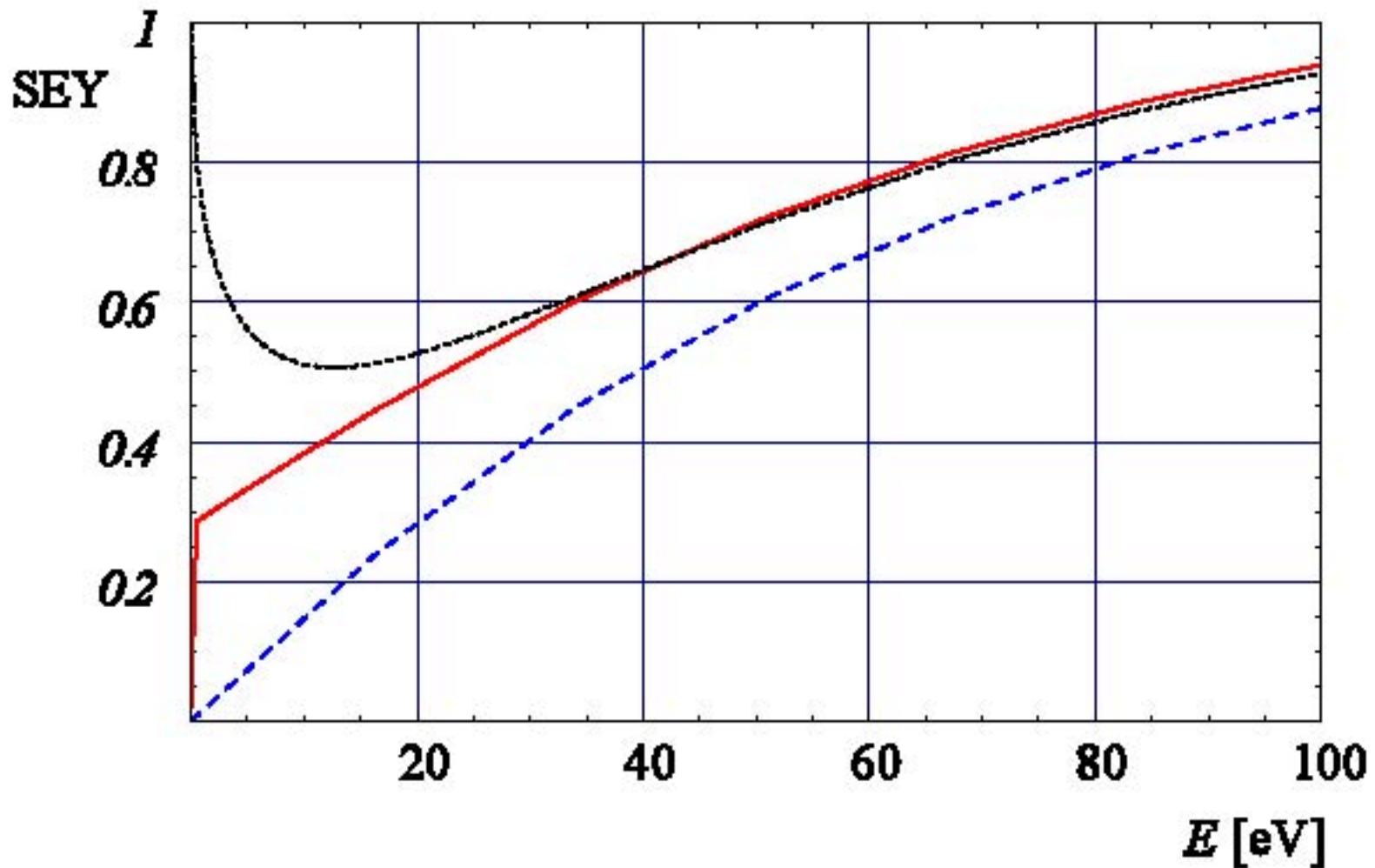
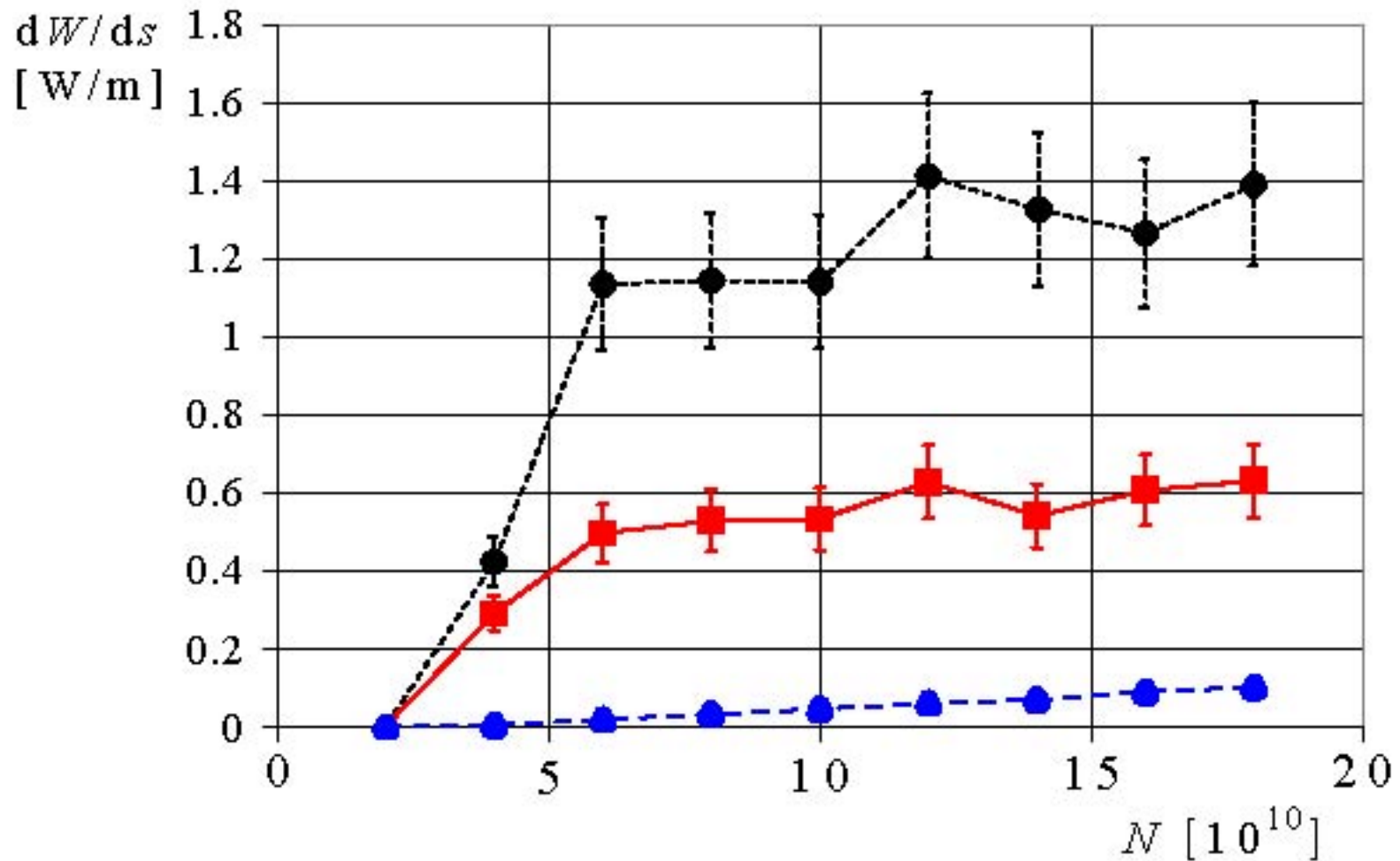


# Electron cloud and related activities

- **SR study** for LHC insertions concluded (no longer discrepancies between beam1 & beam2)
- EPCLOUD **code improvements** (e.g., for round beam in elliptical chamber)
- EPCLOUD on **CVS** ok thanks to Eric
- **EPCLOUD/POSINST comparison** for ESS reveals factor 10 difference (G. Bellodi), under study
- Sections for **LHC design report** in preparation
- Simulating effect of **low-energy reflectivity** for R. Cimino et al. (example)
- **Steep potential step** not a good model (S. Heifets); reflectivity=1 likely artifact of this; under consideration
- Further interaction with **T. Katsouleas'** group?



3 models of total SEY: no elastic reflection, secondary emission yield decreasing towards 0.3 for low energies, model that best fits the measured data, approaching 1 in the limit of zero incident energy



simulated average heat load in an LHC dipole magnet vs bunch population for the 3 SEY models;  $\delta_{\max}=1.2$ ,  $E_{\max}=170$  eV.