



We welcome your comments on the *Bulletin*.
Email them to the Editor at bulletin@rasc.ca

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News from the Society Office

by [Randy Attwood](#), RASC Executive Director

RASC Tours:

Arizona astronomy sites scheduled for September 2016!

After a successful trip to astronomy and space exploration sites in southern California last November, we are planning a five-day trip to Arizona in September to visit the following amazing astronomy sites: Kitt Peak National Observatory, Mount Lemmon SkyCenter, Lowell Observatory, Arizona Meteor Crater, with sightseeing in Sedona and Canyon de Chelly.

Tuesday, September 27, 2016 Arrive Tucson

Your tour begins in Tucson, where great astronomical research continues to explore new vistas for the next generation of astronomers.

Wednesday, September 28, 2016 Kitt Peak National Observatory

After breakfast enjoy the Southwest scenery as you drive up the slopes of Quinlan Mountains in the Arizona Sonoran Desert to Kitt Peak National Observatory, home of the largest array of optical and radio telescopes in the world and the

Tohono O'odham Nation. Tour the Mayall 4-meter optical telescope and the Solar Telescopes.

Thursday, September 29, 2016 UofA Mirror Lab & SkyCenter

The University of Arizona is ranked #1 among observational, theoretical and space astronomy programs in the U.S. Visit the Richard F. Caris Mirror Lab. The tour provides insight to the cutting edge astronomical research and technology involving in making the next generation of telescopes that will explore deep into outer space. Visit the Mount Lemmon SkyCenter and view through the center's 32" Shulman Telescope during the after-dark program.

Friday, September 30, 2016 Tucson -- Flagstaff

On route to Flagstaff, continue to the artist colony of Sedona, which is surrounded by beautiful, towering red rock formations. We stop for lunch and take time to explore a few of Sedona's art galleries. Continue through a spectacular 12 mile-long chasm of Oak Creek Canyon for a relaxing two night stay in Flagstaff.

Saturday, October 1, 2016 Lowell Observatory

Today, meet for an astronomical seminar. After lunch the journey ventures up Mars Hill to Percival Lowell's Historic Lowell Observatory. Visit the 24" Alvan Clark refractor and the Pluto Discovery telescope along with the 4.3 meter Discovery Channel Telescope. After stargazing tonight return to the hotel.

Sunday, October 2, 2016 Arizona Meteor Crater & Canyon de Chelly

Today the tour continues toward Chinle with a stop at the Arizona Meteor Crater, which impacted over 50,000 years ago. After viewing the film "Collisions and Impacts", take a walk around the top of the 550 feet deep caldera.

A lunch stop will be at the oldest, continuously operating trading post of the Navajo Nations, the *Hubbell Trading Post*. Upon arrival explore *Canyon de Chelly*, where sheer sandstone walls rise up to 1,000 feet, several scenic overlooks, and many well-preserved ruins. The pre-historic Anasazi, the Hopi and the Navajo all

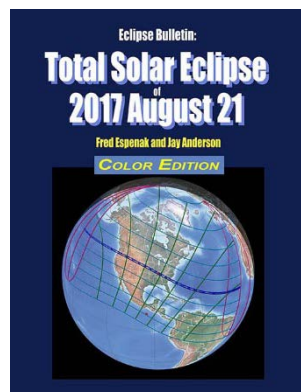
dwelled here. *Canyon de Chelly National Monument* is now entirely Navajo tribal trust land with a resident community within the canyons.

This is a preliminary schedule – dates are subject to change.

If you are interested and want more information please contact Executive Director Randy Attwood at the National Office (416-924-7973) or execdir@rasc.ca

2017 Eclipse Bulletin for sale through eStore:

A new guide to the 2017 Total Solar Eclipse is available through our eStore. Written by Fred Espenak and Winnipeg Centre member Jay Anderson, this is an excellent preview to this special event – a total solar eclipse visible in the continental USA. On Monday, 2017 August 21, a total eclipse of the Sun will be visible from the contiguous United States for the first time since 1979. The track of the Moon's umbral shadow begins in the Pacific Ocean and crosses from west to east through Oregon, Idaho, Wyoming, Nebraska, Kansas, Missouri, Illinois, Kentucky, Tennessee, Georgia, North Carolina, and South Carolina. The Eclipse Bulletin is the ultimate guide to this highly anticipated event.

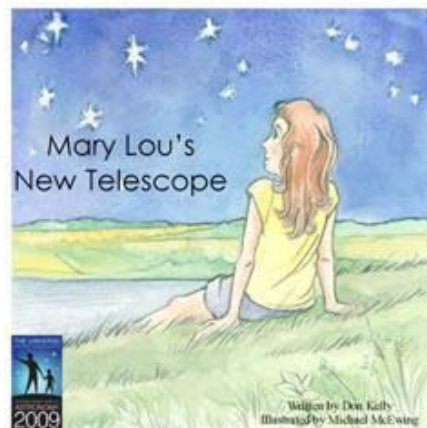


Pricing: \$34.99 + shipping and taxes

https://secure.rasc.ca/rasc/RASC/Store/Store_CURRPUB.aspx?Category=CURRPUB

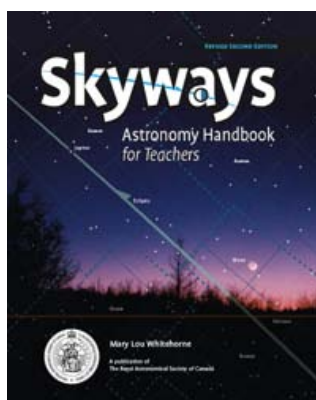
Mary Lou's New Telescope on sale for \$5!

Full colour childrens' book telling the story of a young girl captivated by astronomy. Her interest is rewarded with a special birthday present of a new telescope. **Makes a great gift for a child!** For more information see: https://secure.rasc.ca/rasc/RASC/Store/Store_PUB.aspx?Category=PUB



Teaching Astronomy? Skyways makes it easy!

Skyways is ideal for teachers, youth group leaders, and anyone interested in hands-on astronomy education. Written by a Canadian with Canadian teachers and astronomy educators in mind. Instructions for hands-on activities on a wide range of topics including: Seasons, Stars, and the Solar System. For more information see https://secure.rasc.ca/rasc/RASC/Store/Store_EDPUB.aspx



New Price: \$14.95!

General Assembly in London: May 2016

The 2016 General Assembly will be hosted by **London Centre, alongside AstroCATS!** It will be held from May 19 to May 23 at Fanshawe College. Plan now to visit London, Ontario this summer!

For more information see: <http://events.rasc.ca/>

The President's Corner

by **James Edgar**, RASC President

The electronic *Observer's Handbook*

Attention all you Observers!

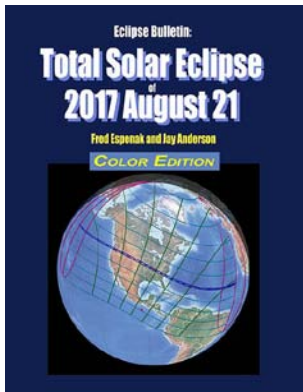
The electronic version of the *2016 Observer's Handbook* is now available to RASC members for the same low price as last year -- \$10 for the data file, plus an activation code good for two installations. The electronic version is available at www.drmz.net/rasc/DRMZ/OH2016.drmz

A **Javelin** reader is required to access the file, plus payment must be made before obtaining the activation code. To arrange payment and get the activation details, contact the Society Office either by email at mempub@rasc.ca, or call during the day **1-416-924-7973**.

The Javelin software has recently been upgraded to conform to the latest versions of Windows and Mac, plus it is suitable for iPads, iPhones, and Android devices.

The 2017 Total Solar Eclipse Bulletin, 2016 *Observer's Handbook* and 2016 *Observer's Calendar*

The 2017 Eclipse Bulletin, *2016 Observer's Handbook* and *2016 Observer's Calendar* are now available on the eStore: [Order yours today!](#)



RASC Observing Certificate Program

The RASC offers six observing certificate programs to promote active observing. By successfully completing these programs, members are eligible for an official certificate from the RASC. Observing certificate programs are a great way to challenge yourself, learn more about the night sky, and get the most out of our challenging and rewarding hobby.

- **Explore the Universe Certificate**
- **Messier Certificate**
- **Finest NGC Certificate**
- **Isabel Williamson Lunar Certificate**
- **Deep-Sky Gems**
- **Deep-Sky Challenge**

For more information see <http://rasc.ca/certificate-programs>

[The Environmental Impact of Light Pollution and its Abatement](#)

What are the causes of light pollution? What are the attached health risks? What techniques can we use to reduce these effects? This special report from the RASC will address these issues, as well as present the new technological, social, and political solutions to help us move toward a future with a more benign use of artificial light at night.

This report is available for a single copy price of \$6.95.

<http://www.rasc.ca/sites/default/files/lpaorderformcanada.pdf>

[Promo wear and Value Packs](#)

RASC Baseball Caps, T-shirts, and Toques are available at

https://secure.rasc.ca/rasc/RASC/Store/Store_PROMOWEAR.aspx?Category=PROMOWEAR .

RASC Value Packs are available at

https://secure.rasc.ca/rasc/RASC/Store/Store_PROMO.aspx

➤ *Bulletin* Photo of the Month

M81 – Bodes galaxy

by **Dan Meek**, RASC, Calgary Centre



This is a 10 hour image taken with an 11-inch EDGE SCT and a QSI583wsg CCD camera.

Thank You to our Sponsors!

by **Julia Neeser**, RASC Marketing Coordinator

The Royal Astronomical Society of Canada has a unique partnership with our friends in the astronomy industry. We are now offering companies the distinction of becoming a charter sponsor of the RASC, Canada's pre-eminent amateur astronomy organization. This offer is available only to those industry leaders who

recognize the value in being associated with the amateur astronomy community.
<http://www.rasc.ca/rasc-sponsors>.



What's New in the Sky

Members are encouraged to check out the **Northern Skies** section of the RASC website. Thanks to Gary Boyle for keeping us all in the know. Julia Neeser creates "The Solar System" monthly with data from James Edgar's "Skies" newspaper articles at <http://www.rasc.ca/observing>.



The Royal Astronomical Society of Canada
203 – 4920 Dundas St W, Toronto ON M9A 1B7 CANADA
Tel: (416) 924-7973, Fax: (416) 924-2911
Member Service: nationaloffice@rasc.ca
Visit Us at: www.rasc.ca
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