

Fraction of events / 10 MeV

**ATLAS Preliminary**

Projection from run-1 data

$\int dt L = 3000 \text{ fb}^{-1}, \sqrt{s} = 14 \text{ TeV}$

HF-channel

$\sigma_{\text{HL-LHC}} = 26.7 \text{ MeV}$

$\sigma_{\text{run-2}} = 36.6 \text{ MeV}$

— HL-LHC  $bbDs \rightarrow \tau(\rightarrow 3\mu)\nu$

- - - HL-LHC  $ccDs \rightarrow \tau(\rightarrow 3\mu)\nu$

— run-2  $bbDs \rightarrow \tau(\rightarrow 3\mu)\nu$

- - - run-2  $ccDs \rightarrow \tau(\rightarrow 3\mu)\nu$

0.25

0.2

0.15

0.1

0.05

0

1650

1700

1750

1800

1850

1900

$m_{3\mu} [\text{MeV}]$

