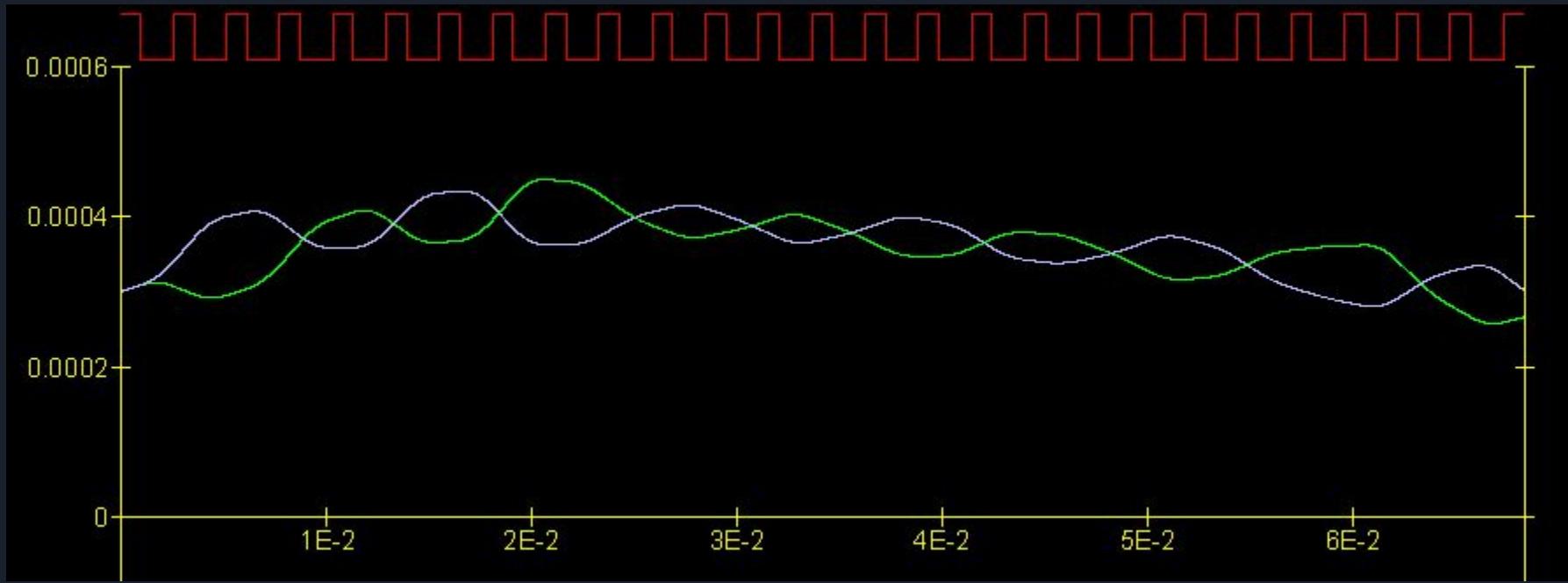
matching 07-10-2020 0.5mm 15mrad 1mm gap 8keV
23quad.in



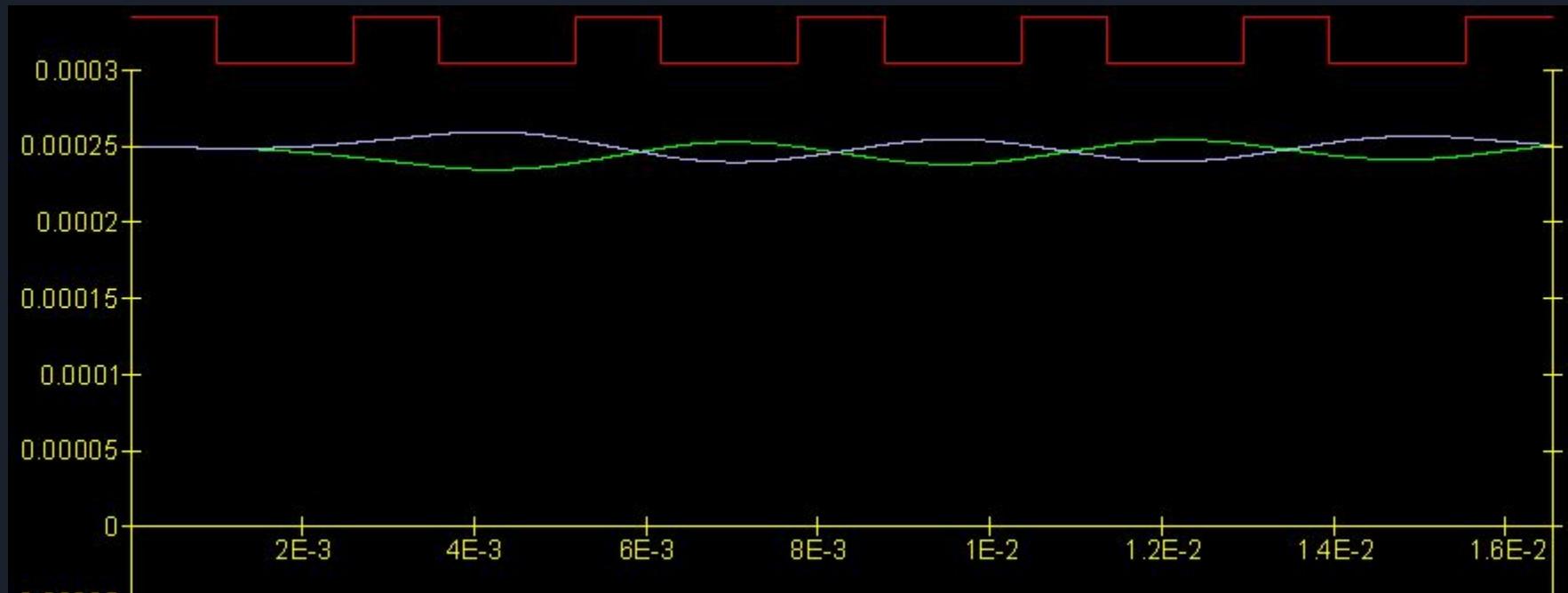
matching 07-10-2020 0.4mm 12mrad 1mm gap 8keV
23quad.in



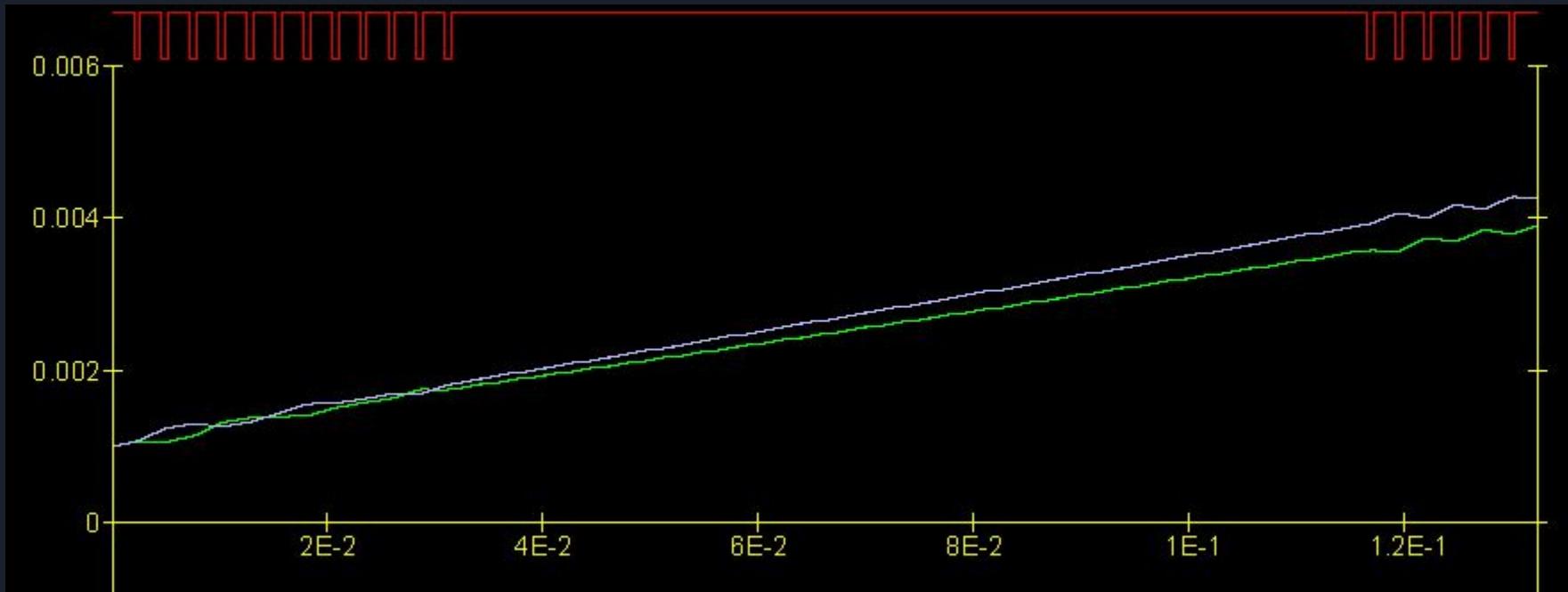
matching 07-10-2020 0.3mm 9mrad 1mm gap 8keV
23quad.in



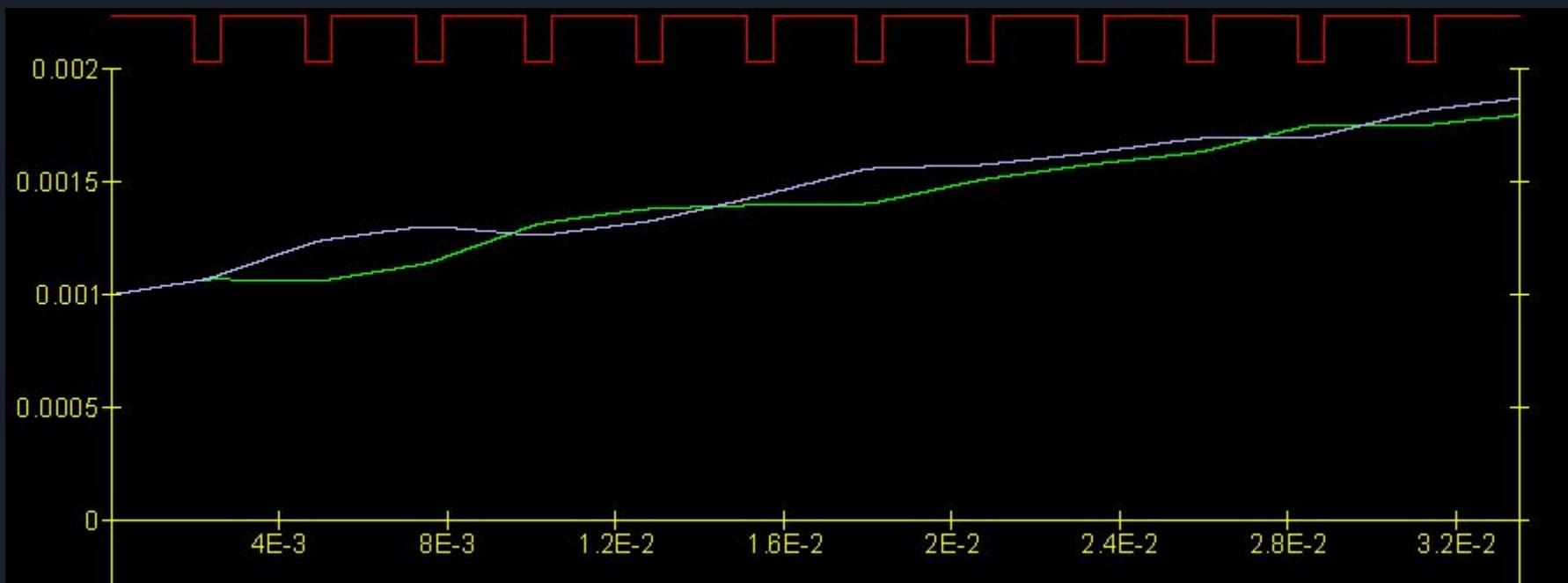
matching 07-11-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam from both -1.3mrad 1mm ap.in



matching 07-13-2020 with 2mm gaps from 07-05-2020 1mm
30mrad 1mm gap 8keV 12quad with all 500V or less - 1mm
and -13.3mrad - combined first and second.in



matching 07-13-2020 with 2mm gap and 0.625mm esq from
07-05-2020 1mm 30mrad 1mm gap 8keV 12quad with all
500V or less EXACTLY 1mm and -13.3mrad.in













































































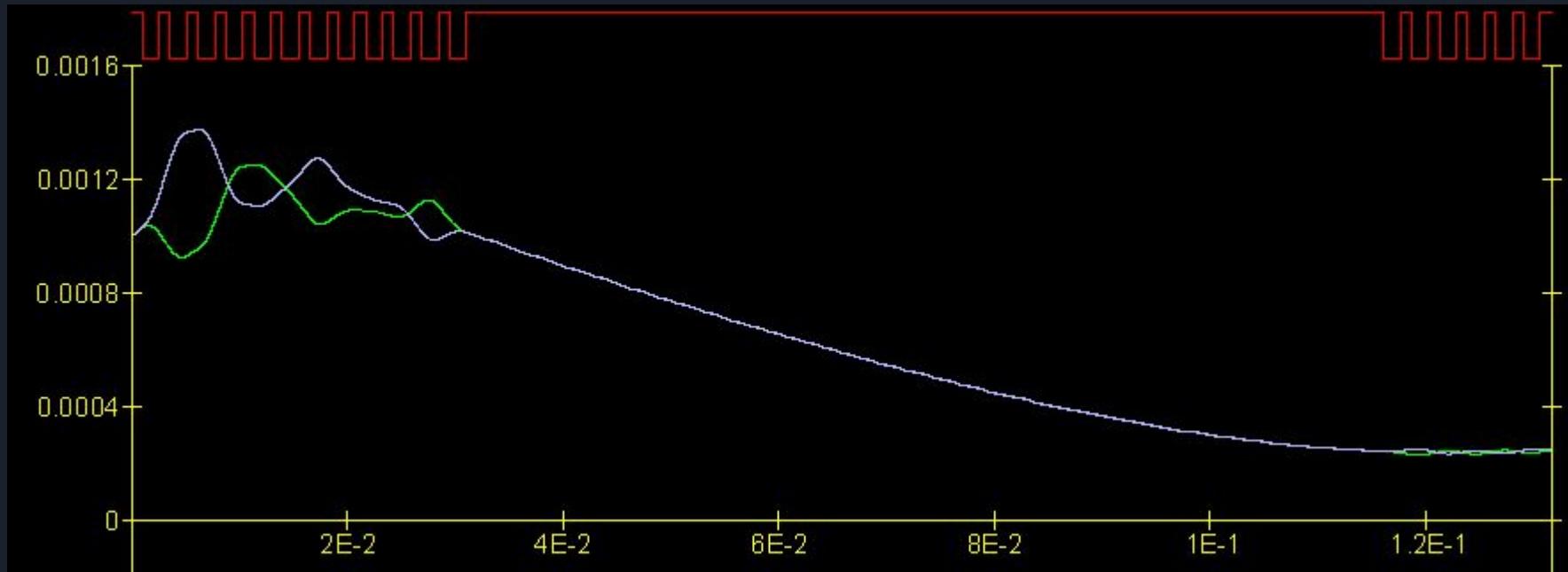




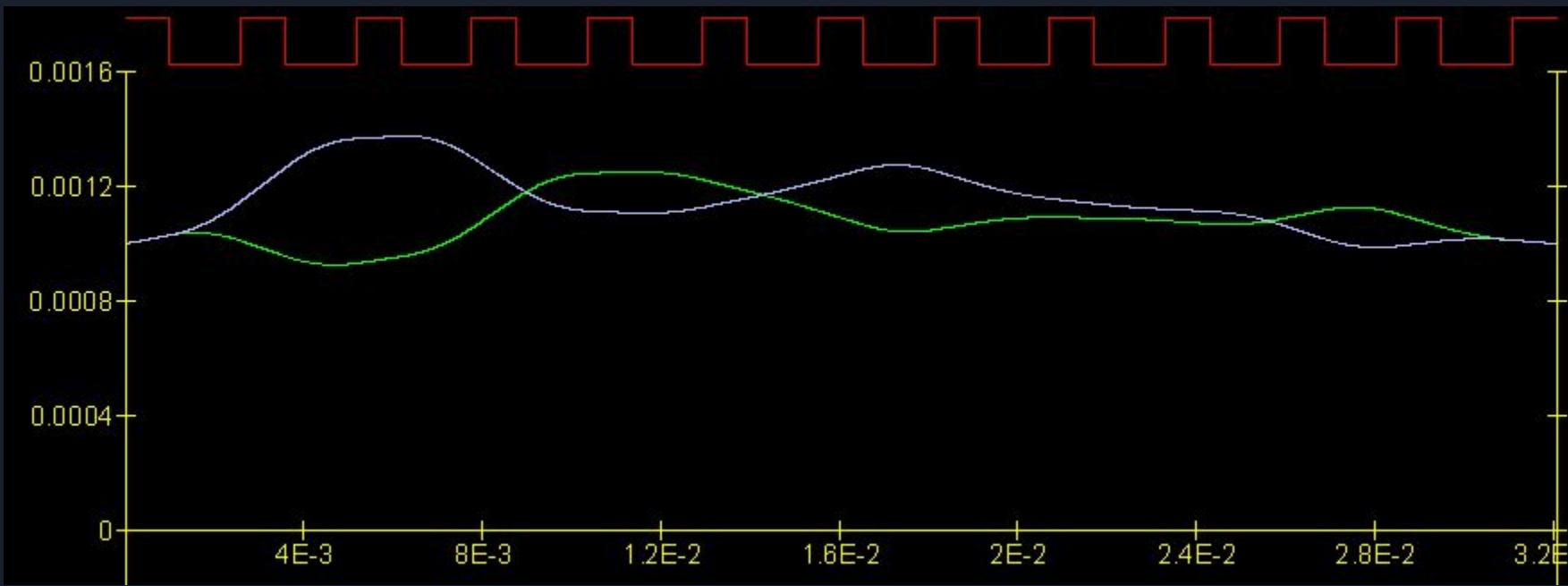




matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less - 1mm and -13.3mrad - combined first
and second.in



matching 07-05-2020 1mm 30mrad 1mm gap 8keV 12quad
with all 500V or less EXACTLY 1mm and -13.3mrad.in



matching 07-05-2020 0.25mm 5mrad 1mm gap 8keV 6quad
almost matched beam from both -1.3mrad.in

