

# multiple H+2-jet categories?

- Several analyses have multiple H + 2-jet categories. Typical cases:
  1. Loose and Tight VBF categories
  2. VBF di-jet and VH di-jet (from  $V \rightarrow jj$ )
- What assumptions should we do on the correlation of the theoretical uncertainties on the ggF contamination?
  - Intuitively one would take the full correlation in the first case, but the second is not obvious.
- A related issue is the correlation between the 2-jet inclusive and the 2-jet VBF bins (e.g. in CMS H $\rightarrow$ WW the 2-jet inclusive is used to define the 1-jet exclusive, while the 2-jet VBF is used for the signal)
- Some VBF bins have a CJV: should we express the uncertainty on that in terms of  $\sigma(\text{ggH} + \geq 3\text{-jet})$ ?

