

## In-class activity 20

This assignment is worth a maximum of 3.0 points, and is due in class today. No in-class assignment is accepted after the end of class.

Work cooperatively and collaboratively as a team on this in-class assignment. Each person in your group will be awarded the same points as the entire assignment. *Turn in this sheet at the end of class, and attach another page if necessary.*

### *Assemble Your Group*

1. [0.5 points.] Find your assigned group members, and sign in below.

Team member: \_\_\_\_\_

Team member: \_\_\_\_\_

Team member: \_\_\_\_\_

Team member: \_\_\_\_\_

### *Flow of Energy to the Surface*

2. [2.5 points.] (Cf. Fix, *Astronomy: Journey to the Cosmic Frontier*, 4/e, pages 396-404, and page 380 (Fig. 16.6), for more details.) On the following page, fill in the interior activity charts for the Sun, as energy (in the form of photons) flows outwards from the core. Every one of the 13 rounded corner boxes should have an entry from the list below. Each term should only be used once.

Absorption spectrum  
Cool H gas currents  
Cooler opaque layers  
(Faint) emission spectrum  
 $\gamma$ -ray ("gamma-ray") photons  
H  
He  
Hotter transparent layers  
Isolated H atoms  
"Spectator" H atoms  
Warm H gas currents  
Visible light photons  
Yellow-hot blackbody radiation

