

# Adaptive Vertex Reconstruction in CMS

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Reconstruction of interaction vertices is an essential step in the reconstruction chain of a modern collider experiment such as CMS; the primary ("collision") vertex is reconstructed in every event within the CMS reconstruction program, CMSSW.

However, the task of finding and fitting secondary ("decay") vertices also plays an important role in several physics cases such as the reconstruction of long-lived particles like Kaons, or the identification of b-jets, i.e. the task of b-tagging.

A very simple but powerful general-purpose vertex finding algorithm is presented that is based on the well-established adaptive vertex fitter to find and fit primary and secondary vertices.

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