1165-60-226 **Aurel I Stan***, The Ohio State University at Marion, 1465 Mount Vernon Avenue, Marion, OH 43302, and **Florin Catrina**. *Three-dimensional 1-Meixner random vectors.*

We present first the definition of multi-dimensional 1-Meixner random vectors. These are random vectors whose components are random variables, having finite moments of all orders, for which the commutators between their joint semi-quantum operators and the multiplication operators that they generate are linear combinations of these multiplication operators and the identity operator. We derive next a system of partial differential equations satisfied by the joint Laplace transform of the components of a 1-Meixner random vector, which is defined on a neighborhood of the origin. We continue by presenting a necessary condition for the consistency of this system of partial differential equations. Finally, we present a complete description of the non-degenerate three-dimensional 1-Meixner random vectors. (Received January 18, 2021)