

Let  $T$  be a Hausdorff space with the families  $\mathcal{G}$ ,  $\mathcal{F}$ ,  $\mathcal{C}$  and  $\mathcal{B}$  of open, closed, compact, and Borel sets. Let  $RM$  be the set of all Radon measures  $\mu : \mathcal{B} \rightarrow ]-\infty, \infty]$  and  $\mu : \mathcal{B} \rightarrow [-\infty, \infty[$ . Consider the set  $\mathcal{K} \equiv \{G \cap F \mid G \in \mathcal{G} \wedge F \in \mathcal{F}\}$  and the lattice linear space  $S$  of all functions  $f : T \rightarrow \mathbb{R}$  such that for any  $\varepsilon > 0$  there is a finite cover  $(K_i \in \mathcal{K} \mid i \in I)$  of  $T$  with  $\omega(f, K_i) < \varepsilon$ . Let  $A$  be a lattice linear subspace in  $S$  with the property  $f \in A \Rightarrow f \wedge \mathbf{1} \in A$ . Consider the set  $RM(A)$  of all  $\mu \in RM$  such that all functions  $f \in A$  are  $\mu$ -integrable. For  $\mu \in RM(A)$  consider the functional  $i_\mu : A \rightarrow \mathbb{R}$  such that  $i_\mu \equiv \int f d\mu$ . Let  $I(A, RM(A)) \equiv \{i_\mu \mid \mu \in RM(A)\}$  be the set of all such functionals on  $A$ .

Consider the lattice linear space  $A^\sim$  of all linear functionals  $\varphi : A \rightarrow \mathbb{R}$  such that  $\forall g \in A^+(\sup\{|\varphi f| \mid f \in A \wedge |f| \leq g\} < \infty)$  and its subspace  $A^\pi \equiv \{\varphi \in A^\sim \mid \forall \varepsilon > 0 \exists C \in \mathcal{C} \forall f \in A(|f| \leq \chi(T \setminus C) \Rightarrow |\varphi f| < \varepsilon)\}$  of *tight* functionals. A functional  $\varphi : A \rightarrow \mathbb{R}$  is called *locally tight* if  $\forall G \in \mathcal{G} \forall u \in A_+ \forall \varepsilon > 0 \exists C \in \mathcal{C}(C \subset G \wedge \forall f \in A(|f| \leq \chi(G \setminus C) \wedge u \Rightarrow |\varphi f| < \varepsilon))$ . The lattice linear subspace of  $A^\sim$  consisting of all linear pointwise  $\sigma$ -continuous locally tight functionals is denoted by  $A^\Delta$ . Consider its subspace  $A^{\bar{\Delta}} \equiv \{\varphi \in A^\Delta \mid \sup\{|\varphi f| \mid f \in A \wedge |f| \leq \mathbf{1}\} < \infty\}$ .

The space  $A$  has the property  $E_\tau$  [ $E_\sigma$ ] if for any  $G \in \mathcal{G}$ ,  $F \in \mathcal{F}$ ,  $C \in \mathcal{C}$ ,  $u \in A_+$  the function  $\chi(G) \wedge u$  is a pointwise supremum and the functions  $\chi(F) \wedge u$  and  $\chi(C)$  are pointwise infimums of some nets [sequences] of  $A$ . The space  $A$  has the *Dini property*  $D$  if for any net  $(f_m \in A \mid m \in M)$  and any  $f \in A$  the condition  $(f_m \mid m \in A) \xrightarrow{p} f$  implies  $(f_m \mid C \mid m \in A) \Rightarrow f \mid C$  for any  $C \in \mathcal{G}$ .

**Theorem.** *If  $A$  has either  $E_\tau + D$  or  $E_\sigma$ , then  $I(A, RM(A)) \subset A^\Delta$ ,  $I(A, RM(A)_+) = (A^\Delta)_+$ , and  $I(A, RM_b) = A^{\bar{\Delta}}$ .*

**Corollary 1.** *Let  $T$  be a Hausdorff space. Then  $I(S_c, RM_+) = (S_c^\Delta)_+$ .*

**Corollary 2 (Riesz-Radon).** *Let  $T$  be a locally compact space. Then  $I(C_c, RM_+) = (C_c^\sim)_+$ .*

**Corollary 3 (Prokhorov).** *Let  $T$  be a Tychonoff space. Then  $I(C_b, RM_b) = C_b^\pi = C_b^{\bar{\pi}}$ .*