FORD AMATEUR ASTRONOMY CLUB
FAAC
Established 1992

Star Stuff

FERA
Ford Employees Recreation Association

ASTRONOMICAL LEAGUE

Volume 7 Number 3

April 1998

Feature of the Month

ECLIPSE CRUISE REPORT
by Paul Mrozek

When I first started making plans to see the February 1998 total solar eclipse, I was just going to stay on the island of Aruba for a week. However, after talking with some people who had vacationed in the Caribbean, I decided that going on a cruise would be worth the extra expense. Now that it's over, I am convinced that going back soon will also be money well spent. In addition to the excellent food, I really enjoyed visiting all the different islands (Puerto Rico, Dominican Republic, Aruba,

Cruise (Continued on page 3)

House Bill 4254

The light pollution bill is still in the Senate committee for Technology and Energy. Representatives from the area clubs are planning a trip to Lansing with Norbert Vance to testify before the committee. This has not been confirmed yet. If you would like more information on this bill or the trip to Lansing contact Jack Kennedy at 248-399-9403 or e-mail to jjkenn@ibm.net

Equipment Review - PhotoSmart Photo Printer -

by Clayton Kessler - February 19,1998 Part 2

I waited until I just couldn't stand it any more and after the Christmas rush I went out and brought home the printer. This thing is huge compared to most inkjet printers on the market. It measures about 18 ½" wide, 18 ½" deep and 6 ½" high - close to the size of the old LaserJet Series II I keep in my office. Fortunately it is not nearly as heavy as the old LJ II.

Hewlett Packard says that this printer "prints real photos..... on photographic paper comparable to what photo labs use". We shall see about that! The printer is an inkjet, or more accurately a "Multi-dye load thermal inkjet printer". It has "Photographic" resolution, no "dots per inch" resolution rating is given. The printer uses two "tri-chamber photo cartridges". Each has three colors and is designated by a star or moon - maybe they knew amateur astronomers would try this thing!

It was a typical Hewlett Packard installation. Everything went just as the instructions said it should. The problem that I faced was how to hook both printers to my single printer port? A Bitronics electronic parallel port switch solved that problem nicely. Software installation was smooth and I was ready to print.

Printer (Continued on page 3)

Contents

Star Stuff
Monthly Publication of the:
Ford Amateur Astronomy Club.

Star Stuff Newsletter
P.O. Box 7527
Dearborn, Michigan 48121-7527

1998 Club Officers

President	**Greg Burnett**
Vice President	**George Korody**
Treasurer	**Ray Fowler**
Secretary	**Harry Kindt**

General Meetings
The Ford Amateur Astronomy Club (FAAC) holds regular general meetings open to the public on the fourth Thursday of the month at 5:00 PM. Meetings are held in conference room 1029 of the Ford Credit Building

Observing Site
The Ford Amateur Astronomy Club has an established observing site, by permit, at the Spring Mill Pond area of Island Lake Recreation Area in Brighton, Michigan located near the intersections of I-96 and US-23. Members are responsible for opening and closing the gate after the parks 10:00 PM closing time. (Summer season only)

Observing Hot Line - (313) 390 5456
On Friday and Saturday nights, or nights before holidays, you can call the hot line number up to 2 hours before sunset to find out if we will be observing that night.

WWW Page
FAAC maintains a web page on the internet at URL:
http://kode.net/~dougbock/faac/
Ford Intranet at:
http://be0084.be.ford.com/fhl/faac

Membership and Dues
Membership to the Ford Amateur Astronomy Club is open to both Ford employees and the general public. The dues structure is as follows:

Annual Individual/Family	$ 20.00
Lifetime Membership	$100.00

Membership benefits include a subscription to the Star Stuff newsletter, discounts on subscriptions to Astronomy and/or Sky and Telescope magazines, after hours use of the observing site at Island Lake, and discounts at selected area astronomical equipment retailers.

Newsletter Staff
Editor: Jack Kennedy 248-399-9403
e-mail jkennedy1@voyager.net
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Editors Corner
By Jack Kennedy

The total solar eclipse on February 26th was certainly the event of the last month. Is this issue we have two accounts of the eclipse and activities surrounding it. the first is the Feature of the Month. An account by Paul Mrozek on the eclipse cruise he was on. The second is an account by our president Greg Burnett. F.A.A.C. was well represented in ARUBA for the festivities.

Hopefully the weather will cooperate and let us resume our quest for Messier objects. If you are interested in a certificate from the Astronomical League, you can get details from one of our club officers or Doug Bock. Finding examining each of the 110 Messier objects is quite an accomplishment. This is the ideal time of year to be hunting.

If you have any pictures of information that you think would make a nice presentation at one of our meetings, contact our V.P. George Korody. He is always looking for presenters for the club meetings.

Lastly, if you would like to submit an article to Star Stuff if possible in electronic form the best format is either MS Word 6.0 or a standard text file.

Kensington Metropark Spring Festival
May 1-2, 1998
Martendale Beach
5:00 to 12:00 - rain or shine

Listen to and Meet

David Levy!!!
Co-Discoverer of
Comet Shoemaker-Levy!

Sponsored by:
The Great Lakes Amateur Astronomy Clubs

Printer (Continued from page 1)
I should mention that my old flat bed scanner came with Adobe Photoshop V3.0 and Corel draw V4.0. I used Photoshop to print my first images. The prints on "premium inkjet paper" were less than impressive - they looked like I made them on my old 560C. I loaded in the HP PhotoSmart photo paper and told the system to print. **HOLY COW!!** The image was outstanding, it looked **BETTER** than the Meijer 1 hour photo print. Several experienced amateur photographers thought my prints were custom enlargements - not do it yourself inkjet output.

One word of caution - make sure that the proper printer driver is selected. Every time I send the PhotoSmart printer an image that should go to my 560C, Windows 95 and my printers get all confused! Fortunately a shut down and re-start clears everything up.

Software -
the scanner and printer software from HP are both excellent packages that installed the first time and run with no problems. Each of these units came bundled with Microsoft Picture It! software. I was very disappointed in this package. I experienced numerous hang up problems while attempting to run this stuff. Because I have other photo manipulation software I have not spent much time debugging Picture It! Perhaps I have an installation problem.

The Best Part -
The best part about the PhotoSmart System is the cost. The Scanner and the Printer are each **$499.95** - no second mortgage required. This is a long way under the $5000 to $6000 of a Nikon scanner and a Tektronix printer. Quite a cost savings - hmmmm.....how much was that **Takahashi astrograph**???

Hewlett Packard has done it again - this PhotoSmart system is the real deal. They have transformed my computer into a darkroom and allow me to get the most from my modest astrophotographic efforts. No stinky chemicals, no fussy time limits and no fumbling around in the dark! A **digital** darkroom is the way to go for me.

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F.A.A.C. Golf Shirts

If you have ordered a blue golf shirt with the club logo you need to contact:
Ray Fowler to pick it up. Shirts unclaimed will be sold.

Cruise (Continued from page 1)
Curacao, St. Croix, and St. Thomas). Seeing the eclipse just made a great time even better!

Based on what I heard from the crew and veteran cruisers, the special "eclipse cruise" I was on had a slightly different atmosphere. I do not think you would have a lot of people attending afternoon lectures by an astronaut or a solar scientist on a normal cruise. Part of the reason for this is that the TravelQuest tour group, about 300 people, was on the ship. In retrospect, I am lucky that they were aboard (and I might even join their next expedition). The TravelQuest leaders had meetings with the captain to make sure that the ship would be in the right location (on the center-line), with its lights off, and as steady a possible (you can't turn the engines off because that would also shut down the stabilizers). They also got almost all the deck chairs to be putt away so that there would be more room to set up, and they went around with rolls of tape to put over the flash on people's automatic cameras. I was very impressed with how they tried to help the "general public" enjoy the eclipse (and not ruin it fr the rest of us). With a couple of hundred people on the top decks, I only saw one idiot's flash go off during totality.

Let me first back-up a bit before I say more about totality. Around 10:00 am on the day of the eclipse, I was heading up to the Pool Deck for the breakfast buffet and I was amazed to see several people already setting up their equipment. This made me a little upset because I did not want to miss getting a good spot and I am not a big fan of baking in the Sun (first contact was not until around 12:45 pm and totality about 1.5 hours later). However, I might not have had to worry about a sunburn because the sky was completely overcast! While I was eating I overheard several people who were becoming stressed out by this situation, but I was not too concerned because I could see the ship was moving at full speed to somewhere. The captain eventually made an announcement confirming my thoughts that we were headed East towards clearer skies (weather systems move from East to West in the Caribbean). When I had finished eating I went back to my cabin to gather my equipment and put on plenty of sun screen (even though t was still overcast). I arrived on the top deck around 11:00 am, and I was lucky to find a good spot along the rail overlooking the Pool Deck and next to a stack of tied down deck chairs. This location prevented anyone from standing in front of me, and gave me a good view for taking pictures of all the people who would be on deck later. The clouds began to clear around 11:30 am, and by noon it was mostly sunny and warm (getting hot).

My choice of setting up on the highest level, the Sun Deck, was not an easy decision. This open location was very windy, but it offered a good view of the horizon (and I wanted to see the approaching lunar shadow, which I

Cruise (Continued on page 7)

Observations
by Greg Burnett

February 26-th, eclipse morning... storms rolling in... more clouds than we had seen all week! We had come to Aruba with the expectation of good weather, of great weather in fact, and so far we hadn't been disappointed. But now, as the decisive moment was approaching, the ugly possibility of being clouded out took on an uneasy reality. Some of us were wondering if we should head south. (We found out later it was actually raining there!)

We had agonized for some time, earlier in the week, over where to position ourselves for the eclipse. The south end of the island offered an additional thirty seconds of totality, at the cost of moving ourselves and our equipment about fifteen miles, and dealing with many uncertainties in traveling, finding a suitable location, and so on. There were rumors of $50 fees being charged to enter certain beaches that were considered prime observing locations. On top of that, we were short on transportation; only one of our party had reserved a rental car in advance. By eclipse week, every car on the island was booked. Eventually we had decided to set up right at our hotel in Noord, just a stone's throw north of the 3-minute line. A bird in the hand...

But now that the weather had become a factor, it was easy to second-guess that decision. We had watched the daily weather patterns since our arrival. Some morning cloudiness was not uncommon, but it consistently cleared before noon. Luckily, today was no exception, despite the heavier than usual clouds. About an hour before first contact, they vanished, leaving just a few white puffs cruising alone on the incessant Caribbean Easterlies.

Waiting for first contact, we watched the Sun through filtered telescopes. There were two small sunspot groups, mildly interesting. More important, we knew the Moon was "right there," even though completely invisible. We could feel its presence. Then at last (precisely on time, actually), the first nick appeared in the solar disk; our faith was proven. The Moon had indeed been right there, creeping up all the while.

As the eclipse began we focused on what was unfolding before us. The entire event would take three hours from start to finish. At the first touch of the Moon, we could see lunar mountains silhouetted against the granular surface of the Sun. As the partial phase progressed, the sky took on a deepening silvery blue cast. From time to time a cloud would pass over, reawakening our weather anxiety. In due course the sunspots disappeared, inexorably swallowed up by the more intense blackness of the Moon's advancing edge. Little by little, twilight fell at mid-day.

Finally, after ninety minutes of watching the clouds and feigning interest in the partial phases, only a tiny sliver of the Sun remained. Just moments to go! Luck had given us a huge area of clear blue sky, with no clouds threatening. "We're gonna see it!" Doug shouted, as the last vestiges of doubt evaporated in the absolute elation of the moment! "Filters off for diamond ring!" There was a final arclamp, persistent just a moment, then snuffed out as totality overwhelmed both land and sky! OOOOOhhhhhhhhhh, MAN!!!

Mercury and Jupiter virtually burst into view, startlingly bright in the silvery sky, flanking the ethereal image of the eclipsed Sun. The million-degree corona defined the phrase "white hot." From the bottomless-black bullet hole of the central eclipse, the corona spread glistening white, feathery streamers out at least two, maybe three solar diameters. They blended imperceptibly into the silvery-blue background. Red prominences and the pink chromosphere danced and shifted along the black edge, changing continuously as we watched.

Transfixed by this incredible sight, I could barely remember to click the camera shutter a few times, winding the film without taking my eyes off the eclipse. We all knew what it would look like, but the real thing is blacker, brighter, whiter, and hotter than the imagination predicts. It is visually intense. And it moves, constantly changing as the seconds pass, not waiting for you, moving on. Look at it! Look hard! Are you sure you're seeing it all? Will you remember how it sizzled, white hot in the silver-twilight sky? Inhale it, engrave it on your mind! It doesn't last long. No time to wonder and enjoy, no time to soak in it. Doug's alert interrupts my reverie, a voice-over from somewhere off-stage: "Use your binoculars!" Oh yeah...excellent idea. Good Lord! The corona fills the 4-1/2 degree field with a lacework of pure white ribbons. Laser-red prominences dance along the limb, on the East, then the North, then West, as the Moon moves along its course. Look fast! "Ten seconds! Filters on!" And it is done. A diamond burst, then a sliver of Sun reasserts itself on the sky, on the eyes, across the landscape. WE SAW IT! We all looked at each other with smiles as wide as the quickly brightening sky.

"How did you feel when you saw the eclipse?" asked the indifferent reporter. All the waiting, the traveling, the anticipation, came together at last, and it was a delight, a privilege, to be in that particular place, at that particular time, to see this wonderful juxtaposition of Moon and Sun. We were there! We saw it! What did I feel like? I felt like a winner!

Warmest thanks to my traveling companions, Doug Bock, Ray and Susan Fowler, and Dale Ochalek, for helping make this the trip of a lifetime! We experienced much more than just the eclipse.

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Meeting Minutes for 3-26-98
by Harry Kindt

The meeting was called to order by our president, Greg Burnett, there were 32 members and guests present. The first item of business was our regular round table discussion. It is at this time, over pizza and pop, those present are a allowed a few minutes to introduce themselves and to describe some of their viewing experiences since our last meeting. Greg then passed around a brochure containing information about greeting cards. The cards themselves all contain pictures with an astronomical theme. Several articles of general interest to the amateur astronomy community were also passed around. As part of our newsletter exchange program, Greg passed around copies of the publications from other Astronomy Clubs.

On behalf of the club, Greg Burnett expressed our thanks to George and Pat Korody and too Bob MacFarland for the fine job they all did in putting together our annual Holiday/ New Year/Spring Equinox Party. The club would also like to express its thanks too all of you who participated in this gala affair. The club would also like to extend its gratitude too Don Klaser, Bob MacFarland and Bob Fitzgerald, for their effort in representing our hobby to Cub Scout Pack 1786 from Wood haven. As a result of their efforts our club treasury is $50.00 richer. We thank Pack 1786 for their generous contribution.

The next order of business could be filed under the **HELP WANTED SECTION.** As was noted in a previous addition of the newsletter, the club is still looking for volunteers to chair the following sub committees: Program, Promotions, Observing and Refreshments. The sub committee assignment are self explanatory, but, if you are interested in any of the chair positions and need further information please contact one of the club officers.

Greg Burnett announced that he was making an attempt to get off the PROFS system. This means that all correspondence will be handled through regular e-mail with out being filtered through the PROFS system. We are aware that all members do not have access to the Internet and cannot be reached by the e-mail method. We are in the process of compiling a list of those members who do have Internet access, or an e-mail address, and those who do not. Those members who do not have an e-mail address will be contacted by telephone, and any announcements, bulletins, or information will be passed along to them via this method.

Upcoming events were the next topic of discussion. The Messier Marathon was scheduled for March 27-28. (This event will have taken place by the time you read this). The next event is the Kensington Star/Comet party scheduled for May 1st and 2nd. You probably have already received the information on this event. The next big event is Astronomy Day which, ironically, will be held on May 2nd and will be celebrated along with our own Kensington Star Party. Doug Bock announced a star party too be held over the Memorial Day weekend (May 22nd through May 26th) at his "Northern, Northern Cross Observatory" outside of Cadillac, MI.

The Treasurer's report was read and accepted.

There was no new business to report.

The remainder of the evening was taken up by the reports from those who witnessed the Solar Eclipse from Aruba. Paul Mrozek described the eclipse as seen from deck of a cruise ship. Ray Fowler described his experience and brought back an "eclipse rock" (ask Ray the next time you see him to explain this (G). Dale Ochalek described his experiences and brought back a video showing the sights and sounds of Aruba in addition to great video of the eclipse. Greg Burnett took us on a grand tour of Aruba via a slide show. Greg also set up a camera and took pictures of their viewing location before, during totality, and after the eclipse, too give us an idea how dark the skies became during a total eclipse. Doug Bock showed us a whole series of slides of the eclipse itself. We were treated to some excellent shots of Bailey's Bead's, the Diamond Ring effect, solar flares and the corona. We wish to thank all of those member who took the time out of their hectic, busy schedules, to fly down too the sunshine and warmth of Aruba just so that they could bring back and share their experiences with us. (G).

The meeting was adjourned at 7:05 PM.

Submitted 3/28/1998
Harry Kindt
Sec'y F.A.A.C.

Change on the Moon
by Ray Laura

I have been observing the moon as an amateur astronomer for about 60 years. And interesting area is "Schroeter's Valley". Especially where the valley runs into the rim of the crater "Herodotus".

About 40 years ago there was a tiny black hole where the valley seems to enter the side of the crater. A white streak filled the valley (ice?), which eventually tapered off away from the crater. More recently the hole is not visible because a large pile of dirt is in the way. It has a ragged top and is obscuring the view to the hole. The shadow of this new jagged hill goes out to a point in the distance. Although difficult to see, I can observe this with my 12.5" telescope, a few days before a full moon.

Recently on television I had a glimpse of what I thought was the hole, taken by orbiting astronauts looking up the valley from a better angle than can be seen from earth, and it looked like the hole that I saw years ago.

I was wondering if any drawings from the 1950's, or new space photos show the hole without the obscuring dirt pile.

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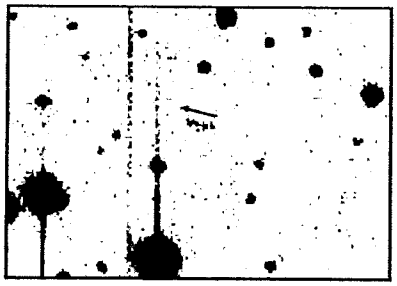
Article from Astronomy Magazine Web Site

Doomsday: October 26, 2028?



All images -- The University of Washington and the Astrophysical Research Consortium.

by Robert Naeye

A one-mile-wide asteroid named 1997 XF11 enjoyed a Warholian 15 minutes of fame.

When the asteroid was discovered by Jim Scotti in December 1997 as part of the University of Arizona's Spacewatch program, hardly any one noticed. But on March 11, Brian Marsden of the IAU's Central Bureau for Astronomical Telegrams posted an IAU circular calling attention to the fact that the asteroid might pass within a hair-raising 30,000 miles of Earth (one-eighth the Earth-moon distance) on October 26, 2028. The news media picked up the story the next day.

Marsden and other astronomers stressed that the chances that the asteroid would impact Earth in 2028 were virtually nil. But Marsden also notes, "We knew there was a possible chance that Earth would be hit. We needed to do something to solve the problem, and we did solve the problem - within 24 hours." To calculate the asteroid's future position, Marsden needed more observations, since only three months of positions were available.

Several astronomers, including Kenneth Lawrence of the Jet Propulsion Laboratory, noticed 1997 XF11 in prediscovery images taken during a March 1990 close approach. With the new observations in hand, Marsden and others have refined the asteroid's orbit. The new calculations conclusively show that the asteroid will miss Earth by a more comfortable 600,000 miles. Although Marsden says the Earth is safe from this asteroid for at least a century, its orbit crosses Earth's orbit, meaning there's a good chance it will someday strike Earth. The asteroid has in fact been added to the list of 108 "potentially hazardous asteroids." If an asteroid the size of 1997 XF11 collided with Earth, it would devastate a continent-sized area, potentially killing hundreds of millions of people. While the impact would certainly produce global effects, it probably would not leadto a mass extinction such as the one that killed off the dinosaurs 65 million years ago. That impactor was about 10 times larger than 1997 XF11. Marsden also notes that even if 1997 XF11 had been on a collision course with Earth, humanity would have had 30 years - plenty of time - to alter its course.

Nevertheless, 1997 XF11 reminds us that Earth lies within a cosmic shooting gallery, and that thousands of Earth-crossing asteroids remain undetected. As planetary astronomer David Morrison of NASA's Ames Research Center has pointed out, there are more people working in a single McDonald's restaurant than there are astronomers who are searching for potentially civilization-ending asteroids.

The University of Washington and the Astrophysical Research Consortium.

International Bureau for Astronomical Telegrams

For more news and information, please see Astronomy Magazine.

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ASTRO LINGO
by Paul Mrozek

entrainment - The process in which jets streaming from radio galaxies draw
energy from surrounding interstellar material.

epact - (1) The Moon's age, or phase, at the beginning of a calendar year. (2)
The difference between a solar and lunar year, or solar and lunar month.

evection - A periodic perturbation in the motion of the

Astro (Continued on page 7)

Cruise (Continued from page 3)
had read was a spectacular sight). Some of the more serious photographers seemed to prefer the next lower level, the Pool Deck, because the windowed walls blocked the breeze (and also blocked up to about 30 degrees from the horizon). Many people also viewed the eclipse from the Promenade Deck, 4 levels down, but that location causes about half the sky to be obscured by the ship. Since this was my first total eclipse, I was planning on doing more mental than mechanical picture taking, so I figured I would put up with the wind in order to see the horizon. Having said that, let me explain why I had 3 cameras with me. My main camera was my Olympus OM-1 (on a tripod) with an Orion 500mm telephoto lens, ISO 200 film, and a glass solar filter. I also had my Pentax auto-SLR camera with a 50mm lensand ISO 100 film to take pictures of the gathering crowd. Finally, I also brought a disposable camera, which has fixed exposure settings and ISO 800 film, to take pictures showing the sky getting darker (these did come out, but I forgot to record the time at which they were taken).

Around 12:15 pm I had somebody watch my stuff so I could go eat lunch (mmmm, Mexican food buffet). One interesting thing on the ship was that up to about 1/2 hour before totality there were waiters walking around the decks serving drinks. From what I heard, most or all of the ship's crew was able to see the eclipse (but I am sure there had to be at least one person who could care less and was demanding service). The beauty salon/massage parlor actually closed down for 2 hours in order to witness the event. A little after 2:00 pm, about 10 minutes before totality, it seemed as if the sky was starting to get darker. It was hard to see this effect because I had my sunglasses on up until totality to help dark adapt my eyes. Another thing I noticed was that the wind and sea were getting much calmer. In fact, during totality there seemed to be no wind at all and the ship was remarkably still (I do not know if this was an eclipse related effect or that the ship's engines were just turned way down). Nevertheless, te Sun was still moving around in the viewfinder of my camera with the 500mm lens (but my pictures came out just fine). All throughout the eclipse there was also somebody (probably from TravelQuest) with a loudspeaker counting down the time left and giving other information, like helping to find Venus before totality. This person also pointed out that one of the ships next to us had some of its external lights on.

With about 1 minute left to totality, the atmosphere in the crowd was sort-of like on New Year's eve. I thought about looking for the lunar shadow, but I decided instead to just stare at the Sun (through a mylar filter of course -- thanks Greg). Totality was incredible, and lasted for 3:41 minutes (which seemed more like 8 seconds). Either there was no diamond ring at second contact, or it happened during the brief second I looked away to take the solar filter off my camera. I was able to take a couple of pictures, but I have no idea what my exposure times were. About half way through totality my sister bumped into my tripod, which made me lose about 15 seconds in order to re-align. This was actually a good thing, because it reminded me to look at some of the other phenomena. The planets Mercury and Jupiter were very easy to spot, but the horizon looked sort of gray (instead of the yellow I was expecting), probably from all the sea haze. One thing I did not notice during totality was any drop in temperature maybe it's hard to feel it go from about 95F to 80 when you are used to it being 30). With about 15 seconds left there was an announcement to get the solar filters ready and to also look at the nice prominence that had just appeared. At third contact I very briefly saw the diamond ring with my naked eye, and then looked away while snapping a picture (I wish I had taken more than one before putting the filter back on). This diamond ring lasted several seconds, which caused everyone to start cheering. The announcer then suggested we all give a round of applause to the captain and crew for getting us there. With all this excitement I forgot to look for the trailing lunar shadow.

For the rest of day everyone on the ship seemed to be in a good mood. At dinner some of the people at my table, who were on the Promenade Deck during the eclipse, said they saw several dolphins after totality. Another bonus was that the on-board cable system kept showing a tape of the eclipse made by the ship's videographer (I watched it several times). This person did an excellent job, especially recording the crowd reactions, and I tried hard to get a copy but it was not for sale. Luckily, the TravelQuest information desk had the name of another professional videographer who was going to be selling copies of his eclipse video.

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Astro (Continued from page 6)
Moon caused by the
variation in the Sun's gravitational pull as the Moon orbits the Earth.

extinction - The reduction in the light intensity as it passes through an
absorbing or scattering medium.

fossa - A long, narrow, shallow, depression on a planetary surface.

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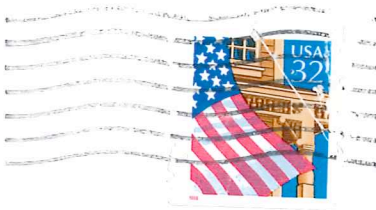
Ford Amateur Astronomy Club
Star Stuff Newsletter
P.O. Box 7527
Dearborn, MI 48121



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			MR: 09:40	MR: 10:31	MR: 11:24	MR: 12:21	
			MS: None	MS: 00:27	MS: 01:24	MS: 02:14	
					FQ: 15:20		
5	6	7	8	9	10	11	
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MR: 01:26	MR: 02:11	MR: 02:53	MR: 03:32	MR: 04:09	MR: 04:45	MR: 05:22	
MS: 11:32	MS: 12:35	MS: 13:42	MS: 14:52	MS: 16:05	MS: 17:19	MS: 18:34	
LQ: 14:54							
26	27	28	29	30			
SR: 05:35	SR: 05:33	SR: 05:32	SR: 05:30	SR: 05:29			
SS: 19:26	SS: 19:27	SS: 19:28	SS: 19:29	SS: 19:31			
MR: 06:01	MR: 06:42	MR: 07:28	MR: 08:18	MR: 09:13			

Observing Guide

Constellation - Leo

Regulus - the alpha star in this constellation. Mag 1.4 A B7V main sequence star. 85 ly away.

M65 & M66 - A pair of 9th mag spiral galaxies. 40 mil ly away.

M95 & M96 - A pair of 10th mag spiral galaxies. Both 30 mil ly away.

Gamma Leonis - A spectacular double star, separated by 4"

Cancer

M44 - Open cluster known as the "Beehive cluster". Occupies 1.5 degrees of sky. It contains about 100 stars.