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Free evolution on algebras with two states II

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Denote by J the operator of coefficient stripping. We show that for any free convolution semigroup of measures ν_t with finite variance, applying a single stripping produces semicircular evolution with non-zero initial condition, $J[\nu_t] = \rho \boxplus \sigma^{\boxplus t}$, where σ is the semicircular distribution with mean β and variance γ . For more general freely infinitely divisible distributions τ , expressions of the form $\rho \boxplus \tau^{\boxplus t}$ arise from stripping μ_t , where the pairs (μ_t, ν_t) form a semigroup under the operation of two-state free convolution. The converse to this statement holds in the algebraic setting. Numerous examples illustrating these constructions are computed. Additional results include the formula for generators of such semigroups.

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