Maybe add a limits plot after the WIMP recoil spectrum… something like:

Experiments set an upper limit of dE/dR differential even rate they can set a limit on R0 (the total event rate for a given mass) and therefore set a limit on the WIMP cross-section at a given energy after using the galactic dark matter density and flux. Show the current best limits from LUX paper here.

Typically express different rate unit (dru) as 1 event per keV kg-day,. The total rate unit (tru) for R0 is event per kg-day.

Direct Detection Backgrounds

-Background Sources

Need to reduce background events to allow a rare NR spectrum to be observed. Typically go underground to avoid NR events from neutrons produced by cosmic ray muons. Gamma and beta-decay backgrounds from the detector components produce ER events. Detectors use ER/NR discrimination to reduce these backgrounds, but each does discrimination in a different way.

-Self Shielding

Cryogenic Detectors

-Overview

-Recoil Discrimination

Bubble Chambers

-Overview

-Recoil Discrimination

Dual Phase TPC

Interaction Physics

Event Reconstruction

NR/ER discrimination