

ASPECTS OF THE PLANETS FOR MARCH.

SATURN

is evening star, and takes his turn in coming to the front on the March records. A noteworthy event occurs in his course as viewed from this planet. On the 7th, at 3 o'clock in the afternoon, he is in quadrature with the sun on the eastern side. On that occasion, when the solar orb sinks below the western horizon, Saturn looks down from the zenith, 90° east of the great luminary. "Soon as the evening shades prevail," and the stars peep from their hiding places in the fathomless depths, the planet, second in size of the sun's family, and by far its most wonderful member, may be seen beaming radiantly from the celestial heights and commencing his westward descent. He is indeed a shining light under his present conditions, and may be readily recognized by the serenity and purity of his rays and the soft golden tint that distinguishes him from the twinkling points surrounding him. Were he an earthly potentate, he could not choose a more commanding position for holding his court than the one he occupies at sunset when in quadrature. For, poised on the height of the celestial dome, he holds under his sovereign sway the most brilliant galaxy of stars the heavens display to mortal vision. On the north, the northern brilliant Capella forms his body guard. Equidistant on the south, Betelgeuse shines, the leading brilliant of superb Orion, who, girded with belt and sword, treads the celestial path with starry feet, stretching his vast bulk over the equator, and dotting the sky with a starry glory visible all over the globe. The peerless Sirius, member of the highest order of suns in space, glows in the southeast. On the west, the clustering Pleiades softly shine, translated to the skies for sisterly devotion, and red Aldebaran looms into view. On the east, Procyon points north to Castor and Pollux, and still farther east the starry Sickle comes into view, while, crowning the starlit scene, Jupiter rises toward the meridian in the plenitude of his power, and in the regal aspect he assumes on his nearest approach to earthly domain.

The observer who beholds Saturn under these conditions gazes upon a magnificent picture of starlit beauty. Every star that has been mentioned may be readily traced with the aid of a chart. The moon will not dim the luster of the stars, and, choosing the whole year through, no more brilliant page of the celestial book will be thrown open to the upturned eye than the one we have attempted to describe, when Saturn soon after sunset looks down from the high heavens above upon this little planet plowing her way through space and turning on her axis as she spins on in her course.

Observers skilled in planetary lore see evidences of change and commotion in the ring-girdled orb. Astronomers of high repute think that the rings are drawing nearer to the planet, and will eventually fall upon it. Others of equal renown—and here the evidence strengthens and accumulates—feel sure that great changes are taking place in the dimensions and density of the golden girdle, unique in the universe so far as our observation extends. The theory is generally accepted that the Saturnian rings are made of myriad satellites forming a kind of cloud, that the divisions of the ring are real, and that we see between them the black background of the sky. A different theory finds advocates, who think that the whole ring is opaque, and that the apparent opening is due to the darker shading of that portion of it. If a star could be seen shining through the dark space between the outer and inner ring, the problem would be solved. But no twinkler has thus far made its appearance between the bright boundaries of the golden circlets, and furnished the indisputable evidence required. The nearest approach to the much desired solution was made 1707-8, when a star was seen between the rings and the body of the planet, and when Dawes, called the eagle-eyed, saw a small star pass behind the outer edge of the outer ring.

The ball of the planet presents similar phenomena to those observed in Jupiter. There are belts and spots and rifts indicating great disturbances, and the same process of world-making. As, however, the planet is double the distance, the observation is more difficult, and on a smaller scale.

The present is the golden opportunity for a close study of the Saturnian system. Some of our best observers are improving every hour fitting for telescopic work, and tidings coming from the distant orb will quickly be proclaimed, for astronomical tidbits are rare in these days, and the discoverer is sure of immortal fame. Mimas would afford a favorable standpoint for observation. It is the innermost of the eight satellites, makes its revolution round the planet in less than 23 hours, and is only 32,000 miles from the edge of the outer ring. A spectator on Mimas would behold the whole system of rings and the planet softly cradled within them, a vision of such sublimity and magnificence that finite fancy is powerless to paint its transcendent loveliness.

The right ascension of Saturn on the 1st is 5 h. 6 m.; his declination is 21° 38' north; his diameter is 17"6"; and he is in the constellation Taurus.

Saturn sets on the 1st at half past 1 o'clock in the

morning; on the 31st he sets at half past 11 o'clock in the evening.

URANUS

is morning star until the 21st, and then becomes evening star. He wins the second, if he does not deserve the first, place on the monthly record, for during the month he reaches the period of his short-lived importance. On the 21st, at 3 o'clock in the morning, Uranus is in opposition with the sun, after which event the four giant planets are all on the eastern side of the sun, and play the part of evening stars in the following order: Neptune, Saturn, Jupiter, and Uranus.

This distant planet, 1,800,000,000 miles away, is visible to the naked eye at opposition and for a short time before and after. He appears as a star of the sixth or smallest visible magnitude, and the observer must know his exact position in order to be successful in his search.

Uranus, on the 21st, is in the constellation Virgo, 10' west and 23' north of Eta Virginis, a star of the third magnitude in the wing of the Virgin. It is incomprehensible that a planet visible to the naked eye should have wandered over the sky so many years without being picked up by some sharp-sighted star gazer, and that the discovery should finally be made by accident. A good telescope will bring him out as a charming object, in his garment of sea-green hue, and exceptional visual power may discern the shadowy belts that diversify his disk.

The right ascension of Uranus on the 1st is 12 h. 7 m.; his declination is 0° 2' north; his diameter is 3"8"; and he is in the constellation Virgo.

Uranus rises on the 1st soon after 7 o'clock in the evening; he sets on the 31st soon after 5 o'clock in the morning.

JUPITER

is evening star. His brilliancy does not perceptibly wane, and he remains lord of the ascendant during nearly the whole night, setting a short time before the day breaks. He is now retrograding, and traveling north. On the 14th he is in conjunction with Regulus, passing 51' north. He is near the star throughout the month, being on the east of it till the 14th, and then on the west. Thus by watching the star, fixed in its position, the wanderings of the planet will be plainly perceptible. The Prince of Planets was superb in February, and will be equally so during March. We can find no new words to describe the grandeur of his starry splendor to the naked eye, and the surpassing beauty he takes on in the telescope.

The right ascension of Jupiter on the 1st is 10 h. 8 m.; his declination is 12° 52' north; his diameter is 42"6"; and he is in the constellation Leo.

Jupiter sets on the 1st about 6 o'clock in the morning; on the 31st he sets a few minutes before 4 o'clock.

VENUS

is morning star. She anticipates the sun only about half an hour in rising, thus showing how close she is to him and how soon she will be entirely lost in his rays. The fairest of the stars will be a blank for months to come as far as observation is concerned. She gives, however, evidence of her usual activity, by paying her respects to Mars, the new comer among the morning stars. The planets are in conjunction on the 27th at 10 o'clock in the evening, Venus being 36' south. The conjunction will be invisible for a double reason. The planets are below the horizon at the time, and too near the sun to be visible under any circumstances.

The right ascension of Venus on the 1st is 21 h. 55 m.; her declination is 13° 50' south; her diameter is 10"6"; and she is in the constellations Aquarius and Pisces.

Venus rises on the 1st at a quarter before 6 o'clock in the morning; on the 31st she rises at a quarter after 5 o'clock.

MARS

is morning star, and is still close to the sun, rising a few minutes before him. Besides his conjunction with Venus, already referred to, he is in conjunction with Mercury on the 7th at 9 o'clock in the morning, being at that time 1° 3' north. It will be readily seen that Venus, Mars, and Mercury are near each other and near the sun in the month of March.

The right ascension of Mars on the 1st is 22 h. 37 m.; his declination is 13° 50' south; his diameter is 4"2"; and he may be found either in Aquarius or Pisces.

Mars sets on the 1st at a quarter after 6 o'clock in the morning; on the 31st he sets at a quarter after 5 o'clock.

MERCURY

is morning star until the 13th, when he becomes evening star. On the 13th, at 1 o'clock in the afternoon, he is in superior conjunction with the sun, making the fifth in the list of evening stars.

The right ascension of Mercury on the 1st is 22 h. 22 m.; his declination is 12° 29' south; his diameter is 4"8"; and he may be found either in the constellation Aquarius or Pisces.

Mercury rises on the 1st soon after 6 o'clock in the morning; he sets on the 31st at half past 7 o'clock in the evening.

NEPTUNE

is evening star during the month.

The right ascension of Neptune on the 1st is 3 h. 15,

m.; his declination is 16° 18' north; his diameter is 2"5"; and he is in the constellation Taurus.

Neptune sets on the 1st about half past 11 o'clock in the evening; on the 31st he sets soon after half past 9 o'clock in the evening.

THE MOON.

The March moon fulls on the 30th, at 39 minutes after 11 o'clock in the morning. She is the queen of the full moons for the whole year, being the first moon that reaches her rounded outline after the vernal equinox. She therefore determines indirectly when Easter Sunday shall fall, and consequently regulates the movable feasts and fasts of the Church. Our nearest celestial neighbor, the moon, thus exerts a great influence on human affairs.

The moon is in conjunction with Uranus on the 2d, with Venus on the 15th, and with Mars on the 16th. The new moon of the 16th is in conjunction with Mercury on the day of her change, with Neptune on the 20th, with Saturn on the 23d, with Jupiter on the 27th, and closes the list with a second conjunction with Uranus on the 27th.

ANNULAR ECLIPSE OF THE SUN.

An annular eclipse of the sun will take place on the 16th, that will be visible as a partial eclipse throughout North America and adjacent portions of the Pacific and Atlantic Oceans. The path of the annular eclipse commences in the Pacific Ocean, crosses California, Idaho, Montana, Manitoba, Hudson's Bay, Greenland, and ends north of Iceland. Observers on this path will behold the sun's face eclipsed with the exception of a ring of light around the edge. In this case, the center of the moon passes directly over the center of the sun, but the apparent magnitude of the moon is less than that of the sun, and therefore she cannot eclipse the whole disk. An "annulus," or ring, is left. The phenomenon is weird and beautiful, but bears no comparison in awe-inspiring intent and sublimity to a total solar eclipse.

The eclipse is visible as a partial eclipse in this vicinity. For New York standard time:

	H. M.
It begins.....	0:14
It ends.....	2:51

The magnitude of the eclipse is 0.537 of the sun's diameter, and is on the sun's north limb.

ECLIPSE OF THE MOON.

There will be a partial eclipse of the moon on the 30th, invisible in the United States, but visible in Asia, eastern Europe, and Africa. The magnitude of the eclipse is 0.886 of the moon's diameter.

The Late William A. Gellatly.

By the death of Mr. Gellatly this city is deprived of one of its best merchants, and Llewellyn Park, N. J., where he resided, one of its best citizens. For many years active manager of the large drug house of Wm. H. Schieffelin & Co., he occupied a position which his talents and perseverance alone had given him. He was born in Scotland in 1831, and was brought to this country when four years of age. The beginning of his career may be reckoned from his thirteenth year, when he attracted the interest and attention of Mr. H. H. Schieffelin during a recitation at one of the public schools, and so pleased the gentleman that the latter immediately engaged him as an errand boy in his office. He was rapidly advanced, however, and passed quickly from one position of trust to another, until he was received, in 1860, into the firm which had trained him and brought him up, and had been wise enough to appreciate him.

Mr. Gellatly was a member of the Chamber of Commerce, a director of the Board of Trade, and a late president of the National Drug Association, all which positions, however, pale before his marked characteristics as a man, for there could not be found one more gentle, loving, kindly, yet strong, firm, wise, and determined in right doing than this ever-active, never-tiring worker.

The death of Mr. Gellatly has cast a gloom over a large circle of friends as well as a delightful household.

Another Inventor Gone.

B. B. Hotchkiss, inventor of the famous gun bearing his name, died on 14th inst., in the fifty-fifth year of his age, in Paris, where he was engaged in the manufacture of his weapons of war. Mr. Hotchkiss was a native of Connecticut, and in early life was employed in Sharp's rifle factory and afterward in Colt's armory at Hartford, Conn., where he assisted in the perfecting of the celebrated Colt revolving pistol. Mr. Hotchkiss invented what is known as the Hotchkiss magazine gun, which was intended especially for use in the rigging of vessels.

The deceased had become quite famous for other inventions in the ordnance and projectile line, and he had established in Paris some ten years ago a factory for manufacturing his inventions, which establishment had grown to extensive proportions under his energetic management. Mr. Hotchkiss was a warm friend of the SCIENTIFIC AMERICAN, and he furnished for the paper the earliest information respecting his inventions. It is to be regretted that he should be cut off so suddenly in the midst of his usefulness.