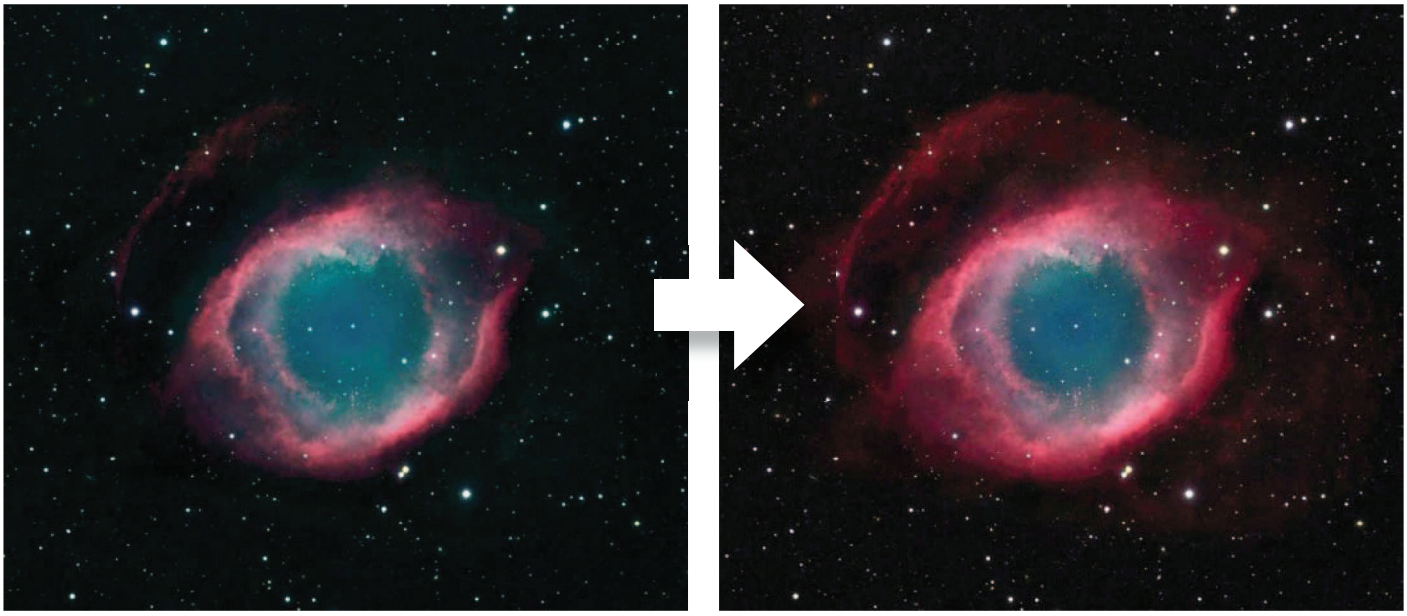
Red Luminance Layering



Boost the nebulosity in your astrophotos with this novel technique.

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In recent years, DSLR and one-shot color (OSC) CCD cameras have surged in popularity with astrophotographers. The sensitivity and noise levels in these camera designs have improved to the point that serious imaging is no longer solely the province of dedicated monochrome CCD cameras with color filters. However, because of the very nature of the DSLR and OSC permanently filtered detectors, it's difficult to do the specialized imaging involved in narrowband enhancement of nebulae and other objects.

Fortunately, you can boost the nebulosity recorded with these cameras by using the *red luminance layering* technique. This method doesn't require any additional filters.

I prefer to image with an OSC camera because it allows me to capture color images in a single exposure. This saves me the expense of having to buy filters and a filter wheel. It also ensures that every time I shoot, I'll automatically have an exposure in every band: unexpected clouds or equipment failures don't interfere with my ability to capture a full set of red, green, and blue images, as can sometimes occur when imaging with monochrome cameras. But often I find that my result lacks the impact of a comparable image recorded using a monochrome camera with color and narrowband filters.

Left: **In this one-shot color (OSC) image, it's difficult to see hydrogen nebulosity in the outer regions of the Helix Nebula (NGC 7293).** ***Right:*** **Creative mixing of the red channel with the other color channels and luminosity in the image makes these faint wisps much more apparent. All images are courtesy of the author.**