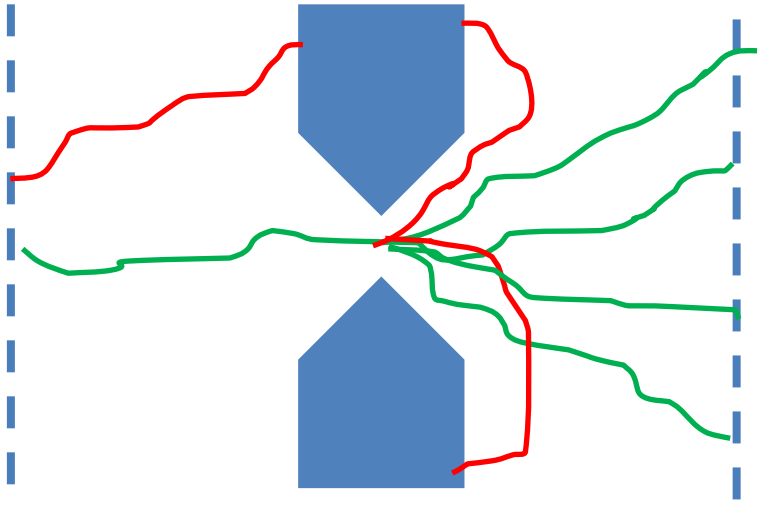
Transparency

Two different calculations



-150 mum GEM +150 mum

Ni = 2 Nc = 1 Nf = 4

Ne= 6

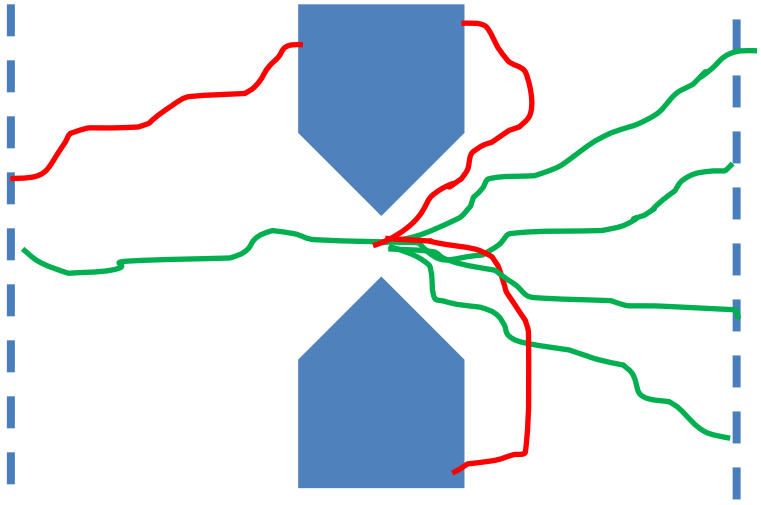
Made up numbers

Made up numbers

LW/NN: transparency = ½ = 50% because one electron created the avalanche which arrived to the end out of two generated electrons

LL/RF: transparency = 4/6 = 66% = Nf/Ne

Two different calculations



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Ni = 2 Nc = 1 Nf = 4

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Made up numbers

Made up numbers

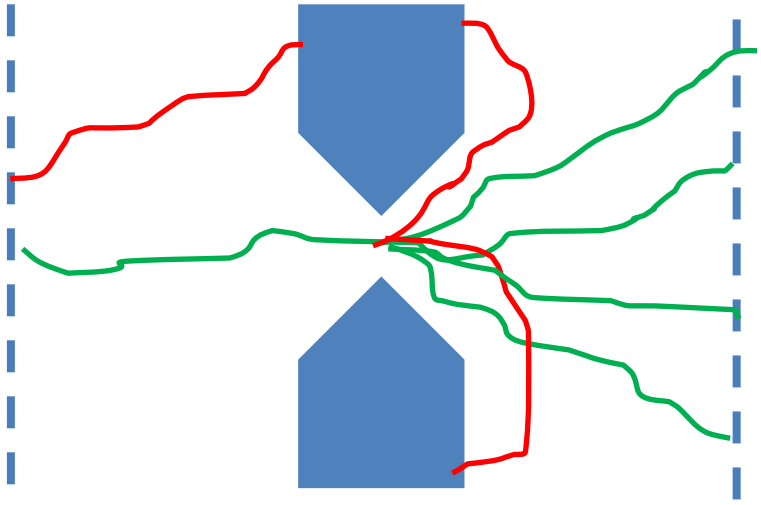
Bonivento et al.:

Eff_coll = Nc/Ni = ½ = 50%

Eff_extr = Nf/Ne = 4/6 = 66%

→ T = Eff_coll * Eff_extr = 50% * 60% = 30%

Two different calculations



-150 mum GEM +150 mum

If we assume that every electron that is collected by the GEM creates an avalanche whose electron(s) (at least one) arrives on the final plane →
$T = T_{LW/NN} * T_{LL/RF} = 87\% * 36\% = 31\%$ ← REAL NUMBERS
I repeated the calculation for my GARFIELD data and I get T = 27%

Bonivento et al.:
Eff_coll = Nc/Ni = ½ = 50%
Eff_extr = Nf/Ne = 4/6 = 66%

→ T = Eff_coll * Eff_extr = 50% * 60% = 30%

Transparency

Please, check if the transparency is the same when calculated in the *standard* way
in order to have a cross check of the
two GARFIELD simulations