

# SOUTHERN COLORADO SKIES



by Dave Furry

## What's Up in May?

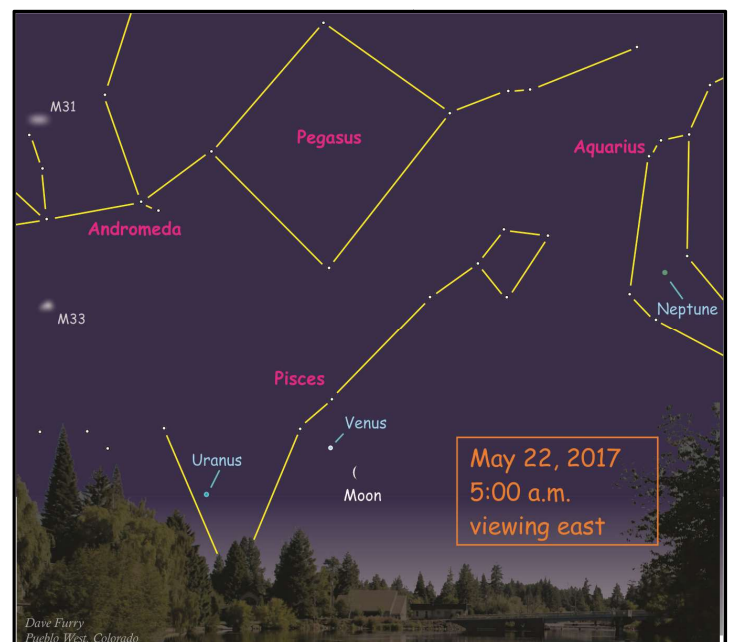
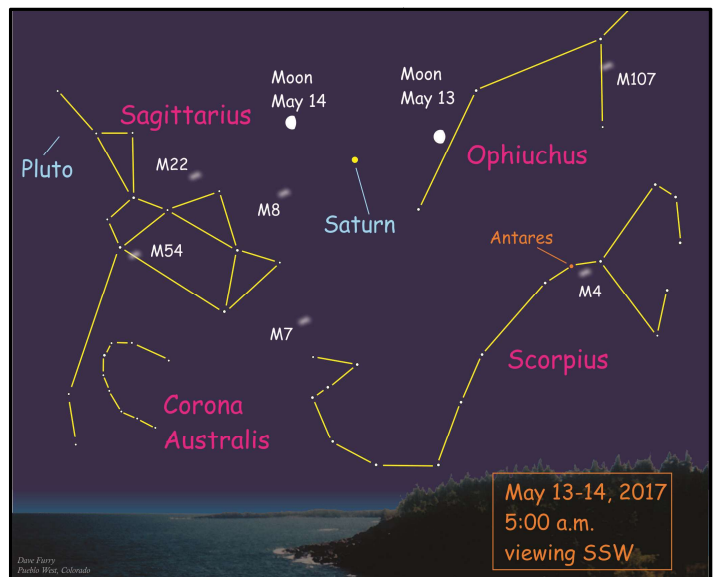
**May 13-14** - If you can rise early, the Moon and Saturn will greet you with a terrific view. The nearly-full Moon will pass close to Saturn as shown in the graphic.

**May 18** - Get up again before sunrise to view Mercury in the eastern sky. The smallest planet will be its greatest western elongation, which means that it will be at its maximum height in the sky.

**May 20** - Saturn is visible very late every night this month, but by tonight it rises at the more convenient hour of 10 p.m.

**May 22** - The very thin crescent Moon appears near Venus, as shown in the graphic.

**Other Planets** - Mars will sink lower into the western horizon at nightfall, and will eventually be lost in the Sun's glare all summer. Jupiter practically dominates the night sky, but is shrinking and fading after opposition early last month.



# SO, YOU THINK YOU'VE BEEN FRUSTRATED!

By Dave Furry

We have all experienced frustration. You may have missed important opportunities, perhaps not been given that job promotion you deserved, or maybe just turned left in life when you should have turned right. Well, take some solace in the following story, one of my favorites from the rich history of astronomy.

In 1677, Sir Edmund Halley (of comet fame) proposed a technique to determine the distance from the Earth to the Sun. One reason this was important was, using Johannes Kepler's recently discovered laws of planetary motion, once this distance was determined it was a simple matter to determine the distances from the Sun to the other planets. The proposed technique involved timing the transit of Venus across the face of the Sun combined with some very clever geometry. The transit of Venus occurs in pairs eight years apart once every century (you may recall that the most recent pair occurred in 2004/2012).



The next pair of transits after Halley's proposal was 1761/1769. Halley himself was no longer alive but astronomers, remembering his proposal, dispersed themselves around the globe to such far-ranging sites as Siberia, Mexico, and the South Pacific. There were good results – the distance was determined to be 95 million miles, which is not far from the modern value of about 93 million miles – but the real stories to me are the arduous adventures that several astronomers experienced in their quest; one story that stands out is the series of misadventures that plagued the French astronomer Guillaume le Gentil.



Guillaume le Gentil  
1725 - 1792

The French Academy of Sciences sent le Gentil to observe the transit from a French colony in India. He dutifully sailed around the Cape of Good Hope to Mauritius, where he waited for months before he could get passage for the final leg to India. Finally aboard a vessel, he soon learned that the British had seized the French colony he was headed for, so he returned to Mauritius. He was still at sea when the transit occurred however he wasn't able to obtain any useful measurements on a moving ship.

He decided to stay in Mauritius and wait for an opportunity to view the 1769 transit from the Philippines. In 1766 he secured passage on a ship to Manila and looked forward to finally observing a transit. But he arrived to a hostile reception from the governor of Manila, and was advised by the French Academy to return to the colony in India, which by now was once again in French hands. He considered staying in Manila anyways, but decided that India had a better chance of clear skies for the transit.

Back in India once again, he experienced a month of clear skies just before the transit. But (of course!) just as the transit began, clouds covered the Sun for the duration of the transit, only to vanish after the transit was completed! Later he was informed that there were perfect skies in Manila for the transit. From what I have read, it appears that at this point le Gentil experienced what we would now call a 'nervous breakdown.'

Before leaving India to return home to France, he contracted dysentery. He was delayed in sailing from Mauritius until late autumn (hurricane season) and sure enough, his ship was caught in a storm, was badly damaged, and had to return to Mauritius where le Gentil had to seek out another ship to get home. He finally got back to France in 1771 after being away eleven and a half years (to view a transit that took only about six hours!).

His colleagues were shocked to see him return from the dead, as was his family. His wife had remarried, and his relatives had declared him dead and (as one biographer described) "enthusiastically ransacked his estate." He also lost his place in the French Academy of Sciences (that august institution that had sent him away in the first place!).

He gave up astronomy, remarried, and retired to write his memoirs. A colleague later said of le Gentil: "... in his sea voyages he had contracted a little unsociability and brusqueness." Small wonder!