

Taïmanov, I. A.

On the existence of three closed not self-intersecting geodesics on manifolds homeomorphic to a two-dimensional sphere. (Russian) [Zbl 0771.53027](#)

Izv. Ross. Akad. Nauk, Ser. Mat. 56, No. 3, 605-635 (1992).

The author constructs a local combinatorial length-decreasing deformation for curves on a surface and gives a complete proof of the Lusternik-Schnirelman three geodesics theorem. The steps of the proof use Besicovitch's covering lemma and are similar to *J. Jost* [Arch. Math. 53, No. 5, 497-509 (1989; Zbl 0676.58018)] with certain amendments of the text.

Reviewer: [V. Yu. Rovenskii \(Krasnoyarsk\)](#)

MSC:

[53C22](#) Geodesics in global differential geometry

Cited in **3** Reviews
Cited in **4** Documents

Keywords:

deformation for curves; three geodesics theorem; Besicovitch's covering lemma