

Astronomical Notes.

THE PLANETS IN APRIL.

The May moon will be eighteen hours old at sunset on the 8th. Then you may have a chance to see a moon on the very day of its birth.

As mentioned in last month's Notes, *Mercury* will be at his best as evening star during the first half of April. But there should be little difficulty in seeing him for some time after the middle of the month, say until about the 25th. His evening star season will end with his inferior conjunction on May 9. But instead of *Mercury* above or below the sun, as is his usual custom at inferior conjunction, he will this time pass right across the sun's face, and we shall have a transit of *Mercury*. This is a much more common occurrence than a transit of *Venus*, but it is a much less important one, and also a much less interesting one. The last four transits of *Venus* — 1762, 1769, 1874, 1882 — have been very important astronomical events, because of the attempts made to determine the sun's parallax by means of them. A transit of *Mercury* is of no use for this purpose. Then, in point of interest at a transit of *Venus*, the black back of the planet can be seen on the sun's face without any other instrument than a piece of smoked glass. Probably some of you saw it so on the afternoon of Wednesday Dec. 6, 1882. There won't be another opportunity until Tuesday June 8, 2004. *Mercury* is far too small to be so seen. The black spot that he will make on the sun on May 9 will be less than one-twenty-fifth of the size of the spot that *Venus* made in 1882. Small as this is, it will take five minutes to get the whole of itself on to the sun's face, and as much more to get off again. The whole transit will occupy five hours, but the show won't begin until after the sun sets here; so we shall see none of it. However, there will be another one on November 10, 1894. That one will be visible here, and as the day is a Saturday, we can look at it all that afternoon.

Venus and *Jupiter* are morning stars, and just at present a sight of them is well worth the trouble of getting up a little earlier than usual. An hour, or even half an hour, before sunrise is early enough, and the earlier in the month the better. *Venus* is moving in towards the sun, *Jupiter* is moving out. They will pass each other on the 7th, and the morning of that day and of the next will be the best times to see them. On these mornings they will be only about half a degree apart — a moonbreadth. The distance between them will increase about a degree a day after this; on the 15th it will be seven degrees, at the end of the month twenty-five degrees. Neither of the planets is at its best — *Venus* has less than half her greatest brilliancy, and *Jupiter* has just about half of his — but, even so, they are the brightest objects in the heavens next after the sun and moon, and it is a very pretty sight to see them as close together as they will be during the first half of April. Which is *Venus* and which *Jupiter* you will probably be able to settle for yourselves. Try also to settle these things: (1) What is the color of each? (2) How many times as bright as the other is the brighter one? Put your answers — especially the answer to (2) — on a post card, and address as below.

Star-gazers who object to early rising may take a look at these planets during the forenoon. *Venus* with the eye and *Jupiter* with a opera-glass. In a clear sky *Venus* is not at all hard to find any time up to noon, just now; and when *Jupiter* is so near her as he is at present a good glass should pick him up without much trouble. As a general rule the best time for getting a daylight peep at them is when they are on or near the meridian. In the middle of April *Jupiter* will be on the meridian at 9 a. m. meantime, and about thirty-five degrees above the horizon in this latitude. At the end of the month the meridian passage will happen three-quarters of hour earlier, and the altitude will be a degree higher. From the middle to the end of the month *Venus* will pass the meridian about 9:40 a. m. at an altitude of from forty to forty-five degrees.

Mars is very far from being the glorious object he was last year, but he is worth looking at just to mark the difference between his splendor then and his insignificance now. Then he was so big and bright that even *Antares* looked mean beside him. You can't compare him with *Antares* now, but there is *Aldebaran*, with about the same brilliancy as *Antares*, and much the same color. Which is the brighter now, *Aldebaran* or that red dot to the right? That is *Mars*. He is moving up between the *Hyades* and the *Pleiades*; about the 25th he will be directly between *Aldebaran* and the *Pleiades*. Try in the early evening which of the two — *Mars* or *Aldebaran* — you can pick up first. At the end of the month your glass will show *Mars* passing very close to a couple of pretty pairs — the *Kappas* and *Upsilon*s of *Taurus*.

In the the summer of 1892 *Mars* will be much brighter than he was even last year.

Although *Mercury*, *Mars*, *Neptune* and *Uranus* are all evening stars in April, *Saturn* has the best claim to be called the evening star for the month. He is above the horizon the whole evening, from sunset to midnight, and he is one of the four or five brightest objects in sight. That's him, up there to the left of the *Sickle* — that yellowish star. No one near him as bright as he is — a steady old chap, too, scarce a twinkle to be got out of him. Those stars near him belong to the constellation *Leo*.

This is one of the very poorest years for seeing *Saturn's* Ring. It is closing up fast. The south side of it, which has been turned towards us for the last twelve years, will disappear at the end of September, and the north side will begin to come in sight at the end of October.

Uranus can be easily found with an opera-glass between *Spica* and *Kappa Virginis*. Having found it, lay down your glass and try your eye. If you are not sure which of two objects in that space is the planet, watch them both from night to night until you see which one is the wanderer.

A. CAMERON.

Yarmouth, N. S., March 25, 1891.

The *Normal Light* is the name of a neat and apparently well-conducted paper published by the students of the Normal School, Fredericton.