

ASTRONOMICAL NOTES.

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The New Planet :—

The Madrid Academy of Sciences announces that an astronomer of Barcelona Observatory has discovered a new minor planet which will be named *Alfossina*.

Life on Mars :—

The Astronomers are still discussing whether or not there is life on Mars. But the belief in general is that the only kind of water on the planet is a limited amount of snow. It is believed that water is circulated by means of canals and that these are the white markings visible on the surface. "That so complete a system of irrigation denotes a highly civilised race of inhabitants is the theory advanced from some quarters," says the "Daily Herald." It is said that in August 1924, Mars will be 25 millions mile from the Earth.

Is the Moon dead ?

The results of recent observations of the Moon's surface by Professor Pickering may compel us, says an astronomical correspondent of the *Morning Post*, to revise old views about the Moon and to conclude that some form of life survives there. Some years ago, it was stated that evidence had been obtained of the existence on the Moon of a tenuous atmosphere, snow, vegetation and "Canals" and now this evidence is given in greater detail and with more assurance as results of prolonged study of the surface features of our satellite.

If the results of the recent observations of Professor Pickering and others can be substantiated completely or even partially we shall require to revise our ideas of our nearest neighbour and to conclude that she may not be quite dead at present, though it seems pretty certain that at no far distant date she will slowly flicker out and be for ever a desolate wilderness.

Sunspots and the spots on Jupiter :—

A well-known astronomer writes :—"Some astronomers

have thought that a relationship subsists between the spots on the Sun and the spots on Jupiter. There certainly seems an apparent identity in point of time between the two classes of spots and on the assumption that the spots on Jupiter are indicative of disturbances on the planet, Ranyard broached the idea that both classes of phenomena are dependent on some extraneous cosmical change; and are not related as cause and effect. Browning suggested many years ago that the red colour of the belts is a periodical phenomenon coinciding with the epoch of the greatest display of sunspots."

Comet Notes :—The years 1918 and 1919 have both been notable for the dearth of comets with parabolic orbits, only one being detected in each year. It is probable that war conditions have prevented the search from being so assiduous as usual, but it is to be hoped that now that normal conditions have returned astronomers will be on the alert to make discoveries.

The Masses of the stars :—

The mass of a star is perhaps its most important element, but it is one that can be ascertained only in exceptional cases. Prof. H. N. Russel in a paper read at the twenty-first meeting of the American Astronomical Society gathered together all the evidences, direct and indirect, on the subject grouping the results by spectral type.

Method I. is the usual one for usual binaries, the orbits and parallaxes of which are known; Method II. is similar, where the parallax and relative motion, but not the orbit are known; Method III is from spectroscopic binaries where both spectra are shown, a mean inclination being assumed; and Method IV, the vaguest of all, derives the parallaxes of binaries from their proper motions.

The Planet Jupiter :—

The Rev. T. E. R. Phillips contributes an interesting article on the planet to the June number of *Scientia*. After giving a resume of Jovian phenomena during the last 20 years,

including the red spot and the south tropical disturbance. Mr. Phillips notes the startling change in the aspect of the planet which took place early in 1919; the disturbance and the redspot hollow both practically disappeared, though the spot itself survived. Discussing the physical condition of Jupiter, he notes the similarity to the sun in density, in varying rotation periods according to latitude and in the dark belts which are comparable with the spot-zones. He suggests that the red-spot may indicate a vast cyclonic movement in the atmosphere, noting that this view would explain the rapid passage of the dark matter of the tropical disturbance round the spot when the two are in conjunction. He notes in conclusion, the importance of Jovian study from the point of view of cosmogony, since it illustrates a stage intermediate between the solar condition and the earliest geological periods.
