

CHANGES IN THE LUNAR CRATER ERATOSTHENES

BY LATIMER J. WILSON

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The appearance of certain dark markings in the lunar crater Eratosthenes has held the attention of selenographers for more than a score of years. Regardless of whatever explanation is offered by various observers to account for them, the markings are interesting because they belong to the same order of planetary detail as the so-called canals of Mars. They are diaphanous dusky lines forming a mesh of intricate pattern which varies during the course of a lunar day, appearing soon after sunlight has flooded the interior of Eratosthenes.

The area involved is about one-third as large as that contained in Yellowstone National Park. In the southeastern part of Eratosthenes dark spots appear at a time when earth, sun and moon have reached a colongitude of about 14 degrees. During lunar mid-day they become stronger and darker and do not begin to disappear until colongitude about 120 degrees is reached. The most striking changes occur around colongitude 70 degrees and again at colongitude 120 degrees.

Sporadic observations have been made at my private observatory here in Nashville since August, 1925, and will perhaps be continued with more regularity when the season of good seeing arrives during the summer of 1926. Fifteen drawings of the region have been made and many of them confirmed by other observers.

There seems little doubt that these changes actually occur in a progressive manner apparently contradictory to the geometry of shadow formation. Whether or not they are produced by a real darkening of the moon's surface has not been decided. Whether they are real or are optical in nature may be eventually deduced from comparing the work of different observers who are observing Eratosthenes in coöperation with Professor William H. Pickering, who is at Mandeville, Jamaica, directing the work. One interesting feature of the markings is that some of them move while others are stationary in each lunation.