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2000 *Mathematics Subject Classification.* Primary: 58F15, 58F17; Secondary: 53C35.
Key words and phrases. Dimension theory, Poincaré recurrences, multifractal analysis.
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1.1. **Example of definition and theorem.** Definition sample:

Definition 1.1. Sample: Let ϕ_t be an Anosmia flow on a compact space V and $A \subset V$ a dense set. Say that the upper Lacunae exponents are $\frac{1}{2}$-*pinched* on A if

$$\sup_{x\in A} \frac{\max\{|\bar{\lambda}| : \bar{\lambda} \text{ is a nonzero upper Lyapunov exponent at } x\}}{\min\{|\bar{\lambda}| : \bar{\lambda} \text{ is a nonzero upper Lyapunov exponent at } x\}} \leq 2. \tag{1}$$

A. B asked in [2] how to state a theorem in AIMS journal, here is an example:

Theorem 1.2. *Content of your theorem.*

Proof. Your proof statements. □

Now let's move to the next subsection.

1.2. **A sample Lemma.**

Lemma 1.3. *State your lemma here.*

Proof. Your proof statements. □

Now let's move to the next section.

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See an example below.

FIGURE 1. Here is the Caption of your figure

Theorem 2.1. *Content of your second theorem.*

In both definition and remark, the text should not be slanted.

Remark 1. Content of your remarks.

In the proof below, we would like to show how to align the math formulas:

Proof of Theorem 2.1. Please align you math formulas:

$$\begin{aligned}\theta_\varepsilon \wedge d\theta_\varepsilon^{n-1} &= (\theta_0+\varepsilon\alpha)\wedge(d(\theta_0+\varepsilon\alpha))^{n-1} \quad \text{since } d\alpha = 0\\ &= (\theta_0+\varepsilon\alpha)\wedge(d\theta_0)^{n-1} + \theta_0\wedge d\theta_0^{n-1} - \varepsilon d(\alpha\wedge\theta_0\wedge d\theta_0^{n-2})\\ &\quad + \theta_0\wedge d\theta_0^{n-1} + \varepsilon\alpha\wedge d\theta_0^{n-1}\\ &= \theta_0\wedge d\theta_0^{n-1} - \varepsilon d(\alpha\wedge\theta_0\wedge d\theta_0^{n-2}),\end{aligned} \tag{2}$$

So,

$$\begin{aligned}\int_0^T |u_0(t)|^2 dt \le \delta^{-1}[&\int_0^T (\beta(t)+\gamma(t))dt\\ &+ T^{\frac{2(p-1)}{p}}(\int_0^T |\dot{u}_0(t)|^p dt)^{\frac{2}{p}} + T^{\frac{2(p-1)}{p}}(\int_0^T |\dot{u}_0(t)|^p dt)^{\frac{2}{p}}].\end{aligned} \tag{3}$$

Please use the displaystyle if your formulas fully occupy a paragraph, while use textstyle among the text.

For two equations:

$$A = \theta_0\wedge d\theta_0^{n-1} - \varepsilon d(\alpha\wedge\theta_0\wedge d\theta_0^{n-2})$$
$$B = \theta_1\wedge d\theta_1^{n-1} - \varepsilon d(\alpha\wedge\theta_1\wedge d\theta_1^{n-2})$$

Please align your formulas nicely. Thanks. □

Acknowledgements. We would like to thank the referees very much for their valuable comments and suggestions.

REFERENCES

[1] FirstName MiddleInitial. LastName, *Title of the paper*, Name of the journal, **Volume** (Year), StaringPage–EndingPage.
[2] D. Aifindel, *Dynamical characteristics of solutions of certain partial differential equations*, Discrete Continuous Dynam. Systems, **12** (2005), 27–54.
[3] Y. Benoist, P. Foulon and F. Labourie, *Flots d'Anosov a distributions stable et instable differentiables*, J. Amer. Math. Soc., **5** (1992), 33–75.
[4] R. Bott, "Differential Forms in Algebraic Topology," Springer-Verlag, New York, 1986.
[5] J. Serrin, *Gradient estimates for solutions of nonlinear elliptic and parabolic equations*, in "Contributions to Nonlinear Functional Analysis" (eds. E.H. Zarantonello and Author 2), Academic Press, (1971), 33–75.
[6] FirstName LastName, "Torsion Cycles and Set Theoretic Complete Intersection," Ph.D thsis, Washington University in St. Louis, 2006.

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