Chasing a Giant – Reginald Sutcliffe and the invention of modern synoptic-dynamic meteorology

by

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It could well be argued that modern synoptic-dynamic meteorology was christened by three intellectual advances; 1) the adoption of isobaric coordinates as a means of simplifying the equation of continuity, 2) the development of the quasi-geostrophic system of equations to approximate and simplify the equations of motion, and 3) the formulation of an omega equation that could both qualitatively and quantitatively diagnose regions of upward and downward vertical motions at the cyclone scale as well as explain the ubiquity of the transverse circulations at fronts. Though many eminent thinkers in our field contributed to these developments in the two decades after WW II, all three of them originated before and during the war from aspects of the work of a single scientist – Reginald C. Sutcliffe.

In this talk I will share the experiences I had over the past two and a half years chasing the scientific and personal history of this giant in the field. His life included moments that testify to the great power of inspirational teachers, the horror and waste of war, the inevitable momentum of good ideas and the necessity of broad vision in both human and scientific affairs that leads to the creation of important and successful institutions. The exhilarating adventures and discoveries I was fortunate enough to enjoy in my sabbatical year will serve as the backdrop for my account of a journey into biographical research. I hope to relate a number of interesting stories from Sutcliffe’s impactful and interesting life as well as from my personal pursuit of his history.