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Chabot Space & Science Center
"Your Place in the Universe"

CALENDAR OF EVENTS

OCTOBER 1—DECEMBER 31, 2003
(Issued Sept. 18, 2003)

This document and all Chabot Space & Science Center news releases and photos may be found online at www.chabot.space.org under Press room.

**** NEW HOURS ****

Monday – Tuesday **CLOSED**
Wednesday – Friday, 10 am - 5 pm – Members and pre-booked groups only

Public Hours:

Friday 5pm – 10 pm
Saturday 10am – 10 pm
Sunday 12 noon - 5 pm

Telescope Viewing

Friday & Saturday 7pm – 10pm (weather permitting)

Closed Thanksgiving, Christmas

Special Extended Holiday Hours

Veteran's Day, Thanksgiving week and Christmas Break
Check website for details

CHABOT SPACE & SCIENCE CENTER — Indoor stargazing in Ask Jeeves Planetarium, outdoor viewing through telescopes, daily screenings in Tien MegaDome Theater, interactive exhibits and hands-on activities. Open Fri. – Sun. Observatory hours Fri. & Sat. from 7 - 10 pm. 10000 Skyline Blvd., Oakland. (510) 336-7300. www.chabot.space.org

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OPENINGS

Exhibits

Skywise—Astronomy Cartoon Exhibit, October 11, 2003 – January 31, 2004

Chabot will open a new exhibit in early October featuring the astronomy cartoon strips *Skywise*. The *Skywise* cartoons were drawn by cartoonist Jay Ryan and published in *Sky & Telescope* magazine from 1997 to 2001. These educational astronomy comic strips are designed to be an informative and entertaining vehicle to help viewers discover and understand the skies.

Cartoonist Jay Ryan says, “Astronomy is a visual subject. When I was first learning the sky, I found most text-oriented astronomy literature to be very unhelpful for comprehending the clockwork of the heavens. Having been a cartoon doodler since childhood, I’d often scribble cartoons to help me visualize difficult concepts. After a while, I realized that perhaps others might also benefit from these astronomy cartoons.”

Ryan’s *Skywise* cartoons explore a wide array of topics: the Solar System, the scale of the Universe, seasons, timekeeping, telescopes, observing the skies, and more. A changing selection of Ryan’s cartoons will be featured at Chabot in the coming months. The exhibit is made possible in part through support from the Ask Jeeves Foundation and *Sky & Telescope Magazine*.

Planetarium Shows

***Ringworld* — Opens Friday, October 17 - February 29, 2004**

The planet Saturn has long fascinated all those who have looked through a telescope to see its beautiful rings. This West-Coast premiere explores Saturn and highlights the Cassini-Huygens mission— a spacecraft arriving at Saturn in the summer of 2004.

***Count Astro’s Haunted Heavens* — (October 11–31)** A Halloween-themed show, Count Astro takes you on a journey in the planetarium to visit various creepy critters in our skies. (20 min.)

New Films

***Cosmic Voyage* — Opens Friday, November 28**

Cosmic Voyage mixes ground-breaking computer animation with cutting-edge science to give us a sweeping view of the universe. A "cosmic zoom" extends from the surface of the Earth to the largest observable structures of the universe, and then back down into the sub-nuclear realm—a guided tour across some 42 orders of magnitude! *Cosmic Voyage* explores some of the greatest scientific theories, many of which have never before been visualized on film. *Cosmic Voyage* was nominated in 1997 for an Academy Award® in the Best Documentary Short Subject Category. (40 min)

Mini-Missions — Armchair Tours to Outer Space

Escape from the Red Planet!

Saturdays at 12:30 & 2:30; Sundays at 1:30 and 3:30

Ages 6 and up. Children, ages 6-12 must be accompanied by an adult.

Tickets: \$10 adults / \$5 youth; available on a first come, first serve basis at the Chabot ticket desk

ALERT!! ALERT!! The shuttle you need to leave the surface of Mars has been severely damaged in a crash landing, your replacement crew is gone, a dust storm is approaching and air, food and water are extremely low...AND THE MISSION HASN'T STARTED YET! This is the scenario for Chabot's newest attraction, "Escape from the Red Planet". You are the crew of a doomed landing. Your mission: Get the shuttle working again and into orbit before you are hit with the worst dust storm ever recorded on Mars. These hour-long mini-missions are run in the Challenger learning Center, a simulated Mission Control and Space Capsule

Visit the Chabot Space & Science Center website at www.chabotspace.org

EXHIBITS

Skywise—Astronomy Cartoon Exhibit Opens October 4

Chabot will open a new exhibit this fall featuring the astronomy cartoon strips *Skywise*. The *Skywise* cartoons were drawn by cartoonist Jay Ryan and published in *Sky & Telescope* magazine from 1997 to 2001. These educational astronomy comic strips are designed to be an informative and entertaining vehicle to help viewers discover and understand the skies.

Cartoonist Jay Ryan says, “Astronomy is a visual subject. When I was first learning the sky, I found most text-oriented astronomy literature to be very unhelpful for comprehending the clockwork of the heavens. Having been a cartoon doodler since childhood, I’d often scribble cartoons to help me visualize difficult concepts. After a while, I realized that perhaps others might also benefit from these astronomy cartoons.”

Ryan’s *Skywise* cartoons explore a wide array of topics: the Solar System, the scale of the Universe, seasons, timekeeping, telescopes, observing the skies, and more. A changing selection of Ryan’s cartoons will be featured at Chabot in the coming months. The exhibit is made possible in part through support from the Ask Jeeves Foundation and *Sky & Telescope Magazine*.

TRAVELING EXHIBITS

The Human Body Exhibit in the Tien MegaDome Theater lobby — **CLOSES December 31, 2003**

The Human Body is a 500-square-foot exhibit that offers a variety of hands-on activities. You’ll find displays on thermography, x-ray and hearing as well as a computer fly-through of detailed 3D representations of human anatomy. The exhibit accompanies *The Human Body* film, now playing in the Tien MegaDome Theater.

ONGOING EXHIBITS

Mars Encounter

What do you know about the planet Mars? Could you plan a mission to Mars? What will interplanetary adventure travel be like? Find out this summer when you visit *Mars Encounter*, a new exhibit developed by Chabot and West Office Exhibition Design.

The *Mars Encounter* exhibit invites visitors to explore Mars’ place in our culture, investigate the accomplishments of past missions to Mars, follow the progress of current missions to Mars, and consider future Mars exploration, when human astronauts will experience the Red Planet first-hand.

The exhibit features a four-foot tactile Mars globe, complete with craters and volcanoes; a Martian meteorite; a Martian Sci-fi theater; a Mars Mission Control where visitors can obtain data on current and past missions; videos of Rover missions; a wall-size mural embedded with quiz games; a vacation to Mars planning station and a play area for the younger crowd. Sponsored by the National Aeronautics & Space Administration, with additional support from Microsoft, Inc.

Astronomy Hall

Planetary Landscapes: Sculpting the Solar System — Fourteen interactive sculptures, created by renowned artist Ned Kahn, suggest the natural processes that form the landscapes of our Solar System.

Moon Mystery — A 3-billion-year-old Moon rock, no bigger than a child’s palm, is the centerpiece of this exhibit, which explores various enigmas in lunar lore, including the “Big Whack” theory of the Moon’s formation and how the Moon affects life on Earth. The moon rock is on loan from NASA’s Johnson Space Center.

The Origin and Meaning of Meteorites — This stunning mural by artists Joy Day and B.E. Johnson is accompanied by a case of meteorite samples, where visitors can view these ancient remnants of the birth of the solar system.

Touch the Sun — Watch solar movies, explore the nature of light, learn about sun mythology of ancient cultures, and find out about real-time solar energy usage from the Science Center’s solar panels.

Our Place in the Universe — A walking tour of the universe. The exhibit includes the fascinating Hologlobe, a dynamic holographic projection of the Earth’s changing atmosphere, oceans, and continents, on permanent loan from the Smithsonian Institution. The **EarthViewer 3D** computer kiosk at the entrance to the exhibit lets visitors connect to highly detailed satellite and aerial images of the Earth—you decide where and how close up you want to look!

Astronomy In California 1850–1950: Telescope Makers, Telescopes, and Artifacts — Explore California’s rich astronomical history and Chabot Observatory’s own 120-year history through a display of telescopes, artifacts, and the histories of their makers, on loan from the Smithsonian Institution.

ASK JEEVES PLANETARIUM

Chabot's **Ask Jeeves Planetarium** brings the night sky to life! More than 9,000 stars are projected overhead by our fiber-optic Zeiss Universarium Mark VIII star-ball, one of the most advanced star projectors in the world. Additional special effects simulate eclipses, supernovae, black holes, and other celestial events, and a laser system brings constellations and other objects to life, augmented by a 15,000-watt, 6-channel surround-sound system. The Ask Jeeves Planetarium seats 240 people under a 70-foot diameter dome, and features live and pre-recorded shows. Led by professional astronomers and accompanied by music, planetarium shows at Chabot Space & Science Center are both entertaining and educational.

ASK JEEVES PLANETARIUM SHOWS

FREE with General Admission

Ringworld — Opens Friday, October 17

The planet Saturn has long fascinated all those who have looked through a telescope to see its beautiful rings. This West-Coast premiere explores Saturn and highlights the Cassini-Huygens mission— a spacecraft arriving at Saturn in the summer of 2004.

Count Astro's Haunted Heavens — (October 11–31) A Halloween-themed show, Count Astro takes you on a journey in the planetarium to visit various creepy critters in our skies. (20 min.)

Return to the Red Planet — ongoing through February, 2004

Travel on a journey in time as you learn how our understanding of the "Red Planet" has changed throughout history. From Percival Lowell's Martian-built canals and the Carl Sagan Memorial station of Pathfinder to the future MER and Mars Express missions, ***Return to the Red Planet*** probes the questions of "Why explore Mars?" "Could life exist there?" and "What would such life look like?" The show includes a live presentation that will teach visitors how to find Mars in the current night sky; features the latest images from telescopes, orbiters, and rovers; includes breaking news from the NASA missions; and presents audiences with a timeline for exploration.

"Sunshine!" —ongoing

Is there a child in your household five and under who you want to introduce to the wonders of the sky? Come meet "Sunshine", the new planetarium program now showing throughout the summer in the Ask Jeeves Planetarium. This 15 minute-long program lets the younger set interact with our closest star, The Sun, as he takes them through a quick look at the work he does all day and the many friends he has—the other stars!

The Sky Tonight —ongoing, Friday and Saturday evenings at 7:30pm

Presented live, the show is a current look at the stars, constellations, and planets from our perspective here in Oakland. The content of this show changes monthly. (40 min.)

For showtimes, visit the Chabot Space & Science Center website at www.chabotspace.org

Tien MegaDome Theater

Cosmic Voyage — November 28

Cosmic Voyage mixes ground-breaking computer animation with cutting-edge science to give us a sweeping view of the universe. A "cosmic zoom" extends from the surface of the Earth to the largest observable structures of the universe, and then back down into the sub-nuclear realm—a guided tour across some 42 orders of magnitude! *Cosmic Voyage* explores some of the greatest scientific theories, many of which have never before been visualized on film. *Cosmic Voyage* was nominated in 1997 for an Academy Award® in the Best Documentary Short Subject Category.

ONGOING FILMS

Lewis & Clark: Great Journey West — ongoing until June 2004

Journey through buffalo-filled prairies, encounter rugged mountains and raging waters and experience the beauty of the American West as you travel with Lewis, Clark and their Corps of Discovery on their 8,000-mile trek to the Pacific Ocean. From 1803–1806 Captains Meriwether Lewis and William Clark led the Corps of Discovery on the first overland expedition into unknown territories of the American West. Lewis and Clark's 8,000-mile scientific expedition mapped the American West and became the stuff of legend. With sweeping aerial panoramas of the rugged American West and stunning aerial photography, the film dramatizes their remarkable and perilous journey past buffalo-filled prairies, through thick forests and raging river rapids, over towering peaks and plunging precipices to the Pacific Ocean. Narrated by Jeff Bridges. A National Geographic Film; distributed by Destination Cinema. (40 min)

To Fly!

A stunning overview of transportation and flight in America. *To Fly!* presents an emotional and visual experience as audiences float over the Vermont countryside and Niagara Falls in a balloon, thrill to the spirit of flying from wild barnstorming to the precision of the Blue Angels, and explore the beauties of flight with a cross-country cruise, hang-gliding in Hawaii and a rocket lift-off. Produced by MacGillivray Freeman Films

The Human Body

Peek inside the human body to see what keeps you going every day. The incredible story of human life is revealed in astonishing detail in this giant-screen film, which looks at the daily biological processes that go on without our control and often without our notice. Explore the science and mystery of the world hidden inside *The Human Body*, a presentation by The Learning Channel (TLC) and BBC Worldwide of a Discovery Pictures/BBC co-production done in association with the Maryland Science Center and the Science Museum, London, with major funding provided by the National Science Foundation and distributed by nWave Pictures Distribution. (43 min)

The Living Sea

Take an action-packed journey to the depths of the oceans. Swim with jellyfish and whales, and meet strange creatures living on the bottom of the sea. The underwater wonders of our planet are explored in this film produced by MacGillivray Freeman Films, in association with Nauticus -The National Maritime Center, the Ocean Film Network, White Oak Associates, Inc., and Dr. Robert Ballard. (40 min)

SCI-FI/ADVENTURE FILM SERIES IN TIEN MEGADOME THEATER

Chabot Space & Science Center continues its screenings of space-related, sci-fi and adventure films on the huge dome of the theater. For tickets or information, call (510) 336-7300 or visit www.chabotspace.org

First weekend of every month, Fri & Sat evenings at 7:30 pm.

Tickets: \$5.00

- October 3–4 *Batman* (1989, rated PG-13)
- October 31–Nov. 1 *Sleepy Hollow* (1999, rated R)
- December, date TBA *Raiders of the Lost Ark* (1981, rated PG)
- December, date TBA *Indiana Jones and The Temple of Doom* (1984, rated PG)
- December, date TBA *Indiana Jones and The Last Crusade* (1989, rated G)

For showtimes, visit the Chabot Space & Science Center website at www.chabotspace.org

SPECIAL EVENTS

Total Lunar Eclipse

Saturday, November 8 — Free
Time: 3:15pm

Take a hike along an easy trail in Redwood Park to see the Full Moon rise just before becoming eclipsed. Return to Chabot Space and Science Center for evening viewing through the large telescopes. Registration recommended. To register, call (510) 336-7368.

Adult Halloween Party

Friday, October 31
Time & tickets TBA

Come in costume and participate in spooky hands-on activities.

Kid's Halloween Day

Saturday, November 1, 10 am – 5 pm
Free with general Admission

Come in costume and participate in spooky hands-on activities.

Annual New Year's Eve Balloon Drop

Wednesday, December 31, 2003, 3:45 - 5 pm
Free with general admission

Join us for our fourth annual Balloon Drop in the Rotunda to cheer the arrival of New Year 2004. At the stroke of 4:00 pm (midnight Greenwich Mean Time) celebrate the start of the real New Year with balloons dropping from our Rotunda, many filled with prizes. For all ages.

New Year's Eve Ring-In

Wednesday, December 31, 2003
Time & tickets TBA

Ring in the New Year with a spectacular view of the ringed planet, Saturn; see the Saturn planetarium show *Ringworld*; watch a movie in the Tien MegaDome Theater, access hands-on exhibits, enjoy refreshments, music, dancing, telescope viewing (weather permitting) and more!

Visit the Chabot Space & Science Center website at www.chabot.space.org

HANDS-ON ACTIVITIES

Spotlight Activities

Weekends, Saturdays 11 am – 4:30 pm; Sundays 12:30 – 4:30 pm

FREE with General Admission

Mars—through November 2

With the telescopes pointed at Mars this summer, we will take a closer look at the Red Planet with hands-on activities, which include Mars Adventure Planning for small children, Build a Mars Colony with Legos, a Mars Coloring Activity and “Have a Ping Pong Ball on Mars” obstacle course.

Flight—November 8 - December 28

In celebration of the 100th anniversary of manned flight, Chabot’s newest Spotlight activities will give visitors a better understanding of the principles and physics of flight, the history of and future of flight, and the impact of flight on our everyday lives. Visitors will build wood and paper airplane models, kites, parachutes, and hot air balloons and even learn to operate a small flying blimp

Garden Days in the EnviroGarden

3rd Saturday of each month, 12 noon – 4 pm

Saturday, October 18, 2003

Saturday, November 15, 2003

Saturday, December 20, 2003

One Saturday each month the Education Department's Environmental Science program hosts a special afternoon of activities for Chabot visitors. Join in fun hands-on activities and demonstrations in the EnviroGarden. Learn about air quality, gardening, composting, solar energy and more.

Discovery Lab

The Discovery Lab is a place especially for the younger crowd, ages 3–7.

Weekends, 10:30 am – 4 pm

FREE with General Admission

October - December — *Up in the Air*

Celebrate 100 years of flight. Assemble a model or design your own aircraft, space vehicle or “thing with wings.”

Discovery Club Activities

The Discovery Club is an after-school workshop for children ages 4-8 to explore the theme “Our Place in the Universe,” meet new friends, brainstorm, problem-solve, design, create, and explore the scientific process. The Club meets in the Discovery Lab on the following Wednesdays, 3:30 – 5:00 pm
Free. To register for one or more workshop, call (510) 336-7362.

Wednesday, October 8

Rock My World —Take a closer look at rocks, minerals, gemstones and soils.

Wednesday, October 22

Capturing the Wind — See how the wind moves objects. Design something that flies.

Wednesday, November 5

The Many Faces of the Moon — Moon phases, timing, light and shadow—and learn more about our telescopes.

Wednesday, November 19

Living Together Here on this Wonderful Planet Earth: Building Our Own Cities — Using a minimal amount of scrap materials we will plan, design and develop our own cities.

Wednesday, December 3

The Nine Children of the Sun — Children will share their creativity, imagination, and thoughts about our most wonderful Solar System, as we make models and more.

Wednesday, December 17

Want to be an Astronaut? — How do astronauts prepare for travel in outer space? What do they wear? What do they eat? Come and have fun and pretend you are an astronaut for the day!

Family Science Workshops

Science fun for the whole family! These hands-on workshops offer a variety of activities that both children and adults will enjoy. Fee: \$20 Adult/\$10 Youth. To register, call (510) 336-7363.

World Space Week Celebration

Saturday, October 4th, 10 – 11:30 am

Biology Room; all ages

Celebrate World Space Week and the 45th birthday of NASA. Send a message to the astronauts on the International Space Station and controllers at Houston's Mission Control Center; learn about and build models of some of NASA's historic spacecraft; and learn how to find out where and when the space station flies over your home. Space cake and drinks to celebrate NASA's 45th Birthday will be served.

Little Aliens

Saturday, October 25th, 10 – 11:30 am

Biology Room; ages 10 and up

With Halloween just around the corner, come and learn about the possibility of the existence of alien life. In particular, we'll use microscopes to look at various kinds of microorganisms that not only survive on everyday household objects, but also those that live in local water sources such as ponds, lakes and streams. A short slide show on where life may exist in our own solar system will also be presented.

Gravity Gets Me Down

Saturday, November 15th, 10 – 11:30 am

Biology Room; ages 10 and up

Prepare for the launch of Stanford University's Gravity Probe B space probe on this day. Learn about the mission, then participate in a variety of family activities designed to give you a better understanding of the nature and properties of one of nature's most mysterious forces — GRAVITY.

Holiday Space Ornaments

Saturday, November 29th, 10 – 11:30 am

Biology Room; ages 5 and up

Join together in a celebration of the beginning of the Holiday Season with a workshop that will show you how to build colorful and delightful holiday ornaments with a space theme. You'll learn how to make NASA spacecraft, star, and planet ornaments, and everyone will leave with a planet Saturn ornament. Join in some holiday treats and music while you work on your ornaments.

Fun With Flight

Saturday, December 13th, 10 – 11:30 am

Biology Room; ages 5 and up

From the sands of Kitty Hawk in 1903 to the outer edges of our solar system in 2003, no invention has made such an indelible imprint on our world as the airplane. This December marks the 100th Anniversary of Flight. To celebrate this event, we will be building various flying wood and paper airplane models to examine some basic principles of flight.

Visit the Chabot Space & Science Center website at www.chabotspace.org

MORE WORKSHOPS and CLASSES

Mini-Missions — Armchair Tours to Outer Space

Escape from the Red Planet!

Saturdays at 12:30 & 2:30; Sundays at 1:30 and 3:30

Children, ages 6-12 must be accompanied by an adult. Not appropriate for children under 6 years old.

Tickets: \$10 for adults and \$5 for children, available on a first come, first serve basis at the Chabot ticket desk

ALERT!! ALERT!! The shuttle you need to leave the surface of Mars has been severely damaged in a crash landing, your replacement crew is gone, a dust storm is approaching and air, food and water are extremely low...AND THE MISSION HASN'T STARTED YET! This is the scenario for Chabot's newest attraction, "Escape from the Red Planet". You are the crew of a doomed landing. Your mission: Get the shuttle working again and into orbit before you are hit with the worst dust storm ever recorded on Mars. These hour long mini-missions are run in the Challenger learning Center, a simulated Mission Control and Space Capsule

Telescope Buyers' Clinic

Saturday, November 22, 2003, 11 am – 5 pm

Fee: \$15 members, \$20 non-members

Workshops aimed at educating participants about telescopes, binoculars and various accessories. Vendors from several commercial companies will be on-site to show off their products, many of which are available for sale. Tickets available through the Box Office at (510) 336-7373.

Adult Astronomy Class

Sunday evenings, January 4–February 8, 2004

7:30 – 9:30 pm.

Fee: \$55 for members, \$65 for non-members

This Winter Chabot Space & Science Center offers a six-week astronomy course designed especially for adults who are curious about the universe surrounding them and want to learn more! This non-mathematical class will cover constellations, the Solar System, stars, galaxies and the Universe. Historical concepts and modern research will also be discussed. This course will utilize the Ask Jeeves Planetarium and Observatories. Class space is limited! To register, contact Denni Medlock (510) 336-7368 or dmedlock@chabotspace.org

Visit the Chabot Space & Science Center website at www.chabotspace.org

DISTINGUISHED LECTURER SERIES

Chabot Space & Science Center is proud to bring you some of the finest speakers in science to address topics in the forefront of humankind's search for knowledge. Each lecture will be preceded by an overture of classical music chosen by that evening's lecturer. Lectures are in the Tien MegaDome Theater, unless otherwise noted.

Tickets are \$5.00, available through the Chabot box office, (510) 336-7373 or through ticketweb.com. Seating is limited and advance purchase is recommended.

Thursday, October 16 — Dr. Wil van Breugel, Lawrence Livermore National Laboratories — *Bright Lights, Big City: How the Most Massive Galaxies and Black Holes Live Together*
7:30 pm, Tickets \$5

Dr. van Breugel will take on an exploration of two of the most powerful celestial bodies known today—black holes and galaxies—and how they interact within our universe.

Thursday, November 20 — Ryan Diduck, Chabot Space & Science Center — *Target Earth: The Search for NEO's*
7:30 pm, Tickets \$5

Chabot Astronomer Ryan Diduck will speak on NEO's (Near Earth Objects) and why there is now an international effort to search for and track these potential Earth-killers.

Thursday, December 18 — Dr. Rick Norman, Lawrence Berkeley National Laboratory — *Gamma Ray and Neutrino Astronomy: New Window on the Universe*
7:30 pm, Tickets \$5

Astrophysicist Dr. Rick Norman will talk on how the birth of our cosmos has recently been revealed in more detail than ever before and how astronomy has changed in the past decade with the new ability of astronomers to view into the “micro” universe presented by gamma rays and neutrinos.

Visit the Chabot Space & Science Center website at www.chabotspace.org

OBSERVATORY

Discover stars, planets, and colorful nebulae clearly visible in the night sky with Chabot's powerful refractor telescopes. The impressive 20" telescope, named *Rachel*, is the largest refractor in the western U.S. regularly open to the public. The 8" Alvan Clark refractor, named *Leah*, is the original 1883 instrument donated by founder Anthony Chabot. *Nellie*, Chabot's new 36" Reflector telescope, which opened this summer, provides spectacular views through its rolling roof observatory.

**Telescopes are open for public viewing Fridays and Saturdays,
Through October 26: Dusk - 11 pm (Daylight Saving Time)
November 1– March: 7 - 10 pm**

SKY CALENDAR

October

Mars remains the highlight of the evening sky. It fades quickly from its Opposition brightness but it still shows as a bright reddish-orange star in the southeastern sky. By the end of the month it is rising as high as it will for this visit with Earth.

Saturn – The ringed planet will be visible around 10 pm on Halloween night.

Venus and the **Moon** dance together very closely in the dusk of October.

November

A total eclipse of the Moon occurs at sunset on **November 8**, echoing time and place of the earlier May lunar eclipse. Viewers will need a low eastern horizon and clear skies to watch this eclipse as the Moon becomes eclipsed just 5 minutes after it rises at sunset.

This is also the month of the annual **Leonid Meteor shower**. While not expected in the huge numbers the last few years have seen, it is always worthwhile to watch for meteors that are predicted on the evening of **Monday, November 17 – Tuesday morning, November 18**. A Third Quarter Moon adds a bit of skylight, but an observer should see a bright Leonid once a minute!

December

Venus dazzles viewers in the early evening, setting almost 2-1/2 hours after the Sun on New Year's Eve. On the evening of December 5 look for tiny **Mercury** to the lower right of the brighter **Venus**.

Saturn rises earlier and earlier throughout the month. It approaches Earth in one of the closest visits it's had in over 30 years. In a moderate telescope its rings will be almost as fully opened as last year.

The King of the planets – **Jupiter** – begins to rise around 10:30 pm and so will be best observable throughout the night.

Visit the Chabot Space & Science Center website at www.chabotspace.org

CHABOT SPACE & SCIENCE CENTER FACTS

Location: 10000 Skyline Blvd., Oakland (in Joaquin Miller Park in the Oakland Hills)

Hours : Closed Mondays & Tuesdays

Wednesday–Friday, 10 am–5 pm for members and pre-booked groups only

Public Hours: Friday, 5 pm – 10pm; Saturday, 10 am–10 pm; Sunday, 12 noon–5 pm

(Closed Thanksgiving & Christmas; Open other major holidays)

Telescope Viewing: Friday & Saturday, dusk – 10:00 pm, weather permitting

Admission: General admission (includes a planetarium show and free parking):
\$11.00 Adult / \$8.00 Youth and Seniors

MegaDome Theater: \$6.00 Adult / \$5.00 Youth and Seniors

Free Telescope viewing

| | General Admission | MegaDome Theater° |
|------------------------------|------------------------------|------------------------------|
| Adult (13-64) | \$11.00 | \$6.00 |
| Youth / Senior 4-12 / >65 | \$8.00 | \$5.00 |

Children 3 and under admitted free.

Students with ID receive \$1.00 discount

Tickets: Tickets may be purchased at the door, or by calling (510) 336-7373. Advance tickets are also available on-line at www.ticketweb.com or by phone at (866) 468-3399.

Celestial Cafe: Vending machines available. Indoor and outdoor seating.

Parking: Convenient free parking is available in the adjacent 3-level parking structure or in the Knoll Lot off Skyline Blvd. Parking spaces for disabled visitors are located near the main entrance (outside the parking structure).

Disabled Access: Chabot Space & Science Center is wheelchair accessible. A limited number of wheelchairs are available without charge on site. Designated parking is available near the main entrance.

Info Phone: (510) 336-7300

Website: www.chabotspace.org

DIRECTIONS TO CHABOT SPACE & SCIENCE CENTER

**** Please Note: Public transportation via AC Transit is no longer available****

From downtown Oakland, or San Francisco: Go east on I 580 to Highway 24 (towards Walnut Creek). From 24, go south on Highway 13 (Warren Freeway) towards Hayward. Take the Joaquin Miller/ Lincoln Avenue exit. Turn left and proceed up the hill on Joaquin Miller to the crest, then turn left at the signal onto the two-lane portion of Skyline Blvd. Chabot Space & Science Center is 1.3 miles up Skyline on the right.

From eastern Berkeley, Orinda etc.: Go south on Highway 13 (Warren Freeway) towards Hayward. Take the Joaquin Miller/ Lincoln Avenue exit. Turn left and proceed up the hill on Joaquin Miller to the crest, then turn left at the signal onto the two-lane portion of Skyline Blvd. Chabot Space & Science Center is 1.3 miles up Skyline on the right.

From Hayward, Castro Valley and points East: Go west on I 580 and take the Highway 13 (Warren Freeway) turnoff. Take the Joaquin Miller/Lincoln Avenue exit. Turn right, and proceed up the hill on Joaquin Miller to the crest, then turn left at the signal onto the two-lane portion of Skyline Blvd. Chabot Space & Science Center is 1.3 miles up Skyline on the right.

Convenient free parking is available in the adjacent 3-level parking structure or in the Knoll Lot off Skyline Blvd. Parking spaces for disabled visitors are located near the main entrance to the facility (outside the parking structure).

Visit the Chabot Space & Science Center website at www.chabotspace.org
