

Abstract Submitted
for the DNP10 Meeting of
The American Physical Society

Racah's method for general subalgebra chains M.A. CAPRIO, University of Notre Dame, K.D. SVIRATCHEVA, Louisiana State University, A.E. MCCOY, University of Notre Dame and Grinnell College — The method of infinitesimal generators (“Racah’s method”) can be broadly and systematically formulated as a method applicable to the calculation of reduced coupling coefficients for a generic subalgebra chain $G \supset H$, provided the reduced matrix elements of the generators of G and the recoupling coefficients of H are known. In this talk, the method will be outlined, using the subalgebra chains of $SO(5)$ as an example. Its applicability to problems in nuclear structure physics will be discussed. Supported by the US DOE (under grant DE-FG02-95ER-40934), the US NSF (under grants NSF-PHY-0500291, NSF-OCI-0904874, and NSF-PHY05-52843), and the Southeastern Universities Research Association (SURA).

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Date submitted: 29 Jun 2010

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