

1073-54-31

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Let  $\omega$  denote the set of natural numbers, and  $\mathfrak{t}$  the tower number. We prove: For every ordinal  $\lambda < \mathfrak{t}^+$ , there exists  $\mathcal{M} \subset [\omega]^\omega$ , an infinite maximal almost disjoint family of infinite subsets of the natural numbers (MADF), such that the Stone-Čech remainder,  $\beta\psi \setminus \psi$ , of the  $\psi$ -space,  $\psi = \psi(\omega, \mathcal{M})$ , is homeomorphic to  $\lambda + 1$  with the order topology. This generalizes a result credited to S. Mrówka by J. Terasawa which states that there is MADF  $\mathcal{M}$  such that  $\beta\psi \setminus \psi$  is homeomorphic to  $\omega_1 + 1$ . We construct our MADF from an ascending mod-finite ordered chain of infinite subsets of  $\omega$ , ordered by almost inclusion. (Received July 11, 2011)