The red object in the above image is the first exoplanet ever detected in a direct image. It is not visible to the eye, but emits infrared light which can then be shown as red in this false color image. The parent “star” is not really a star, but a brown dwarf, a starlike object insufficiently massive to achieve an internal temperature and density great enough to turn on the nuclear fusion needed to
be a full fledged star. It also emits virtually no visible light and is also “seen” in infrared light. Because it is hotter than its planet, its light is of a shorter infrared wavelength which appears bluer-white in this false color image. The system is about 70 parsecs = 230 light years away. The two objects are separated by only 0.778”. The image was captured using the European Southern Observatory’s Very Large Telescope. The planet is about five times the mass of Jupiter and is roughly 55 AU from its parent “star.”