

PLACE
STAMP
HERE

Visit our web site at:
<http://members.aol.com/MARSastro>
E-mail: MARSastro@aol.com

M.A.R.S.
8712 Cobbler Place
Tampa, FL 33615



Martian Chronicles

Newsletter of the Museum Astronomical Resource Society
Volume 19, Number 2
February 2003

CONTENTS

- Upcoming Events, page 1
- First Light, page 1
- Martian Happenings, page 2
- On The Record, pages 2-3
- Astronomy Day 2003, page 3-4
- Constellation of the Month: Orion, pages 4-5
- Celestial Almanac, pages 5-6
- Meteor Showers, page 6
- This Month in History, pages 6-7
- Publication Information, page 7
- Newsletter Edition Details, page 7
- Club Information, page 7

UPCOMING EVENTS

FEBRUARY 2003

- Sat. 02/01, SPAC Star Party, from dusk until dawn, at Hickory Hill (possible, call SPAC to confirm)
- Sat. 02/08, evening - MOSI SkyWatch
- Fri. 02/014, 7:30 p.m. - Monthly Meeting at MOSI, Program: Presented by Frances Ferguson
- Sat. 02/15, evening - MARS Sky Watch at MOSI
- Sat. 02/22, evening - MARS SkyWatch at MOSI
- Sat. 03/01, SPAC Star Party, from dusk until dawn, at Hickory Hill (possible, call SPAC to confirm)

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

MARCH 2003

- (Sat. 03/08, evening - MOSI SkyWatch, tentative, not confirmed)
- Fri. 03/14, 7:30 p.m. - Monthly Meeting at MOSI, Program: Solar Eclipses, Presented by Greg Shanos
- (Sat. 03/15, evening - MARS SkyWatch at MOSI, tentative, not confirmed)
- (Sat. 03/22, evening - MARS SkyWatch at MOSI, tentative, not confirmed)
- Sat. 03/29, SPAC Star Party, from dusk until dawn, at Hickory Hill (possible, call SPAC to confirm)

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

FIRST LIGHT

Hello all, this is my first newsletter as the new editor. I would like some feedback on the paper, such as suggestions and concerns and what not. Hope you enjoy!

Wade Holland

MARTIAN HAPPENINGS

LAST MEETING

At the January 10 meeting our own Craig MacDougal presented update of his "Star Hopping" presentation. In addition, our own Greg Shanos will present a brief video on the recent solar eclipse as viewed from Australia.

NEXT MEETING

At the February 14 meeting, our own Frances Ferguson will bring the presentation

MARCH MEETING

At the March 14 meeting, our own Greg Shanos will bring a presentation on Solar Eclipses. Greg has traveled to the site of several solar eclipses around the world and has much to share on the subject. This is sure to be a memorable evening.

FEBRUARY SKYWATCH DATES

The SkyWatch dates for February are the evenings of February 11, 18. MOSI and MARS will participate on the evening of January 11 and MARS will host the SkyWatch event on January 18. To avoid public disappointment, MARS-only SkyWatch dates will be cancelled if the sign-up sheet does not indicate support on those nights by at least two volunteers and at least one telescope. Note: There will be no SkyWatch on January 25 because of the annual Einstein on Wine event.

WHAT PRESENTATIONS DO YOU WANT TO SEE?

Do you have a particular astronomical topic that you would like to learn more about? Get studying! We need presentations for our monthly meetings and our best ones come from enthusiastic and knowledgeable members. Why not start right now? Decide on a topic, schedule yourself for a particular month, and then get to work. You can do it. And we all will benefit.

ON THE RECORD by Jimmy Thomas, President

On Saturday morning, February 1, our nation, and indeed the world, suffered a tragic loss. The Space Shuttle *Columbia* disintegrated in the skies over Texas during re-entry, and the crew of mission STS-107 was lost. We are all saddened by this tragedy, not the only one we as a nation have suffered in recent years. However, we owe it to the STS-107 crew and their families to, in the words of NASA officials, find the problem, fix it and move on.

The STS-107 mission began with the launch on Thursday, January 16. The crew included:

- Commander Rick D. Husband (his second flight)
- Pilot William C. McCool (his first flight)
- Payload Specialist Michael P. Anderson (his second flight)
- Mission Specialist Kalpana Chawla (her second flight)
- Mission Specialist David M. Brown (his first flight)
- Mission Specialist Laurel B. Clark (her first flight)
- Payload Specialist Ilan Ramon, Israel (his first flight, first Israeli astronaut)

The mission payload included the first flight of the SPACEHAB Research Double Module; Fast Reaction Experiments Enabling Science, Technology, Applications and Research (FREESTAR); the first Extended Duration Orbiter (EDO) mission since STS-90. The 16-day mission was dedicated to research in physical, life, and space sciences, conducted in approximately 80 separate experiments, comprised of hundreds of samples and test points. The seven astronauts worked 24 hours a day, in two alternating shifts.

The first flight of *Columbia* (STS 1) was from April 12 to 14, 1981 with astronauts John W. Young and Robert Crippen. *Columbia*'s most recent flight was STS-109, which flew March 1 to 12, 2002, a Hubble Space Telescope Servicing Mission. Other notable missions include STS 1 through 5, 1981-1982; the first flight of European Space Agency built Spacelab; STS-50, June 25 to July 9, 1992; the first extended-duration Space Shuttle mission; STS-93, July 1999, the placement in orbit of the Chandra X-Ray Observatory. Mission STS-107 was the 28th flight of *Columbia*.

The following is a transcript of the statement read by NASA Administrator Sean O'Keefe a few hours after the loss:

"This is indeed a tragic day for the NASA family, for the families of the astronauts who flew on STS-107, and likewise is tragic for the Nation.

"Immediately upon indication of a loss of communications from STS-107, at a little after 9:00 a.m. this morning, we began our contingency plan to preserve all the information relative to the flight activities.

"I immediately advised the President and the Secretary of Homeland Security, Tom Ridge, at the point after landing was due to have occurred at 9:16 a.m., and spoke to them very briefly to advise them that we had lost contact with the Shuttle orbiter, *Columbia*, and STS-107 crew. They offered, the President specifically offered, full and immediate support to determine the appropriate steps to be taken.

"We then spent the next hour and a half working through the details and information of what we have received and Bill Readdy, Associate Administrator for the NASA Office of Space Flight, will walk you through the specifics of those operational and technical issues.

"We met with the family members of the astronauts who were here at the Kennedy Space Center and are soon to be departing back to the Johnson Space Center in Houston. The President has called and spoken to the family members to express our deepest national regrets. We have assured them that we will begin the process immediately to recover their loved ones and understand the cause of this tragedy.

"We have no indication that the mishap was caused by anything or anyone on the ground.

"We assembled a Mishap Investigation Team at a point past the stage that the orbiter was to have landed here at Kennedy Space Center a little after 9:30. That team, in turn, is coordinating on a regular basis on all the facts that are pertaining to this from the Johnson Space Center with help from a Rapid Response Team from here at the Kennedy Space Center, as well participants from the Marshall Space Flight Center in Huntsville, Alabama.

"In addition to these internal efforts, we have appointed a Mishap Investigation Board, an external group of people who are independent from NASA who will be charged with the responsibility to look at all the information that was immediately locked down right after the absence of communications.

"Each of these individuals are Safety and Mission Assurance related officials in other departments of the Federal government, from the Air Force, the Navy, the Department of Transportation, and across the federal expanse. This Investigation Team will be chaired by an individual who is external to the federal agencies and will have the responsibility to coordinate all the information from an external view.

"So we'll be conducting both the internal activity as well as the external review immediately to ascertain the causes and circumstances under which this tragedy occurred.

"We have pulled together all the federal agencies and local governments as well. I have been in discussion several times this morning with Secretary Tom Ridge. The effort is under way to coordinate an understanding of exactly where the orbiter path had taken it from West Texas towards the Kennedy Space Center here in Florida and to make sure that the material on the ground is secured so that the investigation can begin promptly.

"We would urge people who believe they have found any material to stay away from it and to please contact local officials. The local first responder groups for emergency services have been authorized and directed by Secretary Tom Ridge to assist in any way. The Federal Emergency Management Agency is coordinating that effort on behalf of the Department of Homeland Security.

"I was here this morning with the families of the astronauts and their friends. It started out as a pretty happy morning, as we awaited the landing of STS-107. We had highly anticipated their return because we couldn't wait to congratulate them for their extraordinary performance and their excellent effort on this very important science mission.

"They dedicated their lives to pushing scientific challenges for all of us here on Earth. They dedicated themselves to that objective and did it with a happy heart, willingly and with great enthusiasm.

"The loss of this valued crew is something we will never be able to get over. We have assured the families that we will do everything, everything we can possibly do to guarantee that we work our way through this horrific tragedy. We ask the members of the media to honor that too. Please respect their privacy and please understand the tragedy that they are going through at this time. We will help the media assure that this will be the case as well.

"We trust the prayers of the Nation will be with them and with their families. A more courageous group of people you could not have hoped to know- an extraordinary group of astronauts who gave their lives-and the families of these crewmembers. They knew exactly the risks. And never, ever did we want to see a circumstance in which this could happen.

"We diligently dedicate ourselves every single day to assuring these things don't occur. And when they do we have to act responsibly, accountably and that is exactly what we will do."

ASTRONOMY DAY 2003

Mark your calendars for Saturday, May 10, 2003. Yes, it is that time again, when Astronomy Clubs around the world come together to "Bring Astronomy to the People." Once again, Frances Ferguson is our Astronomy Day coordinator.

Astronomy Day is an internationally observed annual event to show the public how much fun astronomy can be. Astronomy clubs, planetariums, and other groups of sky lovers take this opportunity to provide information, resources, and encouragement in all facets of astronomy. Begun by amateur astronomers in northern California in 1973, the event has grown across North America and now includes more than a dozen foreign countries.

MARS, MOSI and the Science Library will present an all-day event at MOSI in Tampa. The event will begin at 10:00 a.m. and is free and open to the public. The evening will be capped off with the weekly SkyWatch observing session. Will you be ready for the event? We need volunteers to set up, talk with the public and take down. Any help you can give will be appreciated.

This year, we will endeavor to meet, if not surpass, our achievements of 2002. For our efforts at the 2002 Astronomy Day event, our club received one of three Honorable Mention awards given by Sky and Telescope and the Astronomical League. We should all feel proud of our work. Let's see if we can do even better this year.

Do you have an interest you would like to turn into a display or short presentation? Do you have a telescope or binoculars that you could bring as a static display? If you have a solar filter for your telescope, could you perform solar observing for the public?

Could you help with children's crafts like making Solar System necklaces? How about making a "Moon on a Stick" with other children and then using a flood light to demonstrate how the phases of the moon are created? Why not get a big glass bowl, a flashlight, some aluminum foil and water, and demonstrate why stars twinkle? There are many activities that you can do using available MARS materials if you only provide the time.

Can you provide a door prize for the drawings through out the day? Ask a business you patronize to donate to the drawing. Do you have one too many of something and would like to donate it?

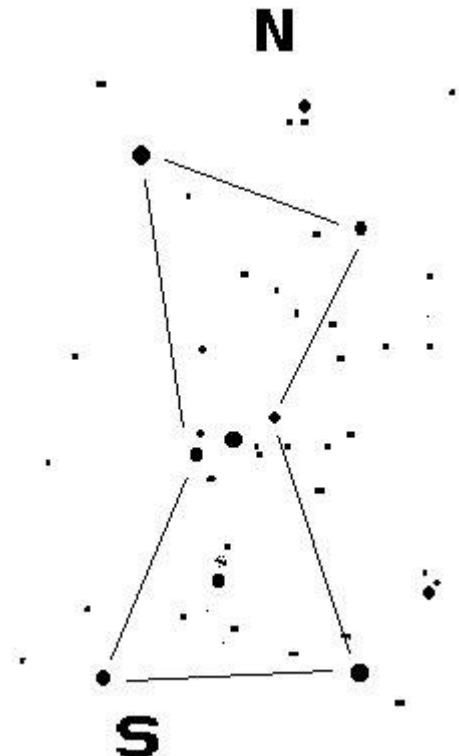
This is always a fun day for us, as well as the public, as we expose them to astronomy.

If you have any items or time that you can volunteer to the event, please contact A.D. Coordinator Frances Ferguson at email address faf2@juno.com or telephone number 813-238-8299.

CONSTELLATION OF THE MONTH by Craig MacDougal

Orion

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 is 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: 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 in-fighting is why we have Hercules in a dim set of stars, and Orion in this sparkling constellation.

CELESTIAL ALMANAC by James M. Thomas

TERM DEFINITIONS

Mag: visual magnitude of objects, with the lowest numbers indicating the brightest objects—the dimmest visible objects are 6 and the magnitude 0 and even negative numbers indicate the brightest objects other than the Moon and the Sun; Rise: rise time of the object; Set: set time of the object; Dist: distance of the object in astronomical units (AU, the average distance of the Earth to the Sun); LTT: light travel time from Earth to the object in hours (h) and minutes (m). All times displayed are given as Eastern Standard Time.

SOLAR SYSTEM OBJECTS

Sun Rise and Set

Feb 1: Rise 7:17 am; Set 6:11 pm
Jan 14: Rise 7:09 am; Set 6:20 pm
Jan 28: Rise 6:56 am; Set 6:30 pm

Moon Phases

New: Jan 2, 3:25 pm
First Qtr: Jan 10, 8:16 am
Full: Jan 18, 5:49 am
Last Qtr: Jan 25, 3:34 am
New: Feb 1, 5:50 am

Moon Rise and Set

Feb 1: Rise 7:42 am; Set 6:32 pm
Feb 7: Rise 10:56 am; Set 11:58 pm
Feb 14: Rise 4:03 pm; Set 5:31 am
Feb 21: Rise 11:41 pm; Set 10:18 am
Feb 28: Rise 5:38 am; Set 4:21 pm

Mercury – in the area of constellations Capricornus and Sagittarius

Feb 1: Mag -0.6; Rise 5:47 am; Set 4:10 pm; Dist 0.96 AU; LTT 0h 7m
Feb 14: Mag -0.15; Rise 5:59 am; Set 4:26 pm; Dist 1.15 AU; LTT 0h 9m
Feb 28: Mag -0.45; Rise 6:17 am; Set 5:07 pm; Dist 1.30 AU; LTT 0h 10m

Venus –moving through the constellation Sagittarius

Feb 1: Mag -4.21; Rise 4:19 am; Set 2:44 pm; Dist 0.84 AU; LTT 0h 7m
Feb 14: Mag -4.9; Rise 4:31 am; Set 2:56 pm; Dist 0.93 AU; LTT 0h 7m
Feb 28: Mag -3.98; Rise 4:42 am; Set 3:13 pm; Dist 1.03 AU; LTT 0h 8m

Mars – in the constellation Ophiuchus

Feb 1: Mag 1.27; Rise 3:08 am; Set 1:29 pm; Dist 1.77 AU; LTT 0h 14m
Feb 14: Mag 1.13; Rise 2:56 am; Set 1:11 pm; Dist 1.65 AU; LTT 0h 13m
Feb 28: Mag 0.96; Rise 2:41 am; Set 12:53 pm; Dist 1.53 AU; LTT 0h 12m

Jupiter – in the constellation Cancer

Feb 1: Mag -2.59; Rise 6:07 pm; Set 7:27 am; Dist 4.32 AU; LTT 0h 35m
Feb 14: Mag -2:58; Rise 5:08 pm; Set 6:30 am; Dist 4.35 AU; LTT 0h 36m
Feb 28; Mag -2.53; Rise 4:05 pm; Set 5:30 am; Dist 4:43 AU; LTT 0h 36m

Saturn – in the constellation Taurus

Feb 1: Mag 0.61; Rise 2:20 pm; Set 4:01 am; Dist 8.40 AU; LTT 1h 9m
Feb 14: Mag 0.70; Rise 1:28 pm; Set 3:09 am; Dist 8.58 AU; LTT 1h 11m
Feb 28: Mag 0.77; Rise 12:32 pm; Set 2:14 am; Dist 8.80 AU; LTT 1h 13m

Uranus – on the border of the constellations Aquarius and Capricornus

Feb 1: Mag 5.96; Rise 8:13 am; Set 7:19 pm; Dist 20.98 AU; LTT 2h 54m
Feb 14: Mag 5.97; Rise 7:24 am; Set 6:27 pm; Dist 21.01 AU; LTT 2h 54m
Feb 28: Mag 5.97; Rise 6:31 am; Set 5:36 pm; Dist 21.00 AU; LTT 2h 54m

Neptune – in the constellation Capricornus

Feb 1: Mag 7.95; Rise 7:15 am; Set 5:57 pm; Dist 31.07 AU; LTT 4h 18m

Feb 14: Mag 7.95; Rise 6:26 am; Set 5:08 pm; Dist 31.04 AU; LTT 4h 18m

Feb 28: Mag 7.94; Rise 5:33 am; Set 4:15 pm; Dist 30.96 AU; LTT 4h 17m

Pluto – on the border of the constellations Serpens and Ophiuchus

Feb 1: Mag 13.89; Rise 3:30 am; Set 2:29 pm; Dist 31.15 AU; LTT 4h 19m

Feb 14: Mag 13.88; Rise 2:40 am; Set 1:39 pm; Dist 30.96 AU; LTT 4h 170m

Feb 28: Mag 13.86; Rise 1:46 am; Set 12:45 pm; Dist 30.74 AU; LTT 4h 15m

METEOR SHOWERS by James M. Thomas

There are no major meteor showers this month.

Observing Meteors

Meteors are best viewed from a dark-sky location. Observers in for the duration of the evening, or at least for several hours, should bring along a few things: a sleeping bag or blankets for warmth, a recliner or lawn chair, a hot beverage to help cut the chill, and binoculars to view the smoke trails of just-past meteors.

THIS MONTH IN HISTORY by James M. Thomas

February 15, 1830 - A meteorite weighing 2-1/2 pounds fell in Launton, Oxfordshire, England.

February 12, 1875 - 100 meteorites fell near Homestead, Iowa.

February 3, 1882 - About 3,000 meteorites fell in Mocs, Transylvania.

February 7, 1906 - Clyde Tombaugh, discoverer of Pluto, was born (95th Birthday)

February 9, 1913 - A meteor shower occurred which had no radiant (it did not appear to radiate from a single point in the sky). The meteors seemed to enter the atmosphere from a circular orbit around the Earth. It was named the Cyrillid shower because it was observed on the feast day of St. Cyril of Alexandria.

February 7, 1930 - A meteorite weighing 820 pounds fell early in the morning near Paragould, Arkansas. The sound made by the impact awoke sleeping people in Arkansas, Tennessee and Missouri. Several police departments were alerted. The meteorite was found about five weeks later, measuring 26 x 36 inches. The rock was moved to the Field Museum at Chicago.

February 12, 1947, 10:35 a.m. local time - A large meteorite weighing about 70 tons fell in the Sikhote-Alin northern range, a few hundred miles north of Vladivostok. The forest was laid waste over an area two miles long and one mile wide. The first scientific expedition to reach the site was led by Dr. E. L. Krinov.

February 22, 1961 - The Soviet Union launched Kosmos 110, carrying into orbit two dogs: Veterok & Ugolyok (40th Anniversary)

February 20, 1962 - John H. Glenn Jr. was launched into orbit atop an Atlas rocket in the Mercury spacecraft *Friendship 7*. Glenn was the first U.S. astronaut to orbit the Earth. The flight lasted 4 hours, 55 minutes with three orbits of the Earth. During the flight there was concern that the heat shield had been released from the spacecraft, and was only being held in place by the retro-rocket pack, which was attached by metal cables and explosive bolts. It was decided by Mercury Control that Glenn should re-enter the atmosphere with the retro-rocket pack in place. It was hoped that this tactic would keep the heat shield from separating from the spacecraft. Glenn returned safely to Earth and splashed down in the Pacific Ocean. It was later determined that a faulty indicator gave the impression that the heat shield was loose when in fact it was not.

February 2, 1965 - Ranger 8 was launched as part of a series of missions to impact the Moon. Ranger 8 transmitted over 7,000 photos back to Earth before crashing into the lunar surface.

February 3, 1966 - USSR's Luna 9 probe landed on Moon, 1st Moon Landing (35th Anniversary)

February 14, 1969 - Preparations were underway for the launch of the U.S. spacecraft Mariner 6 toward the planet Mars on February 24. On this day a faulty switch opened the main valves on the Atlas stage of the Atlas-Centaur launch vehicle. The Martian Chronicles, February 2003

loss of pressure caused the rocket to begin collapsing like a punctured tire. As the air rushed out, two ground crewmen ran into the vehicle, started pressurizing pumps, and thus prevented the further "deflation" of the launch vehicle. NASA later presented the two ground crewmen with Exceptional Bravery Medals. The spacecraft was checked out, the wrinkled launch vehicle was replaced, and the mission was able to launch on scheduled date.

February 24, 1969 - An Atlas-Centaur rocket launched the U.S. spacecraft Mariner 6 on a fly-by mission to Mars. The craft came within 2,000 miles of Mars on July 31. Mariner 6 transmitted photos and data on the planet back to Earth.

February 3, 1984 - Space Shuttle *Challenger* was launched with astronauts Vance Brand, Robert "Hoot" Gibson, Ronald McNair, Bruce McCandless, and Robert Stewart. McCandless and Stewart became the first to perform an untethered extra-vehicular activity (EVA) using the Manned Manuvering Unit (MMU). The crew returned safely to the Earth on February 11.

February 20, 1986 - The Soviet Union launched Space Station *Mir* into orbit. (15th Anniversary)

February 5, 1987 - A Soyuz spacecraft was launched with cosmonauts Yuri V. Romanenko and Aleksandr I. Laveikin. Romanenko set a space endurance record which has since been broken. The crew return safely on Dec. 29.

February 22, 1990 - Western Europe's 36th Ariane rocket, carrying two Japanese satellites, exploded less than two minutes after lift-off from Kourou, French Guiana.

February 6, 1991 - USSR's space station Salyut-7 Burned up In Earth's Atmosphere (10th Anniversary)

February 3, 1994 - Space Shuttle *Discovery* was launched with astronauts Charles F. Bolden, Kenneth S. Reightier Jr., Jan Davis, Franklin R. Chang-Diaz, Ronald M. Sega, and cosmonaut Sergei K. Krikalev. Krikalev became the first Russian cosmonaut to fly aboard a U.S. space shuttle. The crew returned safely to the Earth on February 11.

February 3, 1995 - Space Shuttle *Discovery* launched with astronauts James D. Wetherbee, Eileen M. Collins, Bernard A. Harris, C. Michael Foale, Janis Vose, and V. Titov. Discovery was the first shuttle to rendezvous with Space Station *Mir*, in preparation for shuttle dockings which followed in later missions. The crew returned to the Earth on February 11.

February 17, 1996 - The Near Earth Asteroid Rendezvous (NEAR) space probe was launched on its mission to asteroid Eros. The NEAR probe rendezvoused with Eros early in 2000, to orbit and study the asteroid for about 1 year.

February 15, 1996 - A rocket carrying an Intelsat 708 communications satellite exploded soon after launch from China's launch site in Xichang.

February 22, 1996 - Space Shuttle *Columbia* launched with astronauts Andrew M. Allen, Scott J. Horowitz, Franklin R. Chang-Diaz, Umberto Guidoni, Jeffery A. Hoffman, Maurizio Cheli, and Claude Nicollier. Some single marks were found on 2 solid rocket booster O-rings following the launch. The crew performed microgravity experiments and worked with the Italian tethered satellite. The tether severed and the satellite was lost. The crew returned safely on February 9.

PUBLICATION INFORMATION

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 Jerry Scalzo, 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.

NEWSLETTER EDITION DETAILS

Martian Chronicles, February 2003, Vol. 19, No. 2
Editor: Wade Holland
Assistant Editor: Jimmy Thomas
Contributors: Craig MacDougal

CLUB MEMBERSHIP/RENEWAL ADDRESS:

M.A.R.S.
c/o Jerry Scalzo, Treasurer
2727 W. Fletcher Av., Apt 62D
Tampa, FL 33618

CLUB INFORMATION

MUSEUM ASTRONOMICAL RESOURCE SOCIETY
President - Jimmy Thomas, 813-888-7187, MARSastro@aol.com
Vice President - Wade Holland, 813-988-6689, marshebe@earthlink.net
Treasurer - Jerry Scalzo, 813-263-6473, strek1@webtv.net
Secretary - Mary Jane Scalzo, 813-263-6473, strek1@webtv.net
MOSI Contact - Craig MacDougal, 813-987-6339, MACDOUC@prodigy.net

Mailing address: 8712 Cobbler Place, Tampa, FL 33615
Web site: <http://members.aol.com/MARSastro>
E-mail: MARSastro@aol.com