

Process	This analysis (123 fb <sup>-1</sup> )			CMS (36 fb <sup>-1</sup> ) [13]	ATLAS (139 fb <sup>-1</sup> ) [15]
	$\mu_{obs}(\mu_{exp})$	$\sigma_{obs}(\sigma_{exp})$ [pb]	$\mathcal{B}_{obs}(\mathcal{B}_{exp})$	$\mathcal{B}_{obs}(\mathcal{B}_{exp})$	$\mathcal{B}_{obs}(\mathcal{B}_{exp})$
Z $\rightarrow$ $\Psi(1S)\gamma$	7.2 $\left(8.6^{+4.1}_{-2.7}\right)$	3.8 $\left(4.4^{+1.9}_{-1.3}\right) \times 10^{-2}$	0.6 $\left(0.7^{+0.3}_{-0.2}\right) \times 10^{-6}$	1.5 $\left(1.7^{+0.7}_{-0.5}\right) \times 10^{-6}$	1.2 $\left(0.6^{+0.3}_{-0.2}\right) \times 10^{-6}$
Z $\rightarrow$ $\Psi(2S)\gamma$	29 $\left(68^{+36}_{-22}\right)$	8 $\left(19^{+8}_{-6}\right) \times 10^{-2}$	1.3 $\left(3.1^{+1.4}_{-0.9}\right) \times 10^{-6}$	—	2.3 $\left(2.9^{+1.3}_{-0.8}\right) \times 10^{-6}$
H $\rightarrow$ $\Psi(1S)\gamma$	88 $\left(62^{+30}_{-19}\right)$	1.4 $\left(1.0^{+0.5}_{-0.3}\right) \times 10^{-2}$	2.6 $\left(1.8^{+0.9}_{-0.6}\right) \times 10^{-4}$	7.6 $\left(5.2^{+2.4}_{-1.6}\right) \times 10^{-4}$	2.1 $\left(1.9^{+0.8}_{-0.5}\right) \times 10^{-4}$
H $\rightarrow$ $\Psi(2S)\gamma$	970 $\left(781^{+417}_{-259}\right)$	5.5 $\left(4.4^{+2.3}_{-1.5}\right) \times 10^{-2}$	9.9 $\left(8.0^{+4.2}_{-2.6}\right) \times 10^{-4}$	—	10.9 $\left(8.5^{+3.8}_{-2.4}\right) \times 10^{-4}$