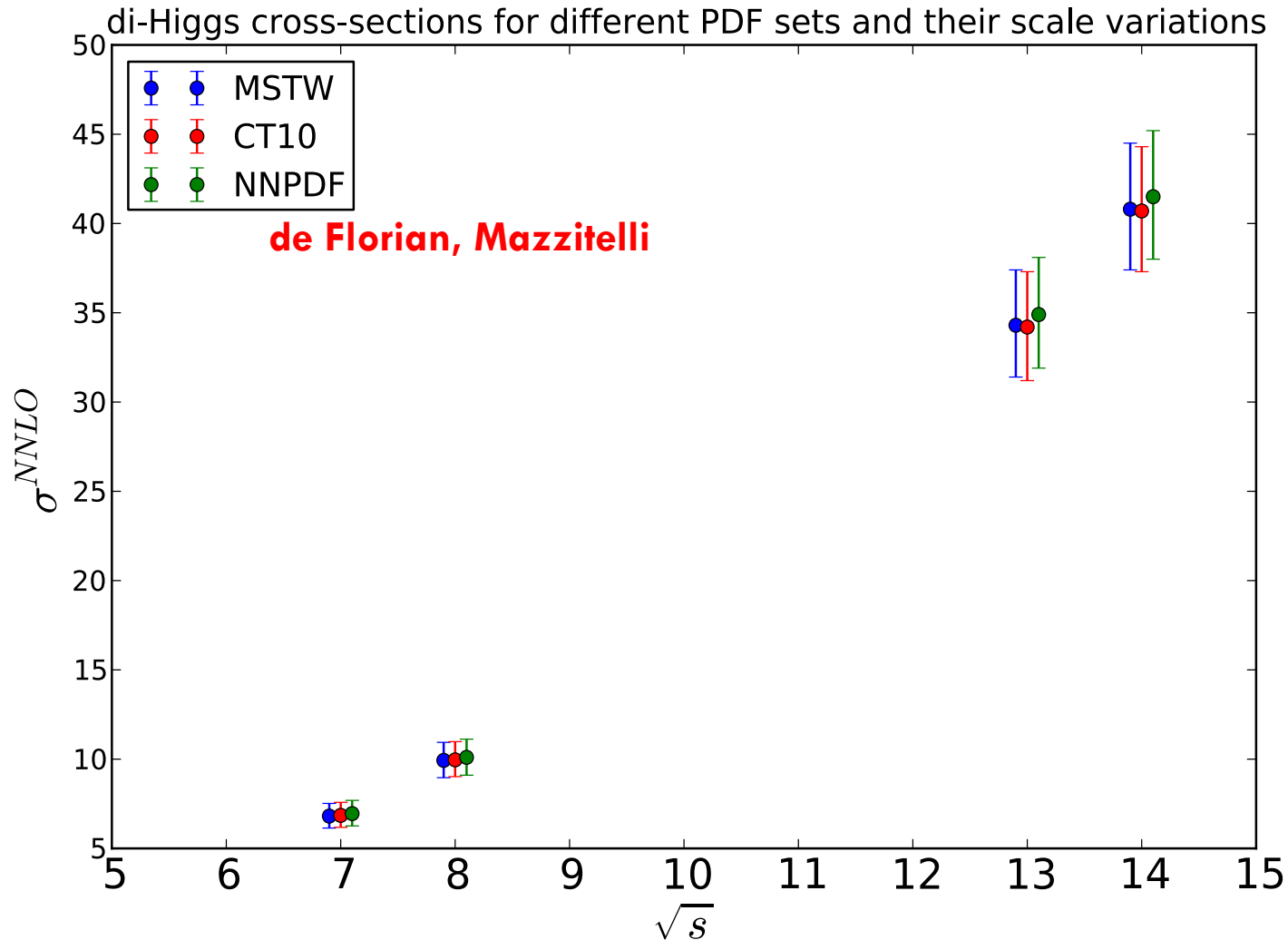


# DISCUSSION: RECOMMENDATION FOR THE CROSS-SECTIONS

SALLY DAWSON, CHRISTOPH ENGLERT,  
MAXIME GOUZEVITCH, ROBERTO SALERNO,  
MAGDALENA SŁAWIŃSKA

# $\sigma (gg \rightarrow HH)$ at NNLO

2



# Uncertainties

3

## □ Scale unc.

cross-sections with  
CT10 PDF set

Scale	$\sqrt{s}$			
	7	8	13	14
$\mu = m_{HH}/2$	7.52	10.9	37.2	44.1
$\mu = m_{HH}$	<b>6.85</b>	<b>9.96</b>	<b>34.3</b>	<b>40.7</b>
$\mu = 2m_{HH}$	6.12	8.94	31.1	37.1
"+" [%]	<b>10%</b>	<b>9%</b>	<b>8%</b>	<b>8%</b>
"-" [%]	<b>11%</b>	<b>10%</b>	<b>9%</b>	<b>9%</b>

□ PDF unc. 2% (taking only MSTW and NNPDF 3.0 wrt CT10)

□ top mass effects unc. +10% -10%