



PISGAH
ASTRONOMICAL
RESEARCH
INSTITUTE

Dr. Bob Hayward
Astronomer/Educator
Graphics from *TheSky*
Software Bisque

Mountain Skies

May 8, 2017

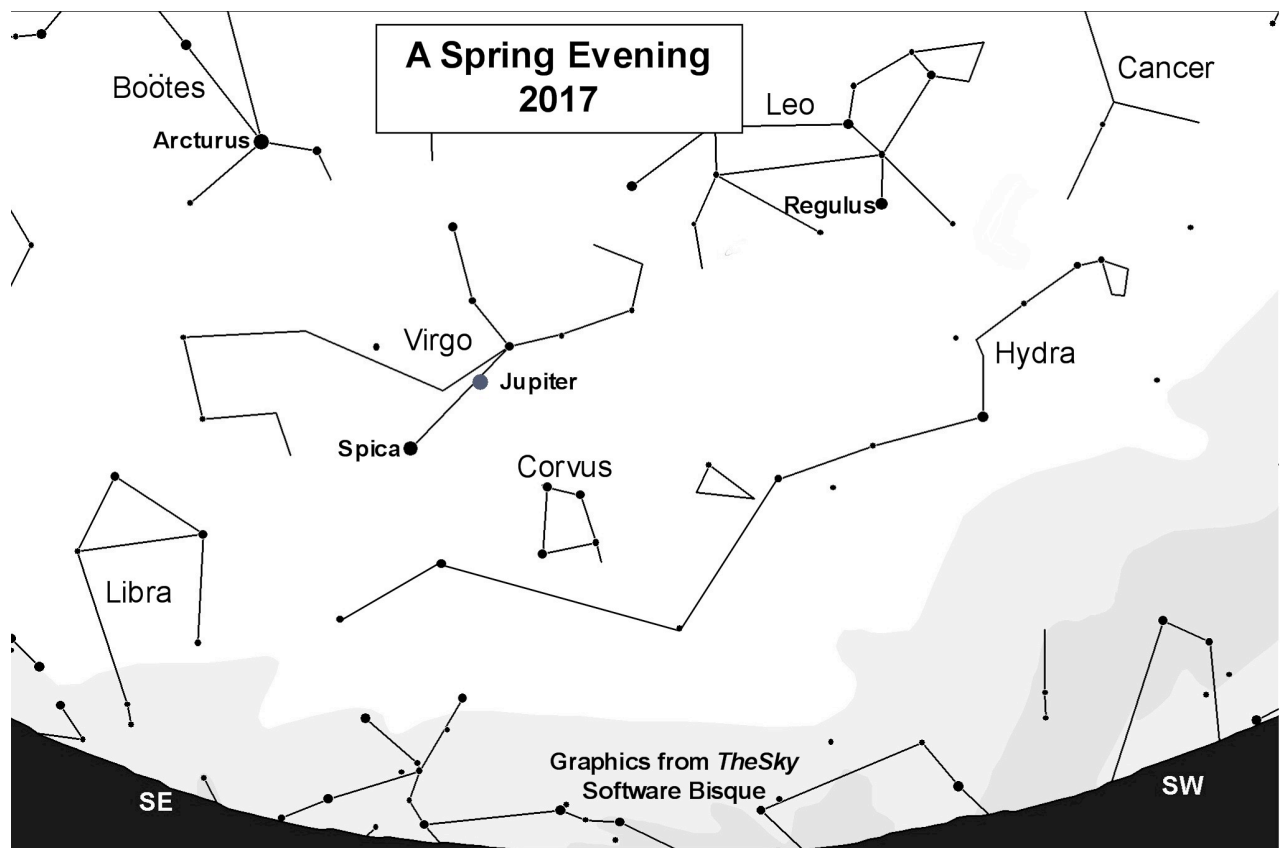
CONSTELLATIONS DATE WELL BACK IN HISTORY

The stars: The spring skies are with us now in the early evening. What do we mean when we identify sections of the sky with the various seasons, e.g., the “spring skies”? It takes the earth one year to revolve around the sun. Obviously, as we orbit our central star, we are on a different side of it each season of the year. Astronomers identify constellations with the seasons in which they are most prominent in the early evening, after the sun has set and the sky has grown dark. That does not mean we cannot see them at other times of the year; we can. In the fall, the spring constellations are in the morning skies before sunrise and, by winter, the spring constellations are up around midnight. The only time of the year we cannot see them at all is when the sun is in that area of the sky. For example, the central figure of the spring skies is Leo the lion. Since the sun lies in front of Leo from August 10 through September 15, we would not be able to see Leo and nearby constellations in August and September. They would be up during the daytime hours...behind the sun. Likewise with Virgo the maiden from September through October.

Where did these constellations originate? Leo the lion has been found on Sumerian pottery and, thus, is one of the oldest constellations, probably around 3500 years old. To the ancient Greeks Leo lived on the moon. He descended to the earth as a shooting star and ravaged the city of Corinth. The strongman Hercules saved the city by strangling the lion with his bare hands. Zeus, i.e., Jupiter, placed the lion in the sky where we see him today. Look for the front of Leo forming a sickle shape or a backwards question mark with the bright star Regulus as the dot on the question mark. His hindquarters are marked by a triangle to the east.

Below Leo, we find Hydra the water snake, the longest constellation in the sky. This is the nine-headed snake that was also a victim of Hercules. As visualized in our evening skies, however, he has

only one head, to the west under Cancer the crab. We can easily spot his head on a dark night but the rest of his body consists of much fainter stars that meander below Cancer, Leo, Virgo and Libra.



Finally, to the east is the longest zodiac constellation, Virgo the maiden. We usually envision Virgo as Ceres the goddess of the harvest. We get our English word “cereal” from her name. She holds some wheat or corn in her hand that is marked by the bright star Spica. Since Virgo is so long, we can actually see her from March through August, the months during which the cereal grains grow. Unfortunately, except for Spica, there are no bright stars in Virgo. To locate this constellation we let our gaze go from the eastern end of Leo over to the diamond shaped constellation of Libra.

The Planets: Speaking of Spica, the planet Jupiter is about 10° above and a bit to the west of this bright star. It has been an interesting exercise lately to watch Jupiter as it moves westward, retrograde, above Spica. On June 5 the giant planet stops its retrograde motion and, once again, moves eastward in a prograde direction like every good planet should do. This month the king of the planets is the king of the evening sky. Look for it well up in the southeast as the sky darkens. Mars is the only other planet up in the evening and it is hanging lower in the western sky before sunset. May will be the last full month of 2017 when we can spot the red planet in the evening sky as it passes behind the sun in conjunction on July 26. We will see it again in the predawn skies about Labor Day.

In the morning skies now we have the brilliant Venus swiftly coming out of the morning twilight. It is up a full two hours before sunrise and is now our “morning star.” Saturn rises well before sunrise by is in the southeast in Sagittarius the archer. It has begun its retrograde motion and by the end of the month will have moved into Ophiuchus the doctor. The elusive Mercury is very low in the morning twilight and a challenge even for experienced observers.

Celestial Calendar:

May 10, 5:42 p.m. EDT – Full Moon

May 14 -The Sun moves from Aries the ram into Taurus the bull

May 18, 8:33 p.m. EDT - Last Quarter Moon

* * * * *