The Denver Observer

A bright meteor streaks through the stars over central Maine, captured by Honorary DAS member Steve Innes on July 30, 2011. *see p.3 for more about Steve.*

Holiday Party Invite

The Denver Astronomical Society invites you to our annual Holiday party. 6pm. Saturday, December 17th, at Hacienda Colorado, 4100 E Mexico St in Denver. See p. 6 for more information and a reservation form. Reservations must be received by Dec. 7th.

November Skies

by Dennis Cochran.

Are you up for a meteor shower? Got your patio chair ready, your libation decanted? Do you have a notepad and time source? The Leonid meteor shower arrives on Thursday the 17th, radiating out of Leo. You can meteor-hunt in the evening before the moon rises, a good choice if your children are with you. Write down how many meteors you see in consecutive half-hour durations. Describe them; give them names! No, wait, that's a bit much. The kids will want binoculars but will soon find that the meteors are gone before they can raise the binox to their eyes. Yet having some gear to mess with makes it more fun for them. Maybe you'll be lucky enough to see a slow-moving bolide glowing green as it breaks into pieces.

Is meteor-viewing dangerous? should you wear a hard-hat? Body armor? No, just enjoy meteors as actors in Nature's overhead show. While looking for them, which involves just looking up since meteors that originate near a radiant will hit the atmosphere all over the sky, you can practice your constellation identification. It can be a game with your kids: How many constellations do you recognize? Keep track in your notebook.

The Great Square of Pegasus hangs overhead these evenings. Andromeda's off-shoot from the northeast corner of the Square sprays out like a cornucopia. Northwest of the 2nd star in the spray is the dominant galaxy of our Local Group, M31. It is similar to, but a bit larger than the Milky Way. Read about it in Hodge and Waller's book "Galaxies and the Cosmic Frontier."

Cetus the Sea Monster takes up the lower part of the southeast sky. Like Pisces he has a circlet of stars, bigger than the fishy one, at the east end of his body. If you can see Aldeberan in Taurus low in the east, the Cetus circlet is halfway between that and

Jupiter. The deep red star Mira, Omicron Ceti, discovered to be variable in 1596, lies farther west in the whale's body. It is the Cetus star just below the Alpha star of Pisces located where the two fish come together at the bottom of their long V. This variability in the realm of the fixed stars was a mind-blowing idea in those days and added evidence to Gallileo's discovery of sunspots that the heavens were not unchanging. Mira is the prototype long-period variable star, with a period of 322 days. The star back towards the circlet end of Cetus, Delta Ceti, marks the spot to look for spiral galaxy M77 just to its east.

Straight south near our horizon is the bright astar Fomalhaut in the constellation Pisces Austrinus, the Southern Fish. Venture northwest of that a distance of half the width of nearby Capricorn to find the Helix Nebula NGC 7293, a planetary half the width of the full moon, the largest-appearing object of this category in the sky.

TWO GIANT GALAXIES OF NOVEMBER SKIES ARE A FEAST FOR THE EYES

This image of just the core of the Great Galaxy in Andromeda, M-31, shows massive dust lanes spiraling around the bright central core of the galaxy. The image, taken by Darrell Dodge, is the first "test image" with the DAS C-14 @f/6.3 SCT in our Brooks Observatory. The entire galaxy spreads over 4 degrees of our fall sky, or 8 full moon widths. You can only see the entire galaxy with binoculars or wide-field low power telescope from a dark sky location.

Oct. 15, 2011 DAS Ed Kline Dark Site, Brooks Observatory. 3 x 120 sec. with Canon DSLR.

M-33 the "Pinwheel Galaxy" in Triangulum, is the second closest galaxy to us after M-31, showing its sprawling spiral arms of stars, gas and dust. It is a tough object to observe in a telescope due to its large size and low contrast. But M-33 is an excellent test for naked-eye observers and the sky darkness. If you can see this with your eye, you are looking 3 million years back into time!

Image by D. Dodge with 8-inch f/4 and Canon DSLR, 60 min. at the DAS Ed Kline Dark Site. Oct. 22-23, 2011.

PRESIDENT'S COLUMN

Steve Innes, DAS Honorary member and past president of DAS died suddenly at his home in Gorham, Maine on Oct. 16th. Steve was 56. I am very saddened by his death as I considered him one of my best friends. He was also friend to many in DAS, Chamberlin Observatory, and the world of ATM, astronomy and outreach.

Once in a while we are lucky enough to meet someone in DAS where both we and our spouses become close friends and we share many good as well as tough times over the years. I was fortunate to make a new friend at a DAS star party in the late 80's when I was a new member and someone called out to come help this guy unload a huge and heavy steel telescope mount from his truck. The guy with the heavy mount was Steven O. Innes.

Our families shared many good times at star parties, family dinners and other occasions. He moved that heavy mount to my backyard where it held my 12-inch for several years as we shared observing here. We traveled to China and Tibet with the Inness' for the longest solar eclipse of the century in July 09. Previous trips we had enjoyed include a week of camping in fog and drizzle on the coast of Maine as well as downpours, telescopes and stars at two Stellafane Conventions in Vermont.

Steve achieved a life well lived in our world of amateur astronomy. He did what many of us might just aspire to; make a living out of building telescopes, running planetariums and doing astronomy public outreach,having a good family life with his wife Nancy, whom he met on a solar eclipse trip to wintry Montana in 1979, while raising two great children, Hillary and Ben. In Denver, he was a machinist for Jim's Mobile Inc. (JMI) and was instrumental in building the first commercial Crayford focusers, the NGF, and the large but portable equatorial driven NGT-18 telescope. For awhile he tried his hand at making and selling his own line of telescope components such as mirror cells from his Denver garage machine shop business, "Star Drive Systems".

While in Denver from 1980 to 1995, Steve contributed his time, his talents and machine shop to Chamberlin Observatory and DAS. He served as DAS president in 1984. According to Chamberlin director Dr. Bob Stencel, "Steve Innes played a crucial role in sustaining Chamberlin during the dark days of the 1980s when things were in disrepair. He will be remembered and honored for that service as well." For his service to DAS and Chamberlin Observatory Steve was made an Honorary lifetime member by the E-Board in 1995.

In 1995 the Innes clan moved to Gorham, Maine, near Portland, to be closer to both their parents and New England roots. After remodeling their house and building his own observatory, where that heavy steel mount holds a dual 10-inch scope system steady on the stars, Steve started working at University of Southern Maine Southworth Planetarium in Portland ME. And after several years he landed a job doing tech support work and astronomy outreach in the USM College of Arts and Sciences, while continuing to support astronomy outreach at Southworth Planetarium. He received a prestigious award for his work from the College this past spring and was planning on attending a Planetarium professionals conference this month.

My friend Steve will be greatly missed. I can hardly believe he's gone. But I know that Steve

"...loved the stars too much to fear the night."

Steve and Nancy Innes in the Forbidden City, Beijing, China.

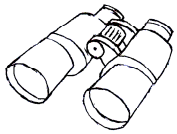
July 2009 photo by Marilyn Pearson

What is the Best Telescope for Me?

☆ The best telescope for you is the one that you will use! ☆

1 Consider trying binoculars first.

★ Easy to use, easy to store, ultra-portable
★ Can see large sections of the sky at once
★ Can use them for daytime activities



An excellent size is 10 x 50:
10 = magnification
50 = the diameter in millimeters of the front lens.

2 Before you buy a telescope, ask yourself these questions...

★ How well do you know the night sky? Finding objects is not easy without practice. A quality computerized "go-to" telescope is costly and its operation must be mastered.
★ How hard is the scope to assemble? If it is too complicated, you won't use it.
★ Where will you do most of your observing? A city resident will likely need to cart it to a dark site.
★ Where do you think you'll be in the hobby in three years? If you really like astronomy, you'll outgrow a small telescope in six months.
★ Will you eventually pursue astrophotography? You'll need a sturdy, motor driven mount that tracks accurately.

★ Telescope Diameter Dilemma ★

Since most sky objects are relatively dim, a telescope needs to gather large amounts of light. Therefore, **larger diameter telescopes** are better than smaller ones. However, they **are also bulkier** — and less likely to make it outside in cold weather!

3 Telescope and observing tips:

★ Magnification — low power is used for most objects.
★ Finderscope — a small one is nearly useless.
★ The larger the scope's diameter, the better views it gives, but the less portable it is.
★ If the telescope has poor optics or a wobbly mount, it will be frustrating to use.
★ Finding interesting objects requires practice and patience.
★ Focus on learning the stars and constellations.
★ ***Never point the telescope at the sun without the proper filter installed ON THE FRONT of the scope.***
★ Don't expect what you see in the eyepiece to closely resemble what you see in photographic images.

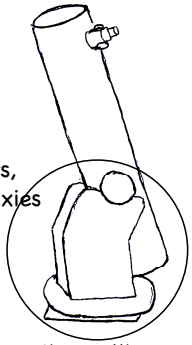
4 Visit your local amateur astronomy club!

★ You can see and try the various sizes and types of telescopes.
★ Some clubs have programs for lending telescopes.
★ Members will be happy to guide you through the scope selection process.

★ Common Telescope Designs ★

Reflector

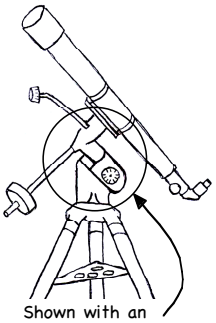
★ Easy to use
★ Least expensive telescope design
★ Great for clusters, nebulae, and galaxies
★ Can can be bulky
★ Generally not suitable for astrophotography



Shown with a Dobsonian Mount

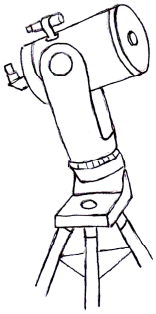
Refractor

★ Easy to use
★ Tend to be costly
★ Not suitable for dim objects
★ Can be used for astrophotography
★ Great for the moon and planets



Shown with an Equatorial Mount

Schmidt-Cassegrain



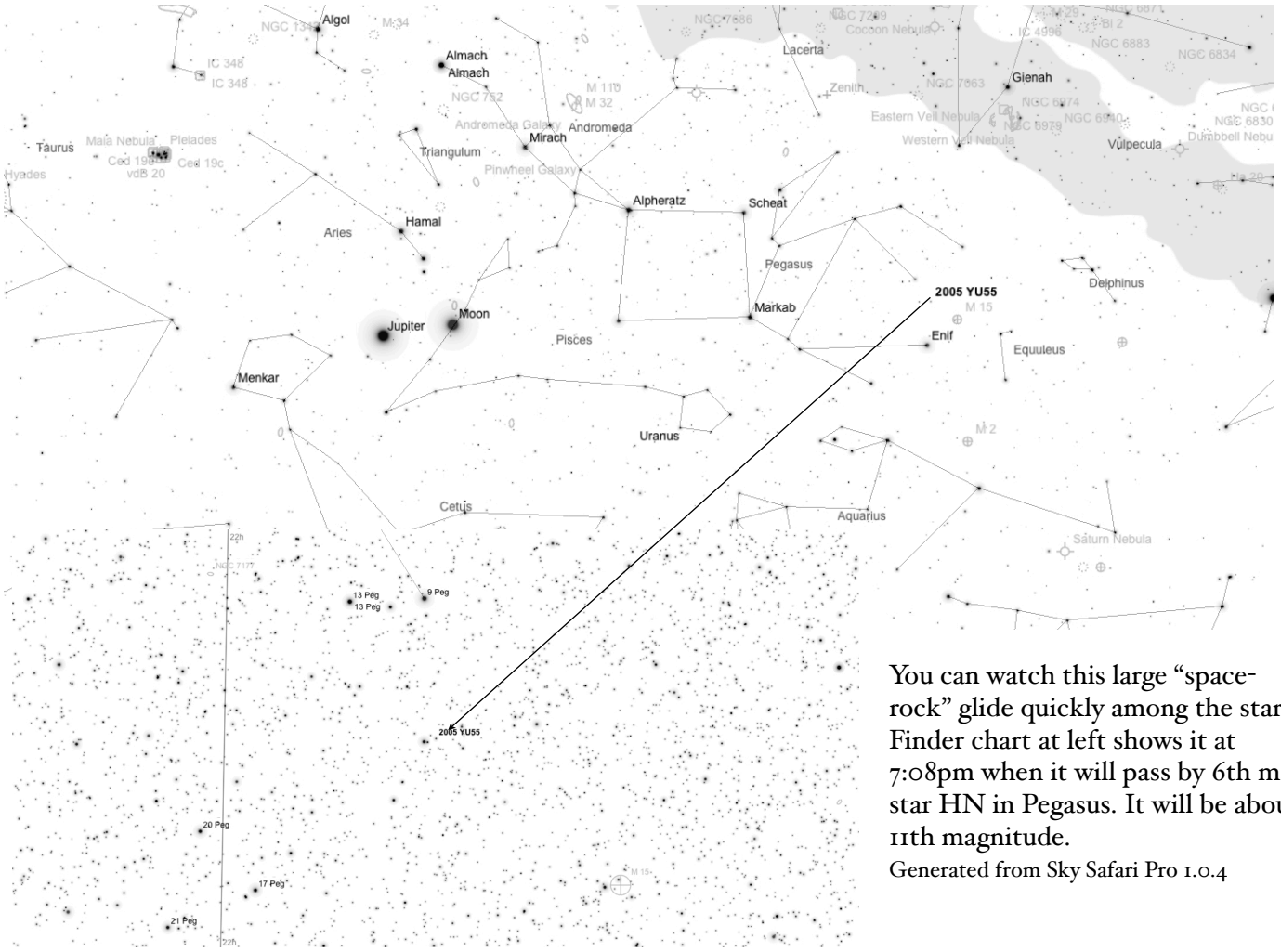
★ Portable, but heavy
★ Tend to be expensive
★ Suitable for astrophotography
★ All-purpose telescope

Astronomical League
www.astroleague.org

DAS NOVEMBER DOINGS: NOV. 5TH 6PM CHAMBERLIN OPEN HOUSE & NOV. 11, 7:30PM OLIN HALL GENERAL MEETING - MEMBERS "SHOW & TELL"

Open House at Chamberlin Observatory: November 5th will feature the "king of planets", Jupiter and our "queen of telescopes", Cathie Havens of S&S Optika. Cathie will be giving a pre-holiday talk on "How to Choose a Telescope" at about 7:30pm. General Meeting: Nov. 11th, 7:30pm. If you have been building a telescope, working on astrophotography or have some put together some great new observing aid from junk you got at the Auction, bring it to Olin Hall on November 11 to tell us all about it. You can either bring the project or show pictures of it from a digital file or flash-drive and project them on the big screen. Let VP-Lisa Judd know and she'll put you on the list!

November Sky Chart for Nov. 8, 7pm. On Nov. 8th Asteroid 2005YU55 will buzz by the earth at about 200K miles.



You can watch this large "space-rock" glide quickly among the stars. Finder chart at left shows it at 7:08pm when it will pass by 6th mag. star HN in Pegasus. It will be about 11th magnitude.

Generated from Sky Safari Pro 1.0.4

New Chamberlin Safety Rule. At the Oct. E-Board meeting, with Dr. Stencels' approval, the E-board passed a new Safety Rule; for children to climb the platform ladder to view through the 20-inch Clark, they must be over 41 inches tall. PN staff will institute the rule for Open Houses and use it as a guideline for the Tues. and Thurs. Public Nights when there are smaller crowds.

Foot note: our editor Patti Kurtz, is moving this month (Oct.) so I have taken on the role of temp. editor. It was a privilege that I could do this issue, hope not to screw-it up too bad and dedicate it to my friend Steve Innes. *Ron Pearson, president, DAS*.

DAS ANNUAL HOLIDAY PARTY!

FOOD, FUN AND SEASON'S GREETINGS!

The Denver Astronomical Society invites you to our annual Holiday party 6pm Saturday, December 17th at Hacienda Colorado, 4100 E Mexico St in Denver.

In years past, we've enjoyed a potluck atmosphere and had many good tidings, but this year we're really Putting on the Ritz! Hacienda is a wonderful Mexican restaurant with an authentic atmosphere, big margaritas, and GREAT food; it's located near the intersection of Colorado and I-25, very near Chamberlin Observatory and Olin Hall where we have our meetings. If you've joined our members at frequenting Village Inn after our open houses and meetings, Hacienda is in the same parking lot right next to it. You may also be familiar with one of Haci- enda's other three locations around town.

The cost per member is $18 for just the bare-bones dinner. But for a $25 price, you can take advantage of what else this restaurant has to offer, in the form of either an appetizer, or a dessert, or one of those famous margaritas. In addition, we will have tickets available to redeem for more than one of these options, for $7 each. For wine and beer, other beverages or to choose from a full page of tequila choices, a cash bar will be available as well – if that margarita is a little too big, then the bar has the smaller version.

So, what's for dinner? Members can choose from the following options:

Entrees:
Chile Rellenos (vegetarian)
Poblano de Pollo (gluten-sensitive)
Chimichanga (steak, chicken or ground beef)
Spicy Carne Asada Salad
Applewood-roasted Pork Carnitas Burrito
Mexican Chopped Salad (chicken or vegetarian)

Appetizers:
Guacamole
Chile con Queso

Desserts:
Chocolate-pecan Brownie
Empanada (banana-pecan pastry)

To RSVP, please fill out the attached form and return to DAS' treasurer (either by hand or by mail) before December 7th. It's best to let us know beforehand whether you're likely to indulge in appetizers and/or dessert, but if you're there and feel that that brownie or margarita really looks good, we'll have more of those $7 tickets available at the event.

DAS HOLIDAY PARTY RSVP

Number of people you're bringing:_____

Number of Dinners: **$18** (dinner only) **$25** (includes appetizer, dessert or margarita)

Chile Rellenos	_____	_____	**Choose 1 for each $25 dinner**:
Poblano de Pollo	_____	_____	Guacamole _____
Chimichanga	_____	_____	Queso _____
Carne Asada Salad	_____	_____	Brownie _____
Carnitas Burrito	_____	_____	Empanada _____
Chopped Salad	_____	_____	Margarita _____

Total: _____x$18 + _____x$25 = $_____

Extra goodies: (more appetizers, desserts or margaritas)

Guacamole	_____
Queso	_____
Brownie	_____
Empanada	_____
Margarita	_____

Total: _____x$7 = $_____

Beer, wine, tequila, other beverages: for sale at event

Grand total: $_____

Please make your check payable and mail to: **DAS Treasurer**

Brad Gilman
7003 S Cherry St
Centennial CO 80122

Payment and form are also accepted by hand at any DAS event where Brad is present before Dec. 7th.

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 Denvers' 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 mission is to provide its members a forum for increasing and shar ing their knowledge of astronomy, to pro mote astronomical education to the public, and to preserve Historic Chamberlin Observatory and its telescope in cooperation with the University of Denver.

The DAS is 501 c3 tax exempt corporation and has three tax deductible funds: the Van Nattan Hansen Scholarship Fund, the DAS General Fund and the Edmund G. Kline Dark Site Fund.

More information about the DAS, its activities and the special tax deductible funds is available on the DAS website: www.denverastro.org

DAS Calendar

Nov. 5th Chamberlin Observatory Open House 6pm.

Cathie Havens talks about "How to Choose a Telescope", Moon and Jupiter viewing!

Nov. 11th Olin Hall DU Campus. General Meeting - Topic - "Members Show & Tell" astronomy projects. 7:30pm

Nov. 18th E-Board meeting 7:30pm Chamberlin Observatory

Nov. 25-26th Dark sky weekend

Dec. 3rd Chamberlin Open House

Cathie Havens talks about "How to Choose a Telescope", Moon and Jupiter viewing!

Dec. 17th DAS Holiday Party - @ Hacienda restaurant. 6pm

Denver Astronomical Society
c/o Chamberlin Observatory
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Denver, CO. 80210