AY 7B Assignment 3

due: Tuesday, February 28

Problem 1: Using near-infrared spectroscopy, one has ascertained the spectral type of a star embedded in dusty gas. One thereby knows the star's intrinsic colors, in particular $(J-K)_\circ$. Additional photometry at $J = 1.22\,\mu$m and $K = 2.2\,\mu$m then gives the color excess E_{J-K}, which turns out to be 0.84 mag.

What is A_V toward this star? (*Hint*: Use the interstellar extinction curve.)

Problem 2: C & O, Problem 3.9

Problem 3: C & O, Problem 3.18

Problem 4: C & O, Problem 3.19

Problem 5: C & O, Problem 12.1

Problem 6: C & O, Problem 12.3

Problem 7: C & O, Problem 12.4