

# GET STARTED IN ASTRONOMY with the ROYAL ASTRONOMICAL SOCIETY OF CANADA

and **SkyNews**  
The Canadian Magazine of Astronomy & Stargazing

## EXPLORE. DISCOVER. OBSERVE.

Be part of one of the world's leading astronomy organizations.

With over 5,000 members, we are actively dedicated to the advancement of astronomy across Canada. Join us!

**rasc.ca**

Find the best sky sights every week at  
**This Week's Sky**

Never miss another wonderful astronomical event. Sign up for the **FREE SkyNews e-newsletter**

**skynews.ca**



ROYAL  
ASTRONOMICAL  
SOCIETY  
OF CANADA

**SkyNews**  
The Canadian Magazine of Astronomy & Stargazing



## JANUARY 20, 2019 Lunar Eclipse— Don't miss it!

One of the year's most impressive highlights is on January 20, when the Moon passes through the Earth's shadow, producing a **TOTAL LUNAR ECLIPSE** visible all across Canada. This is the only eclipse of any kind we'll be able to witness from Canada in 2019.

The Royal Astronomical Society of Canada  
203–4920 Dundas Street West, Toronto, ON M9A 1B7  
Telephone: 416-924-7973 • Toll-free: 1-888-924-7272  
Web: [www.rasc.ca](http://www.rasc.ca) • E-mail: [mempub@rasc.ca](mailto:mempub@rasc.ca)

**RED MOON IN JANUARY** Front cover photo: Like last year, 2019 kicks off with a total lunar eclipse. *SkyNews* editor Gary Seronik recorded this view of the January 31, 2018, event from Penticton, British Columbia.

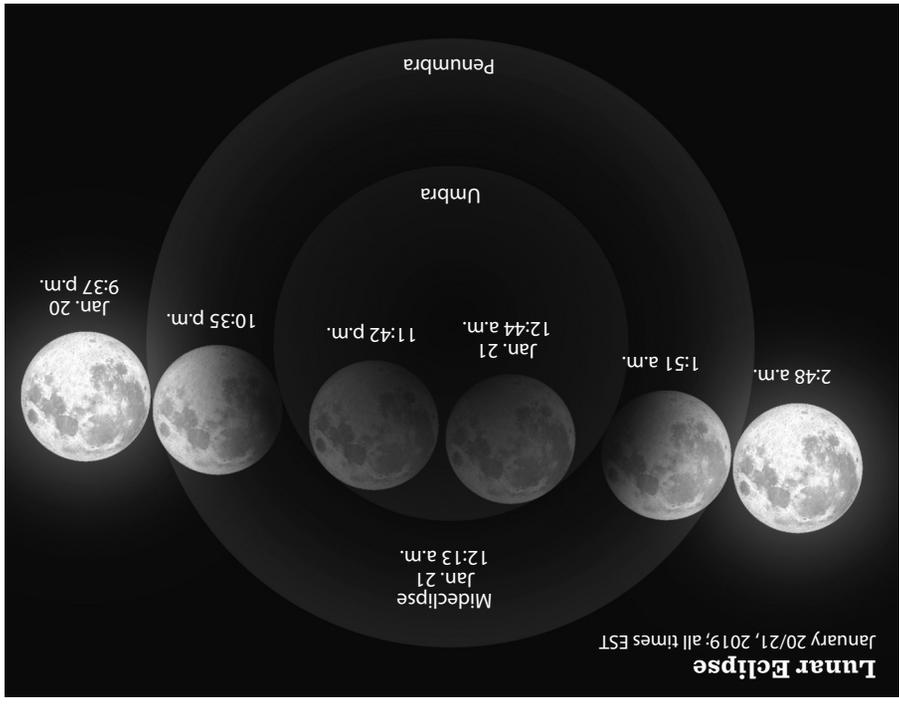
<b>DATE: SUNDAY, JANUARY 20/21</b>	<b>TYPE: ECLIPSE</b>
<b>TIME: EARLY TO LATE EVENING</b>	 <b>VIEW: NAKED EYE</b>

## WINTER'S RED MOON

Here in North America, the eclipse gets under way on the evening of the 20th, and all of Canada will get to see this total lunar eclipse. However, as the table on the facing page illustrates, observers in western Canada will enjoy the most convenient timing, since the entire Moon will sport a gradation of colour ranging from dark orange at the bottom to perhaps bright yellow at the top, where the lunar disc is closest to the northern edge of the umbra. These hues can be striking, especially in binoculars or a telescope used at low power. The reddish orange tint is due to the blue wavelengths of sunlight being scattered and absorbed by the Earth's atmosphere, allowing shadow. While it may seem that our planet's Moon as it approaches the Earth's umbra darkening appears on the left edge of the earth's shadow), though for the opening portion, you really won't see much until a subtle (when the moon is entering and exiting the lists the start and end of the penumbral phase show takes place before midnight. Our table the most convenient timing, since the entire Moon will sport a gradation of colour ranging from dark orange at the bottom to perhaps bright yellow at the top, where the lunar disc is closest to the northern edge of the umbra. These hues can be striking, especially in binoculars or a telescope used at low power. The reddish orange tint is due to the blue wavelengths of sunlight being scattered and absorbed by the Earth's atmosphere, allow-

## As with all lunar eclipses, no special filters or eye-safety precautions are needed to enjoy the view.

CHART BY GLENN LEDREW



**ECLIPSE NEAR M35** The total eclipse of December 20, 2010, provided an opportunity to see and photograph a red Moon near the prominent Gemini star cluster, M35, seen at the left of this photo. PHOTO BY ALAN DYER

While the eclipse can be enjoyed from home, I recommend making the effort to view it from a rural site. As totality begins, you'll see the winter Milky Way gradually emerge, as a moonlit evening transitions into a dark, moonless night. The reddened Moon and pale Milky Way will offer photographers a picturesque scene to capture. Doubtless, the cold winter air will tempt you to stay indoors on January 20. Just keep in mind that for most Canadians, the next total lunar eclipse won't occur until May 2022, although there'll be a very deep partial eclipse in November 2021. In either case, it's a long wait.

### ECLIPSE TIMES (p.m. times on January 20; a.m. times on January 21)

EVENT	AST	EST	CST	MST	PST
Penumbral eclipse begins	10:37 pm	9:37 pm	8:37 pm	7:37 pm	6:37 pm
Partial eclipse begins	11:35 pm	10:35 pm	9:35 pm	8:35 pm	7:35 pm
Total eclipse begins	12:42 am	11:42 pm	10:42 pm	9:42 pm	8:42 pm
Midtotality	1:13 am	12:13 am	11:13 pm	10:13 pm	9:13 pm
Total eclipse ends	1:44 am	12:44 am	11:44 pm	10:44 pm	9:44 pm
Partial eclipse ends	2:51 am	1:51 am	12:51 am	11:51 pm	10:51 pm
Penumbral eclipse ends	3:48 am	2:48 am	1:48 am	12:48 am	11:48 pm

Excerpt by Alan Dyer, from SkyNews magazine's January/February 2019 issue.