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

## CALENDAR OF EVENTS

**JULY — SEPTEMBER 2003**  
**(Issued June 2, 2003)**

This document and all Chabot Space & Science Center news releases and photos may be found online at [www.chabot.space.org](http://www.chabot.space.org) under Press room.

**\*\* NEW ADMISSION PRICES, EFFECTIVE JULY 1st\*\***

**See page 13 for details**

**\* SUMMER HOURS \***

**Tuesday, June 17, 2003 - Labor Day, Sept. 1, 2003**  
**(Open July 4, 10 – 5; Closed Sept. 2 - 11)**

Monday Closed  
Tuesday - Thursday 10 am - 5 pm  
Friday & Saturday 10 am - 7:30 pm  
Sunday 12 noon - 5 pm

**Telescope Viewing**  
Friday & Saturday dusk - 10:30 pm

**Evening Planetarium & Theater Hours**  
Friday & Saturday, 7:30 pm – 9 pm

Following is a sample calendar listing for **Chabot Space & Science Center** — under "Museums," "Nature," "Things To Do," or "Attractions."  
Please also list Chabot events under "Kids," "Films" and "Lectures."

**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 Tues. – Sun. Observatory hours Fri. & Sat. from dusk-10:30 pm. 10000 Skyline Blvd., Oakland. (510) 336-7300. [www.chabot.space.org](http://www.chabot.space.org)

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10000 Skyline Boulevard  
Oakland, California 94619  
Phone: 510-336-7300  
[www.chabot.space.org](http://www.chabot.space.org)

## OPENINGS

### SUMMER OF MARS

**Mars** takes center stage this summer at Chabot, as it makes its closest approach to Earth in over 15,000 years! Chabot salutes the Red Planet all summer with a new Exhibit, Films, Planetarium show, Spotlight Activities, Lectures, and Special Events.

#### **Exhibits**

**Mars Encounter** — New Mars Exhibit — Opens July 4

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 canals; 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.

#### **Planetarium Shows**

**The Mars Show** — Opens July 4 — FREE with General Admission

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, ***The Mars Show*** 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; feature the latest images from telescopes, orbiters, and rovers; includes breaking news from the NASA missions, and presents audiences with a timeline for exploration.

**Come Meet “Sunshine!”** — FREE with General Admission

Is there a child in your household five and under whom you want to introduce to the wonders of the sky? Come meet the Sun in this 15 minute-long animated program. “Sunshine” interacts with the younger set and introduces them to the sky and many friends—the other stars!

**New Films** — NEW Admission price: \$6.00 Adult / \$5.00 Youth & Senior (Effective July 1<sup>st</sup>)

**Lewis & Clark: Great Journey West** — Opens June 7, 2003; ongoing until June, 2004

In celebration of the bicentennial of the Lewis & Clark expedition, Chabot presents ***Lewis & Clark: Great Journey West*** 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. (40 min)

**Cosmic Voyage** — Opens Friday, August 29, for Labor Day weekend

***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)

## **EXHIBITS**

### **New Permanent Exhibit — Mars Encounter** — Opens July 4

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.

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**Spaceflight: Journey to the Stars** — CLOSING JUNE 22 — Explore the past, present and future of spaceflight in this exhibit organized by Chabot Space & Science Center and NASA. Climb into a space capsule, land a lunar module on the Moon, and take a tour of the Solar System. See real spacesuits and NASA models of rockets and spacecraft, feel what it's like to wear astronaut gloves and dig for "moon" rocks.

## **TRAVELING EXHIBITS**

### **The Human Body Exhibit** in the Tien MegaDome Theater lobby — **through December 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**

### **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.

Visit the Chabot Space & Science Center website at [www.chabotspace.org](http://www.chabotspace.org)

## **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**

**The Mars Show** — Opens July 4 — FREE with General Admission

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, **The Mars Show** 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; feature the latest images from telescopes, orbiters, and rovers; includes breaking news from the NASA missions, and presents audiences with a timeline for exploration.

**Come Meet "Sunshine!"** — FREE with General Admission

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** — NEW Admission price: \$6.00 Adult / \$5.00 Youth & Senior (Effective July 1<sup>st</sup>)

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](http://www.chabotspace.org)**

## **TIEN MEGADOME THEATER**

NEW Admission price: \$6.00 Adult / \$5.00 Youth & Senior (Effective July 1<sup>st</sup>)

Relax back in luxurious seats and view spectacular films on the huge dome of Chabot's Tien MegaDome Theater. Tickets for films are \$6.00 adults/\$5.00 for seniors and children, and are in addition to General Admission tickets to the Science Center, except for Friday and Saturday evenings when tickets may be purchased separately. Tickets may be purchased at [ticketweb.com](http://ticketweb.com), or at the Chabot box office by calling (510) 336-7373.

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*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**

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. Narrated by Jeff Bridges. A National Geographic Film; distributed by Destination Cinema. (40 min)

**Mysteries of Egypt** — CLOSING ON JUNE 6

Experience the magic and majesty of Egypt as never before. Soar over the great pyramids of Giza, cross the deathly quiet Valley of the Kings, and descend into the shadowy chambers of the sacred tomb of King Tutankhamun. (38 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 Nautilus -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. Tickets: \$5. For tickets or information, call (510) 336-7300 or visit [www.chabotspace.org](http://www.chabotspace.org)

**War of the Worlds, 1953, Rated G**

Every Friday & Saturday evening in July (except July 4), 7:30 pm

**Mars Attacks, 1996, Rated PG-13**

Friday, August 1 & Saturday, August 2, 7:30 pm

For Showtimes, visit the Chabot Space & Science Center website at [www.chabotspace.org](http://www.chabotspace.org)

## SPECIAL EVENTS

### GRAND OPENING OF CHABOT'S NEW 36" TELESCOPE

Saturday, June 21, 8 pm – 1:30 am

Tickets: \$8 Adult / \$5.00 Youth & Seniors

Celebrate the opening of Chabot's biggest and brightest star — our new 36-inch Cassegrain reflector telescope named "Nellie." Housed in a rolling roof observatory that allows open access to 360 degrees of sky, "Nellie" becomes one of the largest reflector telescopes in the United States available to the public on a regular basis. Enjoy an evening of stargazing, both inside in the Ask Jeeves Planetarium and outside on the Observatory Plaza. The celebration includes telescope viewing, a planetarium show, exhibits and activities. Tickets are available at [ticketweb.com](http://ticketweb.com) or by calling the Chabot Box office at (510) 336-7373.

### Celebrate the 3rd Anniversary of the new Chabot Space & Science Center

August 19, 3 pm – 4 pm; FREE with General Admission

Join us for a slice of "birthday" cake as Chabot Space & Science Center celebrates the third anniversary of its new home on Skyline Boulevard in Joaquin Miller Park.

### Mars Viewing Party

Evenings in August; Dates & Tickets TBA

Want to get up close and personal with Mars? Come to Chabot Space & Science Center for Mars Opposition Night! Take a closer look at the Red Planet with the Center's large telescopes, including our new 36" Reflector, and examine surface features such as the bright white polar ice cap and the darker "V" -shaped Syrtis Major.

### Two Special Mars Demonstrations/Talks

Presented by Dr. Tim McCoy

FREE with General Admission, Time TBA

August 27

#### **Water, Water Everywhere and Not a Drop to Drink**

Why is water so important and where and how should we look for it on Mars? Unlike Earth, water on Mars isn't pooled on the surface in lakes and oceans. Instead, it leaves its mark in subtle ways. During this workshop, students will learn how scientists have searched for water on Mars from early telescopes to modern spacecraft.

August 28

#### **How Does Science Really Work? The Case of Life on Mars**

Science is not a set of answers in a textbook, but a method of searching for those answers. In this workshop, we'll examine one of the hottest science issues—have we found evidence for life on Mars in a meteorite? By examining the evidence, piecing it together like a mystery, we'll look at how human biases and personalities play a role in science.

### Galileo "Landing" on Jupiter

Sunday, September 21; FREE with General Admission; Time TBA

Track the Galileo spacecraft as it descends to a landing on Jupiter, with a live web cam of Galileo scientists at JPL Laboratories during the descent, public question and answer period, and slide/video presentation on the history and discoveries of the Galileo Mission.

Visit the Chabot Space & Science Center website at [www.chabot.space.org](http://www.chabot.space.org)

## **HANDS-ON ACTIVITIES**

### **Spotlight Activities**

#### **Mars (July 1 – September 28)**

Daily, July 1 – August 24: 11:30 am – 4:30 pm

Weekends, August 30 – September 28; Saturdays 11 am – 4:30 pm; Sundays 12:30 – 4:30 pm

FREE with General Admission

With all the telescopes pointed at Mars this summer, we will take a closer look at the Red Planet with hands-on activities, slide shows, rover races and more!

#### **Garden Days in the EnviroGarden**

Saturday, July 19

Saturday, August 16

Saturday, September 20

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

FREE with General Admission

One Saturday each month the Education Department's Environmental Science program hosts a special afternoon of activities for Chabot visitors. Join in some fun hands-on activities and demonstrations in Chabot's 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.

Daily, 10 am – 4:30 pm

Weekends, 10:30 am – 4 pm

FREE with General Admission

#### **Mars in the House**

June – August

Explore the Red Planet through tactile discovery, dramatic play and arts and crafts. Activities include:

- Create a Martian landscape
- Red, red and really red
- Rocks, craters, and volcanoes
- Building a future colony on Mars
- The Robot Factory
- Martians and Aliens
- Wind on Mars

#### **Space has its Place**

August – September

How deep? How wide? How far? Explore space in and around our oceans, our skies and beyond.

#### **Up in the Air**

September – October

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

Visit the Chabot Space & Science Center website at [www.chabotspace.org](http://www.chabotspace.org)

## **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. \$20 Adult/\$15 Youth; To register, call (510) 336-7363

### **The Science of Ice Cream**

Saturday, July 12, 10 am – 11:30 am

Biology Lab, for ages 5 and up

Need to cool down on a hot July day? How about a cup of ice cream? Learn the science behind how ice cream is made, then make some yourself! While you're eating your ice cream, you'll see pictures of the ice cold North and South Polar Regions of Mars taken by spacecraft currently orbiting the Red Planet. Take the recipe home and try making some ice cream for your family and friends.

### **Mars—Just For Kids**

Saturday, July 19, 10 am – 11:30 am

Computer Lab, for ages 8 and up

A morning full of Mars-related activities, as you create your own mission to Mars, weigh yourself on Mars, build a paper model of a Mars spacecraft, and help design a spacecraft by connecting the dots, then navigate your way through a maze.

### **The Science of Ice Cream**

Saturday, August 2, 10 am – 11:30 am

Biology Lab, for ages 5 and up

Need to cool down on a hot July day? How about a cup of ice cream? Learn the science behind how ice cream is made, then make some yourself! While you're eating your ice cream, you'll see pictures of the ice cold North and South Polar Regions of Mars taken by spacecraft currently orbiting the Red Planet. Take the recipe home and try making some ice cream for your family and friends.

### **Make a Candy Mars Rover**

Saturday, August 9, 7 pm – 8:30 pm

Biology Lab, for ages 5 and up

Build your own Mars rover out of candy and crackers. See a short video on NASA's Mars rovers, operate a Mars rover yourself, then build a candy Mars rover you can take home and enjoy—until you decide to eat it! You'll also get to take home some NASA pictures and postcards of Mars.

### **Mars—Just For Adults**

Friday, August 22, 7 pm – 8:30 pm

Computer Lab, for Teens and older

Visit various web sites available to the public for exploring Mars. We'll examine the "best" sites available, participate in some Mars web activities, and learn about Mars surface features and current missions to that planet.

### **Build a Mars Rover**

Saturday, August 30, 10 am – 12 noon

Biology Lab, for ages 10 and older

Materials fee: \$10/family

Get ideas for building your own Mars rover by watching a short NASA Mars Rover video, and by operating a Mars rover simulator. You'll then receive a kit for building a battery-operated chassis, which will be the "core" of your own Mars Rover. Take your chassis home, finish your rover, and bring it back to Chabot for public display. An extra fee of \$10/family will be charged for the chassis.

### **Plunge Into Jupiter**

Saturday, September 20, 10 am – 11:30 am

Biology Lab

On September 21, the Galileo spacecraft ends its 14-year mission with a wild plunge into the planet Jupiter. Get ready for this event by seeing a slide show on the history of Project Galileo, then build a neutral buoyant Jupiter probe, proposed for the future, which floats in air using balloons and Helium gas. NASA Project Galileo pictures and postcards will be handed out at the end of the workshop.

## **OTHER CLASSES**

### **Telescope Making Seminar**

Sunday August 17, 12 – 6 pm

\$395 per telescope (Up to 3 people, ages 12 and over, may make telescope) Build your own 6-inch Dobsonian telescope and learn how to use it, just in time for Mars viewing! To register, contact Denni Medlock at (510) 336-7368.

### **Introduction to Astronomy Class**

Tuesday evenings, September 16 – October 21, 2003

Time: 7:30 – 9:30 pm

Fees: \$55 members, \$65 non-members

This Fall 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](mailto:dmedlock@chabotspace.org).

**Visit the Chabot Space & Science Center website at [www.chabotspace.org](http://www.chabotspace.org)**

## SUMMER OF MARS LECTURE SERIES

Lectures are in the Tien MegaDome Theater. Tickets are \$7, (or \$35 for a series tickets for all lectures) and are available through the Chabot box office, (510) 336-7373 or through [ticketweb.com](http://ticketweb.com). Seating is limited and advance purchase is recommended.

**Thursday, June 19** — Erik S. Bailey (JPL Laboratories) – *The History and Future of Mars Exploration*

7:30 pm, Tickets \$5

With Mars approaching its best view from Earth in over 15,000 years, Erik Bailey, an aerospace systems engineer at the Jet Propulsion Laboratory in Pasadena, will take us on a journey from the very first American probes to Mars to the bold plans for future vehicles of exploration.

**Thursday, June 26** — Dr. Seth Shostak (SETI) – *Martians Invade Hollywood*

7:30 pm, Tickets \$7

Dr. Shostak will take a look at how our ideas about Martians and alien life have been influenced by Hollywood's quest for drama and the absurd, plus a look at what's really real in the cinematic reels.

**Thursday, July 10** — Taylor Perron (UC Berkeley) – *Water and the Martian Landscape*

7:30 pm, Tickets \$7

The quest for locating water on Mars is the key to understanding its past, interpreting its present and humanizing its future. Taylor Perron will take us through that journey and discuss the current status of this exploration.

**Thursday, July 24** — Nathalie Cabrol (NASA) – *NASA's Mars Exploration Rovers*

7:30 pm, Tickets \$7

Dr. Cabrol is a Planetary Geologist and a Principle Scientist with NASA's Mars Exploration Rovers and will be talking about current Mars missions.

**Saturday, August 9** — Dr. Chris McKay (NASA) – *Mars: The Search for Life on the Red Planet*

7:00 pm, Tickets \$7

Dr. McKay is part of the team that announced the possibility that fossilized microbes exist inside Martian Meteorite ALH84001. He will tell us about that experience and what it means to our understanding of the history of the solar system.

**Thursday, August 21** — Dr. Margaret Race (SETI) – *Mars, Astrobiology and Planetary Protection*

7:30 pm, Tickets \$7

Join us to hear one of the most renowned experts in planetary protection, the discipline of keeping Earth microbes from contaminating other bodies we visit. Dr. Race will tell us why such protocols are important in our plans to explore our nearest neighbors in the quest to find life.

**Thursday, August 28** — Dr. Tim McCoy and Dr. Cari Corrigan (Smithsonian Institution) – *Martian Meteorites: What They Tell Us About Mars & Life*

7:30 pm, Tickets \$7

Take a look through the eyes of a geo-biologist and a meteorite expert at what rocks from Mars can tell us about the formation of our solar system and the life that may have existed in those early formative periods. He will be bringing with him ALH84001, better known as the Martian meteorite used to determine if there is water on Mars.

**Saturday, August 30** — William Hartmann – *Travelers Guide to Mars*

6:30 pm, Tickets \$7

Internationally known astronomer and artist William Hartmann takes us on a travelogue to the Red Planet in this look at what a tourist to Mars would discover.

## **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](http://ticketweb.com). Seating is limited and advance purchase is recommended.

**Thursday, September 18** — Dr. Fritjof Capra — *Gaia and the New Understanding of Life*  
7:30 pm, Tickets \$5

Wherever we see life, we see networks—from the metabolic networks of cells to the cellular networks of organisms, the food webs of ecosystems, and the entire planetary web of life. Dr. Capra will discuss the new scientific understanding of life with special emphasis on the recently developed *Gaia theory*, which implies that life is really a property of an ecological system rather than a single organism or species. He will also discuss the profound social, economic and political implications of the Gaian view of life.

Fritjof Capra, Ph. D., physicist and systems thinker, is a founding director of the Center for Ecoliteracy in Berkeley. He is the author of several international bestsellers, including *The Tao of Physics* and *The Web of Life*. This lecture is based on his most recent book *The Hidden Connections: A Science for Sustainable Living*.

Visit the Chabot Space & Science Center website at [www.chabotspace.org](http://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, opens on June 21.

**Telescopes are open for public viewing Fridays and Saturdays, dusk – 10:30 pm (Summer hours)**

### SKY CALENDAR

#### Highlights of the Summer Skies

Want to add a spark to your summer evenings? Grab a pair of binoculars, go outside and look up. Scan to the east for a bright orange-colored star rising mid-evening. What looks like a star is really the planet Mars. This mystical red planet will come closer to Earth this summer than it has in over 15,000 years! Mars will rise earlier and earlier as the summer passes, becoming high in the night sky by late August. It will appear to grow bigger and bigger as the nights go by, too, as it approaches Earth along its orbit.

Just want to spend some quality time out under the stars without binoculars and telescopes? Look northeastward around midnight on August 12-13, ignore the full Moon, and keep a watch out for the fast and brilliant **Perseid Meteors**, which appear in this part of the sky every year. You should be able to see one meteor a minute. After the "oohs" and "aahs" of seeing one have faded, fill the quiet moments in between listening to chirping crickets and the hoots of our nighttime friends, the owls, in Joaquin Miller Park.

**July** — **Mars** begins to brighten considerably, almost double its red-orange glow this month. The planet also continues to rise earlier and earlier, around 11:45 pm at the first of the month and by 10 pm at month's end.

On July 17 **Mars** passes extremely close to the upper edge of the Moon around midnight.

**Jupiter** relinquishes its reign of the nights as it begins to set soon after the Sun. **Mercury** and **Jupiter** form a close pair very low on the horizon after sunset on July 25<sup>th</sup>.

**August** — This is the month of **Mars**. Nothing in the sky, not even the Full Moon-marred **Perseid Meteor Shower** on the evening of Tuesday, August 12, will come close to its dazzling display.

The Red Planet reaches Opposition, its closest approach to Earth during its orbit, on August 28. This year it is the closest to our planet than it has been in over 15,000 years. If its summer dust storms don't materialize observers will get wonderful views of the polar cap and dark area such as Valles Marinares and Syrtis Major.

Look for Mars rising brightly in the East–South East earlier and earlier throughout the month.

**September** — **Mars** is still center-stage in the celestial world, but will rapidly lose its brightness as Earth pulls away from it in our orbit. It will still make for great views, however, and should be watched on nights of good seeing conditions for glimpses of its south polar cap.

**Venus** returns as the evening star, but you will need binoculars to catch it just above the horizon about 20 minutes after sunset.

The Lord of the Rings, **Saturn**, returns to the evening sky, rising about midnight around the end of the month.

**The Harvest Moon** is falls on September 10. Look for it near Mars during that week.

Visit the Chabot Space & Science Center website at [www.chabotspace.org](http://www.chabotspace.org)

## **CHABOT SPACE & SCIENCE CENTER FACTS**

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

**Summer hours: Tuesday, June 17 through Labor Day, Monday, September 1, 2003**

Tuesday – Thursday, 10 am – 5 pm; Friday & Saturday, 10 am – 7:30 pm; Sunday, 12 noon – 5 pm; Closed Mondays  
Open July 4th and Labor Day, September 1

**Additional Planetarium & Theater evening hours:** Friday & Saturday, 7:30 pm – 9 pm

**Telescope Viewing:** Friday & Saturday, dusk – 10:30 pm, weather permitting

**Regular Hours resume September 12, 2003: (Closed September 2 – 11)**

Tuesday – Thursday, 10 am – 3 pm; Friday & Saturday, 10 am – 7:30 pm; Sunday, 12 noon – 5 pm; Closed Mondays  
(Closed Thanksgiving & Christmas; Open other major holidays)

**Admission:** General admission (now includes a planetarium show): \$11.00 Adult / \$8.00 Youth and Seniors  
Tien MegaDome Theater: \$6.00 Adult / \$5.00 Youth and Seniors  
Free Telescope viewing

	<b>General Admission</b>	<b>MegaDome Theater<sup>o</sup></b>	<b>Planetarium shows on Friday &amp; Saturday evenings</b>
Adult (13-64)	\$11.00	\$6.00	\$6.00
Youth / Senior 4-12 / >65	\$8.00	\$5.00	\$5.00

Children 3 and under admitted free.

Students with ID receive \$1.00 discount

<sup>o</sup> Theater visitors must also purchase General Admission, except on Friday & Saturday evenings.

**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](http://www.ticketweb.com) or by phone at (866) 468-3399.

**Celestial Cafe:** Open Tuesday – Sunday. During your visit to the Science Center, take a break at the Celestial Café, where the menu includes tasty salads, sandwiches, desserts and beverages, and kids' favorites such as all-beef hot dogs, pizza and slurpees. 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](http://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).

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