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Steen Andersson* (standers@indiana.edu), Department of Statistics, Indiana University, 309 N. Park Ave, Bloomington, IN 47405, and **Thomas Klein**. *On Riesz and Wishart Distributions associated with decomposable undirected graphs.*

Classical Wishart distributions on the open convex cones of positive definite matrices and their fundamental features are extended to generalized Riesz and Wishart distributions associated with decomposable undirected graphs using the basic theory of exponential families. The families of these distributions are parameterized by their expectations/natural parameter and multivariate shape parameter and have a non-trivial overlap with the generalized Wishart distributions defined in Andersson and Wojnar (2004a,b). This work also extends the Wishart distributions of type I in Letac and Massam (2007) and, more importantly, presents an alternative point of view.

Andersson, S.A. and Wojnar, G.G. (2004a). Wishart distributions on homogeneous cones. *Journal of Theoretical Probability*, 17, No. 4, 781-818.

Andersson, S.A. and Wojnar, G.G. (2004b). The Wishart distributions on homogeneous cones. *Acta et Commentationes Universitatis Tartuensis de Mathematica*, 8, 3-62.

Letac, G. and Massam, H. (2007). Wishart distributions For decomposable graphs. *Ann. Statist.* 35, 1278-1323. (Received January 23, 2009)