

JUN 9 1986

TOG:

RP

MATHEMATICAL REVIEWS

Reviewer: Please provide 5-character classification(s) according to 1980 Subject Index Classification. (See 1980 or later MR Annual Indexes.)

Conventions (use colored pencil):

- Greek underline in red
- German Fraktur print or type roman letter, underline in green
- Script print or type roman letter, encircle in blue
- Boldface underline with a wavy blue line

Do not underline for italics.

WEEN LINES

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C1
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Chirikov, Boris V. [Chirikov, B. V.]
(2-AOSSI-N)

Transient chaos in quantum and classical mechanics.

Found. Phys. 16 (1986), no. 1, 39-49.

Reviewer: Joseph Ford

002215 (Atlanta, Ga.)

Boris, 11/18/86
How can I do my own research when I spend so much time doing work for friends? It's the price of fame I suppose. xxfj
Jee

is now regarded as the true source of (randomness) in deterministic classical mechanics. Quantum mechanics have long known that non-observable, systems could be forced to mimic a time, if the positions and momenta of the treated as random variables. This transient- is what Chirikov calls "pseudo-chaos" or The notion of transient chaos would

represent little more than an historical footnote were it not for the fact that all known evidence indicates that quantum mechanics does not exhibit any true chaos, i. e., any randomness over and above that contained in the wave function itself or probabilities derived from it. One may now adopt either of two attitudes: quantum mechanics is a flawed theory which needs revision, or quantum mechanics can adequately describe observation by careful use of pseudo-chaos and transient chaos. In this paper, Chirikov seeks to salvage quantum mechanics through transient chaos. It is a noble and worthwhile cause; but only time will reveal whether this view reflects the truth or only the final argument of quantum conservatism.

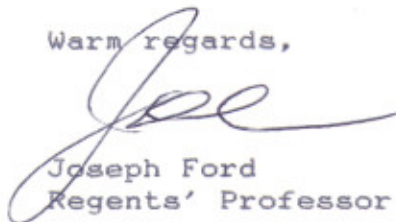
Consider this article translation.
 ommitted for , REVIEWS, or as, in accordance of the Copyright review, including an Mathematical



your fame has grown and the number of your visits to the West have remained small, you have become something of a "cult" figure. When your name comes up in a crowd of chaos workers (as it inevitably does), the majority who do not know you personally begin to show signs of envy toward those few who do. Stories about Chirikov are told and retold, eventually by people who only claim to know you but do not. I noticed a couple of years ago that even Michael Berry showed signs of succumbing to the Chirikov mania when he somewhat wistfully mentioned to me that he might like to visit Novosibirsk someday. Of course, now he has met you, so he is one of the "in crowd." You have become a legend in your own time by simply not being around!

May you and yours have a wondrously Merry Christmas.

Warm regards,



Joseph Ford
Regents' Professor

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