

Weekly report

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Working status

HGTD: a [Higgs plenary meeting report](#) last Thursday

Old results, with some reply to the comments.

New comments: which benchmark we want to present (What is important in HL-LHC condition).

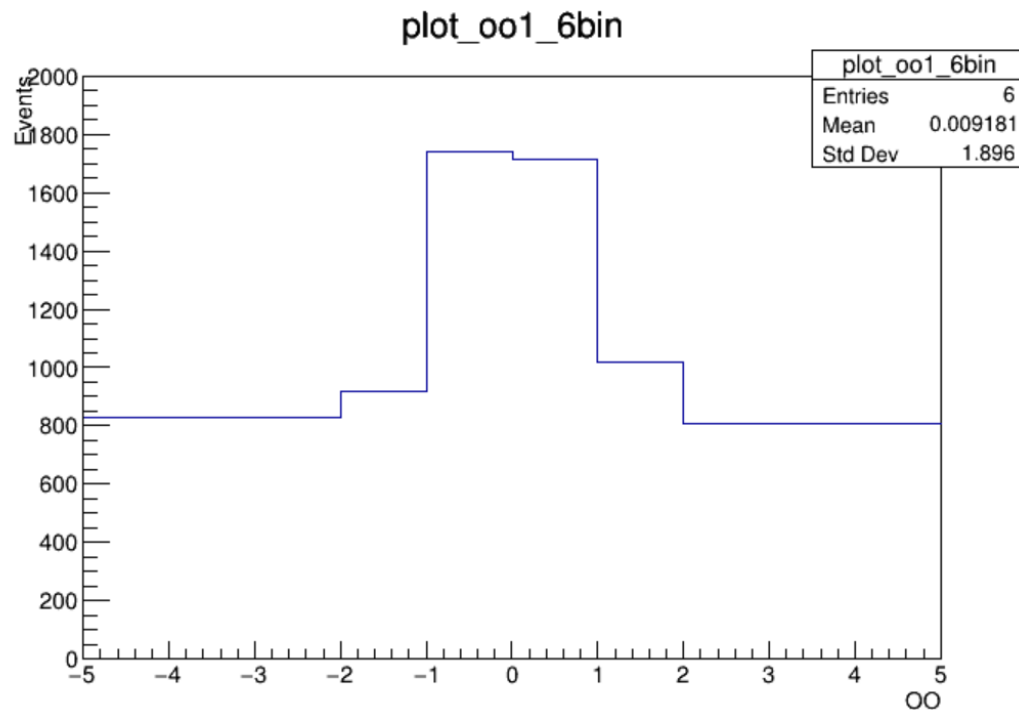
Higgs group approval: this Thursday. Circulate slides tomorrow.

	ITK	rmfwdPU	improvement
Combined sigma	14.58 ± 0.25	15.15 ± 0.33	3.91%
$N_{VBF} / (N_{ggh} + N_{bkg})$	0.391 ± 0.016	0.464 ± 0.026	18.67%
$(N_{VBF} + N_{ggh}) / N_{bkg}$	0.689 ± 0.033	0.807 ± 0.055	17.12%
Highest VBF purity	0.692 ± 0.009	0.712 ± 0.010	2.89%

Working status

VBF HCP: 2 remain issue: 2-D model fit, $\text{Br}(H \rightarrow \gamma\gamma)$ in EFT

Try to fit $m_{\gamma\gamma}$ in each OO bin, just like $H \rightarrow \tau\tau$ people did.



Divide all events into 6
OO bins:
 $[-\infty, -2]$, $[-2, -1]$, $[-1, 0]$,
 $[0, 1]$, $[1, 2]$, $[2, \infty]$

Sideband bkg sample OO
distribution.
Make sure enough stat. in
each bin.

Working status

VBF sample $m_{\gamma\gamma}$ in 6 00 bins

