

Unveiling Venus

By Forrest Lockhart

Those of us who venture out in the early morning hours this fall will notice a bright star-like object floating above the eastern horizon. The planet Venus is without doubt the brightest object in the night sky, but many are amazed at how brightly it gleams even at the approach of dawn. At times Venus shines so brightly that it can be seen at midday. Indeed, many, including former President Jimmy Carter, have mistaken Venus for a UFO.

Since Venus is the second planet from the Sun, with Earth occupying third position, we see it go through changing phases similar to those of the Moon, alternating from a morning to an evening star as the year progresses. Its pearly brightness and changing position in the sky have given it a prominent place in ancient sky mythology. The ancient Babylonians called Venus by the name Ishtar, the goddess of love. In the second millennium BCE the seagoing Phoenicians called it Astarte, the goddess of fertility. While Astarte was renamed Aphrodite by the Greeks, she remained a symbol of love and fertility.

In the early 20th century Venus was considered a twin of Earth. With a diameter of 7500 miles compared to 7900 miles for Earth, scientists expected Venus to be similar to tropical regions here on our planet. Due to its position nearer to the Sun, science fiction writers envisioned a warm, wet planetary surface, replete with dripping jungles and dinosaurian wildlife beneath a perpetually cloudy sky. Some UFO hoaxers of the time even claimed to have met with and been transported by Venusian (or Venerian) residents to our watery neighbor. But advances in science soon stripped the veil from Venus, revealing a bizarre planet beyond the fertile imaginations of fiction writers.

Venus is shrouded in a perpetually opaque cloud cover of sulfuric acid droplets. Below the clouds is an atmosphere of carbon dioxide with a small amount of nitrogen. At the surface the atmospheric pressure is a whopping 92 times greater than that of Earth, equivalent to an ocean depth of 3000 feet. The high level of atmospheric carbon dioxide has created a greenhouse effect that produces surface temperatures as high as 860 degrees F., considerably above the melting point of lead.

Instead of a sister world personifying love and fertility, we now see Venus as a place of crushing pressure and hellish temperature, with no water, no plants and no life. The romance of the Venus of the ancients has been replaced by a bizarre furnace world that only a scientist could love. But we must admit that it certainly looks beautiful in the morning sky.

To learn more about Venus and the other planets of our solar system, we invite you to visit the Cameron Park Rotary Community Observatory on any clear weekend evening.