

THE METEORITE



The Pleiades M-45

also known as:

The Seven Sisters
Subaru



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Newsletter of the Mahoning Valley Astronomical Society, Inc.

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JANUARY 2013

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Meteorite Editor: Phil Plante
1982 Mathews Rd. #2
Youngstown OH 44514



JANUARY 2013

In Memoriam

Newsletter of the Mahoning Valley Astronomical Society, Inc.

MVAS CALENDAR

- JAN 12** Telescope Workshop at YSU. 1:00 PM
- JAN 26** Business meeting at YSU. After 8:00 PM show. Memebership Trustee appointment. Hosts: Phil Plante, Paul & Jan Baker.
- FEB 25** Business meeting at YSU. After 8:00 PM show.
- MAR 9** Bino-Blast at MVCO. 7:30 PM. Eats too!
- MAR 23** Business meeting at YSU. After 8:00 PM show.

NATIONAL & REGIONAL EVENTS

- FEB 2** **10th Annual Dark Sky Festival**, Harmony, FL . Exhibits, Lectures, Planetarium Shows, Star Parties, Workshops. Free to the public. 5:00 pm - 10:00 pm. <http://harmonyfestivals.com/>
- FEB 4-10** **2013 Winter Star Party**. Camp Wesumkee- Scout Key- Florida Keys. Camps, Lectures, Star Parties, Workshops. Registration / fee information available online. Take advantage of early registration. Tickets are on a first-come, first-serve basis. <http://scas.org/wsp.html>
- MAR 7-10** **Staunton River Star Party Spring 2013**. Staunton River State Park, Scottsburg, VA. Time: runs 24 hours. Admission Fees \$35. A low key event. Enjoy the dark skies and fellowship of amateurs astronomers. Messier Marathon? <http://www.stauntonriver-starparty.org>

MVAS BOARD OF TRUSTEES

President	(2013 & 2014)	TBA
Vice President	(2013 & 2014)	Rich Mattuissi
Treasurer	(2013 & 2014)	Steve Bartos
Secretary	(2013 & 2014)	Phil Plante
Officer's Trustee	(2013 & 2014)	TBA
Officer's Trustee	(2012 & 2013)	Rosemary Chomos
Member's Trustee	(2013)	TBA

OBSERVATORY STAFF

Observatory Director	Larry Plante
Assistant Observatory Director	Dave Ruck
Librarian	Rosemary Chomos

PUBLICATIONS STAFF

Meteorite Editor	Phil Plante
Assistant Editors	Steve, Virginia Bartos
MVAS Webmaster	Bill Pearce
MVAS Webmaster	Harry Harker

MVAS, P.O. BOX 564 NEWTON FALLS, OH 44444-9998
 MVAS Homepage- <http://mvoobservatory.com>

The year 2013 began on a sad note with the passing of Bill Pearce. He passed away at home on December 24, 2013. He leaves behind his wife Elaine and two daughters; Tara and Megan. Bill was 55 years old. A memorial service was held at St. Christine church in Austintown on January 2nd, 2013. About a dozen MVAS members attended. Bill became a member of the Society at the November meeting of 2008. Since then, he became very active in MVAS activities. He was a leader in many projects. These included painting work, installing gutters on the 16" Building, and using the internet to place the 50 inch mirror blank on the market, for sale. He and others constructed the now defunct "monolith" in an attempt to cover the 10" SCT pier.



Bill was also very active in getting the membership into astro-imaging. He donated a web-cam to the Society to spur-on lunar and planetary imaging using telescopes at the MVCO. His own solar images in both white light and h-alpha were excellent. He submitted fine lunar, planetary and deep sky images that he had captured from his home observatory. Even movies of Mars' rotation were provided. All of this sparked a movement within the membership to take on astro-imaging. During the summer of 2012, he helped to give imaging seminars after the business meetings. All of this activity was recognized when he was awarded the 2012 MVAS Observer of the Year Award.

Besides maintenance, observing and imaging skills, Bill also had a hand in MVAS leadership. In 2010 he served as a Trustee. He hosted several Board meetings at his home. Since that year, he slowly took over the MVAS website, redesigning it. It became an active homepage and a source for downloading the current issue of the *Meteorite*. This act saved the MVAS several hundred dollars per year by limiting printing and postal expenses. The new website even attracted new members. It served as a place to post an event calendar, the imaging work of other MVAS members, and the latest news and activity.

At the December 8th Annual Meeting, officer elections were held. Bill was running for MVAS President. He went into the hospital that day with a heart condition but insisted on staying on the ballot. He was elected as president. Sadly, he passed two weeks later. He never got to serve as President. He had plans for the MVAS; increasing activity in observing and imaging. That was like Bill. Dealing with health issues all these years, he still forged ahead trying to get things done. He will be missed by all of us. -editor

NOTE: With Bill's passing there was a vacancy in the President's position. Member Lou DiNardo has agreed to serve in this capacity. At a January 5th Trustee meeting, he was appointed to this position. This is pending a ratification vote by the membership at the January meeting.

MINUTES OF THE DECEMBER MEETING

DECEMBER 8, 2012 at Boardman Park

Not long after 6:00 PM the room began to fill with guests. Payments, sign-in, voting activity and greetings mixed well with the appetizers and shrimp cocktail. Around 7:00 PM the buffet was open for attack. In all, 45 people attended this Christmas dinner. It's not likely anyone went hungry. Special thanks to Tony Mehle for providing this sumptuous meal. Kudos' to Larry Plante for bringing the shrimp cocktail. Once again a tip of the hat goes to Larricia's Italian Foods for the delicious food they prepared and to Mocha House for their fantastic cheese cakes.

At 7:55 PM the meeting was called to order by President Sam DiRocco. Roll Call was answered by an astounding variety of "ho-ho-ho's". Thirty-five members made the count. We had ten guests in attendance. Alphabetically they were: Sandi Anderson, Lori Baker, Stephen Bartos, Virginia Bartos, Gretchen DiRocco, Talia DiRocco, Greg Klocek, Jill Klocek, Rose Marko, and Irene Mehle. Many thanks for your support of this event. There was a call for the reading of the Minutes. Greg Higgins moved to suspend the reading. There was a second to the motion made by Lou DiNardo. By a unanimous voice vote, the Minutes were accepted as published in the Meteorite.

TREASURER'S REPORT: The Report was read by Steve Bartos.

General Fund 11/1 thru 11/30 2012

OPENING BALANCE:	\$	8,613.27
CLOSING BALANCE:	\$	9,103.64
AVAILABLE FUNDS (NON-RESERVED):	\$	4,939.52
ACCOUNT NET GAIN/LOSS FOR THIS PERIOD:	\$	+490.37

INCOME:

DUES	\$	240.00
CHRISTMAS DINNER RESERVATIONS	\$	250.00
INTEREST	\$	0.37
TOTAL INCOME	\$	490.37

EXPENSES:

CK# XXXX NO EXPENSES RECORDED	\$	0.00
TOTAL EXPENSES	\$	0.00

Reserved Funds

KEY DEPOSITS (MVCO)	\$	250.00
CASH FROM ORIGINAL OAD FUND (FOR LAND)		3,914.12
TOTAL RESERVED FUNDS	\$	4,164.12

Membership Dues Paid this period by: M. Baker, M. Dimoff, A. Keeley, P. Plante, S. Shanks. Thanks to all.

CORRESPONDENCE: Bob Danko reported no mail in the box.

COMMITTEE/OFFICER REPORTS: *IMAGING COMMITTEE:* *VISUAL COMMITTEE:* *LIBRARIAN:* No reports given.

OBSERVATORY DIRECTOR'S REPORT: Larry Plante reported he had not been to the observatory since the last meeting. It was time to announce the 2012 Observer of the Year Award. Since there had been limited visual reports this year, he decided to expand the range of observing activity to include imaging. Since he led the way for MVAS imagers with his Mars rotation videos and other CCD work, Bill Pearce has been named Observer of the Year for 2012. His name will be added to the awards plaque very soon.

There has been an MVAS hoodie left at the MVCO since right after our OTAA meeting. Rosemary Chomos now has it and will hold it until it is claimed. But will keep it if no one comes forward in the next month or two. Also there were two frozen hamburger patties left in the fridge. Rosemary had them. It appeared no one wanted them. Their fate was not disclosed.

OLD BUSINESS: Sam DiRocco expressed everyone's thanks to Tony Mehle for the fabulous dinner. There was a round of well deserved applause. Tony thanked his wife Irene for helping with the table set-ups and preparations. He also thanked Larry Plante for the additional help and for supplying the shrimp cocktail. More applause. Phil Plante noted that there was unfinished business in the membership re-instatement vote for Bill White. This motion was tabled at the August meeting. Bill had declined then to attend a follow-up meeting, and has not done so since then. With that, the motion for a vote was retracted and the issue is dissolved. By voice vote, the majority where in favor of this action with one nay vote.

Phil noted a few YSU events would be a week later in 2013. The Telescope Workshop will be on January 12 while the Festival of Arts will be held July 13 & 14. There was a brief rundown of the Scenic Vista dates in 2013. A full MVAS schedule will be in the January 2013 Meteorite. Rosemary will work on repairing the curtains in the 12" building. These have been chewed upon by local mice. Too nice to throw away. Dave Ruck asked about the spouting problem on the 16" building. Sam noted that we had decided earlier in the year to seek a professional contractor for the job. One price quote was obtained but the details of what was included were never fully reported. Thus no action was taken. A few companies local to the MVCO might be considered.

It was time to announce the result of the election held earlier in the evening. Harry Harker and Phil Plante tallied the ballots. The four officers were running un-opposed and would likely win by default. But an official count was taken in case of write-in votes. Results: For President: Bill Pearce 31, Bob Danko 2 write-ins. For Vice President: Rich Mattuissi 32, Eric Klesch 1 write-in. For Treasurer: Steve Bartos 32, Lou DiNardo 1 write-in. For Secretary; Phil Plante 32, Sam DiRocco 1 write-in. The MVAS officers for the 2013-2014 administration will be:

President- Bill Pearce, Vice President- Rich Mattuissi,
Treasurer- Steve Bartos, Secretary- Phil Plante

Congratulations to all. Sam DiRocco thanked the membership for letting him serve as MVAS President the past six years. But it was time to move on. He noted that we accomplished a lot and hoped that the new administration can continue the success we've had in the past, with any new projects that come up.

NEW BUSINESS: At the January meeting a vote will held, by paper ballot, in which the general membership will appoint a Trustee ("membership Trustee") for a one year term. Candidates are Dave Ruck and Maryanne Hoffman. The new administration (the four officers) will appoint a Trustee on their own before the January meeting. This is a two year term.

Earlier during dinner, a host list for the 2013 meetings was passed around. Virginia Bartos had the idea of splitting each month into three duties: 1) main meal, 2) desserts, 3) drinks. This would allow members to help out by signing up for one of the specific tasks in a month, or for additional months. This would ease the burden of bringing things and reduce personal costs for any one individual. It was met with approval and the list has been filled. It will be posted in the January 2013 Meteorite.

Larry Plante will have a sign-up sheet at the January meeting for those interested in the April camping trip to Flying W Ranch (cabins) or Hearts Content camp ground. Camping trailers are allowed there he believed. There is great up-front expense in reserving the cabins at Flying W Ranch. We need to know who is coming and they will likely need to make a payment at that time. Next Tony Mehle instructed each table to figure whose birthday was closest to Neil Armstrong's (Aug. 5th), and they would get the centerpiece which had cookies and candy. He then asked everyone to assemble for a group photo after the meeting. Tony has already reserved the same room for the 2013 Christmas dinner and meeting, to be held December 7th, 2013. We thank Tony for the heads-up thinking.

GOOD OF THE SOCIETY: Rosemary told of plans related to the 75th Anniversary of the MVAS (in 2014). Her, Karin DiNardo, and Maryanne Hoffman would like members to design a celebration T-shirt that could be produced in time for early sales in 2014. The designs should be based on past MVAS activities or historical events. All members are encouraged to draw up and submit a design. One will be selected by the membership. Rosemary suggested that the celebration dinner should be catered so that no one is burdened with this chore. These three members are willing to coordinate this, so let's get the thinking caps on. Earlier it was reported that now incumbent president Bill Pearce was hospitalized with a heart condition. He was doing fine, but could not attend this meeting because of it. Jodi McCullough had two get well cards for everyone to sign.

VISUAL REPORTS: Phil Plante announced his lifetime total had surpassed 3,000 variable star estimates in late November. Jodi described the diamond ring effect during the Australian solar eclipse this past November 13 and said she is hooked. She understands why Phil has been to so many and can't wait to see another. Start planning to see the 2017 eclipse. While in Australia, she and Roy also saw the Large and Small Magellanic Clouds. Don Durbin joked that it must have been a Blue Moon because the Browns beat the Steelers. Lou DiNardo saw the spectacular Moon-Jupiter conjunction on November 29. There was a short mention of the upcoming Geminids.

ADJOURNMENT: Adjournment came at 8:27 PM. We thank our hosts Tony and Irene Mehle and Larry Plante. The next meeting will be at YSU on January 26, 2013. Meeting begins after the 8:00 PM show. Scheduled hosts are Phil Plante (main) while Paul and Jan Baker will provide dessert and drinks. **PASSWORD:** name an asteroid. *-minutes by Phil Plante*

A Special Thanks to:

Larricia's Italian Store, 7438 Southern Blvd. In Boardman. Call 330-729-0222. Mike Allegretto did an outstanding job preparing the food for our Christmas Dinner. Please don't hesitate to use Larricia's catering for your next social or business event. Astronomers know: *"It's food from heaven"*

MVAS ACTIVITIES

MVAS Officer Elections were held this year. All candidates were un-opposed. Being a formality, a paper ballot election was held. As expected, the four candidates were elected. The full tally of votes is in the December 2012 Minutes. With President-elect Bill Pearce's passing, it left an open presidential seat. At the January Trustee meeting, Lou DiNardo was appointed to fill this position, after a search for a replacement. By convention, the membership will need to approve (ratify) this action by an up or

down vote at the January meeting. If anyone wishes to be considered, they will need to announce this at the meeting. An election will be held then, if so needed.

The current Officers have appointed Bob Danko as a Trustee (2 year term). At the January meeting the general membership will appoint a Trustee (1 year term) by paper ballot. Your candidates are Maryanne Hoffman or Dave Ruck.

Special thanks are given to Sam DiRocco and to Harry Harker for serving as the MVAS president and Vice President, respectively, for the last six years. Many significant projects were completed under their watch and guidance. Most notably was repair of the 16" building foundation, recoating of the 25" and 16" mirrors and repainting the 16" optical tube. Getting the 50" mirror blank to the MVCO was an accomplishment. Thanks.

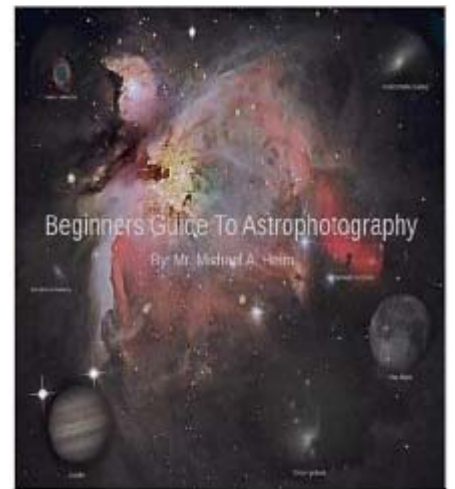
The late **Bill Pearce** had also been named Observer of the Year for 2012. Bill's leadership in astro-imaging paved the way or a new round of imaging within the ranks of the MVAS. We have all enjoyed the images that our members present to us. We have Bill to thank, as a trail blazer. We will miss him.

From Amazon: *"Starting out in photographing the night sky? Thinking about it, but don't know how to get started? If so, this book is for you. This is an illustrated book explaining how to image both planetary and deep sky objects, geared to the beginner. There are also links that will take you beyond the scope of this book as your skills progress."*

This past November, MVAS member Mike Heim published an entry level book on Amazon Kindle. It is aimed at helping beginners get started with imaging the night sky. It went on sale Nov. 25, 2012. He hopes it'll be of some use, and that it will get others interested in imaging. Amazon price is \$9.99.

Click on it-- Get one!
It is located at:

http://www.amazon.com/Beginners-Guide-to-Astrophotography-ebook/dp/B00ACU1ZYI/ref=sr_1_2?s=digital-text&ie=UTF8&qid=1353888867&sr=1-2&keywords=astrophotography+dslr



A Kindle Book!

Go west young man? Member Allen Heasley sent the editor a fine newspaper article that was published in the Nov. 27, 2012 *Denver Post*. Called "Rock-Star Nights", staff writer Douglass Brown did a fine job describing winter observing from the Denver/Boulder area; the early, cold nights are the best time to stargaze. Brown went on to describe various objects, how to dress warmly and listed numerous parks and places to star gaze. He also listed a number of planetariums and observatories in the area. Last but not least was a night sky map. Fifty years ago our local papers used to have such articles in the Sunday paper. It seems clear that Allen (and Bette) is lucky to have this stuff to read. Colorado seems like a nice place for star gazing. If I were movinghmmmm?

We had a splendid turn-out for the Annual Meeting and Christmas Dinner Dec. 8th, 2012. Forty-five people attended. The food was very good- as usual. We send a special thanks to **Tony Mehle** and his wife **Irene** for providing dinner and centerpiece settings. They also set the place up for our culinary enjoyment. **Larry Plante** is thanked for his help in set-up and for supplying the shrimp cocktail appetizer. It went fast this year.

MVAS REMINDERS: Looking at 2013

Well folks, it's that time of year to start the money grab. Your 2013 MVAS dues should be paid as soon as possible. Preferably in January (at the meeting works). This helps in book keeping and it gives us a better idea of what funds will be available in the coming year. Dues are \$40.00 for a regular membership. It is \$10 each for family members (if they also want in) and \$10 for any Junior Member (16 or less) not affiliated with a family membership. If you have paid already, we thank you. If you are paying in January, thanks in advance.

Looking ahead, a list of MVAS events is presented below. It should reflect the actual time line in 2013. Note that none of the other OTAA dates are known as this is written. You can usually assume they will be on the new moon weekend in June (CVAS), July (CAA), and September (BRAS). New Moon occurs early in the month all summer. The Flying W Ranch camp-out is still in the works but the date is correct. Please study this list. As they say: mark your calendar, check it twice.

MVAS EVENT CALENDAR- 2013

Jan 12	Sat -Telescope event at YSU
Jan 26	Sat - meeting YSU. 8:00 PM
Feb 23	Sat - meeting YSU. 8:00 PM
Mar 9	Sat - Bino-Blast 2 MVCO
Mar 23	Sat - meeting YSU. 8:00 PM
Apr 10-11	Wed-Thu- Flying W camping trip.
Apr 20 Sat	- Chili fest MVCO. 7:00 PM
Apr 27	Sat - meeting at MVCO. 8:00 PM
May 11	Sat - OTAA Scenic Vista Stargaze
May 25	Sat - meeting MVCO. 8:00 PM
Jun 8?	Sat - Chagrin OTAA at Telescope Park?
Jun 15	Sat - Scenic Vista Public Night
Jun 29	Sat - meeting MVCO. 8:00 PM
Jul 6	Sat - Cuyahoga OTAA?
Jul 13-14	Sat-Sun - Festival of Arts at YSU
Jul 27	Sat - meeting MVCO. 8:00 PM
Aug 3	Sat - OTAA work session, MVCO. Noon?
Aug 10	Sat - MVAS-OTAA MVCO. 5:00 PM
Aug 31	Sat - meeting MVCO. 8:00 PM
Sep 7	Sat - Black River OTAA? at 6:00 PM
Sep 14	Sat - Astro-Ham & Public night at Scenic Vista.
Sep 28	Sat - meeting MVCO. 8:00 PM
Oct 19	Sat - meeting MVCO. 8:00 PM
Oct 26	Sat - Halloween Party at MVCO. 7:00.PM
Nov 23	Sat - meeting YSU. 8:00 PM
Nov 28	Thu - Thanksgiving
Dec 7	Sat - Christmas Dinner, Larricia Center.

Host List for 2013 Meetings

At the suggestion of Virginia Bartos, we've tried a new format for hosting this year. Everyone at the Christmas meeting thought it was a good idea. Members can sign-up to bring just the main meal, just the desert, or just the drinks. Or any combination

thereof. Hosting any category for multiple meetings is possible. Again, any combination will work. This splits up the costs and burden for any one individual to host. We still need someone for desserts at the April and November meeting. The May meeting is Memorial Day weekend, so it is slated as a typical MVAS BBQ. Bring your own or to share. We'll finalize plans as the May date nears. Let Phil know if you want to fill those openings or need to change something. Thanks.

	Main	Desserts	Drinks
JAN:	P. Plante	P. & J. Baker	P. & J. Baker
FEB:	S. Bartos	P. Plante	L. Plante
MAR:	E. & S. Bishop	M. Baker,	M. Hoffman
APR:	D. Ruck	?	P. Plante
MAY:	MVAS BBQ: Bring your own or to share.		
JUN:	K. Janeco	L. Plante	L. Plante
JUL:	G. Higgins	R. Chomos	R. Mattuissi
AUG:	J. McCullough	R. McCullough	R. Mattuissi
SEP:	D. Schneider	P. & J Baker	P. Plante
OCT:	Harry & Sam	P. & J Baker	L. & K. DiNardo
NOV:	M. Dimoff	?	L. & K. DiNardo
DEC:	Tony Mehle- Christmas Dinner and dessert.		

Tentative Projects For 2013

Get ready to roll-up the sleeves, a few projects that need tackled this year are listed below. We can use the help!

1. Gutters- replacement. Pro vendor is sought.
2. Re-seal 8" roll-off support beams (& 12" beams?)
3. Re-seal deck. Door?
4. Painting: finish walls inside of 16" building. 12" building?

75th Anniversary T-Shirt Contest!

Maryanne, Karin and Rosemary have taken on the 75th MVAS Anniversary celebration, set for October 2014. This starts with selecting an Anniversary T-shirt design, to be ready for production/sale in early 2014. All members are encouraged to submit a design for consideration. The graphics theme should convey MVAS activity of the past: telescope making, variable star work, public outreach, MVCO, or general astronomy. You get the idea. Schematics should be presented on 8" x 11" paper. Membership selects the winner. Contact the above for info.

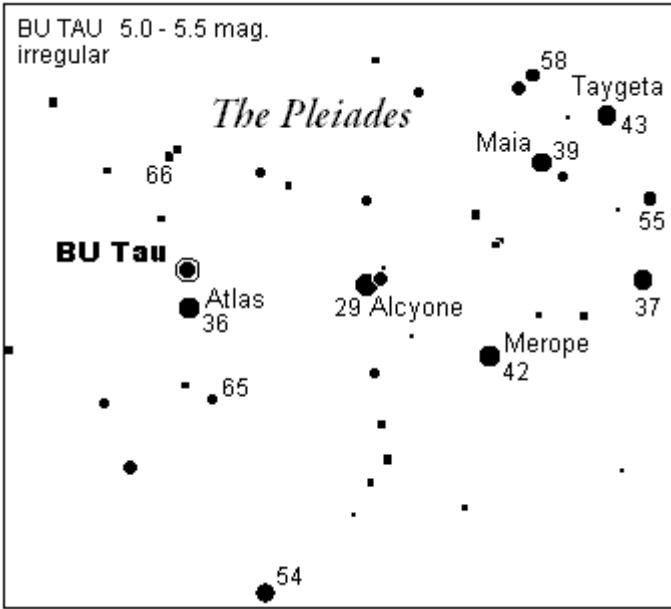
Observer's Notes: A Hidden Charm?

On a cold winter's night, the sky is often very transparent. A perfect time for binoculars or RFT's to stop at the Pleiades for a look. Recent data puts this cluster 440 light years away. Scopes reveal about 100 stars that are around 100 million years old. Being young stars, they "burn" in hot blue light. The dusty reflection nebula (NGC 1435) surrounding Merope also shines with the same blue light. NGC 1435 was discovered by E. W. L. Temple in 1859 with a 4 inch refractor. The other nebulae were found on photographs. All the reflection nebulae in M-45 as seen in photos are not remnants of the cluster's formation. The Pleiades are just passing through the dust cloud. Using a 4" or larger glass under very dark skies, one might glimpse NGC 1435. Can you see it? It is ancient tradition to place human attributes in the sky. Perhaps this evasive glow can be likened to that mysterious charm and bonding that earthly siblings often display. In this case, it's between the Seven Sisters. -P. Plante

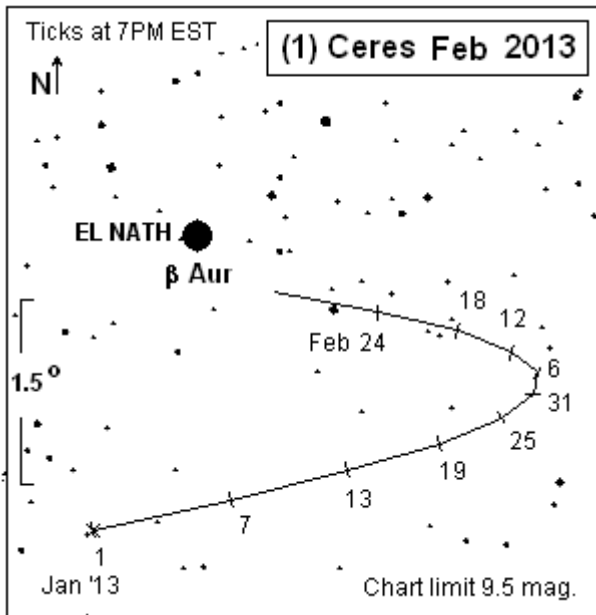
MVAS OBSERVER CHARTS

MVAS OBSERVATIONS - DUE FEBRUARY 2013

Variable star of the month: **BU Tauri** (*abbrev.* BU Tau). Our variable star BU Tau is also known as Pleione. It's a very easy binocular variable. The magnitude change is slight and often it seems to never change. But if you check it weekly and keep notes (or image it) every time you look, you'll eventually see the change. Usually Taygeta and the magnitude 5.4 star at the bottom of the chart are used as comparison stars. This is a pleasing way to get into variable star observing, and for learning the patience needed for long term studies. As always, the numbers given are star magnitudes minus the decimal point. So the point is not confused for a star. Give it a try!

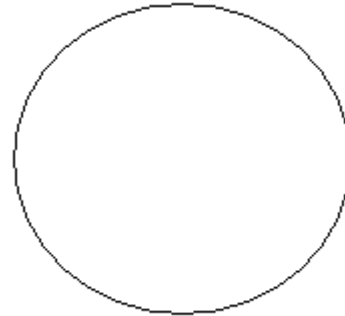


Asteroid of the month: **(1) Ceres**. We continue watching Ceres as it lies SW of β Aur. It starts tracking towards the star as February begins. At month's end, they might both fit in a wide-field eyepiece view. Ceres drops half a magnitude during February: 7.8 to 8.3. You might try binoculars too.



OBSERVER _____

Featured object: Pleiades. Please try a sketch. You may use the variable star chart at right to draw in the seven brighter stars, but draw them at the scale as seen in your eyepiece (the circle below represents the eyepiece field of view). Next, fill in the fainter stars your instrument shows. If you are lucky enough to see the reflection nebulae, draw a pencil smudge around Maia or Merope to represent what you've seen. Relax, take some time. You can do it! Let's see some homework!



Pleiades Observation:

Date: _____ Time(EDT) _____ Scope _____

BU Tau magnitude estimates:

Date: _____ Time: _____ estimate: _____ Instrument: _____

_____	_____	_____	_____
_____	_____	_____	_____

(1) Ceres Observations:

Date: _____ Time: _____ Instrument: _____ magnification: _____

_____	_____	_____	_____
_____	_____	_____	_____

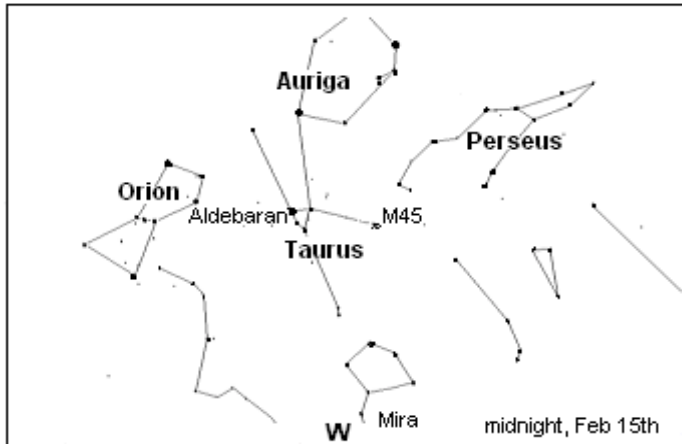
Other Objects in Taurus to observe

D. Sky	Date	Scope	Dbl.	Date	Scope	SEP	MAG	SPLIT?
M- 1	_____	_____	30 Tau	_____	_____	9.0"	5.1 - 9.8	Y / N
N- 1647	_____	_____	88 Tau	_____	_____	69.0"	4.3 - 7.8	Y / N
N- 1817	_____	_____	111 Tau	_____	_____	86.0"	5.0 - 8.0	Y / N

Lunar Occultations (see Sky Almanac):

Star	(UT) Date	Time	Scope	magx.	Event(circle)
_____	_____	_____	_____	_____x	R D
_____	_____	_____	_____	_____x	R D
_____	_____	_____	_____	_____x	R D

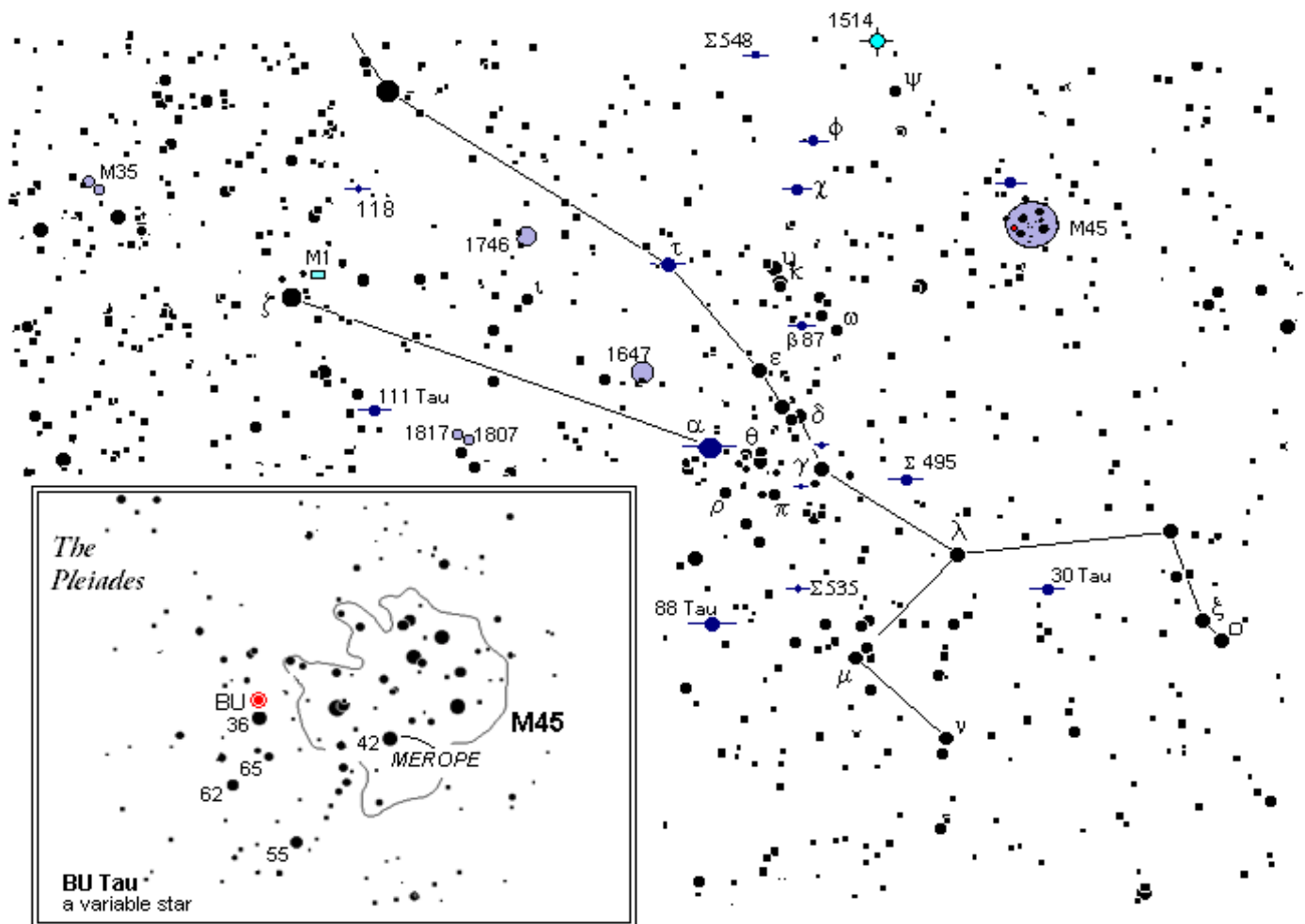
Constellation of the Month — Taurus



By mid-February, Taurus is 65° up in the west, in a dark sky-9PM. Taurus sets around 3:20 AM. February nights are still cold. March nights are moderating towards spring-like temps. With the naked eye you can see the Hyades. Bright red Aldebaran rides within the cluster. This is an illusion as the Hyades' stars are about 150 light years away while Aldebaran is only 68. The small patch of light to the north of Aldebaran is the Pleiades cluster. Can you see the individual stars without optical aid? NGC 1647 and NGC 1746 are nice open clusters for the telescope. You'll need a scope to find the Crab Nebula, M1. It can be spotted as a tiny fuzzy spot with a 60mm scope. There are many fine double stars to choose from. Some have nice colors. Which ones are they? Look for yourself! Don't forget to keep a watch of the variable star BU Tau.

Aldebaran Transit Times:

Dec 15	11:20 pm	Jan 1	10:21 pm	Jan 14	9:22 pm
Feb 1	8:22 pm	Feb 15	7:26 pm	Mar 1	6:24 pm



DEEP SKY					DOUBLES:				Check list		Instruments used: _____ on _____ _____ on _____ _____ on _____
	Mag.	Size	Type	notes							
N 1514	10.0	1.9'	P.Neb.		χ Tau	4.8, 8.5	19"	white, blue	_____ N 1514	_____ 30 Tau	
N 1746	6.1	41'	O.C.	20 str.	30 Tau	5.1, 9.8	9"	blue, orange	_____ N 1746	_____ 88 Tau	
N 1647	6.4	45'	O.C.	200 str.	88 Tau	4.3, 7.8	69"	yellow, pale lilac	_____ N 1647	_____ 111 Tau	
N 1817	7.7	15'	O.C.	60 str.	111 Tau	5.0, 8.0	86"	yellow, lilac	_____ N 1817	_____ 118 Tau	
N 1807	7.0	17'	O.C.	20 str.	118 Tau	5.8, 6.7	5"	orange, orange	_____ N 1807	_____ β 87	
M 1	8.4	6'x4'	SNR	"Crab Neb."	β 87	6.2, 8.6	1.9"	red, blue	_____ M 1	_____ Σ 535	
M 45	1.2	110'	O.C.	100 str.	Σ 535	7.0, 8.3	1.1"	yellow, bluish	_____ M 45	_____ Σ 548	
Variable star: BU Tau	5.0 - 5.7mag.	lr.			Σ 548	6.4, 8.0	15"	yellow, bluish	_____ χ Tau	_____ Σ 495	
					Σ 495	6.1, 8.8	3.7"	yellow, yellow	_____ BU Tau	_____ mag. on _____	

Solar and Lunar (EST).

Date	Sunset	Moonrise	Moonset
1	5 : 40	11 : 51p	— : —
5	5 : 45	03 : 12a	— : —
9	5 : 50	06 : 37a	— : —
13	5 : 55	— : —	10 : 01p
17	6 : 00	— : —	01 : 00a
21	6 : 05	— : —	04 : 16a
25	6 : 10	06 : 23p	— : —
28	6 : 13	09 : 42p	— : —

PLANET WATCH

Mercury Sets	Jupiter Sets	Saturn Rises
6:29p	3:17a	12:59a
6:50p	3:01a	12:44a
7:10p	2:46a	12:28a
7:25p	2:31a	12:13a
7:33p	2:17a	11:53p
7:30p	2:02a	11:38p
7:14p	1:48a	11:22p
6:46p	1:34a	11:06p

February 2013

S	M	T	W	T	F	S
					1	2
3	4	5	6	7	8	9
☾						
10	11	12	13	14	15	16
●						
17	18	19	20	21	22	23
☽						
24	25	26	27	28		
	○					

Asteroid for February 2013 (1) Ceres

Date	Transits	RA		Dec.		Alt.	Azm	Magnitude
		hr.	min	deg.	deg.			
1	8 : 48 pm	05 : 14.1		+27.2		49°	265°	7.8
7	8 : 25 pm	05 : 14.1		+27.4		45	270	7.9
13	8 : 02 pm	05 : 15.0		+27.6		41	273	8.0
19	7 : 41 pm	05 : 17.1		+27.8		37	277	8.1
25	7 : 21 pm	05 : 20.2		+27.9		33	280	8.2
28	7 : 11 pm	05 : 22.2		+28.1		31	281	8.3

(at midnight)

Date UT hr Celestial Highlights

3	14	LAST QUARTER MOON
9	00	R Leo at max 5.8 mag.
10	07	NEW MOON
13	03	Algol at minimum
16	21	Mercury 18° E. elong.
17	20	FIRST QUARTER MOON
23	23	Lunar graze 18km N MVO
25	20	FULL MOON

Variable Star of the Month: **BU Tau 5.0-5.5 irregular**

LUNAR OCCULTATIONS FOR: FEBRUARY 2013

Civil (24hr)			UT			Moon			Star	Star	event	dbl./	
date	hr	min sec	date	hr	min sec	Ph	% illum.	alt	azimuth	name	Mag.	PA	sep.
4	5 : 36	: 24	4	10 : 36	: 24	R	40-	26°	157°	ZC 2230	6.7	259°	.030"
4	6 : 20	: 55	4	11 : 20	: 55	R	40-	27	160	ZC 2236	6.9	308°	1.80"
12	19 : 35	: 01	13	00 : 35	: 01	G	9+	14	262	SAO128380	8.1	azm176°	16 km
15	20 : 24	: 06	16	01 : 24	: 06	D	33+	38	255	SAO92878	7.7	134°	NA
16	21 : 28	: 49	17	02 : 28	: 49	D	42+	37	261	SAO93307	7.7	114°	NA
21	20 : 53	: 53	22	01 : 53	: 53	D	86+	64	154	ZC 1116	7.2	083°	NA
22	19 : 25	: 50	23	00 : 25	: 50	D	92+	43	111	ZC 1234	6.2	149°	.100"
23	18 : 11	: 10	23	23 : 11	: 10	G	96+	19	91	ZC 1341	4.3	azm353°	18 km
23	23 : 58	: 39	24	04 : 58	: 39	D	97+	58	200	zc 1359	5.2	123°	.300"
27	0 : 51	: 09	27	05 : 51	: 09	R	98-	45	165	ZC 1688	6.4	350°	5.00"

at MVO

D= disappearance. Good occultation event.

d= disappearance, the star's magnitude approaches the observing limits of 200mm objective

R= reappearance. Good occultation event

r= reappearance, the star's magnitude approaches the observing limits of 200mm objective

All disappearances (D) occur on the eastern limb (left side in the sky). Reappearances (R) always occur on the western limb.

Position Angle (PA): tells where along the western limb to watch for a reappearance.

PA is referenced to celestial north: North=0° East=90° South=180° West=270°

Occultations computed using Occult v3.6 (I.O.T.A.)

Variable star data from AAVSO. All other data computed with MICA 1800-2050 (Willman-Bell)

GALLERY.....

Christmas Dinner, Dec. 8, 2012

Photos of the event are presented here. A few members were camera shy for the group shot. But this is most of the MVAS that was on hand. Names are omitted....You all know who you are!
All photos except group shot are by Tony Mehle. Thanks!





I only have 4 telescopes this year....





In loving memory: A montage of Bill Pearce and examples of his imaging work. Prepared by Jodi and Roy McCullough. This was displayed at the Memorial Service.