

Salvador Garcia-Ferreira, Angel Tamariz-Mascarua
On p -sequential p -compact spaces

Comment.Math.Univ.Carolinae 34,2 (1993) 347-356.

Abstract: It is shown that a space X is $L(^{\mu}p)$ -Weakly Fréchet-Urysohn for $p \in \omega^*$ iff it is $L(^{\nu}p)$ -Weakly Fréchet-Urysohn for arbitrary $\mu, \nu < \omega_1$, where ${}^{\mu}p$ is the μ -th left power of p and $L(q) = \{{}^{\mu}q : \mu < \omega_1\}$ for $q \in \omega^*$. We also prove that for p -compact spaces, p -sequentiality and the property of being a $L(^{\nu}p)$ -Weakly Fréchet-Urysohn space with $\nu < \omega_1$, are equivalent; consequently if X is p -compact and $\nu < \omega_1$, then X is p -sequential iff X is ${}^{\nu}p$ -sequential (Boldjiev and Malyhin gave, for each P -point $p \in \omega^*$, an example of a compact space X_p which is -Fréchet-Urysohn and it is not p -Fréchet-Urysohn. The question whether such an example exists in ZFC remains unsolved).

Keywords: p -compact, p -sequential, $FU(p)$ -space, Rudin-Keisler order, tensor product of ultrafilters, left power of ultrafilters, $SMU(M)$ -space, $WFU(M)$ -space

AMS Subject Classification: 04A20, 54A25, 54D55