Year: 2014 | Vol.: 85 | Fasc.: 1-2

Title: On conformally flat (α, β) -metrics with relatively isotropic mean Landsberg curvature

Author(s): Xinyue Cheng, Haixia Li and Yangyang Zou

In this paper, we study conformally flat (α, β) -metrics in the form of $F = \alpha \phi(\beta/\alpha)$, where α is a Riemannian metric and β is a 1-form on the manifold. We prove that conformally flat weak Landsberg (α, β) -metrics must be either Riemannian metrics or locally Minkowski metrics. Further, we prove that, if $\phi(s)$ is a polynomial in s, then conformally flat (α, β) -metrics with relatively isotropic mean Landsberg curvature must also be either Riemannian metrics or locally Minkowski metrics.

Address:

Xinyue Cheng School of Mathematics and Statistics Chongqing University of Technology Chongqing 400054 P.R. China

Address: Haixia Li School of Mathematics and Statistics Chongqing University of Technology Chongqing 400054 P.R. China

Address:

Yangyang Zou School of Mathematics and Statistics Southwest University Chongqing 400715 P.R. China and School of Mathematics and Statistics Chongqing University of Technology Chongqing 400054 P.R. China