

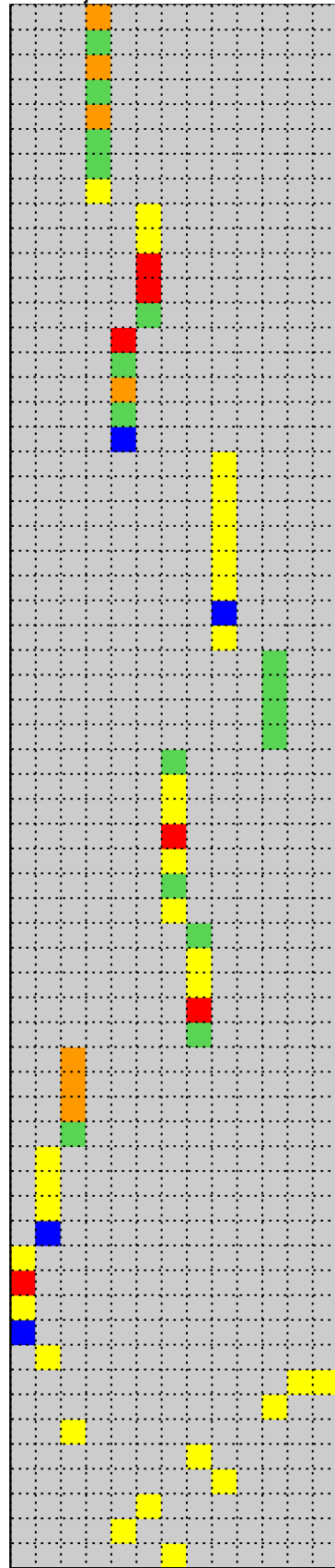
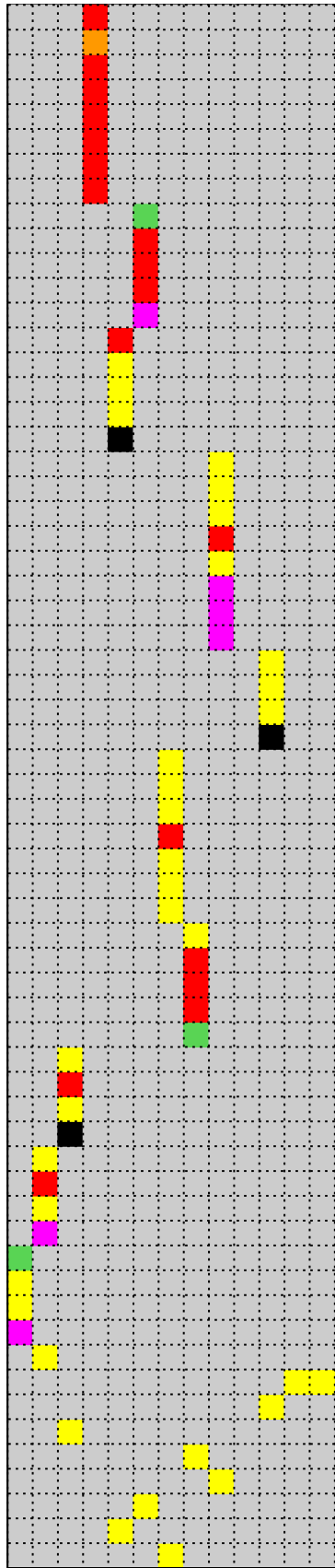
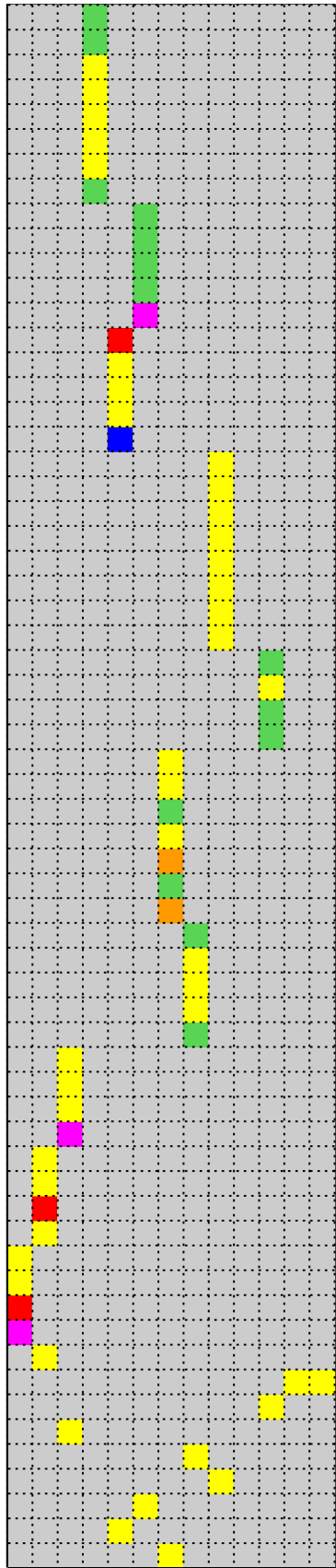
tHq(2IOS+1 $\tau$ )

SR

CR  $t\bar{t}$

CR Z+jets

$t\bar{t}$  hdamp=3mtop  
 $t\bar{t}$  FSR  
 $t\bar{t}$  ISR  
 $t\bar{t}$   $\mu_R \mu_F$  scale  
 $t\bar{t}$   $\mu_F$  scale  
 $t\bar{t}$   $\mu_R$  scale  
 $t\bar{t}$  PS + had.  
 $t\bar{t}$  NLO gen.  
 $t\bar{t}Z$  ISR  
 $t\bar{t}Z$   $\mu_R \mu_F$  scale  
 $t\bar{t}Z$   $\mu_F$  scale  
 $t\bar{t}Z$   $\mu_R$  scale  
 $t\bar{t}Z$  NLO gen. + PS + had.  
 $t\bar{t}W$  ISR  
 $t\bar{t}W$   $\mu_R \mu_F$  scale  
 $t\bar{t}W$   $\mu_F$  scale  
 $t\bar{t}W$   $\mu_R$  scale  
 $t\bar{t}W$  NLO gen. + PS + had.  
 $tW$  FSR  
 $tW$  ISR  
 $tW$   $\mu_R \mu_F$  scale  
 $tW$   $\mu_F$  scale  
 $tW$   $\mu_R$  scale  
 $tW$  PS + had.  
 $tW$  NLO gen.  
 $tW$  (DR vs. DS)  
Diboson  $\mu_R \mu_F$  scale  
Diboson  $\mu_F$  scale  
Diboson  $\mu_R$  scale  
Diboson NLO gen. + PS + had.  
 $t\bar{t}H$  FSR  
 $t\bar{t}H$  ISR  
 $t\bar{t}H$   $\mu_R \mu_F$  scale  
 $t\bar{t}H$   $\mu_F$  scale  
 $t\bar{t}H$   $\mu_R$  scale  
 $t\bar{t}H$  PS + had.  
 $t\bar{t}H$  NLO gen.  
 $tZq$  ISR  
 $tZq$   $\mu_R \mu_F$  scale  
 $tZq$   $\mu_F$  scale  
 $tZq$   $\mu_R$  scale  
 $tZq$  PS + had.  
 $tWZ$   $\mu_R \mu_F$  scale  
 $tWZ$   $\mu_F$  scale  
 $tWZ$   $\mu_R$  scale  
 $tWZ$  (alt. DR)  
 $tWH$   $\mu_R \mu_F$  scale  
 $tWH$   $\mu_F$  scale  
 $tWH$   $\mu_R$  scale  
 $tWH$  PS + had.  
 $tHq$   $\mu_R \mu_F$  scale  
 $tHq$   $\mu_F$  scale  
 $tHq$   $\mu_R$  scale  
 $tHq$  PS + had.  
 $tWH$  XS  
Minor bkg. XS  
Diboson XS  
 $tWZ$  XS  
 $tZq$  XS  
 $tW$  XS  
 $t\bar{t}Z$  XS  
 $t\bar{t}W$  XS  
 $t\bar{t}H$  XS



Not present  
 Kept  
 Shape dropped  
 Norm. dropped  
 Dropped  
 Norm >99% (dropped)  
 Bad shape (dropped)  
 Bad shape & norm. (dropped)