ON MODEL THEORY, NONCOMMUTATIVE GEOMETRY AND PHYSICS

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In recent developments in the theory of Zariski structures it has been established that many quantum algebras can be represented as co-ordinate rings of Zariski geometries. We note that, on the other hand, the corresponding Zariski geometries can be approximated (in a certain model-theoretic sense) by Zariski structures of a finitary type, where Dirac calculus has a well-defined meaning. We use this to give a mathematically rigorous calculation of the Feynman propagator in a few simple cases.

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