Professor R. Goodman has discovered an error in [1, p. 48, lines 9–11] on which our results [2] depend. Nevertheless the construction can be saved in the following way.

We say that a function $\phi$ on a group $G$ is submultiplicative if $\phi(gh) \leq \phi(g)\phi(h)$ for all $g, h$ in $G$. For a locally compact group $G$ we define $E(G)$ to be the space of all continuous functions $f$ such that

$$\sup\{f(g)\phi(g) : g \in G\} < \infty$$

for every continuous submultiplicative function $\phi$. This endowed with a natural topology is a complete locally convex space and it is a $\ast$-subalgebra of $L_1(G)$.

One can prove that if $G$ is first countable, then $E(G)$ has a commutative approximate identity $\{e_n\}$, $n = 1, 2, \cdots$. On the other hand every measure $\mu$ on $\mathcal{M}(G)$ which defines an induced representation is a functional on $E(G)$. It is a matter of simple computation to show that the vector

$$\xi = \sum_{n=1}^{\infty} c_n e_n^\ast * e_n,$$

where $c_n > 0$ are such that the series is convergent in $E(G)$, defines a cyclic vector for every representation $L^\mu_\nu$ with $\mu \in E(G)'$.

The details will appear in Studia Mathematica.

REFERENCES


Institute of Mathematics, The Polish Academy of Sciences, Wroclaw, Poland
Institute of Mathematics, University of Wroclaw, Wroclaw, Poland

Received by the editors July 12, 1972.

© American Mathematical Society 1973