In Memoriam: Professor Emeritus Stanford Solomon Penner 1921 – 2016

by Jay Marshall Bernard, PhD 1977 June 2017

Professor Penner has had a profound influence on my life. In June of 1967, as a 16-year old freshman at the newly established Revelle College with a work-study grant, I could choose any department in the college in which to major and work. I believe that it is a part of the charmed life that I have led to have picked the Aerospace and Mechanical Engineering Sciences department to be the cornerstone of my education. Meeting Professor Penner and the distinguished faculty he recruited, the distinguished graduate students that he and the faculty had assembled, the highly talented laboratory technicians, office professionals, and my new-found partner and undergraduate work-study colleague (David Lischer, who had graduated from high school the previous week as did I) all on that first day all reinforced my notion that college would be a life-changing experience. Little did I know how amazing that experience would be.

The late 1960's were turbulent times in the history of America and The University of California. I managed to learn the AMES curriculum of fluid mechanics, solid mechanics, heat transfer and physical gas dynamics and the Revelle College core curriculum of mathematics, humanities, social science and my minor in visual arts (as Revelle had the foresight of requiring that one's minor not be in a field related to the major) along with a simultaneous education from the turbulence and the freedom of the time. As my cornerstone, the AMES department kept me grounded with not only the curriculum but a steady part-time job as a laboratory assistant. I was fortunate enough to assist Professor Penner's graduate students J. Lowder and Bob Sepucha, his chief scientist K. G. P. Sultzman and his chief technician Joe Robison in assembling laboratory experiments and collecting data. Dave Lischer was my constant companion in these endeavors.

Upon my undergraduate graduation and the nearly simultaneous successful defense of the PhD thesis of Robert Sepucha, I was flattered to be asked by Professor Penner to be his graduate student and conduct the follow-on research to the Penner – Sepucha investigations into the "Self-Induced Transparency" of high-energy laser pulses traversing absorbing gasses. Upon accepting his offer, I knew that graduate school would entail challenging course work and the twists and turns that I was well aware accompanied laboratory experimentation, and I knew of the amazing intellect of my new mentor but I soon learned of the intellectual rigor that would be demanded of me. The six years I spent under Sol's tutelage gave me new meanings to the words "education," "precision," and "discipline." I will forever be indebted to him for the countless hours he devoted to me, his wisdom, advice, kindness, humor, boundless energy, and zest for life.

S. S. Penner's life has been well documented (the best account in my opinion was supplied by his devoted wife Beverly and brilliant son Robert and was published in Modern Developments in Energy, Combustion and Spectroscopy, edited by F. A. Williams, A. K. Oppenheim, D. B. Olfe and M. Lapp, Pergamon Press, 1993; ISBN 0-08-042019-2), but words cannot express the grandeur of his legacy. Sol and Beverly's daughter Lynn also shares their brilliance, and continues to further their legacy. Professor Penner's contributions to science have touched endeavors as diverse as solid rocket propulsion, liquid rocket propulsion, laser diagnostics, energy (its use, production and conservation), and quantitative spectroscopy to name a few. His interests went well beyond what such a short list could encompass. He has had a profound influence on several generations of scientists. He was also an artist, poet, and humanitarian. I am pleased to count him as a dear friend.

Professor Emeritus Stanford Solomon Penner will surely be missed, but even more surely will never be forgotten. God bless him, as he has blessed us.