

ASTRO 8120, Plasma Physics & MHD

Spring 2025

Final Project:

1. A three to five page paper ApJL format (use ApJL LaTeX template).
The page limit refers to the compact 2-column format, which is for the final version. For drafts use the one-column preprint format; it is easier to write comments on.
2. Must resemble research publication, but need not be new results. You can give an overview of existing results and use other people's figures, but not their words.
3. Possible topics (but any original proposal is even more welcome):
 - a. Non-solar: Accretion disk dynamos, pulsar magnetospheres, the galactic magnetic field, planetary magnetospheres, Tokamaks, Z-pinch, Hadron plasmas
 - b. General: Helicity, particle drift in non-homogeneous collisionless magnetic plasmas, current sheets,
 - c. Solar: Heating of the corona, flux transport dynamos, particle acceleration in flares, acceleration of the solar wind, eruptions
4. Schedule:
 - a. One page proposal due March 20th, midnight
 - b. Proposal returned March 23rd
 - c. First full draft for refereeing, Saturday April 19th midnight
 - d. Referee report (by fellow student) returned to editor (me), Saturday April 26th midnight, forwarded with edits to author the next day
 - e. Final paper due to editor Saturday May 3rd, midnight
 - f. Final paper returned and final grade to you, Tuesday May 6nd.
 - g. Final grade in PAWS, May 8th, 5 pm EDT

There will be lectures on writing a paper and refereeing in due time.