WIMP detection:

Astronomical Observation of annihilation

Generating WIMPs in Colliders

Direct detection

-Interaction Cross section and events per kg/day for different targets (41)

-Backgrounds (internal and external, ways to mitigate)

-self shielding

-annual modulation

-NR discrimination (can’t stop neutrons from muons and alpha-n)

-How discrimination is done in cryogenic experiements (CDMS)

-How its done in bubble chambers

-How its done in liquid noble gas

-single phase (pulse shape, with NR producing singlets instead of triplet excimers)

-dual phase (NR has higher charge density, so more recombination, so lower S2/S1)