A Scientific Welcome

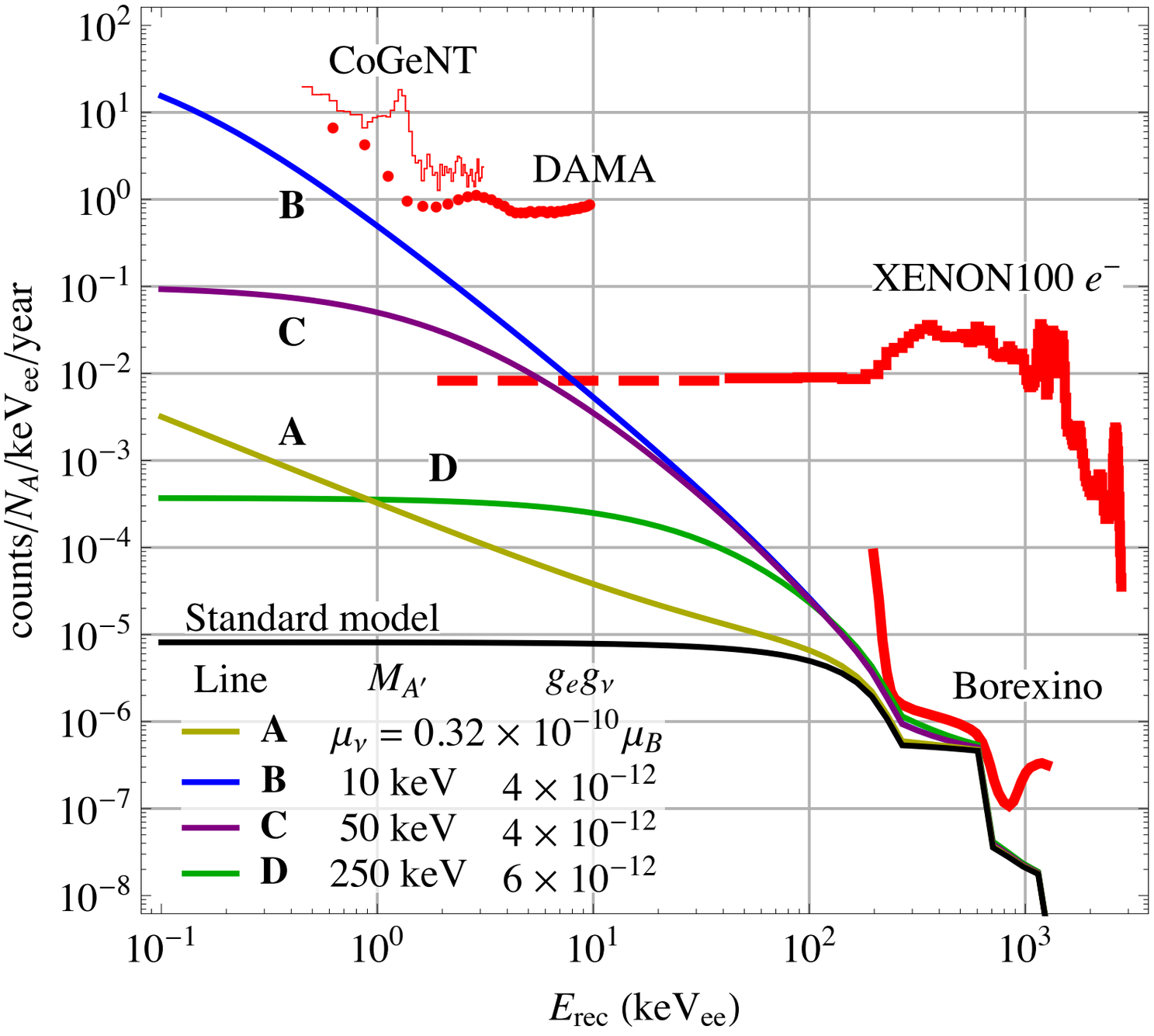
Scott Hertel

solar-*ν* overview plot (2012)

complementarity of
wildly differing approaches

(exposure/threshold/background)

note the unit: “per mole of electrons”

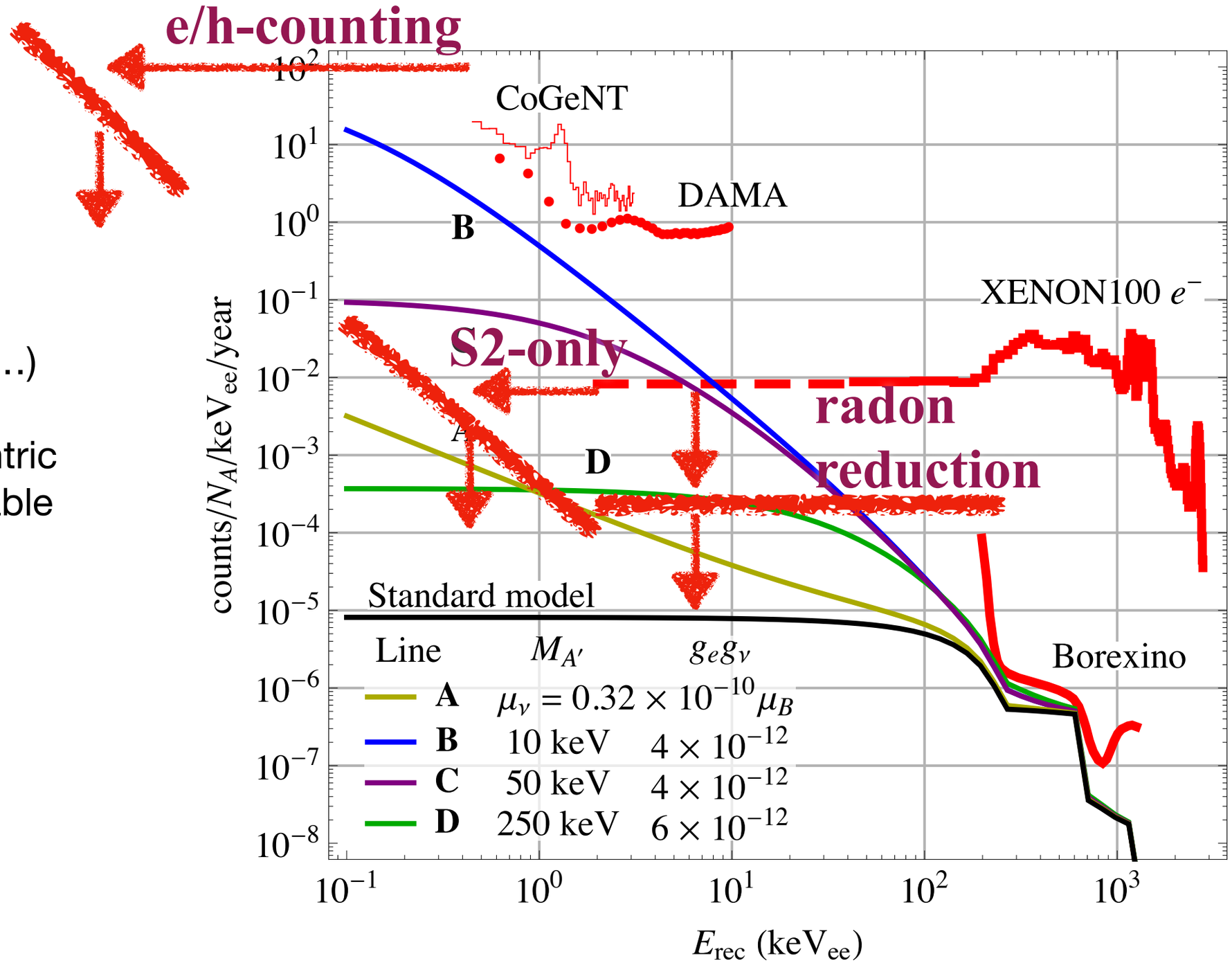


`Exploring nu signals in dark matter detectors’
Harnik, Kopp, Machado
arXiv:1201.6073

Since then: rapid technological advances

(just rough sketches for now…)

Point being: dark matter-centric R&D which is directly applicable



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General questions for the next few days:

(personally biased…)

1) What theory goalposts exist? what scales are most compelling?

2) What of this space is already probed from astrophysics?

3) What technologies are most promising for the next searches in the next few years? the next few decades?

4) What can we learn from the example/experience of the current leading experiments?

5) How do electron-scattering sensitivities compare to coherent nuclear scattering sensitivities?

6) How do neutrino sources compare (reactor / spallation / solar)?

7) Others?