



The Meridian

The newsletter of the
Quad Cities Astronomical
Society

March 2011

<http://www.qcas.org>

Jens-Wendt Observatory – Quad Cities Astronomical Society – Located at Sherman Park in Dixon, Iowa

Monsignor Menke Observatory – St. Ambrose University – Located at Wapsipinicon River Environmental Education Center in Dixon, Iowa

Secretary's Notes - D. Hendricks

Tom Bullock	Dan Browers	Dana Taylor	Bill Mahoney	Karl Adlon
Cecil Ward	Chris Hebel	Steve VanHyfte	Dale Hendricks	Jay Cunningham

We now have an updated list of members. We are still looking for "tweaks" to it to indicate honorary members, at a distance members, etc.

Treasurer's Notes - from Craig Cox (reporting for Craig was Dale Hendricks)

Current balance - \$2,973.74

Craig indicated that ten members who had paid their dues last year had yet to pay dues for this year. After this guilt inducing fact was shared, four miscreants paid up. Guilt works. .

Eastern Iowa Star Party - reminder: dates for the Star Party are 29-30 September and 1 October.

Next Star Party - 26 March but snow is forecast

Program - videos and discussion events -

Dana showed videos from the Hubble website, the first of which was the Tarantula Nebula. Narrator for these videos is the always "entertaining" Dr. J.

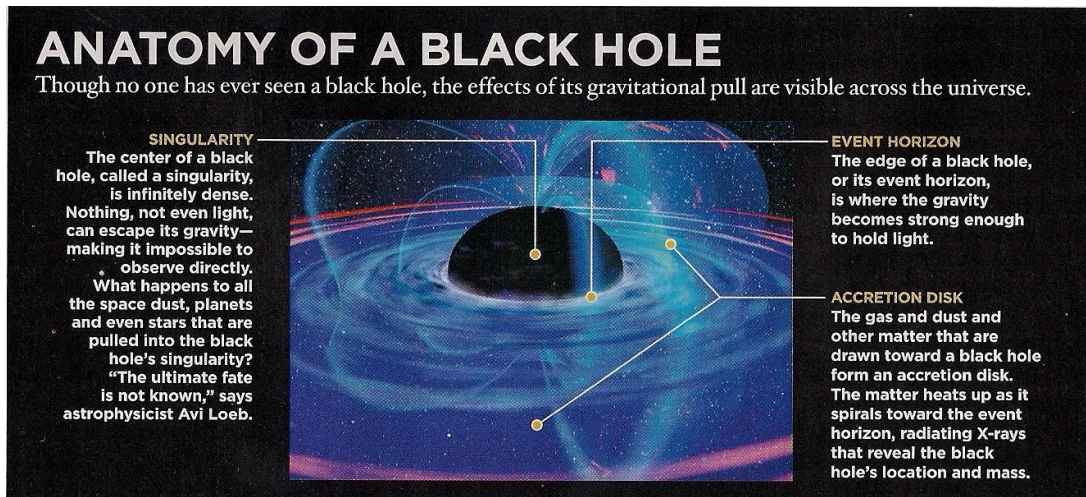
The **Tarantula Nebula**, also known as 30 Doradus and NGC 2070, is a large region of ionized gas surrounding a collection of newly-forming stars at the eastern end of the stellar bar in the Large Magellanic Cloud. Hydrogen gas around the hot, young, massive stars is ionized by their ultraviolet radiation and glows as it recombines. The same process illuminates the Orion Nebula, even though it is only a hundredth the size of the Tarantula. Supernova 1987A, which was visible to the naked eye, appeared in this region. Stars which undergo such explosions live for only a few million years and, thus, do not often travel far from their "birthplaces".



Hubble and Black Holes - Hubble video episode 43 (www.spacetelescope.org) for details provided by Dana.

M43 - Messier 43 (also known as M43, De Mairan's Nebula, and NGC 1982) is an H II region in the Orion constellation. It was discovered by Jean-Jacques Dortous de Mairan before 1731. The De Mairan's Nebula is part of the Orion Nebula, separated from the main nebula by a lane of dust. It is part of the much larger Orion Molecular Cloud Complex.





From the Smithsonian magazine April 2010

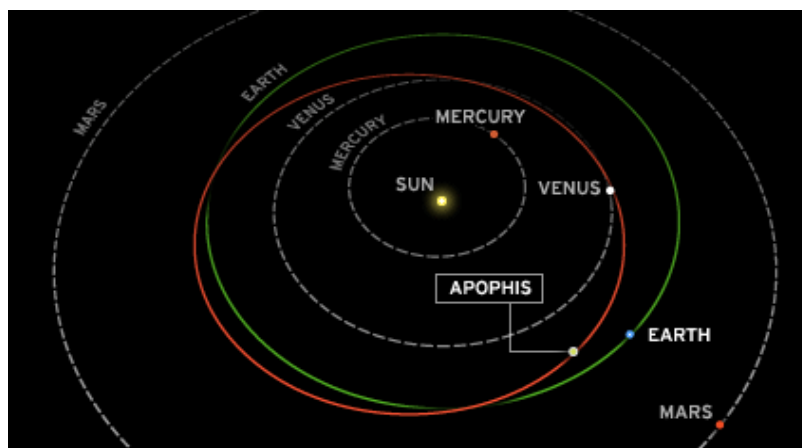
Big Bang and Before - To add further to our level of knowledge of our complex and intricate universe and, by association, our existence in it, Dana provided a video on the microwave background of the universe focused on energy and activity prior to the Big Bang. The more we learn, it seems, the more there is to know and illuminates how much we don't know and how much more there is to know.

NEOs - short discussion of Near Earth Objects - translation: asteroids in our backyard. The most discussed NEO is Apophis.

Apophis: The Asteroid That Could Smash Into the Earth on April 13th, 2036

Apophis is an asteroid with an slightly offset orbit to that of Earth's. Discovered in June 2004, astronomers have determined that it will make a very close flyby on Friday, April 13th, 2029, where it will pass to within 5 Earth diameters of us. The exact path the asteroid follows on its flyby in 2029 will determine whether it smashes into the Earth seven years later.

In 2004, it was first thought that the asteroid would hit us in the first flyby in 2029. The initial calculation for the orbit was made using only two sets of observations, those made in June and a subsequent set made in December. From those observations, astronomers calculated a 1-in-200 chance that the asteroid would hit the Earth. If this was true, then this asteroid had become the most dangerous asteroid ever found. After taking more observations, the chances climbed even higher and by the end of December 2004, **the chances of the Earth being struck by this asteroid climbed as high as 1-in-37**. Normally, when more observations are taken the chances of this kind of collision decrease. Not so here; it seemed like this thing was really going to hit us.



Source: <http://www.deepastronomy.com/apophis-asteroid-could-hit-earth.html>

Luckily, additional observations from other sources were located and these allowed astronomers to calculate a more precise orbit. From those images they were able to conclude that there was "no way" that Apophis would collide with the Earth in 2026. Stay tuned, folks. How many of us will be here in 2026?

Wishing for Clear Skies - Karl Adlon

Another cloudy day and I'm thinking "What's in the night sky that I'm missing?"

Mid-April sunset is about 8PM so about 9 PM - Saturn. It's in the southeast and about 1/3 of the way up from the horizon to zenith. It always is a sight, even with the rings closed up. Moons? For April 30, Sky 6 shows Titan at magnitude 8.4 on the east side with Iapetus at 11.2 about 3 times further away, Dione and Tethys closest on the east at 10.2 and 10.3. On the west Rhea is about a ring diameter away at 9.8 and I'll try for Rhea at magnitude 13 just under the rings. I'd be tempted to take a video with the webcam if the atmosphere is steady.

I don't think you'll find any bees in your yard but have a look at the Beehive (Messier M44). It's in the constellation Cancer, which the Sun was in on my birthday and is only one of the reasons Mary Jean calls me a Crab. M44 is naked eye at our observatory and a good binocular object in the Cities. Ancient Greeks and Romans saw this object as a manger from which two donkeys, the adjacent stars Asellus Borealis and Asellus Australis, are eating; these are the donkeys that Dionysos and Silenus rode into battle against the Titans. In a telescope it's OK – not as good as the Pleiades – I usually have a look, check it off as seen and move on.

M67 is another Messier object in Cancer about 7 degrees south and couple degrees east of M44. It is one of the oldest known open star clusters, likely around 4 billion years old, about the same age and with about the same elemental abundances as the Sun. M67 contains over 500 stars or so and lies some 2,800 light-years away in the constellation Cancer. At that estimated distance, M67 would be about 12 light-years across. Check it off your list and keep heading south.

Another 7 degrees south or so is a group of stars that form the head of Hydra. Have a look with binoculars, since these span about 4 degrees of the sky. About 10 degrees south and half that west you'll encounter open cluster M48. Under good skies this is naked eye and a binocular object in the Cities. Images show the M48 stars to be predominantly blue, which one would expect for younger, open cluster stars.

If your skies are good to the south you can keep looking further south where you'll find lots of open clusters and other objects as you go deeper into the plane of the Milky Way. I, however, will return to M44 and head north.

Perhaps a more challenging object is NGC 2683, a nearly edge-on spiral galaxy at magnitude 10.6. It has been nicknamed "The UFO Galaxy". If you are into doing the Herschel 400 list, this is one of them. It's in the constellation Lynx and can be found on Map 22 of S&T's Pocket Sky Atlas or in the image at right.

You've probably noticed, if you've been following along on a star map, that we are away from the plane of the Milky Way and, as such, distant galaxies are becoming more numerous as we do not need to look through as much dust and gas. So, unsurprisingly, another galaxy, NGC 2403 is the final object for this article.

Located in Camelopardalis, The Giraffe, 2403 is a magnitude 8.4 spiral galaxy. It makes many observing lists including #7 on Caldwell's list. William Herschel discovered this rather conspicuous Northern object which Charles Messier missed when compiling his catalog. Depending on your skies and size of telescope, you may be able to trace out some of the spiral structure. Or maybe you want to try to image it – the image at right was taken with a C8 at f6.3 and a Canon 350D by Gimmi Ratto, Pisa, Italy.

There's a lot to see and do, if only the skies would cooperate.



Events -

Boy Scout meeting at Paul Norton School - 28 March: Joe Bannon, Karl Adlon and late invitee Dale Hendricks attended this event and provided "viewing" of "Saturn" with two scopes. As usual, looking through the instruments was the major activity for these energetic young men (and their sisters and parents).

Putnam Guild presentation - Dana and Dale were invited to present information on our Society to the members of the Putnam Guild at the Putnam Museum Friday, 31 March. The presentation was well received and Dana did a great job of presenting theory, fact and great photos. There were many excellent questions which Dana handled well. At our next meeting, bring up the question about the Mayan calendar and I'll give you my take on Dana's answer. - it was masterful but the person who asked the question was, well, not satisfied. Here are a couple of photos from the event -



Bettendorf Family Museum Astronomy Day - event is scheduled for 7 May and will be focused on Solar Observing; translation - sun spots (if there are any to see). Event is scheduled in two segments. The first segment is from 10:00 to noon and the second from 1:00 to 3:00. We need confirmation from those members who are available and will be able to be there to cover the event. Contact Dana, Dale or Joe with your preferred schedule for this event.

Upcoming Celestial and Club Events

(Some repeats here from the calendar below)

APR	Venus is bright in eastern sky in the morning
3-4 APR	Saturn starts rising in the east at sunset and reaches peak visibility but is "viewable" all month long.
18 APR	Next QCAS meeting at 7:30pm
22/23 APR	Lyriad meteor shower - up to 10/hr. Requires "dark sky".
End of APR	Mercury/Jupiter close to Venus. Mars, Uranus and Neptune gathered nearby but viewing will be "challenging".

APRIL

SUNDAY	MONDAY	TUESDAY	WEDNESDAY	THURSDAY	FRIDAY	SATURDAY
		1	2	3	4 NEW MOON	5 1512 – Gerardus Mercator born
6 1787 – Joseph Fraunhofer born	7 1792 – John Herschel born	8	9	10	11	12 First-Quarter Moon
March 13 – 16 – Easiest chance to observe Mercury this year! Take a picture!						
13 Daylight Savings Begins 1855 – Percival Lowell born	14 Birthdays: 1835-G. Schiaparelli 1879-A. Einstein 1934-G. Cernan	15 1932 – Alan Bean born	16 1750 – Caroline Herschel born.	17 1930 – Jim Irwin born	18	19 Full Moon
March 17 – 28 – Mercury still observable.						
20 Spring begins.	21 7:30 QCAS Mtg	22	23 1840 – First photo of the Moon 1912 – Wernher von Braun born	24	25 1655 – Christiaan Huygens born	26 Last-Quarter Moon QCAS Star Party
27	28	29	30	31	1	2
3 NEW MOON	4 Saturn at opposition.	5	6 Moon is below the Pleiades	7	8	9

QCAS Contacts

Elected Officers			Volunteers and Committees		
President	Dana Taylor	dana@nelsontaylor.com	Facilities	Jim Rutenbeck	jrutenbeck@frontier.com
VP	Chris Hebel	Chrishebel57@yahoo.com	Web Master	Dana Taylor	dana@nelsontaylor.com
Secretary	Dale Hendricks	dhusna68@mchsi.com	Outreach	Joe Bannon	mzbannon@aol.com
Treasurer	Craig Cox	Admiralcox2000@yahoo.com	Programming	Jim Rutenbeck	jrutenbeck@frontier.com
Director	Karl Adlon	Kmja79@yahoo.com			

All other contacts can be sent to the club at P.O. Box 3706, Davenport, IA, 52808.

Members – be reminded that you can submit articles for *The Meridian*. Submit articles to Dale Hendricks at: dhusna68@mchsi.com. If dale is not available, as backup, you may submit information to Joe Bannon at: mzbannon@aol.com or jbannon@midamerican.com