One Good Target

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

February

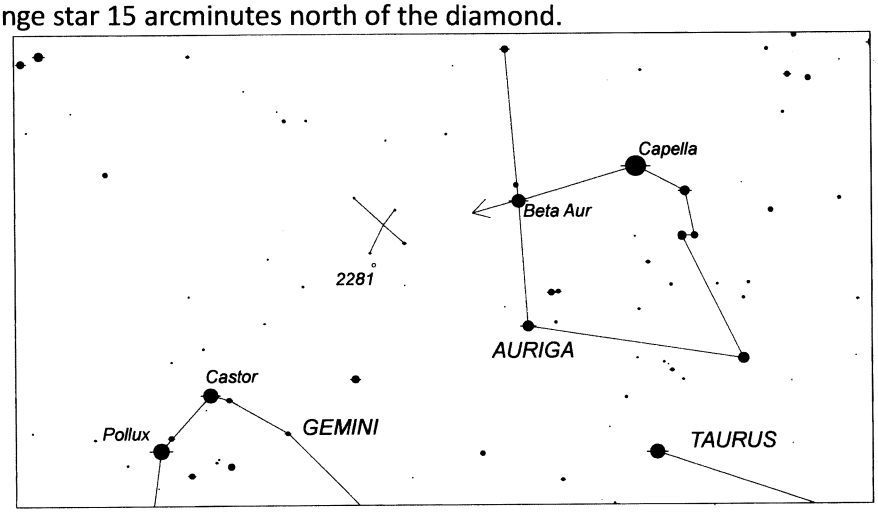
A Neglected Open Cluster in Auriga (NGC 2281)

with side trips to some easily-split doubles, a bright carbon star, and a challenging red dwarf hiding in plain view

Midway between Castor (Alpha [α] Gem) and Capella (Alpha [α] Aur) is a part of the constellation Auriga that is infrequently visited by amateur observers, but chock full of wonderful targets. To get to this underappreciated area, imagine a line from mag 0.1 Capella to mag 1.9 Beta (β) Aur, and extend it one more step. Aim your binoculars or finderscope at that spot, and you'll see a prominent "T" of relatively bright stars. The "T" is part of a large X-shaped group known as **the Charioteer's Cross**, coined by prolific California amateur Mathew Wedel (*Sky & Telescope* "Binocular Highlight" column, November 2016). It just fits in a 5° field. Once you've checked that out, adjust the view to match the upper 5° field in the finding chart on the next page, and take a closer look at the star marking the center of the X: that's **Psi-5 (ψ5) Aurigae**, a yellowish mag 5.3 star with a mag 8.3 companion a comfortable 36 arcseconds away, easily split even at magnifications as low as 25x.

Back in the finderscope, look near the southern tip of the "T" to find **NCG 2281**, sometimes called *the Broken Heart Cluster*. At integrated magnitude 5.4 it's bright enough to be seen in the finder, but it's bigger than you might expect, spanning 15 arcminutes – half as wide as the full Moon. Finderscopes or binoculars show a cloudy spot with a bright unresolved center. A prominent diamond-shaped central group is easily seen in 3" to 4" scopes at low power (20x or so); increasing it to 100x will resolve a couple dozen stars. Larger scopes (10"-12") reveal numerous close doubles, including a nice red and blue pair at one corner of the central diamond. If you have a good imagination, you might be able to see the "floppy fish" described in a Cloudy Nights post: the diamond marks the spot where its starry tail joins its body, as it jumps out of the water like a trout trying to catch a fly represented by the mag 7.3 orange star 15 arcminutes north of the diamond.

This month's target field showing stars to mag 5.5 (North at top)

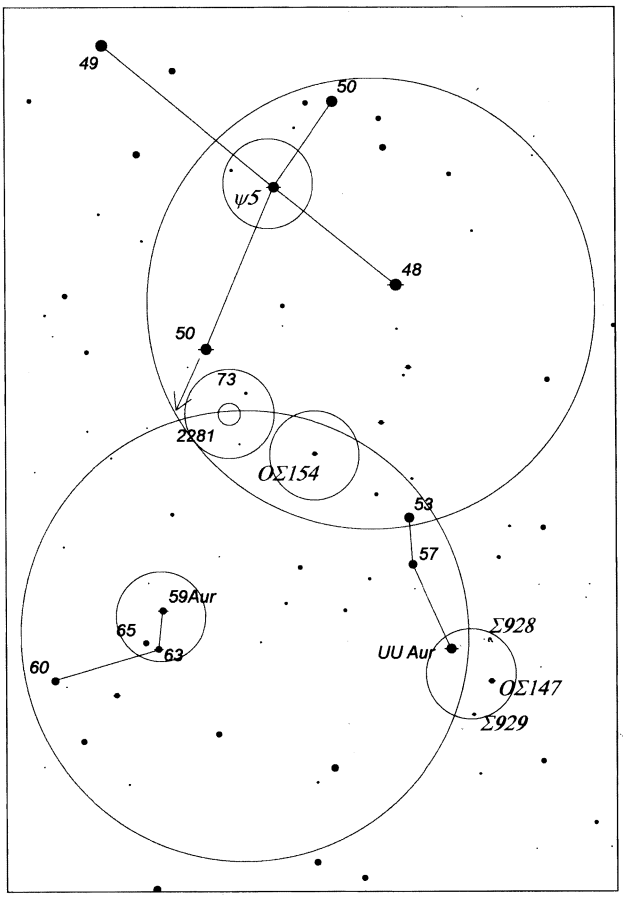


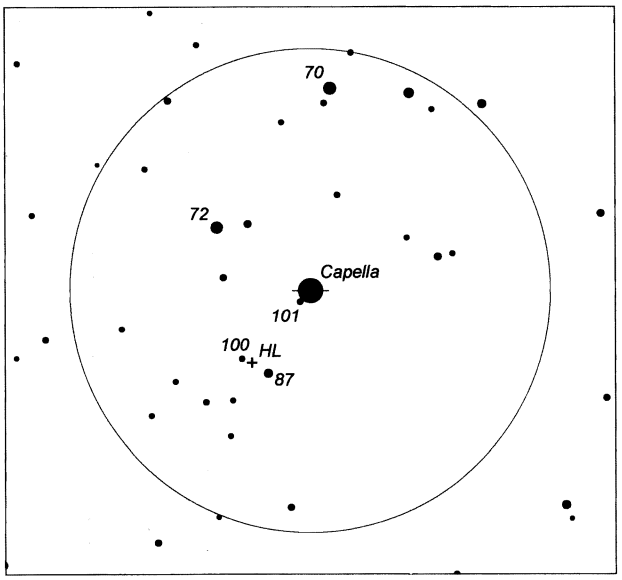
Our next stop, less than a degree SW of NGC 2281, is another double, **OΣ154**, from the catalog of Otto Struve. It pairs a deep orange mag 6.9 primary with a mag 9.4 secondary 24 arcseconds away, and should split cleanly at 40x or more. Next, move your scope to put OΣ154 near the north edge of the finder (as shown in the lower 5° field on the finder chart), and find the lazy-L shaped mag 6 group shown at the east side of the field. The end of the short leg of the "L" is **59 Aurigae**, another easily-split double – try 50x for this one. The yellowish mag 6.2 primary contrasts nicely with a dark blue mag 9.5 companion 22 arcseconds to its SW.

Now switch to the other side of the finderscope field and take a look at red-orange carbon star **UU Aurigae**, at the south end of a mag 5 arc. It's bright for a carbon star, ranging from mag 5.1 to 6.6 over a period of 235 days. Three nice doubles lie within the same 1° eyepiece field as UU Aur and form an arc wrapping around it to the west. The middle one is an Otto Struve triple, **OΣ147**, in which a yellow-orange mag 6.6 primary forms a pretty equilateral triangle with a dark yellow mag 8.7 star 43 arcseconds to its ENE and a purplish mag 9.9 star 45 arcseconds to its ESE. The trio splits nicely at low power (30x will do it). OΣ147 sits within a larger equilateral triangle of field stars, like the Stargate asterism in Corvus (but not as well-centered). The pairs at the north and south ends of the arc take much more power to reveal their duplexity. The north one, **Struve (Σ) 928**, is a yellow and pale blue pair at mags 7.9 and 8.6 separated by only 3½ arcseconds, and may need 150x to give you a clean split. At the arc's south end, **Struve (Σ) 929** is another yellow and blue pair, mags 7.2 and 8.3, separated by 6 arcseconds. It will split at medium power – try 100x.

(Right) 5° finder fields (1° insets):
stars to mag 8, North at top,
selected magnitudes noted, decimals omitted

(Below) Capella HL (1° field):
stars to mag 11, North at top,
selected magnitudes noted, decimals omitted





Before packing up for the night, go back to our starting point and put bright Capella in the eyepiece. Just 12 arcminutes SE you'll find a red dwarf pair, **Capella HL**, mag 10.2 and 13.7 with a separation of only 3 arcseconds – don't expect to split the pair, or to see the 13.7 star. A finding chart appears above, but note that there are two stars at the "+": HL is the one closer to the mag 8.7 star. You'll have to get bright Capella out of the field to see the red dwarf. It's a remarkable view, and a fitting place to end our evening in Auriga's neglected spaces.

Rick Gering / February 2026