



ROYAL
ASTRONOMICAL
SOCIETY
OF CANADA

Photo: Shakeel Anwar



February 15 to February 21, 2021

RASC Weekly: Insider's Guide, Speaker's Night, and Titan Aerosol Analogues

Tuesday, February 16, 2021 - 15:30 to 17:00 EST
Insider's Guide to the Galaxy: Observing the Moon

Anyone anywhere on Earth can see the Moon, even if you live in the biggest of cities! It's our closest and most easily observed celestial neighbor. Join us to learn a little bit more about how to observe Earth's only natural satellite, and where to look for extinct volcanoes, scars of recent impacts, whimsical shapes, colorful patches, and more.

[Register for Insider's Guide to the Galaxy - Observing the Moon](#)

Wednesday, February 17, 2021 - 19:30 to 21:00 EST
Speaker's Night: Indigenous astronomies, stories of the sky and indigenizing the Drake Equation (ONLINE) - Toronto Centre

Presented by Hilding Neilson.

Astronomy has been practised on the land we call North America since time immemorial and the peoples across this land had and have their own ways of understanding the sky and the Universe. In this talk, Dr. Hilding Neilson will discuss Indigenous methods of science and how sky stories reflect observations and knowledge of different peoples.

Dr. Hilding Neilson is Mi'kmaq from Ktaqmkuk (Newfoundland) whose work focuses on stellar and exoplanet astrophysics and on indigenizing astronomy. He earned his PhD from the University of Toronto in 2009 on Cepheid atmospheres and mass loss.

Who can attend: Everyone
Fee: Free
Registration: Not required
Organized by: RASC, Toronto Centre

[Join Speaker's Night: Indigenous astronomies!](#)

Thursday, February 18, 2021 - 19:30 to 21:00 MT
Thursday, February 18, 2021 - 21:30 to 23:00 EST
Infrared Transmission and Reflection of Titan Aerosol Analogues - Calgary Centre

Presented by Ashley Walker

Saturn's moon, Titan, is the only body in the solar system with a thick nitrogen atmosphere that may be similar to that of the Early Earth. Photochemistry in Titan's atmosphere, composed mainly of nitrogen and methane, produces incredibly complex organic materials. The purpose of this work is to understand the composition of these organic materials through the use of laboratory atmosphere simulation experiments. The Planetary HAZE Research Chamber (PHAZER) at Johns Hopkins University operated by the Hörst Lab group has been used to simulate a variety of solar systems and exoplanet atmospheres including that of Titan. In this chamber, nitrogen and methane gases flow past cold plasma in order to create aerosols called "tholins"; experiments such as these have been used to improve our understanding of the chemistry in Titan's atmosphere for decades. The particles generated in these experiments are deposited as thin films and then analyzed using Fourier transform infrared spectroscopy (FTIR). FTIR provides information regarding the chemical composition and optical properties of the particles and can be compared to remote sensing observations of Titan's atmosphere. We review and compare our spectral data to tholins from previous experiments to provide a better understanding of the habitability of Titan.

[Join Infrared of Titan Aerosol Analogues](#)

Advertise your Centre's Events in this Newsletter!

Broaden your audience and meet RASC members from across Canada by advertising your Centre's events in this newsletter! Any Centre is welcome to include their events by emailing event details to Samantha at outreach@rasc.ca. Events will be added to the RASC online calendar and will be included in that week's newsletter. Please note that in doing so, events will be advertised both across RASC and to the public.

Astro-image of the Week

Shakeel Anwar

We are featuring winners of RASC's Astromaging Certificate. Winners will be featured in the banner of RASC Weekly. More information on the RASC Astromaging Certificate is available [here](#).

03 MOON SHOWING CRATERS IN DETAIL (STACKING):

This is a stacked image of the moon showing surface details. The Alpine Valley is visible to the south east of the crater Plato with Aristoteles and Eudoxus partially enveloped in shadow. The video for this image was taken on April 25, 2019 with a ZWO ASI224mc attached to an 8 inch SCT. The image is a 20% stack with the video first stacked in AutoStakkert!3, with further processing done in Registax and Photoshop. Categories: Scenic, Night Sky



To see the large image, check out the [RASC Astromaging Zenfolio page](#).

Presenting the 2020-21 SkyNews Photo of the Week Contest!



Every week, SkyNews publishes the best image from among those sent in by readers from all across Canada. From wide-field Milky Way shots to deep-sky images of galaxies far, far away, the contest highlights pictures that are technically precise and eye-poppingly beautiful.

The prize packages this year are generously sponsored by Sky-Watcher, Celestron, iOptron and The Royal Astronomical Society of Canada. [Click here](#) for more details.

[Enter here](#) every week until June 1, 2021, for your chance to win. Keep your eyes on SkyNews.ca for weekly winner announcements!

This Week's Observing Targets



Check out the sky this week on Skynews:
This Week's Sky - February 15 to 21, 2021:
It's the Moon's time to shine, as through the week it passes Uranus, Mars, the Winter Hexagon and Messier 35.

[Click here for full article](#)

Member Highlights

Do you know a member who you think deserves a spot in our newsletter? Let us know! Email communications@rasc.ca with your submissions.

[view this email in your browser](#)

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