

# Discussion session

## Padova meeting

# EWSB

- right now (in exp) H, VV in SMEFT dim6, HH in HEFT, VBS in SMEFT at dim8. Does it need harmonization?
- interplay with models: models with “large” dim-8 contributions in multiboson? what can we learn from a HEFT parameterization?
- can polarization EFT studies be useful to target Goldstone/transverse discrimination?
- quantum entanglement: any applications to EWSB studies? could it be useful to constrain HEFT? is there anything we can learn from these techniques? what can be realistically implemented in experiments?

# HEFT

- HEFT counting for amplitudes and HEFT bases.  
Choosing one, clarify if they are all equivalent.
- VBS in HEFT: can it be interesting? what can we learn? how hard? what does it take?
- VV in HEFT? less contribution from Goldstones, but unitarity violation would still appear in a non-linear realization
- potentially comparison HEFT vs SMEFT dim6/dim8 in VBS
- replacing SMEFT with HEFT in existing global fits (Higgs + EW + HH)?
- harmonize HH and H parameterizations: interest in H - HH combination in the long run?

## Other WGs

interplay with Higgs WG (Report 5) , EFT WG

activities already in place within WGs

- \* EFT: comparison of dim8 operators in VBS, with positivity bounds
- \* EFT: harmonization of single-H STXS parameterizations
- \* Higgs: overview of HH EFT already out
- \* Higgs: comparison of H and HH EFT parameterizations (stalled?)