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TCAD Simulations of Silicon Sensors at HL-LHC Conditions

Radiation-induced damage in silicon can be modeled in TCAD simulations through effective states in the energy gap,
what we call radiation damage models.
After a brief introduction about radiation-induced damage in silicon, in this talk I will present you some of the available
radiation damage models, how to implement them in TCAD tools and what are typical observables you can study in simulations.
I will also comment on some issues related to annealing and charge collection efficiency.
To conclude I will try to present the outlook for radiation-induced damage studies with TCAD simulation tools.

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