



With any set of two scintillators, the cosmic distribution half way in between them is a triangular distribution, peaked at the center and going to 0 at the edge (assuming any angle cosmic through both scintillators is possible.)

Try a simple MC with uniform distributions in each scintillator and plot the hit population half way between them only for coincidences.

However, one can get much higher absolute rates near the edge by putting the scintillators closer together so that a larger solid angle is accepted near the edge. This is shown on the right.

Also, if one wants to measure efficiency, the size of the scintillators should be slightly smaller than the GEM to be tested, so that one only triggers on cosmics that actually go through the chamber.