STUDIES OF $ZH \to (\nu\nu) + bb$ DECAYS

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* repeat NIU analysis using SHW simulation

* Event Selection:

1. 2 b-jets, $E_T > 15$ GeV, $|\eta| < 2$ (also, $E_T > 15, 20$)
2. missing $E_T > 35$ GeV
3. minimum angle between missing E_T and jet > 0.5
4. reject events with isolated e, μ, τ ($p_t > 8$ GeV, $|\eta| < 2.5$)
5. $H_T < 200$ GeV

Event Flow comparison NIU vrs SHW ($m_h = 100$ GeV)

	NIU	SHW
no. events	2000(5)(0.49)	10000
2 b 20/15	3315	2852
met> 35	2315	2611
dphi> .5	2117	2334
HT< 200	1813	2049
isol lep	1730	1914
mass window	1284 (80-110)	1347 (75-125)

Significance for 100 GeV/c higgs

Signal (fb)	NIU	SHW
ZH	3.3	3.5
WH	1.2	1.3
total signal	4.5 fb	4.8 fb
Background (fb)		
Z	5.6	5.8
ZZ	5.1	6.8
single t	3.0	3.4
tt	1.9	2.3
WZ	2.5	3.6
total background	18.1 fb	21.9 fb
$S/\sqrt{S+B}$	0.95	0.93