



President's Message

I bet you are looking forward to the total solar eclipse on August 21st. I certainly am! I have had the pleasure of experiencing the awesome sight of totality twice so far. Each was an adventure and an encounter with adverse weather. The 1991 eclipse over Hawaii involved sleeping on a lava field overnight, getting sprinkled on and watching the eclipse unfold through a veil of clouds that finally broke during totality! Years later, in 1999, the adventure included a race on the German autobahn to keep ahead of thick, dark clouds! The final frantic stop, moments before totality, was in the nick of time. A great view of the eclipse was observed and then the cloud bank arrived. For the 2017 event I hope the sky over Nashville is clear and that everyone in the shadow's path across the USA gets to see this marvelous event!

If you can't get away from home and into the path of totality, I hope you enjoy watching the partial eclipse. The article in this Bulletin tells you how you can do this safely.

Wishing you all clear skies!

Jutta Siefert Dudley

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Call for RAS Member Abstracts for the 44th Annual RAS Fall Scientific Paper Session

You are invited to present a poster or short talk at the November 11 program. Are you working on projects, made any discoveries or been active in a citizen science activity? We'd like to hear about it!

More information about the program and how you can sign up to present will be forthcoming on the RAS website and in the next Bulletin.

In the meantime, think about what you might present!

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Save the Date!
Saturday, November 11, 2017
RAS Scientific Paper Session
St John Fisher College

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The Great American Eclipse of 2017

Monday afternoon, on August 21st things in Rochester NY will be getting a little darker than usual. This will be because of the Great American Eclipse of 2017! In the Rochester area the eclipse begins at 1:14 PM, reaches

maximum occultation at 2:35 p.m. (when ~70% of the sun will be covered by the moon), and ends at 3:52 p.m. The eclipse event will last 2 hours and 38 minutes in duration total. See the picture on page 2 below for an illustration of what you will see during the eclipse. Note that before and after the eclipse, the moon will not be visible separately because the moon will be in its "new moon" phase.

In our area we will only witness a partial, i.e. ~70%, eclipse. To see the total eclipse, that is 100% of the sun covered making the solar corona and other solar prominences visible, you will have to drive south to Nashville Tennessee. If you miss this eclipse the next one will be in seven years, on April 8, 2024.

But this year on August 21st, weather permitting, there are opportunities to experience the eclipse with others right here in Rochester. The ASRAS Farash Center Observatory will have its solar observatory as well as its 20" Newtonian reflector (with solar filter attached) available for guided viewing of the eclipse. Also, the Strassenburgh Planetarium will have events on that day that include special planetarium performances and demonstrations by the University of Rochester's Society of Physics

Students. The Astronomy Section of the Rochester Academy of Science will operate telescopes and other viewing devices at three outdoor solar viewing stations around the RMSC campus from 1pm to 4pm.

If the sky is cloudy, or worse, come to the Museum building or Planetarium lobby to watch live video from the path of totality on internet screens.

Special low cost "eclipse glasses" are available for purchase from either ASRAS or the Strasenburgh Planetarium for one or two dollars each.

Eclipse safety is important! Looking directly at the sun with your naked eyes WILL permanently damage your eyes quickly. To see the eclipse on your own, "Eclipse Glasses" are the best way to go. Welding glass (#14) will also work well. With

either, you will be able to see large sun spots, and the mountains on the edge of the moon. You can also make a solar filter for a telescope or just make a pinhole projector.

To make a solar filter, you will need optical quality Mylar which blocks 1/1000 of 1% of the light. Don't stretch the Mylar, just lay it down. Wrinkles are ok. If you have a solar filter for your telescope, check it. The best way to check a solar filter is to put it on your telescope, point it at the sun, remove the eyepiece and look down the empty hole. Look for bright spots caused by Mylar imperfections such as cracks or holes. Repair these Mylar imperfections by applying dabs of "whiteout" to those imperfections until the bright spots disappear. After this repair, the eyepiece can be now installed and used.

If you don't have a solar filter you

can build a pinhole camera. Take a box (the longer the better) and cut a hole in one end. Take a piece of paper (aluminum foil works even better) and tape it over the hole. Then, using a pin, punch one small hole in the paper (or foil). Point the end with the hole at the sun, and watch the eclipse on the other end of the box.

Further information on building and using a "pinhole camera" can be found at the following NASA website:

<https://www.jpl.nasa.gov/education/project/how-to-make-a-pinhole-camera/>

*David Bishop, Vice President,
Astronomy Section RAS*



Eclipse graphic courtesy of Steve Fentress Director, Strasenburgh Planetarium Rochester Museum & Science Center

Events for August/September, 2017

For updates to events, check the Academy website, <http://www.rasny.org>, and Section websites.

AUGUST EVENTS

No ASTRONOMY SECTION MEETING in August

FOSSIL SECTION EVENTS

TBD – watch for email notice of date and time.

LIFE SCIENCES HERBARIUM WORKSHOP

TBD – watch for email notice of date and time.

7 Mon: ASTRONOMY BOARD MEETING

7 p.m. Farash Center at Ionia. All ASRAS members are welcome. Contact: Joel Schmid, 533-2097.

13 Sun: ASTRONOMY PUBLIC OPEN HOUSE

12:00 p.m. - 4:00 p.m. (or later, if skies are clear). Marian and Max Farash Center for Observational Astronomy, 8355 County Road 14 Ionia, NY 14475. *Perseid Meteor shower!* For cancellations or changes contact: Joel Schmid, 533- 2097 or see: www.rochesterastronomy.org/calendar-of-events

16 Wed: RAS BOARD MEETING

7:00 p.m. Brighton Town Hall, Stage Conference Room.

19 Sat LIFE SCIENCES FIELD TRIP

10 a.m. Corbetts Glen. Meet at the entrance just off 441 to start checking the status of plants on Pat Martin's Survey of a few years ago. This park contains fields, meadows, hills and water habitats. Rain date Sun Aug 20. Contact: Karen Wolf, 670-9709 or Larry Hirsch, 429-6199.

25 Fri: ASTRONOMY STAR PARTY

9:30 p.m. – 10:30 p.m. Mendon Ponds Park, at Hopkins Point Road near the youth camping area. Contact: Jim Seidewand: (585) 703-9876.

26 Sat: ANTHROPOLOGY FIELD TRIP

10 a.m. Letchworth State Park for Flint-knapping demonstrations, 19th century Mountain men encampment, Atlatl spear throwing, and nature trails/scenic outlooks. We will meet to carpool at the Double Tree Inn near the Rt 390 entrance. Rain date Sun. Aug 27. Contact: Karen Wolf, 670-9709.

30 Wed: LIFE SCIENCES FIELD TRIP

10:00 a.m. BANC property, 301 Railroad Mills Rd, Victor. Dragonflies and Late Summer Flowers walk with Jon Dombrowski. Contact: Larry Hirsch, 429-6199.

SEPTEMBER EVENTS

FOSSIL SECTION EVENTS

TBD – watch for email notice of date and time

LIFE SCIENCES SECTION HERBARIUM WORKSHOP

TBD – watch for email notice of date and time.

8 Fri: ASTRONOMY SECTION MEETING

7:30 p.m.–10:00 p.m. Marian and Max Farash Center for Observational Astronomy, 8355 County Road 14 Ionia, NY 14475 Main Speaker to be determined. Short talk: “Knitting to the Moon – the key role knitting played in programming the Apollo Guidance Computer” by Ted Lechman. \$1.00 hotdogs available at 7:00 p.m. prior to meeting. Contact: Joel Schmid, 533-2097.

11 Mon: ASTRONOMY BOARD MEETING

7 p.m. Farash Center at Ionia. All ASRAS members are welcome. Contact: Joel Schmid: 533-2097.

15 Fri: ASTRONOMY STAR PARTY

8:30 p.m. – 10:00 p.m. Northampton Park, Brockport at the Ski Lodge parking lot off Hubbell Rd. For more information, Contact: Jim Seidewand, (585) 703-9876.

16 Sat: ASTRONOMY PUBLIC OPEN HOUSE

12:00 p.m. - 4:00 p.m. (or later, if skies are clear). Marian and Max Farash Center for Observational Astronomy, 8355 County Road 14 Ionia, NY 14475. *Ionia Fall Festival!* For cancellations or changes contact: Joel Schmid: 533- 2097 or see: www.rochesterastronomy.org/calendar-of-events

19 Tues: MINERAL SECTION MEETING

7:00 p.m. Brighton Town Hall, Downstairs Meeting Room. Annual “Show and Tell / Swap and Sale Event”. Featured are section minerals at reasonable prices. Door prizes and refreshments. Contact: Stephen Busschaert, mineralvp@rasny.org.

20 Wed: RAS BOARD MEETING

7:00 p.m. Brighton Town Hall, Stage Conference Room.

30 Sat: LIFE SCIENCES FIELD TRIP

10:00 a.m. Tinker Nature Center, Henrietta. Fall foliage field trip. Contact: Larry Hirsch, 429-6199.

ONGOING EVENT

ASRAS will operate the telescope, or one on the sidewalk, at Strassenburgh Planetarium on mostly clear Saturday nights. Contact: Jim Seidewand, (585) 703-9876.

OUTSIDE RAS EVENTS

Mon August 21: Solar Eclipse

1:00 p.m. – 4:00 p.m. Strassenburgh Planetarium, RMSC. Solar observing stations will be manned by the Astronomy Section.

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For information, contact President Jutta Dudley at (585) 385-2368 or by e-mail: pres@rasny.org.

The Academy Internet website is

<http://www.rasny.org>

Or see us on Facebook at

<https://www.facebook.com/RochesterAcademyofScience>.

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