

## Re: Question on Lie Groups

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Jannick Asmus wrote:

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- > *After a quick look at your argument the question came to my mind whether*
- > *the image of this curve needs to be multiplicatively closed? E.g. if the*
- > *curve is multiplicative, i.e. it enjoys the property of a group*
- > *homomorphism.*

Asking whether a curve such as this can be found for all points in a connected Lie group  $G$  is to ask whether the exponential map for  $G$  is surjective. There are such  $G$  (ISTR  $SL_2(\mathbb{R})$  is one) for which this is not the case.

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Robin Chapman, [www.maths.ex.ac.uk/~rjc/rjc.html](http://www.maths.ex.ac.uk/~rjc/rjc.html)

"Elegance is an algorithm"

Iain M. Banks, *\_The Algebraist\_*