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Stanley S Chang* (schang@wellesley.edu), Mathematics Department, 106 Central Street, Wellesley College, Wellesley, MA 02481. *Positive Scalar Curvature in Noncompact Manifolds*. Preliminary report.

Since the work of Gromov-Lawson and Schoen-Yau, much research has been done on compact manifolds and the conditions under which they can maintain a Riemannian metric of positive scalar curvature. Efforts in the last twenty years have uncovered some interesting sufficient conditions but a complete characterization of so-called positive manifolds has not been found. In the context of noncompact manifolds, the positive scalar curvature problem has revealed some unusual phenomena that highlights the varied structures in these spaces. (Received February 08, 2011)