

Longmont Astronomical Society

February 2003



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The View From Up Here

Dear members and friends,

Those of you born since 1961 have never known a world without manned space flight. I can remember, as a starry-eyed little kid, sitting in front of the old black-and-white Motorola watching in amazement Alan Shepard's historic sub orbital flight – all 15 minutes of it.

The tremendous successes of the Mercury, Gemini and Apollo missions had many of us convinced we'd see the year 2001 ushered in much the same way as Arthur C. Clark, with Hiltons in orbit, advanced bases on the moon, and manned exploration of the outer solar system. The fact that we have not advanced that far by no means diminishes the accomplishments we have realized; in fact, it is the dream of becoming One with the Cosmos that has helped drive our quest to reach for the stars.

This quest is neither free nor easy. On February 1st we were suddenly reminded of the ultimate cost of this endeavor. Questions will always be raised concerning justification of a manned space program; indeed, the right questions will no doubt help make it a safer one. The crew of Columbia died living a dream; it is the charge of all who follow in their heroic footsteps to help make this dream a reality.

On a lighter note, Sunday, January 19th, was the 16th Annual LAS Banquet! We had another fine dinner at the Wayside Inn in Berthoud, with 47 people attending. We would like to thank our good friend Keith Gleason, manager of CU's Sommers-Bausch Observatory to being our keynote speaker. Keith brought us up to speed on all of the undergrad and graduate astronomy programs now in place at CU – the observatory is busier now than it has ever been. It's good to see such a nice facility being utilized to its fullest, even if it diminishes the chances to casual drop-ins by LAS members! However, we are still invited to help support them through their public observing nights and any star parties they host.

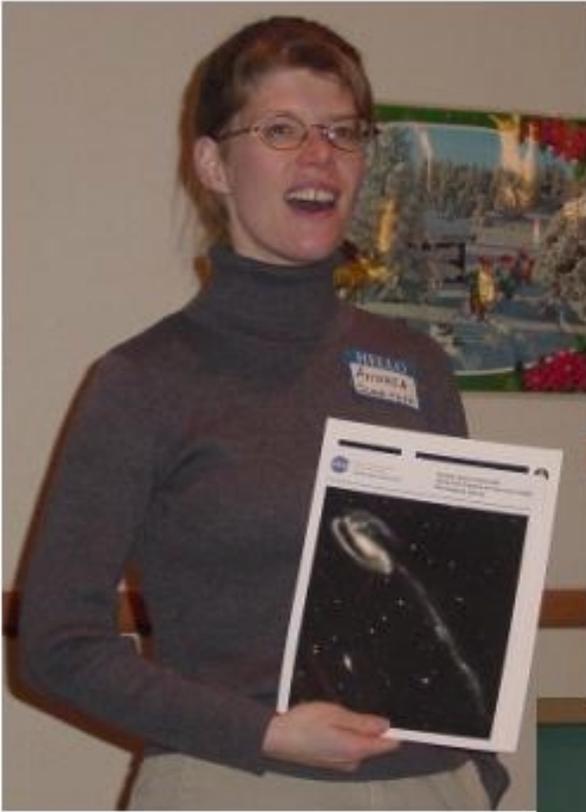
We also heard from our other good friend Dr. Bob Stencel from DU, who reminded us it's not too late to submit proposals for the Colorado state quarter design, featuring a dark sky theme!

Then we had some goodie giveaways! Andrea Schweitzer handed out some great Hubble images, and Randy and Judy Cunningham gave us all a nice laminated Timetable of the Heavens for 2003, courtesy of AstroSystems. Thanks all of you for your generosity! Finally, the club, via the hard work of Merchandising Chairman Kirk Schneider, gave away vinyl stickers of the LAS logo in either white or black. These will be available for purchase for \$2 each as part of our fund-raising efforts.

Well, it was good to see everyone, and get caught up on the visiting and socializing; another very fun LAS banquet!

Bob Spohn
President

LAS Annual banquet pictures



Calendar

February – New moon 2/01 – LAS meeting 2/20

March – New moon 3/02 – Star Party Pawnee 3/01 – Star Party Flanders 3/08 - LAS meeting 3/20

April – New moon 4/01 – LAS meeting 4/17

May – New moon 5/01 – Astronomy Day 5/10 – LAS meeting 5/15 - New moon 5/30

June – LAS meeting 6/19 - New moon 6/29

July – LAS meeting 7/17 - New moon 7/28

August – LAS meeting 8/21 - New moon 8/27

September – LAS meeting 9/18- New moon 9/26

October – LAS meeting 10/16 - New moon 10/25

November – LAS meeting 11/20 - New moon 11/24

December – LAS meeting 12/18 - New moon 12/23

Some announcements:

North Sterling Party on 4/26/03

Yes, Yes, Yes again. God willing, there will be a 5th annual North Sterling Star Party. I already have been in touch with Bob Loomis at park. Bob Loomis and David Cole have the 26th of April picked. I never checked for moon cycle but I am sure they picked it on new moon. I hope to continue to make this a special place under the stars for the LAS club and the true club of observers we have, which crosses many club and local boundaries. I have always wanted to keep this a low key, free event. I am sure Bob Loomis will waive any camping fees to get us out there. Early in the year, but we are always ready, we always think positive. Like Woodstock in past, this is a free event, so be there if you can, let's show them LAS is still the best. Thanks to Leigh Pierson and Bob Loomis and many others. Bye, Gary g

Chamberlin Observatory

The University of Denver and the Denver Astronomical Society cordially invite you to the University of Denver's historic Chamberlin Observatory for telescope viewing of the night sky, featuring the 100-year-old, 20-inch Clark refractor telescope and a variety of amateur telescopes.

For more information call (303) 871-5172

The address is Chamberlin Observatory – Observatory Park, 2930 E. Warren Avenue

Websites: <http://www.denverastrology.org/chamberlin.html>

Free Open House 2003 schedule - <http://www.denverastrology.org/openhouses.html>

March 8th - April 5th - May 15th (Thursday) *SPECIAL EVENT* "Total Lunar Eclipse" - June 7th - July 12th
DAS Annual Picnic and Open House - August 9th and 27th *SPECIAL EVENT* Mars Midnight Madness -
September 6th "Mars at its best" - October 4th "Colorado Astronomy Day" - November 8th "Total Lunar
Eclipse" - December 27th "How to Use Your New Telescope"

Galileo mission to Jupiter – Topic of Fiske planetarium show

The many discoveries of the Galileo spacecraft in its journey through space and around Jupiter will be explored at CU-Boulder's Fiske Planetarium on Friday, Feb. 21, and Tuesday, Feb. 25, at 7:30 p.m.

University of Colorado at Boulder Professor Fran Bagenal will present her live show "Galileo: Mission to Jupiter," as part of the planetarium's monthly astronomy talks. CU-Boulder professors and guest lecturers give the live talks.

During her show Bagenal will present the explorations of Jupiter from the time of Galileo Galilee's first discovery of Jupiter's moons in 1610 to the recent flyby of Jupiter by the Cassini spacecraft on its way to Saturn.

The audience will learn about the stormy weather in Jupiter's atmosphere where storm systems can merge and create giant storms that make hurricanes on Earth look like an afternoon breeze, said Bagenal, a professor in the astrophysical and planetary sciences department.

The audience also will see images of the swirling clouds of Jupiter's atmosphere and the strange geology caused by the extremes of ice and molten lava on the four very different worlds of the Galilean moons. Galileo was launched in October 1989 from space shuttle Atlantis with the mission of studying Jupiter and its moons in more detail than ever before.

Admission for the show is \$5 for adults, \$4 for students and \$3 for children and seniors. Tickets go on sale at 7 p.m. the night of the show. The Sommers-Bausch Observatory will be open to the public after the Friday evening show, weather permitting. Admission to the observatory is free.

For more information about Fiske Planetarium and other shows and programs it offers, call (303) 492-5001 or visit the Web site at www.colorado.edu/fiske

Full Moon names and their meanings...

Full Moon names date back to Native Americans, of what is now the northern and eastern United States. The tribes kept track of the seasons by giving distinctive names to each recurring full Moon. Their names were applied to the entire month in which each occurred. There was some variation in the Moon names, but in general the same ones were current throughout the Algonquin tribes from New England to Lake Superior. European settlers followed that custom and created some of their own names. Since the lunar month is only 29 days long on the average, the full Moon dates shift from year to year. Here is a listing of the full Moon names:

Full Wolf Moon

Amid the cold and deep snows of midwinter, the wolf packs howled hungrily outside Indian villages. Thus, the name for January's full Moon. Sometimes it was also referred to as the Old Moon, or the Moon After Yule. Some called it the Full Snow Moon, but most tribes applied that name to the next Moon.

Full Snow Moon

Since the heaviest snow usually falls during this month, native tribes of the north and east most often called February's full Moon the Full Snow Moon. Some tribes also referred to this Moon as the Full Hunger Moon since harsh weather conditions in their areas made hunting very difficult.

Full Worm Moon

As the temperature begins to warm and the ground begins to thaw, earthworm casts appear, heralding the return of the robins. The more northern tribes knew this Moon as the Full Crow Moon, when the cawing of crows signaled the end of winter; or the Full Crust Moon, because the snow cover becomes crusted from thawing by day and freezing at night. The Full Sap Moon, marking the time of tapping maple trees, is another variation. To the settlers, it was also known as the Lenten Moon, and was considered to be the last full Moon of winter.

Full Pink Moon

This name came from the herb moss pink, or wild ground phlox, which is one of the earliest widespread flowers of the spring. Other names for this month's celestial body include the Full Sprouting Grass Moon, the Egg Moon, and among coastal tribes the Full Fish Moon, because this was the time that the shad swam upstream to spawn.

Full Flower Moon

In most areas, flowers are abundant everywhere during this time. Thus, the name of this Moon. Other names include the Full Corn Planting Moon, or the Milk Moon.

Full Strawberry Moon

This name was universal to every Algonquin tribe. However, in Europe they called it the Rose Moon.

The Full Buck Moon

July is normally the month when the new antlers of buck deer push out of their foreheads in coatings of velvety fur. It was also often called the Full Thunder Moon, for the reason that thunderstorms are most frequent during this time. Another name for this month's Moon was the Full Hay Moon.

Full Sturgeon Moon

The fishing tribes are given credit for the naming of this Moon, since sturgeon, a large fish of the Great Lakes and other major bodies of water, were most readily caught during this month. A few tribes knew it as the Full Red Moon because, as the Moon rises, it appears reddish through any sultry haze. It was also called the Green Corn Moon or Grain Moon. Full Fruit or Barley Moon The names Fruit and Barley were reserved only for those years when the Harvest Moon is very late in September.

Full Harvest Moon

This is the full Moon that occurs closest to the autumn equinox. In two years out of three, the Harvest Moon comes in September, but in some years it occurs in October. At the peak of harvest, farmers can work late into the night by the light of this Moon. Usually the full Moon rises an average of 50 minutes later each night, but for the few nights around the Harvest Moon, the Moon seems to rise at nearly the same time each night: just 25 to 30 minutes later across the U.S., and only 10 to 20 minutes later for much of Canada and Europe. Corn, pumpkins, squash, beans, and wild rice the chief Indian staples are now ready for gathering.

Full Hunter's Moon

With the leaves falling and the deer fattened, it is time to hunt. Since the fields have been reaped, hunters can easily see fox and the animals that have come out to glean.

Full Beaver Moon

This was the time to set beaver traps before the swamps froze, to ensure a supply of warm winter furs. Another interpretation suggests that the name Full Beaver Moon comes from the fact that the beavers are now actively preparing for winter. It is sometimes also referred to as the Frosty Moon.

The Full Cold Moon

Or the Full Long Nights Moon During this month the winter cold fastens its grip, and nights are at their longest and darkest. It is also sometimes called the Moon before Yule. The term Long Night Moon is a doubly appropriate name because the midwinter night is indeed long, and because the Moon is above the horizon for a long time. The midwinter full Moon has a high trajectory across the sky because it is opposite a low Sun.

Full Moons in 2003

January 18th	Full Wolf Moon	5:47 am
February 16th	Full Snow Moon	6:51 am
March 18th	Full Worm Moon	5:34 pm
April 16th	Full Pink Moon	2:35 pm
May 15th	Full Flower Moon	10:36 pm
June 14th	Full Strawberry Moon	6:15 am
July 13th	Full Buck Moon	2:21 pm
August 11th	Full Sturgeon Moon	11:48 pm
September 10th	Full Harvest Moon	11:36 am
October 10th	Full Hunter's Moon	2:27 am
November 8th	Full Beaver Moon	8:13 pm
December 8th	Full Cold Moon	3:36 pm

--Farmer's Almanac (Thanks to Karen Mendenhall)

January LAS meeting notes

Club patches: Kirk Schneider talked about the club patches we are having made. The patches can be affixed to a variety of items - jackets, bags, etc. The club voted to go with the color scheme introduced by Kirk at the December meeting. Kirk will proceed with getting the proof made for the manufacturer.

Visitors:

- Pattie Logan of Wild Mare Productions. Pattie is interested in interviewing LAS members at the next star party, which will be February 1st at Gary Garzone's house, weather permitting. Pattie also explained that she respects anyone's wish not to be interviewed. Gary will send a map of directions to his house to our web master, Steve Albers.
- Richard Laatt, who also joined that night.
- Mark Dittmar, a friend of Kirk and Linda Schneider.
- Gerry Cragun
- Michael Jurey and Evonka (sp?)

Secretary / Treasurer's report: Monica Martens explained that we could still take money for the banquet and add others to the guest list. The banquet is Sunday, Jan. 19th.

Newsletter editor's report: Philippe Bridenne said the newsletter would be on the web by Friday, Jan. 17th, in PDF format.

Astronomy Day: Is May 10th. Michael Hotka, fundraising chair, provided some preliminary details:

- We'll have a booth at the mall in Longmont.
- We'll do a raffle for prizes.
- We'll also be selling club items, such as t-shirts.
- We'll have equipment on display.
- We would like any club photos that people are willing to provide for the backdrop. Also we would like photos that club members have taken of objects in the night sky. We want to showcase club activities and club members' photographic talents.
- We'll have the 8x10 backdrop from JPL (Jet Propulsion Laboratory) of Galileo
- We'll finish with a star party for the public at Flanders Park that evening.
- Volunteers for this event will be needed!!!

This year's meetings: Bob Spohn, president, talked about the structure for this year's meetings, which will include introductory talks on the night sky, since (1) we have many new people, and (2) since refreshers are helpful. Meetings will also include talks on advanced topics as usual.

Bob also introduced the Astronomical League Observing Club programs, which we can all take part in. See below for more information.

And each month we'll have a raffle for a fun astronomy-related item. Most of the time the raffle tickets will each be \$1.00. Next month's prize will be a t-shirt from the Steward Mirror Observatory Lab in Tucson, compliments of Roy and Monica Martens who just visited there.

The next 1st quarter public star party will be at Flanders Park, Feb. 8th.

Observing Club programs: Jim Crane, our Astronomical League Correspondent, talked about the Observing Club programs, and especially the Messier program, which focuses on interesting deep sky objects such as globular clusters, galaxies, and nebulae. To complete a program, you look for particular objects from a list and record your observations. There are many programs to choose from, and when you complete a program, you earn a certificate, pin, and mention of your endeavor in the Reflector.

Everything you need to complete a program is at the Astronomical League web site <http://www.astroleague.org/al/obsclubs/obsclub.html>.

Member news: Jim Crane also talked about the successful launch on Sunday, Jan. 12th of a polar orbiter that can detect the volume of melting ice at the polar ice caps, built in part by Ball Aerospace. It was called the Ice, Cloud, and Land Elevation Satellite (ICESat); more information is at http://www.ball.com/aerospace/media/nr01_12_03.html.

- Also, a reminder that Deep Impact will be launching next January - <http://deepimpact.jpl.nasa.gov/>.

Presentations: Bob Noble provided a presentation of earth-based photographs of the moon from the historical book titled Consolidated Lunar Atlas. These pictures are available from NASA for the public, and he will compile these pictures onto a CD for anyone who would like them. Cost is \$.05 per CD - to cover the cost of the CD. Talk to Bob Noble if you would like a CD. The photographs were very high quality, and we played "Name That Feature."

The following links and explanations are from Bob Noble, provided after the meeting: The Consolidated Lunar Atlas is at: <http://cass.jsc.nasa.gov/research/cla/menu.html>. The photos can be accessed by clicking on "thumbnails," then clicking on the larger "thumbnails" that come up. It's a slow, two-stage process to get to the image you want. The images he saved to the CD are all of the highest resolution images available on this site.

- The Lunar Orbiter photos are nearby at: http://www.lpi.usra.edu/research/lunar_orbiter/index.html

- Also, the Apollo Image Atlas is at: <http://www.lpi.usra.edu/research/apollo/index.html> - They have scans of every frame from every magazine of film taken on AS8 through AS17. (They took LOTS of Hasselblad magazines along -- remember, you can't change rolls in direct sunshine, let alone LUNAR direct sunshine while wearing those gloves!) All indexed, all in order. There are cross-links at either site.

- Elsewhere in the cyber-universe... GRIN or GReatest Images of Nasa can be found at: <http://grin.hq.nasa.gov/>. This is where a few select pictures from all over NASA are presented in high-definition scans. GRIN is a bit of a pain to use, but there is one place in there where you can see ALL of the thumbnails in one HUGE web page:

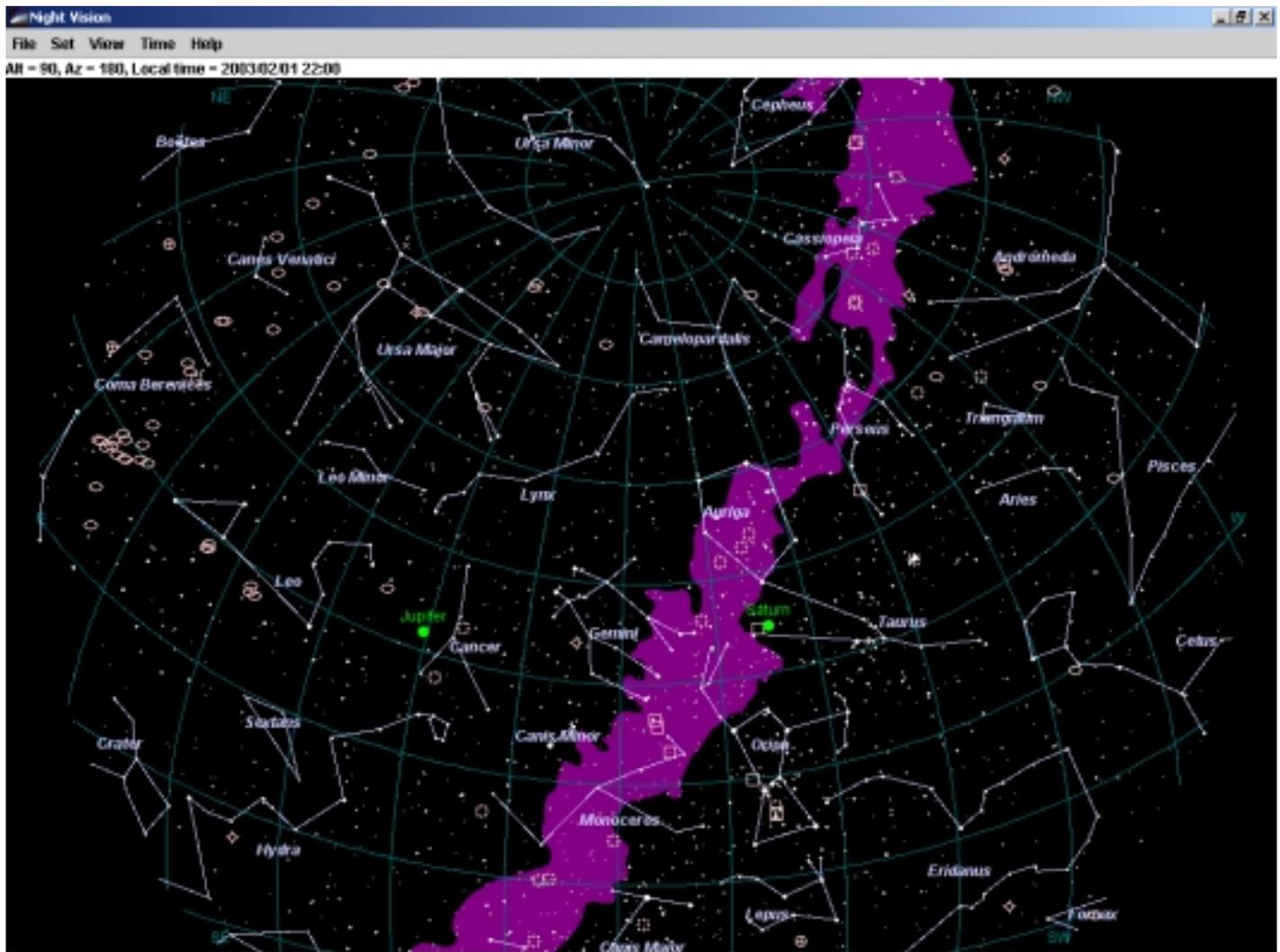
- <http://grin.hq.nasa.gov/BROWSE/ALLGRIN.html> - Bob printed this page to a PDF about 6 months ago. It too is huge (about 6MB).

- GRIN is updated periodically. There are new images there every few months. GRIN also has links to NIX (NASA Image eXchange):

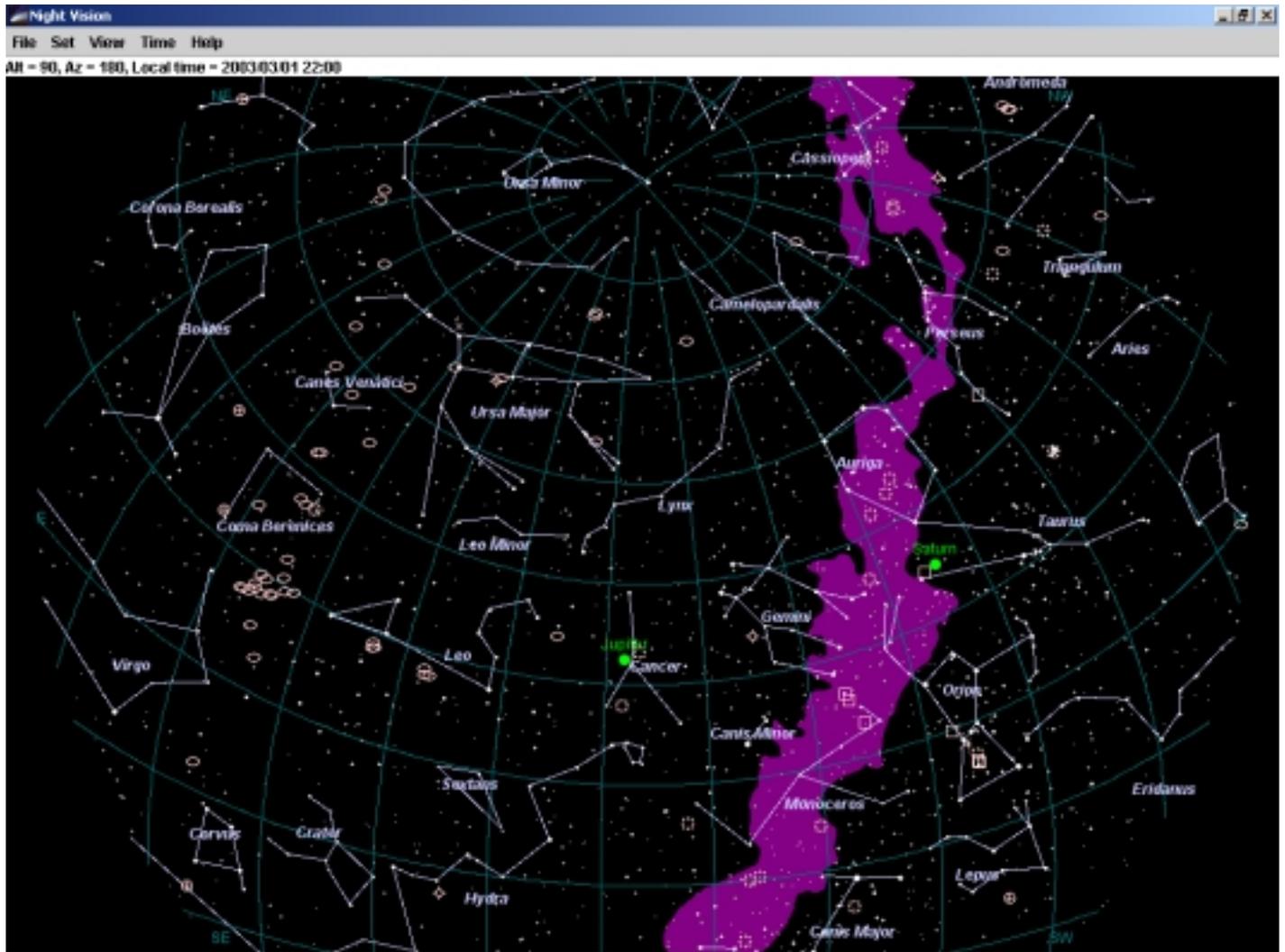
- <http://nix.nasa.gov/> - Very complete, but not the resolution of the GRIN stuff. The image viewer/organizer Bob uses is Ulead Photo Explorer. It is available separately but sometimes is bundled with Ulead Photo Impact (like Photoshop but MUCH cheaper). PhotoExplorer alone is about \$25 and worth every penny.

- Steve Albers has links to the moon shots that Bob showed on our club web site now. To access these photographs, go to the LAS page, then click on "Astronomy Resources / References", then look under the "Moon" section.

February Sky Map



March Sky Map

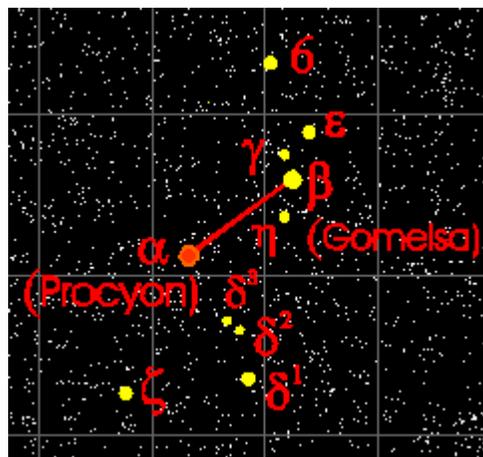
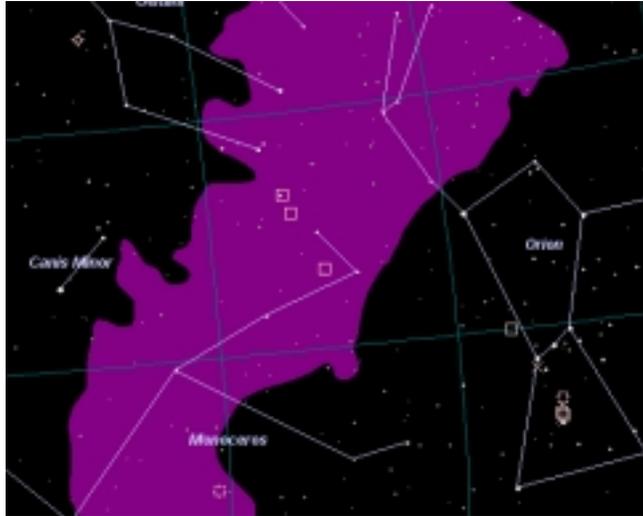


Constellation of the month

Canis Minor (The little dog)

Canis Minor, Canis Major's playful smaller companion, has only two brighter stars than 5th magnitude – Procyon (Greek for "before the dog", as it rises before Sirius) and Gomeisa. Besides being one of Orion's hunting dogs, Canis Minor was also said to be one of Actaeon's hounds. One day Actaeon surprised Artemis, goddess of the chase and the forests, while she was bathing in a pond with her companions. Spellbound by her great beauty, he paused for a moment and she saw him. Furious that a mortal had seen her naked, Artemis turned him into a stag, set her pack of hounds upon him, and he was devoured.

Procyon: Alpha (α) Canis Minoris. This beautiful deep yellow star follows Orion across the sky. Only 11.3 light years away, it is accompanied by a white dwarf that is much fainter than the Pup that accompanies Sirius. Beta (β) Canis Minoris. This star is set in a beautiful field that includes one quite red star.



February 1st New Moon Star Party

You will find below few pictures taken at Gary's house while preparing for the Feb 1st New Moon star party. Unfortunately the skies were cloudy and the only thing we can accomplish was some video shots taken by Pati and her crew.

