



# Northwest Skies

The Official Newsletter of the Tacoma Astronomical Society  
Tacoma, Washington State, USA

78 Years of Amateur Astronomy in the Pacific Northwest

March / April 2009

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## Preface to the March / April Newsletter

by Dave Norberg

Welcome to the first edition of *Northwest Skies* for 2009! Editing a newsletter like this is a new experience for me, and I'm sure there will be a significant learning curve involved. So, I'd greatly appreciate suggestions, submissions, and feedback over the next few months. Let me know what you'd like to see in this newsletter!

Similarly, I've been gradually adding new sections to the website. My eventual goal is to create a limited content management system so that other club members can add to or edit the site's main page as needed or desired. I'm hoping these changes will make the site more dynamic and draw users to check it more often. Let me know if you'd be interested in contributing to the site, or would like new information added to it. I know there are a number of club activities that aren't captured anywhere on the site, and I'd like to rectify that. As with the newsletter, let me know what you'd like to see on the site and I'll see what I can do.

Thanks, and I'm hoping this all goes well!

## The President's Letter

by Alice Few

Welcome back to the newsletter! A huge thanks to Dave Norberg for volunteering to put "Northwest Skies" back into production! Hopefully all of you have some great articles to pass along to make our newsletter not only informative but entertaining as well.

March and April look to be great months for club activities and International Year of Astronomy events. We have a member's only "Solar Sunday" event coming up on March 8th to kick off the NASA sponsored Sun Earth Week (<http://www.solarweek.org/cms/>) and I am working with the producers of the "400 years of the Telescope: a Journey of Science, Technology and Thought" to sponsor a TAS member's only pre-showing of this documentary prior to television airing on April 10th. Chuck has lined up some great speakers for our general meetings and we have the first of our Member Observing Nights on April 24th and weather permitting we can get out and tackle the 2009 Observing List put together by Dave Norberg.

The student program is going strong and their February meeting, "Extreme Scope Makeover -

Home Edition", helped them fine tune their viewing strategy, and scopes, in preparation for their Messier Marathon in March. The students have been active with our public nights, Scouting events and outreach and we immensely appreciate their help.

The arrival of March has seen an explosion of outreach events and science fairs and if you look at the TAS calendar it is almost black with events. Fortunately we have a great team of outreach volunteers, headed up by Joe and his trusty side-kick Ray, but they can't do it all alone. If you get the chance look at the calendar and see if there is an event, or topic, that appeals to you and come join the fun. If you have a program you would like to present let Joe know, often schools call wanting any topic and you could have the perfect idea.

So enjoy March and April, get out and view as often as you can, and come join us for some of our Member events.

Cheers!  
Alice

## Monthly Messier Objects for March

This month we will look for 10 objects, 8 open clusters in the southern milky way and a pair of galaxies, all are within reach of binoculars. The open clusters are easy binocular targets and most are visible with the naked eye. M81 and M82 are difficult binocular targets that offer a stunning telescopic view.

**M41**

This cluster in Canis Major is visible as a hazy patch to the naked eye just below Sirius. M41 is resolvable in binoculars and appears fairly loose in telescopes at low power.

**M93**

This is a small fuzzy patch of light in Puppis, partially resolvable in binoculars. The hardest part of finding this cluster in binoculars is picking it out of a fairly rich region of the milky way. Use low power to examine this cluster and the surrounding richness in a telescope. Medium power provides a nice view of the cluster itself.

**M47**

A bright cluster in Puppis, easily visible as a hazy patch to the naked eye. Binoculars will show a large hazy patch with many stars resolvable. Telescopes show a fairly loose cluster with stars of wide variety of magnitudes.

**M46**

This cluster is right next to M47 and is also visible to the naked eye. In binoculars M46 appears as a large hazy patch with no stars resolvable, giving a nice contrast to M47. In telescopes at low powers this cluster evenly fills the eyepiece. While you are here go to medium or high power and look for the planetary nebula NGC2438. It will appear as a faint uneven ring, with a blue/green color.

**M50**

An open cluster in Monoceros. This is a small hazy patch in binoculars, partially resolvable. Like M93, the richness of the surrounding field is the only difficulty in finding this object. This is a fairly tight cluster at low power in a telescope.

(Continued on page 4)

- **March 2nd: General Meeting.**  
Please note we are meeting at Wyatt Hall, Room 109 at UPS 7:30 PM.





# March 2009

- **March 8th: Memebers Only Solar Party**  
10-12 At Pierce College.

- **March 21st: Public Night**  
7:30pm at Pierce College.

- **March 28th: Public Night**  
7:30pm at Pierce College.

- **Outreach Events**  
Too many to list! Please see the website for the current list.

Sun	Mon	Tue	Wed	Thu	Fri	Sat
1	2	3	4		5	6
8		9	10	11		12
	13	14	15	16	17	18
19	20	21	22	23	24	25
26	27	28	29	30	31	



Public Night



Student Activity



Outreach event



Member activity



Meeting



## Monthly Messier Objects for April

Spring time is galaxy time. As the winter milky way sets into the west we begin to get overhead, clear views outside of our own galaxy. During April we will begin in earnest our search for elusive galaxies. We will be searching for very distant objects, thus in general they will be small and faint.

There are several things to keep in mind to be successful at hunting distant galaxies. The darker the sky the better. Search out dark sky sites, or wait until the desired target is at maximum altitude or passes through relatively darker portions of moderately light polluted skies. Search with low power, once a possible fuzzy is found switch to higher powers for confirmation and to look for more detail. Nearly all of the objects this month are possible in binoculars, though most need dark skies, averted vision, and a trained eye to see. We will be hunting eight galaxies and two objects from our galaxy, a double star and a planetary nebula.

**M40**

This is a pair of faint stars located in Ursa Major. They are a tough find in binoculars, and you will be challenged to split them with binoculars. In telescopes, they appear to be an identical pair of stars and easy to split even at low power.

**M108**










This galaxy will appear as a thin streak of light in telescopes, there is a definite brightening towards the middle. M108 is a very tough object for the largest binoculars.

**M97**

This planetary nebula in Ursa Major, also called the Owl nebula, appears as a fairly large, round, hazy patch of light in a telescope. It is in the same field of view as M108 at low to medium powers. Use averted vision to see the faint glow of the Owl nebula through binoculars.

*(Continued on page 4)*

# April 2009

Sun	Mon	Tue	Wed	Thu	Fri	Sat
			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	29	30		

- April 7th: General Meeting.**  
 Please note we are meeting at Wyatt Hall, Room 109 at UPS 7:30 PM.
- April 18th: Public Night**  
 9:00pm at Pierce College.
- April 24th: Members Dark Sky Observing Night**  
 9:00pm - Site to be Announced; see the TAS website for details
- April 25th: Public Night**  
 9:00pm at Pierce College.
- Outreach Events**  
 Too many to list! Please see the website for the current list.

**Northwest Skies** is a bi-monthly publication of the Tacoma Astronomical Society. All opinions expressed in this newsletter are those of the contributors and not necessarily those of the Tacoma Astronomical Society.

Original article contributions are strongly encouraged and may be submitted as an email attachment to [editor@tas-online.org](mailto:editor@tas-online.org)

## People to Contact

You can also contact us via email through our website at

[www.tas-online.org](http://www.tas-online.org)

Our mailing address is:

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## Monthly Messier Objects for March Continued

### [M48](#)

Moving on to Hydra, we find another naked eye cluster. M48 is a large fuzzy patch in binoculars, partially resolvable. Use low to medium power in your telescope for a spectacular view.

### [M67](#)

In the southeast portion of Cancer is another open cluster, barely visible as a fuzzy patch to the naked eye. Binoculars show M67 as a large hazy patch of light, similar to M46. Use low power to resolve this large, rich cluster in a telescope.

### [M44](#)

Known as the Praesepe or Beehive Cluster, this open cluster is easily visible to the naked eye as a large, fuzzy patch bigger than the moon. Binoculars or rich field telescopes provide the best view of M44.

### [M81, M82](#)

This pair of galaxies in Ursa Major are very possible to see in binoculars, they look like a pair of fuzzy stars. Both galaxies will fit into the same low power telescope field. M81 will appear as a large oval gray patch of light. M82 is a pencil like streak of light next to and perpendicular to the long axis of M81.

## Monthly Messier Objects for April Continued

### [M109](#)

This spiral galaxy in Ursa major appears as a small, oval patch of light. It can be found in the same field of view as Gamma UMa at low to medium power in a telescope. Use large binoculars under good conditions for a chance of seeing this one.

### [M106](#)

This galaxy in Canes Venatici appears as an oval patch of light, larger than M109, with a fairly bright core. A tough, but possible binocular target.

### [M95](#)

This galaxy in Leo appears as a faint round patch of light with a bright nucleus. Large binoculars and good conditions a must.

### [M96](#)

Look for M96 in the same low power telescope field as M95. Another round patch of light, slightly larger and brighter than M95, it too has a stellar core. Binocular advice for M96 is the same as M95.

### [M105](#)

This is a small elliptical galaxy in Leo, and can be found in the same low power field as M96. It look like a small fuzzy star. M105 has a close companion galaxy, NGC 3384, which is only slightly smaller and fainter than M105. To prevent consion, M105 is the closer of the pair to M96. Not possible in binoculars, except maybe with averted "imagination".

### [M65](#)

A small, but relatively bright galaxy in Leo. It is an elongated oval patch of light with a bright stellar core. A tough, but possible binocular target.

### [M66](#)

A close companion galaxy to M65, it can be seen in the same low to medium power field as M65. M66 is another oval patch of light, brighter and slightly wider than M65. Another possible binocular target. While you are here be sure to look for the a thin streak of light which is the galaxy NGC 3628. It can be found north of M66 in the same low power telescope field as both M65 and M66.

## Where is New Horizons Now!!

### Three Years and Counting

New Horizons has completed its third year of flight. A top-level way to look at the main mission is that the spacecraft is racing 24/7 for nine years begin our exploration of the Pluto system in January 2015, culminate that exploration with the Pluto flyby in July 2015, and follow that with nine months of transmitting data back to Earth. (Of course, we all hope the mission will be extended to fly on to explore primordial Kuiper Belt objects, but that's a story I'll detail some other day.)

The nine-year flight can be broken down into three, three-year phases: early cruise (2006-2008), mid-cruise (2009-2011), and late cruise (2012-2014).

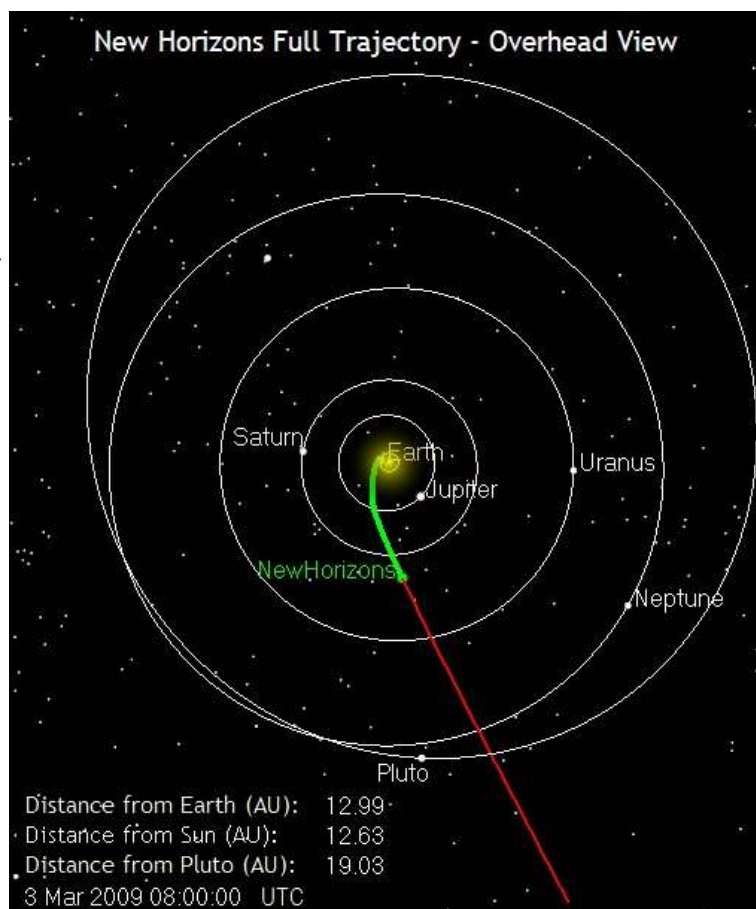
Alan Stern, of NASA, explains the mid-cruise: "With the dawning of 2009, **mid-cruise** is now beginning. Although the next three years will be quieter than the past three, they are just as crucial to the success of New Horizons.

During mid-cruise, New Horizons will race from its current position just beyond 12 astronomical units from the Sun to almost 22 AU — ending up more than a quarter-billion kilometers beyond Uranus' orbit and well toward Neptune's. In terms of mid-cruise flight activities, we will conduct annual spacecraft and instrument checkouts, as well as a little more cruise science. But in addition, we plan to conduct some encounter test activities in 2010 and 2011. Based on our tracking data, we are also expecting another (small) course correction — less than one meter per second — in 2010.

Meanwhile, on the ground, in addition to planning and executing the spacecraft operations of mid-cruise, we will finish sequencing the nine-day "core" encounter command load, fully test it on the New Horizons spacecraft simulators at the Johns Hopkins Applied Physics Laboratory (APL), and plan the surrounding nine weeks of approach and departure activities closest to Pluto.

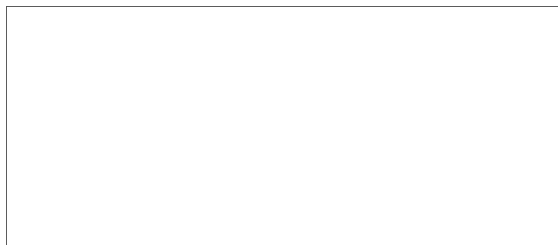
Late in mid-cruise we'll also initiate our KBO target search, and we also plan to replace the original (2004-era) computers in our Mission Operations Center (MOC) and Science Operations Center (SOC), so that at encounter these systems are still young enough to be fully reliable. With a mission staff of less than ten people — just half the size it was in early cruise, and more than 10 times smaller than what Voyager needed to fly across the same territory on its way to Uranus and Neptune — one thing is for sure: the Earthly crew of New Horizons is going to be very busy in during mid-cruise."

- New Horizons has traveled more than 1.21 billion miles (2.08 billion kilometers).
- The spacecraft's primary computer has executed 443,380 commands from Earth.



This image shows New Horizons' current position. The green segment of the line shows where New Horizons has traveled since launch; the red indicates the spacecraft's path toward Jupiter, Pluto and beyond. Positions of stars with magnitude 12 or brighter are shown from this perspective, which is above the Sun and "north" of Earth's orbit.

## Northwest Skies



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### Membership

#### Subscriptions for 2009

Membership subscriptions for 2009 are now due. Please mail your membership renewal to

**The Tacoma  
Astronomical Society  
PO BOX 8881  
Tacoma, WA 98419**

or bring your check along to the next General Meeting.

Membership dues are the primary income for the society and it allows us to fund member activities and parties as well as the Outreach and Student Programs. Your membership is very important to us.

The annual fees are:

Family: **\$35.00**  
Adult: **\$25.00**  
Student: **\$15.00**  
Senior: **\$10.00**

## Comet Lulin



Comet Lulin was discovered in July 2007 by Chinese and Taiwanese Astronomers and made its closest approach to Earth on Feb. 24th. It can be seen with the naked eye under dark skies, and is currently between the constellations of Cancer and Gemini. Go to Heaven's above at <http://www.heavens-above.com/> or Sky and Telescope's observing highlights page at <http://www.skyandtelescope.com/observing/highlights> for its current location. (Photo from APOD.)

## Member Observing Nights

We will be doing a number of member only observing nights at dark sky sites. The first is scheduled for Friday, April 24th. Go to [http://www.tas-online.org/observing\\_nights.php](http://www.tas-online.org/observing_nights.php) for more information. Suggestions and feedback are highly encouraged!