

Astronomy Online

PART ONE: COMPU SERVE

by John Lortz

I gave in about two years ago to the fact that computers were creeping into every facet of my life. First it was talking to the ELIZA program on the IBM where I use to work. Next it was writing a few letters on my Atari 400 at home. Then it was cataloging my video movies on my Atari 800XL, creating a mailing label file for the PAC, and learning to read faster with Speed Reader II. Now its creating 4 monthly newsletters, printing out 3000 mailing labels a month, and creating data-base programs for various small businesses on my Tandy 1200HD. What next? Well, my home computer has finally crept into my favorite hobby...astronomy! Many of you saw Rick Johnson's great star-generating program at a club meeting a few months ago. Star data bases are popping up all over for just about every type of computer available, but that's another story in itself. How has computing crept into MY astronomy endeavors? Through computer telecommunications!!!

I know that many PAC members have computers, and that many of you computer owners have modems for your computers. There's an entire electronic communications world out there to be discovered by anyone having a modem, and for those who also love astronomy there is a

mirid of information waiting for you through the phone lines. Bulletin Board Systems (BBS) dealing with astronomy/space topics are cropping up everywhere (SEE STEVE KELLS LISTING LATER IN THIS ARTICLE). Most cost only the fee for your phone time, although a few may charge small user fees. Besides BBS there are on-line information services such as NewsNet, Dow Jones News And Retrieval, The Source, and (my favorite..)

CompuServe, many of which have data bases dealing with astronomy or Special Interest Groups (SIG's) which upload astronomy programs and articles to the service for other subscribers to access.

I'm still just a novice at computer telecommunications, but let me pass along what I've learned about one of the data bases I frequent, CompuServe. CompuServe is an information service which deals with just about every topic you could imagine, including astronomy and space. There is a modest fee for your initial hook-up (which you get back in the form of free on-line time) and an hourly fee for the service's use. Through the use of a service called Tyanet, you don't pay the regular long distance fee, instead you pay a surcharge of \$2.00 per hour for using the line.

CompuServe itself has been the subject of many books that you can find in the library, bookstore, or from CompuServe directly, but let me just sum up here a few things that I think will interest you the most:

1. HOW DO I START COMPU SERVE? A start-up package is available at many bookstores including B. Daltons and Waldon Books. It provides you with the numbers to call, your initial password, and 4 to 6 hours of free user time.
2. WHAT DOES COMPU SERVE COST? Besides the start up package, the standard service is \$6.00 per hour, plus \$2.00 per hour for the communication surcharge.
3. WHEN CAN I CALL? If you use the standard service, you can call anytime during the week from 6pm to 6am, and all day Saturday and Sunday.

PLEASE NOTE...

the front article continues on page 7, and then skips back to page 3 (printers error). Also, the Calendar date for the Sep. meeting should be the 24th NOT the 27th. Thanks!

OBSERVING CHAIRMAN'S REPORT

Start September out right by having a look at a comet. Now I don't want to steal any of Halley's fire but the comet I am talking about is Giacobini-Zinner, which at the present time is far better looking than Halley and a good deal easier to find. A good four inch should show the comet high in the Milky Way shining at about eighth or ninth magnitude. My 10 inch showed it with a narrow tail about $1/3$ degree long on August 13th and it should brighten as it passes closest to both the Earth and Sun early in September. Look in Sky & Telescope's Comet Digest for positions and magnitudes.

There are still a few good globular clusters left over from the summer sky to look at. M15, located $3\ 1/2$ degrees west and just over two degrees north of epsilon Pegasi can be seen in binoculars although it takes a good six inch telescope to see its many stars. M2, located just under five degrees north and $1/2$ degree east of Beta Aquarii, is not quite as big as M15, but it is still a good target for six or eight inch apertures. M30 is somewhat fainter and smaller than either of the two previous clusters but it still makes a good subject for an eight inch. Look for it just west of the faint double star 41 Capricorni.



by David Knisley

For you planetary nebular lovers, try to pick up the only one visible clearly with a pair of binoculars, NGC7293. It can be seen in a pair of 10 x 50 binoculars if you look just over a degree west of Nu Aquarii. A six inch richfield will show the doughnut like form and the Lumicon U.H.C. filter will help the view considerably.

One of the few barred spiral galaxies in the area is NGC7479, located three degrees due south of Alpha Pegasi. It is 12th magnitude so a good 6 or 8 inch should show it although it takes a 10 inch to show much of the barred structure.

September Calender

1. 1859: R.C. Carrington and R. Hodgson make first observation of a solar flare.
1939: PHYSICAL REVIEW publishes paper by J.R. Oppenheimer and H. Snyder that is first to deal with "black holes".
2. 1804: K.L. Harding discovers Juno, the third known asteroid. 3. 1976: US Viking 2 lands on Mars at Utopia.
- 4.
- 5.
- 6.
7. Last Quarter Moon 8:16 UT
- 8.
9. 1839: John Herschel takes the first glass plate photograph, using his 48 in. telescope as subject
1892: E.E. Barnard at Lick Observatory discovers Amalthea, the fifth satellite of Jupiter.
- 10.
11. 1712: French astronomer G.D. Cassini, discoverer of the major divisions in Saturn's ring system, dies.
1967: US Surveyor 5 makes first chemical analysis of lunar material, the first of any solar system body outside earth.
12. 1759: Charles Messier observes the Crab Nebula and begins to compile his catalog
13. 1959: Soviet Lunik 2 becomes the first human-made object to crash on the moon.
14. 1752: England switches to Gregorian calendar after eliminating prior 11 calender days.
New Moon 15:20 UT
1974: Charles Kowal discovers Leda, 13th satellite of Jupiter.
- 15.
16. 1662: John Flamsteed observes a solar eclipse, his first known astronomical observation.
1877: James J. Jeans, cosmologist, astrophysicist, and popularizer of astronomy, is born.
17. 1789: William Herschel discovers Mimas, satellite of Saturn. 18. 1977: From space, US Voyager I spacecraft takes first photograph of earth and moon together.
19. 1848: G.P. Bond (USA) and William Lassell (England) independently discover Hyperion, satellite of Saturn.
20. 1970: Luna 16 lands on Mare Fecunditatis, drills a core sample, and sends it back to earth.
21. 1974: US Mariner 10 makes second fly-by of Mercury.
First Quarter Moon 7:03 UT
- 22.
23. 1846: Johann Galle and Heinrich d'Arrest find Neptune from the prediction by Leverrier.
1877: Urbain J.J. Leverrier, codiscoverer of Neptune, dies.
- 24.
25. 1644: Olaus Roemer, first person to accurately measure the speed of light is born in Copenhagen
- 26.
27. PAC MEETING, 7:30PM AT HYDE OBSERVATORY!!!
28. 1858: Donati's comet becomes the first to be photographed. Full Moon 20:08 UT
29. 1951: S. Nicholson discovers his fourth and the twelfth satellite of Jupiter.
30. 1880: Henry Draper takes that first photograph of the Orion Nebula.

(Calender courtesy of Compuserve's Naked Eye Astronomy Board)

A NOTE FROM LEE...

Those who attended the July meeting were treated to the tail-end of my "birthday party", for which I wish to thank all the perpetrators. I was especially pleased with my gift, a "do-it-yourself" starmap kit for my bedroom ceiling.

You may recall that this consisted of a xeroxed starmap, templates of stars (magnitudes 1 through 6, ranging from about 1/3-inch to 2 inches in size and neatly designed with 5 points each), crayons for coloring the stars in their correct psychedelic shades, and a pair of "star scissors" with which to cut duplicates from a pad of paper.

Recognizing the budgetary limitations of the contributors, I was enthusiastic over this newfound educational and decorating tool, and set immediately to work installing a lovely star motif in my slumbering quarters. Alas, I immediately ran into problems: The star sizes were much too large to correctly represent the constellations as seen from the bed-to-ceiling distance. This meant either raising the ceiling or lowering the bed.

Merely cutting off the bed's legs proved inadequate. This amounted only to about a foot of additional distance. Raising the ceiling would require several thousand dollars worth of construction. The answer was to remove the bedroom floor, thereby lowering the bed to basement level. From approximately two stories, the stars were now brought into their (roughly) accurate sizes. (I ignored the points as being merely artistic embellishments.) I was able to accomplish the elimination of the bedroom floor in about a week's sawing. Naturally, I had to install a ladder to facilitate reaching the door leading to the rest of the house. I estimate the project cost me a few hundred dollars.

I immediately encountered another problem: lowering the floor changed the aspect ratio of the sky. Using the ceiling alone yielded a very small area of sky, so I was forced to also affix stars to the walls, including closet doors and furniture. Naturally, they had to be painted black to provide a scientifically accurate background. I never realized that so many different kinds of paint would be required to cover these different surfaces in a flat matte black!

Then, when I got around to sticking the stars onto all this, still another obstacle presented itself: The Elmer's glue provided in the kit failed to hold most of the stars--especially the heavier ones, Magnitudes 1-3, onto the walls and ceiling. Nails proved inefficient as well--constellations rarely conform to the pattern of wall studs. Eventually, I hit upon the clever use of carriage bolts which are driven all the way through the walls to the outside and secured by lug nuts. My neighbors have remarked upon the rustic beauty imparted by this arrangement.

All told, I figure I've expended somewhere between 200 and 300 man hours and about \$1,947.52 in installing this gift. I'm sure the folks who generously gave it to me in celebration of my 45th year will be happy to reimburse me. Of course, the best reimbursement is the sincere sense of pleasure I receive when I retire on those cloudy Nebraska nights and gaze upward from my bed in the basement at my handywork. One of the hallmarks of the true amateur astronomer is, after all, resourcefulness.

--LEE T.

NASA ACTIVITES --- Houston, TX, 24 hours, 713-280-8711 Messages about shuttle activity. Most of this info is hard to understand. Many abbreviations and acronyms. The times are listed that various satellites transmit shuttle communications.

SPACE SHUTTLE BBS --- Satellite Beach, FL, 24 hours, 305-777-4714 Contains the latest info about shuttle flights?

ASTRONOMY BBS (?) --- Michigan, 300 baud, 313-292-6147 Contains a menu of astronomy bulletins, event calendars, files, quizzes, and messages.

STAR BOARD --- Denver, CO, 300/1200 baud, 24 hour, 303-455-3113 Operated by the Denver Astronomical Society, the board is free (except for the long distance fee), but if you want a trial run, you can log on using the following: Name = "ASTRONOMY MAGAZINE", Password = "dasbbs"

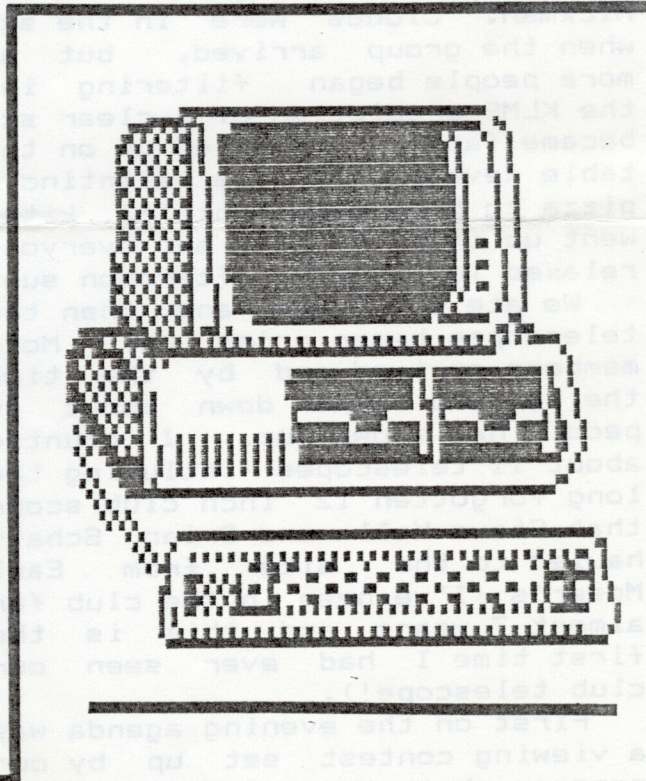
From the main menu, type "M" for the message board. Then, type "5" for the astronomy board.

If anyone calls this number, I'm sure we would all be interested in what you find. A small review would be nice.

PRANCING PONY BBS --- Lincoln, NE, 402-489-1400. This is the local bbs which we talked about last meeting. John Motsinger is the keeper of the Astronomy sub-board. We plan on putting PAC news on the board as well as any programs which members may benefit from. We hope that soon the Astronomy section will be at the base level of the board, but for now follow these directions to get to it...

At the Front Desk type "E" to enter the Common Room. From here type "A" to get to Adventure Haven. The Astronomy sub-board is part of this section. To make things interesting, you have to play the game to get to the Astro section from here. Good Luck!!!

If anyone has any more Astronomy related BBS's they know of, please let John Lortz or I know about them so that we can publish them in the newsletter and add them to the list of what we have now.



The Prairie Astronomer is published monthly by the Prairie Astronomy Club and is free to all club members. Membership expiration date is always listed in the right corner of the newsletter mailing label. Address all membership renewals to: PRAIRIE ASTRONOMY CLUB, INC., P.O. BOX 80553, LINCOLN, NE 68501.
For further club membership information or suggestions contact one of the following: John Lortz (Pres.) 572-1451(Omaha), Ron Veys (V.Pres) 464-1449, Bev Hetzel (Sec.) 435-7881, Lee Thomas (Tres.) 483-5639, or Andy Corkill (Prgm. Chair.) 488-1096. All articles for the newsletter should be sent to newsletter editor, JOHN LORTZ 3119 MAPLEWOOD BLVD. #41, OMAHA, NE 68134, no later than 10 days before each club meeting date.

Annual Star Party

Well, we finally did it! After years of putting up with clouds and rain the PAC finally pulled off an Annual Star Party. Saturday the 17th was the momentous date, and the party began about 4pm at Hyde Observatory when 8 cars caravanned from Hyde to our regular site at Wagon Train lake, just east of Hickman. Clouds were in the sky when the group arrived, but as more people began filtering in, the KLMS prediction of a clear sky became fact. Food piled up on the table (everything from Valentino's pizza to home made runza's), kites went up into the sky, and everyone relaxed in the warm afternoon sun.

We ate about 6pm and then the telescopes began going up. More members arrived and by the time the sun had gone down about 40 people had shown up. I counted about 11 telescopes including the long forgotten 12 inch club scope that Steve Kell and Brian Schaff hauled to the site from Earl Moser's (I've been in the club for almost 7 years and this is the first time I had ever seen our club telescope!).

First on the evening agenda was a viewing contest set up by our program chairman, Andy Corkill. Andy had created a target with a picture puzzle that members were to view with their scopes and then decipher. Of course we had some great prizes for the winners...John Lamborne won second-place honors and received a very nice space shuttle coin. And Ron Veys (who else?) won first place and got what he had always

wanted -- an inflatable 22 inch shuttle (Ron asked if it would float in his bath tub at home and I assured him it would!). I just wanted to mention that Lee Thomas also entered the contest with his Celestron 8, but gave up after the first minute or so and was heard muttering "WHY can't they ever have contests that CHALLENGE me?" (Ron Veys reported that later that night Lee was also heard wondering out loud where the 4th moon of Jupiter was, until someone kindly let him know it was behind the planet at the time).

Clouds again appeared and hampered the first hour of observing, but close to 10:45pm the skies again cleared and everyone raced to see what they could, sharing their telescopes so that all could take advantage of the clear skies and see some great deep sky objects. From Saturn, to the Veil Nebula, to Comet Giacobini-Zinner, we viewed some beautiful sights.

I left about 12:15am, but Steve Kell informed me that about 7 PAC members spent the entire night at Wagon Train awaiting the appearance of Halley's Comet. Between about 4am and 5am they searched for the comet and found a very faint object which they think was Halley's but as Steve told me, only comparing the same star field on another night will confirm whether they actually saw the comet or not.

I had a great time at the party and I think everyone else did too. Perhaps we've finally hit upon the right formula for a successful Annual Star Party..i.e., show up for it come rain or shine!

John Lortz
Editor

4. ASTRONOMY/SPACE ON COMPUERVE:

Naked Eye Astronomy is a small data base which has some general files on stars, planets, etc. plus a calendar of historical events concerning astronomy. (type GO NIA at the Compuserve "!" prompt to get to this section)

Space Forum is a special interest group forum which deals with space topics (nasa, space shuttle, etc.) and also has an astronomy section. The forum lets you communicate with other astronomers and space enthusiasts all over the country, down load programs that other users have submitted, and use any of the 10 or so different data bases that the forum has. They also have many on-line live conferences with guest "speakers". (type GO HOM-127 at the Compuserve "!" prompt)

Astronomy Magazine and Sky & Telescope Magazine both use the Public Access section of Compuserve to store information that users can read and download. Sky & Tel puts all of the programs it has in it's magazines on file here as well as any late breaking news items. Astronomy also includes many of its programs here (including the August Issues Star.bas program). (at the initial Compuserve "!" prompt type EX1 to move to the Personal Computing Section and then type R ACCESS to move to the Public File Access System, and finally type R NEWS.DAT[70275.125] to get to Sky & Tels news file) (files for Astronomy Magazine are also in the Public File Access System. Once you are in the system use the browse feature to look for 'astronomy' topics. Astronomy Magazine's Compuserve ID number is [74206.110].)

Space News Magazine puts information from it's magazine onto Compuserve on a bi-weekly basis. (again, these files are in the Public Access Area as are the Astronomy Articles and the Sky & Tel files. Space News Magazine's Compuserve ID number is [70376.534] and it's main file is called SPACEN.TXT.)

I hope the above information helps out all of you who want to break into the computer communication world. Room limitations here prevent a more detailed discussion, but such topics make for great after meeting discussions at Hyde Observatory.

PART TWO: BULLETIN BOARD SYSTEMS

by Steve Kell

DEAR ASTRONOMY MODEMER,

This is a preliminary list of Astronomically related bulletin boards. I have not called all of these numbers, so I can't guarantee their current existence. Hopefully, a few of you can afford calling these numbers, and let us poor folk know all about them. Do they have any interesting downloads, etc.?? It would be nice if we could pool any Astronomical programs or text files we might download.

ASTRONOMER'S BBS --- Titusville, FL, 24hr, 300/1200..305-268-8576 This board has an extensive data base of astronomy-related programs and text files. Its affiliations include the Coalition to Achieve Non-Detrimental Lighting (CANDL), and the Independent Space Research Group. Most of the computer stuff is for MS-DOS machines, and the BBS uses the RBBS software.

APPLE ASTRONOMY --- Houston, TX, 713-526-5671. Operated by the Burke-Baker Planetarium. This is a simple board having messages about astronomical news, games, quizzes, and calendars of events.

KALAMAZOO ASTRONOMICAL SOCIETY --- 24hrs, 300 baud, 616-342-4062 As a Remote CP/M system, you can run any of the programs on the system. The message system has the latest info. on comets, auroras, and other astronomical events. Uses RCPM/RBBS.

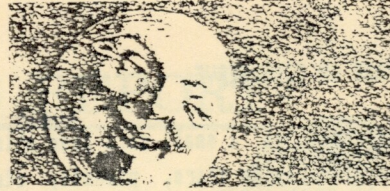
GASNET --- Greenbelt, MD, 301-344-9156. That is the Get-Away Special Net. This is a NASA board, at the Goddard Space Flight Center. It includes a message board that lists current shuttle and space info.

THIS MONTH'S PROGRAM...

Two well known members of the club, Carol Moore and Earl Moser, will be presenting the program at this month's meeting. Don't miss this fabulous duo as they present...

"THE INSIDE STORY OF KITT PEAK AT THE NATIONAL CONVENTION"

Andy Corkill
Program Chairman

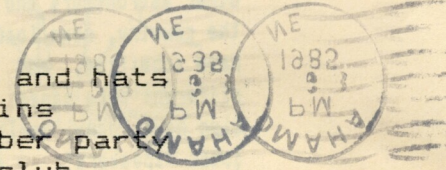


AT THIS MONTH'S MEETING...

We have some important items to discuss at the meeting this month (which by the way is Tuesday night, August 27th at 7:30pm, at Hyde Observatory).

The list includes:

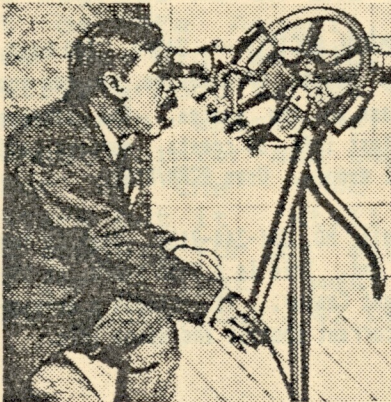
1. New club shirts and hats
2. Messier Award Pins
3. A possible October party with the Omaha club.
4. Looking into the possibility of building our own observatory.



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