Profile Likelihood Distributions for Mass Bin 140 GeV 1.0 Background only Signal + Background Observed Profile Likelihood p=0.05 threshold value, with power = 1.00 0.8 Density 9.0 0.4 0.2

10.0

Profile Likelihood

12.5

15.0

17.5

20.0

7.5

0.0

0.0

2.5

5.0