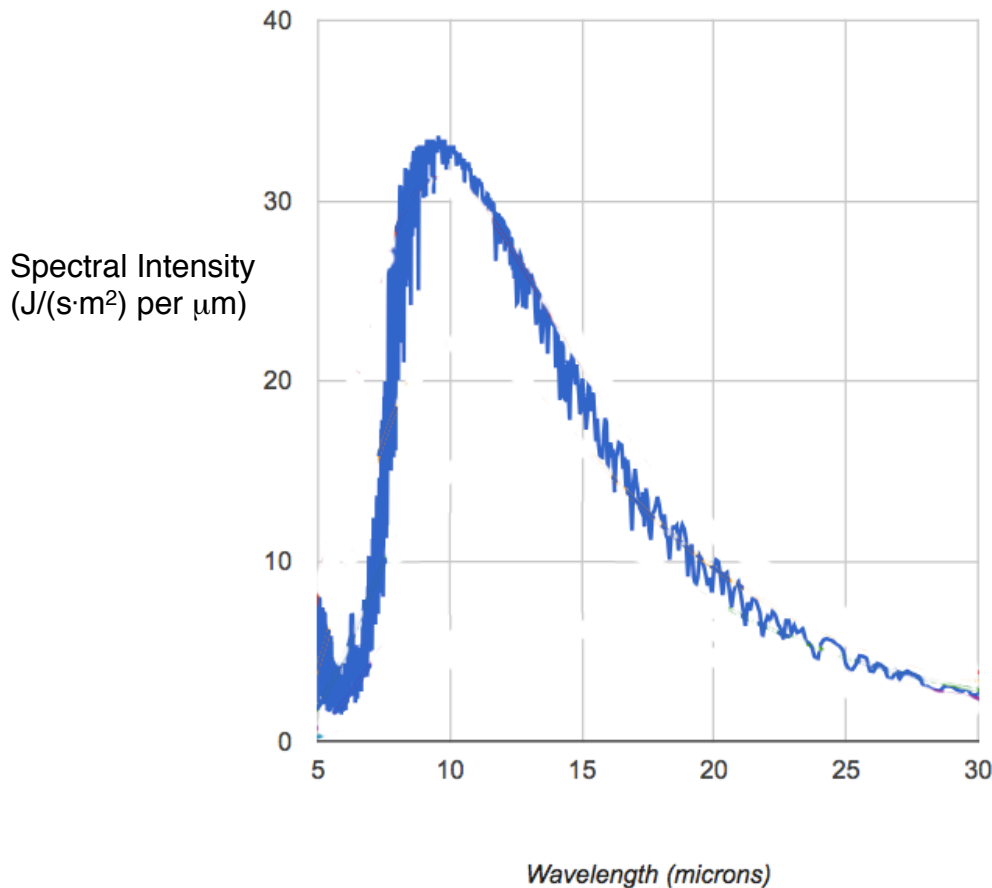


## Worksheet: Working with spectral distributions

The spectrum shown below is a computer simulation of the expected upward IR flux at the top of the Earth's atmosphere assuming the ground temperature is 306.7 K, the atmospheric concentration of water vapor is typical, CO<sub>2</sub> is 0 ppm, and CH<sub>4</sub> is 0 ppm.



To extract useful information from this spectrum use simple geometric approximations of definite integrals:

- Estimate the energy flux (measured in J/(s·m<sup>2</sup>)) for radiation in the bandwidth 13 μm to 17 μm.
- Estimate the total energy flux.