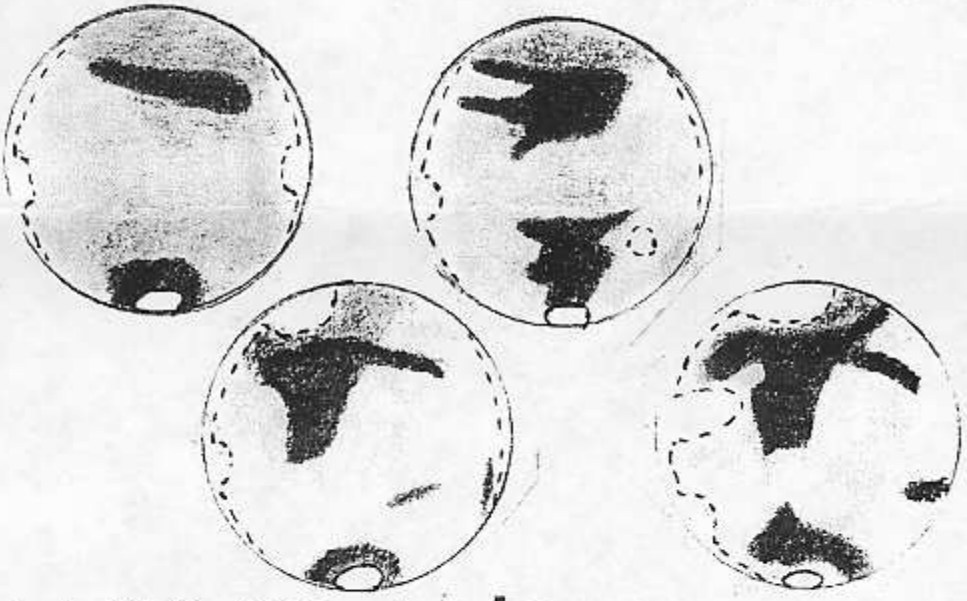
University Lowbrow Astronomers
Ann Arbor, Michigan

REFLECTIONS
REFRACTIONS

of the University Lowbrow Astronomers

July 1999

The University Lowbrow Astronomers is a club of Astronomy enthusiasts which meets on the third Friday of each month in the University of Michigan's Physics and Astronomy building (Dennison Hall, Room 807). Meetings begin at 7:30 pm and are open to the public. Public star parties are held twice a month at the University's Peach Mountain Observatory on North Territorial Road (1.1 miles west of Dexter-Pinkney Road; further directions at the end of the newsletter) on Saturdays before and after the new Moon. The party is canceled if it's cloudy or very cold at sunset. For further information call (313)480-4514.



1. April 28, 99 at 11:00 pm, longitude 160 degrees, X255, filter nos. 21 and 80A, limb arcs and clouds.

2. May 9, 99 at 11:00 pm, longitude 40 degrees, X255, filter nos. 21 and 80A, limb arcs and evening clouds over Arcadia.

3. May 14, 99 at 11:00 pm, longitude 310 degrees, X255, filter nos. 21 and 80A, Hellas and evening clouds, limb arcs.

4. May 19, 99 at 10:00 pm, longitude 300 degrees, X255, filter no. 21, Hellas cloud, Libya cloud, bright evening arc and clouds.

Stan Bies presents here a number of Mars sketches he made here using a Ceravolo DH145 Maksutov-Newtonian telescope. Compare these images to the Mars map printed in Sky & Telescope magazine, page 106 for orientation of the features. South is up on all views.

This Month:

July 16 - Meeting at 807 Dennison - See the Lowbrow's latest acquisition – A 10" almost LX200 Schmidt-Cassegrain telescope!

July 17 - Public Star Party at Peach Mountain Observatory – Welcome all 'scopes' big and small; and observers too.

Next Month:

August 7 - Public Star Party at Peach Mountain Observatory – Locate Uranus & Neptune tonight. Both are in Capricornus and will be rising as the evening progresses. See Pg 108, May Sky & Telescope magazine for a chart.

August 12 & 13 – The annual Perseid meteor shower peaks early in the morning on these days.

August 14 - Public Star Party at Peach Mountain Observatory – If you missed em – look for Perseid meteors just one day past their peak!

August 20 - Meeting at 807 Dennison - Chris Sarnecki (aka – Mr. Chris, Ed, Kristtoffel Zanik-niet) will present a multi– media presentation on Eclipse 99 (That is if Bernard can locate a video & TV. Are you listening Bernard?)

Computer Subgroup Meeting Report of June 25th

By Dave Snyder, dgs@umich.edu

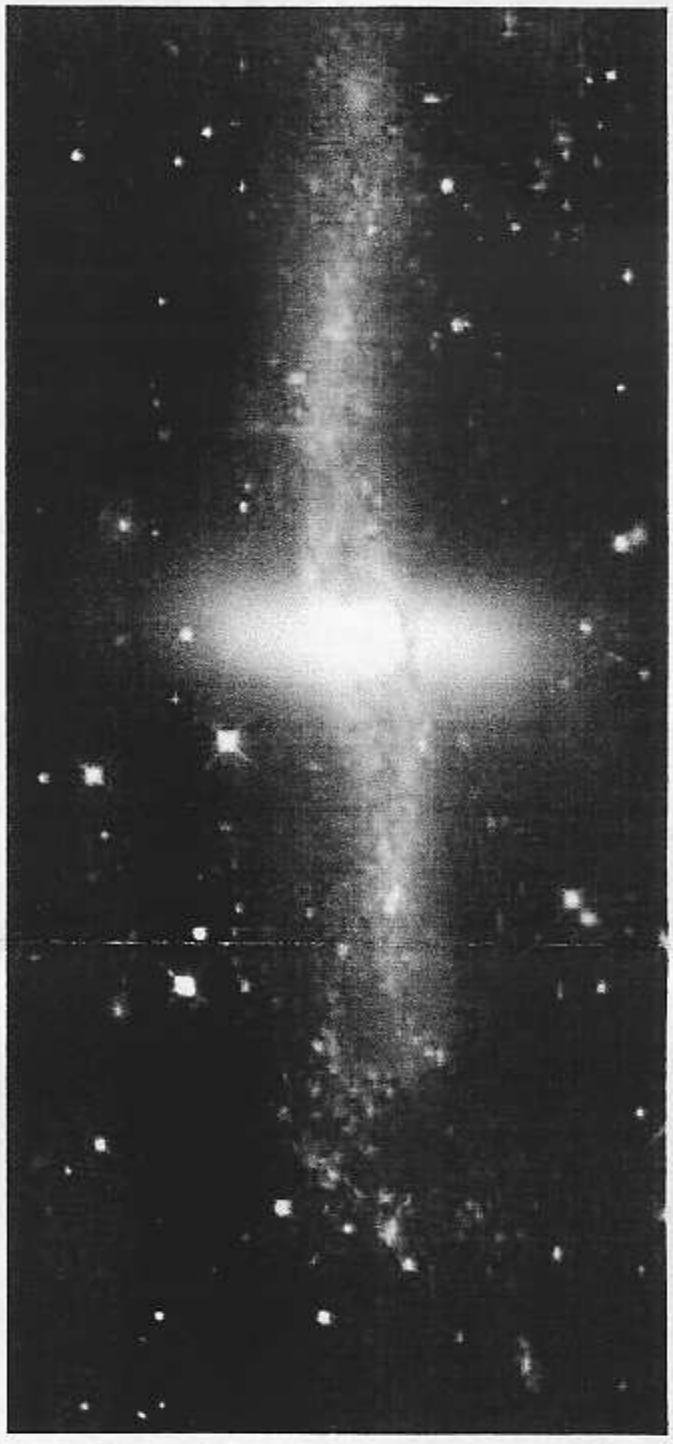
A few years ago there was a "computer subgroup" which met once a month. A small group of Lowbrows (which varied over time) would meet and discuss various ways computers could be in used by amateur astronomers. For various reasons we stopped meeting (the last such meeting was in November 1996).

After some conversations with some club members, I suspected there would be enough interest to try to start the subgroup up again. I decided that the topic of the next meeting would be "How to Build a Web Page or a Web Site." As I was preparing for that talk, I realized that the material I had would fill up more than a single evening.

On June 25th, a group of us meet in the Dennison Building. I began with a talk on the basics of HTML (HTML is the primary language used on web pages). Bernard Friberg brought a computer which I used to demonstrate a software product that makes writing HTML easier. After that Bernard demonstrated "the Sky", a program that is used to produce star maps.

I anticipate that we will continue to meet once a month for a while. Possible topics include more advanced topics in web applications (this includes JavaScript and Java) and a discussion of software for CCD cameras. My hope is eventually the group can work together to produce some new content for the lowbrow web site.

I have an email list of everyone who has expressed an interest. I will be happy to add more names to that list. Anyone interested in the computer subgroup should contact me.

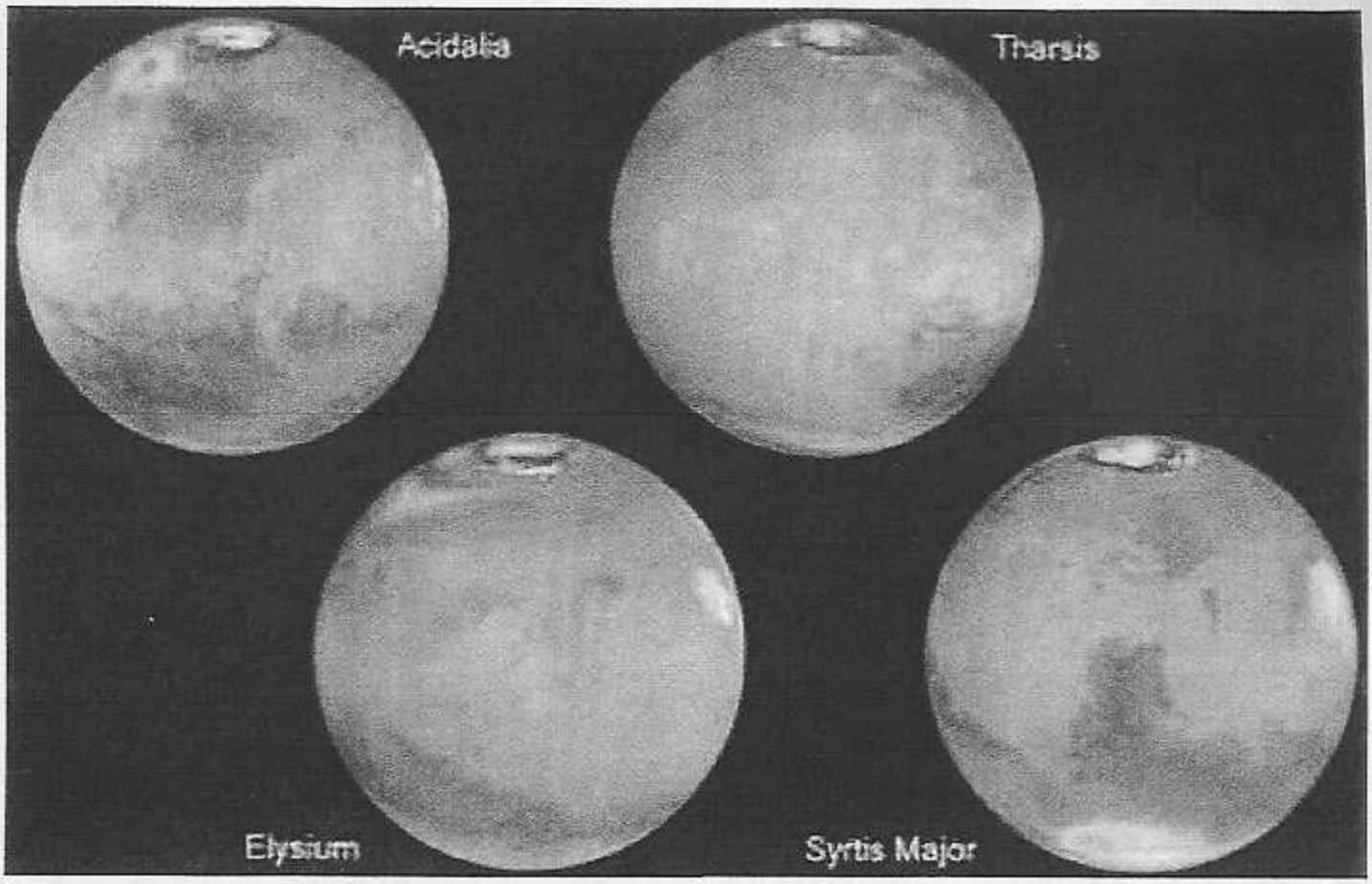


Just a note...

In the summer months Lowbrows have been known to crawl under a rock, sip something cooling, or basically escape to parts unknown. For that reason our crop of articles is little to non-existent. Therefore, as previously discussed this month's issue of REFLECTIONS will feature astro photos from some of the best observatories for your viewing enjoyment. - Ed

Previous page – **NGC 4650A – Picture and Text Credit: Hubble Space Telescope –** Explanation: NGC 4650A appears to be two galaxies in one. A rare type of galaxy known as a Polar Ring, NGC 4650A is composed of an old central group of stars and a young ring of stars rotating further out. Both components are clearly visible in this featured photograph by the Hubble Space Telescope. What creates Polar Ring Galaxies is still being researched, but a leading theory is the collision of two distinct galaxies in the distant past. Polar Ring Galaxies allow astronomers to estimate the amount of dark matter in galaxies by measuring the rotation rate of the highly extended ring. An unknown type of dark matter is implied because the ring typically rotates too fast to be held together by only the visible stars.

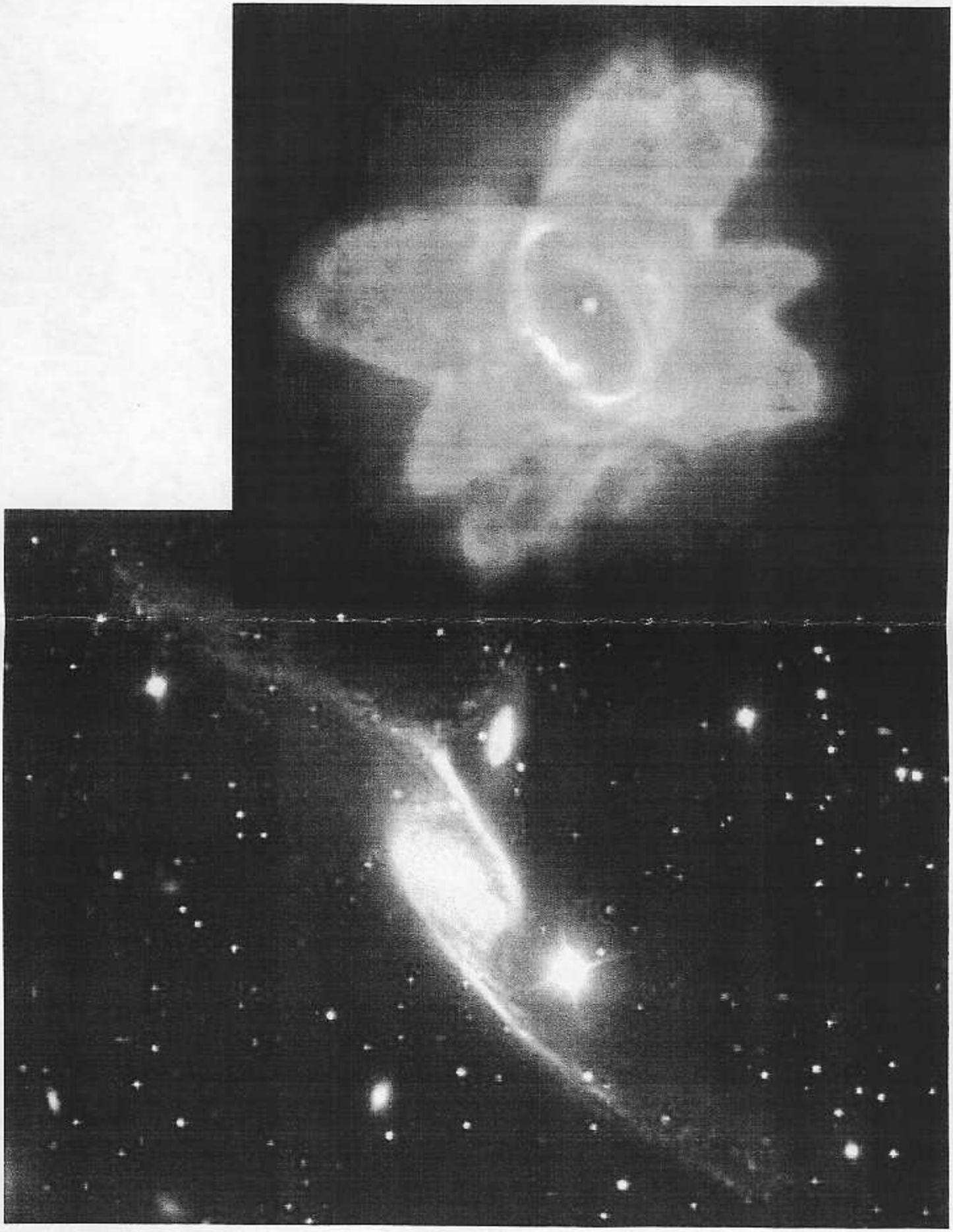
Above – Starbirth in the Trifid Nebula Picture and Text Credit: J. Hester (Arizona St. U) et al., WFPC2, HST, NASA **Explanation:** Tremendous pillars of gas and dust are being boiled away in the Trifid Nebula. In the center of the picturesque Trifid lies a young hot star, located above and to the right of this picture. As soon as it was born, the massive star scorched its surroundings with bright and energetic light. Nearby stars trying to form ended up starved for gas as it was swept away from them by the bright star's light and wind. Lower mass stars should continue to form in the Trifid Nebula, as over 1500 times the mass of our Sun still exists in uncondensed gas. Also known as M20, the Trifid Nebula is about 9000 light years away and easily visible with a small telescope in the constellation of Sagittarius.



Above – Four Faces of Mars – Picture and Text Credit: S. Lee (U. Colorado) et al., WFPC2, HST, NASA **Explanation:** As Mars rotates, most of its surface becomes visible. During Earth's recent pass between Mars and the Sun, the Hubble Space Telescope was able to capture the most detailed time-lapse pictures ever from the Earth. Dark and light sand and gravel create an unusual blotted appearance for the red planet. Winds cause sand-tinted features on the Martian surface to shift over time. Visible in the above pictures are the north polar cap, made of water ice and dry ice, clouds including an unusual cyclone, and huge volcanoes leftover from ancient times. The Mars Global Surveyor satellite orbiting Mars continues to scan the surface for good places to land future robot explorers.

Top Next Page – PKS285-02: A Young Planetar Neula - Picture and Text Credit: R. Sahai & J. Trauger (JPL), WFPC2, HST, NASA **Explanation:** How do planetary nebulae acquire their exquisite geometrical shapes? To investigate this, astronomers used the Hubble Space Telescope to image several young planetary nebulae. These nebulae are the outer envelopes of stars like our Sun that have recently been cast away to space, leaving behind a core fading to become a white dwarf. In this photograph in red H-alphacarbon that composes humans is thought to be created by red giant stars and ejected into the cosmos in planetary nebulae like PKS285-02. The complexity of this nebula leads some astronomers to hypothesize that these shells were created by high-speed, collimated outflows during a late phase of this star's evolution.

Lower Next Page – NGC 6872: A Stretched Spiral – Picture and Text Credit: FORS Team, 8.2-meter VLT Antu, ESO **Explanation:** What makes NGC 6872 so long? Measuring over 700,000 light years across from top to bottom, NGC 6872 is one of the largest barred spiral galaxies known. The galaxy's elongated shape might have something to do with its continuing collision with the smaller galaxy IC 4970, visible just above center. Of particular interest is NGC 6872's spiral arm on the upper left, as pictured above, which exhibits an unusually high amount of blue star forming regions. The light we see today left these colliding giants before the days of the dinosaurs, about 300 million years ago. NGC 6872 is visible with a small telescope in the constellation of Pavo.



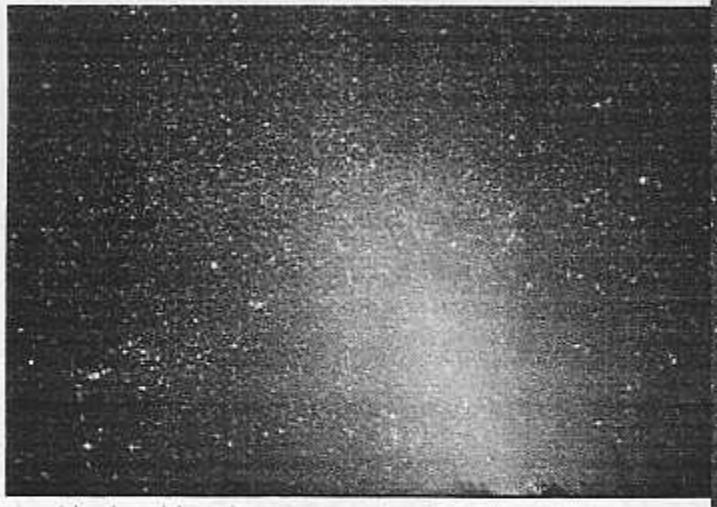
Jupiter

By Mark Deprest

Jupiter sketch by Mark Deprest. Io (one of Jupiter's moons) is visible as a shadow on the disk. The original is at Mark's house, but you can see an electronic copy at http://www-personal.umich.edu/~dgs/lowbrows/members/planets2.htmlhis sketch.

1998 Texas Star Party

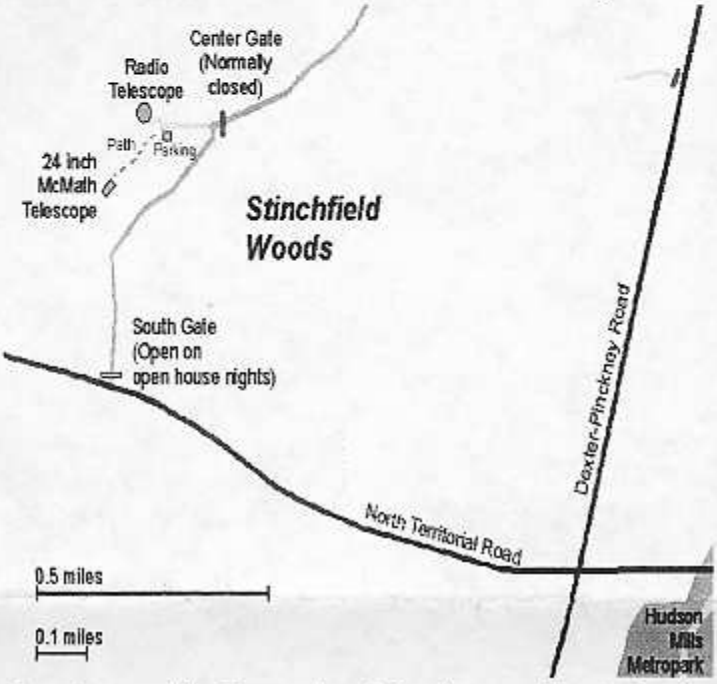
By Doug Scobel



Last but not least...
Doug's pictures of April, 1998 Texas star party can be seen in their entirtety on our web site at http://www-personal.umich.edu/~dgs/lowbrows/members/tsp10s.html. Do check this out if you haven't seen them in color. The picture above is the zodiacal light and the picture to the right is the Milky Way.

Places and Times:

Dennison Hall, also known as The University of Michigan's Physics and Astronomy building, is the site of the monthly meeting of the University Lowbrow Astronomers. It is found in Ann Arbor on Church Street about one block north of South University Avenue. The meeting is held in room 807. Monthly meetings of the Lowbrows are held on the 3rd Friday of each month at 7:30 PM. During the summer months, and when weather permits, a club observing session at Peach Mountain will follow the meeting.



Peach Mountain Observatory is the home of The University of Michigan's 25 meter radio telescope as well as the University's McMath 24 inch telescope which is maintained by the Lowbrows. The observatory is located northwest of Dexter. The entrance is on North Territorial Road, 1.1 miles west of Dexter-Pickney Road. A small maize-and-blue sign marks the gate. Follow the gravel road one mile to a parking area near the radio telescopes. Walk along the path between the two fenced in areas (about 300 feet) to reach the McMath telescope building.

Public Star Parties:

Public Open House/Star Parties are held on the Saturday before and after each new Moon at the Peach Mountain Observatory. Star Parties are canceled if the sky is cloudy at sunset or the temperature is below 10 degrees F. Call 480-4514 for a recorded message on the afternoon of a scheduled Star Party to check on the status. Many members bring their telescopes and visitors are welcome to do likewise. Peach Mountain is home to millions of hungry mosquitoes - bring insect repellent, and it does get cold at night so dress warmly !

Amateur Telescope Making Group meets monthly, with the location rotating among member's houses. See the calendar on the front cover page for the time and location of next meeting.

Membership:

Membership dues in the University Lowbrow Astronomers are $20 per year for individuals or families, and $12 per year for students and seniors (age 55/+). This entitles you to the monthly REFLECTIONS newsletter and the use of the 24" McMath telescope (after some training). Dues can be paid to the club treasurer Doug Scobel at the monthly meeting or by mail at this address:

1426 Wedgewood Drive
Saline, MI 48176

Magazines:

Members of the University Lowbrow Astronomers can get a discount on these magazine subscriptions:

Sky and Telescope: $29.95 / year
Astronomy: $27 / year
Odyssey: $16.95 / year

For more information contact the club Treasurer. Members renewing subscriptions are reminded to send your renewal notice along with your check when applying through the club Treasurer. Make the check payable to "University Lowbrow Astronomers".

Newsletter Contributions:

Members and (non-members) are encouraged to write about any astronomy related topic of interest. Call or E-mail to Newsletter Editors at:

Bernard Friberg (743)761-1875 Bfriberg@aol.com
Chris Sarnecki (734)426-5772 chrisandi@aol.com

to discuss length and format. Announcements and articles are due by the first Friday of each month.

Telephone Numbers:

President:	Mark Deprest	(734)662-5719
Vice Presidents:	Lorna Simmons	(734)525-5731
	Dave Snyder	(734)747-6537
	Paul Walkowski	(734)662-0145
Treasurer:	Doug Scobel	(734)429-4954
Observatory Director:	Bernard Friberg	(734)761-1875
Newsletter Editors:	Chris Sarnecki	(734)426-5772
	Bernard Friberg	(734)761-1875
Keyholders:	Fred Schebor	(734)426-2363
	Mark Deprest	(734)662-5719

Lowbrow's Home Page:

http://www.astro.lsa.umich.edu/lowbrows.html

Dave Snyder, webmaster
http://www-personal.umich.edu/~dgs/lowbrows/

Monthly Meeting

July 16, 1999, 7:30 pm

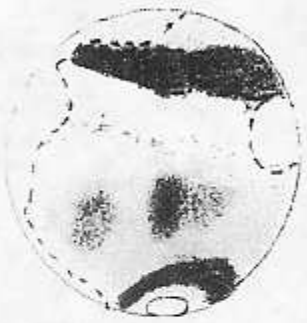
Room 807 Dennison Hall
Physics & Astronomy Building
The University of Michigan

Prof. Lorna Simmons, PEO – *

Presents

SUPER NOVAE

* Lorna's previously scheduled talk on "Parking Operations at Peach Mountain" was erroneously published in last month's RE-ELECTIONS and represents the work of an out-of-control Editor (I'll be having a talk to that guy). Anyway, Lorna has agreed to make an astronomy related presentation. —Ed



Left – May 20, 99 at 10:00 pm, Longitude 300 degrees, Hellas cloud, bright evening arc and clouds, Libya cloud.

Right – May 26, 99 at 9:45 pm, Longitude 200 degrees, Phase distinct equatorial cloud band, clouds over Memnonia, Olympus Mons, Libya, Eridania

Mars sketches by Lowbrow Stan Bies. Stan used a Ceravolo DH145 Maksutov-Newtonian telescope at X255 power with filter nos. 21 and 80A. More sketches inside this issue. South is up on all views.

University Lowbrow Astronomers
Ann Arbor, Michigan

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Exp 11/1999

Lowbrow's WWW Home Page:
www.astro.lsa.umich.edu/
lowbrows.html

Check your membership expiration date on the mailing label !

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