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Insert the article title here

Insert first author name here[1], Insert second author name here[2], Insert third author name here[3], Insert fourth author name here[3], and Insert last author name here[†4]

[1] *Insert first author address here*

[*] *E-mail: xxxx@xxxx.ac.jp*

[2] *Insert second author address here*

[3] *Insert third author address here*

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Subject Index xxxx, xxx

[†] These authors contributed equally to this work

typeset using $\mathcal{PTP}$TEX.cls

1 Insert A head here

This demo file is intended to serve as a "starter file" for ptephy journal papers produced under LaTeX using `ptephy_v1.cls` v0.1

1.1 Insert B head here

Subsection text here.

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2 Equations

Sample equations.

$$\begin{aligned}
\frac{\partial u(t,x)}{\partial t} &= Au(t,x)\left(1-\frac{u(t,x)}{K}\right) - B\frac{u(t-\tau,x)w(t,x)}{1+Eu(t-\tau,x)},\\
\frac{\partial w(t,x)}{\partial t} &= \delta\frac{\partial^2 w(t,x)}{\partial x^2} - Cw(t,x) + D\frac{u(t-\tau,x)w(t,x)}{1+Eu(t-\tau,x)},
\end{aligned} \tag{1}$$

$$\begin{aligned}
\frac{dU}{dt} &= \alpha U(t)(\gamma - U(t)) - \frac{U(t-\tau)W(t)}{1+U(t-\tau)},\\
\frac{dW}{dt} &= -W(t) + \beta\frac{U(t-\tau)W(t)}{1+U(t-\tau)}.
\end{aligned} \tag{2}$$

$$\frac{\partial(F_1,F_2)}{\partial(c,\omega)}_{(c_0,\omega_0)} = \left|\begin{matrix} \frac{\partial F_1}{\partial c} & \frac{\partial F_1}{\partial \omega} \\ \frac{\partial F_2}{\partial c} & \frac{\partial F_2}{\partial \omega} \end{matrix}\right|_{(c_0,\omega_0)} = -4c_0 q\omega_0 - 4c_0\omega_0 p^2 = -4c_0\omega_0(q+p^2) > 0.$$

3 Enunciations

Theorem 1. *Assume that $\alpha > 0, \gamma > 1, \beta > \frac{\gamma+1}{\gamma-1}$. Then there exists a small $\tau_1 > 0$, such that for $\tau \in [0,\tau_1)$, if c crosses $c(\tau)$ from the direction of to a small amplitude periodic traveling wave solution of (2.1), and the period of $(\check{u}^p(s), \check{w}^p(s))$ is*

$$\check{T}(c) = c \cdot \left[\frac{2\pi}{\omega(\tau)} + O(c - c(\tau))\right].$$

Condition 1. *From (0.8) and (2.10), it holds* $\frac{d\omega}{d\tau} < 0, \frac{dc}{d\tau} < 0$ *for* $\tau \in [0, \tau_1)$*. This fact yields that the system (2.1) with delay* $\tau > 0$ *has the periodic traveling waves for smaller wave speed* c *than that the system (2.1) with* $\tau = 0$ *does. That is, the delay perturbation stimulates an early occurrence of the traveling waves.*

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4 Figures & Tables

The output for figure is:

Fig. 1 Insert figure caption here

An example of a double column floating figure using two subfigures. (The subfig.sty package must be loaded for this to work.) The subfigure `\label` commands are set within each subfloat command, the `\label` for the overall figure must come after `\caption`. `\hfil` must be used as a separator to get equal spacing. The subfigure.sty package works much the same way, except `\subfigure` is used instead of `\subfloat`.

The output for table is:

Table 1 An Example of a Table.

One	Two
Three	Four

5 Conclusion

The conclusion text goes here.

Acknowledgment

Insert the Acknowledgment text here.

For references, note how to include DOI information from examples below.

References

[1] J. P. Blaizot, and E. Iancu, Phys. Rep. **359**, 355 (2002). https://doi.org/10.1016/S0370-1573(01)00061-8
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[4] S. Alekhin, A. Djouadi, and S. Moch, Phys. Lett. B 716, 214 (2012) [arXiv:1207.0980 [hep-ph]]. https://doi.org/10.1016/j.physletb.2012.08.024

A Appendix head

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$$a + b = c \tag{A1}$$

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Table A1 An Example of a Table.

One	Two
Three	Four

A.1 Appendix subhead

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$$a + b = c \tag{A2}$$

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Fig. A1 Figure caption

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$$a + b = c \tag{A3}$$

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B Appendix heading

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$$a + b = c \tag{B1}$$

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$$a + b = c \tag{B2}$$

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Fig. B1 Figure caption

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Fig. B2 Figure caption

Table B1 An Example of a Table.

One	Two
Three	Four

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