

## The Kossakowski Matrix and Strict Positivity of Markovian Quantum Dynamics F. Franco $^{1}$

We investigate the relationship between strict positivity of the Kossakowski matrix, irreducibility and positivity improvement properties of Markovian Quantum Dynamics. We show that for a Gaussian quantum dynamical semigroup strict positivity of the Kossakowski matrix implies irreducibility and, with an additional technical assumption, that the support of any initial state is the whole space for any positive time

<sup>&</sup>lt;sup>1</sup>Politecnico di Milano, Milano, Italy