ON LEBESGUE TYPE DECOMPOSITION FOR COVARIANT COMPLETELY POSITIVE MAPS ON C^*-ALGEBRAS

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ABSTRACT. We show that there is an affine order isomorphism between completely positive maps from a C^*-algebra A to the C^*-algebra $L(H)$ of all bounded linear operators on a Hilbert space H, u-covariant with respect to a C^*-dynamical system (G, α, A) and u-covariant completely positive maps from the crossed product $A \times_\alpha G$ to $L(H)$, which preserves the Lebesgue decomposition.

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