

Ricci Collineations of Static Space Times with Maximal Symmetric Transverse Spaces

M. Akbar and CAI Rong-Gen

Institute of Theoretical Physics, the Chinese Academy of Sciences, P.O. Box 2735, Beijing 100080, China

(Received: 2005-4-28; Revised: 2005-6-9)

Abstract: A complete classification of static space times with maximal symmetric transverse spaces is provided, according to their Ricci collineations. The classification is made when one component of Ricci collineation vector field V is non-zero (cases 1~4), two components of V are non-zero (cases 5~10), and three components of V are non-zero (cases 11~14), respectively. Both non-degenerate ($\det R_{ab} \neq 0$) as well as the degenerate ($\det R_{ab}=0$) cases are discussed and some new metrics are found.

PACS: 04.20.-q, 04.20.Jb

Key words: Ricci collineations, exact solutions of Einstein field equations, maximal symmetric spaces

[\[Full text: PDF\]](#)

Close