One Good Target

With Some Other Sights Worth Seeing While You're in the Neighborhood

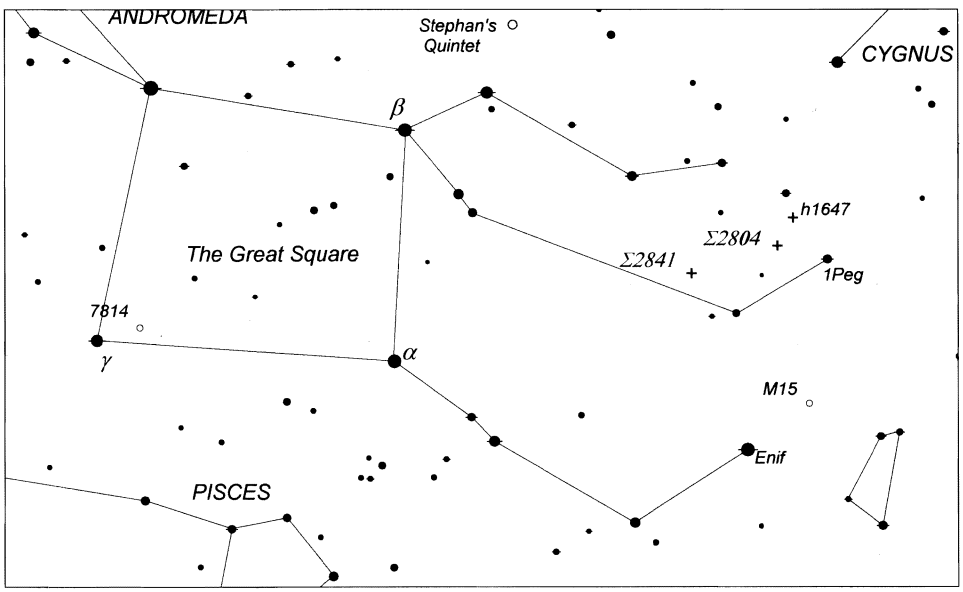
October

Stellar Wonders in the Flying Horse: An Evening Exploring Pegasus

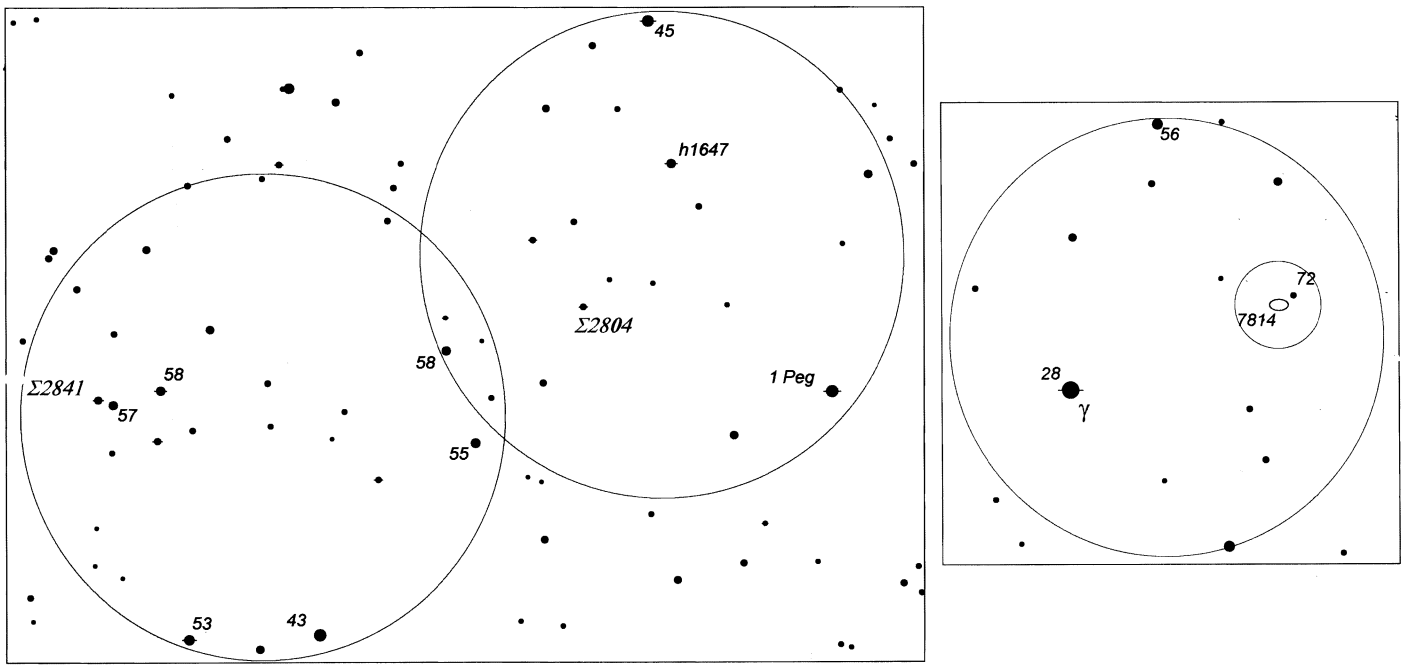
When observers visit the constellation Pegasus (The Flying Horse), they almost always focus on two targets: globular cluster M15 (which OGT covered in October 2019) and Stephan's Quintet (which deserves its own issue of OGT). But there are other sights worth seeing in this part of the sky – this month, we'll cover a few of them.

Let's start with **Enif (Epsilon [ε] Pegasi)**, the bright star most of us use to locate M15. It's easy to find by turning the Summer Triangle into a parallelogram – Enif is the star at the figure's SE corner. We usually see it only in our finderscopes as we hop past it to the cluster, but it's well worth a visit in its own right. It's a very wide pairing of a mag 2.4 yellow primary star and a mag 8.4 violet companion perched 143 arcseconds to the NW – and as storied observer Sir John Herschel (1792-1871) first noticed, it performs a pretty neat trick. If you put it in a medium-powered eyepiece (anywhere from 60x to 100x should work), then gently tap your telescope tube to make the stars jiggle perpendicularly to the line between them, the bright primary star will obediently move back and forth with the tapping, but the fainter star will seem to swing like the pendulum on a grandfather clock, which led Herschel to call Enif *The Pendulum Star*. Why does that happen? Former *Astronomy* magazine columnist Glenn Chaple explains that it's because the brighter star registers on our retinas more quickly than the faint one, and therefore it seems as if the secondary moves a split second after the primary moved, creating the illusion of pendulum-like motion. But whatever the physiological reasons are, the effect is memorable.

This month's targets showing stars to mag 5.5



While we're in the neighborhood, let's visit a group of double stars north of Enif, lying along the Horse's southern foreleg. We'll start with the brightest pair, **1 Pegasi**, which comprises a mag 4.2 yellow-orange primary and a purple mag 9.3 companion 37 arcseconds away. Based on the five magnitude difference in brightness (which means that the primary is 100 times as bright as its faint companion), it might take 50x to 75x to split them. You'll need even more power for our next target, **Struve (Σ) 2804**, a pretty pair of whitish to yellowish stars, mags 7.7 and 8.0, separated by just 3½ arcseconds. Bump the magnification to 200x or more to show them as individuals. North of Σ2804 is a wider double, **h1647** from Sir John Herschel's catalog of double stars (1874). Its components, mag 6.1 and 10.2, are separated by 41 arcseconds and are notable for the deep red-orange color of the primary, which contrasts nicely with the secondary's dim blue-gray hue (if you can see it) – try 50x. Moving to the east brings us to our final double-star target, **Struve (Σ) 2841**, consisting of a mag 6.5 yellow primary and a blue-green mag 8.0 secondary 22 arcseconds to the east. It should split easily at 40-50x.



5° finderscope fields (1° inset) – North at top – stars to mag 8 – selected magnitudes noted – decimals omitted

# of Stars	Limiting Magnitude
1	4.5
4	5.0
7	5.5
13	6.0
35	6.5

Before packing up for the night, we should visit the constellation's most prominent feature, the **Great Square of Pegasus**. It's one of the largest and best-known asterisms in the sky, but not a great place for visual targets, although some observers use the number of stars visible within the Great Square to estimate sky quality – the British magazine *Astronomy Now* published a table a couple years ago with the values shown at right. There's also a nice target for large scope owners at the lower left corner of the Square: mag 10.6 galaxy **NGC 7814**, known as *The Little Sombrero* because it displays a distinct equatorial dust lane similar to that seen in The Sombrero Galaxy (M104). It's easy to find just 3½° NW of Gamma (γ) Pegasi. Medium sized (6" to 10") scopes show an elongated oval with a brighter core, but to see the dust lane you'll need a good dark sky site and at least a 12" scope (but preferably 16" or larger at very high power, 300x or more). The Great Square is also a little-known naked eye tool: if you follow a line from the Square's lower right corner to its upper right corner 4½ steps farther north, it will lead you to **Polaris**, just like the "pointer" stars at the end of the Big Dipper – bringing us to familiar ground, and a fitting spot to wrap up our evening exploring the hidden wonders of the Flying Horse.

Rick Gering / October 2025