

*Note on the Projection of Saturn on the Dark Limb of the Moon.* By the Rev. Prof. Baden Powell.

In the last number of the *Notices* (March 1860, p. 213), Mr. Pollock has recurred to the phenomenon described by him in a former number, of the projection of *Saturn* on the *dark* limb of the moon on May 8th, 1859, and to the remarks of the Astronomer Royal, which do not seem to recognise the appearance as described.

As some doubt, however, still seems to attach to the case, perhaps I may be allowed to observe, that the subject of such projections was referred to by me long ago in two papers printed in the Society's *Memoirs*, vols. xvi. and xviii. For projections on the *bright* edge there may be little difficulty in theory; but practically, the point to be accounted for is, why they should be seen in some instances and not in others, under conditions apparently the same.

For the *dark* edge, in my first paper (p. 309), I pointed out generally a *peculiar optical principle* which might *possibly* afford an explanation. And in my second paper (pp. 84 and 90), I have referred to all the recorded instances of projections on the *dark* edge; yet how far *any* optical cause can here apply may be very doubtful; and it would seem more probably due to some atmospheric effect.

The appearance described by Mr. Pollock is, in my opinion, a very remarkable one, especially in regard to the magnitude of the effect; so striking as to be noticed by a person totally unprepared for it, and with the naked eye; while it was not visible in the telescope. All the recorded observations of this kind are telescopic, and this singular fact would seem rather to point to some *ocular* cause.

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In reference to Mr. Pollock's note on the Occultation of *Saturn* in the last *Monthly Notice*, the Astronomer Royal observes:—

“Mr. Pollock cannot fail to remark that what we call the dark limb of the moon, though relatively dark, as compared with the bright limb, is absolutely bright, and brighter than the surrounding sky; and its image is, therefore, swelled beyond its geometrical limits upon the retina by any cause of indistinctness, whether ordinary irradiation, faulty adjustment of the eye, or any other cause; in the same manner as that of the bright limb, though probably not to the same visible extent. The proportion of its brightness to the brightness of *Saturn's* disk is unimportant, just as the proportion of the brightness of