## **VBF** results with new samples

• Use new signal MC and data samples with updated calibration

- improve 3% on VBF significance and  $\Delta \mu_{VBF}$ , even before changing MVA
- Use full reverse isolation in training for Christmas and reweight results

Results (5GeV window)	Moriondd Ioose	Moriond tight	Workshop loose	Workshop tight	Christmas Ioose	Christmas tight	+reweight loose	+reweight tight
VBF signal	2.5	5.5	4.9	4.3	4.9	4.4	4.7	4.7
ggF	1.8	1.5	3.4	0.9	3.3	0.9	3.4	1.1
bk model	23.0	10.8	44.7	6.8	44.0	6.8	45.7	7.4
Purity	57.9%	79.1%	58.8%	82.3%	58.6%	82.1%	60.0%	81.0%
Significance	0.49	1.48	0.70	1.43	0.69	1.45	0.65	1.48
Combined significance	1.56		1.59		1.61		1.62	
Improve Δμ <sub>VBF</sub> (statistic)	3%		5%		6%		7%	
Data	239	114	450	73	448	72	463	79

## **Current Status**

Will have a new version of samples with corrected calibration
remove any call to the tools of the class ConvertedPhotonScaleTool

• VBF category is finalized with Christmas strategy

- use all reverse isolation samples in the training
- not use reweighting

• The coupling supporting note is undergoing

- introduction, samples, object/event selection are done
- collecting categories
- systematics
- results

## Happy 2014 !