1052-53-172 **Megan M Kerr*** (mkerr@wellesley.edu), Dept of Mathematics, Wellesley College, 106 Central St, Wellesley, MA 02481, and **Andreas Kollross** (kollross@math.uni-augsburg.de), Mathematics Institute, University of Augsburg, Augsburg, Germany. *On a class of homogeneous spaces with nonnegative curvature.* Preliminary report.

For compact Lie groups $H \subset K \subset G$, we study the existence of G-invariant fibration metrics on G/H with nonnegative sectional curvature, with respect to the fibration $K/H \to G/H \to G/K$.

We start with a metric on G/H induced from the biinvariant metric on G, such that the map $G/H \to G/K$ is a Riemannian submersion. We consider the one-parameter family of metrics on G/H obtained by scaling up in the direction of the fibers. In this work we build on the work of L. Schwachhöfer and K. Tapp, to understand what conditions on $H \subset K \subset G$ guarantee that this parametrization of homogeneous metrics on G/H yields metrics of nonnegative curvature. (Received August 26, 2009)