

Injection and extraction, introduction

USPAS

by

Mike Plum and Uli Wienands

Schedule

USPAS

	Monday	Tuesday	Wednesday	Thursday	Friday
Morning (start at 9:00)	Introduction (Mike) Basic optics (Mike) Proton and H ⁻ injection (Mike)	Proton and H ⁻ injection (Mike) Proton extraction (Mike) Foils (Mike) Lessons Learned (Mike)	Electron fundamentals and injection (Uli) Bunch charge equalization (Uli)	Electron extraction (Uli) Resonant extraction & MTE (Uli) Crystal extraction and collimation (Uli)	Final test
Lunch (12:00 -14:00)					
Afternoon (start at 14:00)	Continue lectures as necessary Discussion session Home work	Continue lectures as necessary Discussion session Review last night's home work Today's home work	Continue lectures as necessary Discussion session Review last night's home work Today's home work	Continue lectures as necessary Discussion session Review last night's home work Today's home work	
Evening	Continue homework assignment as necessary	Continue homework assignment as necessary	Continue homework assignment as necessary	Continue homework assignment as necessary	

Our goal

- Uli and I would like for you to walk away from this class with an enhanced appreciation of, and a basic knowledge of, the fundamental concepts of accelerator injection and extraction systems
 - Proton, ion, and electron systems
 - How they work
 - What are the issues commonly encountered
 - Basic injection and extraction system design

Course structure

- Homework will be assigned each day Monday thru Thursday, and will be due the following morning. Xiaoying Pang will grade the homework.
- Uli and I will be available afternoons and evenings to help with homework and any other questions you may have
- There will be a test Friday morning. This test is mandatory for all students taking the class for credit (and recommended for those who are not!).
- Grading: 70% home work, 30% final exam