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Haynes-Shockley simulation

- *motivation*
  minority carrier mobility and diffusion in doped neutral region

  why important, how used

- *model*
  holes in n-type material
    SIMPLIFYING ASSUMPTION: ignore recombination (long tau)

  finding mobility directly from time-of-travel

  diffusion equation -> Gaussian distribution
    role of Dp in formula
    solving for Dp if you know width of distribution at (1/e)(excess conc. at peak)

- *measurement technique*
  scope trace: pulse width in time -> width of distribution along x-axis

- *simulation*
  SIMPLIFYING ASSUMPTIONS:
    (initial #EHP's) = (delta_P in Gaussian), because recombination ignored

    show the Gaussian only at the detection point

  Fixed values:
    mu, Dp

  Controls to vary:
    number of EHP's created by light pulse
    detection distance

  Show that, for a given detection distance, different EHP injections give same mu, Dp
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