Astronomy 401

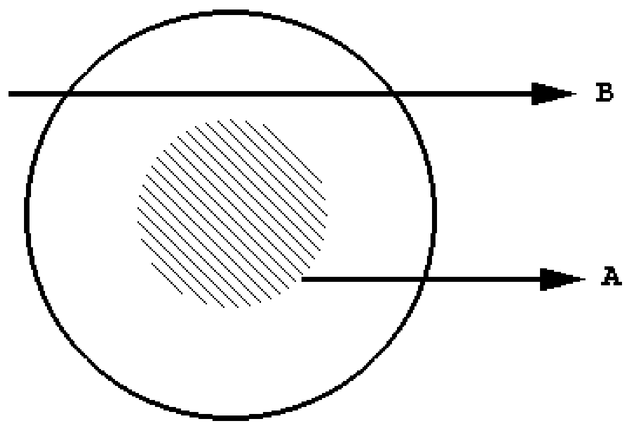
Stars

Homework # 2, Due Thursday, September 27, 2001

Name: ____________________

Student number: ____________________

1. Carroll & Ostlie: problem 3.7
2. Carroll & Ostlie: problem 9.2
3. Carroll & Ostlie: problem 9.3
4. Suppose you are observing the radiation from a spherical interstellar cloud with an optically thick core and an optically thin atmosphere, as shown in the figure below. Suppose both the core and the atmosphere have the same temperature. Will the radiation intensity along a line of sight (A) that intersects the core be larger or smaller than the radiation intensity along a line of sight (B) that only passes through the atmosphere without intersecting the core?



5. Carroll & Ostlie: problem 9.11
6. Carroll & Ostlie: problem 9.12