



Focal Point



September, 2013

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Please Renew Your MAS Membership!

Starting this year the Membership Renewal Notices will be sent out via email. The members are asked to print out the attached Renewal Form, fill it out and send it back along with a check made payable to The Milwaukee Astronomical Society. The Form can also be printed from the last page of this newsletter. Please renew your membership soon. We are grateful to those members who have already responded.

If you joined the MAS after January 1st, 2013 your membership is active till 2014.

Membership Meeting on Friday, September 20th

The next membership meeting will be on Friday, September 20th at the MAS Observatory, at 8:00 PM. **Michael E. Bakich**, a Senior Editor at Astronomy Magazine, will be our speaker. His topic will be comet Ison a sungrazing comet discovered on 21 September 2012 by Vitali Nevski and Artyom Novichonok. Ison has a potential to become a comet of the century. But comets are notoriously unpredictable. It has the potential to live up to the hype, but it also has the potential to do nothing.



Next Public Night on September 27

On September 6th the MAS held the fourth Public Night of the season. An estimated 70 guests showed up. The topic was: Deep Sky Objects.

The next public night will be held on **September 27th**, from **7:30 pm** at the MAS Observatory in New Berlin. All help is appreciated.

2013 Public Observing Nights	
September 27, 19:30	Constellation Culture Sue Timlin
October 11, 19:30	The Moon Celeste Keith

Member's Astrophoto



This photo was taken on September 4th. NGC253 is the huge low galaxy that sits at -25 degrees in the Sculptor Constellation. The image is a combination of a 300s and 360s exposures with Atik 460 camera through a Celestron 11" SC with a HyperStar lens.

by Dennis Horvath

Classified

SkyQuest XT10i telescope for sale

Hello star gazers,

I have a barely used Orion Skyquest XT10 Intelliscope Dobsonian telescope that I would like to sell for \$600. The telescope retails on the Orion web page for \$779.99 plus shipping (\$55). It has the Skyquest computerized object locator. It comes with two eyepieces: a Plossl 10 mm and a Plossl 25mm. If the purchaser lives in the Milwaukee/Madison area, we can make arrangements for pickup or delivery.

Barbara Atlee
262-966-9601



In the Astronomical News

Voyager 1 at a Distance of 17 Light Hours Has Left the Solar System

New and unexpected data indicate Voyager 1, a 36-year-old probe that is about 12 billion miles from our sun has been traveling for about one year through plasma, or ionized gas, present in the space between stars. Voyager is in a transitional region immediately outside the solar bubble, where some effects from our sun are still evident. A report on the analysis of these data, an effort led by Don Gurnett and the plasma wave science team at the University of Iowa, is published in Thursday's edition of Science.

Voyager 1 does not have a working plasma sensor, so scientists needed a different way to measure the spacecraft's plasma environment to make a definitive determination of its location. A coronal mass ejection, or a massive burst of solar wind and magnetic fields, that erupted from the sun in March 2012 provided scientists the data they needed. When this unexpected gift arrived at Voyager 1's location 13 months later, in April 2013, the plasma around the spacecraft began to vibrate like a violin string. In April 9, Voyager 1's plasma wave instrument detected the movement. The pitch of the oscillations helped scientists determine the density of the plasma. The particular oscillations meant the spacecraft was bathed in plasma more than 40 times

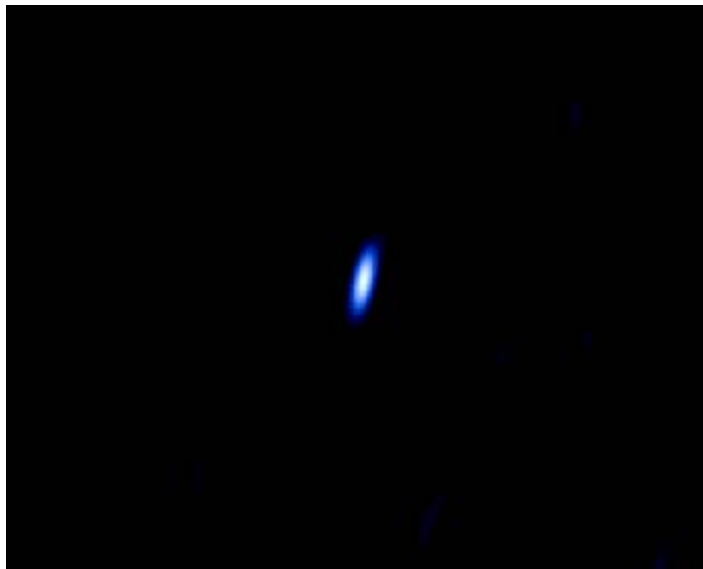
denser than what they had encountered in the outer layer of the heliosphere. Density of this sort is to be expected in interstellar space.

The new plasma data suggested a timeframe consistent with abrupt, durable changes in the density of energetic particles that were first detected on Aug. 25, 2012. The Voyager team generally accepts this date as the date of interstellar arrival. The charged

particle and plasma changes were what would have been expected during a crossing of the heliopause.

Voyager mission controllers still talk to or receive data from Voyager 1 every day, though the emitted signals are currently very dim, at about 23 watts -- the power of a refrigerator light bulb. By the time the signals get to Earth, they are a fraction of a billion-billionth of a watt. Data from Voyager 1's instruments are transmitted to Earth typically at 160 bits

per second, and captured by 34- and 70-meter NASA Deep Space Network stations. Traveling at the speed of light, a signal from Voyager 1 takes about 17 hours to travel to Earth. After the data are transmitted to JPL and processed by the science teams, Voyager data are made publicly available.



The signal of NASA's Voyager 1 spacecraft has been spotted from Earth by the National Radio Astronomy Observatory's 5,000-mile-wide Very Long Baseline Array (VLBA). Though incredibly weak by the standards of modern wireless communications, Voyager 1's signal is bright when compared to most natural objects studied by radio telescopes. Image credit: NRAO/AUI/NSF.

by Tony Phillips / Science@NASA

Adopt a Telescope Program - Signup Sheet

	Adoptee	Scope	Location
1	Sue Timlin	18" F/4.5 Obsession	Wiesen Observatory
2	Neil Simmons	12.5" F/7.4 Buckstaff	B Dome
3	Russell Chabot	12.5" F/9 Halbach	A Dome (Armfield)
4	Dan Yanko	18" F/4.5 Obsession (Kyle Baron)	Albrecht Observatory
5	Tamas Kriska	25" F/15 Zemlock	Z Dome
6	Henry Gerner	12" LX 200	Tangney Observatory
7	Jeffrey Fillian	14" Z-Two scope	Ray Zit Observatory
8	Vacant	10" LX 200	Jim Toeller Observatory

At Your Service

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Neil Simmons	262-889-2039
Michael Smiley	262-825-3981
Sue Timlin	414-460-4886
Dan Yanko	262-255-3482

September/October Key Holders

9/21	Tom Schmidtkunz	414-352-1674
9/28	Neil Simmons	262-889-2039
10/5	Dan Yanko	262-255-3482
10/12	Paul Borchardt	262-781-0169
10/19	Russell Chabot	414-881-3822
10/26	Brian Ganiere	414-961-8745



MAS Observatory

18850 Observatory Rd
New Berlin, WI

www.milwaukeeastro.org

MAS Membership Renewal Form



Please return this form with your payment. We encourage you to join our online community at the **Milwaukee Astronomical Society Google Group**. Please visit our website at www.milwaukeeastro.org

Add my email to the MAS Google Group: YES _____ NO _____

Name:

Address:

City, State Zip:

Phone:

E-mail Address:

Membership (select one of the following)

- _____ \$46.00 - Resident Individual
- _____ \$52.00 - Resident Family
- _____ \$23.00 - Resident Student
- _____ \$28.00 - Non Resident Individual
- _____ \$32.00 - Non Resident Family
- _____ \$20.00 - Non Resident Student

A resident is defined as a person who lives in Milwaukee, Waukesha, Ozaukee, or Washington counties. Non-residents are all other locations. Keyholders must pay resident dues.

Subscriptions

- _____ \$33.00 - Sky and Telescope magazine subscription
- _____ \$34.00 - Astronomy magazine subscription

\$ _____ Total due.

Make checks payable to **The Milwaukee Astronomical Society.**

Please complete and mail form with payment to:

Tamas Kriska
923 Currie Place
Wauwatosa, WI 53213