

1970c

“Pion Production in Nuclear Collisions” (Dissertation), M. D. Shuster, University of Maryland, College Park, Maryland, September 1970, University Microfilms, Inc., Ann Arbor, Michigan, 1971.

My dissertation published a complete theory of the production of pions from the collision of nucleons with nuclei, based on the Lehman-Symanzik-Zimmerman reduction scheme, current-field algebra, and dispersion relations, and comparisons with data for pion-production total cross sections as a function of energy arising from collisions of protons with Cobalt-57 targets. The long delay in the publication of this work resulted in large part from differences of opinion of what was and what was not publishable, and also from the fact that I had lost the taste for very formal theoretical Physics and would eventually lose the taste for academic Physics altogether. I was particularly wary of publishing anything on the notorious “elephant effect,” the brainchild of my dissertation advisor, in which I had no faith. The dissertation was defended on September 16, 1970. I boarded a plane for my post-doctoral position in France the following week. The Ph.D. was conferred at the following graduation in February 1971.

My dissertation in 1970 bore some of the non-technical character traits of my more recent publications: a quote in Latin, a quatrain from the *Rubaiyat of Omar Khayyam*, and a slightly tongue-in-cheek introduction which glibly (but rigorously) reviewed the salient background to my work. Interestingly, some colleagues told me later that the introduction had been the clearest exposition they had seen of the basics of this research area.

Superseded 1970a, 1970b.

Superseded by 1971a, 1976c.