

The Hercules Cluster, M13, in Hercules — featured this month in "July Skies."

Image © Jon Martin

## JULY SKIES

With the aim of making this column useful to everyone, beginner and experienced observer alike, we'll be looking at fewer targets beyond the solar system, but spending more time describing each one—just like we did last month. We'll continue the separate "Getting Your Bearings" section whenever space permits, so beginners can find that month's stars and constellations without slowing us down here. I hope that regardless of your level, you'll give each target due consideration—the experienced observer may rediscover forgotten objects, while the beginners can get a feel for what's out there—the "range of possibility" even if they can't yet get there on their own. —The editor

As July begins, the epilogue of the June 30th Venus-Jupiter conjunction unfolds—from their closest of  $0.3^{\circ}$  on the 30th, the pair widens to  $0.6^{\circ}$  on July 1st, 1° on the 2nd, and about  $1.5^{\circ}$  on the 3rd; after that, they separate a little less than  $1/2^{\circ}$  each day, until the two planets lie just over 3° apart on the 7th.... Even if clouds prevent observation at their closest, watching the planets' progress every few nights will still be something to experience.

On the 18th, Venus pairs with a 3-day-old, thin crescent moon-

#### In the Observer

President's Message	
Society Directory	
Schedule of Events	
DAS News / Volunteer Opportunities3	
<i>About the DAS</i>	
Getting Your Bearings	
<i>Space Day.</i>	

they'll both fit easily in a 2° field, so either a very low-power telescope or binoculars should make a good twilight view. Venus will be a crescent, too—if its outline isn't apparent at low magnification, think about checking it out with higher power. As the month progresses, Venus' crescent will get increasingly larger

### by Zachary Singer

and thinner, until the planet is lost in the Sun's glare (inferior conjunction is in mid-August).

Saturn is now found somewhat west of south at nightfall, and it'll more or less maintain its position in the southern sky through the month. Though Saturn is technically in Libra, many observers will find it easier to think of its location as just northwest of the "claws" in Scorpius.

Two weak meteor showers, the Delta Aquariids and the Alpha Capricornids, peak at the end of July, but moonlight will wash them out.

Beyond the solar system this month, our travels take us to the constellation Hercules, with side trips to Ophiuchus and Scorpius afterward. Hercules, as noted in this issue's "Getting Your Bearings," is known for the keystone-shaped asterism at its center and the magnificent globular cluster, M13. Sadly, though, M13 is often the only thing

1 - 7

15

18

23

Full Moon

New Moon

Last-Ouarter Moon

First-Quarter Moon

Sky Calendar

to 3° by the 7th (see "July Skies")

Moon and Venus less than 2° apart

Venus and Jupiter 0.6° apart, widening

that beginners and experienced observers see in Hercules, and that's a waste—there are many beautiful binary stars systems and deep-sky objects there. We'll start with some of the binaries, and then head into deeper space.

Rasalgethi, at 17h

15m,  $+14^{\circ}$  23', is also known as Alpha ( $\alpha$ ) Herculis and described in various sources as a "red-orange and green" pair, or even "orange and *emerald* green" [italics mine]—which sure would make you curious! Realistically, I observed Rasalgethi for a couple of years with a 6-inch reflector and saw only the most subtle green tint, if there even was any—until last year, when it appeared as a blazing chrome-orange and green duo in my 12-inch scope. Just last week, though, the same 12-

### **JULY 2015**

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#### PRESIDENT'S MESSAGE by Ron Hranac

#### The joys of astronomy on the road

What comes to mind when you read the phrase, "astronomy on the road"? Loading your scope and accessories in the trunk of your car and heading for a favorite observing site? Carrying binoculars or a small scope on a business or vacation trip? Visiting an observatory, planetarium, or science museum in another state? Reading your favorite astro magazine during a flight?

One of the enjoyable aspects of amateur astronomy is that it can be done just about anywhere. Though it's easy to take a scope or binoculars out into your front yard, or make a short trip to the Chamberlin Observatory or the DAS dark-sky site, there's no reason to limit astronomy to familiar local activities. Over the years, I've done a fair amount of personal and business travel, and in many instances have been able to make astronomy on the road part of that travel.

I grew up in the Pacific Northwest, and return there from time to time to visit family. More often than not, I take a small scope or binoculars along for the trip. My wife's sister and her husband are semi-retired farmers-I say semi-retired because farmers never really retire-in southeastern Idaho. I've been taking astro gear to the farm for the better part of the past three decades, sharing views of the night sky with my sister-in-law and her hubby, nieces and nephews, and my nieces' and nephews' children. The farm, located about 50 miles east of Pocatello, has some very dark skies. The last time we visited, though, I encouraged some of the younger kids to draw pictures of the sunspots they saw through a solar scope. My grand-nephew, still in elementary school, did a great job with his sketches, capturing the spots' penumbras and umbras.

During one of our family vacations several years ago, I took my 10x70 binoculars along for a little casual observing. While passing through Spokane's airport security on the return home, the woman operating the X-ray machine asked if I would mind removing the binoculars from their carrying case. I obliged, and she said, "I have never seen binoculars that big before, and just wanted to look at them in person."

I've taken a compact 85mm refractor on several business and personal trips over the years. At one airport somewhere in the Midwest, the guy running the X-ray machine commented, "Ah, a refractor. Amateur astronomer?" There was no one else in line, so we chatted for several minutes about the hobby and the scope I was carrying. Turns out he was an amateur astronomer, too.

Sometimes astronomy on the road is limited to gazing at the night sky naked-eye from a hotel

**Continued on Page 8** 

## DAS SCHEDULE

### **JULY 2015**

- 6-11 ALCON, Las Cruces, NM
- E-Board Meeting—At DU's Historic Chamberlin Observatory, 7:30 p.m.
- 17-19 Dark Sky Weekend-EGK Dark Site & Brooks Observatory
- DAS Picnic-DU's Historic Chamberlin Observatory-Starts at 4 p.m.
- Open House-DU's Historic Chamberlin Observatory-Starts at 8:30 p.m.
- General Meeting at DU's Olin Hall, 7:30 p.m., -See p. 3 for details

During Open House, volunteer members of the DAS bring their telescopes to the Chamberlin Observatory's front (south) lawn, so the public can enjoy views of the stars and planets, try out different telescope designs, and get advice from DAS members. The Observatory is open too (costs listed below), and its historic 20-inch telescope is open for observing with no reservations necessary.

Open House costs (non-members): If the skies are clear, \$2/person (\$5/family), \$1/person in inclement weather. DU students with ID, and DAS members free.

Public Nights feature a presentation on astronomical subjects and a small-group observing session on the historic 20-inch telescope (weather permitting), at Chamberlin Observatory on Tuesday and Thursday evenings (except holidays), beginning at the following times:

March 10 - September 30 at 8:30 P.M.

October 1 - March 9 at 7:30 P.M.

Public Night costs (non-members): \$4/adult, \$3/child and students with ID. DAS members and DU students with ID: free.

Members of the public (non-DAS/DU, as above), please make reservations via our website (www. denverastro.org) or call (303) 871-5172.

#### **Society Directory**

#### **DAS Executive Board**

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The Executive Board conducts the business of the DAS at 7:30 p.m., at Chamberlin Observatory. Please see the Schedule of Events for meeting dates. All members are welcome. http://www.denverastro.org

The Denver Astronomical Society

## DAS NEWS

#### Volunteer Opportunities

July 7 or 8: Easter Seals of Colorado Rocky Mountain Village site in Empire. Boy Scout Troop 506 in Arvada would like some DAS members to come to their summer camp to help the boys work on the Astronomy merit badge. There will be 10-12 scouts between the ages of 12-15, and 3-4 adult leaders present. Whoever goes is welcome to join them for dinner and stay the night (they will have a tent set aside if needed). I will send the merit badge requirements to those who sign up. Please note which day(s) you are available in your email.

July 11, 8:30pm: Candelas Star Party at Candelas Swim and Fitness Club at Townview in Arvada. This event was previously postponed due to inclement weather. They'd like us to come and bring out scopes for some nighttime observing.

July 13-17, 9:30-11:30am (any

day): St. Stephen's Episcopal Church in Aurora. Rev. Carol Meredith has asked us to come out to their annual community summer camp. The theme this year is "Reaching Beyond the Stars." There will be 60-65 latino kids and their families in attendance (they all speak English). They have a parking lot to set up solar scopes and also a basement for a presentation. They're open to suggestions about the activity but liked the idea of solar observing and Ron #3's meteorite collection. Please note which day(s) you are available in your email.

To volunteer, please contact Lindsey Shaw at *external@denverastro*. *org*—and thanks!

#### DAS General Meeting

**Friday, July 31st, 7:30pm:** Dr. Emily M. Levesque, of the University of Colorado, Boulder, will present "The Weirdest Stars in the Universe." Come learn more about enormous red supergiants, core-collapse supernovae (and their impostors), neutron stars, and of course, Thorne-Żytkow objects, along with a comparison of Hollywood vs. actual astronomy!

Dr. Levesque has lectured at the Space Telescope Science Institute (STScI), in Baltimore, and is a Hubble Fellow and a former Einstein Fellow—her long-term research focuses on massive stellar astrophysics, and she's working toward "improving our overall understanding of massive stars, both locally and in the early universe, so that we can effectively use them as cosmological tools." In 2014, Dr. Levesque received the Annie Jump Cannon Award from the American Astronomical Society for her work with gamma-ray bursts in exploring the fundamentals of stellar astrophysics and cosmology.

(Bio information from Dr. Levesque's and the AAS's website.)

The meeting will be held at **DU's Olin Hall, Room 105**, and all present will be invited to a reception following the meeting at DU's Historic Chamberlin Observatory. Coffee and light refreshments will be served.

#### DAS Picnic

Our annual picnic is scheduled for **4:00 p.m. on Saturday, July 25th**, at DU's historic Chamberlin Observatory, followed that evening by our monthly Open House. Members and guests should bring a favorite side dish (salad, veggie, dessert, etc.). DAS will provide the main course—BBQ—along with plates, napkins, flatware, soft drinks, and ice.

#### Writers Wanted

The Denver Astronomical Society is looking for good, volunteer writers to contribute articles for *The Observer's* "This Month's Skies."

Are you brimming with ideas about how to describe celestial events? If you are, please contact the editor, Zachary Singer, at *editor@denverastro.org* 

## ABOUT THE DAS

Membership in the Denver Astronomical Society is open to anyone wishing to join. The DAS provides trained volunteers who host educational and public outreach events at the University of Denver's Historic Chamberlin Observatory, which the DAS helped place on the National Register of Historic Places. First light at Chamberlin in 1894 was a public night of viewing, a tradition the DAS has helped maintain since its founding in 1952.

The DAS is a long-time member in good standing of the Astronomical League and

the International Dark Sky Association. The DAS's mission is to provide its members a forum for increasing and sharing their knowledge of astronomy, to promote astronomical education to the public, and to preserve Historic Chamberlin Observatory and its telescope in cooperation with the University of Denver.

The DAS is a 501 (c)(3) tax-exempt corporation and has established three tax-deductible funds: the Van Nattan-Hansen Scholarship Fund, the DAS General Fund, and the Ed-

mund G. Kline Dark Site Fund.

More information about DAS activities and membership benefits is available on the DAS website at *www.denverastro.org*.



# **GETTING YOUR BEARINGS**

#### Finding Hercules and Scorpius

This month, we'll locate two constellations, Hercules and Scorpius. They're both at their highest around 10:30 p.m. mid-month, one nearly overhead and one low, with the constellation Ophiuchus between them. The first, Hercules, is well-known for both its star attraction, M13, and the keystone-shaped asterism that contains it. The keystone, and for that matter, the rest of Hercules' outline, is bright enough to be seen easily on a decent night; at the same time, its brightest stars are only 3rd and 4th magnitude and don't immediately jump out at you. To find Hercules, then, we'll use two bright stars on either side of it-Vega and Arcturus.

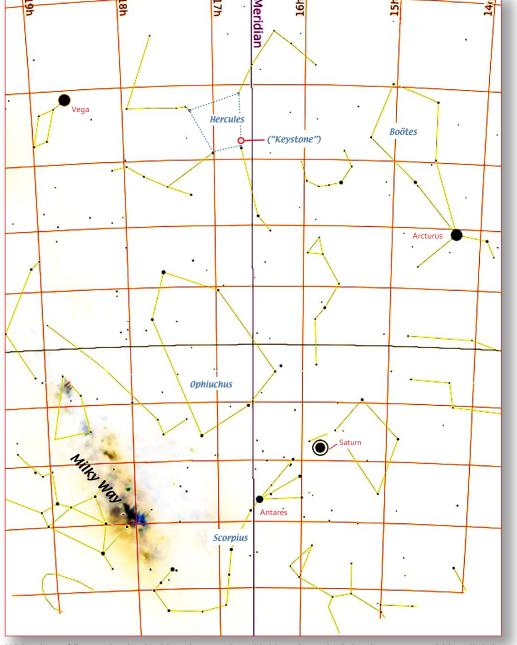
At the beginning of July, Vega is the secondbrightest star in our sky, and it's easily found at 10:30 p.m. by pointing your toes south and looking straight up-Vega will be off to your left, somewhat east of the Meridian; by the end of the month, it'll be almost directly overhead. The star's bright, cool-white glow will be unmistakable, as its nearest rivals lie at least 20° away and are at least 3/4 of a magnitude dimmer. (Vega is also one of three stars making up the Summer Triangle, an important landmark we'll explore next month.)

Arcturus, meanwhile, resides as always at the end of a curve following from the arc of the Big Dipper's handle, as we saw in this column last month. (If you missed it, look for the link for the June '15 issue at http://www.denverastro.org/ observer.html.) Arcturus has moved westward since then, and now commands the sky from its new position about 50° above the western horizon.

Now that we've got our landmarks, you'll find Hercules' keystone along the line from Vega to Arcturus (see map). At 10:30 p.m. in July, the keystone is more or less straight up-a little eastward of there at the beginning of the month and a little westward at the end. As you become more familiar with the keystone's outline and relative location, it will become easy to find it just by heading in the right direction from Vega.

The keystone is a perfect jumping-off point for the rest of Hercules and the edges of neighboring constellations, but as it moves westward in the sky and its orientation changes, its shape is easy to lose track of, and it becomes possible to confuse one keystone star with another. Just remember that the southern side of the keystone is the narrowest, and you won't get lost.

Scorpius is more straightforward to locate and keep track of; unlike many constellations, it looks like its namesake-in this case, a very distinctive "scorpion" shape, complete with stinger! At nightfall this month, you'll find Scorpius flying low, just above the southern horizon (and so directly below Hercules-and Ophiuchus-when they're



17h

œ

16h

Wide view of Denver's sky, looking due south at 10:30pm in early July; the stars would be slightly eastward (to the left) July 1 and westward (rightward) later in the month. (See "July Skies" for detailed maps.) Chart produced with Stellarium software under GNU license and then enhanced

at their highest). As another guide, look for a telltale bright red-orange star in that area-it's 1st-magnitude Antares, a fascinating red supergiant, and the center of the scorpion's body.

Unlike Hercules, many of the stars in Scorpius are bright-2nd magnitude or better-making the outline a little easier to see. This year, as a bonus, Saturn is just west of the claw, helping to locate the constellation and providing something wonderful to look at. Unfortunately for us, though, Scorpius is low enough in Denver's skies that you'll need a clear horizon-otherwise the southernmost parts of the constellation easily disappear behind even low-slung structures and trees. 00

### ... from the editor

## SPACE DAY

DAS Volunteers at Denver Museum of Nature and Science

We had a great event at the Denver Museum of Nature and Science on May 31st. The clouds came and went, but we had some decent views of the Sun in both white light and H–Alpha. Several hundred visitors had a chance to take a peek at the Sun through the DAS scopes that were set up on the west patio.

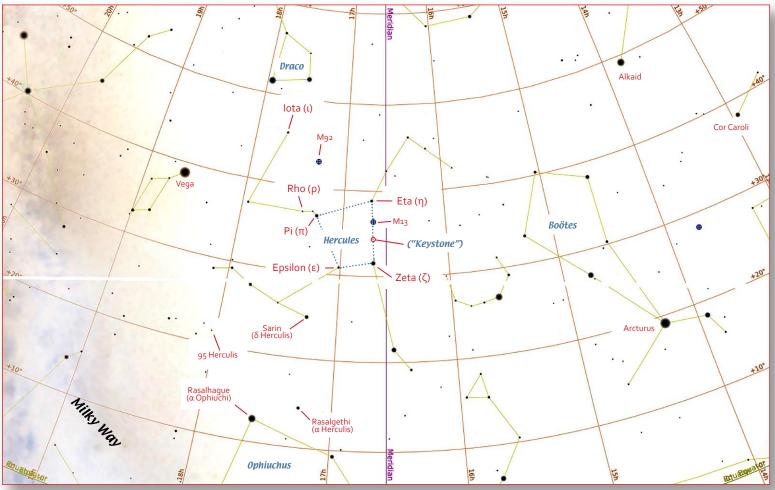
Thanks very much to our volunteers for participating in Space Day!





Photos above and left  $\ensuremath{\mathbb{C}}$  Lindsey Shaw; photo below  $\ensuremath{\mathbb{C}}$  Ron Hranac.





Section of the Denver sky in early July at 10:30 p.m., as viewed when facing south and looking straight up. This map contains all of the objects in Hercules mentioned in "July Skies," as well as some stars and constellations from last month, for a frame of reference.

### JULY SKIES Continued from Page 1

Chart produced with Stellarium software under GNU license, and then enhanced.

inch failed to show those hues, and my friend and I both saw a pale, cream-orange star with a white (maybe "bluish-white") companion.

Either way, Rasalgethi is both a beauty to look at, and a fascinating star system. The main pair is listed as 4.6-4.8 seconds of arc apart, depending on your source; it's easy to split in a 6-inch scope once you bring up the power. The orange (or red-orange) primary is a supergiant, rather like Betelgeuse but a little smaller-so it would "only" extend out past Mars' orbit if it were to replace our sun. Its companion orbits more than 500 astronomical units (AU) away-more than 12 times the average Pluto-Sun distance-and is itself binary, with two large stars a bit less than half an AU apart. While the companion's stars complete their mutual orbit in under two months, it takes several thousand years for them to circle the primary.

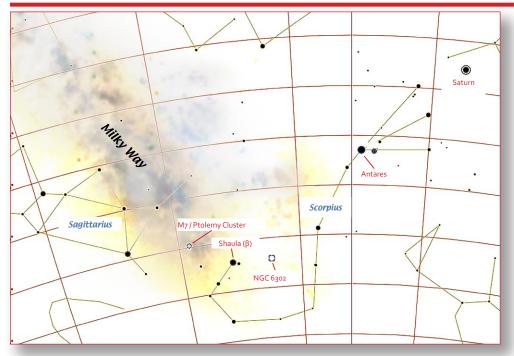
To find Rasalgethi (it's shown in this article's Hercules map), starhop diagonally from the "top-right"/northwestern star in Hercules' keystone, Eta ( $\eta$ ) Herculis, to the "bottom-left"/southeastern keystone-star, Epsilon ( $\epsilon$ ) Herculis. Keep going in the same direction, for about the same distance, to the next star of about-equal brightness, "Sarin," or Delta ( $\delta$ ) Herculis. Make one more hop straight south to Rasalgethi, which is about as bright to the eye as Sarin and the keystone stars.

If you have it right, you'll see a noticeably brighter, 2nd-magnitude star about 5° to the east. That star is Rasalhague, of the neighboring constellation Ophiuchus-once you get used to their relative positions, you can just find Rasalhague and make the short hop directly from there to Rasalgethi, if that's easier.

Interestingly, our next star, 95 Herculis, bears a visual description similar to Rasalgethi's-in this case, many authorities defer to Admiral Smyth's "apple-green and cherry-red." The stars' spectral classes, though, are different from Rasalgethi's, and as Robert Burnham, Jr. noted, 95 Herculis is "notorious among observers for discordant estimates of color." (He went on to describe differences across time with the same observer, as well as differences between observers.) In the 12inch recently, 95 Herculis looked very pale orange (or perhaps slightly reddish) and "cool" or "clean" white to me; my friend reported similar. The observations match what I saw a year ago.

If you'd like to see for yourself, 95 Herculis is at 18h 02m, +21° 36', and it's certainly worth a look. The binary's separation of 6.2 arcseconds makes it an easy split, and part of the reason for that greater width, compared to Rasalgethi, is an orbit in excess of 900 AU. When you look at 95 Herculis, think about that distance and consider that it means the two stars are more than 5 light-days apart-sending a radio message from one to the other and getting a reply would take about a week and a half-and as Prof. James Kaler (U. of Illinois) reports, the pair's orbital period is more than 11,000 years.

Unfortunately, 95 Herculis' position and 4th-magnitude brightness mean that it might be hard for beginners to star-hop to-but if you'd like to give it a shot, head to Sarin, like you did for Rasalgethi. Then, instead of making the final hop to the south, head a little south of eastward, for about the same distance as you travelled from Sarin to Rasalgethi. You should find 95 Herculis there, in **Continued on Page 7** 



Scorpius, surrounding constellations, and the Milky Way. This area is filled with deep-sky objects; for clarity, only those in "July Skies" are plotted. Chart produced with Stellarium software under GNU license, and then enhanced.

#### JULY SKIES Continued from Page 6

a small clump of 4th- and 5th-magnitude stars. If you have a go-to system, though, it's a safe bet that 95 will be in its catalog.

The last double star on our tour is Rho (0) Herculis, which is the easiest of our three to navigate to-it's close enough to a Hercules "keystone star" to share a finderscope's field. Rho continues our theme about colors described and seen: In this case, the pair is characterized as "bluish-white" and "pale emerald," and this time, my friend saw the colors-fair and square, before being told of their description. (I didn't-to me, they were a "clean white pair," even after extended observation.) These young stars orbit each other at about 500 AU, and are a little more than 4 arcseconds apart from our point of view. Like Rasalgethi, they should split nicely in a moderate telescope.

Rho Herculis, at 17h 24m, +37° 08', is just under 2° east of Pi ( $\pi$ ) Herculis, the "top-left"/northeast star in the keystone. If you center Pi in your finderscope, Rho should be near the eastern edge (don't forget to account for the "upside-down" view in a straight-through finderscope). Another star of similar brightness to Rho, e Herculis, lies roughly between them, so you'll know you're on the right track when you see it-but another pretender, c Herculis, is more or less directly opposite from Rho.

The takeaway from visiting these binaries is that visual descriptions aren't always as accurate as we might like, for a variety of reasons: perceptions of color and "wow-factor" are subjective at best, observers bring various philosophies on restraint versus "poetic license" to describing what they see, and seeing conditions and equipment alter the view. Double stars aren't the only objects that this applies to-as we'll see, the same goes for deep-sky objects, too, and we'll start with two globular clusters in Hercules, before heading south for Scorpius.

With apologies to our advanced observers, we'll start with M13, a globular they've no doubt seen before. As they would tell you, M13, or the "Hercules Cluster," is the "best" globular you can see at our latitude—so bright it's often visible in a 6x30 finderscope in the city.

Part of M13's fame, though, comes from its high declination (celestial "latitude"), which places it much higher in the Denver sky than its rivals, last month's M5 among them. This advantaged position means that M13 is visible for longer on a given night, visible for more nights each year, and less impacted by atmospheric interference than its more southern competition. Combine all that with a location in the Hercules keystone that makes finding it simple, and it's no wonder M13 is famous!

I say this to you because M13 really is gorgeous to look at, but there's a common belief that it's so much "better" than other globulars that many of them aren't worth bothering with-and yet M5, for example, actually outshines it. The trick to M13 is to enjoy it without forgetting all the others.

To get to M13 (16h 42m, +36° 26'), just center Eta ( $\eta$ ) Herculis, the northwest star in the keystone, in your finder or telrad. Once you're there, move your telescope towards Zeta ( $\zeta$ ) Herculis,

the southwestern keystone star; finderscope users will see M13's glow before Eta leaves the field of view, and telrad users will roughly center the globular by moving the 4° circle towards Zeta until Eta lies about  $1/2^{\circ}$  outside the circle, on the opposite side. When you've found M13, try different magnifications to see which view suits you and your telescope best-as a starting point, I've found that about 16X per inch of telescope aperture works well, at least with Newtonian scopes.

M92, just north of the keystone at 17h 18m, +43° 07', is often overlooked-the newbies don't know it's there, and the experienced often skip it as a let-down compared to M13. Actually, M92 is an interesting cluster, with a noticeably brighter core than its extravagant neighbor. Like M13, it shows well even in small scopes, and is nicely visible in a 6-inch in the city, at least on moonless nights. If you're going to M13, you're already in the neighborhood, so you might as well visit.

M92 lies about 2°-a telrad's radius-from a line extending from the southeastern keystone star (Epsilon), through the northeastern one (Pi), and continuing about half-again as far to Iota (t) Herculis, north of the Keystone. If you put the eastern edge of your telrad's outermost circle on the line, a little more than halfway from Pi to Iota (that is, closer to Iota), M92 will be near the center of your finderscope.

Before we leave Hercules, a quick tip: At our stated times this month, the constellation is quite near the zenith-just about straight up. That's good news for people with equatorial mounts or go-to scopes, as image quality is best when objects are highest; but it's a difficulty for manual dobsonian users-dobs are really a pain to point at objects when they're close to the zenith. If you're a new dob user, you might do well to wait an hour or so for the targets to move west-you'll have better leverage when your targets are a bit lower.

On the way south to Scorpius, advanced observers looking for something new might want to stop at NGC 6572, a planetary nebula in Ophiuchus. Located at 18h 13m, +6° 52' (about 7-1/2° "east-ish" of  $\beta$  Oph), it's bright and distinctly blue-but also quite starlike at low power, and therefore easy to miss when you're looking for it. I enjoyed it in the 12-inch, but my (beginner) friend wasn't so impressed. If you're used to hunting down planetaries, this is a good one to add to the list; but given its appearance and the likely difficulty finding it, I'd say beginners would be better off elsewhere. **Continued on Page 8** 

#### THE DENVER OBSERVER

#### President's Message Continued from Page 2

parking lot (I've been known to invite hotel employees to step outside and watch an International Space Station pass). I always do a double-take when looking at the Southern Hemisphere's night sky, because the familiar constellations that can be seen from both hemispheres appear "upside-down" from a down-under vantage point. (Of course, the residents of the Southern Hemisphere would say the same thing about stargazing in the North.)

Occasionally astronomy on the road is a bust, just like it can be at home. I had to travel to the east coast for business meetings in June of 2004, and the trip happened to coincide with that year's Venus transit. I brought a solar scope and tripod with me, hoping to watch at least part of the transit before meetings got underway. I woke up early, fired up the inroom coffee maker, and turned on the local TV news. The top story was the weather and the transit: The town was socked in by heavy fog, with very poor visibility. Sadly, there was no chance of seeing Venus passing in front of the Sun.

Over the years, astronomy on the road has also included visits with my kids and grandkids to the Johnson Space Center in Houston and Florida's Kennedy Space Center. I've managed to sneak in visits to Griffith Observatory, Lick Observatory, and Lowell Observatory while traveling, too.

There is no reason to leave the hobby behind when traveling. As you can see, there are many ways to enjoy astronomy on the road.

## JULY SKIES

#### **Continued from Page 7**

At last, there's Scorpius, almost as close to the horizon as Hercules is to the zenith. Since Scorpius covers a part of the Milky Way that's close to the center, the constellation is loaded with-and surrounded by-deep-sky objects. For now, though, we'll pop down and take a quick peek to get you going, and leave you to discover more.

For beginners, there's M7, referred to also as Ptolemy's Cluster; it's a beautiful open cluster bright enough to see with the naked eye under dark skies-just point your finderscope or telrad at it, and you're in business. (Since it's more than a degree across, start with the lowest-power eyepiece you've got.) M7 is located at about 17h 55m, -35°—"about" because it's large, with indistinct boundaries-you'll find it just about 4° northeast of Shaula, or Beta ( $\beta$ ) Scorpii, the bright star in the scorpion's stinger (see Scorpius map, page 7).

For the advanced folks, there's NGC 6302, also known as the Bug Nebula, at 17h 15m, -37° 07'; it's almost exactly 4° west of Shaula. You'll need fairly high power to see detail, and with a maximum altitude of about 19°, good seeing conditions will be paramount. Still, it's an interesting object-if you're not familiar with it, a quick web search will bring you details and brilliant Hubble images.

—See you next month. 📀



Page 8

The Denver Astronomical Society

One Mile Nearer the Stars



