

One Good Target

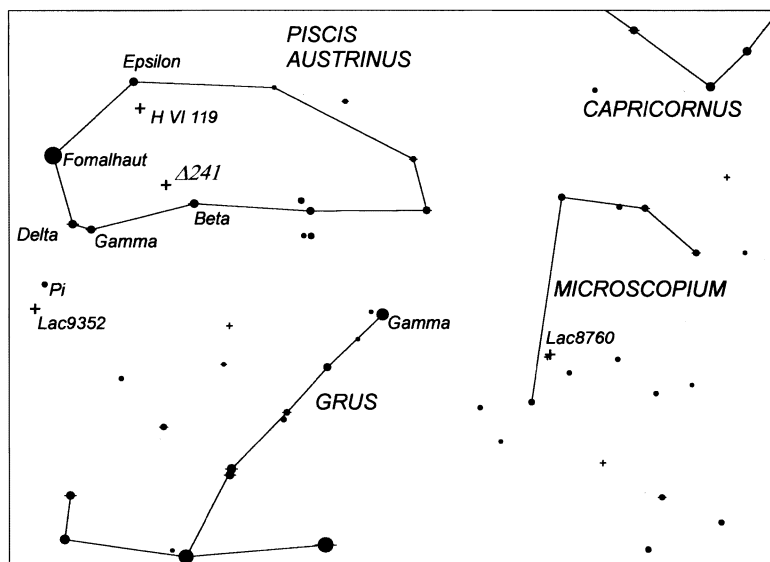
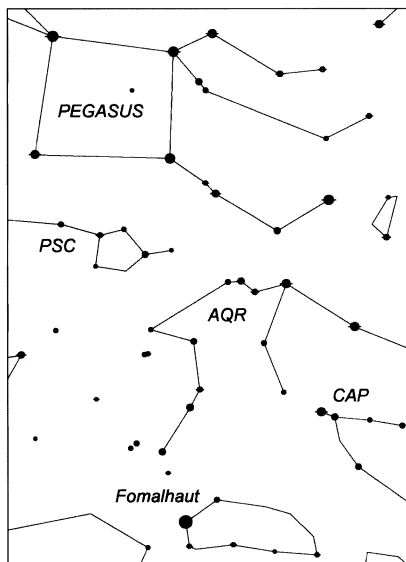
With Some Other Sights Worth Seeing
While You're in the Neighborhood

October

The Sky South of Aquarius and Capricornus
with side trips to a neglected bright beacon, a few doubles,
and two unexpectedly bright red dwarf stars

When large parts of the world were not yet explored, mapmakers labeled the still-unknown areas with images of huge predatory sea serpents, or ominous warnings like "*here there be dragons.*" For many amateurs in the mid-northern latitudes, the constellations south of Aquarius and Capricornus fall into that same category of unexplored and therefore frightening terrain – but it doesn't have to be that way, and there's no better time to find that out than on October nights, when this part of the sky is on meridian.

The key to this area is the bright star **Fomalhaut** (Alpha [α] Piscis Austrini). At magnitude 1.2, it's brighter than Regulus, Castor, or any of the stars in the Big Dipper or Orion's Belt. It's easy to find but seldom noticed, because it sits all by itself in an area with no other bright stars nearby. Follow a line along the west side of the Great Square of Pegasus southward three more steps and you can't miss it. "Fomalhaut" means "the mouth of the fish" in recognition of its prominent position in the constellation Piscis Austrinus (The Southern Fish). It's a neighbor of our Sun, located just 22 light years away.



Left – finding Fomalhaut: North at top, stars to mag 4.5

Right – this month's targets: North at top, stars to mag 5.5

Once you've found Fomalhaut, you're within a 5° finderscope field of several nice doubles, as shown on the accompanying finder chart. Putting Fomalhaut at the SE edge will put mag 4.2 Epsilon (ε) PsA at the opposite NW edge, with multiple star **H VI 119** in the field. That star's unwieldy name refers to William Herschel's list of what he called "class VI" pairs – those with separations wider than 60 arcseconds – published from 1782 to 1785. H VI 119 is a triple consisting of a distinctly yellow mag 6.3 primary 87 arcseconds away from a secondary that initially looks like a single mag 7.1 bluish star, but high magnification reveals it to be a close pair, mags 7.3 and 8.1, separated by 3 arcseconds. Splitting the primary pair is easy – 25x is more than enough – but expect to need a steady atmosphere and 250x to split the fainter pair. How much magnification do you need before you can begin to tell that the secondary "star" is actually a close pair?

Next, put Fomalhaut near the NE edge of the finderscope field, and look near the south edge to find two challenging doubles. The eastern one is **Delta (δ) PsA**, consisting of mag 4.2 and 9.2 stars separated by 5 arcseconds; the western one is **Gamma (γ) PsA**, mags 4.5 and 8.0 with a 4 arcsecond separation. These pairs are almost twins, with similar magnitudes, separations, and position angles – but they're also difficult, for three cumulative reasons: their components are close together, their secondaries are much fainter than their primaries, and they're always relatively close to the horizon where our view is compromised by a thick layer of atmosphere. You'll need a 6 inch or larger scope and 200x or more to see them both. Unfortunately, they're nearly a degree away from one another, a little too far apart to fit them both in a single field with enough magnification to split them.

To bring us back to more reasonable magnifications, put Gamma at the east edge of the finderscope field and find **Beta (β) PsA** near the west edge. Beta comprises a yellowish mag 4.4 primary and a white mag 7.9 secondary 30 arcseconds south. It's easier to split than Delta or Gamma, but don't be fooled by its 30 arcsecond separation: the 3.5 magnitude difference in brightness between the two component stars may require 75-100x to resolve.

In the same finder field as Beta is an attractive and very easy pair, **Dunlop (Δ) 241**, from the catalog of southern hemisphere doubles compiled by Scottish astronomer James Dunlop in 1829. Consisting of an orange mag 5.8 primary with an ambiguously-colored mag 7.6 secondary 90 arcseconds away, this pair will split easily at magnifications as low as 25x.

With Delta and Gamma at the NW edge of the finder field, you can use mag 5.1 star Pi (π) PsA as your landmark for finding a relatively bright red dwarf star, **Lacaille 9352**. Less than 11 light years away from us, this star shines at mag 7.4 – pretty bright for a red dwarf – and is fairly easy to center in the eyepiece once you have Pi in the finder view. See the accompanying chart for details.

Before packing up for the night, take the opportunity to add two probably new names, Microscopium and Grus, to your "constellations I've observed" life list. Scan SW from Fomalhaut (towards Beta PsA) to find a mag 3.0 star, Gamma (γ) Gruis in the constellation Grus (The Crane), a bird the ancient Egyptians associated with astronomy because of its high altitude flight. Once you have Gamma Gru in your finderscope, you can use a prominent triangle and an easily-followed trail of stars to lead you to tonight's final target, **Lacaille 8760** (also catalogued as **AX Microscopii**), the brightest of all red dwarf stars at mag 6.7, and a close neighbor located only 13 light years from the Sun. Reaching it always gives me a feeling of accomplishment, making this a fitting spot to wind up our evening's adventures in the sky south of Aquarius and Capricornus.

Rick Gering / October 2026

Finding charts

Around Fomalhaut:
5° field, stars to mag 6.0

H VI 119:
5° field, stars to mag 8.0

$\Delta 241$:
5° field, stars to mag 8.0

Lac 9352:
5° field (1° inset), stars to mag 9.0

Lac 8760:
5° fields, stars to mag 7.5

All charts:
North at top,
selected magnitudes noted,
decimals omitted

