

# THE Eyepiece



May 2006  
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Monthly Publication of the Neville Public Museum Astronomical Society

## The Break-up of Comet 73P/ Schwassmann-Wachmann 3's Fragment B

The first image from a three-day observation with Hubble, taken on 18 April 2006, shows the break-up of Comet 73P/Schwassmann-Wachmann 3's Fragment B.

Courtesy of NASA, ESA, H. Weaver (APL/JHU), M. Mutchler and Z. Levay (STScI)



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### NPMAS Club Loaner Telescopes

NPMAS members may use, free of charge, for a one month, one of the two club telescopes available. For more details, please contact Gerry Kocken, *Properties Chair*, at 920-336-8594.



NPMAS is a proud member of the

**Night Sky Network**

"Astronomy clubs bringing the wonders of the universe to the public"

Member Society



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# April Meeting Minutes

by Amy Hannon-Drew

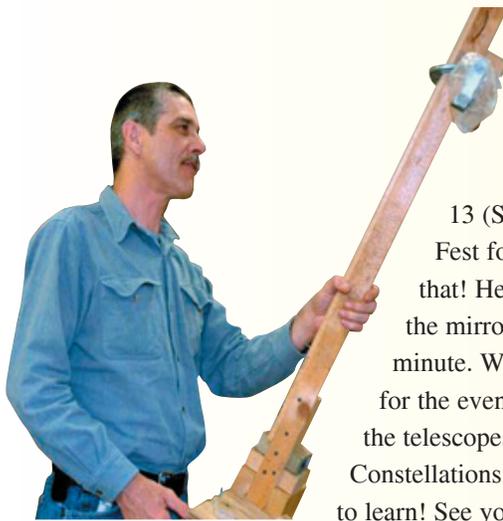
The April meeting of the NPMAS took place on Wednesday, April 12, 2006 at the Neville Public Museum. Gerry Kocken started the meeting at 7 pm sharp. We had 41 people at the meeting including several new members! Our membership keeps growing!

Upcoming events include the NCRAL Meeting in Appleton on April 22, Parmentier Observing Weekend on April 28 & 29, Public observing at the Wildlife Sanctuary on May 5 & 6, WOW on May 25 thru the 28, and a trip to Yerkes coming up in June. We looked at the past events since the last meeting as well. They included the Messier Marathon and Astronomy Day! The messier marathon was a great success. The clouds cleared just in time for a night of viewing. Mike Monfils gave out three certificates for participants. Dick Francini found 77 objects, Chris Schroeder was close behind with 76 and Gerry Kocken found 25 objects using binoculars!

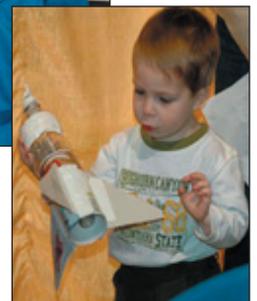
Congratulations! Astronomy Day was another success! Kids put together and launched over 300 rockets! Thank you for all of you who helped out that day! The Tuesday evening

telescope making class is starting up again on April 25. Everyone is welcome to come and see how mirrors are ground and how telescopes are made! We were asked for some help from the Sheboygan club with their Astronomy Day event coming up on May 6, and the Rocket for Schools organization is looking for help on May 12 & 13 (See [www.rocketforschools.org](http://www.rocketforschools.org))

Mike Monfils finally received his award from Astro-Fest for his 'telescope' made of 2 x 4s and duct tape. Ok, maybe there was more to it than that! He received the award for the 'Best use of materials at hand'. He uses the scope to test the mirrors that we are grinding at the telescope making class. Joe Celmer presented our astro-minute. We learned how to use the setting circles on our telescopes! Thank you Joe! Our speaker for the evening was Gary Baier, who gave us some great ideas for enjoying the night sky with the telescopes we were born with – our eyes! Our topic for next month's astro-minute: Guidepost Constellations. Our feature speaker will talk about the Asteroid Belt! There is always something new to learn! See you all there!



## Photos from The Big Event for Little Kids on Saturday, April 8, Astronomy Day for the Neville Public Museum Astronomical Society.



## Meetings, Events & Star Parties

### May 5

Public observing at  
Mosquito Hill Nature Center

### May 5 & 6

Public observing at the  
Wildlife Sanctuary

### May 25-29

WOW, Hartman Creek

### Looking Ahead:

### June 10

Yerkes Trip

### June 16 & 17

36th Annual Apollo Rendezvous  
2006 & Astronomical Leagues  
GreatCon 2006, Dayton, Ohio  
<http://www.mvas.org>

## Planet Watch For May

by Wayne E. Kuhn



**Mercury** is lost in the morning twilight at the beginning of May and will be in superior conjunction on the 18th. It reappears in the evening sky the last few days of the month. While it is visible it will shine at magnitude -2.1 and be 5.1" in apparent size.

**Venus** is still in the morning sky, rising less than 2 hours before the sun and is very low in the east. It shines at magnitude -3.9 and shrinks to 16.1" in apparent size.

**Earth's Moon:** First Quarter Moon is on the 5th at 11:13 PM. Moon is at apogee (251,389 miles) on the 7th at 1:00 AM. Full Moon is on the 13th at 12:51 AM. Last Quarter Moon is on the 20th at 3:20 AM. Moon is at perigee (229,042 miles) on the 22nd at 9:00 AM. New Moon is on the 26th at 11:26 PM.

**Mars** starts the month in Gemini but moves into Cancer on the last day of the month. It stands only 20 degrees high in the west after sunset and sets about 11:30 PM in the northwest. It dims to magnitude 1.6 and shrinks to 4.7" in apparent size.

**Jupiter** remains in Libra and will be in at opposition on May 4. This means Jupiter will be in the sky all night, transiting about 30 degrees high near 11:00 PM. It shines at magnitude -2.5 and is 44.6" in apparent size.

**Saturn** is still in Cancer and is low in the west at the end of evening twilight. It sets about 4 hours after the sun and shrinking in size. It shines at magnitude 0.3 and is 17.8" in apparent size.

**Uranus** is still in the constellation Aquarius. It shines at magnitude 5.9 and is 3.4" in apparent size.

**Neptune** is in the northern part of the constellation Capricornus all year. It dimly shines at magnitude 7.9 and is 2.2" in apparent size.

**Pluto** starts the year in the constellation Serpens Cauda but will move ever so slightly into Ophiuchus in October. It shines at magnitude 13.9 and is 0.1" in size.

### New memberships to NPMAS in March:

Sean Dolan  
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### New Member Info from Kendall Kelley

**How did you find out about the club?** I'm sure that we heard about it through the Museum, but two of our children became particularly interested after seeing your booth (and reviewing handouts that they picked up there) at last year's Big Event for Little Kids.

**Do you own a telescope or binoculars?** Binoculars ... we will buy a telescope after we become a bit more educated and identify an appropriate product that we can afford.

**How long have you been interested in Astronomy?** I (Kendall) have always had an interest, although I have not devoted the time necessary to learn much about it. My wife has included Astronomy in the homeschool curriculum of each of the children, so each of them have at least a basic introduction. The two girls who have expressed a strong interest are Kaitlin (age 12, and VERY interested) and Keelin (age 10).

**Do you have a favorite area in Astronomy (deep sky observing, planets, cosmology, etc)?** So far several of the children have shown an interest in deep sky observing.

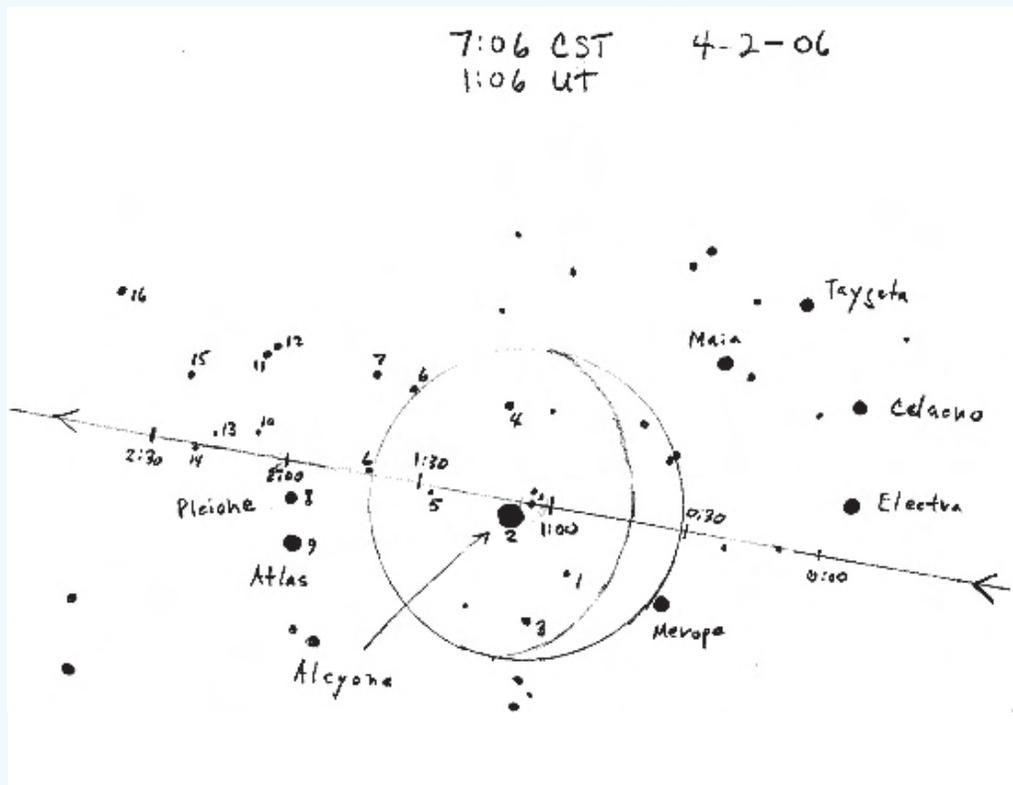
**What can you tell us about yourself? Who are the other members of your family?** Kendall (Dad), Kathy (Mom), Kara (soon to be married and moving out - age 23), Kristopher (age 20, Jr at the University of Dallas, Texas), Kyle (age 16, High school senior), Kaitlin (age 12), Keelin (age 10), Kiera (age 8), Keona (age 5), and Kaelisa (age 3).

**What would you like to get out of your membership?** An opportunity to learn a lot more about Astronomy and opportunities to learn about deep sky observing (including using equipment so that we can figure out what we should purchase) from more experienced club members.

# Pleiades Occultation April 1, 2006

by Dick Francini

On the evening on April 1 the crescent Moon passed over the open cluster M-45, the Pleiades. All the elements for the best possible look at an event like this seemed to be in place. The timing allowed most of the event to be viewed just after the Sun set, the stars were to disappear behind the dark limb of the Moon (as opposed to disappearing behind the bright side making them much more difficult to observe) and the Moon was only a small 16% crescent, cutting down it's brightness so it would not overpower the dimmer stars.



I have never been interested enough in occultations of stars by the Moon to go to the trouble to research them and pull the scope out to observe them. All that I have seen have been by accident, but they are still an interesting spectacle to see. For those of you who have not seen this I will briefly explain what it looks like. When you look through a telescope at high power, stars seem to be small disks. As a result you might expect that a star going behind the Moon would slowly disappear behind the dark limb, slowly dimming as it goes. This is not what happens at all. Stars are actually so far away from us that they are actually only the tiniest pinpoints of light; far too small to show any dimming as they disappear. They appear to make contact with the dark limb and then just blink out in an instant, no dimming can be seen at all. It is a very interesting phenomenon to see. Stars appear as small disks in your telescope at high power as a result of the wave nature of light, not their actual size.

Above is a picture of the Pleiades with the Moon's path plotted and times in UT noted. This position was a 7:06 CST or 1:06 UT (4-2). I included the names of the brighter stars and also numbered the stars as they disappeared. Sorry if it seems a bit crowded, but this all seemed like important information to include.

The event actually started before it got dark, so I missed a portion of it. I would have needed to start about 5:00 CST to see the entire thing. I got started around 6:15, just before the Sun set. I was very fortunate that there was a very heavy dark bank of clouds down by the horizon, and the Sun disappeared into this cloud bank before setting, allowing the sky to darken a bit early. When I first started I could only see the few brightest stars, Alcyone and Atlas, and the crescent Moon. I could not see the Moon's dark side at all, so I had to complete the circle using my imagination and guess when these first stars would disappear. Fairly quickly other dimmer stars started to pop in (thanks to the heavy cloud bank).

In all, 17 different stars blinked out behind the Moon in about a 2 ¼ hour period. The event became much more interesting to watch when the Moon's dark side finally became visible. You could then watch a star slowly approach the dark side, seem to touch, and then blink out. Imagine the star was part of an electric circuit and you could turn it off with a switch. That's exactly what they look like when they disappear!

CONTINUED On Page 5

Watching them reappear was much more difficult as the bright crescent overpowered the dimmer stars. You could not see most of them reappear, they had to get a small distance away from the Moon before they became visible again. I thought that maybe the three brighter stars Merope, Alcyone, and Atlas would be visible as they popped out from behind the Moon, but I managed to miss all three as the reemerged! Timing these was difficult as don't know exactly when or where they would reemerge, I was guessing all the time. The first bright star, Merope, reappeared before I expected it to. The second (and brightest) Alcyone, reappeared while I was watching the stars numbered 11 and 12 disappear. The the final one, Atlas, reappeared while Janice was watching star 16 disappear. Didn't someone say, "Timing is everything"?

The most interesting part of this evening of observing was watching the two stars I have numbered 6. As I watched them creep closer and closer to the dark edge it became apparent that they were going to disappear at almost the same time. But I never expected what actually occurred. They disappeared at exactly the same moment, not even a second difference! What are the odds of something like that happening? My picture has the Moon at this moment with the two stars numbered 6 just touching before disappearing. It appeared that there might be another chance of two disappearing very close together with the stars numbered 11 and 12, but 12 ended up being about 20 seconds behind 11. This is when I missed Alcyone's reappearance.

Another issue which contributed to me to missing the reappearance of the three brighter stars was that I needed to use a filter when watching them reappear, to dim the bright crescent down some. Even using my 8" instead of my 16", the bright crescent was still much too bright to watch for any period of time without a filter. Unfortunately the filter dims the stars as well. I watched the disappearing stars at a high enough power that I was able to get the bright crescent out of the field of view and thus avoid using a filter at all. But I was forced to add the filter every time I switched over to watching the bright side. I was also unable to keep an eye on both the dark edge and the bright edge at the same time as I was purposely observing them separately to control the amount of bright light from the crescent.

There will be three more similar occurrences this year, July 20, Oct 10, and Dec 4, but this one seemed to present the best conditions of the four. The next two have the stars disappearing behind the bright side instead of the dark side. The December 4 event is probably closest to this one as the stars disappear behind the dark limb, but the bright side will be more problematic as it will be almost a half Moon as compared to a 16% crescent this time.

This was a very interesting and a very different observing experience. It was well worth the time and effort. Those of you who would like to try this, I would suggest the December 4 event, the times appear to be about 1:30 UT to about 4:00 UT (or 8:30 to 11:00 CST the evening of December 3).

## NPMAS Board

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Public Outreach Gerry Kocken

Messier Marathon Mike Monfils

Astronomy Day Gerry Kocken

Club Picnic Amy Hannon-Drew

October Field Trip Ed Smith

## NPMAS Observing Sites

NPMAS members have access to three observing sites located on private land and belonging to members of our club.

**Parmentier Observatory** — largest private observatory in WI housing a 30" classical Cassegrain. Members may view through the 30" or bring their own scopes and set up in the field below.

Observatory Number: 920-845-5626

Ron Parmentier Home: 920-336-5878

**Crivitz Observing** — private residence of Dave & Carol Jorgenson. Located in the Northwoods of Wisconsin on 100 acres of land, this site offers some of the darkest skies around. The field is equipped with electricity and a cabin is available for use. Call ahead to make arrangements.

Dave & Carol Jorgenson Home: 715-757-3296

**Cedar Drive Observatory** — private residence of Tony Kroes and Tara Adsit. Located SW of Pulaski on 10 acres of land. Members welcome anytime, but please call ahead to make arrangements.

Tony Kroes Home: 920-822-4959

# May NPMAS Meeting

May 10, 2006

## Asteroid Belt

Bob Lundt

also: Ed's Bit &  
Guidepost Constellations



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## May 2006

Sunday	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday
	<b>1</b>	<b>2</b> DPAS Club Meeting	<b>3</b>	<b>4</b>	<b>5</b> First Quarter Moon Astronomy Day Eta Aquarids Meteor Shower Peak	<b>6</b>
<b>7</b>	<b>8</b>	<b>9</b>	 Meeting <b>10</b>	<b>11</b>	<b>12</b> Comet Schwassmann- Wachmann 3 Near- Earth Flyby (0.079 AU)	<b>13</b> Full Moon
<b>14</b> Griffith Observatory Reopens	<b>15</b>	<b>16</b>	<b>17</b> NEWSTAR Club Meeting	<b>18</b>	<b>19</b>	<b>20</b> Last Quarter Moon
<b>21</b>	<b>22</b>	<b>23</b>	<b>24</b>	<b>25</b>	<b>26</b>	<b>27</b> New Moon
					WOW 2006	
<b>28</b>	<b>29</b>	<b>30</b>	<b>31</b>			
WOW 2006						