

Solar Physics 2010: Exercises to Lecture 8  
Due Date: 8 June 2010 at 09:00

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## 1 Stix Exercise 4.10

Calculate  $d \ln B_\lambda / d \ln T$  as a function of  $T$  and  $\lambda$ . If the intensity changes by an order of magnitude, how much does the brightness temperature change at  $T = 5000$  K, for the two wavelengths  $\lambda = 150$  nm and  $\lambda = 150$   $\mu$ m?

## 2 Stix Exercise 4.11

What is the difference between the contribution function for the emergent *line intensity* and the contribution function for the *line depression*?