DM in Astrophysical Objects I:

Work in groups of three. You may draw on existing literature but are encouraged to propose creative or underexplored ideas. Be as quantitative as possible, try to make order-of-magnitude correct estimates.

Astrophysical Object Identification

Brainstorm:

- List astrophysical objects (AO)/environments (either known or hypothetical) where dark matter might have a measurable effect.
- For each one, brainstorm what effect dark matter might have on it, what observations can be made of it, what the resulting dark matter sensitivity/signature/bound is, and how astrophysical object uncertainties effect the bound. Of course use paper/tablets/etc.

Astrophysical object:		
Dark matter effect:		
AO Observations:		
Signature/Bound:		
AO Uncertainties:		

From the six astrophysical objects you have brainstormed in your group, select the one that seems most promising / original / fun. You will be using this object for the next 3 sessions.

How much DM flux passes through a tabletop, assuming the halo dark matter flux is isotropic, and spherically distributed with a single speed v? What if the flux follows a spherically symmetric distribution f(v)?

-You are free to choose whatever coordinate bases you like. Which might be easiest?