

ZHH analysis.

WBF event generation

Julie Munch Torndal

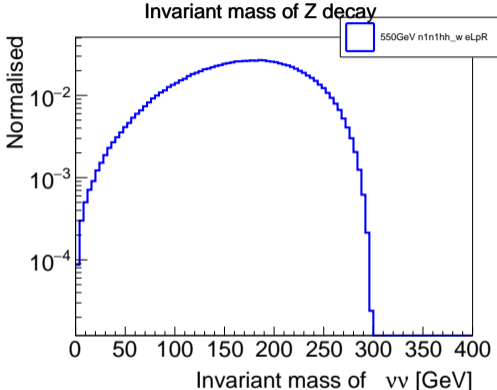
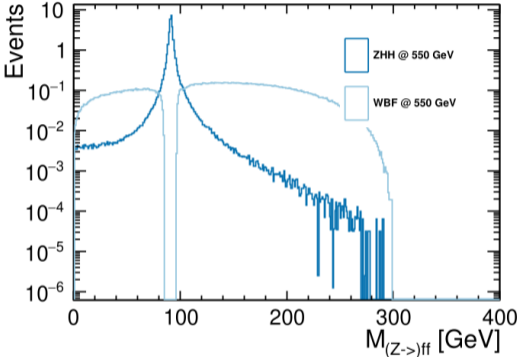
Di-Higgs working group meeting
May 20, 2026



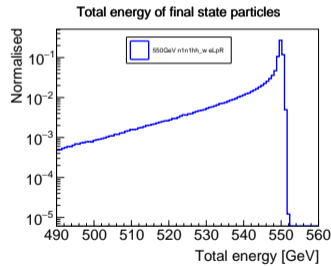
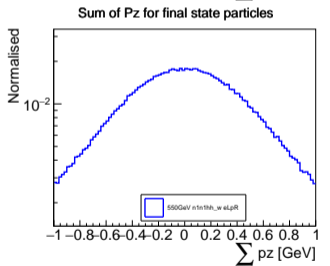
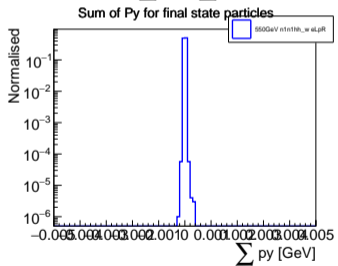
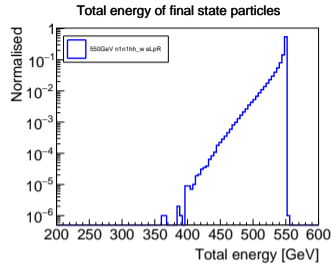
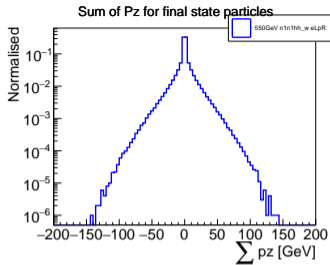
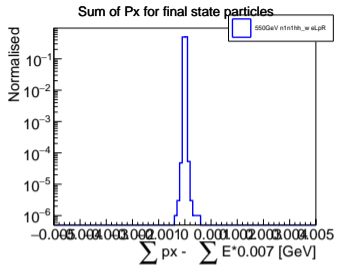
HELMHOLTZ

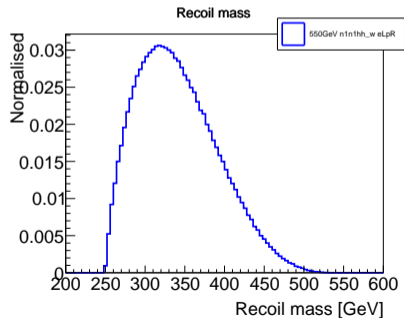
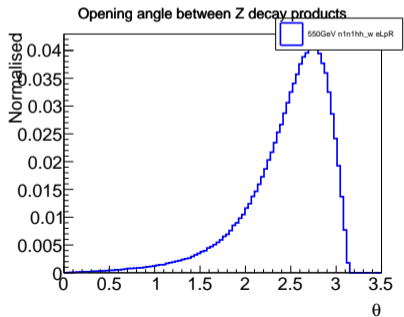
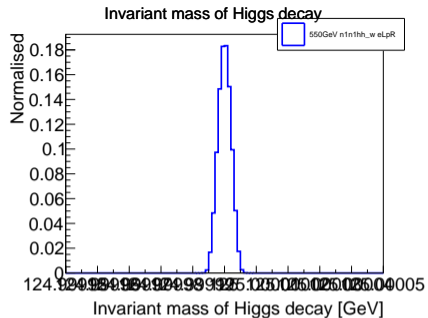
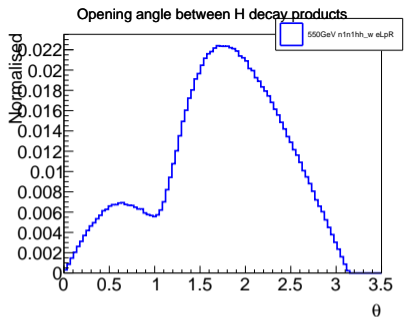


Pure WBF events with whizard

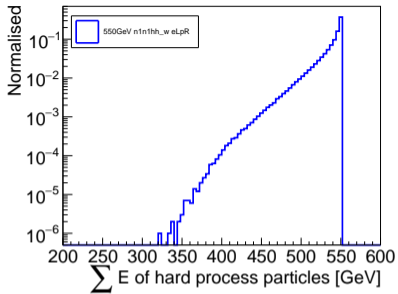


[00000009]	4]	11]	-2.80e-14, -1.34e-14, 2.75e+02]	0.00e+00, 0.00e+00, 0.00e+00]	2.75e+02]	3	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	5.11e-04]	-1.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[2] -	[8,11,12]
[00000010]	5]	-11]	5.45e-06, 2.62e-06, -2.70e+02]	0.00e+00, 0.00e+00, 0.00e+00]	2.70e+02]	3	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	5.11e-04]	1.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[3] -	[8,11,12]
[00000011]	6]	22]	5.47e-18, -6.40e-19, 8.01e-18]	0.00e+00, 0.00e+00, 0.00e+00]	9.72e-18]	1	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	-1.46e-25]	0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[2] -	[]
[00000012]	7]	22]	-5.45e-06, -2.62e-06, -5.53e-06]	0.00e+00, 0.00e+00, 0.00e+00]	8.19e-06]	1	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00]	0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[3] -	[]
[00000013]	8]	23]	2.69e+01, -7.35e+00, 5.97e+01]	0.00e+00, 0.00e+00, 0.00e+00]	1.14e+02]	2	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	9.23e+01]	0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[4,5] -	[9,10]
[00000014]	9]	12]	1.40e+01, -1.42e+01, 8.35e+01]	0.00e+00, 0.00e+00, 0.00e+00]	8.59e+01]	2	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	-9.54e-07]	0.00e+00]	0.00e+00, 0.00e+00, -1.00e+00]	(0, 0)	[8] -	[17]
[00000015]	10]	-12]	1.29e+01, 5.84e+00, -2.38e+01]	0.00e+00, 0.00e+00, 0.00e+00]	2.79e+01]	2	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	4.77e-07]	0.00e+00]	0.00e+00, 0.00e+00, 1.00e+00]	(0, 0)	[8] -	[18]
[00000016]	11]	25]	-4.19e+01, 2.54e+01, -1.99e+02]	0.00e+00, 0.00e+00, 0.00e+00]	2.48e+02]	2	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	1.25e+02]	0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[4,5] -	[13,14]
[00000017]	12]	25]	1.50e+01, -1.00e+01, 1.44e+02]	0.00e+00, 0.00e+00, 0.00e+00]	1.92e+02]	2	0]	0.00e+00, 0.00e+00, 0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	1.25e+02]	0.00e+00]	0.00e+00, 0.00e+00, 0.00e+00]	(0, 0)	[4,5] -	[15,16]





Total energy of initial fermions



Total energy of initial fermions + ISR

