



## **Radiative Processes**

Defining the radiation field (specific intensity, moments, fluxes)

Equation of radiative transfer; emission, absorption, & the source function

Formal solution for the radiation field; analytic solutions in optically thin & thick cases

Mean opacities: qualitative survey of opacity sources vs. wavelength & temperature

Local thermodynamic equilibrium; gray atmosphere; limb darkening

Beyond the gray atmosphere: non-LTE scattering; non-plane-parallel geometries

Basics of spectral line formation & broadening; absorption vs. emission spectra

Application: planetary atmospheres: radiative equilibrium & greenhouse effect

Application: irradiated bodies with chemistry: comet sublimation & the snow line

Application: H II regions and Strömgren spheres