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

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ABSTRACT. Let $X$ be a completely regular Hausdorff space, and let $D$ be a cover of $X$ by $C_0$-embedded sets. Let $\pi : \mathcal{E} \to X$ be a bundle of Banach spaces (algebras), and let $\Gamma(\pi)$ be the section space of the bundle $\pi$. Denote by $\Gamma_b(\pi, D)$ the subspace of $\Gamma(\pi)$ consisting of sections which are bounded on each $D \in D$. We construct a bundle $\rho' : \mathcal{F}' \to \beta X$ such that $\Gamma_b(\pi, D)$ is topologically and algebraically isomorphic to $\Gamma(\rho')$, and use this to study the subspaces (ideals) and quotients resulting from endowing $\Gamma_b(\pi, D)$ with the cover topology determined by $D$.

REFERENCES


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