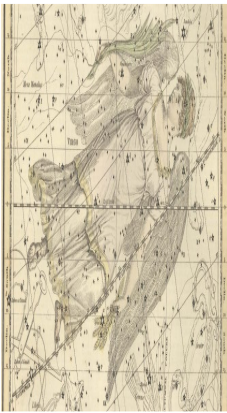


Zodiac constellations 14: Virgo

The constellation of the 'the virgin' (Latin) is the 2nd largest of the modern constellations (after Hydra) and the largest zodiac constellations.



Virgo has long been associated with fertility. In Babylonian astronomy, it was part of a constellation known as 'the furrow', representing goddess Shala and her ear of grain. In ancient Greece, Virgo was associated with Demeter, the goddess of wheat and agriculture, while the Romans associated it with Ceres, their goddess of agriculture and fertility. The name of the constellation's brightest star, Spica, also reflects the association with fertility. In Greek mythology, Virgo was also sometimes identified as the virgin goddess Iustitia or Astartea, the goddess holding the scales of justice in her hand. The scales were later separated from the Virgo constellation to form Libra. During the Middle Ages, Virgo was also sometimes associated with the Virgin Mary.

The Sun passes through Virgo from late-September to the end of October (5+ wks). Thus, it is in Virgo at the September equinox. Any perceived link between the constellation of the fertility goddess and the autumnal equinox (in the northern hemisphere), which is associated with the harvest, is coincidental. This coincidence is a consequence of precession of the equinoxes. One of the two points in the sky where the celestial equator crosses the ecliptic, the First Point of Libra (autumn equinox point) was originally in Libra, but has moved westward over the centuries (similarly, the other crossing point, the First Point of Aries, is now in Pisces). This point will move out of Virgo to Leo around 2440 CE.

Virgo has at least 29 stars with known exoplanets. It has eleven Messier objects and several galaxy clusters, particularly the Virgo cluster.

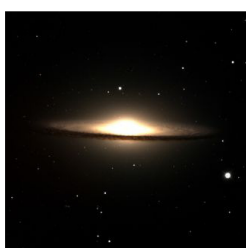
Notable features include:

- Alpha Virginis (Spica – 'ear of grain'): a blue-white star of magnitude 1.0. Located 260 ly away It is, in fact, a spectroscopic binary.



detail can be observed through a telescope

- Virgo cluster: the nearest large cluster of galaxies and centre of the local supercluster. Mostly all in Virgo, it edges into Coma Berinices. It is an irregular, roughly elliptical cluster of over 2,000 galaxies, with a diameter of 9 million ly. The brightest galaxies giant ellipticals including M49, M60, M84, M86, and M87. M59 and M89 are also elliptical galaxies. Other galaxies are spirals, including M58, M61 and M90 About 55 million ly away,



- M104 (Sombrero galaxy): a spectacular spiral galaxy, oriented almost edge on to Earth, giving the appearance of a Mexican hat. It is about two-thirds closer to Earth than the Virgo cluster at around 28 million ly away. Its central bulge, made of older stars, is larger than normal. This is surrounded by large bright globular clusters. A very

prominent dark lane of dust comprising polycyclic aromatic hydrocarbons runs across the galaxy. Observation requires a telescope.

- Virgo A: this strong radio source in M87 is a highly active galaxy. M87 is the largest galaxy in Virgo. Virgo A is a classical radio galaxy, with two lobes, the brighter one fed by a prominent jet 4,000 ly long (also visible at optical wavelengths) arising from the galaxy's central supermassive black hole. Located 60 million ly away, it is observable by telescope.
- Brightest quasar (C3 273): the first quasar identified, it has a magnitude of 12.9 and is located around 3 billion ly away.

Sources: Ridpath, I (Ed) 2012 Oxford dictionary of astronomy Oxford, OUP, Ridpath, I (Ed) 2006 Astronomy London, Dorling Kindersley, en.wikipedia.org