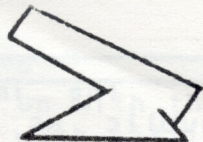




# The Prairie Astronomer



Lincoln Ne

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Mars, a planet that has been studied closely from the mid 60's, still hides many of its secrets from us. Mariners 4, 6, and 7 started it through the use of robot sensing devices. These robots relayed back information on the thin atmosphere, the dead crated landscape and the lack of lush vegetation, high technology and related civilization.

Hardly the report to make you rush out and buy anymore sci-fi books on the mysteries of Mars, right? Not quite, for Mariner 9 followed and discovered massive volcanos, huge canyons, planet engulfing dust storms, and mysterious channels similiar to riverbeds found on earth. Hardly a dead boring planet.

But even followed by the Viking mission in 1976 that conducted surface tests of mars many questions are still unanswered. So what does the future hold? The Mars Geoscience-Climatology Observer (MGCO) is to study the planet between 1990 and 1993. Not only is this a new study of mars but the concept of this project is new. It will be a new class of relatively simple, inner-solar-system missions using spacecraft already developed for earth orbit.

This plan was formulated by the Solar System Exploration Committee of NASA. This was needed for a two fold purpose. The present missions were becoming too complex and expensive. They also tried to achieve too wide a scope of results. Obviously to maximize results versus dollars. The other reason came from increasing fiscal cuts of the various programs by congress.

The MGCO will build upon the success of the previous Viking and Mariner missions. Some holes in our knowledge of Mars are: Mars has a long and colorful history of volcano activity, but little is known of the chemical composition of the ash. There is evidence that Mars undergoes radical climate changes but we don't know why.

With MGCO we can 1. Determine the chemical and mineralogical composition of Mars. 2. Precisely define the surface topography of the planet. 3. Find where most of the water is and how it contibutes to the seasonal changes on Mars. 4. To determine the structure and pattern of the atmosphere.

We plan on using commercially available spacecraft and currently a summer of 1990 launch date is planned. No scientific instruments have been chosen yet.



The important point for NASA to drive across to the public as well as congress is now at very modest cost planetary research can be continued and reap many answers and benefits. These can be used to help not only our understanding of the solar system but of our own planet as well. That helps all of us.

Russ Genzmer

## News Notes.....

Mid States Convention Wrap-up.

The convention was opened by Steve Best serving as chairman, on June 23. A series of papers were given that always prove interesting to all types of amateur and professional astronomers. Among these were the always faithful Bob Cox who demonstrated graphically on his Atari the positions of Jupiters moons for any time during the day. Several gave talks on their trip following the May 30 solar eclipse. Tom Becker spoke on telescopes in space. The leagues plans for the Halley's Comet trip to South America.

The banquet guest speaker was Dr. Doug Hall from Vanderbilt University. Talking on Starspots and the light of variable stars.

Representing our club were Earl Moser and his wife as they always do. Next years convention will be held in Wichita Ks. This is close enough for a good turnout on the part of all PAC members.

Russ Genzmer informed the club that the 8" mirror we had won as a door prize at the last national convention had arrived. Thanks to Summit Instruments of Miami Fl. The mirror was presented to Ron Veys and his committee. They are responsible for the tube and mount construction.

For sale-- 13" Odyssey telescope dobsonian mount. Good shape. \$450 contact Bill Noel Lincoln Ne. 464-1765.

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

A big thank you goes out to Joe Marcus from Omaha. Joe was kind enough to drive down last meeting and present a very interesting program on Halley's Comet and comets in general. He handed out sample issues of the Comet News Service. I would urge any interested in comets to subscribe to this quarterly review. Thanks again Joe.



Since some of us have a tough time keeping up with the scientific lecture circuit that sometimes arrives with little or no advance warning we urge all who hear of any such lectures to contact our phone tree. They are Lee Thomas 483-5639, Rick Johnson 423-6726, or Earl Moser 792-2260. These people will then do their best to spread the word around that a lecture will be arriving soon. Thanks.

## July Program.....

This month's meeting will feature Jack Dunn. He will have slides on the recent solar eclipse and also information on a planetarium conference in Mexico.

## Observe Report.....

The lone star party this month is August 24th, with the 25th reserved as a backup in case the club picnic is rained out in July. This month I would like to discuss astronomical books.

I recently enrolled in the Astronomy Book Club, one of Macmillan's many book club offerings. Many of you may have seen the ad in Sky and Telescope offering a set of books for a very low introductory price. For example, you can get all three volumes of Burnham's Celestial Handbook for \$3.00 plus an approximately \$2.00 shipping charge. These are the hardbound versions not paperback. This is a small fraction of the suggested \$60 list price they normally carry. However, you must agree to buy at least three more books from the club during the next 12 months and that can be the real kicker, since the average price of the selections seems to run about \$18.00. After buying the books, you may cancel your membership.

Many of these books are quite good for both the general reader and the advanced amateur, but more than a few are intended for students and professionals and probably should be avoided unless you have a degree in Physics or Astronomy. My favorite selection so far is The Red Limit by Timothy Ferris. It is a lively historical discussion of the search for the edge of the universe. It portrays astronomers as human beings with all their quirks and reveals the way science is influenced by strange scientists. Another good selection is The Moment Of Creation by James S. Trefil. It is a discussion of the Big Bang from the viewpoint of modern particle physics and is a must for all of you who like quarks. However, don't bother with The Cambridge Deep Sky Album by Phillip Teece. The photography is lousy and the selection of some objects is rather bizarre to say the least. (Don't mince words Dave, tell



us what you think).

The book club sends you a monthly selection list and a card that you must send back even if you do not wish a book that month. If you don't you will automatically receive the featured selection and have to pay for it. Check it out and good reading.

David Knicely

## President's Message.....

It's been a busy summer for me as I'm sure it has been for you. Between working in the evenings and the often crummy weather I've spent little time outside under the stars. Add to this the fact that my telescopes secondary mirror is on the blink...well, you get the picture. But instead of looking at how I'm not outdoors star hopping as I would like to be, I decided to capitalize on the chance to be indoors and to catch up on all the armchair astronomy I've neglected over the past few years.

When it comes to getting astronomy books at B. Daltons or Walden Books, I may not quite be in Ron Veys' league...but I come fairly close. I've always loved having books on my shelves, unfortunately most of them just collect dust. But once in a while I do actually pull some of them off the shelves and put them to the proper use. This summer I've so far plowed through three interesting astronomy related books that I think some of you might enjoy. All three are by William Kaufmann and were written back in 1978-79. They are: Galaxies and Quasars, Black Holes and Warped Spacetime, and Stars and Nebulas. You've probably all seen these books at one time or another on the shelves of your favorite bookstore or library, since all three have been around for a few years. You can sometimes find them on the sale table as I did, but even if you have to get them at the library or pay full price (about \$8.95) for them at the bookstore I think you'll find them to be excellent reviews of many basic astronomical phenomena. I know I learned a lot from these books, but I guess considering where I was starting from...I had and still have a lot more to learn. Anyway, if you have the opportunity, check these books out next time you're in the mood to sit back in your favorite reading chair. I think you'll find them well worth your while. I'll see you at the meeting.

John Lortz



Whats up with the Russian Planetary Missions, you ask? Some of the things our Russian counterparts are exploring are:

It seems they are extremely interested in another Mars mission. This will also include a rendezvous with Mars' tiny moon Phobos. This is targeted to happen in 1988-1990 time frame. Phobos has always been of interest to the Russians. They wish to study the surface composition via this mission.

A Lunar Polar Orbiter is also planned for 1989-1992 time frame. They wish to obtain a geochemical map of the moon by remote sensing of lunar water locations. They are also looking for western European involvement.

Several more Venera missions are under study at this time also. Longer lived landers are being developed as well as ideas for "Hoppers" or vehicles that can land and take off. Soil movement or plating and volcanos are of interest to them. A 1988 time frame is planned for this venture.

Long range plans for a space located large radio telescope are being drawn up. Possibly 5 years away yet. the primary concern is SETI studies.

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1. Newsletter subscriber only, \$6.00 per year.
2. Junior Member, \$6.00 21 years of age and less.
3. Regular Member \$19.00.
4. Family members \$21.00.

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.