

## Teacher Guidelines – Photometry with SalsaJ

**Step 16:** Can you explain what is happening in the graph and the reason for its shape?

Initially, there is a rapid rise in the star's intensity as the aperture radius increases. This is because to begin with, not all of the star fits into the radius so some of the star is missed, as this increases, more of the star is measured.

The graph begins to plateau once all of the star is within the aperture. The gradual rise is due to the light from the background sky as more of this is measured as the aperture radius continues to increase.

**Step 17:** Use your graph to identify the radius at which the majority of the star's intensity is included within the aperture radius, and minimal amounts of background sky.

**Hint:** Look for the area where the graph begins to plateau.

In the example in Figure 8, an appropriate aperture radius to use would be 10. This is where most of the star is within the aperture radius and you are also measuring minimal levels of the background sky.

**Step 18:** What part of your eye is comparable with the aperture radius used in photometry?

The aperture is comparable to the Iris. This is the part of the eye that controls how much light enters your eye through your pupil.

## Teacher Guidelines – Photometry with Makali'i

**Step 15:** Can you explain what is happening in the graph and the reason for its shape?

Initially, there is a rapid rise in the star's counts as the aperture radius increases. This is because to begin with, not all of the star fits into the radius, as this increases, more of the star is measured.

The graph begins to plateau once all of the star is within the aperture. The gradual rise is due to the light from the background sky as more of this is measured as the aperture radius continues to increase.

**Step 16:** Use your graph to identify the radius at which the majority of the star's counts is included within the aperture radius, and minimal amounts of background sky.

**Hint:** Look for the area where the graph begins to plateau.

In the example in Figure 9, an appropriate aperture radius to use would be 10. This is where most of the star is within the aperture radius and you are also measuring minimal levels of the background sky.

**Step 17:** What part of your eye is comparable with the aperture radius used in photometry?

The aperture is comparable to the Iris. This is the part of the eye that controls how much light enters your eye through your pupil.

You are now ready to perform your photometry measurements. Refer to the **Photometry of Supernovae with Makali'i** worksheet to do this.