Correction :

On the measure-preserving flow on the torus.

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By Toshiya SAITÔ

In section 1 of my paper mentioned in the title, X and Y were assumed to be real-valued periodic functions (of period 1 in x and y) having continuous first derivatives. But these conditions were insufficient for the validity of my discussions.

In fact, Poincaré's classification of singular points, which I have utilized in section 2, is valid only when these singularities are all non-degenerate.

So, besides the conditions stated in the paper, following condition should be added :

Common zero points of X and Y are all isolated and the Jacobian

$$\frac{\partial(X, Y)}{\partial(x, y)}$$

does not vanish at these points.

Without this condition, the criterion given in the paper is sufficient but not necessary for the flow to be ergodic. This has been shown by Oxtoby by an example of an analytic ergodic flow with one (degenerate) fixed point on the torus.[*]

I thank Prof. Kakutani who indicated me the insufficiency of my discussion and kindly informed me of the example by Prof. Oxtoby.

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[*] Forthcoming shortly.