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Title

The CMEE library for numerical modeling of electron effects

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Session RP1 - Poster Session VIII.

*POSTER session, Thursday afternoon, October 30
Fran Hill Southeast Exhibit Hall, ACC*

[\[RP1.080\] The CMEE Library for Numerical Modeling of Electron Effects](#)

Peter Stoltz (Tech-X Corporation), Ron Cohen, Art Molvik (LLNL), Miguel Furman, Jean-Luc Vay (LBL), Andreas Adelman (Paul Scherrer Institut)

The CMEE (Computational Modules for Electron Effects) library is a collection of computer routines for numerical modeling of electron effects in accelerator and plasma physics codes. The goal of this library is to make these numerical models available to any code in need of electron effects modeling, including high-power microwave codes, fusion wall interaction codes, laser-plasma codes, proton accelerator codes, and HIF codes. CMEE includes routines to model secondary electrons, neutral gas desorption and ionization. The secondary electron routines are based on routines from the POSINST code. The neutral gas desorption routines are based on a thermal binding model similar to the model in ,e.g., the LSP code. The ionization routines are based on the IONPACK library from Tech-X. This poster discusses the latest state of these routines, specifically implementation in the WARP code and comparisons to data from the High Current Experiment (HCX). In particular, recent comparisons between the CMEE routines and neutral gas desorption measurements from HCX are presented.

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