



## MidAtlantic Mirror Making #10

Don Surles

Success! It is over! MMM#10, yes folks, I said MMM#10 is now part of Delmarva Star Gazers' history. And it was a tremendous success! Thanks to each participant for making #10 a memorable MidAtlantic Mirror Making weekend.

The final count of mirrors attempted and mirrors completed is:

Diameter	New	Refigure	Completed
6"		2	2
8"	2	1	3
10"	6	2	8
12.5"		1	0
16"		1	1
Total	8	7	14

I saw many of these mirrors on the test stands...and they are something to be treasured by their makers forever. There will be no rocking the focuser back and forth to decide when focus has been reached with these mirrors. All of us store-bought telescope owners will have to restrain our envy when we look through the scopes built around MMM#10 made mirrors. These mirrors are true works of art created by some very nice, dedicated, hard working people.

Now to some particulars surrounding the event. There was an absence of snow, fire trucks, sun and forks (yes, we ran out of plastic forks). But the gods of wind, rain, and tide attended MMM#10 and they let their vengeful presence be known. The rain and wind of Friday night and Saturday morning were classic Nor'easter and at Saturday's high tide we found ourselves on Mallard Lodge Island. Water was just a few feet from the Lodge out the back door, on both sides of the Lodge, and out front Route 9 was underwater to our north and south. In fact, the tidal water actually came into the parking lot and several cars had to be moved to higher ground...just inches higher...there are no hills around the Lodge. The wind and water penetrated the old Lodge in SEVERAL places and we contended with a few drips for a few hours. I am sure this MMM will be remembered as the one when we were forced to stay inside and "Grind More – Worry Less"...in this case the worry was about the rising water and when would the wind and tide abate. Someone even asked what my plan was in case we lost electrical power...and I didn't have a plan. I did not have a plan to prevent the tarp covering the grinding room floor from rising...apparently the Lodge floor does not have an air barrier and as the winds howled outside the old Lodge became a chimney and our blue Chinese tarp rose off the floor – twixt the grinding stands.

As usual the food was excellent and plentiful. Kathy, Karen, Doreen, and Gina did a great job in preparing great food in very substantial quantities...mirror makers like to eat often and they like eat large quantities...mirror making whets the appetite. We even had a banana pudding with "#10" written in 'nilla wafers on top. Of course we had a fish fry with hush puppies Saturday night...the vengeful gods must like fried fish and hushpuppies 'cause they calmed the winds and turned off the rain just in time for us to cook on the side deck. For those who want the recipe for hushpuppies...it a MMM secret that is shared freely.

I want to thank all who participated and made MMM#10 so much fun and such a huge success. Here are just some of the people – in no particular order, who contributed their time, talents, personality, and lots of work to ensure MMM#10 was successful...and if I missed you and your contribution please don't be offended 'cause without you the event would not be nearly as great.

Bill Hanagan and Michael Lecuyer – master pitch lap makers...the gods of pitch.  
Dave Groski, Dick Parker, and Steve Swayze – master mirror makers, testers, coaches...and encouragers. These guys can see and interpret those test reflections and then instruct the mirror maker in the proper figuring strokes...truly art and science combined

Kathy Sheldon, Karen Surles, Doreen Riley, and Gina Acker kept the excellent food coming in spite of the weather

Jerry Truitt, Ted Paras, Art Bianconi, Rob Lancaster...provided helping hands at whatever needed to be done

All the Mirror Makers...you stuck with the plan and worked for a successful outcome

We have successfully promoted MidAtlantic Mirror Making for the TENTH time. All of you, take your left hand and place it on the back of your right shoulder...and flop it up and down several times. You deserve those "pats on the back". Thank you again and now it is time to start planning number 11. See you next March.

## Obscure Astronomy Vocabulary Lesson

Don Surles

There is a new bookstore at Christiana Mall...I am not sure about the name...probably Borders. Chain bookstores are like chain hamburger restaurants...McDonalds, Burger King, Hardees...pretty much all the same...hamburgers or books...doesn't make much difference. The name is not important; what is important is the size of the store – it is HUGE and there must be a book for everyone somewhere in that store. I found a 500+ page book named Collins Dictionary of Astronomy written in Lilliputian size 5 font. I thought I knew a lot about astronomy but when faced with 500+ pages of words in microscopic font my confidence was challenged and I bought the book so's'n I could douse the doubts.

Here are a few of the more obscure words I found twixt the covers of this little jewel. If'n you can't find the meaning of the words please come to our next meeting in April and their meaning will be revealed.

And now the list...

Almuncantar

Amanda Telescope

Analemma

Ansae

Anomalistic Month and Anomalistic Year

Apodization

Appulse

Astration "ouch!"

Ataxite

Now if you are bored and have nothing else to do just run these words thru your spell-check or on-line dictionary. My little 500+ page book may have a few nuggets of info not found "on-line". Maybe I will share some obscure "B" words next month.

## **Comments for the Mirror Makers**

Art Bianconi

For those who just finished grinding mirrors at the Mid-Atlantic Mirror Making Seminar, I've some secrets to share:

Keep the scope simple; the barest minimum of equipment so it allows you to focus on observing, not fiddling with equipment.

The more you invest in goodies, the longer it takes to design, build and set up. The more that can go wrong.

The longer it takes to build, the greater the chances that life's inevitable surprises will intrude on your plans. There are enough frustrated expectations in life without adding one more. So I urge you to build it as fast as possible.

Please strive to keep it light.

Be fanatical about every part you put in it regardless of size. Please don't over-build the scope out of some uncertainty about it's strength.

If in doubt, please find out. Ask me.

Do something every single day to further the scope's completion. Small or large, doesn't matter so long as you do something to ". . . *move the ball forward*". (Cleaning the shop doesn't count)

One day you will look up and there, magically, is a telescope!

Lastly, use the scope a lot to where you know it intuitively and can operate it automatically in the dark, the way you do your car or a musical instrument. Resist the temptation to load up on more telescopes until you've mastered the current one.

If you want, check out this site for telescope tubes. The tubes are actually for rockets. The company is Public Missiles at <https://blastzone.com/pml/> Click on *air frames*.

### **Your 2009-2010 Officers**

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## Mid-Atlantic Nirror Making #10



### Magazine Subscriptions

As a paid member of DMSG, you can sign up/renew your S&T or Astronomy mags through the club for a discount over private rate. S&T, reg. \$42.95, is \$32.95 thru DMSG, Astronomy, reg. \$44, is \$34. See Michael Lecuyer for details.

## Spectacular Spiral

Tom Koonce

Antelope Valley Astronomy Club, Inc.

Lancaster, California

Every year around mid-April the Whirlpool galaxy is well placed for observation in the northern sky in Canes Venatici (The Hunting Dogs). The Whirlpool is also known as M51 and NGC 5194, but most people know it by the nickname that is obvious after your first view. It has a smaller, yellowish companion galaxy, NGC 5195 in the distance. The Whirlpool is the best spiral galaxy in the sky, in my opinion. It can be seen with a small telescope, the spiral arms detected in an 8" scope, and when it is viewed through a really large telescope it is a stunning sight that you'll never forget. It's always a star party favorite when it's visible higher in the sky. A friend once let me observe it through his 51" reflector and I could hardly tear myself away from the view after 15 minutes. I thought I had only been at the eyepiece for 30 seconds...

You will find it quickly by following the curved handle of the Big Dipper away from the dipper to the star Alkaid at the end of the handle. Then look 2 degrees (outer ring of your Telrad) lower to the south and west in declination at about a 90 degree angle to the handle of the dipper. Scan around the area at low powers and you'll spot it as a fuzzy patch of gray.

The more magnification that you apply to the view, the more of the galaxy's structure will be revealed. Under clear, dark skies you will easily be able to make out the spiral structure of the two tightly wound spiral arms, dust lanes and the illusion of a connecting bridge of material between the two galaxies that is not actually there, at least to the extent that it looks like through the eyepiece. The two galaxies interacted about 70 million years ago, with M51 coming out the winner, gaining mass and kick starting many regions of active star formation. While it certainly would have been an exciting (bad?) time to be living in the Whirlpool galaxy, the result today is a spectacular face-on spiral galaxy just 31 million light years away from us with plenty of interesting details, such as the pinkish knots of star forming regions and the radial wisps of interactions between the spiral arms. At medium power, sharp observers may be able to spot another much smaller edge-on galaxy, NGC 5229, to the northwest in the same field of view.

There are a few tricks to observing the Whirlpool galaxy and other 'faint fuzzies' like it. Obviously clear, dark skies and steady seeing are important. Filters will not enhance your views of galaxies, since galaxies are composed of stars emitting at all frequencies, filtering the view down to a particular band of frequencies will not increase the contrast of the view, like looking at the Ring Nebula with an OIII filter. The best way to visually observe extended, dim, magnitude 8.4 objects like the Whirlpool is to increase the amount of light getting to your eye... thus "bigger aperture is better." Please be careful when viewing awesome deep sky objects like M51 through really big telescopes, as it has been known to lead to serious infections of "Aperture Fever" in some observers. Sadly, there is no known cure for it and no known health insurance plans cover the cost of treatment. Trips to the Texas Star Party, Winter Star Party and other major deep sky events where big telescopes are present only offer temporary relief.

Now that the weather is warming up once again, take some time in April to get to know the spectacular Whirlpool galaxy, either for the first time or perhaps visit your old friend and study it in new detail.

Clear Skies,  
Tom

For More Information:

<http://hubblesite.org/newscenter/archive/releases/2005/12/image/a>  
<http://apod.nasa.gov/apod/ap090526.html>



Photo Credit: HST, ACS



## Astrophotos by Members and Friends



←

**Hickson 44**  
 These are tough objects from Blackbird, especially with my less than high end equipment.  
 60 Million light years away, dimmest is Mag 11.1  
 Unguided stack of 45 sec exposures, about 28 minutes total, 8" f/4 Canon Xti @ 1600 ISO.  
 Cal

↓

This is a four panel mosaic that I shot with the ST-10XME camera on the AP 130mm EDF refractor with a 0.75 telecompressor attached giving an overall focal length of 646mm.

Each pane is an RGB combine and each was about 70 min total exposure time plus a few shorter exposures to fill in the burnt out Trapezium area.

Joe Morris



↑

**Leo Triplets.**  
 Taken in Blackbird Parking Lot. Stack of 45 second unguided photos, 22 minutes total. 8" f/4 with Canon Xti @ iso 1600 using IDAS LPRF and coma corrector. Levels and contrast adjusted in PhotoShop. Cal



← →

These pics were from Wednesday night 3/17. pics are with canon XTi and Canon 100-400 "L" lens...handheld.

Don Surles



**How to Join the Delmarva Stargazers:** Anyone with an interest in any aspect of astronomy is welcome

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Do you need the newsletter snail mailed to you (Y/N)? \_\_\_\_\_

Please attach a check for \$15 made payable to Delmarva Stargazers and mail to Kathy Sheldon, 20985 Fleetown Rd, Lincoln, DE 19960. Call club President Don Surles at 302-653-9445 for more information.

Moondark is on hiatus this month. The column should return soon. Look here or keep an eye out on the [Moondark web site](#) ).