

pecting the truth of his experiments, I repeated mine with common glass. For long telescopes water alone can be used ; and it is still to be feared that an inconveniency will subsist, from the opacity resulting from the quantity of liquor which fills the interval between the two glasses.

The longer the telescope the greater loss of light will ensue ; so that it appears at first sight that this mode cannot be used, especially for long telescopes ; for following what M. Bouguer says in his *Optical Essay*, on the gradation of light, nine feet seven inches sea-water diminishes the light in a relation of 14 to 5 ; therefore these long telescopes, filled with water, cannot be used for observing the sun, and the stars would not have light enough to be perceived across a thickness of 20 or 30 feet of intermediate liquor.

Nevertheless, if we consider, that by allowing only an inch, or an inch and a half, for the bore of an objective of 30 feet, we shall very distinctly perceive the planets in the common telescopes of this length ; we may suppose that by allowing a greater diameter to the objective we should augment the quantity of light in the ratio of the square of this diameter, and, consequently, if an inch before suffices to see a star distinctly, in a common telescope,  
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