

REPORT

QUIPROCONE FUNDING APPLICATION: 051

Funding application 51 supported visits of researchers from Potsdam (Prof Eisert, Mr. Cramer and Mr Dreissig) to Imperial College London to collaborate with Prof Plenio. The objective was to study infinite interacting harmonic quantum systems and their entanglement properties.

This collaboration has been successful and a publication is in preparation. The key result is a full proof of an entanglement area theorem, much like the black-hole area theorem, for arbitrary spatial regions both for zero and for finite temperature. The field theoretical limit has also been considered. Furthermore, an analogous area theorem for classical correlations has also been proven.

The paper summarizing these results will be submitted in April.