## **Accepted Manuscript**

Dynamics from a mathematical model of a two-state gas laser

Antigoni Kleanthous, Tianshu Hua, Alexandre Manai, Kamran Yawar, Robert A. Van Gorder

 PII:
 S0378-4371(17)31359-6

 DOI:
 https://doi.org/10.1016/j.physa.2017.12.110

 Reference:
 PHYSA 19040

To appear in: Physica A

Received date : 22 November 2016 Revised date : 29 September 2017



Please cite this article as: A. Kleanthous, T. Hua, A. Manai, K. Yawar, R.A. Van Gorder, Dynamics from a mathematical model of a two-state gas laser, *Physica A* (2018), https://doi.org/10.1016/j.physa.2017.12.110

This is a PDF file of an unedited manuscript that has been accepted for publication. As a service to our customers we are providing this early version of the manuscript. The manuscript will undergo copyediting, typesetting, and review of the resulting proof before it is published in its final form. Please note that during the production process errors may be discovered which could affect the content, and all legal disclaimers that apply to the journal pertain.

## Highlights

A non-dimensional PDE system for a two-state gas laser is derived

Steady states of this PDE system are classified showing a linear profile in space is stable

Numerical simulations are performed and resulting solutions tend to the linear steady state

Solutions maintain regularity and do not show signs of turbulence

Traveling wave solutions are also considered

Download English Version:

## https://daneshyari.com/en/article/7375824

Download Persian Version:

https://daneshyari.com/article/7375824

Daneshyari.com