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SATURDAY, MARCH 23, 1929.

VENUS LATELY AT HER BRIGHTEST: THE PLANET'S PHASES AND LANDSCAPE.

DRAWINGS BY LUCIEN RUDAUX, FROM SCIENTIFIC DATA.



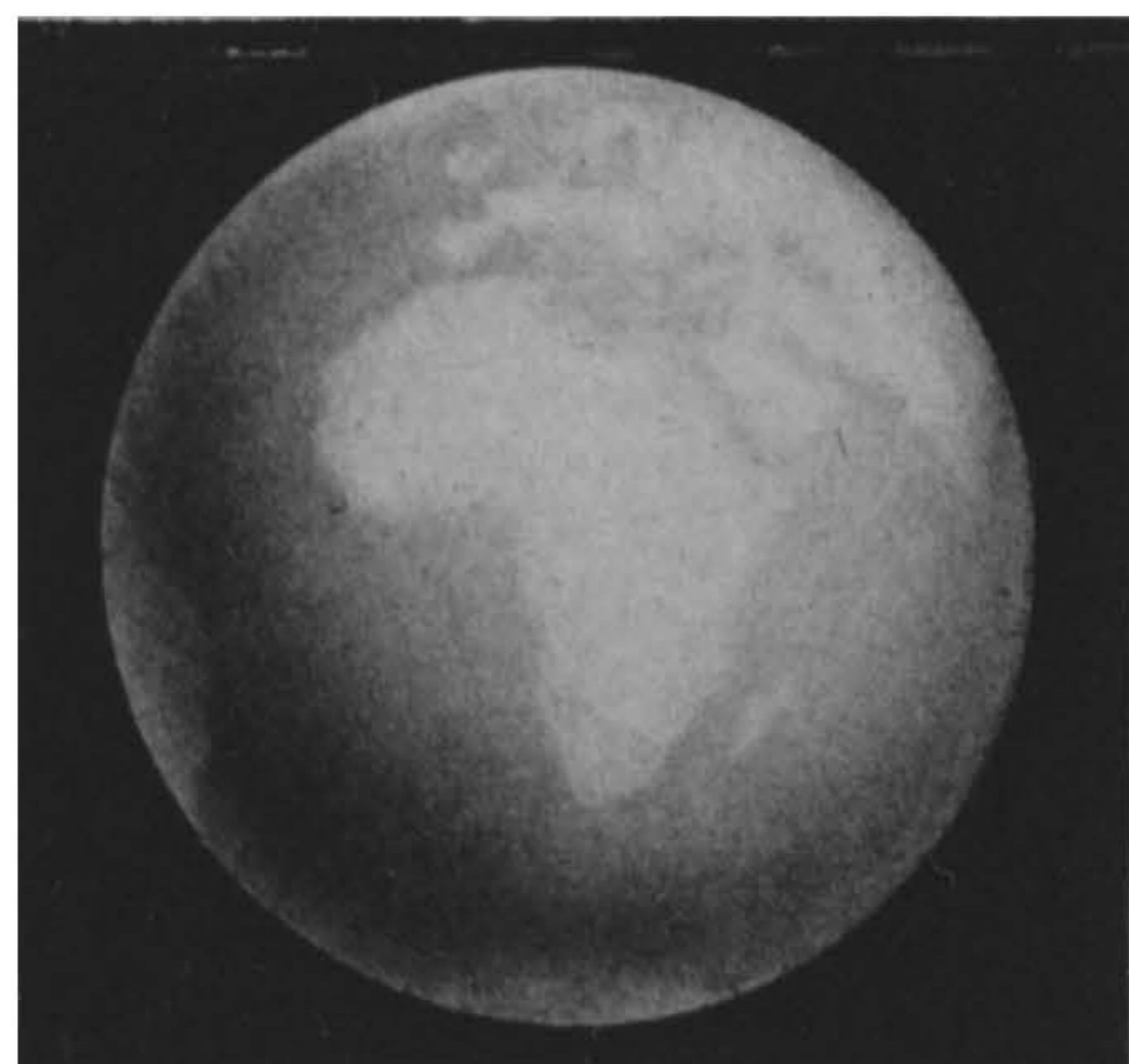
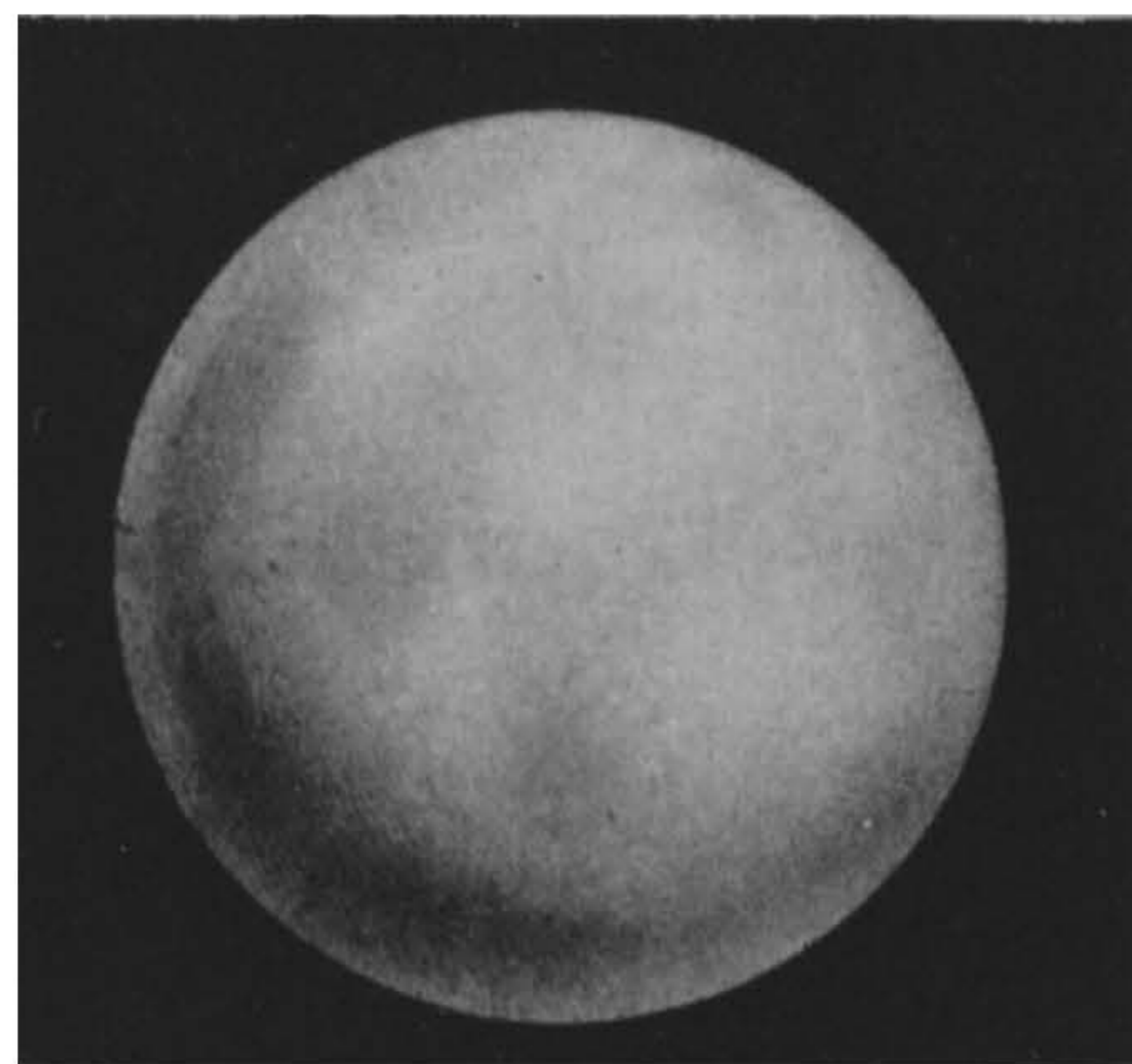
SUCCESSIVE PHASES OF VENUS (LEFT TO RIGHT) ON FEBRUARY 7, MARCH 18, AND APRIL 1: THE PLANET AS IT APPEARS (THROUGH AN ASTRONOMICAL TELESCOPE) WHEN IT APPROACHES THE EARTH AND SEEMS TO INCREASE IN SIZE.



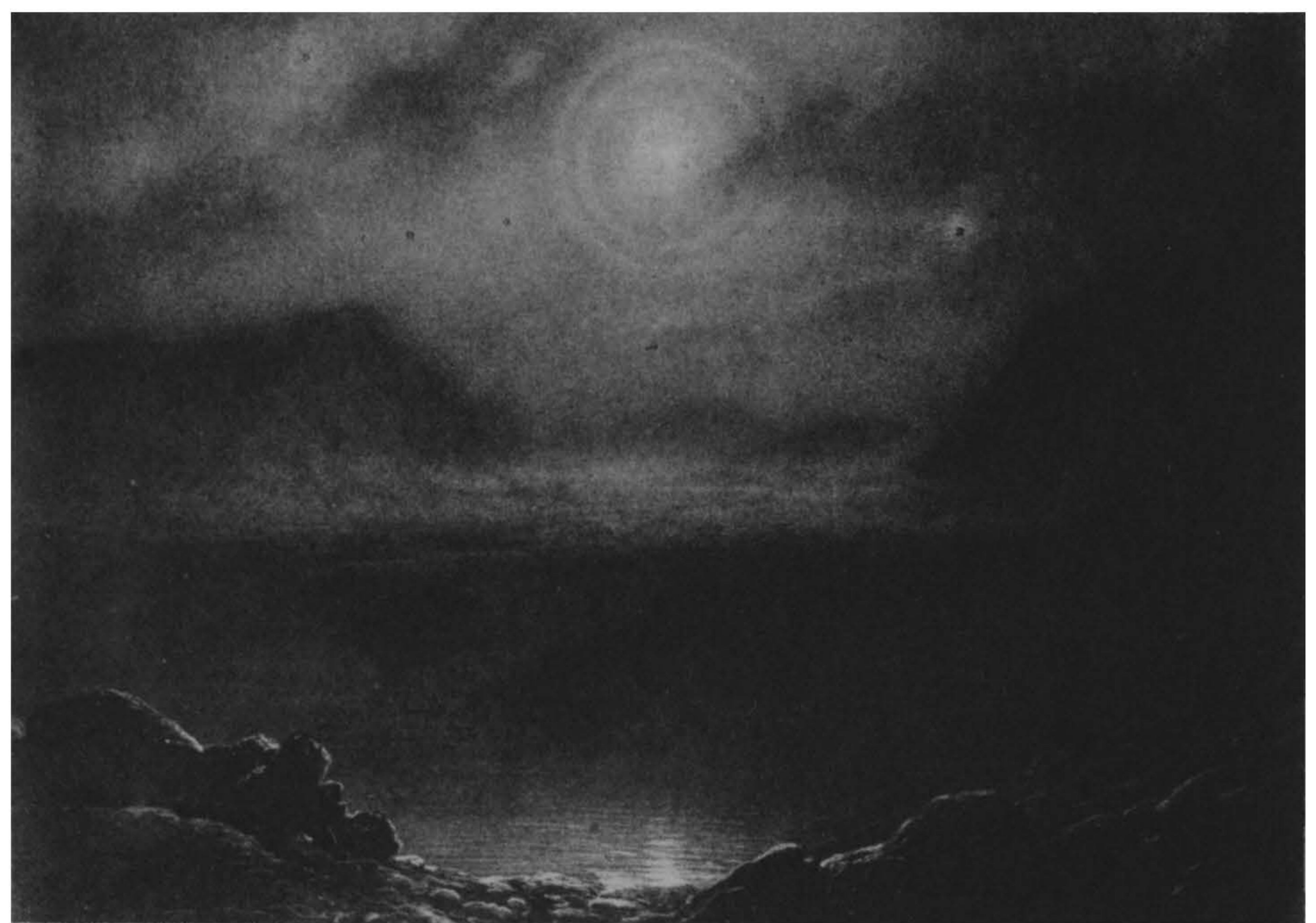
SUNSET ON VENUS: A STRANGE DISTORTION OF THE SUN, THROUGH ATMOSPHERIC REFRACTION, AS IT WOULD PROBABLY APPEAR TO AN INHABITANT OF THE PLANET—AN IMAGINARY VENUSIAN LANDSCAPE.



DIMENSIONS OF THE SOLAR DISC AS SEEN FROM VENUS (BELOW) AND FROM THE EARTH (ABOVE).



THE EARTH AND HER "SILVER SISTER WORLD": COMPARATIVE DIMENSIONS OF OUR GLOBE (BELOW) AND OF THE PLANET VENUS (ABOVE).



EARTH AS "A POINT OF PEACEFUL LIGHT" SEEN FROM VENUS: OUR GLOBE THE ONLY STAR THAT SHINES BRILLIANTLY IN THE PLANET'S NIGHT SKY, WHICH CAN NEVER BE CLEAR OWING TO THE CLOUDY ATMOSPHERE.

Continued. gives it light, make the illuminated part of its globe more or less in perspective under phases similar to those of the moon. On February 7, the planet had its greatest distance from the sun, being separated from it by about 107,000,000 kilometres. On March 18, it will only be 65,000,000 kilometres away from our eyes, and will attain its greatest brilliance, a condition due jointly to its distance and the magnitude of the phase. On April 20, when it has become invisible, it will pass between the earth and the sun, and will be reduced to a distance of only 43,000,000 kilometres. But what would especially strike a human visitor to

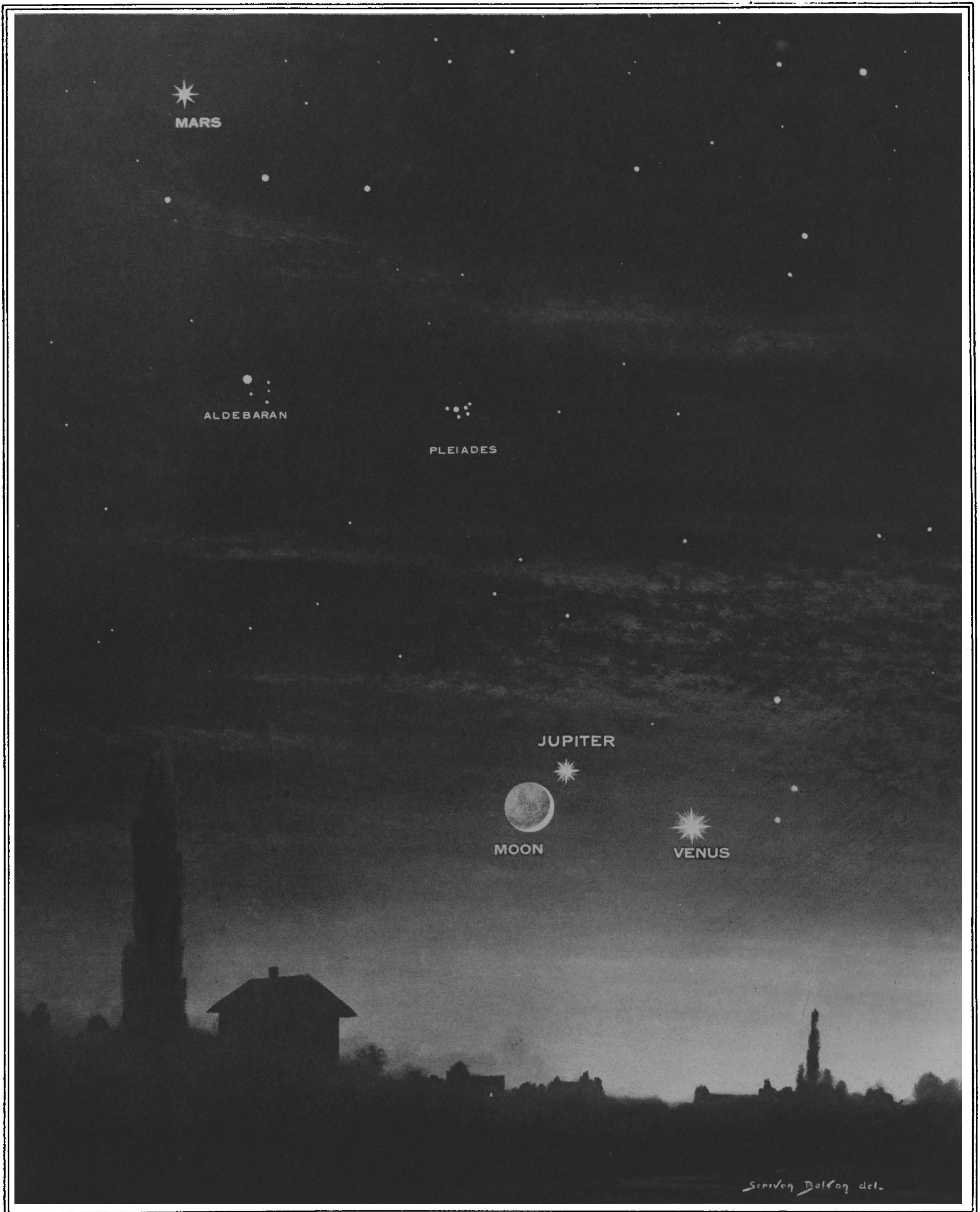
Venus would be the peculiar character of the Venusian landscape. Owing to the quality of the atmosphere, and of its density, nearly double that of ours, the surface would appear to be shrouded in a continual mist. If the sun were visible through the atmospheric disturbances attenuating its radiation, it would show itself as a relatively enormous disc on account of its lesser distance. Knowing what we do of the effects of atmospheric refraction and how they alter the solar disc on the horizon, we can imagine that, through the dense atmosphere, such effects are exaggerated on Venus, and give to the sun the strangest of outlines."

THE recent phenomenon illustrated opposite lends a topical interest to the above studies of Venusian phases and landscape. Writing a fortnight ago, M. Lucien Rudaux, who made the drawings, said: "The brilliancy of Venus will increase until it reaches its maximum on March 18; but then the planet will appear less high above the horizon, and it will disappear in April. This displacement can be explained by following the relative motions of Venus and of the earth, planets which traverse their orbits at unequal speed. Venus, more rapid because nearer to the sun, moves at the rate of 34.6 kilometres a second; the earth, less hurried, traverses 29.5 kilometres in the same time. The various positions thus occupied by Venus in relation to us and the sun, which

[Continued below.]

THREE PLANETS WITH THE MOON: A RECENT AND RARE PHENOMENON.

SPECIALLY DRAWN FOR "THE ILLUSTRATED LONDON NEWS," BY SCRIVEN BOLTON, F.R.A.S. (COPYRIGHTED.)



A CELESTIAL SPECTACLE SELDOM SEEN: VENUS, JUPITER, AND MARS IN CONJUNCTION WITH THE MOON.

The above picture represents a spectacle which occurred on the evening of March 14, and which will live long in the memory of many of those who were fortunate enough to witness it. Only on rare occasions can three planets and the moon be seen adorning the western sky. The dazzling silvery light of Venus, known to the ancients as Hesperus, and to the Romans as the goddess of love, far outshone Jupiter, the primrose-hued giant of the Solar System; while higher in the heavens appeared ruddy-faced Mars, the Roman god of war. The crowning addition to this trio was the three-day-old silver orb of night, reflecting an ashen earthlight, an appearance known "as the old moon in the new moon's

arms." Venus is now at its greatest brilliancy. It is, in fact, nine times brighter than Sirius. Its light is so intense as to cast a shadow, and may be likened to an early dawn. Its crescent-shaped appearance, even in a field-glass, is very beautiful. It will continue to approach Jupiter until the 29th, when the two planets will be closer together even than now. In order to solve the vexed problem of the length of the Venusian day, several astronomers are now assiduously engaged in a close scrutiny of the planet. The results are awaited with interest. Similar observations were conducted two years ago, when a rotation period of about seventy hours was suggested.