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Stephen Bruce Sontz* (sontz@cimat.mx), Jalisco s/n, Mineral de Valenciana, 36240 Guanajuato, Mexico. *A deformation of quantum mechanics and its heat kernel*. Preliminary report.

A particular deformation of quantum mechanics, studied recently by the author and collaborators, will be presented together with its relation to heat kernel analysis. This deformation includes a Hilbert space defined in terms of square integrable functions on a configuration space as well as a Hilbert space of holomorphic functions on a phase space. This generalizes the work of B. Hall to another context. (Received February 07, 2006)