Physics 138
Plasma Physics 2003
General Information

Instructor: Michael Brown, office: Dupont 151, x8648; SSX lab: Dupont 6, x8645; e-mail: doc or mbrown3; home (before 10 PM): 891-6860

Meeting Time: Tuesday, 7-10 PM Dupont 142B

Office Hours: anytime except Wed afternoon (P4 lab).


Approach: I’m hoping that the plasma seminar can be both low-key and intense at the same time. Low key in the sense that we can study whatever aspect of plasma physics interests us any particular week. Intense in the sense that most of us have a research interest in plasma physics so we’ll want to focus deeply on each topic. Since all of you are seniors, I’ll assume that you know the drill about seminars (don’t wait until the last minute to do the work, work together, strive to teach all of us something each week).


Meeting Preparation: Each week we’ll figure out a topic and do some problems (mostly from Goldston but I’ll mix others in from the above texts). Everyone should count on participating in some way each week (doing a problem or some other presentation). Approximately every other week you’ll be asked to give a 20-30 minute presentation on a topic (often linked with a problem or something outside the reading). It will behoove you to look at outside material for additional insight. The goal of your presentation
should be to show us something we don’t already know. Finally, I’d like to institute a mechanism to have your presentations and homework solutions on our website. Best would be a PDF or you could scan handwritten papers.

Meeting Organization: It’s my style to give a brief introduction to the seminar. Each week I’ll ask for one or two short presentations, we’ll take a break then do several problems. I’ll ask for volunteers for presentations the week before and we’ll decide at the beginning of each seminar who will cover which homework problems. You’ll let me know the problems you feel most comfortable with and I’ll respect your preferences. Difficult problems we can all work on together. I’d like the atmosphere to be lively but not intimidating. The goal of the group should be to push everyone’s understanding. If something isn’t clear, we need to stop and clarify. Let’s plan on doing some special topics at the end of the semester.

Grading: Let’s not worry about grades... I’ll look at presentation material and there will be a final exam.