

# Ashtekar's Loops and Bars' Loops

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Abstract: The arguments for the equiponderance of Ashtekar's loops and Bars' loops have been presented.

The Ashtekar loops weaving the spacetime and geometrical Bars' loops induced by the spacetime exist.

These both kinds of loops are equivalent.

It is so because the charges - inducing by equivalent of them mass, which in turn induces the curvature of the spacetime - are the fields equivalent of this spacetime.

The existence of the topological charge (besides charges equivalent of the spacetime woven from Ashtekar's loops) is an argument supporting the equiponderance of the spacetime A. Ashtekar loops and geometrical J. Bars (and M. J. Duff) loops.

So mass curves the spacetime and the curvature of the spacetime and its geometry generate the mass.

The geometry is essential too, because the empty spacetime is not described by the condition  $R_{ik} = 0$  , but by the condition  $R^l_{klm} = 0$  .

It is the different description of the spontaneous symmetry breaking.