1145-VO-2226   **Rishi Raj Subedi*** (`rishi.subedi@famu.edu`), 1767 Hermitage Blvd, Apt 9304, Tallahassee, FL 32308. *Five-dimensional Lie-Einstein metrics.*

The question of the existence Einstein metrics on five-dimensional solvable Lie groups are partially solved. Several classical results pertaining to the existence of such "Lie-Einstein" are presented and their relevance to the fi ve-dimensional case is explained. Index formulas for the curvature tensors of an invariant metric on a Lie group are supplied. The case where the nilradical is of dimension four is solved completely and in the case when the nilradical is of dimension three and the single non-solvable case, the problem is solved when the metric is assumed to be of diagonal form. The five cases where an Einstein space is known to exist are given. (Received September 25, 2018)