Name _____ Date _____ Per. _____

Understanding a Radiometer

1. Watch the radiometer as it rotates. Move the light source close to and further from the radiometer. What happens to the speed of the rotation of the vanes? You can also use your hand to block the light being received by the radiometer. How does this change the motion of the radiometer vanes?

2. Again, watch the radiometer as it rotates. Note the direction to which it is rotating. Predict and explain why the radiometer vanes rotate in the direction that you see.

3. You may think that the impulse pressure from the photons of light hitting the white side of the vanes would provide a greater impulse of energy (or push) on the light side, while the photons would be absorbed by the black sides of the vanes resulting in less of an impulse of energy (or push) on the dark vane. If you think this, your rationale would be correct. However, this would cause the vanes to rotate in a direction towards the white vane side. This is obviously not the direction the vanes rotate. So, rethink your ideas from question 2 and write them down here.

4. We'll discuss your ideas and learn the real answers in a classroom group share discussion.