

1 The ω -hitting Forcing

A family $\mathcal{W} \subseteq [\omega]^\omega$ is called *ω -hitting* if for every $\{A_n \mid n \in \omega\} \subseteq [\omega]^\omega$ there is $W \in \mathcal{W}$ such that $W \cap A_n$ is infinite for every $n \in \omega$. We say a forcing notion \mathbb{P} *preserves* \mathcal{W} if \mathcal{W} is still a ω -hitting family after forcing with \mathbb{P} . It is known that both Cohen and Laver forcing preserve all ω -hitting families, while Random and Mathias may destroy some *of* them. Our main focus is on Borel ω -hitting families and consider them as a forcing notion, we will study the main properties of this forcing.