

Star & Weather Gossip

CONCERNING THE HEAVENS THE ATMOSPHERE THE SEA

BY

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CHAPTER XIX

THE PHANTOM PLANET

IT was significant that during the solar eclipse of August 21st, 1914, no mention should be made of any search for the supposed planet between Mercury and the sun. Probably the belief in the existence of such a body has vanished from the minds of those astronomers who form eclipse expeditions. 'Twere well it were so, perhaps, for it cannot but be unsatisfactory to chase a phantom.

For my part, I have no doubt that Leverrier and Lescarbault were mistaken when they announced the existence of that intra-Mercurian planet which has come to be christened Vulcan. Leverrier submitted to the French Academy of Sciences, in 1859, a certain error in the secular motion of the perihelion of Mercury, which he could not otherwise explain than by supposing another planet to exist between Mercury and the sun. Then the astounding intelligence was laid before the Academy that not only had the body been found but that its discovery was actually made several months before Leverrier had calculated its presence. The finder was one Dr. Lescarbault, of Orgères, France, who happening to look at the sun through his telescope one bright afternoon saw, to his great surprise, a small round black spot pass over the disk, a circum-

stance with which he promptly acquainted Leverrier. The latter journeyed to Orgères and there gleaned what he looked upon as highly satisfactory information. That is how the matter came to be presented by Leverrier to the Academy.

Vulcan has had every chance to reveal itself since the days of Leverrier and Lescarbault. It has not done so, and the only reasonable conclusion, I think, is that there is no such planet to be revealed. In the year 1876 a German astronomer stationed in China, saw a small black spot on the solar disk and found that it quickly vanished. He promptly telegraphed the news to Europe that Vulcan had at last reappeared. Observations made at Greenwich and Madrid, however, proved that the alleged planet was merely a sunspot which had been carried out of view by the solar rotation.

On May 19th, 1885, that highly skilled observer, Mr. T. W. Backhouse, of Sunderland, wrote to *The Astronomical Register* as follows: "Again at the spring node of the accepted orbit of the supposititious Vulcan the sun was examined here each day (except Sundays) when the weather allowed, over the period during which a transit is possible, according to Leverrier, but with no positive result. It may be added with confidence that no planet-like object, certainly none with motion relative to spots, etc., was visible on the sun's disk at nearly all the times of my observations between March 15th and April 18th." Mr. Backhouse noted that on some six occasions the observation was not good, or not very good, or that the definition was bad. He considered that the question of Vulcan's existence could only be settled by

continued and systematic watching for its appearance in transit, as at the time of a solar eclipse it might be too near the sun to be visible.

RICHTER'S DREAM

The mighty angel and the man whom God called up from dreams into the vestibule of heaven were speeding through space ; the rushing of planets was upon them, the blazing of suns was around them. "Then came eternities of twilight, that revealed, but were not revealed. On the right hand and on the left towered mighty constellations, that by self-repetitions and answers from afar, that by counter-positions built by triumphal gates, whose architraves, whose archways, horizontal, upright, rested, rose, at altitude, by spans that seemed ghostly from infinitude. Without measure were the architraves ; past number were the archways ; beyond memory the gates. Within were stairs that scaled the eternities around ; above was below, and below was above, to the man stripped of gravitating body. Depth was swallowed up in height insurmountable ; height was swallowed up in depth unfathomable. Suddenly, as thus they rode from infinite to infinite, suddenly, as thus they tilted over abysmal worlds, a mighty cry arose that systems more mysterious, that worlds more billowy, other heights and other depths, were coming, were nearing, were at hand.

"Then the man sighed and stopped, shuddered and wept. His overladen heart uttered itself in tears, and he said : 'Angel, I will go no farther ; for the spirit of man acheth with this infinity. Insufferable is the