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1003-53-1344 **Andrew Bucki*** (ajbucki@lunet.edu), Langston, OK 73050. *Para-φ-Lie Algebras.* Preliminary report.

Let M be an n-dimensional differentiable manifold. An endomorphism of M given by a tensor field φ of type (1,1) and constant rank r which satisfies $\varphi^3 - \varphi = 0$ is called a para-φ-structure and M is a para-φ-manifold. Let M_i be a para-φ-manifold with a para-φ-structure φ_i $(i = 1, 2)$ and let $f : M_1 \to M_2$ be a diffeomorphism. Then f is a para-φ-map if $\varphi_2 \circ f_* = f_* \circ \varphi_1$. If G is a Lie group with an integrable para-φ-structure φ and both L_g and $R_g : G \to G$ are para-φ-maps, then G is called a para-φ-Lie group. In this paper, para-φ-Lie algebras are defined to establish some properties of para-φ-Lie groups in purely algebraic way. It is shown that every para-φ-Lie group G is the quotient of the product of an almost product Lie group and a Lie group with trivial para-φ-structure by a discrete subgroup if and only if its Lie algebra $\mathfrak{g}$ is a para-φ-Lie algebra. (Received October 04, 2004)