Why the new moon on February 18th is special

February 19 2015, by David Dickinson

The waxing crescent moon and Earthshine. Credit: Frank Miller.

Did you hear the one about last month's 'supermoon?'

Yeah, we know. The hype was actually for an event that was less than spectacular, as it revolved around the first new moon of 2015 on January 20th. Said suspect moon was touted as 'super' (we prefer the quixotic term proxigean) as it occurred 18 hours prior to perigee.

Not that the first lunar perigee of 2015 was an especially close one in time or space at 359,642 kilometres distant. Is every New and Full moon now destined to become branded 'super' in the never ending SEO quest to get eyeballs on web pages?

But wait, there's more. We've noticed as of late that another popular term is creeping into the popular astronomical vernacular: that of a 'black moon'.

We've written lots about moons both of the Black and Blue variety before. We'll also let you in on a small secret: astronomers rarely sit around observatories discussing these moons, be they Blue, Black or Super. At most, astronomers note the weeks surrounding New as the 'Dark of the moon,' a prime time to go deep for faint objects while the light polluting moon is safely out of the sky. And yes, terms such as 'Super' or 'black moon' have dubious roots in astrology, while the term Blue moon comes down to us via a curious mix-up from Sky and Telescope and the Maine Farmer's Almanac.

Simply put, a black moon is the new moon version of a Blue moon, and is either:

Year	Date	3rd of 4	2nd in a Month	Notes
2015	February 18th	Y	-	
2016	October 30th	-	Y	
2017	August 21st	Y	-	Total Solar Eclipse
2018	February			Missing a Full Moon
2019	August 30th	-	Y	
2020	August 19th	Y	-	
2022	April 30th	-	Y	Partial Solar Eclipse
2024	December 30th	-	Y	

Black Moons for the next decade. Created by the author.

A month missing a Full or new moon… this can only occur in February, as the lunar synodic period from like phase to phase is 29.5 days long. This last occurred in 2014 and will next occur in 2018.

The second new moon in a month with two. This can happen in any calendar month except February.

And now for the most convoluted definition: the third new moon in an astronomical season with four.

We bring this up because the February 18th new moon is 'Black' in the sense that it meets the requirements expressed in rule 3. The fourth new moon of the season falls on March 20th, just 13 hours before the northward equinox on the same date.

Such are the curious vagaries of the juxtaposition of the lunar cycle on our modern day Gregorian calendar. Unfortunately, this doesn't mean you'll win the lottery or be lucky in love: any Earthly woes are strictly your own affairs to deal with, black moon or no.

An extremely thin crescent moon against a low contrast twilight sky. Credit and copyright: David Blanchflower.

It does mean, however, that higher than average ocean tidal variations are in the offing. The February 18th new moon also occurs only seven hours and 42 minutes prior to perigee—the second closest time wise for the year for any moon, Full or New —and just 115 kilometres shy of the closest perigee of 2015 on September 28th.

Lunar perigees can vary in distance from 356,400 to 370,400 kilometres from the Earth.

Like the waxing and waning of the moon, we too go back and forth about the surge in popularity of 'super-'and 'black and blue' moons. Sure, the pedigree of such terms is dubious at best. And it's also true that we

all can't resist writing about 'em when we see those search numbers skyrocket. Still, if we fail to make the term our own, we've left the door wide open for woo to creep on in and claim the minds of our 'at risk' friends. Perhaps the best strategy is to 'hook 'em with black moons,' then feed them science…

An extremely ‘old moon’ just 29 hours prior to new. Photo by author.

And you can indeed see a new moon in a sense, during a total solar eclipse. The next chance to stand in the shadow of our nearest natural neighbor is coming right up next month on March 20th, although you'll have to venture to the high Arctic north of Europe to experience totality.

And it's always fun to try to spot the extremely thin crescent moon within a day prior to or after new. You'll need an absolutely clear and

flat horizon to accomplish this feat of visual athletics. Begin sweeping the suspect viewing area with binocs about 45 minutes prior to sunrise or after sunset. You'll be surprised how difficult it is to see the razor thin moon against a low contrast sky. The challenge becomes significantly tougher when the moon is within 20 hours of new.

Source: Universe Today