

# Introductory Astronomy

Week 7: Galaxies

Clip 2: Many Bands!

# Through the Dust Darkly

408KHz: relativistic  $e$

1.4GHz: HI

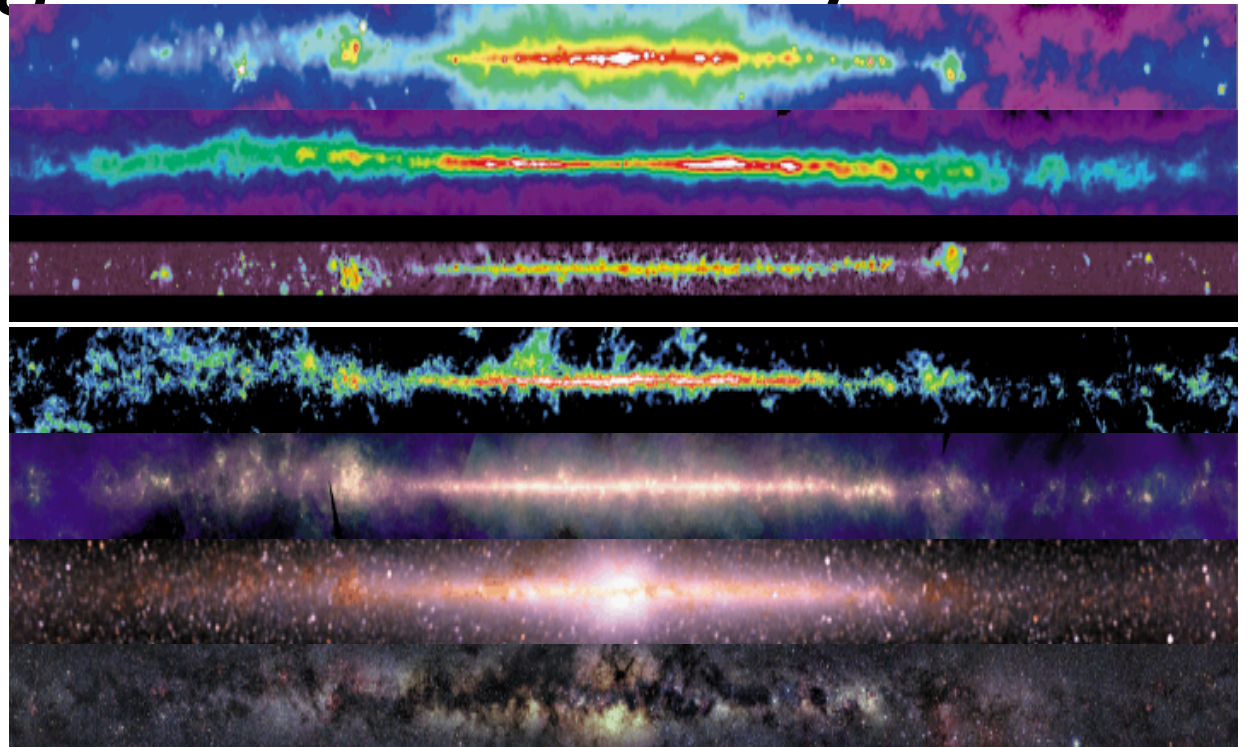
2.7 GHz: ionized  $\text{gas}$ ; fast  $e$

115GHz: CO signals  $\text{H}_2$

3-25 $\times 10^3$ GHz: warm  $\text{dust}$

86-240 $\times 10^3$ GHz: Cool  $\text{giants}$

460 $\times 10^3$ GHz: Hot  $\text{stars}$



# Credits

- Multiwavelength Milky Way: NASA/GSFC  
[http://mwmw.gsfc.nasa.gov/  
mmw\\_product.html#slides](http://mwmw.gsfc.nasa.gov/mmw_product.html#slides)