ART. XXIV.—*On Mr. Glazebrook's Paper on the Aberration of Concave Gratings*; by H. A. ROWLAND.

IN the June number of the Philosophical Magazine, Mr. R. T. Glazebrook has considered the aberration of the concave grating and arrives at the conclusion that the ones which I have hitherto made are too wide for their radius of curvature. As I had published nothing but a preliminary notice of the grating at that time, Mr. Glazebrook had not then seen my paper on the subject, of which I gave an abstract at the London Physical Society in November last. In this paper I arrive at the conclusion that there is practically no aberration and that in this respect there is nothing further to be desired.

The reason of this discrepancy is not far to seek. Mr. Glazebrook assumes that the spaces are equal on the arc of the circle. But I do not rule them in this manner; but the equal spaces are equal along the *chord* of the arc. Again, the surface is not cylindrical, but spherical.

These two errors entirely destroy the value of the paper as far as my gratings are concerned, for it only applies to a theoretical grating, ruled in an entirely different manner from my own, and on a different form of surface.

I am very much surprised to see the method given near the end of the paper for constructing aplanatic gratings on any surface, for this is the method by which I discovered the concave grating originally, and the figure is the same as I put on the blackboard at the meeting of the Physical Society in November last. I say I am surprised, for Mr. Glazebrook's paper was read at the Physical Society, where I had given the same method a few months before, and yet it passed without comment. Indeed, I have given the same method many times at various scientific societies of my own country. However, as Mr. Glazebrook was not present at the meeting referred to, he is entirely without blame in the matter.