In 1963, theory of the hadronic interaction was mainly concerned with the nature of exchanged particles, largely due to the theoretical predictions at that time concerning the high energy, or 'asymptotic,' behaviour of the total cross section ($\sigma_T$) with increasing energy in the region beyond a few GeV. The experiment was devised initially by Ed Jenkins and Ted Kycia, who had previously measured $\sigma_T$'s at Brookhaven National Laboratory (BNL), aided and abetted by Boran Leontic, Bob Phillips, Linc Read, and Roy Rubinstein. A new Cherenkov Counter, designed by Kycia, was central to the success of this work. I was on leave from the theoretical predictions at that time concerning the high energy, or 'asymptotic,' behaviour of the total cross section ($\sigma_T$) with increasing energy in the region beyond a few GeV. The experiment was devised initially by Ed Jenkins and Ted Kycia, who had previously measured $\sigma_T$'s at Brookhaven National Laboratory (BNL), aided and abetted by Boran Leontic, Bob Phillips, Linc Read, and Roy Rubinstein. A new Cherenkov Counter, designed by Kycia, was central to the success of this work. I was on leave from the "Glauber connection" in establishing neutron total cross sections from the deuterium and proton data, were problems faced in data analysis. In the end, systematic errors, arising from the extrapolation procedures, prevented us from achieving very high precision of cross section in absolute terms, but the relative cross sections, as a function of energy, showed us clearly, for the first time, a cross section up to our highest limit (20 GeV).

"What does one recall of the fall and winter of 1963? For me, John Kennedy's death, the memories of being 'on campus' at BNL, a first experience of 'below zero' weather, flu on New Year's Eve, and a very happy collaboration, made all the more so by the friendship and enthusiasm of my colleagues at BNL. Why was this work so cited? The falling cross section indicated that more energy was needed to establish if 'asymptopia' was ever in sight and with the subsequent development of colliding pp and pp beams at CERN, it is clear one always had to measure further $\sigma_T$'s as higher energies became available. Even now, these early cross section measurements still continue to appear on conference slides! It is surprising, but heart-warming to us all, that our early work has been so recognised.

"R. Battiston et al. recently published work in this field."2


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