Independence around $\aleph_\omega$

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In recent decades, several topological and set-theoretical statements have been shown to be independent of ZFC by demonstrating that they hold under GCH + $\square_{\aleph_\omega}$, while their negations follow from GCH and a suitable version of the Chang Conjecture, — specifically, the principle $(\aleph_{\omega+1}, \aleph_\omega) \twoheadrightarrow (\aleph_1, \aleph_0)$.

In this talk, we will formulate several such statements and investigate the possible implications between these statements.