The Computer Corner by Russ Genzmer

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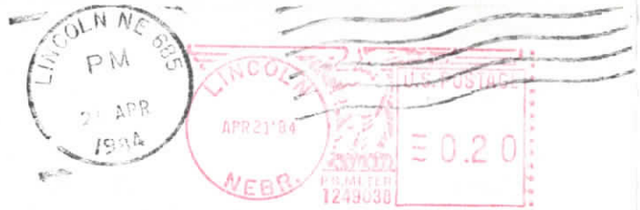
Some basic information on the orbital data required for the various tracking programs can be supplied by Dave Knisely of our club. He tells me that most of these programs are for the amateur radio operators, so the output is usually for a specific location on Earth and consists of altitude and azimuth bearings to aid in antenna pointing. The output also contains data on the Doppler shift on signals coming from the spacecraft.

Many programs also will search for all passes visible after a designated time and will tell you the time they come over the horizon (A.O.S.), the time of maximum altitude bearing as well as the azimuth, and the time they vanish (L.O.S.). The more advanced programs (i.e. for the Apple IIe, IBM PC, Zenith 100, etc) will put the spacecraft on a map so a person can watch the spacecraft orbit the earth.

The best place to obtain the software is via the AMSAT Software exchange. Write to the Radio Amateur Satellite Corporation P.O. Box 27, Washington D.C. 20044. Ask for a list of available software for your machine. They also have a nice moon tracking program. Be sure to send a self addressed stamped envelope with your request.



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Dust Catchers of Space...

U-2 airplanes, normally thought of as America's spy planes are now helping NASA's scientist's study comet secrets. It's huge 80 foot wingspan is ideal for catching the dust of comets for study.

The primordial material of comets have an age of 4.6 billion years. Study of this material can give us many clues to our solar system birth and evolution.

The French, European, and Japanese spacecraft are preparing to fly by the approaching Halley's comet. While they will study the comet's tail, gas, and icy head they will lack the ability to bring any material back for a longer study. That is where the U-2 comes in. It is estimated that about 10,000 tons of comet dust enter the earth's stratosphere each year. The U-2, outfitted with sticky plates on its wings can collect this and bring it back to earth for study.

Scientists will be able to take this material and study it for a year. The results will augment the findings of the fly-by spacecraft.

The study of comet's cannot be overstated. While meteorites are interesting they are material that has been pretty well beat around. Planetary researchers like to have pristine material to work on. Comets answer this request. Meteorites and comets were both formed around the birth of the solar system. But meteorites were formed in the warm inner solar system. Comets on the other hand were created in the uncontaminated unheated area around Uranus and Neptune. From there they were thrown out to a region 5 trillion miles from the sun.

Now with the U-2 and its collector plates scientist's hope to get a handle on not only comets but how they might answer some questions on the birth of our solar system.

Newsworthy Notes...

This month's meeting proves to be an interesting one. Dr. Edward Schmidt, professor of astronomy at the University of Nebraska will present "Star birth in the Orion Nebula". Since birthing places of stars are a major quest of many astronomers this talk should give we amateur's a different look at one of the most observed objects in the sky.

***** PRESIDENTS MESSAGE ******

It's time to pull the cover off your telescope and begin warm weather observing. I know that I could almost be classified as a warm weather observer since most of my best nights of observing have been during the summer months (let's just say my longest nights of observing have been in the summer). But I guess the point I'm trying to make is that warm weather is returning and the spring/summer Messier's and Herschel's are just waiting for us.

Now I'm not one to talk when it comes to working on observing projects. I've been poking along on my Messier list for about 3 years now and still have a long way to go. But it's only been in the past few month's that I've come to realize how impressive an accomplishment it is to complete an observing program, especially the Herschel list. As many amateur astronomers as there are in the U.S., only a hand-full have completed the program.

There are many ways to promote the Prairie Astronomy Club, but I think one of the most prestigious and (in many ways) easiest methods is to add our members names to that small and important list of recognized observers. I know that quite a few members don't have their own telescopes, which would seem to put them at a large disadvantage, but don't forget the club telescope and the (hopefully) soon to be new loaner telescope. The forementioned is available now and the latter will be ready for use later this summer.

So let's all get out and see what we can come up with this spring and summer. We have a great club here and the potential to put ourselves on the map as one of the top observing clubs in the country.

See you at the next meeting...

John Lortz

The Prairie Astronomer is published monthly by the Prairie Astronomy Club.
Membership structure--
1. Newsletter subscriber only, $6.00 per year. Over 21 years of age no club voting privileges (Newsletter only)
2. Junior Member, $6.00 21 years of age and less. Receives newsletter, voting privileges. No magazine subscription discount through club.
3. Regular Member $19.00, receives newsletter, voting privileges, Sky and Telescope subscription with dues through club. No age restriction.
4. Family members $21.00, same as regular member, but receives 2 votes in elections etc.
Numbers 2,3,4 of above also can receive as an elective, Astronomy magazine through the club at $12.00 per year. Address membership renewals to: Prairie Astronomy Club, Inc. PO box 80553, Lincoln Ne. 68501 Address all articles for inclusion in the Newsletter to Russ Genzmer 5301 So. 30th Lincoln Ne. 68516. All articles should be received 10 days before club meeting date.

Astronomy Day is rapidly approaching and we need the clubs support! Harlan Franey will be at this months meeting to take names and assign times for help during that day. If you are not going to be at this months meeting but would like to help, please contact Harlan at 488-0085.

Astronomy day is May 12th, at the Gateway shopping center. Our display will be located in front of B. Dalton's Bookstore. This has always been a very good location and compared to last year at East Park Plaza, will be a good improvement.

For Sale..

Dynamax 8" telescope. Tripod mount, Dynamax standard eyepiece's. Lighted cross hair finder by Tuthill. $600.00. Contact Ken Kopta at 489-3005.

Telescope Making magazine was in, then out, then in...
They sent it to my old, old address of which it sat there until I called them then they sent it out. It is unlikely that it will make it to this month's meeting. I will send it to the 6 members as soon as it arrives rather then wait a full month again.

Observer's Report by David Knisely

The next star party will be Saturday April 28th at Behlen Observatory (see last month's newsletter). I understand that Dr. Don Taylor has finally found an Astrologer to be sacrificed (willing or not) so the skies should be dark and clear!

Some of you have asked me about the Messier and Hershel awards. They offer something material to hang on your wall as well as a lot of good observing experience. For the Messier Club, you need to order "Observe; A Guide to the Messier Objects", through the Astronomical League Book service ($3.50). This manual contains all the information you need to help in locating all 110 objects in the list plus a nice series of log sheets for recording your observations. Once you have seen and recorded all the objects, all you do is show me or another club official your log so we can send for your award. If you log at least 70 of the objects, you get the Messier Club Certificate. The award certificate is conferred when you log all 110 objects and both the certificate and the award are presented to you at a short ceremony during a club meeting. All the Messier objects are visible in a three or four inch telescope so it shouldn't be too difficult for a beginner to get at least the Club Certificate.

The Hershel Award is more difficult than the Messier due to the faintness of the objects in the Hershel catalog. It is a challenge for the experienced observer with a six or eight inch telescope to see all 400 of the listings so it would be best if you try for the Messier award first.

There is an observe manual available for the Herschels from the book service and, although it contains a few errors, it is still a great help. It contains only two pages for logging your observations, so a quick trip to the photocopier is a must.

When you complete the catalog, send your observations to Brenda Branchett, Herschel Coordinator, P.O. Box 546, St. Augustine, Fl. 32084. You will be sent a beautiful award certificate and your observations will be returned to you. I will bring my certificate to the next club meeting plus additional information.