Wednesday Mar 1, 2017

Last time:

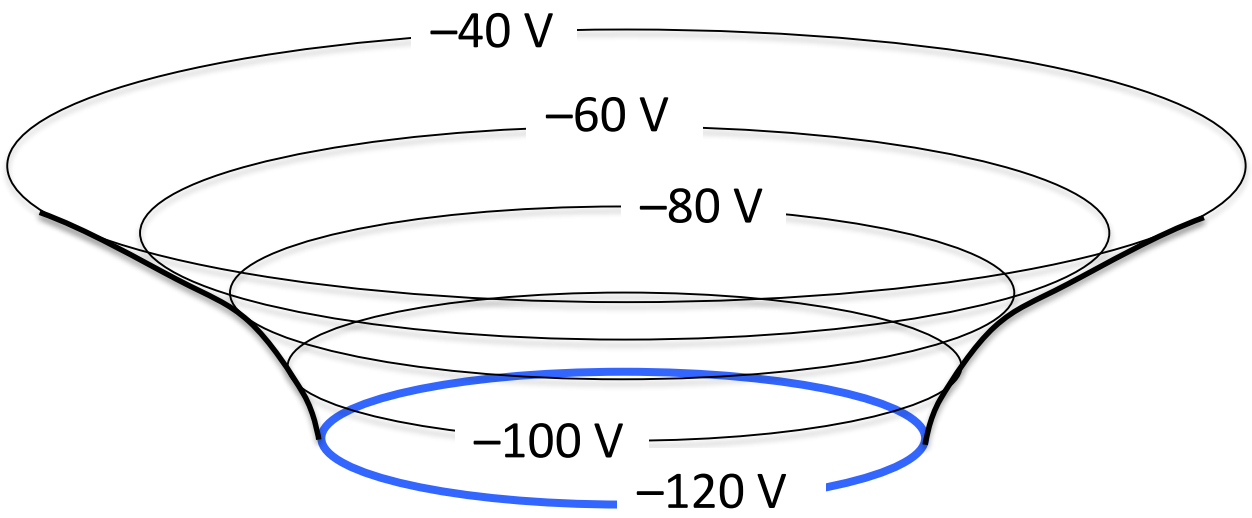
- Equipotential surfaces: visualizing electric potential
- Electrostatic work
- Conductors and electric potential
- Interpreting equipotential surfaces

Today:

- Interpreting equipotential surfaces
- ΔV applications
- Potential of a dipole and line of charge

Equipotential surfaces for charged shell

Equipotential surfaces give you information about **where a charged particle is allowed to go, based on its energy**. If you release a marble in a bowl at some height *h*, it will never be able to reach a higher height. Similarly, if you release a positive charge from some potential, it can never reach a higher potential unless supplied with extra energy.

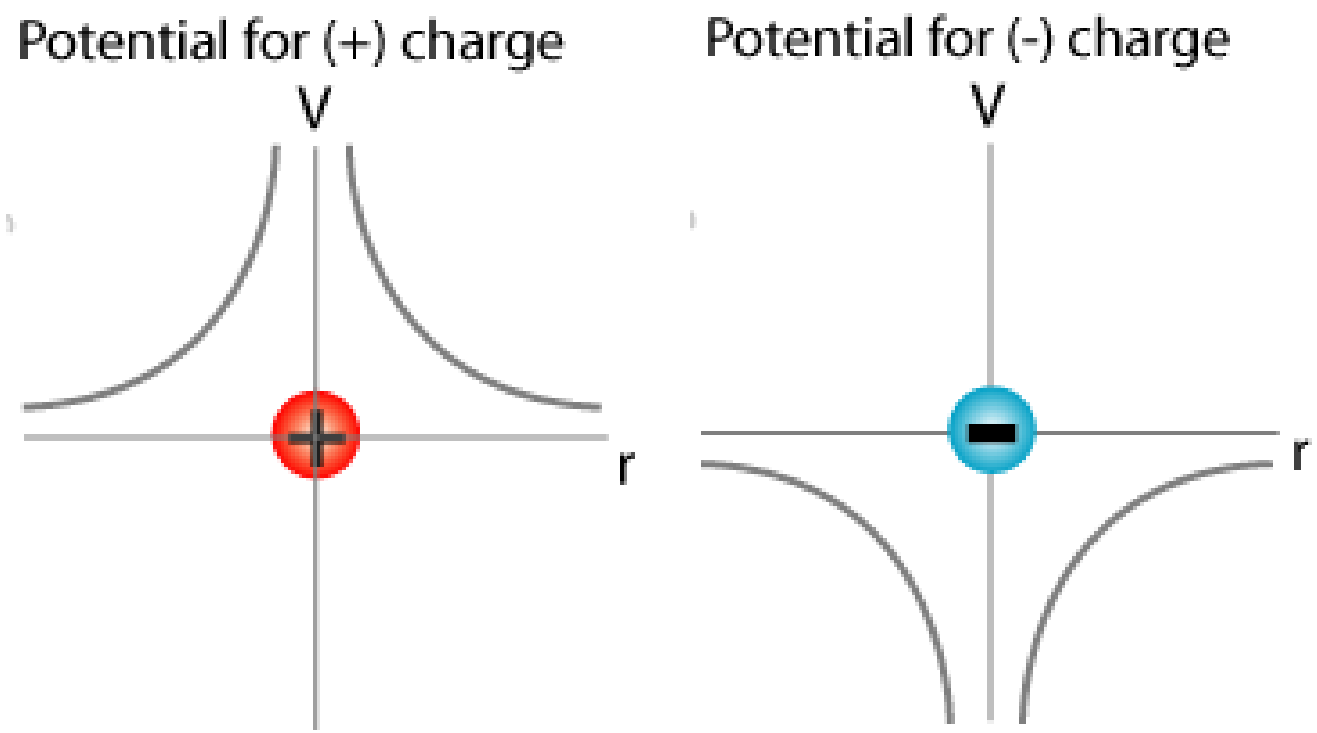


TopHat questions

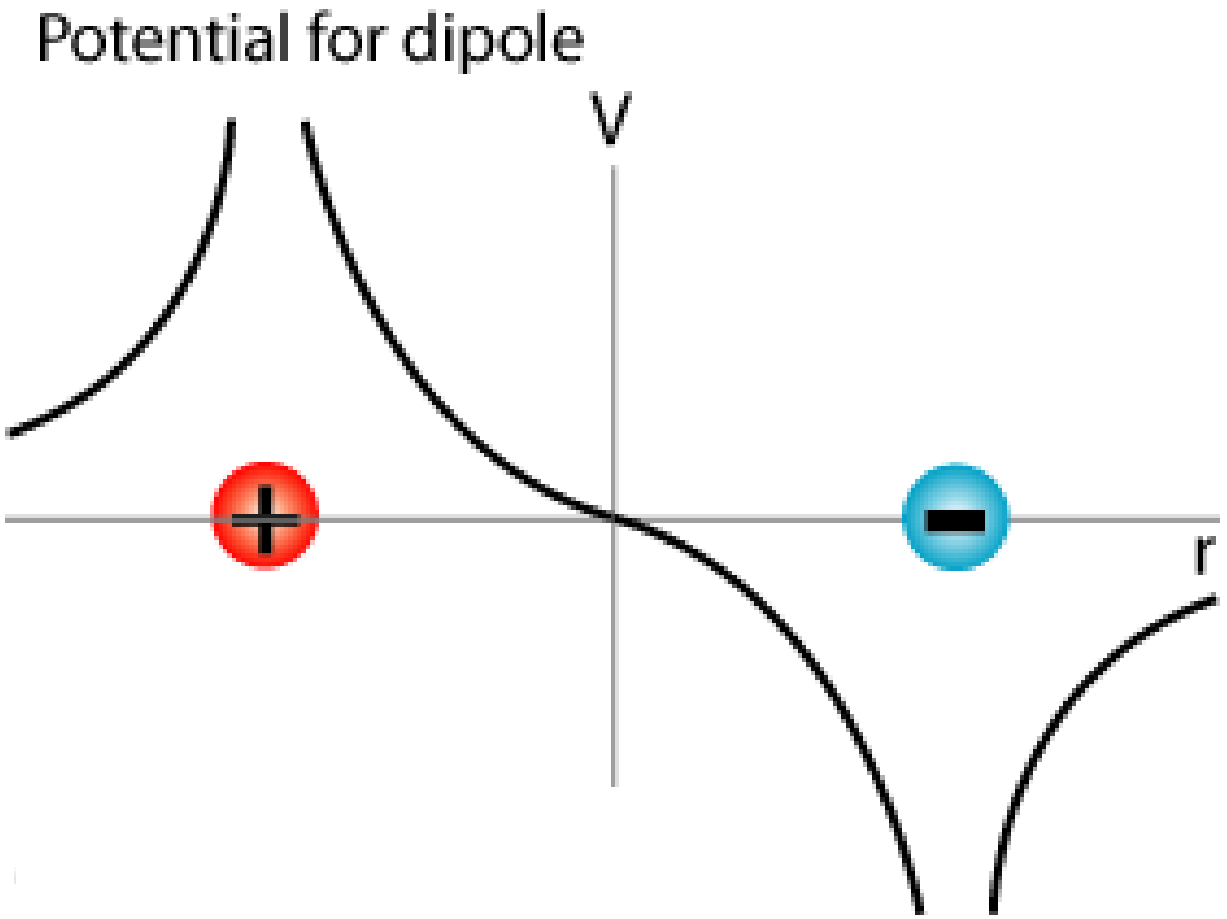
Potential of the dipole - general

- Document camera

Potential

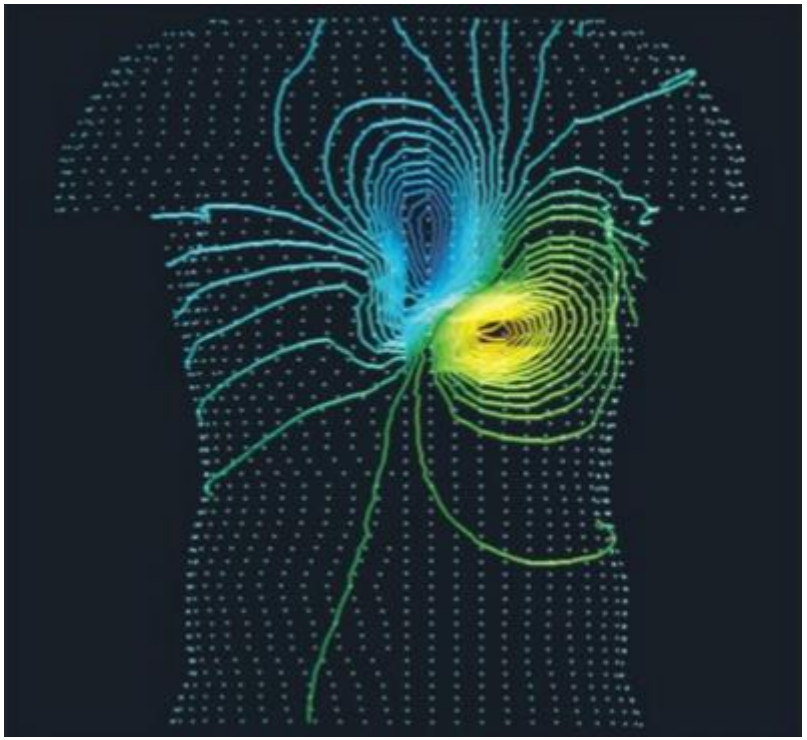


Potential



EKG (ECG) Electrocardiogram

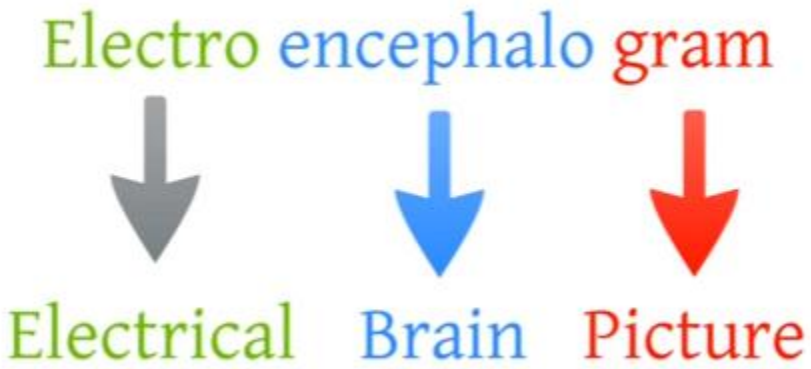
- The equipotential lines near the heart are slightly distorted lines for an electric dipole
- Electric activity of the heart can be monitored by measuring the potential differences



https://www.youtube.com/watch?v=SNrTbeL2h84

EEG electroencephalogram

- Way of measuring the electrical potentials that the brain produces



https://www.youtube.com/watch?v=86zIa3pGM50

Wednesday Mar 1, 2017 class 2

Last time:

- Interpreting equipotential surfaces
- ΔV applications
- Potential of a dipole

Today:

- Potential of line of charge
- Additional examples

TopHat questions

Potential of the line of charge