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John B. Polhill* (jpolhill@bloomu.edu), Department of Math/CS/Stat, 237 Ben Franklin, 400 East Second Street, Bloomsburg, PA 17815. *Partial Difference Sets and Association Schemes.*

A regular partial difference set is a subset of a finite group G whose corresponding Cayley graph is strongly regular. As a result, a partial difference set and its complement form a 2-class association scheme. In this talk, we will investigate additional relationships between association schemes and partial difference sets. Along the way, we will construct some new examples. (Received September 09, 2010)