

The Heavens in October

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The principal change in the evening sky is the appearance of the bright winter constellation Taurus...

million miles from us, it had drawn so near the sun that the disturbance produced in it by the great body had greatly increased its intrinsic brightness.

THE UNIVERSE OF STARS. No one can study the wonderful face of the sky, shown in Figs. 1 and 2, without wondering what the nature of the universe is...

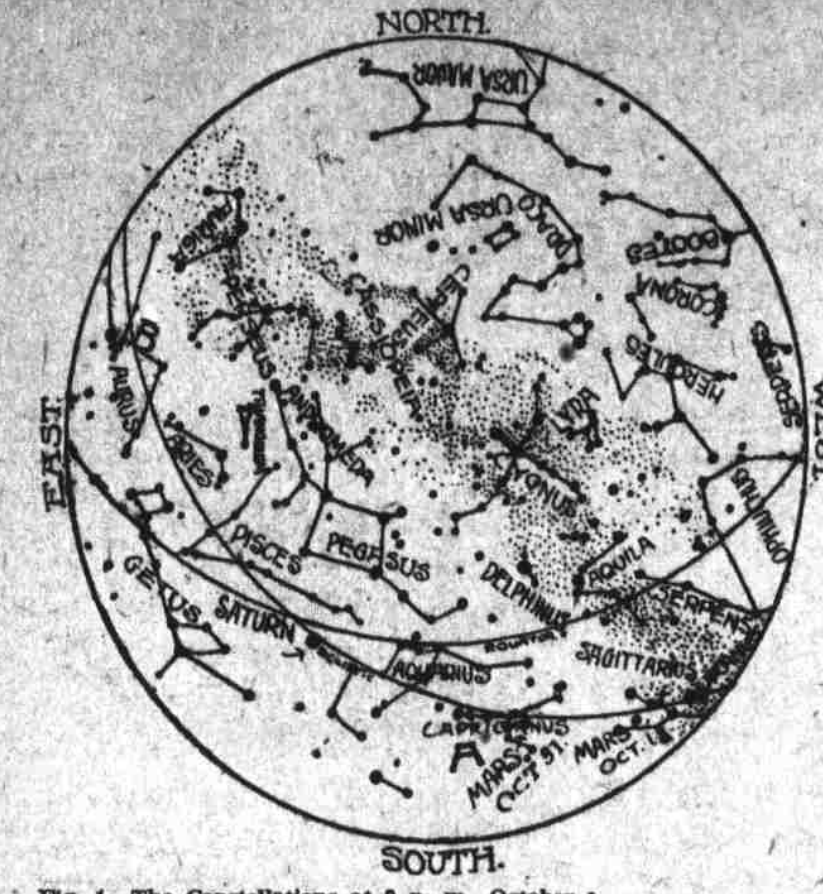


Fig. 1—The Constellations at 9 p. m., October 1.

westward turning has now become very evident. In August it arched the

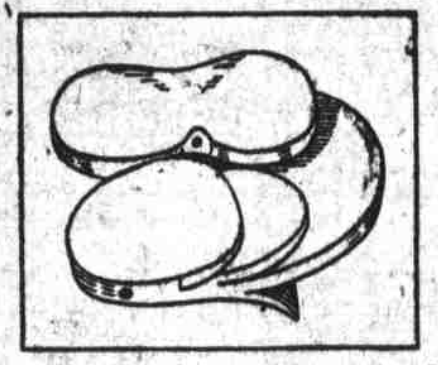


Fig. 2—Disc model of the Milky Way.

heavens from north to south; now it extends from the northeast to the southwest; by December it will stretch due east and west and until the end of February will cease to pass directly through the zenith.

THE PLANETS. The planet Mars, which is moving rapidly eastward out of the constellation Sagittarius into Capricornus, may still be seen in the southwest, but it is now in unfavorable position for observation.



Fig. 4—Spiral model of the Milky Way.

was supposed to be twice as deep as the second. The model formed from all the pointings is the disc-shaped body shown in Fig. 2 with various laminations corresponding to the branching of the Milky Way, and with a few holes directly through it which correspond to the dark holes or vacant places in the sky.

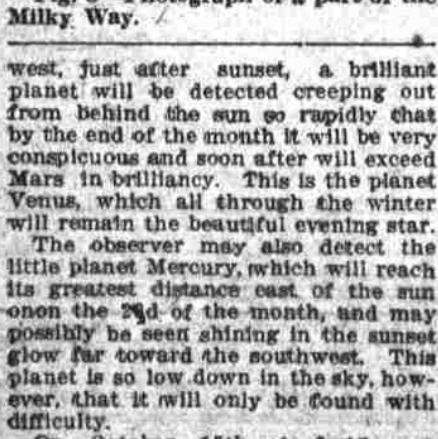


Fig. 3—Photograph of a part of the Milky Way.

west, just after sunset, a brilliant planet will be detected creeping out from behind the sun so rapidly that by the end of the month it will be very conspicuous and soon after will exceed Mars in brilliancy.

THE AUGUST COMET. The observer who looked at the sky just before sunrise during the month of August doubtless saw the bright little comet which was then visible. These visions from the depths of space have been very rare of late years.

we know that stars are a great cloud of dust, but there are many minute worlds revolving on one of which it is our destiny to dwell.

The first attempt to find the form of our universe was made by Herschel more than a century ago. Supposing that the fainter stars appear faint because they are farther from us than the brighter ones, and that the stars on the whole are evenly distributed through the cloud, he thought it only necessary to point his telescope in different directions and go count the number of stars which he saw.



Fig. 5—A possible form of the Milky Way spiral.

cause they are very old and beginning to die out. If we could directly measure the distance to some thousands of stars the task of finding the shape and size of our star cloud would be an easy one.

But there is only one way known of measuring the distance of a star, and that is by observing its apparent change in direction from us as the earth carries us along its great path in its yearly journey around the sun.



Fig. 5—A possible form of the Milky Way spiral.

But beside our own motion around the sun, the sun itself is ceaselessly rushing through the star cloud carrying the earth and all of the other planets with it. The effect of this motion is to cause a displacement of all the stars, and notwithstanding that the stars themselves are also moving in all directions, on the whole those stars which are nearest to us will appear to be displaced the most, just as to a passenger on a swiftly moving railway train the nearer objects appear to rush past with far greater velocity than those which are far away.

The August comet was a very pretty one, with a bright nucleus and a short tail. It was easily visible without a telescope. On August 1st it was near the bright star Aldebaran, at A, Fig. 6; by September 1st it had moved entirely across the Taurus into Cancer. It was nearest the earth on August 23, when it was but 70 millions of miles away, but it was brightest on August 23d because, though it was then 90

through the star cloud, the proximity of this method will be very much increased. From such careful studies of star drift it is inferred that the great majority of stars which we see are arranged in a long spiral cluster which appears to us as the Milky Way.



Fig. 6—The Constellations just before sunrise, showing the path of the August comet.

From this it is concluded that we are in the cluster itself; that our sun is merely one of the stars of the Milky Way cluster.

Fig. 4 shows a form originally assigned to the Milky Way cluster, but from more recent researches it appears that the spiral is more complicated, perhaps somewhat of the shape shown in Fig. 5.

Scattered among the bright stars there are innumerable fainter ones which appear faint because they are farther away than the others. Some of them, like the red stars, are faint because they have reached a point in their development in which the light of their bright interior is obscured by heavy clouds.

APPEAL FOR CONDEMNED MAN.

Four Exceptions Will Be Filed With Supreme Court in Appeal, Guthrie Case—Highway Robbery Charged Against a Negro—Tobacco Begins to Come in Plentifully at Durham.

Durham, Sept. 28.—The appeal case of Major Guthrie, the negro murderer who stands convicted and under sentence of death for strangling his wife, has been prepared by his attorney, Mr. Benjamin Loveston, and forwarded to Solicitor A. L. Brooks.

The officers are looking for one Norman Beasley, a negro, who snatched \$1 from the hands of the wife of Robert Weaver, also colored, and then ran off. When he grabbed the money the cries of the woman brought her husband to her help.

There was quite a large break of tobacco on the market yesterday, the three warehouses being well filled with the weed. The grade of tobacco being sold is low, but the prices for those grades are good and considerably above the average.

One Durham Negro Shoots Another. Special to The Observer. Durham, Sept. 28.—There came near being a fatal shooting affair at the Seaboard Air Line depot yesterday when Bun Mitchell was shot and wounded by Fred Carlton, both negroes.

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DETECTIVE'S QUICK WORK. In Two Hours He Runs Down Boy Who Took \$50 and Returns the Money to the Owner.

Special to The Observer. Asheville, Sept. 27.—City Detective Frank Jordan did a neat stunt in the sleuth line and, while no prosecutions will follow, the work of the detective was nevertheless excellent.

EASY MONEY. The stock of the Candidate Laundry Co. of New York has \$24 dividends, and has to \$100. Salesmen wanted, investigate. NATIONAL TRADING CO., 1 Madison Ave., New York.

ANNOUNCEMENT. Drs. W. A. Graham and T. H. Wright beg to announce that they have formed a copartnership under the firm name of Graham & Wright for the practice of Medicine and Surgery.

Commissioner's Sale of Real Estate. By order of the Superior Court, in a proceeding therein pending, entitled Frances Eugenia Clark and others vs. Loyd Smith and others, on the 15th day of October, 1907, at 12 o'clock m., at the courthouse door in the City of Charlotte, I will sell at public auction to the highest bidder the following described tract of land:

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