

Pacific Journal of Mathematics

**CORRECTION TO "SOME ERGODIC THEOREMS INVOLVING
TWO OPERATORS"**

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The argument used to establish Theorem 1 of [1] proves less than asserted. Let the notation be that of [1]. Theorem 3 is then a consequence only if $\mu(S) < \infty$ and therefore Theorems 4 and 5 must be withdrawn. The revised version of Theorem 1 is as follows.

THEOREM 1.1. *Let t and u be nonsingular measurable transformations of S onto itself which have no wandering sets of positive measure. If for each $f(x)$, $0 \leq f(x) \leq 1$, $\lim_{n \rightarrow \infty} \sum_{k=0}^n f(v^k x) / n$ exists almost everywhere $[\mu]$, then the conclusion of Theorem 1 holds.*

By Theorem 3 of [2] there exists a finite t -invariant measure α and a finite u -invariant measure β , each equivalent to μ . The argument proceeds as before with these α and β . In Theorem 2, the α and β are also obtained as above.

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REFERENCES

1. Paul Civin, *Some ergodic theorems involving two operators*, Pacific J. Math. **5** (1955), 869-876.
2. Yeal Naim Dowker, *Finite and σ -finite invariant measures*, Ann. Math. **54** (1951), 595-608.

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