

DUMITRU, Dan, *ON COMPACT EINSTEIN WARPED PRODUCTS*

Abstract: The aim of this paper is to give some obstructions to the existence of compact Einstein warped products. It is proven in ([7]) that a compact Einstein warped product should have strictly positive scalar curvature. Also, in ([8]) it is proven that the dimension of the base of a compact Einstein warped product cannot be two. In this paper we prove that the fibre of a compact Einstein warped product should have strictly positive scalar curvature and we give some new obstructions to the existence of such spaces. In particular, we remark that a compact Einstein warped product must have dimension greater than five.

Keywords: warped products, Einstein spaces, warping function