HR Models
CSSA Workshop May 31st
HR Diagram

• Hertz-Sprung Russel Diagram (HR)
• Color Magnitude (CMD)
• Relates the luminosity & Temperature
Luminosity

• How much energy (light) the star gives off
• Absolute Magnitude vs. Apparent
Temperature of Objects: Black Body

- Blue = Really Hot
- White = Hot
- Red = Cool
Temperature of Stars - Blackbody

- Temperature related to color
- All colors have specific temperature curves
- Difference in Ab Mag give color

http://phet.colorado.edu/sims/blackbody-spectrum/blackbody-spectrum_en.html
HR Diagrams
HR – Evolution of Star
Activity – HR Models

• Create an HR Diagram of a star cluster
• Use model to find types of stars selected
Star Cluster - Palomar 5

http://www.astro.virginia.edu/class/whittle/astr553/Topic12/t12_pal5_evap.html

Slogan Digital Sky Survey - SDSS
Star Cluster - Palomar 5

• Small Star Cluster that traverses through the Milk way
• ~10 Billion Years Old
• Loses stars every time it passes through Milk way
• Data from Sloan Digital Sky Survey – Ground Based Telescope 2.5m

http://www.astro.virginia.edu/class/whittle/ast553/Topic12/t12_pal5_evap.html
HR – Diagram Palomar

HR Diagram for Palomar 5  r vs g-r

- Main Sequence
- Red Giants
- SuperGiants
- White Dwarfs
Part II – Select Stars from Palomar 5

• Using the model you created, determine the stars you selected from Palomar 5