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Review text:

In physics you may perceive coherent states (CS) either as a way of description of lasers (etc) or, more generally, as one of ways of a tentative conversion of a classical system into its possible quantum descendants. In mathematics you may treat them either as one of abstract off-springs of the algebra and group theory or as a broad menu of concrete and friendly semi-classical-state structures. In 2010, in ref. [18], the present authors (plus J.-P. Gazeau), led by the latter motivation, choose the specific PoeschlTeller interaction model (well known for its formal merits manifested, say, in the so called supersymmetric quantum mechanics) and clarified its CS-related phenomenological appeal (typically: the CS were identified with points in the classical phase space). The present text is, basically, a continuation. It offers a deeper mathematical insight ranging from the proof of the resolution of unity and from the explicit quantization of classical observables via some comments on asymptotics up to the clarification of the details of the operator domains and self-adjoint extensions.