

Abstract Submitted  
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**The Tortured History of Gauss's Law** ROSS SPENCER, Brigham Young University — American physics textbooks contain the following equation, which is called Gauss's law:

$$\oint \mathbf{E} \cdot d\mathbf{S} = \frac{q_{\text{enclosed}}}{\epsilon_0}$$

It is odd, however, that biographies of Karl Friedrich Gauss (1777-1855) contain no mention of this law. A brief history of this important result will be presented in which it will be shown that what we call Gauss's law today was originally guessed at by Joseph Priestly (1733-1804) after he read a letter from Benjamin Franklin (1706-1790), then was derived, forgotten, and re-derived several times in two different contexts by many of the luminaries of physics in the eighteenth and nineteenth centuries.

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