

diablo Moonwatch

Mount Diablo Astronomical Society

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The Orion Nebula from CFHT (Canada-France-Hawaii Telescope)

Few astronomical sights excite the imagination like the nearby stellar nursery known as the Orion Nebula. The Nebula's glowing gas surrounds hot young stars at the edge of an immense interstellar molecular cloud only 1500 light-years away. The Great Nebula in Orion can be found with the unaided eye just below and to the left of the easily identifiable belt of three stars in the popular constellation Orion. The above image from the 3.6-meter Canada-France-Hawaii Telescope atop a dormant volcano in Hawaii brings out Orion's detail in spectacular fashion. Buried in the complex nebulosity are the bright stars of the Trapezium in Orion's heart, the sweeping lanes of dark dust that cross the center, the pervasive red glowing hydrogen gas, and the blue tinted dust that reflects the light of newborn stars. The whole Orion Nebula cloud complex, which includes the Horsehead Nebula, will slowly disperse over the next 100,000 years.

Parabolic Reflectors

President's Corner

Liede-Marie Haitsma

In a recent email from Scientifics I saw an interesting metal sphere that you could change the form, by just manipulating the wire weaving. It's called Parabolus (plural parabola or parabolus):

Parabolus Educational Transforming Interwoven Metal Sphere

This stainless steel wire weaving is made from 14 tear-shaped petals. With a touch, Parabolus will transform into a crown, a flower, or a butterfly. Based on the mystical number 7, Parabolus reflects the geometry of nature. Interwoven curves can be found in the pattern of "eyes" on a Peacock's tail feathers, the scales of a pinecone, the seeds in a sunflower or thistle, or even the arms of spiral galaxies.

Looking further about the Parabolus I came upon the Parabolic Reflector. There are two kinds of paraboloids: elliptic and hyperbolic. The elliptic is shaped like an oval cup that can have a maximum or minimum point. The hyperbolic is shaped like a saddle (and Pringles chips).

The parabolic reflector is elliptic and is often seen as a dish or mirror. It collects or projects energy; collects sound waves, incoming star light. The parabolic reflectors were first mentioned in a book entitled "On Burning Mirrors" by Diocles (mathematician) who lived around the end of the third century and the beginning of the second century BC. He is thought to have proved the focal property of the parabola, and his name is associated with the geometric curve called the Cissoid of Diocles. Archimedes, third century BC, studied paraboloids and is said to have used reflectors to set the Roman fleet on fire during the siege of Syracuse in 214-212 BC. An article in Time Magazine, 11-26-73, proved that Archimedes could very well have done this as a Greek engineer, Ioannis Sakkas, in 1973 got the Greek navy to provide the men, the site and the target...and it worked. The 70 men reflected the sunlight onto the rowboat and it was on fire within seconds.

Satellite dishes, radio telescopes, and examples of parabolic reflector telescopes are the Gran Telescopio Canarias (Canaries Great Telescope) on the island of La Palma, in the Canary Islands of Spain, and 24 inch convertible Newtonian/Cassegrain reflecting telescope on display at the Franklin Institute. The world's largest solar parabolic dish is located at the Ben-Gurion National Solar Energy Center in Israel.

For more information:

http://solareis.anl.gov/documents/docs/NREL_CSP_3.pdf

<http://en.wikipedia.org/wiki/Parabola>

http://en.wikipedia.org/wiki/Parabolic_reflector

"The Archimedes Heat Ray – myth or reality?" - See the following websites:

<http://www.time.com/time/magazine/article/0,9171,908175,00.html>

<http://en.wikipedia.org/wiki/Archimedes>

http://web.mit.edu/2.009/www/experiments/deathray/10_priorDeathRay.html

<http://www.mlhanas.de/Greeks/Mirrors.htm>

Thanks to Marni Berendsen and Dick Flasck

A big thank-you to Dick Flasck for volunteering to take over the planning of speakers for our monthly meetings. Marni Berendsen is turning over the reins to Dick after serving in that position for seven years. Marni will continue as Membership Coordinator.

If you have an idea for the meeting program or can recommend a speaker, please contact Dick at rflasck@aol.com.



Quirks, Quarks and Quacks

MDAS October Meeting - What's Up?

Moon

Quirks, Quarks and Quacks! Greetings Earthlings! This "What's Up" is coming from Planet Goldilocks. My name is "GURLW3BEARS" and I will be using Moon's body as a vehicle to make this presentation. My main mission was to dispel some of you non-believers in the existence of alien life forms within the universe. However, humanoid J. Scala insisted (we) discuss some more tangible subjects, so I threw in Quirks and Quarks (to appease his demands!) My visit will be brief and leave you with a sense of wonder(?)

Quote of the week: "Most folks are about as happy as they make up their minds to be."-Abraham Lincoln.

Einstein for Everyone

**MDAS October Meeting -
Main Speaker: Robert L. Piccioni, PHD**

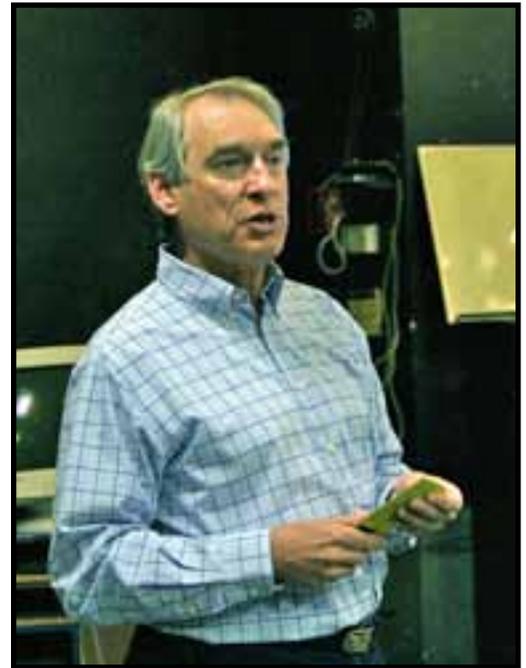
Dick Flasck

To much of the general public the iconic twentieth century giants in science are perceived as virtually single dimensional caricatures. Probably the most widely recognized of these giants is Albert Einstein. But was Einstein truly the unfettered genius, the virtually disembodied super-intellect solely contemplating ideas far too deep and abstract for the common man? Was he largely unaffected by the concerns and constraints of society?

Our main speaker in October, Dr. Piccioni, in addition to explaining the basis of Relativity, breaths life and humanity into the story of Albert Einstein. Dr. Piccioni further examines how the outward character of our lives has been altered and perhaps largely determined by Einstein's work.

Dr. Piccioni graduated from Caltech, has a Ph.D. in high-energy physics from Stanford University, and was on the research faculty of Harvard University. He is an expert on Einstein's theories and cosmology. Robert ran eight high-tech companies and holds patents in medical equipment, microelectronics, and smart energy. Since "retiring", Robert's mission is making science accessible. He is "Teacher of the Year" at the Osher Institute and hosts the online radio show "Guide to the Cosmos". Robert is the author of two books that won national and international competitions for "Best Popular Science Book of the Year."

Be sure to attend the October 26th MDAS meeting for a look at Albert Einstein from a new perspective.



Upcoming programs:

November 16: Jeff Adkins, NASA Workshop

Newsletter Editor Wanted

Rob Haitsma

After almost two years of being the Newsletter Editor, I think it is time for another person to place their stamp on this. As of January 2011, I am stepping down from being the Editor.

Currently, the Newsletter is created using the application Adobe InDesign. This is the industry standard for creating reports, presentations and newsletters. At the last MDAS Board Meeting, it was mentioned that the club will be considering purchasing the software for the new editor, so that may be a consideration for accepting this position. If not, the Newsletter can surely be created be any number of different applications... whichever you feel comfortable with.

The position entails receiving files from several coordinators ("What's Up?", "Main Speaker" and "Night Sky Network") as well as items from the President and possibly MDAS members themselves.

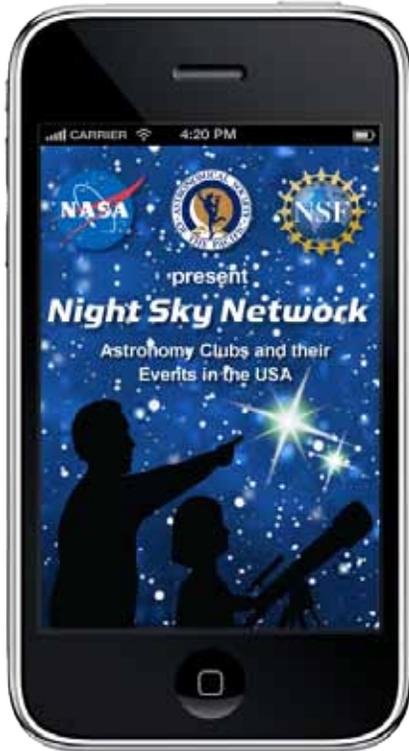
Upon the beginning of the New Year, another item requiring attention in this position will be removed. The Newsletter will no longer be printed and sent out. The Newsletter will be in digital form and online only. This will simplify it's creation as the Newsletter can then be as short (or long) as needed.

Of course, I will lend my help to whoever takes the position. It has been a lot of fun, but now it is time for some fresh faces and experiences.



Free Go StarGaze iPhone App!

Marni Berendsen



NEW! Go StarGaze, a free iPhone app that helps people find astronomy events & clubs within seconds. You can search for events near your current location or find out what public astronomy events are happening across the U.S.A.

Our club gets publicity, for free, for all our public events listed on the Night Sky Network Events Calendar. Any event listed on the NSN Events Calendar (<http://nightsky.jpl.nasa.gov/event-calendar.cfm>) is automatically listed in Go StarGaze.

In the first month since its release, the Go StarGaze iPhone app had over 3,000 downloads.

Help MDAS publicize our events! Install the app on your iPhone, iPad, or iPod Touch now. Take a minute to rate Go StarGaze with 5 stars and write a review, and then tell your friends about the app. Even if you don't have an iPhone, you can spread the word. Thanks for helping promote our club.

Get Go StarGaze: <http://itunes.apple.com/us/app/go-stargaze/id380833895?mt=8>

NASA Night Sky Network (NSN) News: Free Meteorites for Our Club!

Marni Berendsen

Space Rocks Toolkit & Telecon

The next NASA Night Sky Network ToolKit is rolling out in November: Space Rocks, on asteroids and meteorites. This ToolKit contains real meteorites!

To kick off the release of the new Space Rocks ToolKit, the NSN is holding a Telecon: "Cosmic Disasters, Real and Imagined" with Dr. Alan Harris, of the Space Science Institute in Boulder, Colorado. Mark your calendars for Thursday, November 18th at 6 pm. More details on how to call in and participate soon.

For details on the Night Sky Network, contact Marni Berendsen at berendsen@aol.com

Venus and Jupiter Dominate are Making a Statement: "Dust off that telescope!"

Jim Scala

Jupiter reached its closest opposition for about the next decades on September 21st. The very next day, the 22nd we experienced a "Super Harvest Moon;" that's a Harvest Moon that coincides with the Fall Equinox. If that wasn't enough Venus reached its greatest illuminated extent on September 23rd which means Venus reached maximum brightness. It's a great time to dust off your telescope and get looking.

The Super Harvest Moon September 23, 2010. This years Harvest Moon coincided with the Fall Equinox making it very unusual.

Venus grows larger, dominates the Western evening sky and passes by.

Any small telescope will show the phases of Venus and 2010's conjunction is one of the best because our respective orbits bring Venus a little closer, so by month's end it will be almost a full arc minute in size. As we look West at sunset we're looking back where Earth's been, so when we look at Venus we're



watching it gain on us, It will pass between us and the Sun on October 29th us and become a morning star. When we look into the morning sky we're looking ahead, so we'll be watching Venus pull away from Earth and slowly go behind the Sun.

Venus on September 23rd when it was at "greatest illumination." The FOV in this image is 2 arc minutes by 1.5 arc minutes. Venus was about 40 arc seconds and will be almost 59 arc seconds by October 21st. No other planet becomes that large.

Venus is most easily observed during the day; after all at magnitude over minus four it's the brightest

point sized object in the sky. The obvious caveat is to use circles or a well tested GOTO mount, so you don't mistakenly swing your telescope on the Sun. A great view and fantastic photographic project would be to travel to the Grizzly peak area and catch Venus as a bright object near the Golden Gate Bridge. A small scope could show it as a crescent near the bridge structure. If you're interested, let me know; I'd like to join you and give it a try.

Jupiter, the "Amateur Planet" dominated the Eastern Sky.

Jupiter is called "the Amateur planet because it's great for amateur observation. In a small telescope-even with binoculars-you can watch the four Galilean moons run their race around the planet and at opposition see the planets disk. A four inch telescope brings out the red spot-although it can be seen in smaller scopes-and as telescope size increases more detail becomes visible. Jupiter's detail is endless.

Jupiter on September 5 showing its great red spot and Europa. Close inspection shows the broad range of detail available in most amateur telescopes.

Jupiter's red spot- really sort of salmon colored-is the object most people try and observe. However, about seven years ago a Cal Tech planetary astrophysicist predicted that the number of "White Spots" would increase over this decade. These are not really spots; indeed, they're what the planetary scientists call cy-clones. His prediction was correct as the next image



shows quite nicely.

Jupiter on September 24th showing a number of it's "White Spots." These spots should continue in-creasing in number and usually occur in pairs and often in a trio. I'd like to hear from members who see these spots in a six inch or smaller telescope.

Don't forget Jupiter's Moons.

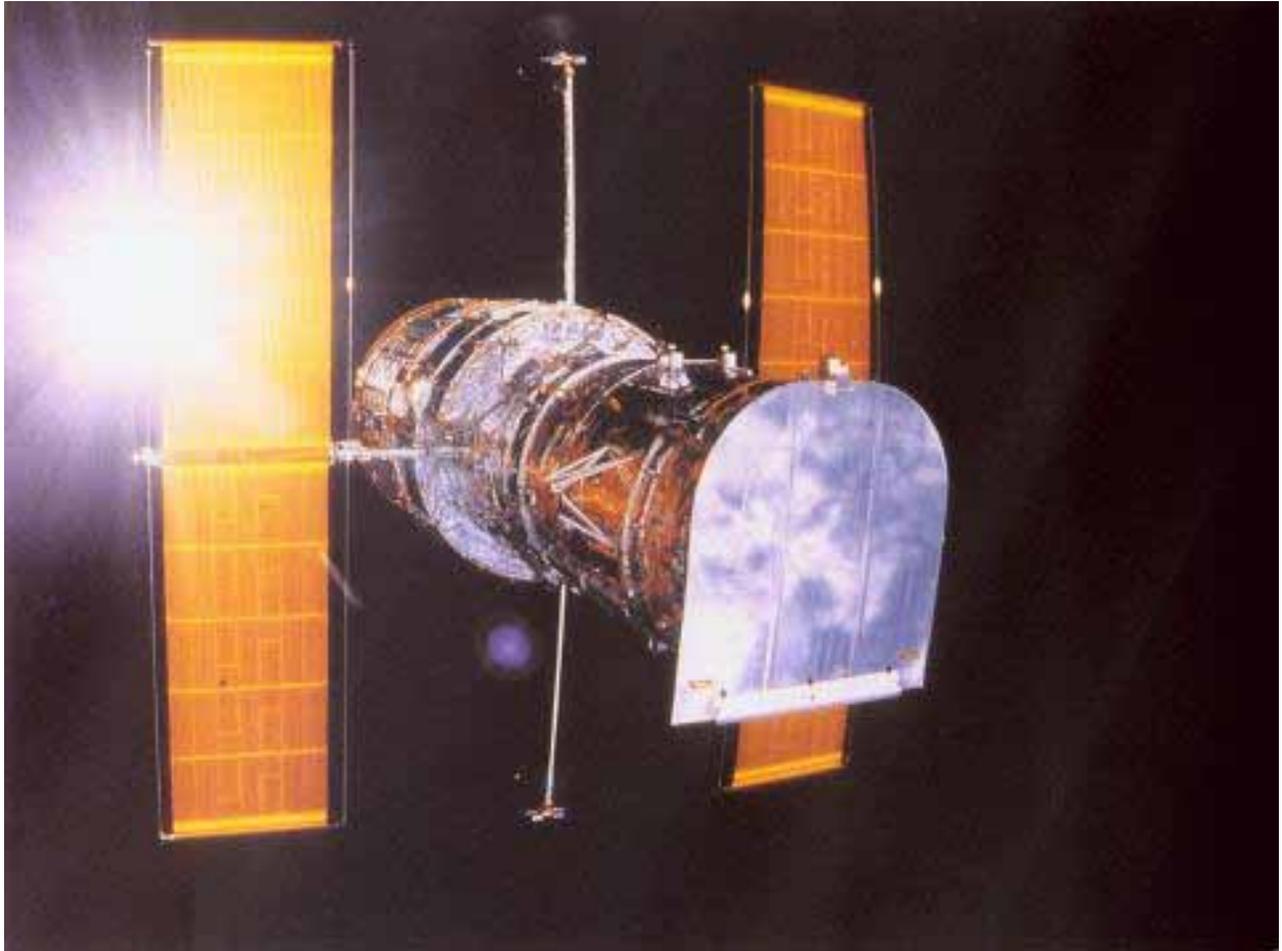
Finally this discussion can't forget the Moons of Jupiter. A good 50-mm telescope becomes a ma-jor observatory for young people when they track these moon from night to night. In addition they will see Jupiter's belts and discover for themselves the fascinating field of planetary science.

Jupiter with the Moons Io (closest) and Europa (furthest) as it would be seen in a small telescope. This image was cap-tured in a 78-mm telescope (3 inch) and could be seen in a 60-mm telescope.

Take advantage of the East bay's Fall seeing.

Fall in the East bay area brings some of our best planetary seeing. It's especially good when a high pressure system settles in over the central valley, brings Easterly winds and keeps the high moisture layer away. Unfortunately, this good seeing brings "spare the air" days and an increased fire danger. However, those somewhat dusty nights steady the images and make planetary observing excellent.





Cool Astro Links

Night Sky Network: Club Member Login
<http://nightsky.jpl.nasa.gov/login.cfm>

Night Sky Network: Astronomy Clubs
<http://nightsky.jpl.nasa.gov/>

Astronomy Picture of the Day
<http://antwrp.gsfc.nasa.gov/apod/>

NASA - Home
<http://www.nasa.gov/>

Jet Propulsion Laboratory
<http://www.jpl.nasa.gov/>

ESA Portal
<http://www.esa.int/esaCP/index.html>

JAXA | Japan Aerospace Exploration Agency
http://www.jaxa.jp/index_e.html

Main Hubble Page
<http://hubble.nasa.gov/>

**HubbleSite:
Out of the ordinary...out of this world**
<http://hubblesite.org/>

Universe Today
<http://www.universetoday.com/>

Bad Astronomy
<http://blogs.discovermagazine.com/badastronomy/>

**SpaceWeather.com: News and information
about the Sun-Earth environment**
<http://www.spaceweather.com/>

Cloudy Nights
<http://www.cloudynights.com/>

Astromart
<http://www.astromart.com/>

The Planetary Society
<http://www.planetary.org/home/>

Astronomical Society of the Pacific
<http://www.astrosociety.org/>

**AANC: Astronomical Association
of Northern California**
<http://www.aanc-astronomy.org/>

Mount Diablo Astronomical Society
<http://www.mdas.net/>

Astro Classifieds

I have a **Konusmotor 114** (4.5", 900mm, f/8) equatorial reflector telescope with tripod available for sale. I got it in August 2008, but have never set it up or used it.

After attending some star parties, I realized rather quickly that I was more interested in stargazing with the naked eye.

I wonder if anyone might be interested in purchasing it.

Thanks for your help.

Nancy Brown - ndowdsbrown@hotmail.com

Rubylith, red, clear, transparent, huge 24" x 36" sheets. For flashlight lens, laptop covers, car lights, etc.

\$5.00 per sheet, can be picked up at my home in Oakland, or at an EAS or MDAS meeting or viewing night that I attend.

But if you want shipping, you have to order here:
<http://dragonflybridge.com/Rubylith/>

Jon Steel
510-531-6218
jonlee@aol.com



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Meetings are held:

Fourth Tuesday every month,
except on the third Tuesday in November and December.
Refreshments and conversations are at 6:45pm.

Meetings begin at 7:15pm.

Where:

Concord Police Association Facility
5060 Avila Road, top of the hill.
Take Avila Road from Willow Pass Road.

Directions to facility:

http://nightsky.jpl.nasa.gov/club-view-directions.cfm?Address_ID=18

MDAS Meetings and Viewing Events in October 2010

Sunday	Monday	Tuesday	Wednesday
26	27	28	
3	4	5	
CalStar 10	Columbus Day 11 7:30 PM Board Meeting	7:00 PM MDAS Imaging SIG 12	
17	18	19	
24	25	7:15 PM GenMtg: Getting Einstein 26	
31	1	2	

Wednesday	Thursday	Friday	Saturday
29	30	1	2
			Sunset: 6:51 PM
6	CalStar 7	CalStar 8	CalStar 9
			6:00 PM EXPLORE OUR GALAXY Sunset: 6:40 PM
13	6:30 PM Indian Valley Night Sky E 14	7:00 PM Hidden Hills Starparty 15	16
			Sunset: 6:30 PM
20	6:00 PM Star Party 21	22	Society Observing 23
			Sunset: 6:21 PM 
27	28	29	30
			Sunset: 6:13 PM 
3	4	5	6

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