

Erratum: Decay of passive scalars under the action of single scale smooth velocity fields in bounded two-dimensional domains: From non-self-similar probability distribution functions to self-similar eigenmodes
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There is an error in Sec. II B, page 3, 2nd column of our paper. For the map in Eq. (7), when $s_1 = s_2 = 0$, we incorrectly stated that one does not see the complete decay of the variance. As a result, Fig. 1 is incorrect. In fact, the variance does decay completely and we do see the emergence of an eigenmode, just as we did for the other (s_1, s_2) pair considered in the paper. Moreover, the decay of the eigenmode is dependent on the value of D . A corrected version of the figure is given below [initial condition is $\phi(x, y) = \cos(x)\sin(y)$].

Another error in Sec. II B, page 4, 1st column, is that the initial condition used was $\phi(x, y) = \cos(x)\sin(y)$. This does affect one of our observations (page 4, 1st column); namely α_n is a function of diffusivity (as can be seen in the included figure). On the positive side, this reinforces our conclusion about the emergence of eigenmodes in flows with barriers. We would like to mention the work of Pikovsky and Popovych [1], which led us to reconsider the problem, and consequently, to the detection of the programming error which caused the erroneous figure.

There is also an error in Sec. III, line 7 of our paper. The line “Substituting a plane wave solution . . . , we get,” should read “Substituting a plane wave solution in a linearized form of Eq. (1), we get.” This does not affect any conclusions, as the derivation was intended for the linear regime.

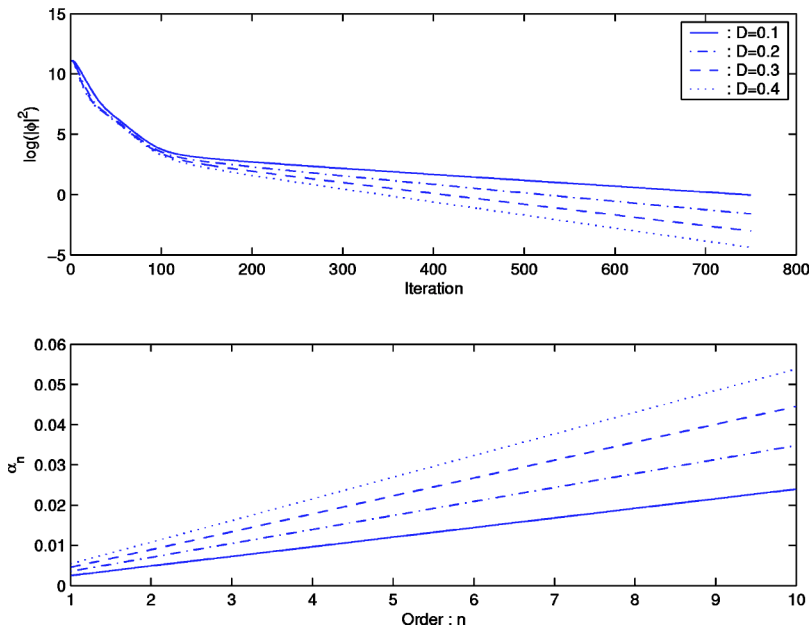


FIG. 1. Upper panel: the decay of the variance with $s_1 = s_2 = 0$. Lower panel: α_n vs $n \Rightarrow$ normal scaling.

[1] A. Pikovsky and O. Popovych, *Europhys. Lett.* **61**, 625 (2003).