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Abstract for an Invited Paper for the HAW05 Meeting of the American Physical Society

Theoretical Overview of Longitudinal Spin Physics FENG YUAN, RBRC, Brookhaven National Laboratory

Opening the afternoon session of mainly longitudinal spin physics results, my overview will cover the theoretical underpinnings dating from the *Spin Crisis* to recent spin-related concepts, models, and expectations. The global analysis of experimental results – such as to be presented after my talk – provides a largely model-independent and coherent framework to extract the relevant theoretical information and the uncertainties thereof. I will outline the knowns and unknowns (incl. debatables) of the underlying building blocks: Perturbative expansion in terms of twist and coupling (higher orders) as well as statistical and computational tools.