

On incompactness for chromatic number of graphs

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We deal with incompactness. Assume the existence of non-reflecting stationary set of cofinality κ . We prove that one can define a graph G whose chromatic number is $> \kappa$, while the chromatic number of every subgraph G' subseteq $G, |G'| < |G|$ is $\leq \kappa$. The main case is $\kappa = \aleph_0$.

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