

CMPD/CMSO Winter School 2008.
INSTABILITIES IN LABORATORY AND
ASTROPHYSICAL PLASMAS

January 7th - 12th 2008

1 Monday: Rayleigh-Taylor Instability

8:30 am. Breakfast

8:50 am. Welcome.

9 am. Linear Theory *Troy Carter*

10:20 am. Coffee.

10:40 am. Magnetized Rayleigh-Taylor-Parker *Ellen Zweibel*

12:00 pm. Student talk

12:30 pm. Lunch

2:00 pm. Outstanding problems in Rayleigh-Taylor. *Dmitri Ryutov*

3:20 pm. Student talk.

3:50 pm. Tea

4:10 pm. Homework

5:30 pm. Drinks + Homework

2 Tuesday: Kink Modes

8:30 am. Breakfast

9 am. Simple Linear Theory *Steve Cowley*

10:20 am. Coffee.

10:40 am. Formal theory of MHD Stability. *Andrei Simakov*

12:00 pm. Student talk

12:30 pm. Lunch

2:00 pm. Kink Modes in Fusion Experiments *Dylan Brennan*

3:20 pm. Student talk.

3:50 pm. Tea

4:10 pm. Homework

5:30 pm. Drinks + Homework

3 Wednesday: Tearing Modes

8:30 am. Breakfast

9 am. Simple Linear Theory *Cary Forest*

10:20 am. Coffee.

10:40 am. Nonlinear Theory *Dmitri Uzdensky.*

12:00 pm. Student talks

FREE AFTERNOON

4 Thursday: Magneto-rotational instability and Velocity Shear Driven Modes.

8:30 am. Breakfast

9 am. Linear theory of MRI and Kelvin-Helmholtz *Bill Dorland*

10:20 am. Coffee.

10:40 am. Nonlinear MRI *Jeremy Goodman and Hantao Ji*

12:00 pm. Student talk

12:30 pm. Lunch

2:00 pm. Kinetic Theory of MRI *Eliot Quataert*

3:20 pm. Student talk.

3:50 pm. Tea

4:10 pm. Homework

5:30 pm. Drinks + Homework

5 Friday: Kinetic Instability

8:30 am. Breakfast

9 am. Cosmic Ray Streaming Instability *Ellen Zweibel*

10:20 am. Coffee.

10:40 am. Firehose and Mirror Instability *Alex Schekochihin*

12:00 pm. Student talk

12:30 pm. Lunch

2:00 pm. Kinetic instabilities in Space Plasmas *Margaret Kivelson To be confirmed*

3:20 pm. Student talk.

3:50 pm. Tea

4:10 pm. Homework

5:30 pm. Drinks + Homework

6 Saturday: Alfvén Instabilities in Burning Plasmas

8:30 am. Breakfast

9 am. Alfvén Modes in Tokamaks and ITER *Jim Van Dam*

10:40 am. Nonlinear theory of Alpha Particle driven modes *Boris Breizman*

12:00 pm. Student talk

12:30 pm. Lunch

2:00 pm. Fast Particle Instabilities in Experiments – issues and prospects
Bill Heidbrink

3:20 pm. END