Kinetic modelling of runaway electrons
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- Synchrotron radiation reaction
  - Can lead to bump-on-tail formation and change the effective critical electric field
- Nonlinear collision operator
  - Important differences even when the electric field is much less than the Dreicer field
- Knock-on collisions
  - Important to take kinematic constraints of large angle scattering events into account

Studies conducted using the continuum kinetic codes CODE and NORSE.

- Bremsstrahlung radiation reaction
  - Boltzmann model leads to extended tail in the runaway distribution

![Graphs showing mean-force, full Boltzmann, and approx. Boltzmann distributions for different magnetic fields.](a) B = 0 T, (b) B = 2 T)