Planet venus

Astronomically, as a central planet Venus circles the sun inside the earth's orbit. It passes between the earth and the sun, when it is lost in the glare for about 14 days. This is known as the short meet (inferior conjunction), and at this time Venus is contiguous to the earth. Later on in the cycle the planet passes at the back the sun on the far side of its orbit--the long encounter-and is lost to view for almost three months. At this time it is farthest from the earth (superior conjunction). In the autumn of 1610 Galileo moved from Padua back to Pisa, and sustained his astronomical observations.

He examined the planet Venus and discovered that it moved through phases like the Moon, a discovery that struck another blow to the geocentric vision of reality. In the Aristotelian worldview, the Sun and the planets all rotated around Earth. But if this were true, then Venus must always lie between the Sun and Earth. From Earth, then, Venus would always appear as a hemispherical. In a heliocentric system, however, Earth and Venus can find themselves at times on opposite sides of the Sun. In that case, Venus will move through phases, including a " full Venus" phase related to a full Moon.

And that's exactly what Galileo saw (Boas Marie, 1962). A scientist on the planet Venus, which is constantly swathed in dense clouds and from whose surface no image of Sun or other star is observable, would picture the firmament quite in a different way from an observer on the and surface of Mercury, on whose cloudless horizon the Sun never sets; and still diverse would be the outlook of an researcher resident on the giant Jupiter, with its surface still plastic and its atmosphere saturated with ammonia gas and methane.

Nor is it only the view upward to the skies that is colored and transfigured by these planetary differences, but also the viewpoint downward to the planets themselves, to their surface features: the solids and liquids, polar zones, equatorial belts, and the thin films of life that may (or may not) overlay certain constructive surface areas of these spinning orbs. Venus has a temperature of about 450 degrees F at nearly three-quarters of an Astronomical Unit from the Sun.

The interpretation give quite a different answer--about -40 degrees F. This is because Venus is covered with an wide-ranging atmosphere, full of clouds. These clouds reflect almost all the solar light and heat, and there is little left to heat the planet. But the some clouds will also bottle up any heat emission from the planet, so that the actual temperature of the surface of Venus may be much higher than the observed temperature. What we are actually observing is the temperature of the atmosphere of Venus above the cloud layer.

In fact, this thick cloud layer averts us from knowing anything concerning the surface conditions on Venus--we do not even know how quickly Venus rotates, because we cannot see any permanent markings on the surface. It is hard also to know of what the clouds of Venus are composed. They appear very white, because they imitate so much solar radiation; this is the major reason why Venus can become the brightest object in the night sky. The method used to find out the chemical nature of the atmosphere of a planet is to look intimately at the spectrum of the planet.

If we pass the light of the Sun through a prism, we see a colored rainbow band with some colors missing or faint. We typically pass the light through a slit, and the missing colors appear as dark lines in the solar spectrum. There are many tens of thousands of such lines, and the particular lines that appear depend upon the chemical nature and physical conditions of the atoms in the outer layers of the Sun. If a planet simply reflected the light of the Sun, then its spectrum must be an exact replica, albeit a faint replica, of the solar spectrum.

But if the planet has an atmosphere, then the sunlight has had to pass twice through the planet's atmosphere before reaching us. We might hope to see new dark lines appearing in the planet's range that were not in the Sun's spectrum, lines produced by the atoms of the planetary atmosphere. The range of Venus has been searched for such telltale lines, in the hope of identifying the atoms of the planet's atmosphere. But such searches have been uncertain. In particular, the trait groups of lines that we know to be due to water vapor do not occur in the range of Venus (Crease Robert P. , and Charles C.

Mann, 1984, 91). At one time it was supposed that this pessimistic observation ruled out any possibility of the clouds' being ordinary water-vapor clouds and numerous suggestions of alternative chemical constituents were made, such as solid carbon dioxide, and formaldehyde, a compound of carbon, oxygen and hydrogen. But if the temperature at the cloud level is as low as -40 degrees F, then the clouds might still be of water, but in a frozen state. If this be so, then on the surface of Venus water might exist in a free liquid state and conditions on Venus might well be suitable to the development of life.

But this is just conjecture. The clouds of Venus hide the secrets of the surface well, and Venus remains a mystery. Velikovsky stated that Venus originated in Jupiter. It would be estimated, then, that the two planets would have an analogous composition. But such is not the case. Jupiter's density is low; representing that most of its mass is in the type of light elements such as hydrogen and helium. However, Venus has a density close to that of the earth and four times higher than that of Jupiter. There is no means that Venus could contain large amounts of hydrogen, helium, or other light elements.

Like Earth, Venus should have a core of heavy metals and a mantle of rocky minerals. There are related discrepancies between the atmospheres of the two planets (Morrison 1977: 154-55). It is also hard to account for Venus's hypothetical change in orbit from a much extended one to a nearly circular one as the consequence of a collision with Mars (Morrison 1977: 151). Such a change " would have requisite the application of outside forces thousands of times more powerful than those desired to tilt the earth's axis, perturb the rotation, and destroy the landscape.

There is no agent accessible to provide those outside forces. "(Mulholland 1977: 113) There are also features of the orbits of both Venus and Mars which propose a long period of relative steadiness (Mulholland 1977: 113-14). Velikovsky uses the two small moons of Mars to support his case. These satellites were not exposed until 1877, but Velikovsky claims that they were recognized to the ancients because they had been seen obviously when Mars passed close to the earth.

Not only does proof of ancient knowledge of these tiny moons fail to stand up under watchful scrutiny, but their very existence on almost circular orbits is strong proof against Velikovsky's contention that Mars collided with Venus and constantly had close encounters with Earth. If such near-misses had taken place the orbits of the moons would have been strictly disturbed, and the probability is that Mars would have mislaid them to either Venus or Earth, both of which are larger than the red planet. Most of the astronomical searching with infrared have been made through the spectroscope.

That is to say, the direct picture of the heavenly body is not photographed, but its light is passed through a prism or reflected from a diffraction grating, and the resultant spectrum is photographed. Many of the lines in the range are far out in the invisible regions on either side of the rainbow, and for several elements and compounds these lines of invisible light are the only significant signals. If they are far out in the ultra-violet, they are lost in the upper air where a high layer of ozone absorbs all the ultra-violet apart for a narrow region near the visible.

Thus, most of the ultraviolet light is filtered out of the sunshine by this gaseous layer and never reaches us. But if the signals are lines of the infra-red, they are now an open book, thanks to the competence of the new photography. The existence of phosphorus in the Sun was recently discovered in this way, by the photographing of infra-red phosphorus lines in the solar spectrum. And in the same way astronomers have been exploring the atmospheres of the planets. Planets, of course, have no light of their own. Each shines by reflected sunlight.

But it so happens that when the light of the Sun falls upon an cover of gas, such as the atmosphere surrounding a planet, the atoms and molecules of the atmosphere absorb definite wave lengths of the sunlight according to their peculiar affinities. The consequence of this selective absorption is to add certain dark lines to the spectrum, and these then show up by contrast with the spectrum of direct sunlight. The dark assimilation lines added by the planetary atmosphere become clues to the make-up of the atmosphere.

In this way it was lately discovered at Mount Wilson Observatory that the atmosphere of Venus is dense with carbon dioxide gas, its upper layers containing 10, 000 times as much carbon dioxide as is in the whole atmosphere of the Earth, that the atmospheres of Jupiter and Saturn contain ammonia, and that the amount of oxygen in the atmosphere of Mars is not more than ? of 1 per cent of the Earth's atmospheric oxygen. Similar studies at Lowell Observatory have revealed the presence of marsh gas (methane) in the atmospheres of Jupiter and Saturn (Duncan A.

M. , 1976). These findings are not encouraging to the hypothesis of life on the planets. We know no form of animal life that can breathe ammonia and methane, or that could get along on the meager oxygen available on Mars. The presence of so much carbon dioxide on Venus might argue an environment favorable to plant life were it not for the fact that Venus is perpetually shrouded in dense clouds. These completely blanket it from the observable rays which on our Earth are necessary to vegetation.