

[Benoist, Yves](#)

Projective nilmanifolds. (Nilvariétés projectives.) (French) Zbl 0839.53033
Comment. Math. Helv. 69, No. 3, 447-473 (1994).

A nilmanifold is a compact quotient of a nilpotent Lie group by a discrete subgroup. An affine (resp. projective) structure on a C^∞ -manifold is an atlas whose charts take values in \mathbb{R}^n (resp. \mathbb{S}^n) and whose coordinate changes are affine (resp. projective) transformations.

The author studies properties of affine and projective structures on nilmanifolds. The main results are: 1) On “filiform” nilmanifolds, any affine or projective structure is left invariant. 2) There exist nilmanifolds without projective structure.

Reviewer: [G.Roos \(Poitiers\)](#)

MSC:

[53C30](#) Differential geometry of homogeneous manifolds
[22E25](#) Nilpotent and solvable Lie groups

Cited in **1** Review
Cited in **11** Documents

Keywords:

[affine structure](#); [nilmanifold](#); [projective structure](#)

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