Meeting: 1000, Albuquerque, New Mexico, SS 8A, Special Session on Interactions in Riemannian Geometry

1000-53-142 **William Dickinson** (dickinsw@gvsu.edu), Department of Mathematics, 2307 Mackinac Hall, Grand Valley State University, Allendale, MI 49401, and **Megan M. Kerr*** (mkerr@wellesley.edu), Department of Mathematics, Wellesley College, 106 Central Street, Wellesley, MA 02481. *The geometry of compact homogeneous spaces with two isotropy summands.* Preliminary report.

We classify all homogeneous spaces $M = G/H$ where G is a simple compact Lie group, H a connected, closed subgroup, and G/H is simply connected, for which the isotropy representation of H on T_pM decomposes into exactly two irreducible summands. For each homogeneous space, we determine whether it admits a G-invariant Einstein metric. In the case when there is an intermediate subgroup $H < K < G$, we classify all the G-invariant Einstein metrics. This is an extension of the classification of isotropy irreducible spaces, by O. V. Manturov and J. Wolf. (Received August 23, 2004)