

*from program simla*

*subroutine qeds subroutine*

*call chi()*

Calculate  $\chi_e$

*call egen\_sub()*

Determine probability rate  
 $\Gamma(t; \chi_e)$  via interpolation of  
lookup table

Select a uniform random  
number  $r \in [0, 1]$

Return to  
main program  
simla.f90

**NO**

Is  
 $r < \Gamma(t)dt$   
?

**YES  
EMIT PHOTON**

*call Gammatinterp()*  
*call chi()*

Select a uniform random  
number  $\zeta \in [0, 1]$

Determine photon  $\chi_\gamma$ , via  
root of sampling equation

$$\zeta = \Gamma(t)^{-1} \int_{\chi_\gamma^{\min}}^{\chi_\gamma} d\Gamma(t)$$

Update four-momentum  
of electron