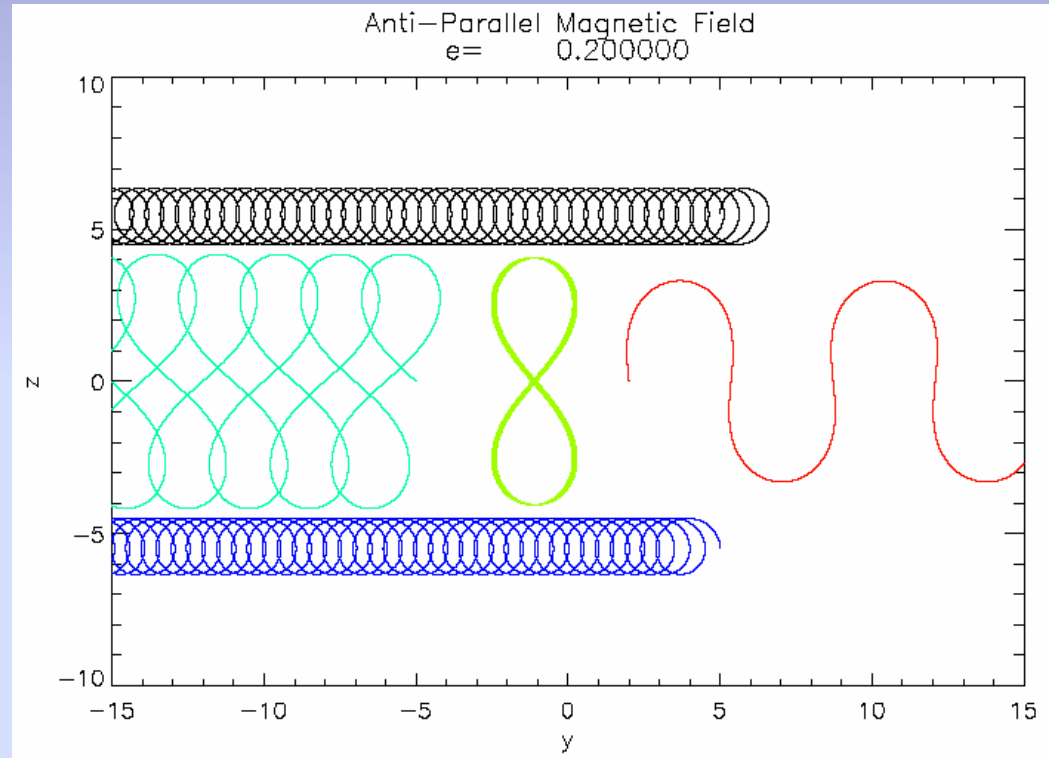
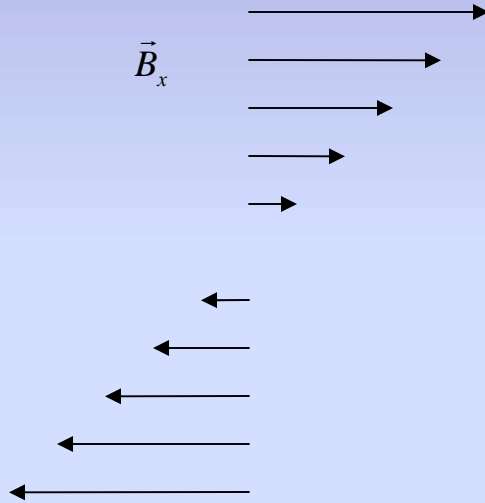


Single-Particle Motion and Collective Plasma Dynamics in Thin Current Sheets

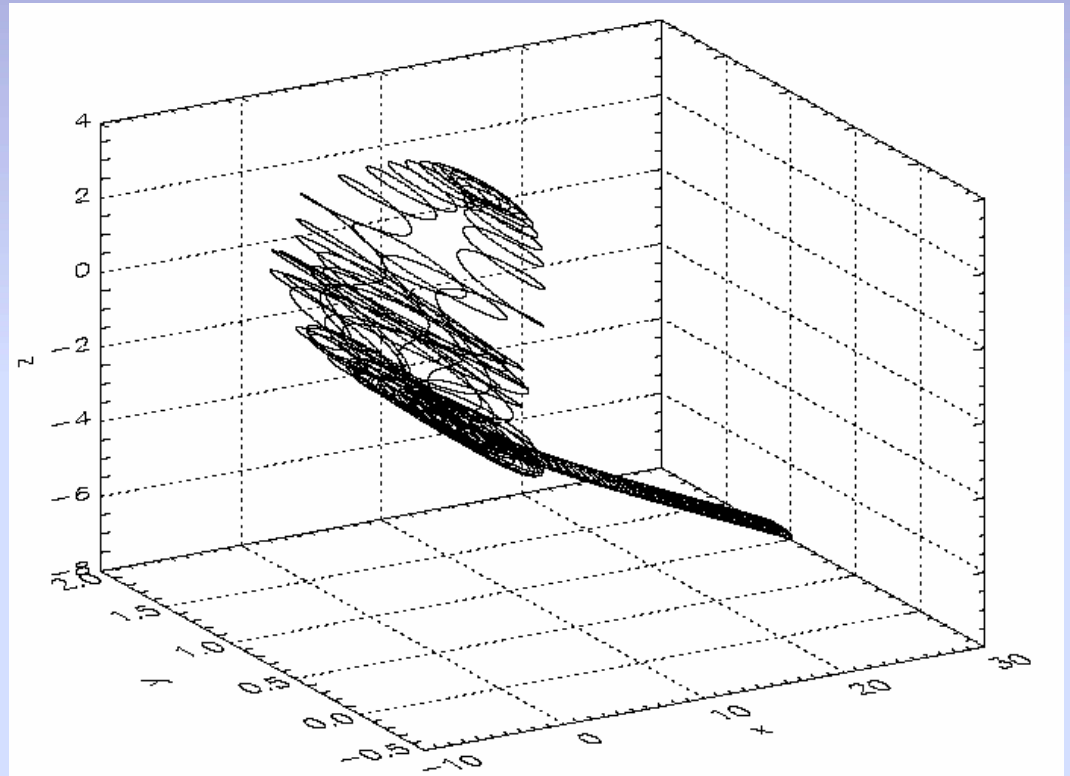
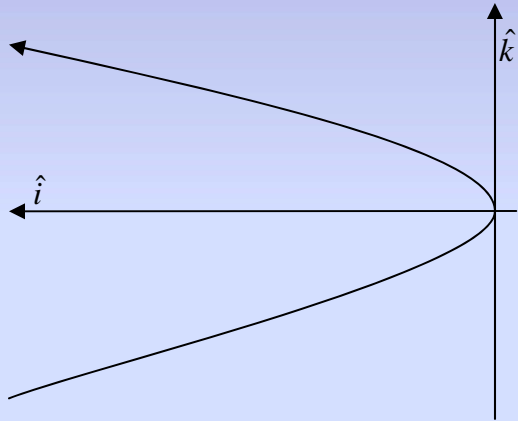
*Robyn Dunstan, Elizabethtown College, Elizabethtown,
PA 17022, (Advisors: P. Guzdar and M. Sitnov)*

TREND Fair 2005

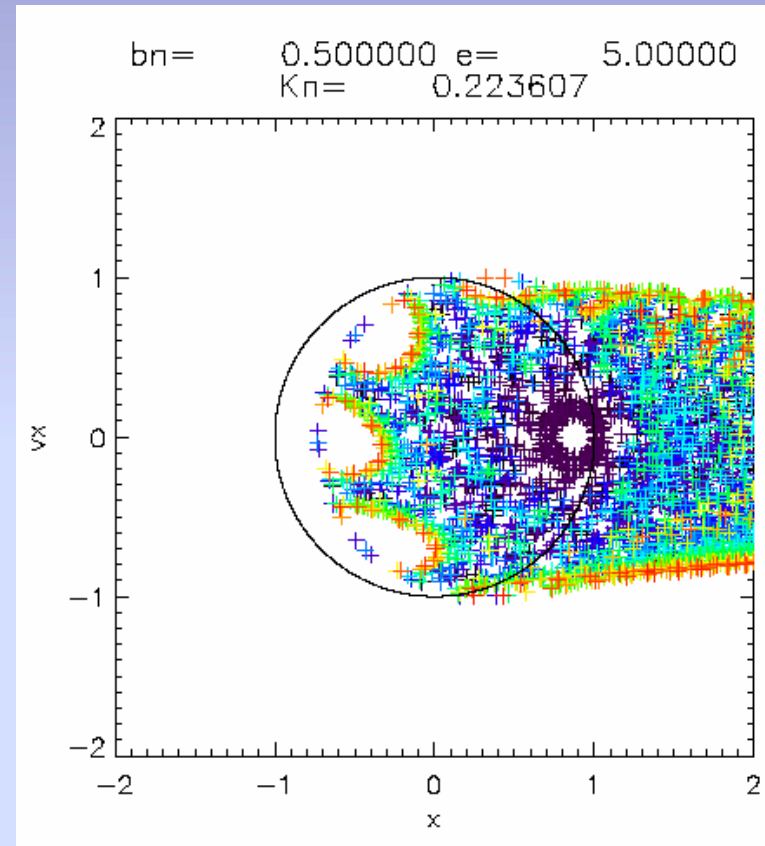
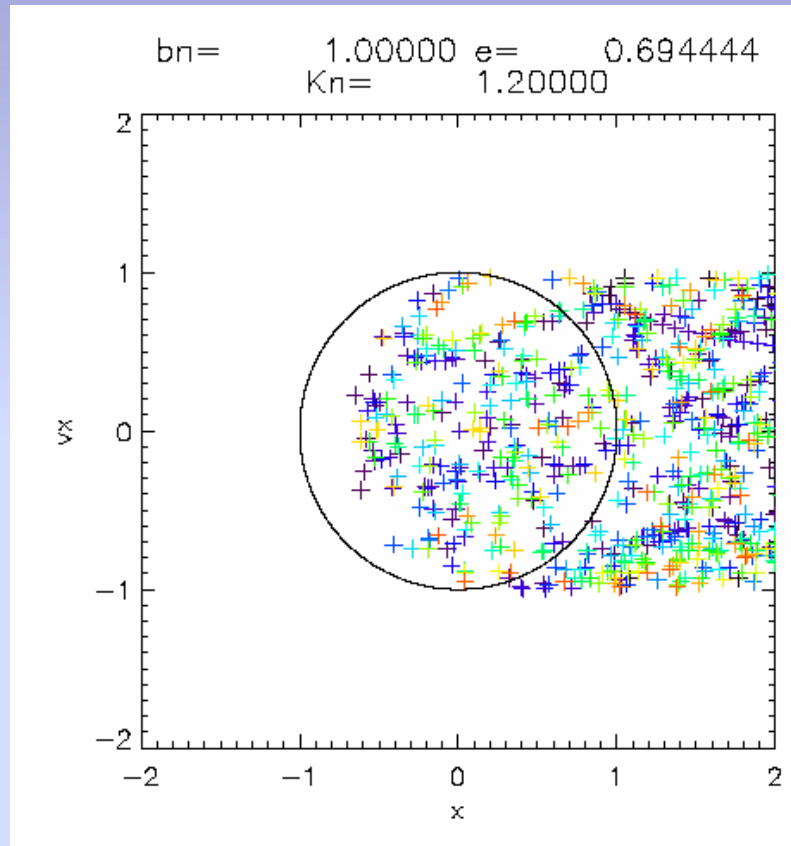
Anti-Parallel Magnetic Field



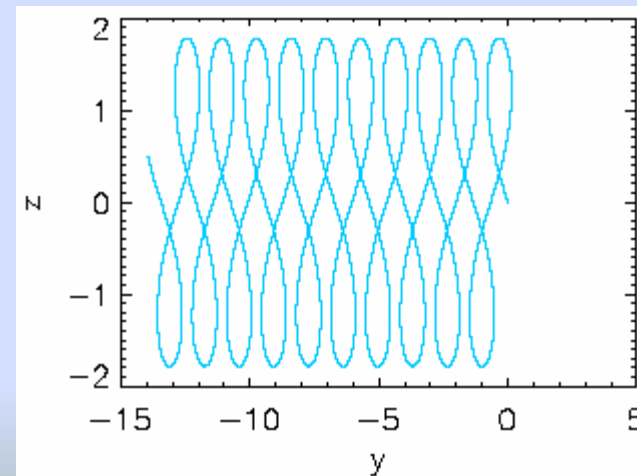
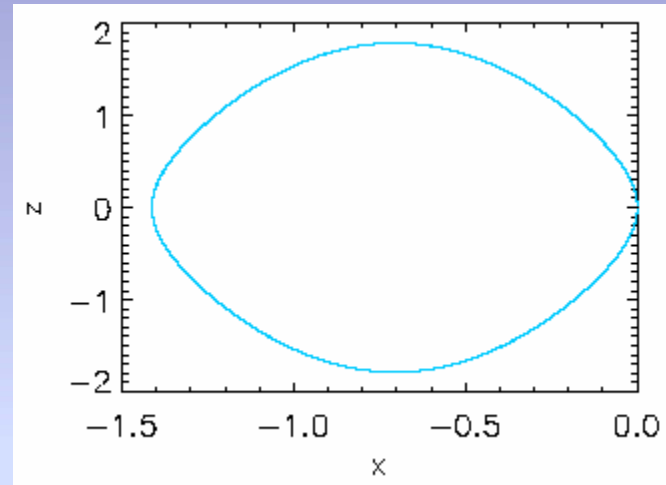
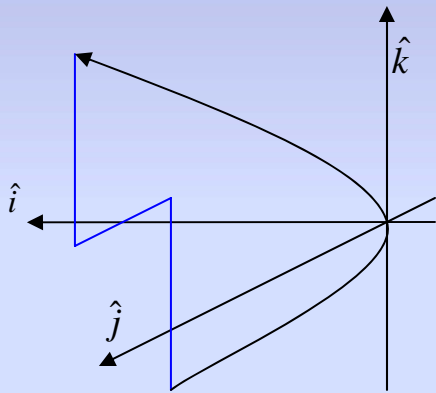
Curved Magnetic Field



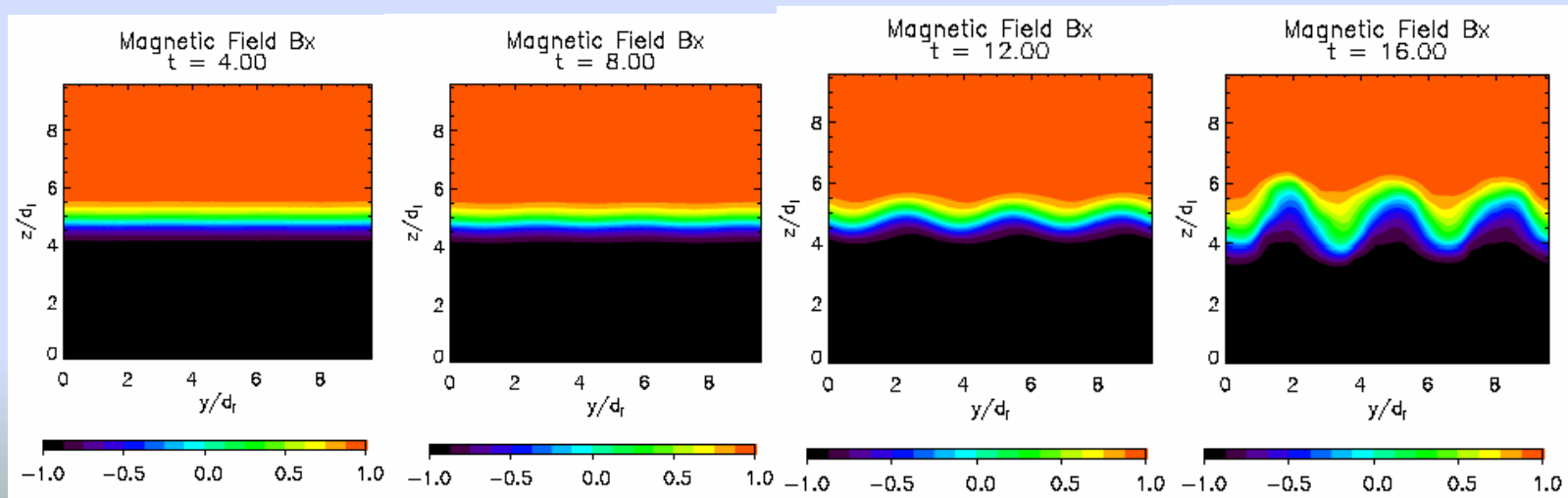
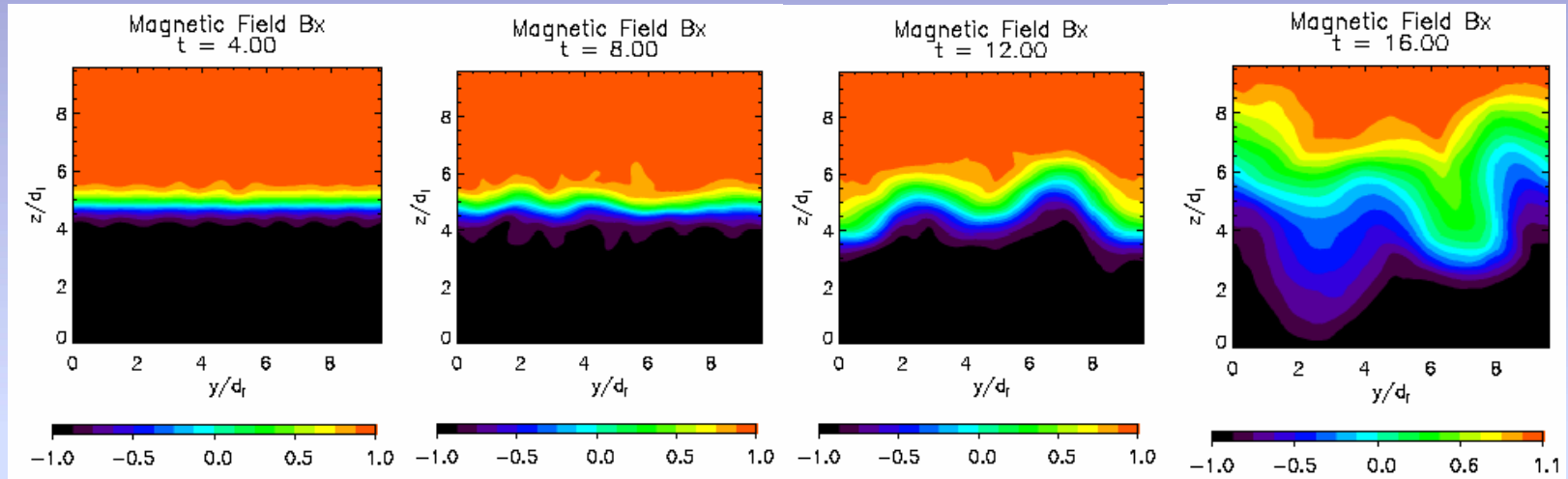
Curved Magnetic Field



Magnetic Fields with a Shear Component



Particle Simulations



Conclusion

- Types of orbits in an anti-parallel magnetic field
- Orbital drift
- Chaos in a curved magnetic field
- Effect of a shear magnetic field component
- Particle simulations