

1068-54-199

Lynne C Yengulalp*, 300 College Park, Dayton, OH 45469. *Non-normality points of $\beta X \setminus X$.*

In 1990, Beslagic and van Douwen showed that, assuming GCH, if X is discrete then both $(\beta X \setminus X) \setminus \{y\}$ and $\beta X \setminus \{y\}$ are not normal for any $y \in \beta X \setminus X$. In 2007, Logunov and Terasawa independently showed (with no extra axioms) that, if X is a crowded metric space, $\beta X \setminus \{y\}$ is not normal for any $y \in \beta X \setminus X$. We combine ideas from these two contexts while seeking conditions implying that $(\beta X \setminus X) \setminus \{y\}$ is not normal for crowded metric spaces. Along the way, we generalize some notions from set-ultrafilters to z-ultrafilters. (Received January 18, 2011)