Weekly Meeting
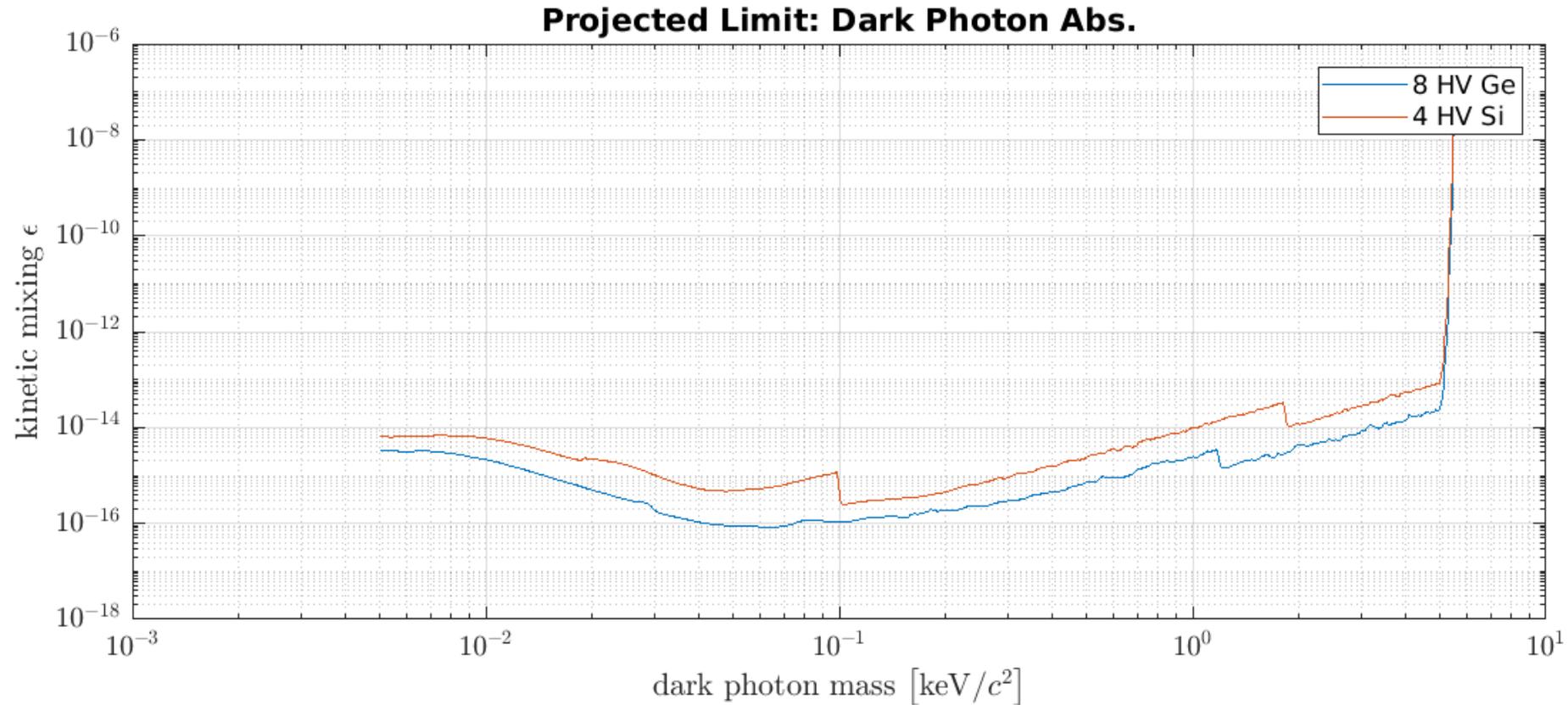
June 21 2018

SNOLAB Projections

- First projections:
  - Energies converted to keV_ee
    - $E_{ee} = E_{nr} \dfrac{\left(1+\frac{VY(E_{nr})}{3}\right)}{\left(1+\frac{V}{3}\right)}$
  - Efficiency function taken from sensitivity code
  - PFV cuts has been applied to sim data
  - Thresholds were determined by trail and error
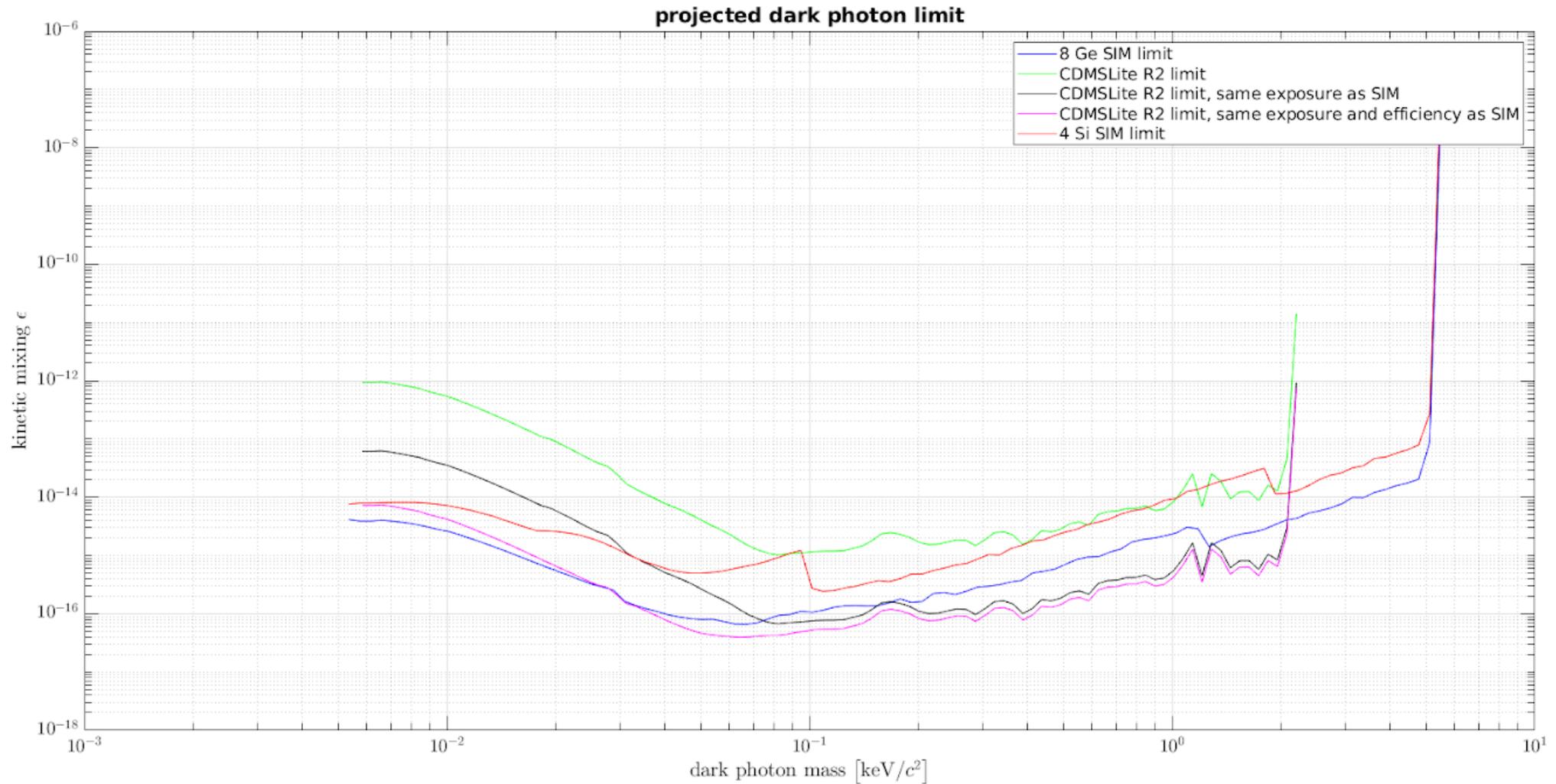   - [minEth_ee, maxEth_ee] = [0.05,5] (keV_ee)

SNOLAB Projections

- First projections:

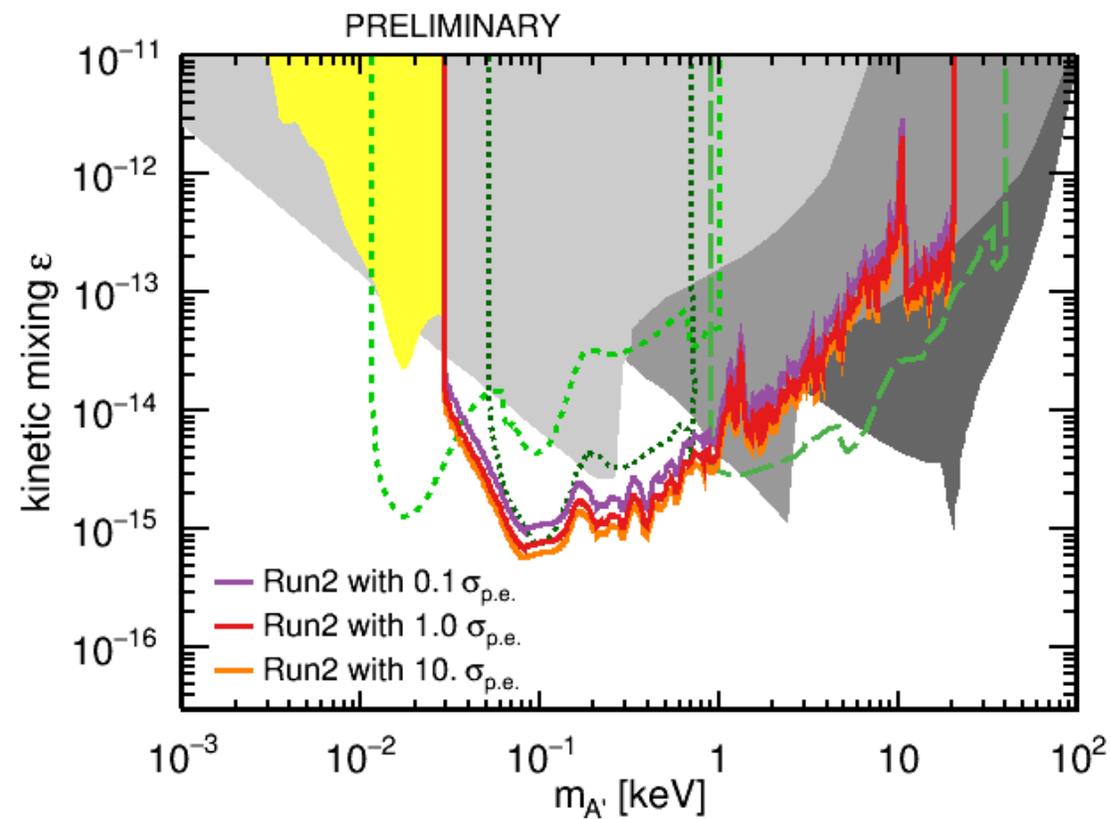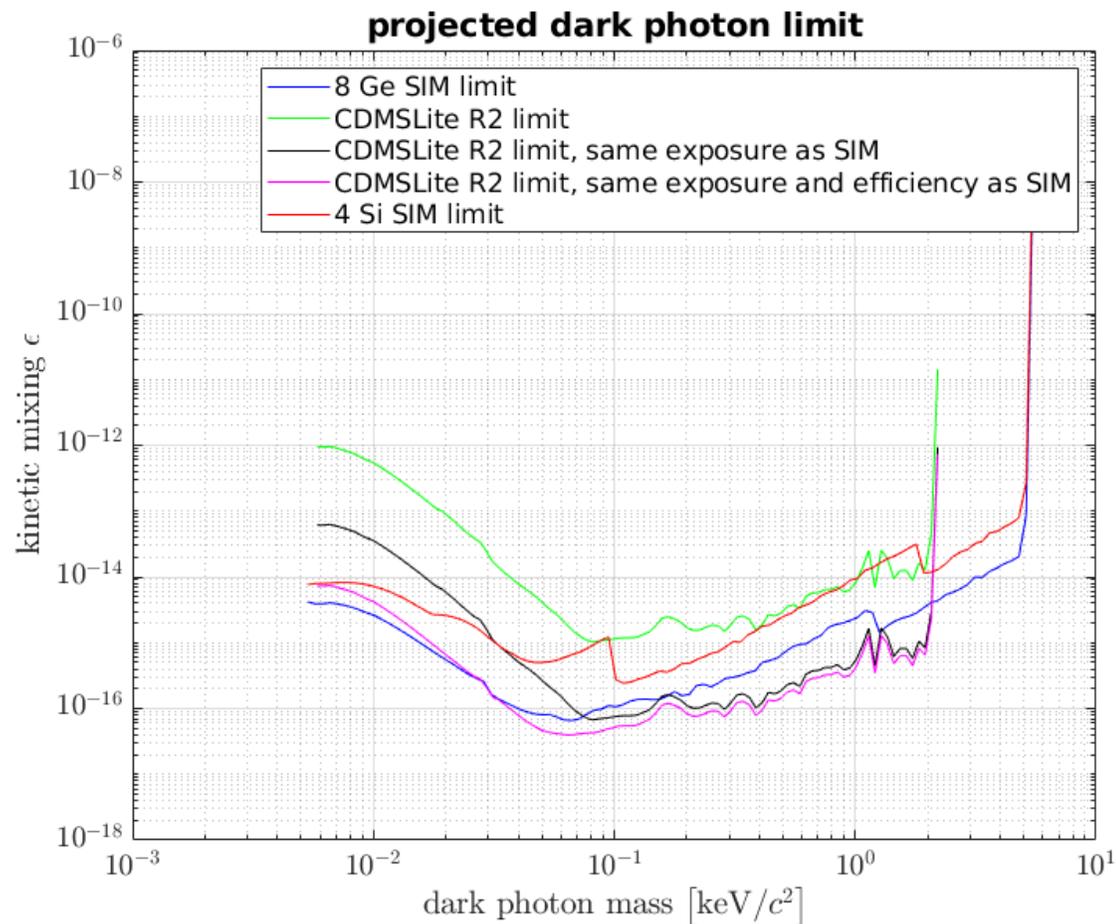Projected Limit: Dark Photon Abs.

SNOLAB Projections

- Need to check validity of the code:
  - Compare with CDMSLite R2 data
  - Make sure that we indeed need to convert to keV_ee
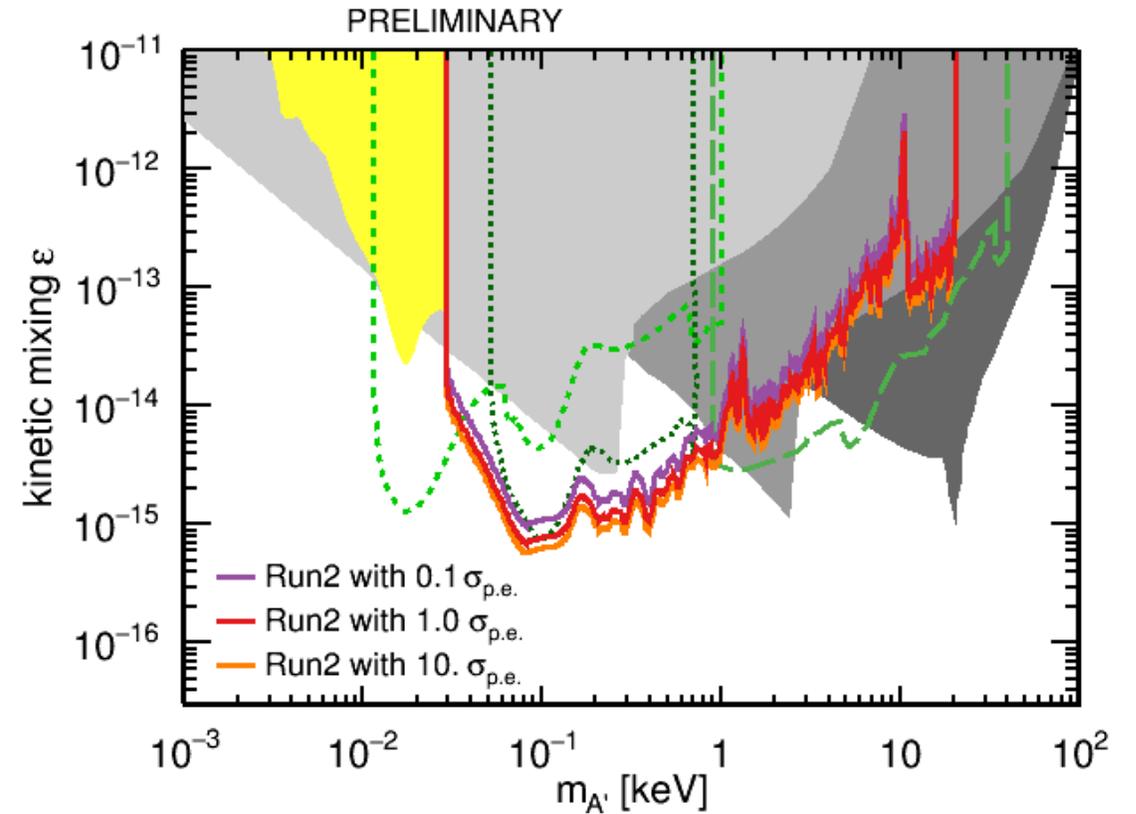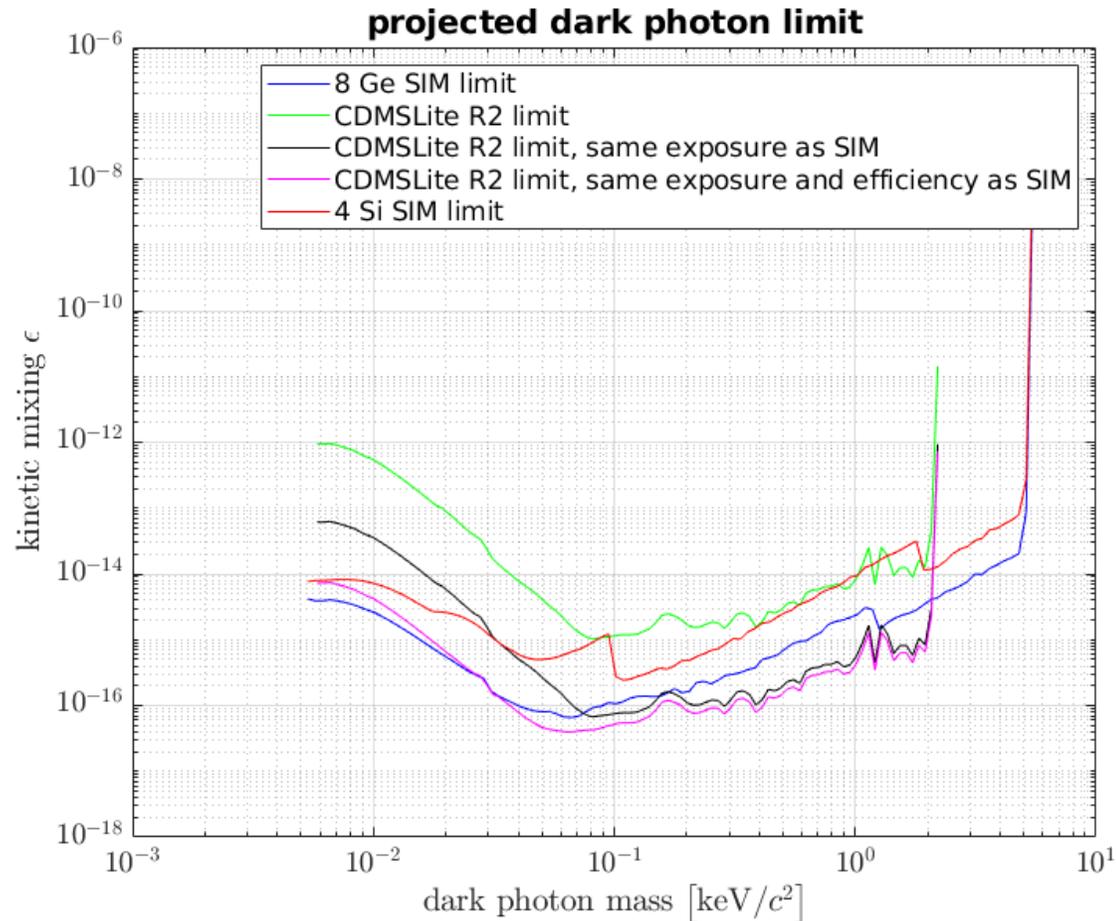 - Look at efficiency curves

SNOLAB Projections
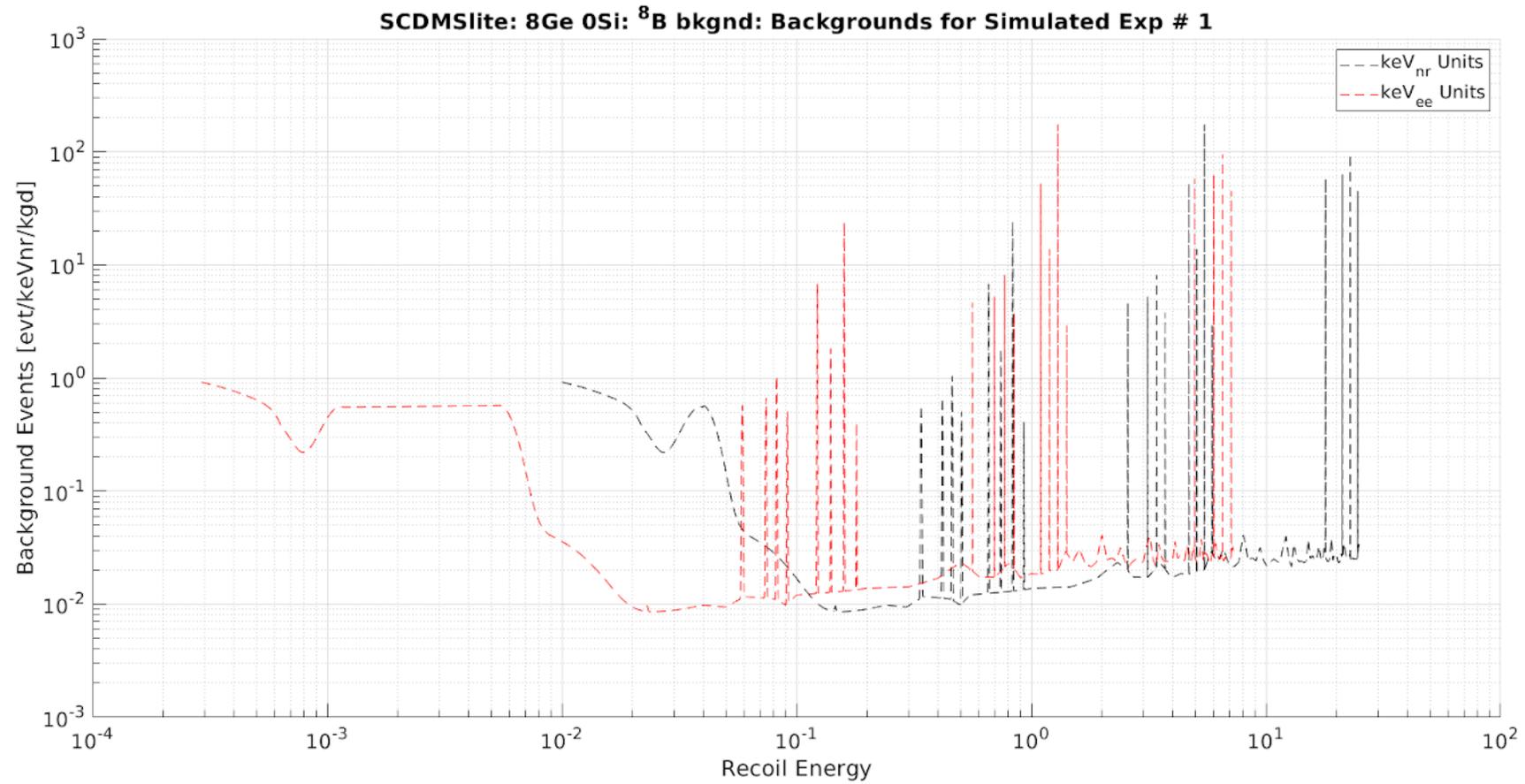

projected dark photon limit
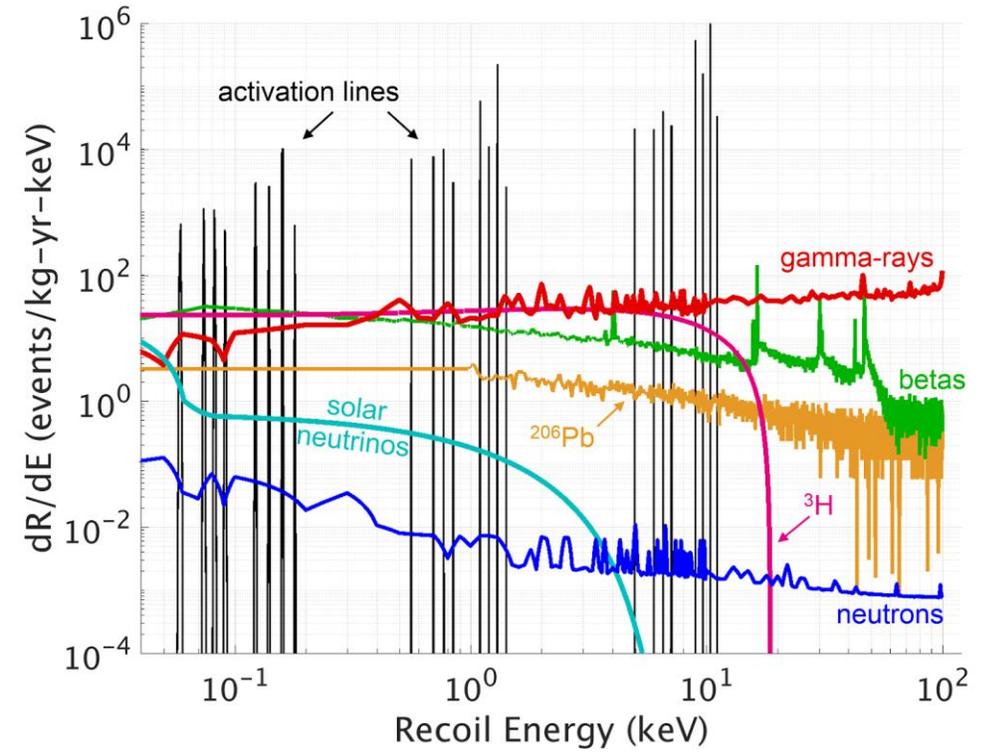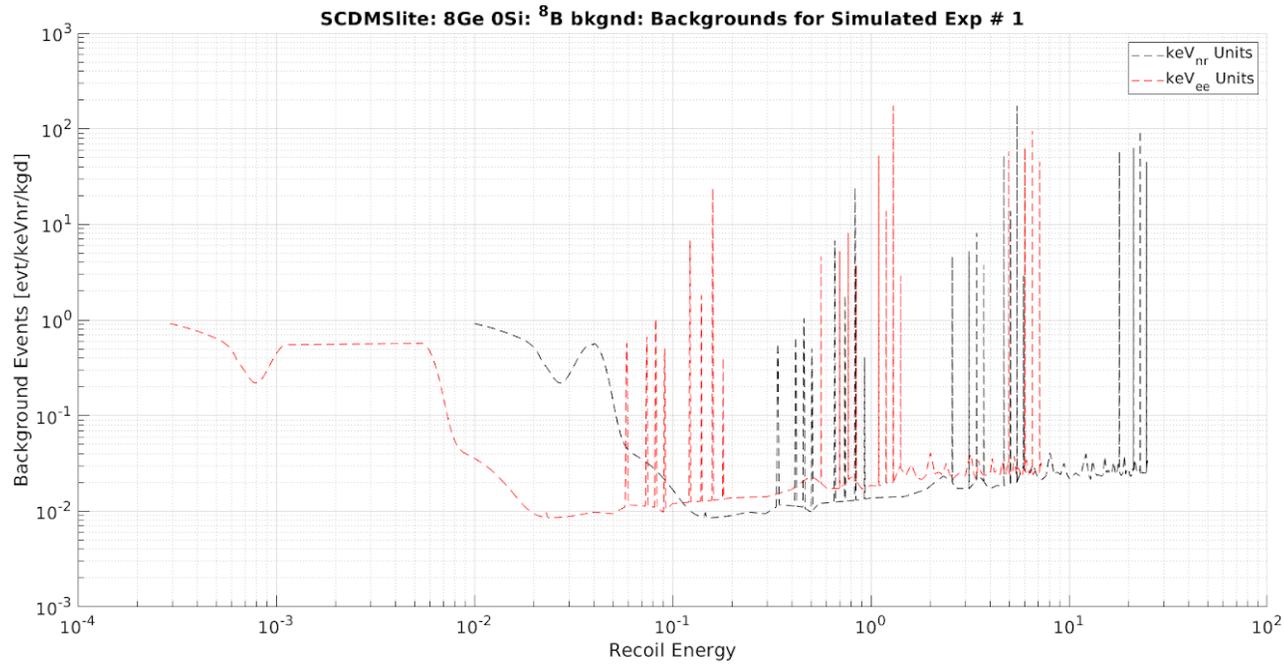
SNOLAB Projections

SNOLAB Projections

Did not scale number of events. Need to extrapolate instead!

SNOLAB Projections
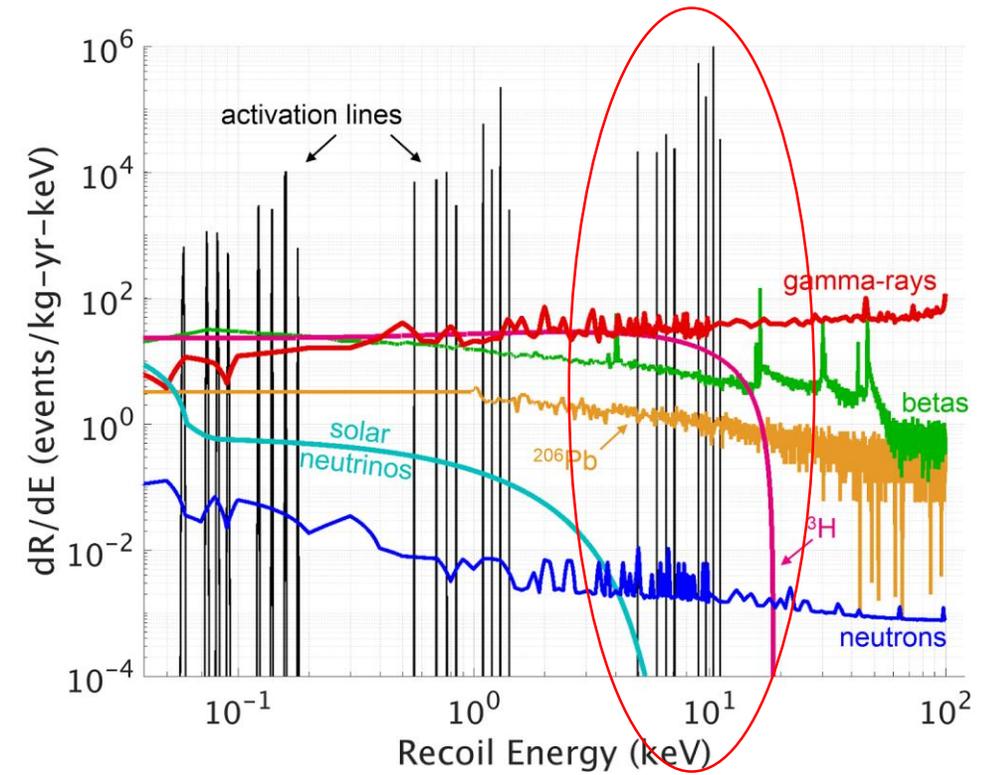

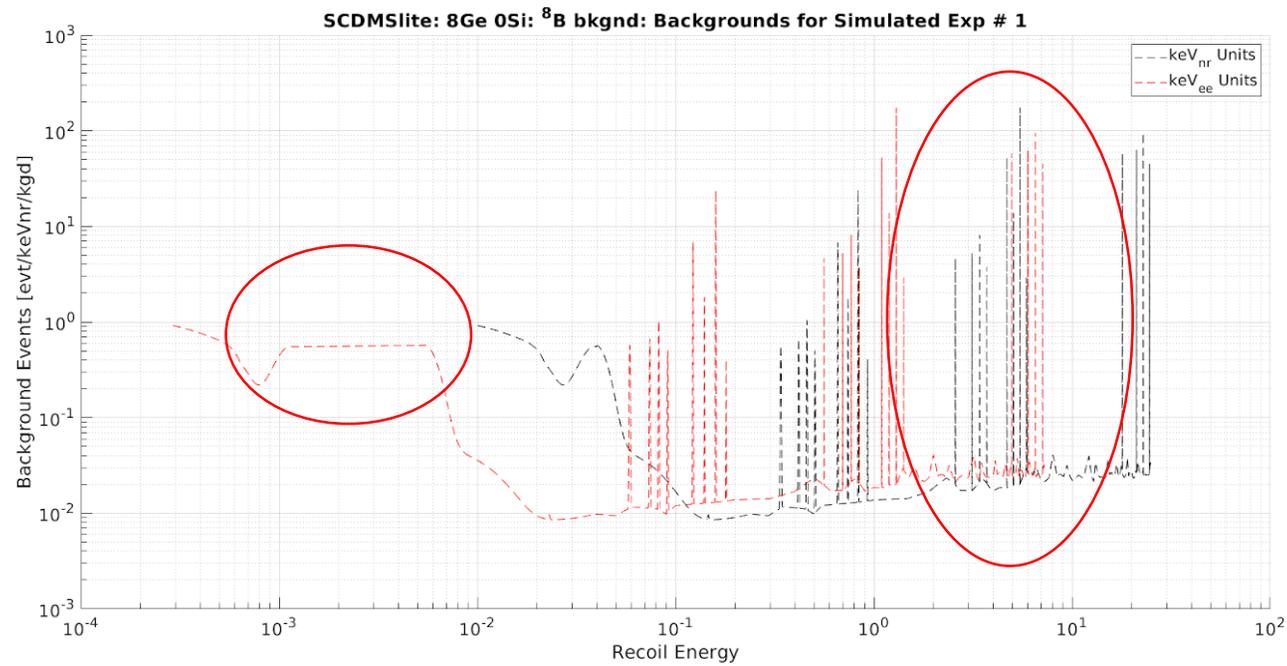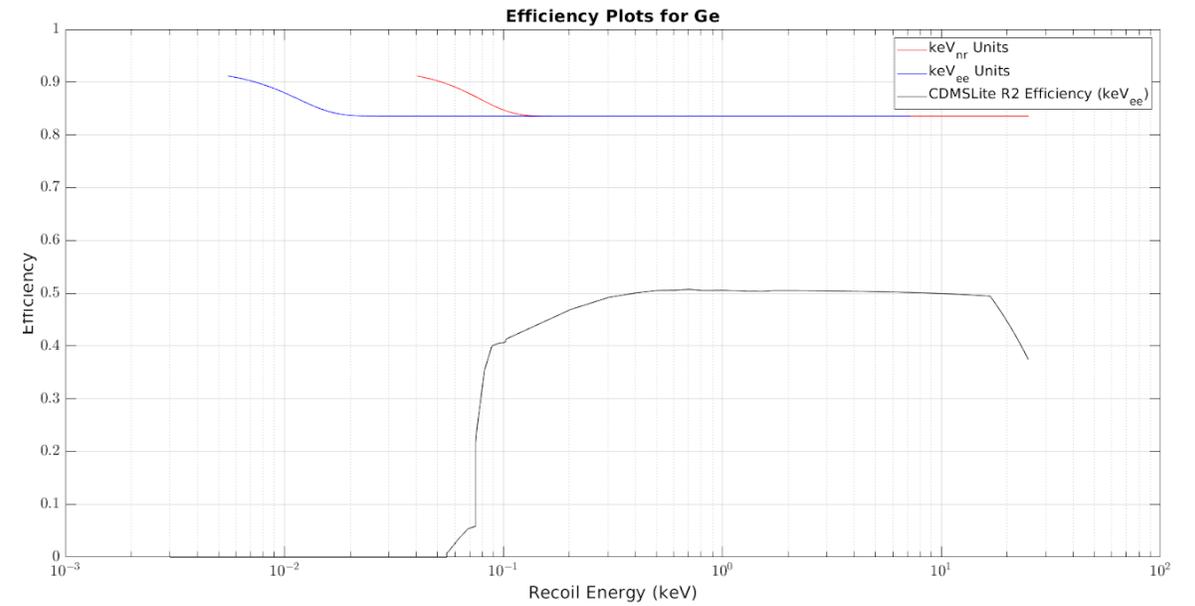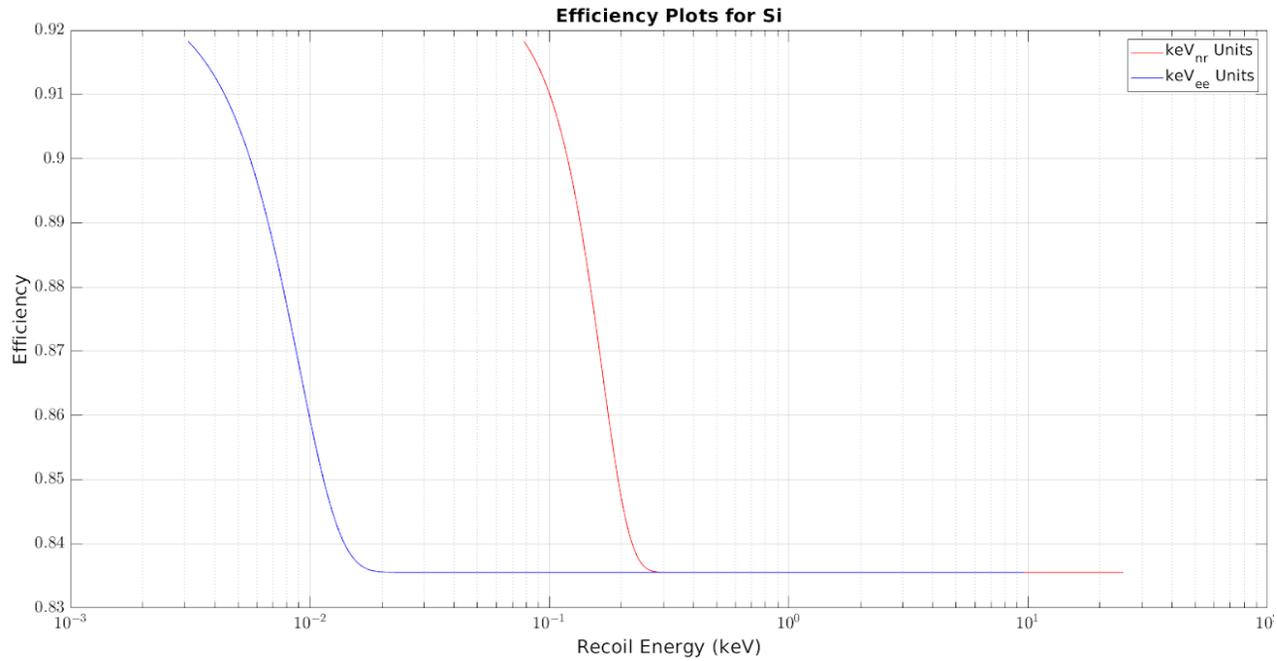SCDMSlite: 8Ge 0Si: ^{8}B bkgnd: Backgrounds for Simulated Exp # 1

SNOLAB Projections

SNOLAB Projections

SCDMSlite: 8Ge 0Si: ^{8}B bkgnd: Backgrounds for Simulated Exp # 1

SNOLAB Projections

SNOLAB Projections

Efficiency Plots for Si

Efficiency Plots for Ge
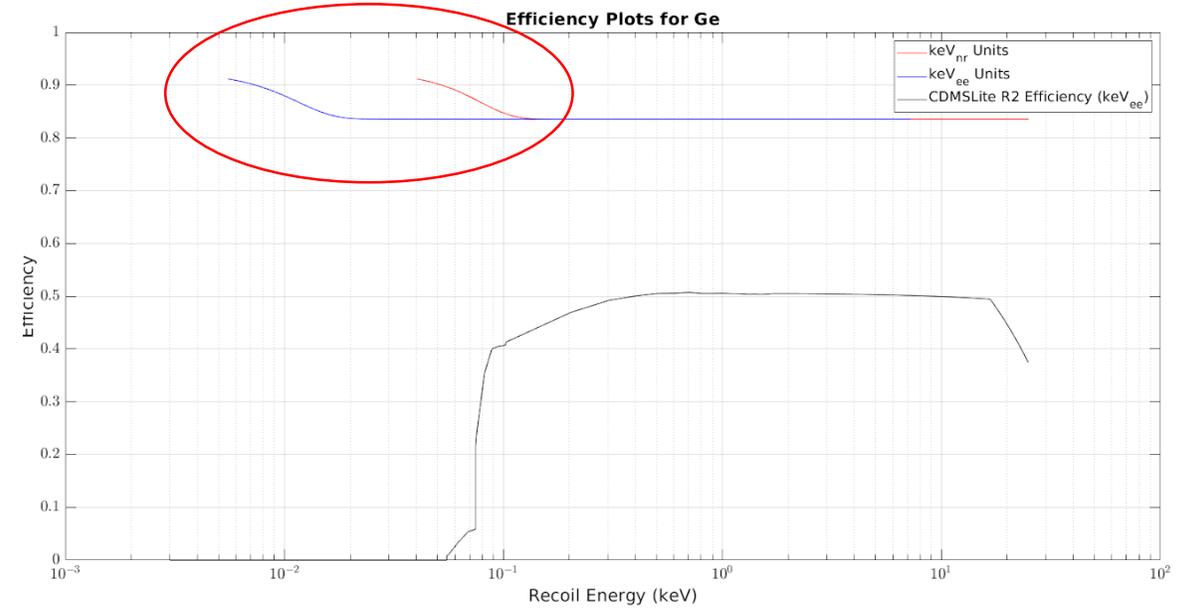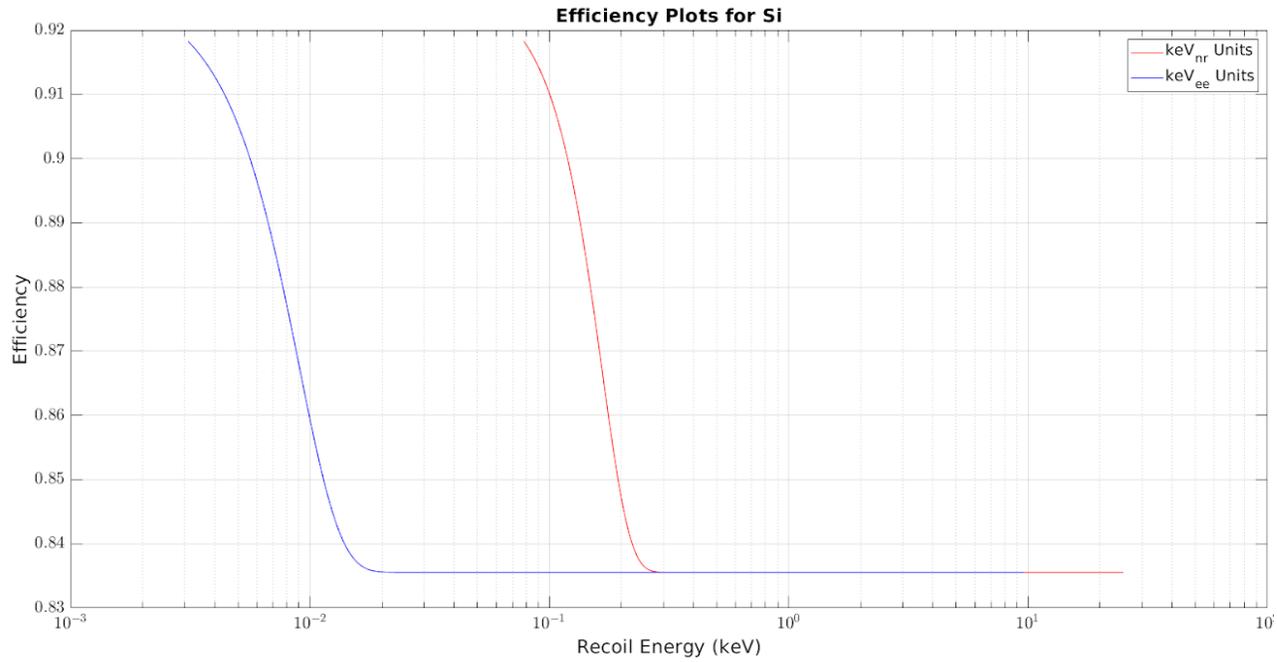
SNOLAB Projections

- Once validation is complete, we might be able to make some plots in time for upcoming conferences

- We also want to look at iZIP projections, but I think that is lower priority.

Type 3 Decider Requirements

- I've gotten the dqm/plotter code to work that crates the diagnostic plots

- It uses cdms processed data

- Need to identify what plots need what quantities/rq/rrqs, and then what is needed to calculate those quantities/rqs/rrqs

Other

- Belina is likely to become an Analysis Coordinator starting next week, so she is looking for someone to help with the ER DM group.

- Belina has asked me to be an ER DM working group deputy chair, who will become co-chair after initial learning curve

- Do you know when Miriam is expected to start at UofT?