

**Above: Herschel's great, reflecting telescope was completed at Slough, England and put into operation in 1789.**

## Special Announcements

**April 28 & 29 ..Special Astronomy Gala out at the Rystrom Observatory. Every member is encouraged to come out... bring your scopes. Your participation is what will make this event a success. Minutes not handy at press time. Sorry.**

**WHAT HAPPENED IN HISTORY IN APRIL**

- 2 First photograph of the Sun was made in 1845.
- 2 USSR Luna 4, in 1963, flew by the Moon.
- 2 USSR Zond 1, in 1964, flew by Venus.
- 3 USSR Luna 10, 1966, first craft from Earth to orbit the Moon.
- 3 In 1973, USSR launched Salyut 2 space station.
- 4 In 1960, the U.S. launched Tiros 1, the first weather satellite.
- 4 Apollo 6, Saturn V, last unmanned test of capsule, rocket, 1968.
- 5 In 1973, the U.S. Pioneer 11 probe left to fly by Jupiter, Saturn.
- 6 In 1965, Early Bird was launched, the first commercial communications satellite, also known as Intelsat 1.
- 6 In 1973, the U.S. launched Pioneer 11 to Jupiter, flying 25,000 miles from the giant planet December 3, 1974.
- 7 In 1968, the USSR's Luna 14 probe orbited the Moon.
- 8 The first unmanned test of Gemini 1 two-man space capsule, 1964. In 1970, James A. Lovell Jr., Fred W. Haise Jr. and John L. Swigart Jr. attempted to fly Apollo-Saturn 13 to Moon but a service module oxygen tank ruptured. They returned safely to Earth using lunar module oxygen and power.
- 11 In 1987, the astrophysics and biotechnology space laboratory, Kvant, launched March 31 from the USSR, was permanently attached to the Mir space station.
- 12 Man's world changed forever when Yuri Gagarin, in Vostok 1 in 1961, became the first man to orbit Earth. He lifted off from Tyuratam at 9:07 a.m. Moscow time. Vostok 1 completed one orbit in one hour 48 minutes at an altitude of 112 to 203 miles. Gagarin was killed seven years later in a March 1968 plane crash while training for the flight of Soyuz 3. On the far side of the Moon, a crater was named in his honor.
- 12 Robert L. Crippen and John W. Young fly the first U.S. shuttle, Columbia, to space in 1981.
- 12 U.S. Senator Jake Gam flew aboard shuttle Discovery in 1985.
- 14 Astronomer Christiaan Huygens was born in 1629.
- 16 Charles M. Duke Jr., Thomas K. Mattingly and John W. Young flew Apollo-Saturn 16 to Moon, 1972. Young and Duke made fifth Moon landing, collecting 213 lbs. of samples 71 hours.
- 17 In 1967, Surveyor 3 left the U.S. for the Moon where it soft landed at Oceanus Procellarum after a 65-hour flight. It scooped up lunar soil and sent test results back by radio.
- 19 In 1971, Salyut 1, man's first space station, launched by USSR.

19 In 1982, Salyut 7, the second of the USSR's second-generation space stations launched.

20 U.S. Apollo 16 made Man's fifth landing on the Moon in 1972.

23 In 1965, Molniya 1a launched, the first USSR active real-time communications satellite.

24 Vladimir M. Komarov, in 1967, was killed when his Soyuz 1 crashed after re-entry.

24 In 1970, China launched its first satellite, Mao 1.

26 In 1962, Cosmos 4, the first USSR weather satellite, launched.

28 The U.S. plans to launch shuttle Atlantis flight STS-30 to Earth orbit, ferrying the Magellan probe bound for Venus.

### ***Insane Ramblings from the President by Richard Huziak***

I could easily fill a newsletter with all that I have to say, but I'll try to keep it short. Call me at 665-3392 with any comments on the below topics.

***Martensville Starnight - Tuesday, April 25.*** A starnight is tentatively planned for Martensville on April 25. I will be giving a presentation to a troop of Girl Guides between 6:30 and 8:15 p.m., during which time I may need help in the form of a solar telescope or two. At about 8:30, we would open the observing to the general public, and run until around midnight. Martensville is only about a 10 minute drive from the edge of Saskatoon. **I would like to see at least 5 telescopes out there. Many members have been talking about having 'mini'-starnights in close outlying towns, and here's our big chance. This is an opportunity to impress the town, and maybe pick up more members.** Details are still tentative, and a rain-date has not been set, but when details are firmed up, I'll be calling everyone. You can, however, be proactive and get in touch with me beforehand if you can help out.

***We Need a Banner!*** - Is there anyone out there who can buy, beg or borrow a very large banner for us? We need to be seen at displays and starnights. We need a banner that is at least 1 meter by 3 meters in size that we can string up above display tables or at the entrance to a starnight. If you don't know where we can get one, does anyone want to volunteer to be in charge of designing it and getting one made? The Centre is not exactly broke, and we can afford to buy one if it is reasonably priced.

**Upcoming Events** - Here's a list of lots of things to do in astronomy for the next year. Make your plans!!

Call me for details on any of these upcoming events!

- April 15 Spica occultation and partial eclipse of Moon (early morning)
- April 17** **General Meeting, Room A-226 - program TBD**
- April 25 Public Starnight - Martensville - details tentative
- April 28-29 Gala OG Session - Rystrom Observatory - Be there!
- May 6 Astronomy Day Display and Starnight (Market Mall and Diefenbaker Park)
- May 15** **General Meeting, Room A-226 - program TBD**
- May 27 OG meeting - Rystrom Observatory - rain date June 3
- June 19** **General Meeting, Room A-226 - Mark Moore - "3D Astronomy"**
- June 24 OG meeting - Rystrom Observatory - no rain date
- June 29-Jul 3 General Assembly, Windsor, ON - Jim Young and Ed Kennedy are attending
- June 29 -July 3 Assembly of the Astronomical Society of the Pacific - Moorehead, MN (dates tentative)
- July 21-23 Northern Prairie Star Fest - Sarles, North Dakota
- July 28-29 Annual Public Starnight - most likely in Diefenbaker Park
- Aug. 11-12 Perseid Meteor Peak - full moon will wash out - probably and alternate activity
- Aug. 23-27 Mount Kobau Star Party - Osoyoos, BC
- Sep. 1-4 Alberta Star Party - Eccles Ranch, AB
- Sep. 18** **First General Meeting of the New Year - Room A-226**
- Sep. 22-23 Annual Fall Public Star Night - maybe at Wanuskewin

**Welcome New Members** - I will always try to acknowledge new members as they enter the Centre. This year this task has been a little lax, but better late than never! **Thanks for joining and let your interests be known so we can design good programs for you.** Welcome to:

R. O. Christie, Carol Davis, Terry Dencsak, Brian Friesen, Kirt Headley, Erich Keser (ex-Sudbury Astronomy Club), Floyd Kuechle, Patricia

LaFournaise, Christine (Chris) MacAuley, Mark MacKenzie, Koji Maeda (from Japan), Dustin Matkowski, Mark Moore, Craig Reichert, Gilbert Smith, Shawn Switenky, Jordan VanderVorst, Barbara Worobec, Dave Yanko

In addition, the following latecomers were not included in last months' published list.

Nelson Rystrom RR#5Saskatoon, SK S7K 3K8 (306) 955-2350  
 Cynthia Fey 473 Gladmer Park Saskatoon, SK S7J 2X3  
 (306) 374-7710

**Fireball Reports Still Wanted!** - Yes, Gordon and I still work with MIAC, and we still want you to give us a call as soon as you see (or hear of) a fireball. For newcomers, MIAC is a Canada-wide organization of amateur astronomers who take reports of fireballs (BIG meteor sightings) and send them to a central research organization run by the NRC. Occasionally we also research them ourselves. (See Oct. 1994 JRASC). I can't believe fireballs have stopped falling, but no one has called me since January. Any meteor brighter than Venus is a fireball by our definition. My answering machine is always on.

**Promotional Articles for Sale** - We still have 3 copies of the 1995 RASC Calendar (\$6.50 ea.) and a bizzillion copies of the Beginning Observer's Handbook (BOG)(\$9.50 ea.). I will deliver free in town, or add \$2.00 if you want them mailed.

**Sky and Telescope Subscriptions** - For new members, you can get a 20% discount in subscription costs to Sky and Telescope magazine if you subscribe through the Saskatoon Centre. If you subscribe, you can also get an additional 10% off of anything else Sky Publishing Corp. sells. Write or call me for a brochure explaining how you do this.

**Internet and Email** - It seems that everyone is on the Internet, or soon will be. Well, the Saskatoon Centre is too. **Our address is "Huziak@SEDSsystems.ca"**. If you're on the `Net, send me an email. I also have lots of other mail addresses for you as well as a listing of interesting `ftp' sites on astronomy, NASA, etc. No fewer than 11 of our members are on email already! I'll stick the list in in a future issue.

**Eclipse Chasers!** - The Calgary Centre has organized an eclipse

expedition the view the Oct 24, 1995 India total eclipse of the sun. The package starts at about \$3500. **For more information, call Laurie at "Let's Talk Worldwide Travel" at 1-800-667-9986, or call Calgary Centre members Don Hladiuk at (403) 266-7809 or Alan Dyer at (403) 221-3731.**

### ***Mariner Interplanetary Probes***

Mariner was a series of U.S. interplanetary science probes to the Solar System's inner planets in the 1960's and early 1970's. Then Mariner 11 and Mariner 12 became Voyager 1 and Voyager 2 which went on grand tours of the Solar System's outer planets.

Mariner 1. Launch toward Venus failed.

Mariner 2. Launched successfully toward Venus August 14, 1962, the 445-lb. Mariner 2 flew by within 21,642 miles of Venus December 14, 1962. Mariner 2 was the first successful planet fly-by. The probe confirmed the existence of a solar wind. It measured the temperature of Venus but did not find a magnetic field. Today Mariner 2 is in orbit around the Sun.

Mariner 3. Launched toward Mars November 5, 1964, failed to follow the proper trajectory and now is in orbit around the Sun.

Mariner 4. Launched successfully toward Mars November 28, 1964, the 575-lb. Mariner 4 flew by Mars July 14, 1965. Mariner 4 was the first successful probe to Mars, passing the Red Planet at a distance of 6,117 miles. It sent back 22 photographs showing the planets arid, cratered surface. Today it is in orbit around the Sun.

Mariner 5. Launched successfully toward Venus June 14, 1967, the 540-lb. Mariner 5 flew by Venus October 19, 1967. It passed Venus at a distance of 2,479 miles, measuring the planet's temperature and collecting a profile of its atmosphere. Mariner 5 accurately measured the mass and diameter of Venus, but didn't find a magnetic field. Today it is in orbit around the Sun.

Mariner 6. Mariner 6 and Mariner 7 were 910-lb. twins. Launched successfully toward Mars February 24, 1969, Mariner 6 flew by Mars July 31, 1969. Mariner 6 passed Mars at a distance of 2,120 miles. It sent back photos of the region around Mars' equator. it measured surface temperature, atmospheric pressure, composition and diameter of Mars. Today Mariner 6 is in orbit around the Sun.

Mariner 7. Mariner 6 and Mariner 7 were 910-lb. twins. Launched

successfully toward Mars March 27, 1969, Mariner 7 flew by Mars August 5, 1969. It passed at a distance of 2,128 miles. Mariner 7 photographed the southern hemisphere of Mars and the Martian South Pole ice cap. Mariners 6 and 7 together transmitted to Earth a total of 201 photographs of the Red Planet. They measured surface temperature, atmospheric pressure, composition and diameter of Mars. Today Mariner 7 is in orbit around the Sun.  
Mariner 8. Failed during launch to Mars.

### ***Public Observing at the U of S Observatory***

The U of S Observatory will be open to the public Saturday evenings from 7:30 - 9:30 p.m. from October through February. Observatory assistants will be present to answer questions about astronomy and to assist in the viewing through the six inch telescope. **For further information call Stan Shadick at 966-6434.**

### ***ASTRONOMY DAY - MAY 6, 1995....by Sandy Fergusson***

This year International Astronomy Week occurs the week of May 1-7, with **International Astronomy Day** being celebrated on Saturday, May 6th. This is the nineteenth year in which Astronomy Day will be held in Canada. This year the theme is "**Light Pollution - a Very Serious Problem**", emphasizing the importance of informing the public how light pollution affects our night sky and suggesting alternatives on how to control the amount of artificial lighting in our urban areas that will result in safe streets as well as successful observing.

**We will be setting up our display tables and telescopes at Market Mall (next the Food Court), between 10:00 a.m. and 5:00 p.m., as we have done in previous years.** We also expect to have Rick Huziak's solar telescope set up outside at one of the entrances to give passers-by an opportunity to check out the sun (and hopefully some spots) should the day be fair.

In the evening our first starnight of the season is planned (weather permitting, of course) in Diefenbaker Park. We will set up on the southwest side of the hill, behind the trees, where we hold all our

summer starnights. Signs will be set up in the park and at local intersections.

**If anyone is able to donate an hour or two of their time that day to help at our display tables or to stand watch at the solar scope, your assistance would be greatly appreciated.** Also, anyone who can provide time, telescopes and astronomy knowledge will be most welcome at the starnight as well. **Please give me a call at 931-3184 or catch me at a meeting if you can help out or require more information.**

### ***Letter from the Editor***

Well here it is...time to put out another newsletter. All of us were supposed to be out at our Observer's Group but old Mother Nature had other ideas. You will notice that this newsletter has changed again in the way it looks and the way it is laid out. The reason for that is that I finally got a computer that is real and fast and not something from the Dark Ages like that old Tandy of mine. I guess that I shouldn't talk too bad about it as it helped me put out the last several newsletters without too much trouble.

I would like to thank **David Cornish** for all of the help that he gave me on the newsletter. My old Tandy could only do so much before it complained and David was kind enough to help me lay out the past newsletters. Now that I have a good computer I can really have some fun with the newsletter and set it up the way I have always wanted from the start. This newsletter is not the final copy but as I am pressed with not a lot of time, I could only make some of the changes I want right now.

If any of you are interested in sending in some articles for the newsletter here are some things to remember. **First of all it MUST BE RECEIVED by the first of the month or it will not be put in the newsletter until next month.** I do not have a 5.25 floppy anymore so please submit your articles on either a 3.50 dd or hd disk. If you do not have a computer please type it out and get it to me no later than the middle of the month so that I will have ample time to get it into the newsletter. **My address is Garry Brett, 522 Devonshire Crescent, Saskatoon...S7L 5W1 Phone 384-1807.**

I would also like to thank **Al Hartridge** for doing up the back page each month. He not only spends a lot of time doing it he also laser prints out



over 138 copies of that page. That way we we all get a quality back page with a superb picture on it.

David asked me to mention that **Motion Picture & Sound** has their filters on sale, so drop down there and buy what you need. For those of you who do not know, MPS are the sponsors of our Binocular Observers class.

Well, that's about it for now. Hope you like the newer layout and if you have any ideas on articles or anything else give me a call. If I am out

### ***Betcha Didn't Know***

STS-61 C. Columbia carried Ku-1, second in a planned series of stationary satellites by RCA. Columbia also carried 12 Get Away Special canisters (GAScans) with experiments and Materials Science Laboratory-2.

The dozen GAScans held seed germination, chemical reaction, egg hatching, astronomy, atmospheric physics and materials processing experiments. Materials Science Laboratory-2 held a liquid bubble suspension by sound waves experiment, melting and resolidification of metallic samples and containerless melting and solidification of electrically conductive specimens.

Hitchiker G-1 housed experiments studying film particles, tested a new heat transfer system and determined the effects of contamination and atomic oxygen on ultraviolet optics. Comet Halley Active Monitoring Program (CHAMP) was a 35mm camera to photograph Comet Halley through the shuttle flight deck's aft overhead window. Unfortunately the camera batteries died.

STS-34. Chang-Diaz was scheduled to ride Atlantis flight STS34 for four days in space with the Galileo Jupiter probe in October 1989. With him were to be astronauts Donald E. Williams, Michael J. McCulley, Shannon W. Lucid and Ellen S. Baker, M.D.

***DON'T FORGET ABOUT OUR BIG ASTRONOMY  
GALA ON APRIL 28 & 29 OUT AT RYSTROM'S.  
BRING YOUR SCOPES!***

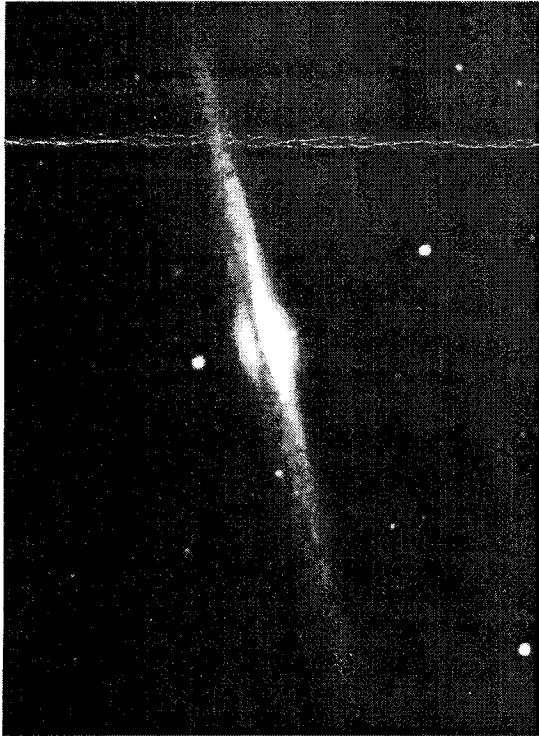
# ASTROPHOTO CORNER

APRIL 1995

SASKATOON CENTER RASC

## PHOTO OF THE MONTH

### NGC 4565 - COMA BERENICES



Probably the best known edge on spiral galaxy in the sky. Located about 1.7 degrees east of the double star 17 Comae, this galaxy is possibly an out lying member of the Virgo Cluster since it has a radial velocity (red shift) comparable to typical members of the Virgo Group. It is roughly 20 million light years away with a diameter of 90,000 light years. Total light received from this galaxy is equivalent to about 3 billion suns.

This galaxy is easily seen in the club's 8" Celestron as an elongated streak of light with a brighter central hub and some indication of a dark dust lane. It is a fine view in my 14" Celestron.

- NGC 4565 is quite easy to find. First find 17 Comae which forms the apex of an arrow head shaped group of stars pointing toward the east, then move your scope about 1.5

to 2.0 degrees east and the galaxy should appear in your feild of view.

#### TECHNIQUE:

This photograph was taken with my Celestron 14 and focal reducer to f7.5 on hypered 2415. The exposure was for 75 min. A Micron P90 computer with Aldus photostyler software was used for digital manipulation to enhance the above photograph.

#### ASTROPHOTO TIP:

Focusing is the single most important step in obtaining truly satisfying astrophotos. While one would assume that this is a straight forward task let me assure you that this can be quite difficult. Fortunately there are devices on the market that can aid in obtaining good focus. With the C14 I use a Sure Sharp focuser which works real well, however I have had great difficulty in obtaining satisfactory focus with my Astrophysics refractor and camera until I discovered the knife edge focus method. To do this open the back of your camera(unloaded),then aim the telescope at a mag.2 star, then run the knife edge (I use a sharpened paint scraper) along the film rails of the camera and adjust the focus of your telescope repeatedly until a point is reached where the knife edge produces an instantaneous darkening of the feild . This is the point of sharpest focus.

Clear Skies and Good Guiding ————— Al Hartridge