

Search for boosted $H \rightarrow WW$ and prospects for boosted $W \rightarrow cb$ in the CMS Experiment

Friday, 31 October 2025 18:00 (20 minutes)

Boosted boson jet tagging has been a central focus of both theoretical and experimental high-energy physics research over the past decades, serving as a major driver of innovation at the energy frontier. We leverage the powerful ParT tagger in CMS to search for boosted $H \rightarrow WW$ and $W \rightarrow cb$ jets across multiple channels. Public results from the 0L-channel $H \rightarrow WW$ search will be presented, along with prospective results for the 0L- and 1L-channel $W \rightarrow cb$ search searches. The vital calibration strategies involved will also be discussed.

Primary authors: Mr GAO, Leyun (Peking University); Dr ZHAO, Yuzhe (Peking University)

Presenter: Mr GAO, Leyun (Peking University)

Session Classification: Parallel 2

Track Classification: CMS