

we now in support of our theory. By it we conceive that the waste of the sun's fire must be replaced by gaseous combustible matter. The vast quantity of this matter for the continual supply of our sun, whose diameter is nigh 800,000 miles, may indeed be conceived, and perhaps calculated; but though, as Dr. Graham says above, "we may henceforth be enabled to explain how the light and heat of the suns or stars of the other systems is formed and maintained," and which, reasoning by analogy with our own sun, we certainly may do, yet how are we to contemplate the stupendous and incalculable quantity of gaseous matter which would be required for the due supply of the millions of suns which the astronomers state to exist in the universe?

I have therefore conceived and adopted the idea that there may be *elaboratories of these gasses* appointed by the Creator in the distant regions of space; for, believing that nothing short of a direct act of creation would be adequate for restoring the stupendous quantities of gaseous matter wanted in the supply of all the suns of the universe, I have therefore conceived that, although Lord Rosse has resolved the nebulae in the constellation Orion into stars, still some or many of the nebulae discovered in other regions of space may actually be *elaboratories* established by the Deity *for the formation of this gaseous matter*.

The positive fact of the tails of comets being gaseous, their uniform courses round the sun, the changes which take place when they leave him, all appear to me a great confirmation of the sun's gaseous nature, and if this be ultimately conceded, we have every right to conclude that the other stars or suns of the universe are gaseous also, and though it might be conceived that a sufficient quantity of gaseous matter might be found in a space that is infinite, still the safety of the earth and planets precludes that idea. I have therefore come to the conclusion, as is stated above, that there must be *elaboratories* for the formation of the gases required, in which *elaboratory* a constant act of creation of the elementary matter of those gases would be indispensable, to