

PHYS 1444 – Section 003

Lecture #11

Wednesday, Oct. 5,
2005

Dr. **Jaehoon Yu**

- Alternating Current (AC)
- Power in AC
- Microscopic view of current
- Superconductivity
- Electric shock hazards
- EMF and Terminal Voltage



Announcements

- Homework due has been changed to noon Tuesdays starting #6
- First term exam next Wednesday, Oct. 12
 - Time: 1 – 2:20 pm
 - Location: SH103
 - Coverage: CH. 21 – 25
- Reading Assignments
 - CH25 – 9
 - CH25 – 10
- There will be a workshop 1 – 5pm this Saturday in SH103 for construction of the World's Largest Cloud Chamber
 - Food from 12:30pm



Alternating Current

- Does the direction of the flow of current change when a battery is connected to a circuit?
 - No. Why?
 - Because its source of potential difference stays put.
 - This kind of current is called the Direct Current (DC), and it does not change its direction of flow.
 - How would DC look as a function of time?
 - A straight line
- Electric generators at electric power plant produce alternating current (AC)
 - AC reverses direction many times a second
 - AC is sinusoidal as a function of time
- Most the currents supplied to homes and business are AC.

