1105-54-332 **Jerry Vaughan** and **Catherine Payne***, capayne2@uncg.edu. *Continuous functions on ψ-spaces.*

Let $\psi(\kappa, \mathcal{M})$ be a ψ-space with underlying set $\kappa \cup \mathcal{M}$ where κ is an infinite cardinal number and $\mathcal{M}$ is a maximum almost disjoint family (MADF) of countably infinite subsets of κ. A MADF $\mathcal{M} \subset [\kappa]^\omega$ is called rich provided for every continuous function $f : \psi(\kappa, \mathcal{M}) \to \mathbb{R}$, there exists $r \in \mathbb{R}$ such that $|f^{-1}(r)| = |\psi(\kappa, \mathcal{M})| = |\mathcal{M}|$. A cardinal κ is called a rich cardinal if every MADF $\mathcal{M} \subset [\kappa]^\omega$ is rich. We prove that $\kappa \leq \mathfrak{c}$ is rich if and only if $\mathfrak{a} = \mathfrak{c}$, where $\mathfrak{a}$ is the minimum cardinality of a MADF on ω and $\mathfrak{c}$ is the cardinality of the continuum. The first example of a rich MADF was the well known MAFD $\mathcal{M}$ on $\kappa = \omega$ due to S. Mrówka with the property that for every continuous $f : \psi(\omega, \mathcal{M}) \to \mathbb{R}$, there exists $r \in \mathbb{R}$ such that $|\psi(\omega, \mathcal{M}) \setminus f^{-1}(r)| \leq \omega$. (Received September 23, 2014)