

Working Title

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Abstract

Fill this later

1 Outline (to remove later)

- “The Sun is magnetically active, and this affects our technological society...”
- Talk about the history of solar magnetic simulations. Show the results that they have achieved (wreaths of magnetism are maintained by the convective zone alone, most are really high rotation rate but that’s probably wrong now, yadda yadda...).
- Talk about how my simulations proposed with enrich that history of simulations (e.g. there’s been the “assumption” almost that the toroidal field is made in the tachocline, and this will help to distinguish whether or not that’s the truth in an actual “laboratory”).
- Talk about the tools that will be used in the simulations. We have ASH. Maybe we’ll use Dedalus?
- Talk about how, once this matter is settled, we’ll bridge the gap towards “observables” by extending simulations to the solar surface at the resolution of supergranulation. After running simulations that encompass “important” characteristics of the surface (on our length scales), we’ll do post-processing in order to convert our simulations into “observables,” and see if such observables look like anything that (X, Y, Z) satellites could detect/have detected. This is a (possible) glimpse at what happens underneath the surface of the sun.
- Mention the NASA strategic/science plans and exactly which points of them we’re fitting into, here.

2 Intro

(I’ll take this part from Ben’s past work tomorrow when I have an ounce of energy).

Sources and stuff below so I can see formatting!

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