

February 2004
Volume 20, Number 2



Martian Chronicles

Newsletter of the Museum Astronomical Resource Society

Upcoming Events

Help Wanted:

Astronomy Day
Coordinator.

Contact: Frances
Ferguson

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February 2004

Saturday 02/07, MARS SkyWatch

Sunset – 6:15 p.m.

Friday 02/13, Club Meeting

Monthly Meeting at 7:30 p.m. in
the MOSI planetarium.

Program: The Year 2003 In
Review.

Saturday 02/14, MARS SkyWatch

Sunset – 6:20 p.m.

Wednesday 02/18 through Sunday 02/22, SPAC Orange Blossom Special

For details, go to the MARS on-
line calendar and click on the
links provided by Jimmy Thomas

Saturday 02/28 MOSI/MARS SkyWatch

Sunset - 6:29 p.m.

March 2004

Saturday 03/06, MARS SkyWatch

Sunset – 6:34 p.m.

Friday 03/12, Club Meeting

Monthly Meeting at 7:30 p.m. in
the MOSI planetarium.

Program: A presentation by Mr.
Frank Lock of Englewood

Saturday 03/13, MARS SkyWatch

Sunset – 6:38 p.m.

Saturday 03/20, SPAC Star Party

From dusk until dawn at Hickory
Hill (possible, call SPAC to
confirm) Sunset – 6:41 p.m.

Saturday 03/27 MOSI/MARS SkyWatch

Sunset - 6:45 p.m.

MOSI SkyWatch: Observing sessions are normally held on the Saturday evening nearest the First Quarter Moon and the two Saturday evenings following. SkyWatch sessions are held at MOSI. Call to check on any schedule changes. The Saunders Planetarium: 813-987-6360; MOSI Information Desk: 813-987-6012

SPAC Star Parties: Hosted by the St. Petersburg Astronomy Club (SPAC). Held on the Saturday evenings nearest the new moon, at Hickory Hill near Brooksville. For more information call the SPAC hotline: 813-792-0721

Have You Checked the Calendar?: Our online club calendar is now being updated with important dates related to club, astronomy, and space events. If you have a question about an upcoming event, be sure to check the calendar. Either go to the club website (www.marsastro.org) and click on the "Online Club Calendar" link near the top of the page, or access the calendar directly by going to URL: <http://calsnet.com/marsastro>

Martian Happenings

January Meeting Minutes: - by Wade E. Holland, Secretary

The monthly meeting of the Mars Astronomy Club was called to order at 7:30 p.m. in the MOSI Planetarium. There were 29 people in attendance

Frances left the planned program at her house. Craig suggested that she use one of her programs still in his computer. She presented *It Doesn't Look Like That In My Scope*. Frances then introduced all of the new officers of the club and noted that Astronomy Day needs a volunteer coordinator. Comments from officers and volunteers:

Jimmy Thomas, Education Outreach Coordinator, reported that the first outreach program was a success with 18 people attending the presentation on the Mars Rover Mission. The succeeding outreach presentations will be:

- March 5 - The Sun and the NASA Genesis Mission
- May 4 - Mercury
- July - Saturn
- September - Meteorites and tektites
- November - Venus

Steve Dixon, Newsletter Editor and Publisher, noted the reorganization and additions to the newsletter.

Craig MacDougal, MOSI Liaison, excitedly announced that a donation of a 20" Obsession telescope has been made to MOSI.

Mildred Simpson, Treasurer, reported on our funds. The following is an update as of February 1, 2004.

Working Balance brought forward:\$243.54
1 Membership:\$ 11.25
Subtotal:\$254.79
Monies in Reserve:\$163.13
Total:\$417.92

Old Business:

Craig was asked what needed to be done for club members to check out the club scope. Craig said a club member would need to contact him and make arrangement to pick up the scope. Length of loan time has not been determined.

New Business:

A motion was made by Mildred Simpson that,

- (1) the club money brought forward from last year plus any donations be reserved for special expenditures;
- (2) that current expenditures will include monthly newsletters, postage and copying of handouts for sky watch, etc.; and
- (3) any other expenditures such as Astronomy Day will be requested in advance and approved by the executive board which consists of the officers and committee heads.

The motion was amended by Paul DeVillier to include a donation by him to make the special fund equal \$200.00. The motion was seconded and passed.

Frances Ferguson posed the question of whether we should continue the MARS SkyWatch. Paul DeVillier volunteered to help and bring telescopes. It was decided that the watches will continue through spring.

Craig MacDougal presented a slide of the Mars Mission and Jimmy Thomas added that anyone can have their name added to the Deep Impact Mission disk at the following website:www.deepimpact.nasa.gov (expiration date was 01/31/2004)

The meeting was adjourned at 9:16 p.m.

February Meeting Program:

Frances Ferguson will present "2003, A Year in Review," or "A Lot of Pretty Pictures."

What's Up: Astronomy for Today – Jimmy Thomas

Be sure not to miss the next of our bi-monthly presentations that we are co-sponsoring this year with The Science Library at MOSI. On Friday, March 5, we will have a presentation on "The Sun and the NASA Genesis Mission." We will learn about our closest star, the Sun, and we will discuss the NASA Genesis mission, which is currently collecting solar wind particles for return to Earth in September. The presentation will be held in The Saunders Planetarium and will run from 7 pm to 8 pm. Come on out and support the club in this wonderful series of presentations.

Link: Lee Ferguson suggests this web site (case sensitive): http://utahskies.org/report/20040109/Utah_Skies_Report.shtml

From the "Keeper of the Frog Scope" by Francis Ferguson, President

I left the program at home? What a way to start the New Year! Thank you Craig for suggesting that I present the *It Doesn't Look Like That in My Scope* program. I can always count on you for solutions to problems. Also, thank you fellow Club members for not getting upset.

This was the first program I developed using Microsoft PowerPoint. The process taught me how easy it is to put a program together. I hope many of you will be inspired and find a subject that you will like to present in the future.

My favorite club activity is Astronomy Day. I am looking for a member to become the Astronomy Day Coordinator. I guarantee this is not a lonely job. There are many members who will help you before, during, and after to make it a fun day.

The major responsibilities include coordinating with Craig MacDougal on the facilities and tables MOSI provides, encouraging exhibitors, and assigning exhibitors locations to set up their displays. If you are not sure you want to be the person in charge, then think about serving on the committee. There are a lot of small jobs to be done.

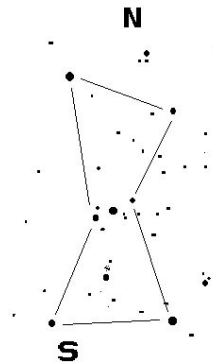
Congratulations to Jimmy Thomas on the educational outreach program with the Science Library at MOSI. I enjoyed the **December** presentation, and I was glad to see several MARS members present to supply the moral support. I am looking forward to the March 5 program *The Sun and the NASA Genesis Mission*.

I do plan to present the program *2003 A Year In Review* and some of the new Mars pictures from JPL to the February meeting. In fact, I will bring several disks just to make sure I get there with one.

Constellation of the Month - Orion by Craig MacDougal

This month we feature **ORION** (o-RY-en) the Hunter. Go out at about 9:00 at night and face south. A bit more than half way up from the horizon to the zenith (straight up) you should see three stars, equally spaced, forming an almost horizontal line. These stars are pretty bright, but not dazzling. The length of the line is comparable to holding up two fingers side by side at arms length. These three stars represent Orion's belt. To the upper left about four finger widths is a very bright star. This is **BETELGEUSE** (BEE-tle-joos...really). Betelgeuse is the hunter's right shoulder. Notice the reddish color. About the same distance to the lower right of the belt is another very bright star: **RIGEL** (RI-jel). This is the hunter's left knee cap. Compare the color of Rigel to the color of Betelgeuse. These two stars are good representatives of the hottest, and the coolest stars that we normally see in the sky. Rigel is classified as a B star, which is the second hottest classification. (The hottest class is not labeled A as you might expect, but O. The reasons for this are a long story that I'll share with you in a later edition.) This means that Rigel has a surface temperature of around 25,000 degrees Celsius. Betelgeuse, on the other hand, is classified as an M star, which is the coolest of the seven "normal" classifications. Its surface temperature is lower than 3,600 degrees Celsius. There are other stars that help Rigel and Betelgeuse form a large rectangle that encloses the belt. You can also

use these stars to make a lopsided hour glass shape. Just below the belt are three fainter stars forming a vertical line. This is his sword. Sweep this area with binoculars, and you will see a fuzzy patch in the sword: the **Orion Nebula**. The Orion Nebula is considered to be the closest star "nursery" to us. Stars are being born inside this cloud of gas as you read this. If you have any kind of telescope, and a dark sky, just "cruise" around this area at low power. We are still looking in our galactic "back yard", and there are countless wisps of nebulae and star clusters in this region. Orion is probably the one constellation that everyone can recognize. Its present day representation of a hunter with a sword tucked in his belt goes all the way back to the ancient Sumerians, who called him Gilgamesh. The legend of Gilgamesh apparently was re-worked slightly by the Greeks into the legend of Heracles (Hercules), but for reasons unknown, Heracles ended up with a far less spectacular constellation, while Orion took this place of prominence. This is very suspicious, since Orion appears to be fighting Taurus the Bull, and one of the tasks of Heracles was to catch the Cretan bull. Furthermore, there is no ONE legend of Orion, just several vague stories that differ in most of the details. The only detail that maintains any consistency is that Orion was trying to woo either one of the Seven Sisters, or Pleione, their mother, or any combination of the eight of them.



(Anybody that would listen to his sweet-talking, I suppose.) There is one other detail Of Orion's legends that remains fairly constant: he met his demise from the sting of a scorpion, and that's why when Scorpius is rising in the east Orion is setting in the west. Whether or not Orion is really Hercules in disguise does not detract from the beauty of this constellation, but I can't help wondering if some ancient Greek political infighting is why we have Hercules in a dim set of stars, and Orion in this sparkling constellation.

It Doesn't Look Like That In My Scope By Wade Holland and Frances Ferguson

It Doesn't Look Like That In My Scope was a program Frances developed after buying a CD from Jack Newton containing many of his amazing photographs of the universe. Frances chose the Messier objects because they have always fascinated her. This was designed to be an audience participation program where everyone could guess which object we were viewing.

Vocabulary needed for identifying the slides:

a. nebula: (Layman's terms: where the stars are dying/when the stars explode colorful gases are expelled) American Heritage Dictionary: A diffuse mass of interstellar dust or gas or both, visible as luminous patches or areas of darkness depending on the way the mass absorbs or reflects incident radiation

b. galaxy: (Layman's terms: where stars are forming) American Heritage Dictionary: Any of numerous large-scale aggregates of stars, gas and dust, having one or a group of more or less definite overall structures, containing an average of 100 billion solar masses, and ranging in diameter from 1,500 to 300,000 light-years

Objects included were:

1. M16 Eagle Nebula in Serpens
2. M31 Sb Galaxy in Andromeda
3. M13 Globular Cluster in Hercules
4. M99 Galaxy in Goma Berenices
5. M61 Spiral Galaxy in Virgo
6. M57 Ring Nebula
7. M27 Dumbbell Nebula
8. M51 Whirlpool Galaxy in Canes Venatici
9. M45 Seven Sisters
10. M1 Crab Nebula in Taurus
11. M101 Pinwheel Galaxy in Ursa Major
12. M81 Sb Galaxy in Ursa Major
13. M108 Sc Galaxy
14. M109 Sb Spiral Bar Galaxy
15. M42 Great Nebula in Orion
16. M104 Sombrero Galaxy in Virgo
17. M17 Swan Nebula in Sagittarius
18. M20 Trifid Nebula in Sagittarius
19. M76 Cork Nebula

After the slide show Frances Ferguson handed out packets to students that included a map of the moon, a star map of the seasons, pictures of a nebula, the Hubble satellite, and the Tadpole and Warp galaxies.

February Sky Watch Crib Notes by Mark Dixon

Ok, now you've got your scope all set up waiting for the MOSI patrons...then along comes the first victim and wham! They hit you with a really hard question like: "How far is it to the moon?" or "What is the speed of light?" or better yet "Where's the restroom?" You look for Craig and he is busy, or maybe practicing selective hearing. Anyway, I thought a few crib notes would kind of come in handy...make you look like you know something. I used Starry Night Pro set to Tampa and the MOSI/MARS Sky Watch night for the data.

<u>Object</u>	<u>Distance from Earth at 8 p.m. 2/28/2004, Tampa</u>	
Moon	.003 AU	.25 million miles
Venus	0.932 AU	86.68 million miles
Mars	1.650 AU	153.45 million miles
Jupiter	4.429 AU	411.90 million miles
Saturn	8.549 AU	795.06 million miles
1 AU is 150 million kilometers or 93 million miles		
(All numbers are rounded and approximate)		

<u>Object</u>	<u>Distance from Earth at 8 p.m. 2/28/2004, Tampa</u>
Sirius	8.6 ly
Pleiades	400 ly
Betelgeuse	429.2 ly
M42 Orion Nebula	1,600 ly
Andromeda	2,200,000 ly
The "speed of light" is about 186,282 miles per second. The distance light travels in one year (ly) is 5,878,507,000,000 miles, or about 6 trillion miles.	

**Newsletter of the
Museum Astronomical
Resource Society**

Martian Chronicles is published monthly by the Museum Astronomical Resource Society (also known as the MARS Astronomy Club) to provide club news and other items of interest to its members. MARS is sponsored by the Museum of Science and Industry (MOSI), Tampa, Florida. Annual club membership dues are \$15.00, which may be paid to any officer at club-sponsored events or mailed to the **CLUB MEMBERSHIP/RENEWAL ADDRESS** listed below. Make checks payable to Mildred Simpson, our club treasurer. Newsletters are available to nonmembers by requesting a complimentary trial issue. Please send all inquiries, comments and newsletter contributions to the address below. The deadline for submitted contributions is the 15th of the month prior to the next issue. Contributions may be delayed in publication due to available space.

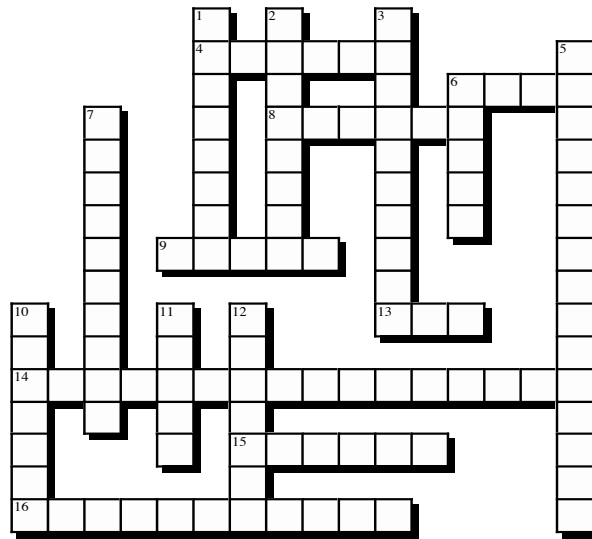
We're on the Web!

See us at:

www.marsastro.org

Membership/Renewal
M.A.R.S.
C/O Mildred Simpson
1522 West River Lane
Tampa, FL 33603

Martian Challenge By Steve Dixon



ACROSS

- 4 NASA Administrator Sean _____.
- 6 The top of rover's PanCam Mast Assembly is about _____ feet above the Mars surface.
- 8 NASA dedicated landmarks to _____ 1 crew.

- 9 Rovers' search for clues of _____.
- 13 Number of wheels each Mars Rover has.
- 14 RAT is acronym for (3 words)
- 15 The planned length of each rover's mission is _____ days.

16 Spirit's landing site. (2 words)

DOWN

- 1 NASA dedicated seven landmarks to crew of orbiter _____.
- 2 A mineral indicator of possible Martian water, grey _____.
- 3 NASA's twin rovers are primarily robot _____.
- 5 Opportunity's landing site. (2 words)
- 6 A Martian day is about _____ minutes longer than Earth's.
- 7 Spirit's current rock of interest.
- 10 Lego AstroBot Biff Starling's hobby. (clue: Red Rover link)
- 11 Type of memory Spirit may have problem with.
- 12 1964 successful Mars flyby that returned photos, _____4.

Clue: puzzle information was taken from the <http://marsrovers.jpl.nasa.gov> web site and links. MARS Members, bring your completed crossword puzzle to the Editor at the February meeting for a chewy prize.

Did You Know?

That for the Rovers to land at their Mars targets with such a high degree of accuracy, navigators at NASA/JPL had know everything from how the molten lava in the center of the earth was churning to how plate tectonic movements were affecting earth wobble to how the plasma in the Earth atmosphere delayed the signals at the Deep Space Network Stations. A 2-inch position error on Earth builds out to a 0.3-mile error on Mars!

About Our Organization...

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