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On λ -Kunen points and β -normality of $\beta X \setminus \{p\}$

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Abstract: We show that every point of the remainder $\beta X \setminus X$ of the Čech–Stone compactification βX of any metrizable crowded space X is a “ λ -Kunen” point for some regular cardinal λ . As a consequence we show that $\beta X \setminus \{p\}$ is not β -normal in the sense of result published in the paper *On α -normal and β -normal spaces (2021)* by A. V. Arhangel’skii and L. Ludwig and, it explicitly indicate closed subsets of $\beta X \setminus \{p\}$ that cannot be “ β -separated”.

Keywords: Kunen point; β -normality; Čech–Stone compactification; metrizable crowded space

AMS Subject Classification: 54D15, 54D35, 54D40, 54D80, 54E35, 54G20

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