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Martian Chronicles

Newsletter of the Museum Astronomical Resource Society
Volume 19, Number 1
January 2003

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UPCOMING EVENTS

JANUARY 2003

- Sat. 01/04, SPAC Star Party, from dusk until dawn, at Hickory Hill (possible, call SPAC to confirm)
- Fri. 01/10, 7:30 p.m. - Monthly Meeting at MOSI, Program: Star Hopping
- Sat. 01/11, evening - MOSI SkyWatch
- Sat. 01/18, evening - MARS SkyWatch at MOSI
- Sat. 02/01, 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

FEBRUARY 2003

- Sat. 02/01, SPAC Star Party, from dusk until dawn, at Hickory Hill (possible, call SPAC to confirm)
- Fri. 02/07, 7:30 p.m. - Monthly Meeting at MOSI, Program: To Be Announced
- (Sat. 02/08, evening - MOSI SkyWatch, tentative, not confirmed)
- (Sat. 02/15, evening - MARS SkyWatch at MOSI, tentative, not confirmed)
- (Sat. 02/22, evening - MARS SkyWatch at MOSI, tentative, not confirmed)
- Sat. 03/01, 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, friends.

Jimmy Thomas here. I was not able to meet with our new editor Wade Holland or to with any newsletter information. Therefore, I put together this newsletter at the last minute, with the club meeting week staring me in the face. I hope that you will enjoy this month's edition. Though my in January will be even more complicated than December, I will do my best to assist Wade in taking over this duty. Enjoy.

Clear Skies,

Jimmy Thomas

MARTIAN HAPPENINGS

LAST MEETING

We had a great time at the December 13 meeting. Though we were not able to have a planetarium show, we had a lot of fun eating and socializing. We even had some limited formality when we held the elections of officers for the new year. For more details see the MARS MINUTES section.

NEXT MEETING

At the January 10 meeting our own Craig MacDougal will offer observing tips in his updated "Star Hoping" presentation. In addition, our own Greg Shanos will present a brief video on the recent solar eclipse as viewed from Australia.

CONGRATULATIONS, MARK DIXON, FOR ACHIEVING THE RANK OF EAGLE SCOUT

Please accept my apology, friends. I should have notified you in this regard earlier, but I have not checked my e-mail for a month and I am catching up. Proud father Stephan A. Dixon presents the following information to the club:

I am proud to inform you that Mark Alan Dixon has received from National Council, Boy Scouts of America; the highest recognition in Scouting – the Eagle Scout rank! As of December 2002 Mark has been a member of Troop 83, Riverview, Florida for 3 years and 9 months. He previously completed 5 years as a Cub Scout.

For his Eagle Service Project, Mark planned, designed, and supervised the construction of a six-inch Newtonian telescope for the Astronomy Program at East Bay High in Riverview, Florida. Mark is currently enrolled as a 9th grader in the Aerospace Program at Middleton High, Tampa Florida.

The date of his Board of Review, and therefore the official date of his Eagle Scout rank, is October 12, 2002. Mark conducted his Eagle Court of Honor at Riverview United Methodist Church on Saturday, December 14.

Those wishing to give their congratulations and good wishes to Mark and his family may contact Mark as follows:

Mark Dixon
11108 Roberts Lane
Riverview, FL 33569
(813) 671-9438
rinsect2000@att.net

SADNESS ON THE PASSING OF MARK DILLENBECK

I am sad to inform you that MARS member and former club secretary Mark Dillenbeck passed away suddenly on Wednesday, December 4. I received an e-mail on December 28 from Mark's wife, Kathy, regarding this. I have no further details on the circumstances of Mark's death, but I do know that Mark had been ill for some time. Kathy informs me that she would like to offer Mark's astronomy books to the club library. Kathy believes that Mark would want this. We will gladly accept these items and treasure them. Those wishing to contact Kathy may do so using the following information:

Kathy Dillenbeck
1408 Viola Drive
Brandon, FL 33511
813-685-3458
ktdbeck@tampabay.rr.com

Below are the obituary details as presented by the Tampa Tribune:

Mark J. Dillenbeck, of Brandon, passed away suddenly on Wednesday, December 4, 2002. Beloved husband, brother and uncle, Mark is survived by his wife, Kathy; brothers, Jay and David of Tampa and Don of Johnson City, N.Y.; sister, Joyce Knefley of Ulysses, Pa.; as well as numerous nephews and nieces. A native of Binghamton, N.Y., he resided in Brandon for 14 years. He was a Child Protective Investigator for the State of Florida Department of Children and Families until he was forced to retire two years ago due to ill health. A celebration of his life was held at 7 p.m. on Monday, December 9, 2002 at the Brandon First Church of the Nazarene, 114 Kingsway Rd., Brandon. In lieu of flowers, donations may be made to the American Diabetes Assoc. or the American Heart Assoc. This information was presented to the Tampa Tribune by SERENITY MEADOWS MEMORIAL PARK & FUNERAL HOME, Brandon/Riverview.

JANUARY SKYWATCH DATES

The SkyWatch dates for January are the evenings of January 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 Martian Chronicles, January 2003

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.

MARS MINUTES

December 2002 Meeting of M.A.R.S.

December 13, 2002

Jimmy Thomas, President

Wade Holland, Vice President

Jerry Scalzo, Treasurer

Alvin Dozier, Secretary

The meeting/party began at 7:30 pm in the Gallery area outside The Saunders Planetarium at MOSI. There are members present along with their family members.

The formal portion of the meeting began at 8:15 pm and was moderated by Jimmy Thomas. Jimmy announced that, because of the scheduled planetarium shows for MOSI camp-in groups that evening, the group would not be able to participate in the annual planetarium show.

Recognition was given to John Bell for his achievement in the construction of the club library's first metal cabinet. Because of the abundance of books yet to be housed, John was encouraged to begin construction on the second cabinet when his time permitted. Joe Carr was acknowledged for the number of books that he provided to the club from his personal library. It was suggested that Joe be acknowledged publicly at the next club meeting.

Craig MacDougal noted that the following Friday, December 20, from 7 pm to 9 pm, MOSI would hold a SkyWatch on top of the IMAX dome because of the winter solstice.

Elections were held for the club officer positions for the year 2003. The following are the results:

- President: Jimmy Thomas
- Vice President: Wade Holland
- Treasurer: Jerry Scalzo
- Secretary: Mary Jane Scalzo
- Newsletter Editor: Wade Holland with the assistance of Jimmy Thomas. Mildred Simpson noted her willingness to assist in the distribution of club newsletters as long as the newsletter is ready prior to the Wednesday before the monthly meeting.
- Astronomy Day Chairperson: Open. Frances Ferguson and Alvin Dozier expressed desires to be part of the Astronomy Day 2003 committee.

With regard to Astronomy Day, the group was reminded that MARS received an Honorable Mention award from Sky and Telescope Magazine for their Astronomy Day 2002 activities. Suggestions were made for possible improvements for the 2003 Astronomy Day, to be held May 10. Suggestions include a tent or screened-off area for slide shows, videos, etc. It was also noted that the 2003 event might be back inside MOSI.

Following the formal time, the group returned to eating and conversing until 9 pm, at which time all of the attendees assisted in cleaning up trash and stacking chairs for later collection. A great time was had by all.

ROAMING ASTRONOMER by James M. Thomas

(This article originally appeared in the January 1999 edition of this newsletter under the column heading Wandering Astronomer.)

Lowell Observatory

Percival Lowell was born into an aristocratic Boston family. He studied mathematics at Harvard and, after graduating in 1876, made a fortune in business. Lowell worked for ten years in the Far East as a travel writer and served as a foreign secretary. Following this, he settled down to a serious pursuit of astronomy. He became particularly interested in Mars and its "canals," of which drawings by the Italian astronomer Giovanni Schiaparelli had received wide public attention.

In 1894 he founded the Lowell Observatory at Flagstaff, Arizona. This was the first astronomical observatory in Arizona. Its altitude of some 7000 feet and its dry desert air made it an excellent observing site for the study of Mars, which was at that time in opposition, or very close to the Earth. Lowell began with a small staff and two borrowed telescopes. Two years later, he ordered and installed a specially

designed 24-inch refracting telescope, which was constructed by Alvan Clark & Sons of Cambridgeport, MA. For many years, the Clark telescope was the major research tool of the Observatory. It is still in use today and has been registered as a National Historic Landmark.

For a time Lowell considered other locations for the Observatory, traveling with the big refractor to many possible sites in North America. He finally relocated to Mexico City, Mexico. Like Flagstaff, the Mexico skies were dry and clear. But Mexico City's geographic location, which allowed viewing of the planets at a higher declination, appeared to make it better suited for planetary observations. However, the high temperatures during the day made for very turbulent viewing at night. In April of 1897, after six months in Mexico, Lowell made the decision to return to Flagstaff. Lowell announced that the overall conditions at Flagstaff were far better than those experienced at any of the other North American sites he had tried. It was then that Flagstaff became the permanent home of Lowell Observatory.

Though the study of Mars was the original purpose of Lowell Observatory, its research quickly expanded into other areas, including V.M. Slipher's discovery of the first evidence of the expansion of the universe in 1912 - 1917 and Clyde Tombaugh's discovery in 1930 of the planet Pluto. Drs. Carl Lampland and Arthur Adel made pioneering contributions to the field of infrared astronomy and Dr. Henry Giclas discovered many of the white dwarf stars known today.

Lowell Observatory currently operates eight telescopes in the Flagstaff area, plus a ninth at the Perth Observatory in Western Australia. Several of Lowell's telescopes are equipped with state-of-the-art electronic cameras, modern spectrographs, and other auxiliary instrumentation. The telescopes at their dark sky site at Anderson Mesa, Arizona include the 72-inch Perkins Telescope, the 42-inch Hall Telescope, the 31-inch Lowell Observatory Telescope, the LONEOS Schmidt Telescope, and the Navy Prototype Optical Interferometer Telescope.

Approximately half of the Observatory's astronomers devote themselves primarily to studies of the solar system. Lowell Observatory is particularly recognized for its work on the smaller solar system bodies. One of the Lowell staff has discovered more asteroids than any other living astronomer. Others played an important role in the recent discovery of the rings of Uranus.

Beyond the solar system, Lowell astronomers are investigating topics as diverse as star formation in distant galaxies and the stability of stars like our Sun. Lowell scientists are closely involved in research using telescopes in space and on the ground.

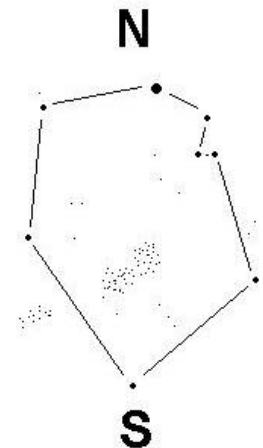
Percival Lowell believed scientists have an obligation to convey their work in a way that all interested people can appreciate - a conviction that is shared today by the Lowell astronomers. Tens of thousands of guests from all over the world visit Lowell Observatory each year and learn about its work first hand. Visitors may ask questions of the Lowell staff, view exhibits on the history and work of the Observatory, tour much of the facility, attend evening observing sessions, and much more.

Though Percival Lowell died in 1916, his legacy continues on through his Observatory. For more information on the Lowell Observatory, its facilities, its research, educational programs, daily guided tours, and other tourist information, contact: Lowell Observatory, 1400 West Mars Hill Road, Flagstaff, Arizona 86001, USA, telephone number (520) 774-3358. You may also learn more by accessing their web site at URL: <http://www.lowell.edu/>

CONSTELLATION OF THE MONTH by Craig MacDougal

Auriga

For our New Year's constellation we turn to one with an unmistakable beacon, and a pretty distinctive shape. However, even though the name and occupation of this celestial character goes back to the ancients, there are at least three different legends that account for what he did to deserve a place in the sky, none of which can be called the definitive story. Go out at our usual 9:00 PM, and face northeast. About three quarters the way up the sky you will come across a distinctly bright star. This is **CAPELLA** (ka-PEL-a), the brightest star in the constellation **AURIGA** (ar-I-ga), the Charioteer. (The what? A guy who drives chariots for a living.) Auriga forms an irregular pentagon shape in the sky that can't quite be covered up with your hand held at arm's length, and your fingers together. Those of you that have been following these monthly constellations on your own star charts probably have already noticed that one of the stars in the pentagon is the same star that represents the tip of one of Taurus' horns. Can two constellations share the same star? Well, yes, and no. Yes, the ancients did it that way, and did the same thing with at least one other pair of constellations. But no, in our modern times, when official boundaries between constellations were decided on, it was also decided that such "fence sitting" might be confusing, so this star is officially a part of Taurus. But let's go back to Capella for a moment. Capella is a significant star to astronomers because it is believed to be about the same size, temperature, and age as our own sun. Therefore, studying Capella from afar can give us clues as to how our sun fits into the grand scheme of things in our galaxy. It has also been used as a standard brightness reference since it has generally been considered to be non-variable. Recently, some variability has been found, but not enough to mess up everybody's calibrations. Auriga is a fun constellation in binoculars. Just a casual scan within the pentagon will show a lot more stars in interesting chain-like patterns, plus three fuzzy patches that are open star clusters cataloged by Charles Messier. One reason for all this fun is that we are still looking along the Milky Way. Even though the Milky Way is generally mentioned in conjunction with the summer sky, this band of faint light runs from the summer constellations, through Cassiopeia, and after running through Auriga, heads past Orion (next month's constellation). Besides the conflicting stories of who's chariot Auriga drove and why, there is another puzzle. Capella means "she goat" and the stars that form a skinny triangle next to Capella are called "the kids". Now, while there are some legends regarding a she goat and kids, and there are even some references to a lost constellation about them, nobody has yet found an explanation as to why Auriga, the great chariot driver, is left carrying around a mother goat and her offspring.



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 unites (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

Jan 1: Rise 7:22 am; Set 5:46 pm
Jan 15: Rise 7:23 am; Set 5:57 pm
Jan 31: Rise 7:18 am; Set 6:10 pm

Moon

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

Mercury – moving from the constellation Capricornus to the constellation Sagittarius

Jan 1: Mag 0.15; Rise 8:33 am; Set 7:04 pm; Dist 0.82 AU; LTT 0h 6m
Jan 15: Mag 2.82; Rise 6:41 am; Set 5:14 pm; Dist 0.68 AU; LTT 0h 5m
Jan 31: Mag -0.4; Rise 5:47 am; Set 4:11 pm; Dist 0.94 AU; LTT 0h 7m

Venus – Moving from the constellation Libra toward Ophiuchus and Serpens

Jan 1: Mag -4.53; Rise 3:53 am; Set 2:44 pm; Dist 0.60 AU; LTT 0h 5m
Jan 15: Mag -4.38; Rise 4:02 am; Set 2:39 pm; Dist 0.71 AU; LTT 0h 5m
Jan 31: Mag -4.22; Rise 4:18 am; Set 2:44 pm; Dist 0.83 AU; LTT 0h 6m

Mars – Moving from the constellation Libra to the constellation Ophiuchus

Jan 1: Mag 1.53; Rise 3:37 am; Set 2:20 pm; Dist 2:04 AU; LTT 0h 17m
Jan 15: Mag 1.42; Rise 3:24 am; Set 1:56 pm; Dist 1.92 AU; LTT 0h 16m
Jan 31: Mag 1.28; Rise 3:09 am; Set 1:31 pm; Dist 1.78 AU; LTT 0h 14m

Jupiter – in the constellation Cancer

Jan 1: Mag -2.52; Rise 8:30 pm; Set 9:40 am; Dist 4.46 AU; LTT 0h 37m
Jan 15: Mag -2.57; Rise 7:28 pm; Set 8:41 am; Dist 4.36 AU; LTT 0h 36m
Jan 31: Mag -2.59; Rise 6:12 pm; Set 7:31 am; Dist 4:32 AU; LTT 0h 35m

Saturn – in the constellation Taurus

Jan 1: Mag 0.41; Rise 4:30 pm; Set 6:11 am; Dist 8.11 AU; LTT 1h 7m
Jan 15: Mag 0.50; Rise 3:31 pm; Set 5:12 am; Dist 8.21 AU; LTT 1h 8m
Jan 31: Mag 0.61; Rise 2:24 pm; Set 4:05 am; Dist 8.39 AU; LTT 1h 9m

Uranus – on the border of the constellations Aquarius and Capricornus

Jan 1: Mag 5.94; Rise 10:10 am; Set 9:13 pm; Dist 20.71 AU; LTT 2h 52m
Jan 15: Mag 5.95; Rise 9:17 am; Set 8:21 pm; Dist 20.86 AU; LTT 2h 53m
Jan 31: Mag 5.96; Rise 8:16 am; Set 7:22 pm; Dist 20.97 AU; LTT 2h 54m

Neptune – in the constellation Capricornus

Jan 1: Mag 7.94; Rise 9:13 am; Set 7:57 pm; Dist 30.95 AU; LTT 4h 17m
Jan 15: Mag 7.95; Rise 8:20 am; Set 7:04 pm; Dist 31.04 AU; LTT 4h 18m
Jan 31: Mag 7.95; Rise 7:19 am; Set 6:00 pm; Dist 31.07 AU; LTT 4h 18m

Pluto – on the border of the constellations Serpens and Ophiuchus

Jan 1: Mag 13.91; Rise 5:28 am; Set 4:27 pm; Dist 31.46 AU; LTT 4h 21m
Jan 15: Mag 13.90; Rise 4:35 am; Set 3:34 pm; Dist 31.35 AU; LTT 4h 20m
Jan 31: Mag 13.89; Rise 3:34 am; Set 2:33 pm; Dist 31.16 AU; LTT 4h 19m

Quadrantid Meteor Shower

Meteors from the Quadrantid shower may be visible from January 1 through 6 with the peak on January 4. The meteor hourly rates may
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range from 40 to possibly 110 at the shower's peak. The meteors will appear to originate from a point in the sky near the constellation of Boötes the Herdsman (RA 15hrs 28min, Dec +50°) high in the eastern sky. This is not a prime time shower. Ambitious observers will either have to get up very early or stay up very late. And you will only have a few hours to observe. The radiant point of the shower will begin rising about 1:00 a.m. but it will not reach its zenith before sunrise.

The Quadrantid shower has no known parent comet. It was first noticed about 1835. Most meteor showers are named after the constellation that contains the radiant. The Quadrantids are the exception to this rule. These meteors come from an area of the now-rejected constellation Quadrans Muralis (the Mural Quadrant), which is now the northern part of the constellation Boötes. A mural quadrant was an early instrument used for measuring declination. It is a large graduated circle with a sighting arm and telescope. The word "mural" indicated that the instrument was attached to a wall.

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

January 30, 1868 - About 180,000 meteorites fell near Pultusk, Poland. Those collected were estimated to have a total weight of 2 tons. It is thought that they were fragments of a large body that broke apart in the atmosphere.

January 1, 1869 - 500 meteorites fell in Hessle, Sweden. They fell at such a low rate that those which landed on ice only a few inches thick actually bounced on impact.

January 31, 1958 - A U.S. Army team launched the satellite Explorer 1 into Earth orbit. The 13-kilogram (30-pound) satellite became the U.S.'s first in orbit. It was launched from Cape Canaveral's Complex 26A atop Juno 1, a modified Jupiter-C rocket. Explorer 1 was constructed for the Army by the Jet Propulsion Laboratory of the California Institute of Technology. An onboard experiment designed by Dr. James Van Allen of the State University of Iowa (now the University of Iowa) detected the Earth's radiation belt, subsequently named the Van Allen Radiation Belt.

January 27, 1967 - Three U.S. astronauts, Virgil I. "Gus" Grissom, Roger Chaffee and Edward White, died in a "flash fire" aboard Apollo 1 during a simulated launch at Cape Canaveral. The incident triggered a complete review of the command module and related procedures. As part of the outcome, the spacecraft internal gas was changed from pure oxygen to an oxygen-nitrogen mixture. Also, the command module main hatch was revised so that it could be opened more easily.

January 31, 1971 - A Saturn V rocket launched the U.S. mission Apollo 14 with astronauts Alan Shepard, Stuart A. Roosa and Edgar D. Mitchell. They made the third Moon landing of the Apollo program on Feb. 2. Astronauts Shepard and Mitchell collected 96 pounds of lunar samples and stayed on the lunar surface for 33 hours and 31 minutes. They returned safely to the Earth on Feb. 9.

January 28, 1986 - Space Shuttle *Challenger* was launched with astronauts Francis R. Scobee, Michael J. Smith, Judith A. Resnik, Ellison S. Onizuka, Ronald E. McNair, Gregory B. Jarvis, and Christa McAuliffe. The *Challenger* exploded 73 seconds after liftoff and all aboard were killed. The incident triggered a complete review of the Space Shuttle program and a redesign of the vehicle, the solid rocket boosters, and the launch and support procedures. The shuttle flights resumed after 2 years and 8 months, with the launch of the Space Shuttle *Discovery* on Sept. 29, 1988.

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

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