MT WILSON TO MEASURE HEAT FROM MARS

Pasadena, Calif.-

The largest telescope in the world, the 100-inch reflector at Mount Wilson Observatory here, will be turned upon Mars at the time of its closest approach to earth in August, if conditions are favorable, Dr. Walter F. Adams, of that institution says. It is probable that photographic plates sensitive to red light will be used in order to detect differences in the kind of light from different parts of the surface. Measurements of the heat radiated from the polar caps and other portions of the surface will also be made.

ASTRONOMER-ARTIST TO OBSERVE AT YERKES OBSERVATORY

Williams Bay, Wis. - When conditions are highly favorable for the observation of Mars, Prof. George Van Biesbroeck, an experienced artist, will make drawings of that planet, using the Yerkes Observatory forty-inch telescope, Dr. Edwin B. Frost, director of the Observatory, has announced. Owing to the low altitude of Mars in the sky and the consequently poor observing conditions at the time of opposition no photographic observations are planned.

"At the succeeding opposition when the altitude is more favorable and when speical apparatus can be designed by Prof. Frank E. Ross who will then be here, we shall secure photographs," Dr. Frost said.

SPECIAL LIGHT SENSITIVE PLATES TO CATCH MARS AT LICK OBSERVATORY

Mount Hamilton, Calif. - Photographic observations of Mars with special plates and color filters will be made during the next month, Dr. R. G. Aitken, assistant director of Lick Observatory, announced.

"Specially prepared plates sensitive to ultra violet and red light as well as light to which ordinary photographic plates are sensitive, will be exposed through the Crossley reflecting telescopes," Dr. Aitken explained. "Light with wave-lengths of 7500, 4500, and 3600 Angstrom units will be utilized. Orthochromatic plates and color filters using light of wave length of 5600 Angstrom units will be used in connection with the 36-inch refracting telescope."

Positions of the satellites of Mars will be measured and the planet will be watched visually as occasion offers

HARVARD ASTRONOMERS IN JAMAICA PLAN VISUAL OBSERVATIONS OF MARS

Cambridge, Mass. - An extensive program of intensive visual observations of Mars with the Draper telescope will be carried on in August by Prof. W. H. Pickering and his assistants at the Mandeville, Jamaica, station of the Harvard College Observatory. Dr. Harlow Shapley, director of the Harvard College Observatory, announces that no plans have been made for the observation of Mars at the Arequipa or Cambridge stations.

Pittsburgh, Pa. - "Mars will be a little closer to the earth on August 22 than at any recent opposition period but the advantage gained is very slight, only about one per cent."says Dr. H. D. Curtis, director of Allegheny Observatory. "Unfortunately, it will also be 18 degrees south of the celetial equator and thus unfavorably situated for Observers in the northern United States. No extensive program of observations is being planned at Allegheny Observatory though some photogrphs may be attempted."

Swarthmore, Pa. - No extensive program for observing Mars is contemplated at the Sproul Observatory, according to Dr. John A. Miller, director. Some drawings and photogrphs of the planet will be made at the time of its closest approach in August.

READING REFERENCE - Gregory, Sir Richard. The Vault of Heaven. New York, E. P. Dutton & Company, 1923.

GRAFTED POTATOES GROW LIKE FRUIT

Grafting, a procedure quite common in tree culture, has been applied to vegetables and flowers by a French botanist who has by this method increased the size and yield, created new species, prolonged the life of plants and intensified the perfume of flowers.

Prof. Lucien Daniel of the University of Rennes has performed grafting operations on cabbage, lettuce, beans, potatoes, tomatoes and various flowers. Other botanists who have examined his results concede that the fantastic experiments made by Prof. Daniel hold much practical promise for the market gardener.

One of the first attempts made by Prof. Daniel was to graft the black Belgian bean on a large white Soissons bean. From this combination plant he obtained seeds of an entirely new variety of beans which has remained fixed.

He took a bitter variety of cabbage unfit for food but which resists frosts and grafted on it a variety that has a good flavor but succumbs easily to cold. The seeds of the hybrid yielded a new variety that tastes good and resists cold.

Some of his most sensational grafts were made on the family Solanaceae to which belong such useful plants as potatoes, tomatoes, tobacco, and egg plant. He grafted sections of egg plant on tomato vines. First the grafts produced the regular ovoid egg plant fruit and later on the same branch yielded other fruit resembling that of tomatoes. Finally a true hybrid, round in shape, was obtained.

Prof. Daniel has also grafted tomato branches and bella donna on potato vine and potato stems on egg plants and tomato vines. Potatoes, of course, are simply swollen stems or tubers which develop underground. He was curious as to what would happen when he grafted a potato stem on another plant. Would tubers continue to be produced? Yes, they were, but not underground. Large beautiful tubers hung from the branches like fruit.

These aerial tubers when planted yielded a new kind of underground potatoes which were more resistant and developed more quickly than those of which they were the offspring.

A still more fantastic discovery was the finding, among these second-generation hybrids, of three plants which bore both aerial and subterranean tubers at the same time. These tubers being harvested and planted yielded a stable new variety rather late in developing but delicious in flavor, extra large in size and very hardy.

One of the most recent experiments is the double grafting of belladonna and