

Preliminary results and plan on VVV search

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A new model, called Bulk Extra Dimension model, which is modified by the inclusion of Higgs brane from Bulk Graviton model, leads to novel phenomenology. We consider two cases based on this new model. The process is $pp \rightarrow W_{kk} \rightarrow W\phi \rightarrow WWW$. And the main difference between these two cases is the choice of the mass of ϕ . Besides, the first VVV search based on Bulk Graviton model is also studied, in which the graviton decays to tri-W. Some preliminary results of these three cases will be given in my report.

Summary

For the third case, we have set up the analysis machinery with alpha method and performed the study of the one resonance case. In case I, alpha method can't work due to low statistics. So we plan to estimate the background using the cut and counting method with the "+" cut. While case II is much more complicated, and we will consider it later.

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