Proposal of mapping induced current: Version-3
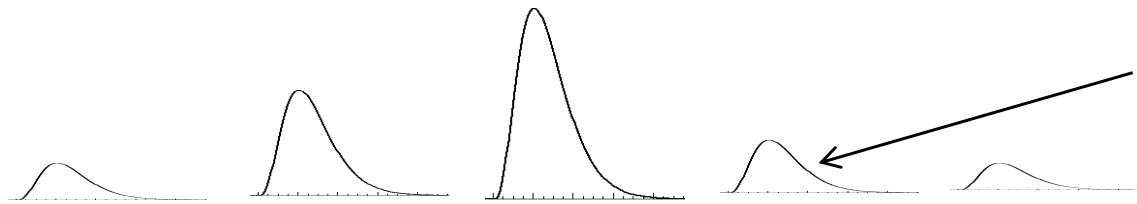
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Changes from version-2

(1) The definition of x is changed from -40 ~ +40 to 0 ~ +80 microns.

(2) Induced current with 4 different mapping steps (1, 2.5, 5 and 7.5 microns) were generated.

Save time shapes for 5 strips
(0.5ns interval up to 25ns)
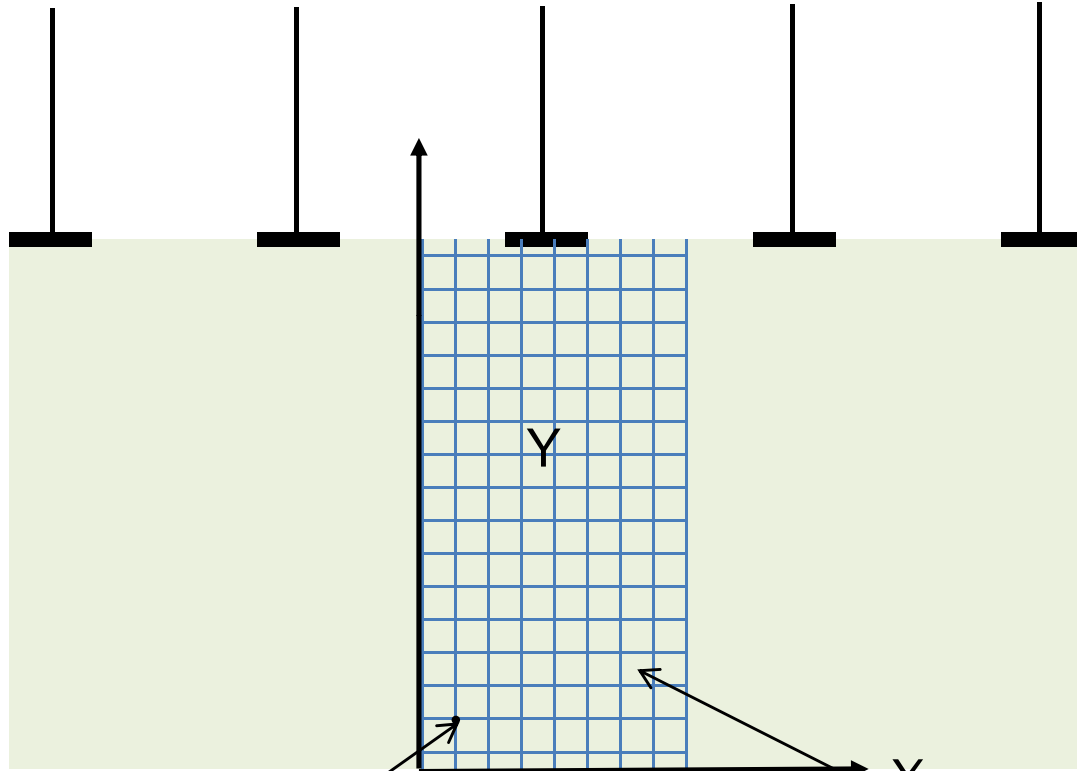
strip= m2   m1   00   p1   p2

285 μm

Data array:
Charge[ixmax][iymax]50]
for 4 strips (m2,m1,00,p1,p2)
mappingStep size of
 1 μm : Charge[81][285]50]
2.5 mm : Charge[33][114]50]
5.0 mm : Charge[17][57]50]
7.5 mm : Charge[11][38]50]
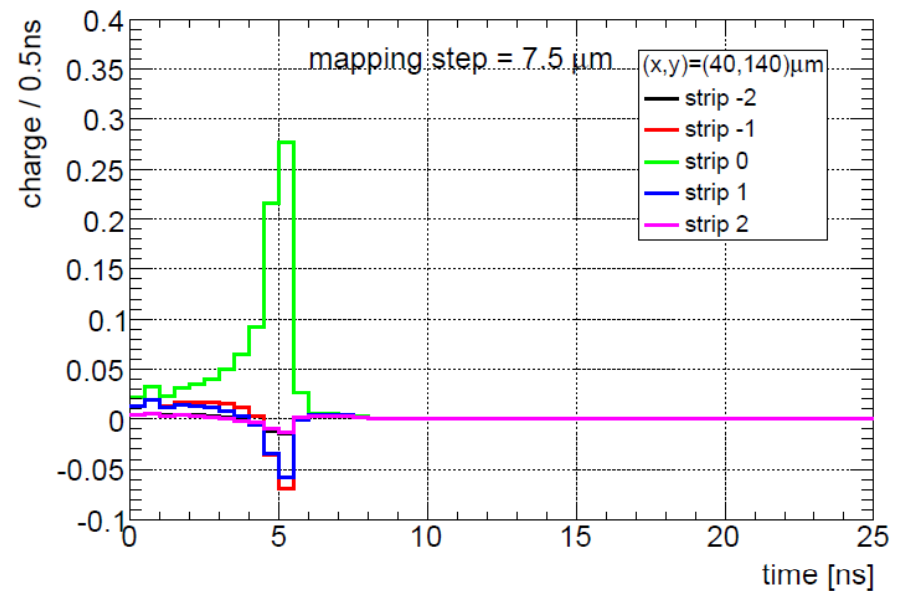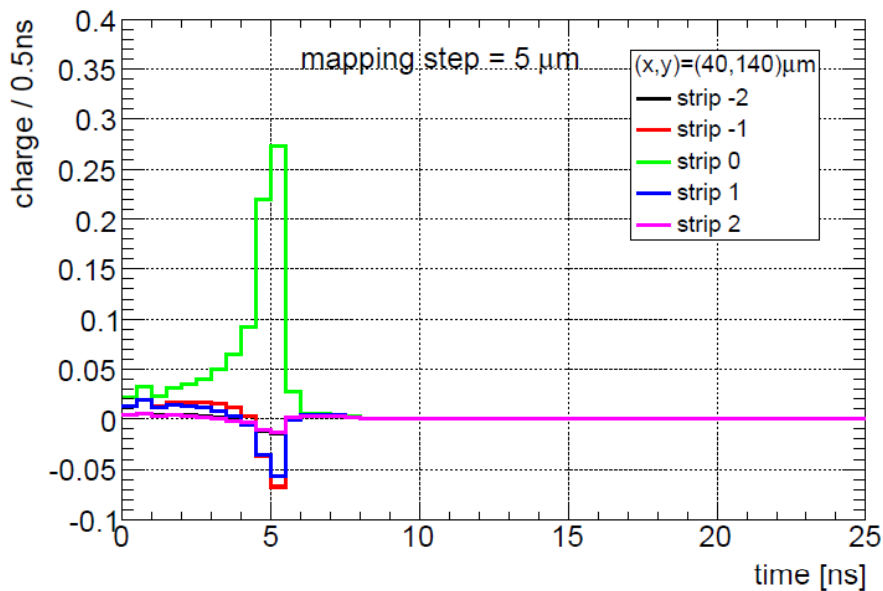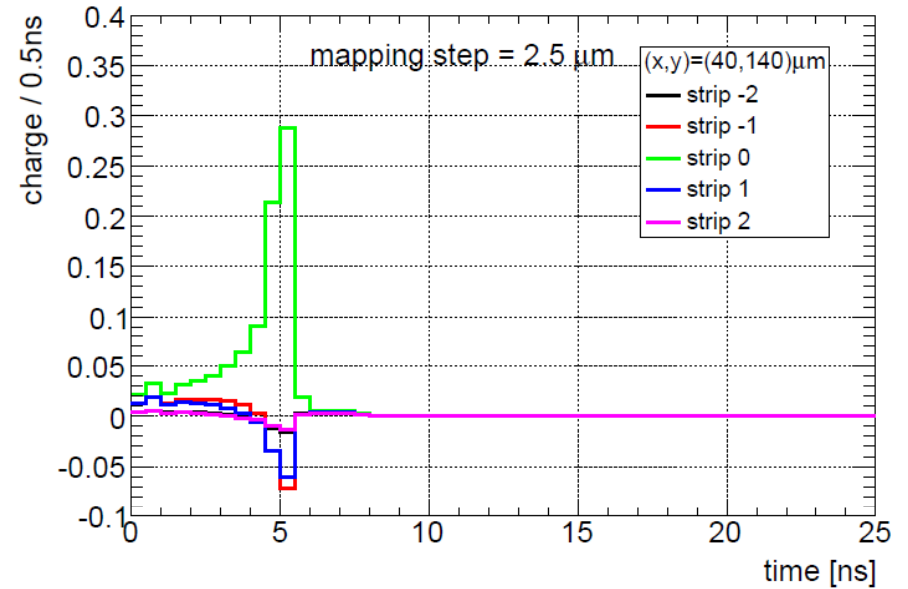
Y

0 μm

0   +80 μm   X

Calculate induced charge
at each crossing points

Use interpolation of
adjacent 4 mesh points

New x coordinate to match with Richard's

Induced charge by an e-h pair of unit
charge at x=40 μm, y = 140 μm

with various mapping steps
2.5, 5.0 and 7.5 μm

Some remarks

(1) X coordinate is defined now from 0 μm to +80 μm with a strip located in the middle.

(2) Induced charge look-up tables for four different mapping steps (1, 2.5, 5 and 7.5 μm) were generated.
       - 1 μm : too slow to compile (due to large array?).
      - other three cases showed similar results.

(3) Look-up tables and interpolation programs (v3) are available at
      http://atlas.kek.jp/si-soft/map/index.html