CMS Preliminary

4L(µµ), 1B
S_T inclusive

4L(µµ), 1B

S_T inclusive

g_\phi^2 \times \text{BR}(φ→µµ) = 0.05

137 fb^{-1} (13 TeV)

Events

\begin{align*}
\log_{10} \text{Events} = & 4 \times \log_{10}(4L(µµ), 1B) \\
& \times \log_{10}(S_T \text{ inclusive}) \\
& \times g_\phi^2 \times \text{BR}(φ→µµ) = 0.05
\end{align*}

\begin{align*}
\log_{10} \text{Events} = & 4 \times \log_{10}(137 \text{ fb}^{-1}) \\
& \times \log_{10}(13 \text{ TeV}) \\
& \times \log_{10}(0.05)
\end{align*}

Data
ZZ
Conversion
\text{t}t\text{Z}
\text{MisID}
\text{Rare}
\text{t}t\phi_{PS}(125)
\text{t}t\phi_{S}(300)
Uncertainty

Dimuon M^{300}_{OSSF} (GeV)

Obs/Exp

\begin{align*}
\text{Obs/Exp} = & \frac{\text{Observed Events}}{\text{Expected Events}} \\
& \times \log_{10}(137 \text{ fb}^{-1}) \\
& \times \log_{10}(13 \text{ TeV}) \\
& \times \log_{10}(0.05)
\end{align*}

\begin{align*}
\text{Obs/Exp} = & \frac{4 \times \log_{10}(4L(µµ), 1B)}{\log_{10}(S_T \text{ inclusive})} \\
& \times \frac{g_\phi^2 \times \text{BR}(φ→µµ) = 0.05}{\log_{10}(137 \text{ fb}^{-1}) \\
& \times \log_{10}(13 \text{ TeV}) \\
& \times \log_{10}(0.05)}
\end{align*}