

Quantum Physics

Guessing Quantum Ensemble Using Laplace Principle

Georges Parfionov, Romàn R. Zapatrin

(Submitted on 23 Jan 2009)

For a mixed quantum state with density matrix ρ there are infinitely many ensembles of pure quantum states, which average to ρ . Starting from Laplace principle of insufficient reason (not to give $\text{emph}\{a\ \text{priori}\}$ preference to any particular state), we derive a 'natural' distribution of pure states averaging to ρ , which is 'more spread' than all the others.

Comments: 11 pages, LaTeX. Talk presented at Quantum Structures - 2008 (July 6-12, 2008, Sopot, Poland)

Subjects: **Quantum Physics (quant-ph)**

Cite as: **arXiv:0901.3771v1 [quant-ph]**

Submission history

From: Romàn R. Zapatrin [[view email](#)]

[v1] Fri, 23 Jan 2009 20:18:38 GMT (8kb)

[Which authors of this paper are endorsers?](#)

Download:

- [PDF](#)
- [PostScript](#)
- [Other formats](#)

Current browse context:

quant-ph

[< prev](#) | [next >](#)

[new](#) | [recent](#) | [0901](#)

References & Citations

- [SLAC-SPIRES HEP](#)
([refers to](#) | [cited by](#))
- [CiteBase](#)

Bookmark([what is this?](#))

[CiteULike logo](#)

[Connotea logo](#)

[BibSonomy logo](#)

[Mendeley logo](#)

[Facebook logo](#)

[del.icio.us logo](#)

[Digg logo](#)

[Reddit logo](#)