

Expected 95% CL upper limits on  $\sigma(\text{gg} \rightarrow \text{S}) \times \mathcal{B}(\text{S} \rightarrow \text{HH} \rightarrow \text{bb}\tau\tau)$  [ fb ]

$m_{\text{S}}$ [ GeV ]	Per category			Per decay channel			Combined
	res. 1b1j	res. 2b	boosted	$\text{bb}\tau\mu\tau_{\text{h}}$	$\text{bb}\tau\text{e}\tau_{\text{h}}$	$\text{bb}\tau_{\text{h}}\tau_{\text{h}}$	
250	362.3	177.2	-	192.9	329.1	738.3	160.6
270	712.9	443.4	-	525.4	785.2	619.1	356.4
280	744.1	381.8	-	474.6	847.7	529.3	309.6
300	666.0	400.4	17687.5	537.1	996.1	494.1	335.0
350	486.3	256.8	7656.2	414.1	1402.3	292.0	229.5
400	215.8	132.3	2351.6	233.4	331.1	127.4	106.0
450	123.5	71.8	771.5	134.3	173.8	75.7	60.1
500	98.1	47.4	408.2	81.5	97.2	59.1	41.5
550	64.9	34.7	150.9	51.3	85.4	40.5	28.8
600	52.2	23.9	91.3	36.6	51.3	30.8	20.0
650	39.6	17.1	38.6	28.8	34.7	20.0	14.2
750	36.6	21.0	15.1	18.1	27.8	17.1	10.3
900	38.6	15.1	8.3	14.2	16.1	10.3	6.3