1040-46-23 **Dinamérico Pereira Pombo Jr.*** (dpombo@terra.com.br), Instituto de Matemática, Universidade Federal Fluminense, Rua Mário Santos Braga, s/n, Niterói, RJ 24020-140, Brazil.
Linearly compact modules of continuous mappings.

Throughout, R shall denote a topological ring with an identity element and all R-modules under consideration are unitary left R-modules.

Proposition 1. If X is a topological space, F is a separated linearly topologized R-module and H is a submodule of the R-module $C(X;F)$ of all continuous mappings from X into F, then (H, τ_o) is a separated linearly topologized R-module, where τ_o denotes the compact-open topology on H.

Theorem 2. If M is an equicontinuous submodule of $C(X;F)$ such that $\overline{M(x)}$ is linearly compact in F for all $x \in X$, then $\overline{M}$ is linearly compact in $(C(X;F), \tau_o)$.

Corollary 3. Assume that R is commutative. If E is a topological R-module, F is a separated linearly topologized R-module and M is an equicontinuous submodule of the R-module $L(E;F)$ of all continuous R-linear mappings from E into F such that $\overline{M(x)}$ is linearly compact in F for all $x \in E$, then $\overline{M}$ is linearly compact in $(L(E;F), \tau_o)$.

Corollary 4. If K is a discrete field, E is a topological vector space over K and U is a neighborhood of 0 in E, then $M = \{f \in L(E;K); f(x) = 0 \text{ for all } x \in U\}$ is linearly compact in $(L(E;K), \tau_0)$. (Received January 03, 2008)