Chaos in Bohmian quantum mechanics

2006 J. Phys. A: Math. Gen. 39 8563

(http://iopscience.iop.org/0305-4470/39/26/021)

INSTITUTE OF PHYSICS PUBLISHING JOURNAL OF PHYSICS A: MATHEMATICAL AND GENERAL

J. Phys. A: Math. Gen. **39** (2006) 8563 doi:10.1088/0305-4470/39/26/021

Addendum

Chaos in Bohmian quantum mechanics
C Efthymiopoulos and G Contopoulos 2006 *J. Phys. A: Math. Gen.* **39** 1819

Research Center for Astronomy, Academy of Athens, Soranou Efesiou 4, GR-115 27 Athens, Greece

E-mail: cefthim@cc.uoa.gr and gcontop@cc.uoa.gr

Received 25 April 2006
Published 14 June 2006
Online at stacks.iop.org/JPhysA/39/8563

In our recently published paper 'Chaos in Bohmian quantum mechanics' we criticized a paper by Parmenter and Valentine (1995 *Phys. Lett.* A **201** 1), because the authors made an incorrect calculation of the Lyapunov exponent in the case of Bohmian orbits in a quantum system of two uncoupled harmonic oscillators.

After our paper was published, we became aware of an erratum published by the same authors (Parmenter and Valentine 1996 *Phys. Lett.* A **213** 319) that recognized the error made in their previous calculations. The authors realized that, when correctly calculated, 'aperiodic trajectories with well defined boundaries . . . have vanishing Lyapunov exponents', i.e., they are not chaotic.

We want to supplement our paper with a reference to this erratum. The generic calculation of Lyapunov exponents in Bohmian quantum systems remains an original contribution of our paper (section 2).

References

Efthymiopoulos C and Contopoulos G 2006 *J. Phys. A: Math. Gen.* **39** 1819
Parmenter R H and Valentine R W 1995 *Phys. Lett.* A **201** 1
Parmenter R H and Valentine R W 1996 *Phys. Lett.* A **213** 319

