CORRIGENDUM TO MULTIPLICATON OPERATORS AND DYNAMICAL SYSTEMS

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Throughout Section 2 of [1], X should be taken as a completely regular Hausdorff $K_{\mathbb{R}}$ -space. The lines 1 through 26 in the proof of Theorem 2.1 of the paper should be replaced by the following lines.

PROOF. Suppose the condition holds. Firstly we show that M_{ψ} maps $CV_b(X, T)$ into itself. Let $f \in CV_b(X, T)$. Since X is a $K_{\mathbb{R}}$ -space, it is enough to show that $M_{\psi}f$ is continuous on each compact subset of X. Let K be an arbitrary compact subset of X and let $\{x_{\alpha} : \alpha \in \Delta\}$ be a net in K such that $x_{\alpha} \to x$ in K. Fix $p \in cs(T)$ and $\epsilon > 0$. Let $B = \{f(x_{\alpha}) : \alpha \in \Delta\}$. Then B is a bounded set in T. Since $f(x_{\alpha}) \to f(x)$ in T, there exists $\alpha_1 \in \Delta$ such that $p[\psi(x)(f(x_{\alpha}) - f(x))] < \epsilon/2$, for every $\alpha \ge \alpha_1$. Also, since $\psi : X \to B(T)$ is continuous, there exists $\alpha_2 \in \Delta$ such that $p[(\psi(x_{\alpha}) - \psi(x))(f(x_{\alpha}))] < \epsilon/2$, for every $\alpha \ge \alpha_2$. Let $\alpha_0 \in \Delta$ be such that $\alpha_0 \ge \alpha_1$ and $\alpha_0 \ge \alpha_2$. Then clearly $p[\psi(x_{\alpha})f(x_{\alpha}) - \psi(x)f(x)] < \epsilon$, for every $\alpha \ge \alpha_0$. This proves that $\psi f \in C(X, T)$. Let $v \in V$ and $p \in cs(T)$. Then there exists $u \in V$ and $q \in cs(T)$ such that $v(x)p(\psi(x)f(x)) \le u(x)q(y)$, for every $x \in X$ and $y \in T$. Thus $||\psi f||_{v,p} = \sup\{v(x)p(\psi(x)f(x)) : x \in X\} \le \sup\{u(x)q(f(x)) : x \in X\} < \infty$. This implies that $\psi f \in CV_b(X, T)$. Clearly M_{ψ} is linear on $CV_b(X, T)$.

References

 R. K. Singh and J. S. Manhas, 'Multiplication operators and dynamical systems', J. Austral. Math. Soc. (Ser. A) 53 (1992), 92-102.

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