

Table 1: Data fake rates for Cut-Based e-veto

Selection	fake rate	total(+)	total (-)	stat	bkg
Loose Bar	0.0872613	0.0209007	0.0209006	0.0038612	0.0029802
Loose Cra	0.0329959	0.0131553	0.0129239	0.0126100	0.0027694
Loose End	0.5874364	0.0249802	0.0281791	0.0082358	0.0005427
Loose (TOL) Bar	0.0684029	0.0230847	0.0230967	0.0037104	0.0030883
Loose (TOL) Cra	0.0257447	0.0127541	0.0125653	0.0121696	0.0028676
Loose (TOL) End	0.1498224	0.0248640	0.0265552	0.0064589	0.0027255
Loose (MOL) Bar	0.0241130	0.0077405	0.0077726	0.0033180	0.0030426
Loose (MOL) Cra	0.0095339	0.0121285	0.0121330	0.0120334	0.0014341
Loose (MOL) End	0.0922760	0.0086738	0.0126798	0.0060845	0.0014740
Medium Bar	0.0264755	0.0075731	0.0076034	0.0033336	0.0031278
Medium Cra	0.0199575	0.0122948	0.0121010	0.0119291	0.0019786
Medium End	0.0624740	0.0091522	0.0090767	0.0056678	0.0018770
Medium (TOL) Bar	0.0212560	0.0078474	0.0078694	0.0032888	0.0031748
Medium (TOL) Cra	0.0165489	0.0120634	0.0119683	0.0117816	0.0020491
Medium (TOL) End	0.0378325	0.0109852	0.0108872	0.0052826	0.0027816
Medium (MOL) Bar	0.0155042	0.0076477	0.0076737	0.0032322	0.0031537
Medium (MOL) Cra	0.0075748	0.0122334	0.0121963	0.0121288	0.0010089
Medium (MOL) End	0.0221662	0.0086867	0.0087330	0.0050526	0.0029862
Tight Bar	0.0111783	0.0067202	0.0067512	0.0030880	0.0028152
Tight Cra	0.0083222	0.0115341	0.0114608	0.0112132	0.0021690
Tight End	0.0424994	0.0083126	0.0081315	0.0053264	0.0014901
Tight (TOL) Bar	0.0101259	0.0067325	0.0067661	0.0030796	0.0028054
Tight (TOL) Cra	0.0083315	0.0115457	0.0114723	0.0112264	0.0021596
Tight (TOL) End	0.0200177	0.0093201	0.0089336	0.0049593	0.0025215
Tight (MOL) Bar	0.0076910	0.0068760	0.0069028	0.0030576	0.0026540
Tight (MOL) Cra	0.0053731	0.0140731	0.0140073	0.0139006	0.0003494
Tight (MOL) End	0.0146052	0.0086120	0.0083653	0.0048611	0.0027075

Table 2: Data fake rates for BDT-Based e-veto

Selection	fake rate	total(+)	total (-)	stat	bkg
Loose Bar	0.0284856	0.0120625	0.0120437	0.0036926	0.0059207
Loose Cra	0.0244774	0.0152095	0.0151788	0.0144246	0.0046118
Loose End	0.0693956	0.0115583	0.0116973	0.0060725	0.0044285
Loose (TOL) Bar	0.0266312	0.0120018	0.0119776	0.0036731	0.0059278
Loose (TOL) Cra	0.0234730	0.0151452	0.0151257	0.0143651	0.0046625
Loose (TOL) End	0.0448354	0.0165983	0.0164790	0.0057402	0.0044896
Loose (MOL) Bar	0.0184216	0.0117769	0.0117641	0.0036149	0.0054088
Loose (MOL) Cra	0.0130037	0.0156957	0.0155597	0.0151110	0.0036868
Loose (MOL) End	0.0277703	0.0117759	0.0114854	0.0056360	0.0041330
Medium Bar	0.0120351	0.0110454	0.0110525	0.0034798	0.0055145
Medium Cra	0.0056200	0.0137246	0.0137001	0.0130939	0.0039174
Medium End	0.0169810	0.0094715	0.0094360	0.0054276	0.0039249
Medium (TOL) Bar	0.0117184	0.0109790	0.0109865	0.0034803	0.0055078
Medium (TOL) Cra	0.0056201	0.0137247	0.0137002	0.0130940	0.0039173
Medium (TOL) End	0.0130243	0.0096955	0.0095381	0.0052971	0.0040706
Medium (MOL) Bar	0.0104262	0.0110364	0.0110601	0.0035001	0.0049528
Medium (MOL) Cra	0.0045597	0.0149166	0.0148963	0.0143367	0.0040240
Medium (MOL) End	0.0096631	0.0100481	0.0096013	0.0054123	0.0038386
Tight Bar	0.0083401	0.0096428	0.0096469	0.0033961	0.0042216
Tight Cra	0.0065617	0.0133688	0.0134024	0.0131748	0.0015451
Tight End	0.0057211	0.0075095	0.0074532	0.0049515	0.0033164
Tight (TOL) Bar	0.0082671	0.0095430	0.0095475	0.0034004	0.0042023
Tight (TOL) Cra	0.0065621	0.0133697	0.0134033	0.0131758	0.0015447
Tight (TOL) End	0.0053989	0.0075653	0.0075148	0.0049377	0.0033119
Tight (MOL) Bar	0.0080799	0.0097124	0.0097228	0.0034500	0.0036967
Tight (MOL) Cra	0.0061182	0.0179551	0.0179914	0.0178523	0.0010349
Tight (MOL) End	0.0052877	0.0076524	0.0075528	0.0052022	0.0027698