

Z+jets CR

- 2 prompt leptons from $Z \rightarrow \ell\ell$
- Additional non-prompt leptons from jets

$t\bar{t}$ CR

- 2 prompt leptons from $t\bar{t}$ decays
- Additional non-prompt leptons from jets

Combined CR

- based on non-prompt composition
- Evaluate fake factors (F)

Fake Background estimation

Validation Region

- One pair either same charge or different flavor
- Dominated by fake events
- Apply F to each not-signal leptons in the not-signal quadruplets

Signal Region

- Apply F to each not-signal leptons in the not-signal quadruplets