

COVER TOPOLOGIES, SUBSPACES, AND QUOTIENTS FOR SOME SPACES OF VECTOR-VALUED FUNCTIONS

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Communicated by M. S. Moslehian

ABSTRACT. Let X be a completely regular Hausdorff space, and let \mathcal{D} be a cover of X by C_b -embedded sets. Let $\pi : \mathcal{E} \rightarrow X$ be a bundle of Banach spaces (algebras), and let $\Gamma(\pi)$ be the section space of the bundle π . Denote by $\Gamma_b(\pi, \mathcal{D})$ the subspace of $\Gamma(\pi)$ consisting of sections which are bounded on each $D \in \mathcal{D}$. We construct a bundle $\rho' : \mathcal{F}' \rightarrow \beta X$ such that $\Gamma_b(\pi, \mathcal{D})$ is topologically and algebraically isomorphic to $\Gamma(\rho')$, and use this to study the subspaces (ideals) and quotients resulting from endowing $\Gamma_b(\pi, \mathcal{D})$ with the cover topology determined by \mathcal{D} .

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Date: Received: Jun. 10, 2017; Accepted: Oct. 16, 2017.

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2010 *Mathematics Subject Classification.* Primary 46H25; Secondary 46H10.

Key words and phrases. cover topology; bundle of Banach spaces; bundle of Banach algebras.

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