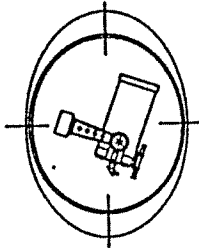
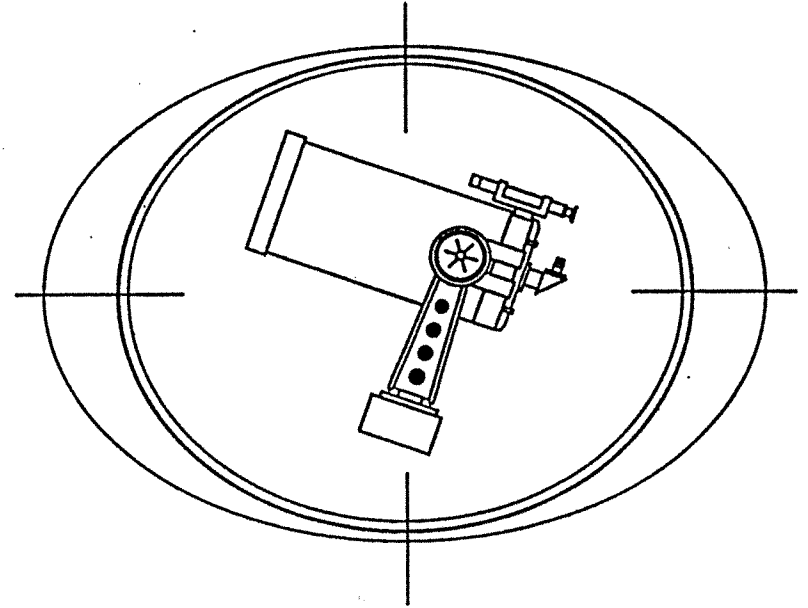

WINNICENTRICS

A Publication of
The Royal Astronomical Society of Canada
Winnipeg Centre



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Vol. 29 No. 3 May/June 1989

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Once again, Astronomy Day approaches. This year, it is on May 13, 1989, the day before Mother's Day. Several events are being planned, some in conjunction with the Planetarium

From 1:00 PM to 5:00 PM, the Winnipeg Centre will have a display at the Planetarium. It is hoped that this will mark the installation of John Haines' master work in the Planetarium display cases. Lorence will have his computer star map/catalogue set up, and at least one telescope will be set up outside for solar viewing. A video of the Voyager planetary probe will be set up and running as well. We will need volunteers to help with this event.

That evening, there will be a Public Star Party at Assinboine Park, from 8:00 PM to 11:00 PM. We hope to have several telescopes set up for the public to view. Again, we are issuing a call for volunteers to help set up their scopes and guide the public in viewing. This year, the actual site will NOT be on the Cricket Field, but behind the Conservatory, east of the building near the parking lot.

We realize that this is the second week in a row that we would expect help from our members, but we have enough members that if you can make only one week or the other, we still have more than enough people to cover both events. This is your Centre and your hobby (or passion), and this is a great opportunity to show your family, friends and the general public what all the fuss is about.

Come out and help us!

FOR SALE

20 inch F/4 mirror with Newtonian diagonal flat. Standard thickness, perforated primary for Cassegrain focus. \$1,800.00 Canadian. Contact the Montreal Centre, RASC, P.O. Box 1752, Stn. B, Montreal, Quebec, H3B 3L3.

Celestron Super Polaris C-8 with sky sensor computer, motor drives, 26mm plossl, off axis guider, tele-extender, dew cap, piggy back mount, tele-view 13mm plossl, tele-view Richfield kit (2" diagonal + 55mm plossl). \$2,400.00. Contact Russ Klassen at 661-5212.

PENUMBRAL EXPERIENCES

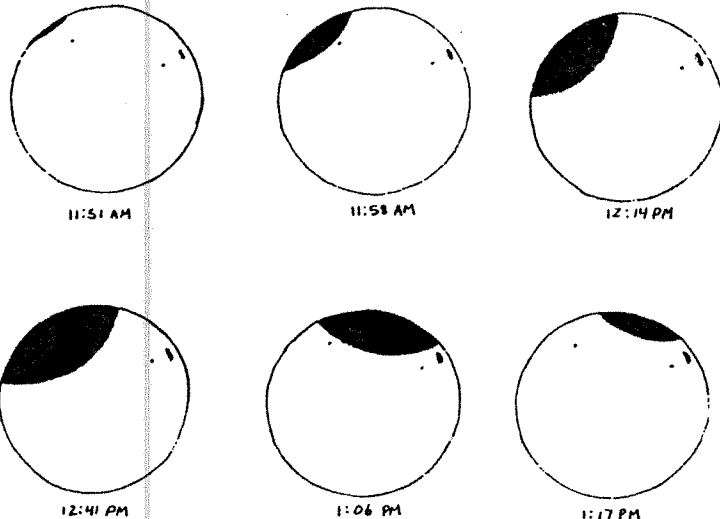
By Scott Young

At 12:41 p.m. CST on March 7, 1989, about a dozen first-year astronomy students were freezing on the roof of University College in a 50km wind, crowded around the projected image of what looked a lot like Pacman. Hardly what most people would call fun, but we loved it! We were observing the first solar eclipse to cross Winnipeg since 1986.

We had set up a 6" Dynascope to project the sun's image onto a screen, and some people had welder's glass. Then, just as the eclipse began, Brian Yasui of the CBC arrived with his cameraman, and they interviewed various people at random. During all this I had been sketching the eclipse. I noticed that the moon's limb was irregular and much darker than a nearby group of sunspots. "Fascinating, Captain..."

During a brief respite from the wind, I talk with Brian, swapping stories about the February 1979 eclipse. Then someone mentioned "The Big One" in Baja and Hawaii on July 11, 1991. I don't know about the others, but when the moon's shadow hits Baja, I'll be there!

PARTIAL SOLAR ECLIPSE MARCH 7, 1989



MAY 12, 1989

8:00 p.m.

LOCATION: Theatre 100, St. Paul's College
Featured Speaker: Jay Anderson, Environment Canada

A former member of the Winnipeg Centre, Jay has always been involved in astronomy education. He is the "eclipse forecaster" for astronomers worldwide, and many of us are familiar with his recent article in Sky & Telescope. His topic will be (of course): Eclipses. He will not only tell us about Finland in 1990 and Baja in 1991, but also present a vide of a past eclipse or two.

JUNE 9, 1989

6:30 p.m.

The Annual Family Barbeque!!

Invite your family and friends to the 3rd Annual RASC Family Barbeque and Great Messier Race! Bring enough munchies for you and yours, and a barbeque if you have one. There'll be tours of the observatory, a Pluto hunt, and a possible autograph session with Ian Shelton. Also, don't forget your 'scopes for the Messier Race!!

MASCON 1989

Spring has sprung, and with it come thoughts of this year's family astronomy adventure at Riding Mountain National Park. It's called MASCON, for Manitoba Astronomy Convention, and the name has further significance in that a mascon is a concentration of mass under the Moon's surface. In this case, we hope to have a concentration of astronomers in Riding Mountain National Park!

MASCON will be held on July 28, 29 and 30, 1989. The RASC Winnipeg Centre is working closely with Parks Canada to produce a public astronomy event that will be of great interest to everyone, young and old.

Friday, July 28, will find some RASC members giving a short presentation at a park Interpretive Centre. That evening, it is hoped that amateurs from near and far will gather to camp at Lake Katharine, and we will be allowed to set up our scopes on the darkened parking lot. There will be power and a bathroom handy. This will be the astronomers' night!

Saturday, July 29, will be the day for public programs in Wasagaming. We hope to have solar observing at the Interpretive Centre, and a number of slide presentations in the theatre. In the evening, we will be back at Lake Katharine for an evening of public observing. This will include constellation tours, planet finding contests (would you believe that six will be visible!) and whatever else we can think up.

Sunday, July 30, a day of rest. Except if Saturday has inclement weather, in which case this will be our day of public programming with our scopes.

The Winnipeg Centre is in contact with the Brandon Amateur Astronomy Club and the Portage la Prairie Astronomy Club, and we hope that their members will also be actively participating in the event. We will certainly need as many volunteers as possible, and as many scopes as can be brought to the Park. This event will give us a chance to work together with our members in Dauphin and other rural locations. Maybe we can make a side trip to the Kellwood Observatory and the Dauphin dark sky site. There are many non-astronomy things to do, too, of course, including hiking, swimming, boating, etc. Bring your family for a fun time, and help us in public education programs!

cont'd ↑

The cost of MASCON itself is zero, but the campsites themselves are \$9.00/day per site. We are still negotiating, but it seems that we cannot reserve sites ahead of time. We hope to have some people get to Lake Katharine early in the week to prepay some sites and finalize arrangements, but it should be noted that there are many other campsites in the area if Lake Katharine fills up. This is a busy time of year for the Park anyway, so we hope that we can at least get a loop set aside for us. Plan now to attend!

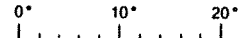
Southwood Mall Display

The Winnipeg Centre has not had a Mall display for some time. It was decided to try a small "test run" of our major display which will be going into the Planetarium this summer. We will be setting up in the Southwood Mall on May 6, 1989, and run from 10:00 AM to 3:00 PM. John Haines will be bringing his enormous display for a preview, and we hope to have a few scopes set up as well, including our C-14, now that it is out of the observatory. There is a distinct possibility that we will have a video display running, but we are still looking for someone to bring their VCR and TV. In general, we are looking for volunteers to take turns watching over the display and answering questions about astronomy. Bring your family; while they shop for awhile (and spend money), you can sit with us at the display. The Southwood Mall has a number of good stores, including a K-Mart, Radio Shack and a Jumbo Video that is the largest video store in the city. And there's even an open-air Arizona Fitness studio where you can go and watch the - er - heavenly bodies work out. See! Astronomy is everywhere!

If you want to help, call Mohsen Abdel-Hadi or call Chris or Myra.

SKY CALENDAR MAY 1989

Use this scale to measure angular distances between objects on diagrams below.



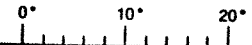
CURRENT SKY INFORMATION:
Call (517) 332-STAR

An aid to enjoying the changing sky

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>Diagrams show sky in mid-twilight, about 50 min before sunrise or 50 min after sunset, except May 5, 15, 30, as noted.</p> <p>Sunday and Monday evenings, May 7 & 8: Moon Monday</p>	<p>Evening, May 1: Mars</p> <p>Aldebaran * Jupiter Mercury Pleiades (use binocs) Hyades WNW</p>	<p>Tuesday through Thursday mornings, May 2-4: Old Moon Thurs May 4</p> <p>Monday and Tuesday evenings, May 8 & 9: Pollux Castor</p>	<p>Wednesday evening, May 3: Moon Tuesday May 2</p> <p>Wednesday evening, May 10: Pollux Castor</p>	<p>Predawn: Peak of Eta Aquarid meteors. 4 20 min. after sunset on Fri. May 5: Begin trying for near-record young Moon 4 1/2° N of Venus. Age 13 1/2 hr from mid-US (Illinois shown), 15-16 hr from W Coast. Moon is 1/2° higher for each time zone farther west. Please send us details of any sightings!</p> <p>Evening: * Jupiter 11 Aldebaran WNW Mercury Castor Pollux Mars</p>	<p>☾ New Moon 7:46 am EDT 20 minutes after sunset, * Jupiter Fri May 5: Mercury Aldebaran * Mercury See text, May 4. Extremely Young Moon! Venus In WNW</p> <p>Friday and Saturday evenings, May 12 and 13: Regulus Moon Friday just past First Quarter</p>	<p>☽ Tau β Tau</p> <p>Jupiter * Moon easy! Aldebaran * Mercury WNW</p>
<p>Have you spotted Venus yet? On what date will you last see Jupiter this month?</p> <p>14</p>	<p>30 minutes after sunset: 15 Look early for Venus 7° LR of Jupiter. Mercury, 3rd mag and 3/4° UR of Venus, is invisible in bright twilight. Aldebaran may be gone, too!</p> <p>16</p>	<p>Evening: SE to SSE. 16 Moon Spica</p> <p>Evening: 23 Can you still see Jupiter? Look 1.3° below Venus.</p>	<p>Evening: 17 Spica Moon</p> <p>23 Moon Weds 24 Moon Tues 23 TEAPOT. 23 Tuesday and Wednesday mornings May 23 & 24</p>	<p>To be sure of seeing Venus-Jupiter, begin looking earlier, about 30 min after sunset.</p> <p>W * Betelgeuse WNW * Jupiter * Venus</p> <p>25</p> <p>Vesta, the brightest asteroid, will come within 106 million miles of Earth next month and reach mag 5.3.</p>	<p>Venus-Jupiter 3° apart. Watch them next 5 nights; binoculars help.</p> <p>Regulus Moon Saturday</p> <p>26</p> <p>Predawn darkness hours: Neptune closely S of a 6.7-mag star 1.2° W of Saturn. See text below.</p>	<p>Saturday evening: 20 Planets 2° apart. WNW * Jupiter * Venus</p> <p>○ Saturday May 20: Full Moon rises in SE before Venus sets.</p> <p>Sunday morning: Antares May 21, morning: SW</p>
<p>Sets 1.2 hours after sundown, and is much easier to observe. In first half of May, you must look shortly after sunset to spot Venus. To Jupiter's lower right; see May 5 and 15. On May 22, Venus climbs past Jupiter. Watch these two planets for a few evenings around that conjunction, as shown on May 19-23. Pick a place with an unobstructed view toward WNW, start looking about 1/2 hour after sunset, and use binoculars. Mars, in Gemini, sets in dark sky all month, 3 to 4 hours after sunset. Of mag 1.6 to 1.7, Mars is a close match in brightness to Castor, the fainter Gemini Twin. Watch Mars' 0.6° daily eastward shift carry it from the foot of Castor in early May to the left of the bright "Twins" in early June.</p> <p>1.3° apart.</p>	<p>Evening: Planets appear closest tonight as Venus passes 0.8° N of Jupiter. 22</p> <p>22</p>	<p>Evening: 23 Can you still see Jupiter? Look 1.3° below Venus.</p> <p>23</p>	<p>Evening: 17 Spica Moon</p> <p>23 Moon Weds 24 Moon Tues 23 TEAPOT. 23 Tuesday and Wednesday mornings May 23 & 24</p>	<p>To be sure of seeing Venus-Jupiter, begin looking earlier, about 30 min after sunset.</p> <p>W * Betelgeuse WNW * Jupiter * Venus</p> <p>25</p> <p>Vesta, the brightest asteroid, will come within 106 million miles of Earth next month and reach mag 5.3.</p>	<p>Venus-Jupiter 3° apart. Watch them next 5 nights; binoculars help.</p> <p>Regulus Moon Saturday</p> <p>26</p> <p>Predawn darkness hours: Neptune closely S of a 6.7-mag star 1.2° W of Saturn. See text below.</p>	<p>Saturday evening: 20 Planets 2° apart. WNW * Jupiter * Venus</p> <p>○ Saturday May 20: Full Moon rises in SE before Venus sets.</p> <p>Sunday morning: Antares May 21, morning: SW</p>
<p>Sunday, May 28: At sunrise today, Moon has just passed Last Quarter and is nearly 90° (1/4 circle) to west of rising Sun. Note Moon's shape.</p>	<p>Tuesday May 30, 3 hours after sunset: Antares at opposition, up nearly all night.</p>	<p>Evening: 23 Can you still see Jupiter? Look 1.3° below Venus.</p> <p>23</p>	<p>Evening: 17 Spica Moon</p> <p>23 Moon Weds 24 Moon Tues 23 TEAPOT. 23 Tuesday and Wednesday mornings May 23 & 24</p>	<p>To be sure of seeing Venus-Jupiter, begin looking earlier, about 30 min after sunset.</p> <p>W * Betelgeuse WNW * Jupiter * Venus</p> <p>25</p> <p>Vesta, the brightest asteroid, will come within 106 million miles of Earth next month and reach mag 5.3.</p>	<p>Venus-Jupiter 3° apart. Watch them next 5 nights; binoculars help.</p> <p>Regulus Moon Saturday</p> <p>26</p> <p>Predawn darkness hours: Neptune closely S of a 6.7-mag star 1.2° W of Saturn. See text below.</p>	<p>Saturday evening: 20 Planets 2° apart. WNW * Jupiter * Venus</p> <p>○ Saturday May 20: Full Moon rises in SE before Venus sets.</p> <p>Sunday morning: Antares May 21, morning: SW</p>

SKY CALENDAR JUNE 1989

Use this scale to measure angular distances between objects on diagrams below.



CURRENT SKY INFORMATION:
Call (517) 332-STAR

An aid to enjoying the changing sky

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
<p>Locate and plot the two faint outer giant planets and an asteroid this summer. Begin with Teapot of Sagittarius and bright Saturn now 4° above its handle. Refer to angular distances between stars on map at right to determine diameter of your binoculars' field of view. Hints given here and below will help you "star hop" to your target planet. Example—Uranus (mag 5.6): Extend line from ϕ to λ, 4° beyond λ to 5.0-mag 11 Sgr. Uranus lies 1.7° E (left) of 11 Sgr on June 1, decreasing to 0.5° E on July 1. Neptune, Vesta, more on Uranus: See June 24, 25, 28. Save this chart to track planets in coming months.</p>						
<p>Planets in WNW at dusk: Brilliant Venus (mag -3.9) and faint Mars (+1.8) are 24° apart on June 1, 7° apart on June 30. Each day Venus is slightly farther from Sun, while Mars sinks lower; they'll pass on July 12. Both are moving east against stars. Venus by 1.2° daily. Mars by 0.6°. Watch Mars pass 5° S of Pollux on June 5; Venus does the same on June 23. Planets very low in ENE at dawn: Mercury, mid-June into early July, and bright Jupiter (-1.9) emerging to its lower left near end of June; see calendar. Planets up most of night, all in Sagittarius; all retrograding as Earth overtakes them in June-July, with date of opposition, when planet is 180° from Sun and up all night—in SE at dusk, in south in middle of night, and in SW</p>	<p>Pollux • Castor • Mars Sunday June 4, evening: Young Moon Venus</p>	<p>Pollux • Castor Mars Moon, Monday June 5 Venus</p>	<p>Tuesday June 6, evening: Moon Pollux • Mars • Procyon Venus</p>	<p>On what night will Mars align with Castor and Pollux? Find out by observation.</p>	<p>Thursday and Friday mornings, June 1 & 2: Moon Thurs 1 Old Moon Fri 2 ENE</p>	<p>2 New Moon 3:53 p.m. EDT (12:53 p.m. PDT). This is the only date this month Moon can't be seen.</p>
<p>As Moon sets in west early Sunday morning (near midpoint of darkness hours night of June 10-11), it is near First Quarter phase, half full and 90° from Sun. Moon rises again just after midday. Note shape Sunday evening is more than half.</p>	<p>Monday through Wednesday evenings, June 12-14: S to SSW.</p>	<p>Spica Monday 12 Tuesday 13 Wednesday 14</p>	<p>Morning: Use binoculars to see Mercury rising in bright twilight. As Mercury brightens in east of June, will you see it with naked eye? Pleiades ENE Mercur</p>	<p>Evening: Mars Pollux Castor Venus</p>	<p>Evening: Antares Moon SSE</p>	<p>Evening: Antares Moon SSE</p>
<p>Sunday and Monday June 18 & 19, 1¼ hours after sunset: Full Moon Sunday 18 Saturn Monday SE</p>	<p>Morning: Mercury reached greatest elongation 23° from Sun on June 18, but gets slightly higher for another week. Pleiades ENE Mercury</p>	<p>Morning: Moon in handle of Teapot. Saturn TEAPOT SW</p>	<p>June solstice 5:53 a.m. EDT. Summer begins in Earth's northern hemisphere. Sun overhead at the Tropic of Cancer. How far from overhead is your midday Sun today?</p>	<p>Evening: Mars Pollux Castor Venus Moon</p>	<p>Morning: Binoculars needed to see Aldebaran 2.7° LR of Mercury. Pleiades Mercury* In ENE • Ald</p>	<p>Sat June 24: Uranus at opposition. At mag 5.6, Uranus easy in binocs as brightest object within triangle of λ, 11, and 14 Sgr on chart above. Tonight, Uranus is 0.8° E (left) of 11 Sgr, the 5.0-mag star 4° WNW of λ, top of Teapot. Watch Uranus approach 11 Sgr until night of July 14. Vesta now within 3° NNW of Uranus; see June 25.</p>
<p>Sunday June 25: Asteroid Vesta unusually close and bright, predicted mag 5.3. Using binocs and chart above, "star hop" to Vesta. Begin with 3rd-mag λ (Lambda) Sagittarii at top of Teapot, then find 4th-mag μ (Mu) 5½° to its NW. Next, note 4.8-mag 21 Sgr 5° N of λ and 2.8° E of μ, and 5.4-mag 14 Sgr within 0.7° S of μ. Tonight Vesta is midway between 14 and 21 Sgr, 1.4° from each. Can you see it with unaided eyes? Observe and photograph Vesta nightly this week as it shifts ¼° WSW per day. On Sat eve July 1, Vesta will pass only 0.1° NW of 14 Sgr.</p>	<p>Evening: Mars is within Beehive. But twilight interferes with view of that cluster's faint stars. Mars Venus WNW Castor Pollux</p>	<p>June 28: Tonight note 5th-mag 28 Sgr 0.3° W of Saturn, and 8th-mag Neptune 0.4° to Saturn's NE. On night of July 2-3 Saturn will occult the star! Uranus is now 0.6° E of 11 Sgr. Can you still find Vesta?</p>	<p>Thursday June 29, morning: Pleiades Hyades Aldebaran • Mercury Jupiter ENE</p>	<p>Friday June 30, morning: Pleiades Moon Hyades Aldebaran • Mercury Jupiter ENE</p>	<p>Second and most observable of this year's triple conjunction of Saturn-Neptune: To find Neptune tonight in good binocs or small 'scope, first note 5.8-mag star 28 Sgr 0.6° W of Saturn. Neptune is 0.3° (half as far) to Saturn's north and two mags fainter than 28 Sgr.</p>	

at dawn: Uranus June 24; Vesta June 25; Saturn and Neptune July 2. Motions against background stars in June—Vesta 7° WSW, Saturn 2° W, Uranus 1.2° W, Neptune ¼° W. Saturn appears as bright zero-mag "star" 4° above 2nd-mag σ (Sigma) in handle of Teapot; Uranus (mag 5½) decreases its distance E (left) of 5th-mag 11 Sgr from 1.7° on June 1 to 0.5° on July 1. Neptune (mag 8½) is near Saturn to all month. On June 1 it is 1.0° WNW of Saturn and about 3½° of the way from 30 to 31 Sgr; two 7th-mag stars 0.4° apart. Neptune is 0.3° N of Saturn June 24 (see calendar), and on July 1 is still 0.5° to Saturn's NE. Track Vesta in last week of June: See June 25.

Robert C. Victor, Jenny L. Pon, Robert D. Miller
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