

ON ASPLUND SPACES $C_k(X)$ WITH THE COMPACT-OPEN TOPOLOGY

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Recall that a Banach space E is called an Asplund space if every separable Banach subspace of E has separable dual. A celebrated theorem of Namioka and Phelps says that for a compact space X , the Banach space $C(X)$ of continuous real-valued functions on X is Asplund if and only if X is scattered. We extend this result to the class of spaces $C_k(X)$ of continuous real-valued functions endowed with the compact-open topology for several natural classes of non-compact Tychonoff spaces X . The concept of Δ_1 -spaces recently introduced and studied has been shown to be applicable for this research.