



Mati Abel (mati.abel@ut.ee), Institute of Pure Mathematics, University of Tartu, 50409 Tartu, Estonia, *Quotiently locally m -pseudoconvex and quotiently locally m -convex algebras.*

ABSTRACT. Let A be a topological algebra and \mathcal{L}_A the base of closed and balanced neighbourhoods of zero in A . We shall say that A is a quotiently locally m -pseudoconvex (quotiently locally m -convex) algebra if for every string $S = (U_n)$ in \mathcal{L}_A and every neighbourhood O of the kernel

$$N(S) = \bigcap_{n \in \mathbb{N}} U_n$$

of string S there exists in A an idempotent and absolutely pseudoconvex (respectively, idempotent and absolutely convex) neighbourhood U of zero such that $N(S) \subset U \subset O$. In this case $A/N(S)$ is a locally m -pseudoconvex (respectively, locally m -convex) algebra for each string S in \mathcal{L}_A . Properties of quotiently locally m -pseudoconvex and quotiently locally m -convex algebras are considered.