Harvey I. Blau (blau@math.niu.edu), Department of Mathematical Sciences, Northern Illinois University, DeKalb, IL 60115, and Robert J. Hein* (hein@math.niu.edu), Department of Mathematical Sciences, Northern Illinois University, DeKalb, IL 60115. Homogeneous P-polynomial Integral Table Algebras. Preliminary report.

The standard, monotonic algebras of the title are classified, as are the subset that have integer dual degrees. (Here, "standard" means that all column sums of the generating tridiagonal matrix are equal, and "monotonic" means that the superdiagonal entries of the matrix are nondecreasing while the subdiagonal entries are nonincreasing.) Most of the resulting algebras do not occur as adjacency algebras of distance-regular graphs. (Received August 23, 2005)