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Brian W Curtin* (bcurtin@math.usf.edu), Department of Mathematics, 4202 E. Fowler Ave.
PHY114, Tampa, FL 33620. *Modular Leonard triples of Bannai-Ito type.*

Let \mathbf{K} denote a field, and let V denote a vector space over \mathbf{K} of finite positive dimension. An ordered triple A, A^*, A° of linear operators on V is said to be a Leonard triple whenever for each $B \in \{A, A^*, A^\circ\}$, there exists a basis of V with respect to which the matrix representing B is diagonal and the matrices representing the other two operators are irreducible tridiagonal. A Leonard triple A, A^*, A° is said to be a modular whenever for each $B \in \{A, A^*, A^\circ\}$, there exists an antiautomorphism of $\text{End}(V)$ which fixes B and swaps the other two operators. We recall the connection between Leonard triples and the orthogonal polynomials in the terminating branch of the Askey scheme, and note that the modular Leonard triples arise as special cases of those Leonard triples associated with the q -Racah, Racah, Krawtchouck, and Bannai-Ito polynomials. We shall then discuss the modular Leonard triples of Bannai-Ito type in further detail. (Received August 13, 2005)