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





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