

## From OQS to Quantum Trajectories for Quarkonia

Open quantum systems (OQS) have shown a good performance within other fields of physics, including quantum optics and solid state physics. Recently, it has been implemented in the Heavy Ion Collisions (HIC) field to study different kinds of events such as jet quenching or quarkonia propagation inside the quark-gluon plasma. We will do an overview of OQS towards the motivation and its application for the quarkonia in QGP case through the so-called Lindblad equation. Quantum trajectories (QTRAJ), on the other hand, is an algorithm to simulate this Lindblad equation, in our case, in a C++ framework.

It will be discussed how Lindblad's formalism is implemented through the QTRAJ as well as the current state of some code upgrades in progress to include new theoretical developments obtained within the last three years.

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