

Mount Diablo Astronomical Society

Diablo Moon Watch

December 2012

GENERAL MEETING

Tuesday December 18, 2012

MDAS at the Movies

**LAST MEETING AT
THIS LOCATION**

Doors open at 6:45 p.m.
Concord Police Association Facility
5060 Avila Road, Concord



December is MDAS at the Movies month chosen by popular vote on the evening. This years selection is one of:

Documentaries:

- Roving Mars
(40 minutes)
- In the shadow of the Moon
(100 minutes)

Classic Pre-Space Movies:

(With 10 minute introduction on visual effects)

- When Worlds Collide
(82 minutes)
- Forbidden Planet (89 minutes)
- The Day the Earth stood still
(92 minutes)

Come and vote in the end-of-year elections, the annual State of the Society review.

Here is the slate of candidates for the Board of Directors (all currently unopposed, all incumbents):

President: Chris Ford

Vice President: Rick Linden

Secretary: Moon Trask

Treasurer: Wil Roberge

Membership Coordinator, Mtg Room:

Marni Berendsen

Meeting Program Chair: Dick Flasck

Outreach Coordinator, AANC Rep:

Jim Head

Publicity Board Member: Vacant

Observing Committee Chair, Board

Member: Richard Ozer

Whats Up Coordinator, Board

Member: Kent Richardson

Newsletter Editor: Vianney

Webmaster: Vacant

New Member Steward: Nick Tsakoyias

Alcor and Mizar: What's in a name Their role in medicine.

By Jim Scala

If you look up at the night sky you're familiar with the Big Dipper.

This asterism looks like a dipper, and has been recognized in every Northern Hemisphere culture going back thousands of years. It confirms that people dipped water for daily use, probably starting with a dried gourd and eventually a metal dipper. Start from the dipper, count out to the third star on the handle and you're at Mizar. To a keen eyed person,

against a dark sky, Mizar appears to have a companion star - it's a naked eye double. Mizar's naked eye visible companion star was appropriately named Alcor - a test - by the Arabs.

Alcor, is arguably one of the most correct names any star has ever been given and its secondary name, The Faint One is also excellent. Both stars were named by Nomadic Arabs over 4,000 years ago and appear on their star charts. Today Alcor is magnitude 4.8, but when named, it was dimmer at magnitude 5.5, and was a

(Continued on page 5)

NEW LOCATION

As of January 2013 onward, our regular monthly society meeting nights are moving from the Concord Police Academy to the Lindsay Wildlife Museum in Walnut Creek at the usual day and time every month.

CORNER 2012 – A Remarkable Astronomical Year!

by Chris Ford

PRESIDENT'S

Looking back through this years pictures powerfully reminded me of what a busy year 2012 was in the world of amateur astronomy and for the MDAS in particular. We even managed to survive the so called Mayan "end of the world." Here are just a few of this years highlights:



March: The ISS transits Venus. Here MDAS Vice President Rick Linden and members Bob Minor and Alan Agrawal track it down for imaging near St Mary's College in Moraga.



"Mr Exoplanet" Geoff Marcy himself, at the MDAS society night in March 2012. Just one of many wonderful speakers organized for our education and entertainment this year by the tireless efforts of Dick Flasck.



The MDAS Imaging Special Interest Group (SIG) continued to meet the second Tuesday of every month in Walnut creek to share ideas, tips, tricks, or just chat about the latest developments in astrophotography. Here MDAS members (from left to right) Len Cook and wife, Stuart Foreman, Jerry Hudson, and host Doug Grebe pose for the camera. Anyone interested in imaging the skies is welcome to join us. No knowledge or experience is required!



It was an amazing year for solar astronomy and transits, probably the most extraordinary we will see in our lifetimes. First up in

May was the annular eclipse of the Sun by the Moon widely visible from Northern California. Here solar telescopes and observers gather near Lassen for an unforgettable experience as totality approaches.

2012 – A Remarkable Astronomical Year! *(Continued from the previous page)*



Star Party season was in full swing by July. Here MDAS member Chris Bernardi lectures on video-astronomy techniques at the Golden State Star Party. (GSSP)



June saw the last transit of Venus across the face of the Sun that we will see in our lifetimes. Here members of the public enjoy the view through various MDAS member telescopes at the Juniper parking lot on Mount Diablo. Your newsletter editor Vianney keeps a close watch on the proceedings.

In September Space Shuttle Endeavour paid all of us in the Bay Area a visit during an unforgettable flyover on its way to LA and retirement.

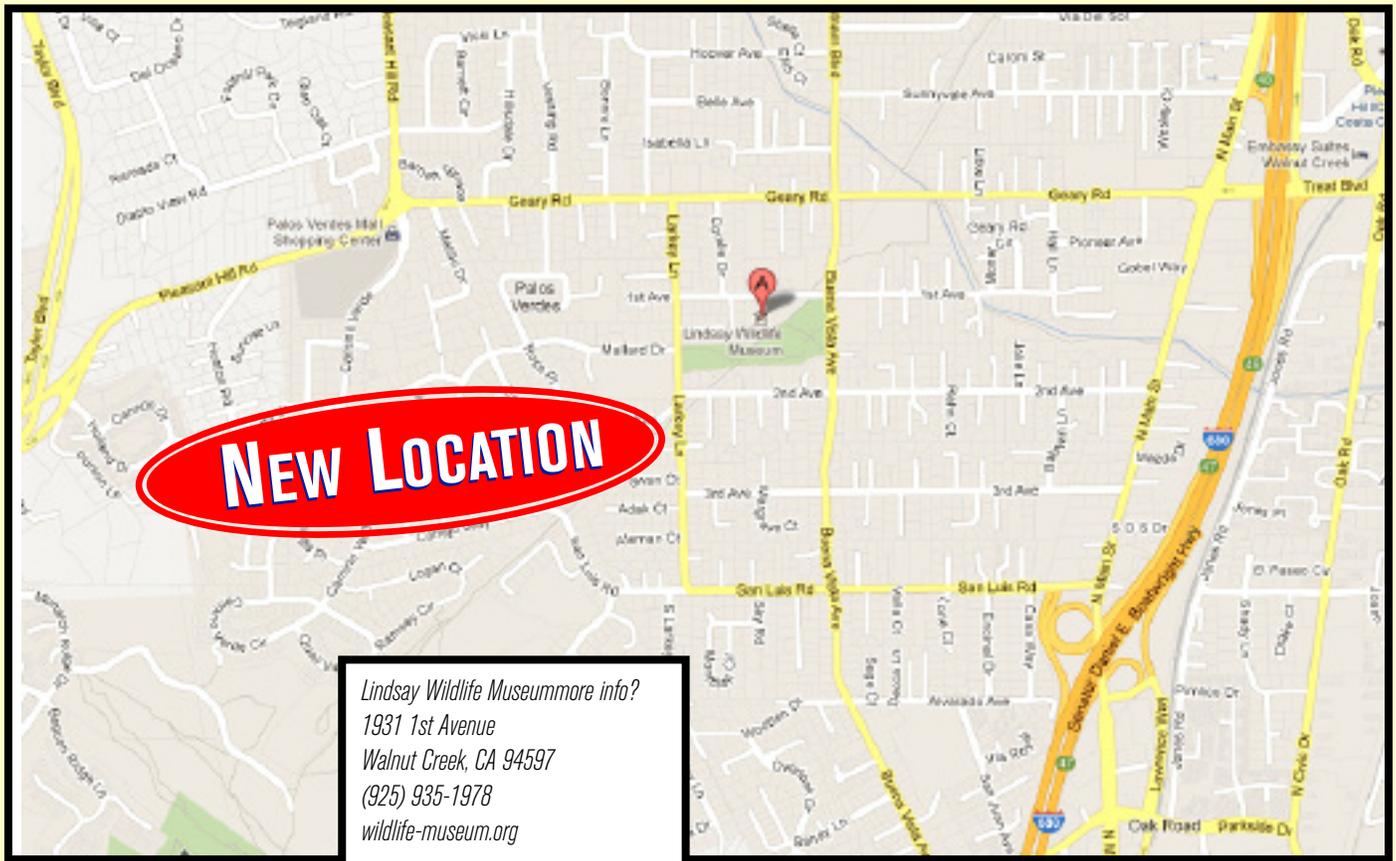


In June, a really big Bay Area astronomical and space event was SETIcon held in the South Bay and attracting several thousand attendees. This was a veritable who's who of astronomy and SETI research including Frank Drake, Seth Shostak, and Jill Tarter. Here your President receives some 23rd century medical advice. (It worked!)

Finally, December will be the very last society meeting held in our Concord Police Academy location so let us celebrate what has been "home" for the MDAS for many years now. From January next year, the Lindsay Wildlife Museum in Walnut Creek will be our meeting location and is a superb fit for our society. There will be plenty of parking in both the museums upper and lower lots, on the street, and at the adjacent Larkey's park. Again, don't forget that the Lindsay Wildlife museum will be our new location from January 2013 going forwards. However the Concord Police Academy has been the site of many memorable meetings and presentations and it has become synonymous with the MDAS for so many of us. We will miss you!

Seasons Greetings and Clear Skies to all MDAS members! Chris Ford

Our General Meeting will have a New Location on January 22nd 2013



Looking for new MDAS Board members!

Starting 2013, we have two positions opening up on the board of the MDAS which is an excellent opportunity for you to contribute to the society and your fellow members. The two positions are:

- *Publicity Chair*
- *Webmaster*

Neither role will take up much of your time or is particularly onerous and we are all here to help you. If you would like to find out more, please contact me at cford81@comcast.net where I will be happy to tell you about these roles and how you can participate in the running of the MDAS!

Chris Ford

Alcor and Mizar: What's in a name *(Continued from the front page)*

better test of visual acuity. When you look at it, compare it to 3rd Magnitude Mizar. Keep in mind the magnitude scale starts at zero (very bright) and as it increases the brightness goes down by a factor of ten for each unit. So, if Alcor is now magnitude 4.8 it's almost ten times brighter than when it was at magnitude 5.8. A person, with good vision, can easily see magnitude six against a dark sky.

the deficient person had to eat lots of alfalfa. You'll probably ask, "Isn't that what we feed cattle?"

In the desert world of those long-gone days Alfalfa was human food and, when abundant, was probably shared with livestock. Alfalfa remains cattle feed now because its leaves are among the most nutritious. Humans slowly shifted to more interesting leafy vegetables like lettuce and for bet-

men became the King's guards and were allowed to eat their vegetarian diet. I suspect there's a lesson in that for today?

Other anthropological evidence suggests that about that same time the Arab healers hit on another cure for poor night vision- the root of Queen Ann's Lace. Queen Ann's Lace was the plant from which the modern carrot was developed - so no surprise. It was a better solution than eating Alfalfa because it's richer in beta carotene and easy eating. Nowadays, a few carrots would solve the problem in days. Vitamin A is actually an animal vitamin made from beta-carotene in plants which is why it took up to two weeks for the condition to clear when Pulse was used.

Our attention shifts to Greece about 500 BCE and the medical school started by Hippocrates; appropriately named the Father of Modern Medicine. Hippocrates also used Alcor to diagnose a lack of night vision. But, he had experimentally identified liver as the quickest cure. He'd treat a mild case with calf's liver and a stubborn case with cow's liver. We know today that the older the animal the more vitamin A it's liver contains. And since its actually Vitamin A the cure appears quickly.

Accept nature's relentless focus on survival, use of trial and error to find the best solution, and it won't surprise you that the Big Dipper and Alcor appeared as a visual test in Asian records as well and especially Chinese seafarers. Their solution, similar to



The Big Dipper which is always visible from latitude 38 and above. In lower latitudes it dips below the horizon in springtime - when it's dipping water. Alcor and Mizar are line of sight companions and are not gravitationally connected.

Nomadic Arabs used Alcor as a diagnostic test to determine a person's Penetrating Vision; in more clinical terms, a test of night vision. We know today that failing to see Alcor, indicated a Vitamin A deficiency. Arab healers knew it wasn't healthy and had developed a very effective solution. A person who failed was prescribed a Pulse rich diet. In those days, that meant

ter eating pleasure. About 3,500 years ago Alfalfa's nutritional value was pointed out in the world's first published nutrition experiment described in the Old Testament. Daniel wanted his men to be the king's guards, which was about the highest honor they could achieve. But, He wanted to stick with their largely vegetarian diet. The king's men normally

ate his rich household diet and Daniel considered them fat and soft. So, they conducted an experiment to settle the issue. One group ate the king's rich diet and the other ate Daniel's Pulse rich diet.

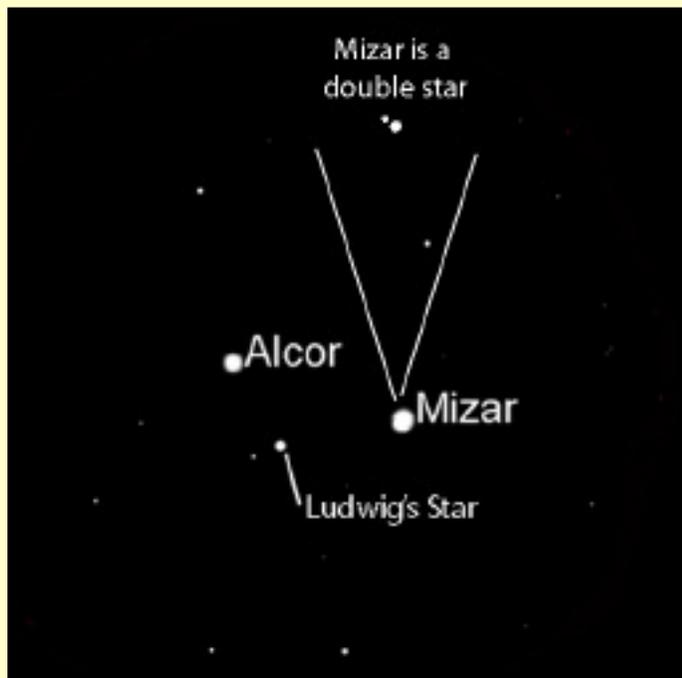
After the allotted time it was clear that men on Daniel's food were more fit than those who ate the king's diet. As a result, Daniel's

Alcor and Mizar: What's in a name *(Continued from the previous page)*

Hippocrates, used pigeon's liver as the cure - very practical since they used pigeons for food.

Vitamin A, or beta carotene is also essential for eye development in young children and its lack - less than a penny's worth daily - is the cause of blindness in many second and third world countries. Most vegetables and grains supply beta carotene that our liver converts to Vitamin A, so there's no excuse for its dietary shortfall in our affluent world.

Was the Alcor-Mizar a triple star system?



Alcor, Mizar and Ludwig's Star are labeled. The insert also shows that Mizar is a double star.

The image below shows Alcor, Mizar and Ludwig's Star. Ludwig's star, magnitude 8, was discovered in 1681 and named in honor of Ludwig V. It's important to have a distance discussion to clear the confusion this star created. A healthy human eye can see stars separated by 74 arc seconds; that's 1.25 arc minutes; designated 1.25'. A good way to get a feeling for these distances is to consider that the full moon at 30' or a half a degree, so arc seconds are very small distances with 60 seconds in an arc minute. It's important to recognize that Alcor is 11.8' from

Mizar (over a third the full Moon's width) and Ludwig's Star at 8.2 minutes are distances we can easily detect. If Ludwig's star had been the same magnitude as Alcor, the nomadic Arabs would have drawn it as a triple star system and not a double.

This third star may have been the "test star" rather than Alcor. I'm glad Patrick Moore only suggested this in his book entitled *Astronomer's Stars* because we know now that it wasn't the test star. It was never brighter than magnitude 8 and has always been invisible to the unaided eye. An extensive search of other ancient star charts, confirms it never appeared, but Alcor is always has. If Moore were alive today, we could review the more recent information and put his logical idea to rest.

Acknowledgement:

I first wrote about Alcor in, Making the Vitamin Connection (Harper & Row 1982) in which I used folk wisdom to explain human survival. My search was supported by the dedicated librarians at UC Berkeley's astronomy department and UCSF's Medical school.

Mount Diablo Astronomical Society Event Calendar—December 2012

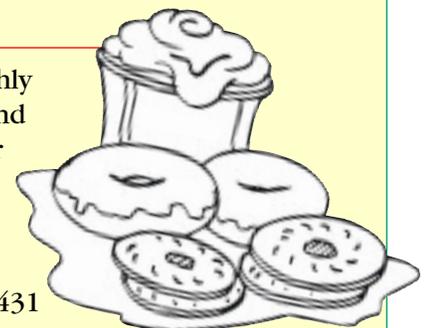
Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
25	26	27	28	29	30	Observatory Maintenance (Private) 1 Sunset: 4:50 PM
2	Board Meeting (Private) 3	4	5	6	7	Society Observing (Private) 8 Sunset: 4:50 PM
9	10	MDAS Imaging SIG (Private) 11	12	13	14	Society Observing (Private) 15 Sunset: 4:51 PM
16	17	7:15 PM GenMtg: 18 Movie Night!	19	20	21	22 Sunset: 4:54 PM
23	24	Christmas Day 25	26	27	28	29 Sunset: 4:58 PM

Are you a Cookie Monster?

MDAS is in need of a member or two to arrange for refreshments at our monthly meetings. All you need to do is pick up an assortment of cookies and beverages, and arrange them on a table at the meeting by 7:00 pm. You'll even be reimbursed for your expenses.

Best of all: You get to take home the leftovers!

If this sounds like a sweet deal to you, give Marni a call (or text) at 925-930-7431 or email berendsen@aol.com.)



Board Members & Address

President

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Vice President

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New Member Steward

Nick Tsakoyias - claytonjandl@aol.com

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MDAS
P.O. Box 4889
Walnut Creek, CA 94596-3754

General Meetings:

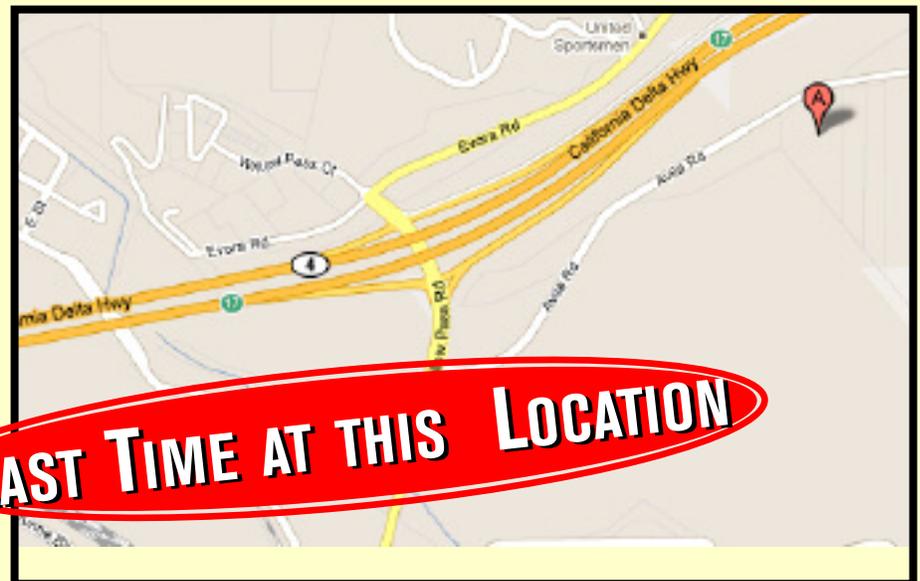
Fourth Tuesday every month,
except on the third Tuesday in
November and December.
Refreshments and conversations
Meetings begin at 7:15pm.

Where:

Concord Police Association
5060 Avila Road, Concord, CA 94596-3754
The last meeting at this address will be in
December 2012.

Directions to facility:

Avila Road is off Willow Pass Road. Turn east
onto Avila Road approximately 300 yards
south of the Willow Pass Road off-ramp from
the Route 4 freeway. Turn right into the Police
Association Facility at the crest of the first hill.



Writers Wanted

We are always looking for new articles and content. If you have astronomical perspectives or experiences to share with your fellow members that you would us to consider, please feel free to contact me Chris (cford81@comcast.net) or our newsletter editor Vianney. (veloroute@hotmail.com)

Clear skies!

Chris and Vianney

