Hail Hale-Bopp! If you want to call it the comet of the century, you’ve got my vote! It couldn’t be much better placed in the sky for the casual observer. Even perihelion was magnificent. It’s going to attract a lot of people to amateur astronomy. I have no doubt that telescope sales will reach a peak because of this comet.

Evidently, Bill Gates and company have realized the importance of capturing that part of the public that still hesitates to get involved with regular computers. Microsoft has purchased WebTV. The acquisition cost Microsoft 425 million dollars. Success in this venture depends on the introduction of digital television and how well it’s accepted by the public. Even so, Bill and company are guaranteed some success, as today’s TV sets will cease being manufactured by the year 2006.

Europa is making news because of Galileo’s latest data acquisition of that moon. Three hundred foot high icebergs are evident in the photos shown by NASA. Where there’s water, there could possibly be life, of some form or another. At some depth below the surface there may be enough heat to sustain it.

According to the Detroit Free Press, the Heaven’s Gate cultists played amateur astronomer with a brand new LX-200 telescope about two months before heading for la-la-land. However, the $3,645 telescope let them down because they could see the comet but not the space ship that was following it. So, they asked for their money back. Mike Fowler, of Oceanside’s Photo And Telescope, reluctantly cancelled their charge-card order. “They didn't know much about astronomy” Mike said. They went to another astronomy store called Scope City in San Diego and bought binoculars, telling the clerk that they got a better view, of the comet, using binoculars. It’s amazing how strong a belief system can be, even when the evidence against your beliefs is staring you right in the eyeball.

There’s been a slight change in Microsoft's plans for Windows 97. The name's been changed to Windows 98. Why? Because it's been delayed. That's nothing new for...
The WASP
Published by
Warren Astronomical Society, Inc.
P.O. Box 1505
Warren, Michigan 48090-1505

1995 Officers
President Dave D’Onofrio 313-563-6652
1st VP Lou Faix 810-781-3338
2nd VP Blaine McCullough 810-673-8695
Secretary Glenn Wilkins 810-528-8233
Treasurer Ben Tolbert 810-796-2872

The Warren Astronomical Society, Inc., is a local, non-profit organization of ama-
teur astronomers. The Society holds meetings on the first and third Thursdays of
each month, starting at 7:30 p.m.
First Thursday meeting: Third Thursday meeting:
Cranbrook: Institute of Science Macomb Community College
1221 North Woodward Ave South campus, Bldg. B, Room 209
Bloomfield Hills, Michigan 14600 Twelve Mile Rd.
Warren, Michigan

Membership and Annual Dues
Student $12.00 College $17.00 Individual $25.00 Family $30.00 Senior Citizen $17.00
Send membership applications and dues to the treasurer:
Ben Tolbert
20206 Vermander
Clinton Twp. MI 48035

Among the many benefits of membership are
- Free use of Stargate Observatory.
- Special interest subgroups. See chairpersons.
- Call list: don’t miss unexpected events.
- Free membership in Astronomical League, including Reflector newsletter.
- More benefits are listed in Member Booklet

The Warren Astronomical Society Paper (WASP) is the official monthly publication
of the Society. Each new issue of the WASP is made available at the Macomb meet-
ing on the third Thursday. Non-members will be charged $1.00 for each new issue.
Back issues, when available are free. Requests by other clubs to receive the WASP
and other correspondence should be addressed to the editor.

Articles for inclusion in the WASP are strongly encouraged and should be submitted
to the editor on or before the first Thursday of each month. Any format of submission
is accepted, however the easiest forms for this editor are files in plain text format.
A copy mailed on the Internet to jeanbondo@eaglequest.com

For further information on contribution, see or call the editor:
Jeff Bondono
51054 Kingwood
Shelby Twp. Michigan 48316-4524
510-731-4706

Disclaimer: The articles presented herein represent the opinion of their authors and
are not necessarily the opinion of the Warren Astronomical Society or this editor. The
WASP reserves the right to edit or deny publication of any submission.

Stargate Observatory is owned and operated by the Society. Located on the
grounds of Camp Rotary on 29 Mile Road, 1.8 miles east of Romeo Plank Road,
Stargate features a 12.5 inch f/17 club built telescope under a steel dome. The obser-
vation is open to all club members in accordance to the “Stargate Observatory Rules”
posted in the member handbook. Those wishing to use the observatory must call
the 2nd VP by 7:00 p.m. on the evening of the session. The coordinates for Stargate
Observatory are 82° 56' 0.4" W, 42° 46' N.

Library: The Society maintains a library of astronomy-related books and periodicals
at the Macomb meeting room. See the librarian, Louis Nannee, to check out a book.

Special interest groups
Computers Larry Kalinowski 810-776-9720
Deep Sky Doug Bock 810-750-0273
Lunar/Planetary Riyad Matti 810-548-2323
Solar Marty Kunz 810-477-0546
Math John Hergott 810-548-1442
Telescope Fred Judd 810-758-7458

Page 2 WASP

Masterpieces Messier
Missed
by Jeff Bondono

NGC 4216 at 12h16m +13d09m

NGC 4216 is catalogued as a 10th magnitude 8′x′2′ Sb
spiral galaxy. I first saw it with my 8′ Newtonian from near
Selfridge Air Force Base during May of 1986. I apparently
didn’t see much because I only noted that it was a small
round glow.

An attempt from my Utica backyard in June of 1986 was
unsuccessful, but March of 1987 from that same site
showed me a 5′x′2′ silver of light with a bright nucleus.

Much darker skies at my Imlay City observing site during
May of 1990 showed me what I called a first-class
galaxy. With direct vision, the galaxy again appeared as a
5′x′2′ glow with a bright nucleus. Averted vision added
fainter outskirts and I could imagine this galaxy as a text-
book nearly-edge-on spiral.

An April 1992 observation at the same site with the
same scope added only that the core was 1.5′x1′.

During 1993-4 I built my 14.5′ dobsonian scope, and
my first observation of NGC 4216 with that scope came
again at Imlay City, during March of 1995. The extra aper-
ture expanded NGC 4216 into an 8′x′2′ spindle running
about north-south with a very bright nonstellar core offset
toward the northwest from center. The galaxy’s halo did
not grow wider around the nucleus; instead the halo ap-
peared to be a flat brushstroke of pale light in the sky
with nearly-parallel edges, with the core superimposed.
The halo seemed more sharply cutoff on the eastern edge
than on the western edge. There appeared to be an ex-
tremely faint glow just east of the sharply-cutoff eastern
edge, and I thought I might have seen a dust lane with
slow growth, but I noted this observation as very unsure.
Later I read other people’s observing notes and found this
to be a real feature. This lane shows very well in the pic-
ture on page 92 of April 1996’s Sky and Telescope and
here. I noted no superimposed stars or stars very close to
galaxy, so I apparently didn’t see the star just off the east-
ern edge of the galaxy. This seems odd.

Observations during 1995 and 1996 added that the core
of the galaxy is elongated in the same position angle as
the main body, that within that core a very slightly brighter
stellar occasionally shows during moments of the steadi-
est seeing, and that the faint glow of the halo appears on
both the eastern and the western sides of the core, so the
galaxy can’t be truly edge-on.
them, they have a habit of delaying software introduc-
tions. It actually helps raise the public's anticipation for 
the software.

The scheduled meeting, at Stargate observatory, with 
Metro-park personnel proved to be quite a gathering. 
The skies cleared for the fourth straight day in a row, 
revealing a marvelous panorama of celestial wonders, 
for about forty members and visitors. Comet watching 
was at the top of everyone's list. A lot of photos were 
taken and the twenty-two inch Dobsonian made eyes 
pop. If you haven't gazed through the eyepiece of that
'scope yet, be prepared to get your socks knocked off.

I've been collecting Hale-Bopp photos off the Internet 
and have potted 28 images on a floppy disk for sale to 
anyone that's interested. These images aren't listed in 
the clubs shareware list. See me if you'd like a copy. 
They're one dollar per disk to club members.

It looks as though America On Line (AOL) is making an 
attempt to purchase Compuserve....rumors are flying. H

ALAN HALE, from page 1

graduate and graduate school, that the opportunities 
for us to have a career in science are limited at best 
and are which I usually describe as "abyssal." Based 
upon my own experiences, and those of you with whom 
I have discussed this issue, my personal feeling is that, 
unless there are some pretty drastic changes in the 
way that our society approaches science and treats 
those of us who have devoted our lives to making 
some of our own contributions, there is no way that I 
can, with a clear conscience, encourage present-day 
students to pursue a career in science. It really pains 
me a great deal to say something like that, but I feel so 
strongly about this that I have publicly made this state-
ment at almost every opportunity I have been given.

I am trying to use the media attention that is currently 
being focused upon me to raise awareness of this state 
of affairs, and perhaps start to effect those changes 
that will allow me to convey a more positive message to 
the next generation. So far, I'm sensing a certain reluc-
tance among the media to discuss this issue, as they 
seem far more interested in items which I consider to 
be irrelevant and unimportant. But I intend to keep 
hammering away at this, and I'd like to believe that 
eventually some are going to sit up and take notice. I 
am also attempting to schedule meetings with some of 
our government leaders, to see if I can at least get 

Sincerely,

Alan Hale

WASP
The beguiling ideas about science quoted here were gleaned from essays, exams, and class room discussions. Most were from 5th and 6th graders. They illustrate Mark Twain's contention that the 'most interesting information comes from children, for they tell all they know and then stop.'

Question: What is one horsepower? Answer: One horsepower is the amount of energy it takes to drag a horse 500 feet in one second.

You can listen to thunder after lightning and tell how close you came to getting hit. If you don't hear it you got hit, so never mind.

Talc is found on rocks and on babies.

The law of gravity says no fair jumping up without coming back down.

When they broke open molecules, they found they were only stuffed with atoms. But when they broke open atoms, they found them stuffed with explosions.

When people run around and around in circles we say they are crazy. When planets do it we say they are orbiting.

Rainbows are just to look at, not to really understand.

While the earth seems to be knowingly keeping its distance from the sun, it is really only centrifating.

Someday we may discover how to make magnets that can point in any direction.

South America has cold summers and hot winters, but somehow they still manage.

Most books now say our sun is a star. But it still knows how to change back into a sun in the daytime.

Water freezes at 32 degrees and boils at 212 degrees. There are 180 degrees between freezing and boiling because there are 180 degrees between north and south.

A vibration is a motion that cannot make up its mind which way it wants to go.

There are 26 vitamins in all, but some of the letters are yet to be discovered. Finding them all means living forever.

There is a tremendous weight pushing down on the center of the Earth because of so much population stomping around up there these days.

Lime is a green-tasting rock.

Many dead animals in the past changed to fossils while others preferred to be oil.
Did you know that....

If it wasn't for Pluto's highly reflective surface, it might never have been discovered? Pluto's surface is covered with methane ice or frost and makes it extremely bright. If Pluto and its moon, Charon, were in the Earth’s Moon’s orbit, (and we were able to keep the methane from melting), they would be three times brighter than our Moon. Talk about light pollution!!


Celestron, Celestar 8

Complete, including 25mm eye piece, boxes, manuals, hard case. Like new, 1 year old. Excellent condition.

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Contact Mike Affeldt
SEAGUL@SPRYNET.COM
313-891-5229, after 5 p.m.

Last Month's Puzzle

I NEED HELP By Vic Lee

Hey, guess what?! The Andromeda galaxy is ONLY 25 feet away. It's just a lot smaller than we originally thought.
Meteor Showers

ACROSS
1  April 22nd
4  May 4th
8  July 28th
10 November 17th
11 December 22nd
12 August 12th

Use the date of maximum ZHR to determine the name of the shower.

Note: All spaces and/or grammatical symbols have been eliminated from the puzzle.

DOWN
2  October 10th
3  November 20th
5  January 3rd
6  December 14th
7  October 21st
9  November 4th
<table>
<thead>
<tr>
<th>Date</th>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td>Apr 17</td>
<td>7:30 pm</td>
<td>Meeting: Macomb Community College South Campus, Bldg. B, Room 209</td>
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<tr>
<td></td>
<td></td>
<td>“Solar Eclipse”, by Dave Harrington</td>
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<tr>
<td>Thu 24</td>
<td></td>
<td>Computer Subgroup Meeting</td>
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<tr>
<td>Fri 25</td>
<td></td>
<td>Public Comet Observing at Kensington Metro Park</td>
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<tr>
<td>Sat 26</td>
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<td>Public Comet Observing at Kensington Metro Park</td>
</tr>
<tr>
<td>May 1</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td></td>
<td></td>
<td>“Comet Hyakutake”, by Mike O’Dowd</td>
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<tr>
<td>Fri 2-Sat 3</td>
<td></td>
<td>Campout/Observing at Duggan’s Family Campground, Port Austin</td>
</tr>
<tr>
<td>Fri 9-Sun 11</td>
<td></td>
<td>NCO Wilderness Star Party - Boon, west of Cadillac. BYO Everything.</td>
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<tr>
<td>Thu 15</td>
<td>7:30 pm</td>
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<td>Thu 22</td>
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<tr>
<td>June 5</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td>Fri 6-Sat 7</td>
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<td>14th Annual Summer Solstice Party, at Northern Cross Observatory</td>
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<td>Fri 13-Sat 14</td>
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<td>27th Annual Apollo Rendezvous and Telescope Fair, Dayton Ohio</td>
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<tr>
<td>Thu 19</td>
<td>7:30 pm</td>
<td>Meeting: Macomb Community College South Campus, Bldg. B, Room 209</td>
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<td>Wed 30-Sun 2</td>
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<td>SMURFS ’97</td>
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<tr>
<td>Aug 2-Sun 9</td>
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<td>4th Annual Nebraska Star Party</td>
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<tr>
<td>Thu 7</td>
<td>7:30 pm</td>
<td>Meeting: Downstairs at Cranbrook Institute of Science</td>
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<tr>
<td>Fri 8-Sun 10</td>
<td></td>
<td>Perseid Meteor Shower campout at Port Crescent State Park</td>
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<tr>
<td>Tue 12-Wed 13</td>
<td></td>
<td>Peak of Perseid Meteor Shower (continued camping for those that wish)</td>
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<tr>
<td>Thu 21</td>
<td>7:30 pm</td>
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<td>Thu 29</td>
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<td>Sept 4</td>
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<tr>
<td>Fri 5-Sun 7</td>
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<td>Astrofest, at Kankakee, Illinois</td>
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<td>Thu 18</td>
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# 1997 May 1997

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<td>27 12:46 8:59p</td>
<td>28 6:00 12:32p</td>
<td>29 6:00 9:00p</td>
<td>30 1:28 9:01p</td>
<td>31 5:59 2:50p</td>
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**Detroit, MI**

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**Key to times:**
- **SunRise**
- **MoonRise**
- **SunSet**
- **MoonSet**