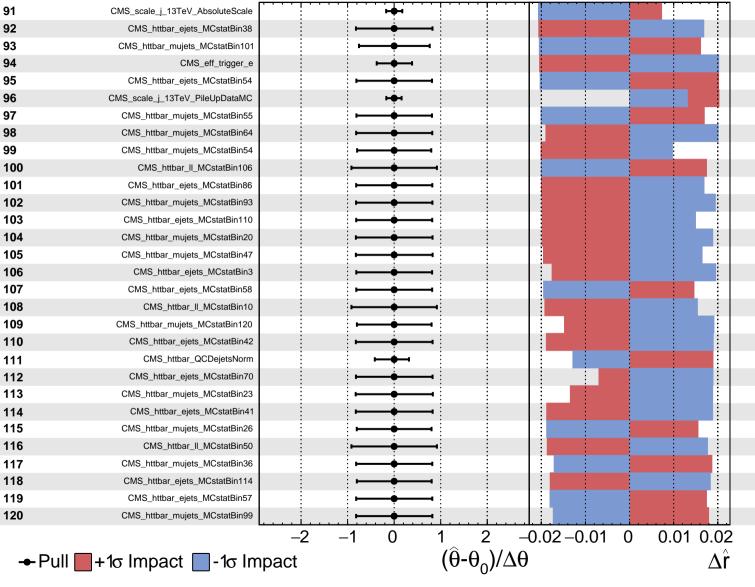CMS *Internal* $\hat{r} = 1 \pm 0.565$

31	CMS_httbar_ll_MCstatBin77	
32	CMS_httbar_mujets_MCstatBin21	
33	CMS_httbar_mujets_MCstatBin57	
34	QCDscaleMEFactor_ggA-int	
35	CMS_httbar_mujets_MCstatBin12	
36	CMS_httbar_ll_MCstatBin5	
37	CMS_httbar_mujets_MCstatBin100	
38	CMS_httbar_mujets_MCstatBin104	
39	CMS_httbar_ll_MCstatBin78	
40	CMS_httbar_mujets_MCstatBin80	
41	CMS_httbar_ll_MCstatBin6	
42	CMS_httbar_ejets_MCstatBin5	
43	CMS_httbar_ejets_MCstatBin76	
44	CMS_httbar_mujets_MCstatBin38	
45	CMS_httbar_ll_MCstatBin7	
46	CMS_httbar_mujets_MCstatBin125	
47	CMS_httbar_mujets_MCstatBin75	
48	CMS_httbar_ll_MCstatBin4	
49	CMS_httbar_mujets_MCstatBin48	
50	CMS_httbar_mujets_MCstatBin16	
51	Hdamp_TT	
52	CMS_httbar_ll_MCstatBin74	
53	CMS_httbar_mujets_MCstatBin43	
54	CMS_httbar_mujets_MCstatBin15	
55	CMS_httbar_mujets_MCstatBin61	
56	CMS_httbar_mujets_MCstatBin31	
57	CMS_httbar_ejets_MCstatBin67	
58	CMS_httbar_mujets_MCstatBin11	
59	CMS_httbar_ejets_MCstatBin11	
60	CMS_httbar_ll_MCstatBin100	

$(\hat{\theta}-\theta_0)/\Delta\theta$ $\Delta\hat{r}$

—•— Pull   ■ +1σ Impact   ■ -1σ Impact

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

61	CMS_httbar_ejets_MCstatBin39	
62	CMS_httbar_ejets_MCstatBin7	
63	CMS_httbar_ejets_MCstatBin22	
64	CMS_scale_j_13TeV_RelativeBal	
65	CMS_scale_j_13TeV_RelativeFSR	
66	CMS_httbar_ll_MCstatBin9	
67	CMS_httbar_ejets_MCstatBin32	
68	CMS_httbar_ejets_MCstatBin43	
69	CMS_httbar_ll_MCstatBin97	
70	CMS_httbar_mujets_MCstatBin10	
71	CMS_httbar_ll_MCstatBin80	
72	CMS_httbar_mujets_MCstatBin56	
73	CMS_httbar_ejets_MCstatBin69	
74	CMS_httbar_mujets_MCstatBin22	
75	CMS_scale_j_13TeV_RelativePtBB	
76	CMS_httbar_mujets_MCstatBin18	
77	CMS_httbar_mujets_MCstatBin66	
78	CMS_httbar_mujets_MCstatBin65	
79	CMS_httbar_ejets_MCstatBin75	
80	CMS_httbar_mujets_MCstatBin69	
81	CMS_httbar_mujets_MCstatBin19	
82	CMS_METunclustered_13TeV	
83	CMS_httbar_ll_MCstatBin8	
84	CMS_httbar_ll_MCstatBin79	
85	CMS_httbar_QCDmujetsNorm	
86	CMS_httbar_ll_MCstatBin105	
87	CMS_httbar_ll_MCstatBin76	
88	CMS_httbar_ejets_MCstatBin84	
89	CMS_scale_j_13TeV_RelativeJEREC1	
90	CMS_httbar_ll_MCstatBin28	

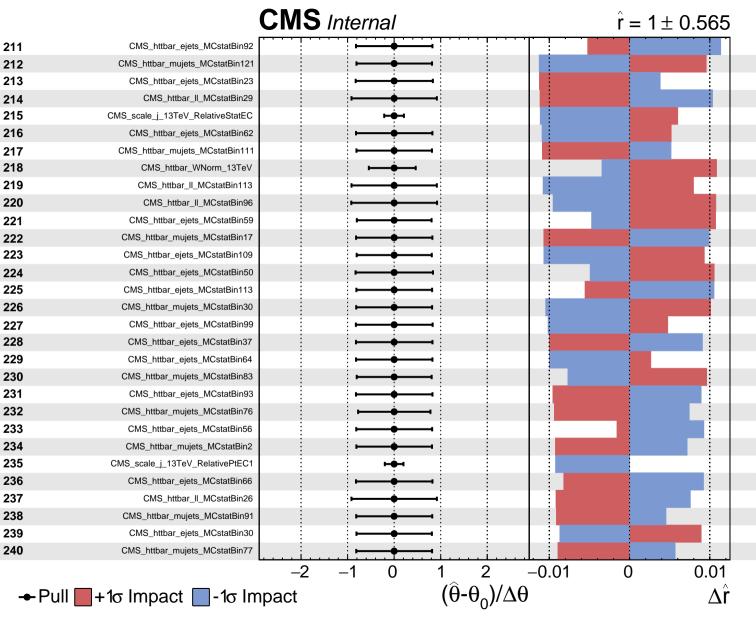Pull +1σ Impact -1σ Impact $(\hat{\theta}-\theta_0)/\Delta\theta$ $\Delta\hat{r}$

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

91	CMS_scale_j_13TeV_AbsoluteScale	
92	CMS_httbar_ejets_MCstatBin38	
93	CMS_httbar_mujets_MCstatBin101	
94	CMS_eff_trigger_e	
95	CMS_httbar_ejets_MCstatBin54	
96	CMS_scale_j_13TeV_PileUpDataMC	
97	CMS_httbar_mujets_MCstatBin55	
98	CMS_httbar_mujets_MCstatBin64	
99	CMS_httbar_mujets_MCstatBin54	
100	CMS_httbar_ll_MCstatBin106	
101	CMS_httbar_ejets_MCstatBin86	
102	CMS_httbar_mujets_MCstatBin93	
103	CMS_httbar_ejets_MCstatBin110	
104	CMS_httbar_mujets_MCstatBin20	
105	CMS_httbar_mujets_MCstatBin47	
106	CMS_httbar_ejets_MCstatBin3	
107	CMS_httbar_ejets_MCstatBin58	
108	CMS_httbar_ll_MCstatBin10	
109	CMS_httbar_mujets_MCstatBin120	
110	CMS_httbar_ejets_MCstatBin42	
111	CMS_httbar_QCDejetsNorm	
112	CMS_httbar_ejets_MCstatBin70	
113	CMS_httbar_mujets_MCstatBin23	
114	CMS_httbar_ejets_MCstatBin41	
115	CMS_httbar_mujets_MCstatBin26	
116	CMS_httbar_ll_MCstatBin50	
117	CMS_httbar_mujets_MCstatBin36	
118	CMS_httbar_ejets_MCstatBin114	
119	CMS_httbar_ejets_MCstatBin57	
120	CMS_httbar_mujets_MCstatBin99	

$(\hat{\theta}-\theta_0)/\Delta\theta$

$\Delta\hat{r}$

← Pull ■ +1σ Impact ■ -1σ Impact

CMS *Internal* $\hat{r} = 1 \pm 0.565$

121	CMS_httbar_ejets_MCstatBin44	
122	CMS_httbar_mujets_MCstatBin94	
123	CMS_httbar_ll_MCstatBin72	
124	CMS_httbar_ejets_MCstatBin119	
125	CMS_httbar_ejets_MCstatBin18	
126	CMS_httbar_mujets_MCstatBin92	
127	CMS_httbar_mujets_MCstatBin35	
128	CMS_httbar_ejets_MCstatBin35	
129	CMS_httbar_mujets_MCstatBin59	
130	CMS_httbar_mujets_MCstatBin67	
131	CMS_httbar_mujets_MCstatBin90	
132	CMS_scale_j_13TeV_AbsoluteStat	
133	CMS_httbar_ll_MCstatBin3	
134	CMS_httbar_ejets_MCstatBin63	
135	CMS_httbar_ejets_MCstatBin55	
136	CMS_httbar_mujets_MCstatBin102	
137	TTXsec	
138	CMS_httbar_ll_MCstatBin2	
139	CMS_eff_e	
140	CMS_httbar_mujets_MCstatBin7	
141	CMS_httbar_ejets_MCstatBin16	
142	CMS_httbar_mujets_MCstatBin14	
143	CMS_httbar_ejets_MCstatBin29	
144	CMS_httbar_ll_MCstatBin73	
145	CMS_httbar_tChannelNorm_13TeV	
146	CMS_httbar_ejets_MCstatBin117	
147	CMS_httbar_mujets_MCstatBin25	
148	CMS_scale_j_13TeV_PileUpPtEC1	
149	CMS_httbar_ejets_MCstatBin53	
150	CMS_httbar_ejets_MCstatBin47	

$-2 \quad -1 \quad 0 \quad 1 \quad 2$

$-0.01 \quad 0 \quad 0.01$

— Pull   ■ +1σ Impact   ■ -1σ Impact

$(\hat{\theta}-\theta_0)/\Delta\theta$ $\Delta\hat{r}$

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

151	CMS_httbar_ll_MCstatBin24	
152	CMS_httbar_mujets_MCstatBin42	
153	CMS_httbar_ll_MCstatBin107	
154	CMS_httbar_ejets_MCstatBin125	
155	CMS_httbar_ll_MCstatBin11	
156	CMS_httbar_mujets_MCstatBin9	
157	CMS_httbar_ejets_MCstatBin25	
158	CMS_httbar_mujets_MCstatBin103	
159	CMS_httbar_ejets_MCstatBin112	
160	CMS_httbar_mujets_MCstatBin52	
161	CMS_httbar_mujets_MCstatBin62	
162	CMS_httbar_mujets_MCstatBin96	
163	CMS_httbar_mujets_MCstatBin109	
164	CMS_httbar_mujets_MCstatBin40	
165	CMS_httbar_ejets_MCstatBin79	
166	CMS_httbar_mujets_MCstatBin41	
167	CMS_httbar_ejets_MCstatBin33	
168	CMS_httbar_mujets_MCstatBin84	
169	CMS_httbar_ll_MCstatBin31	
170	CMS_httbar_ejets_MCstatBin20	
171	CMS_httbar_mujets_MCstatBin115	
172	CMS_httbar_mujets_MCstatBin118	
173	CMS_httbar_ejets_MCstatBin102	
174	CMS_httbar_mujets_MCstatBin51	
175	CMS_httbar_ejets_MCstatBin19	
176	CMS_httbar_mujets_MCstatBin37	
177	CMS_httbar_mujets_MCstatBin60	
178	CMS_httbar_mujets_MCstatBin1	
179	CMS_httbar_ejets_MCstatBin122	
180	CMS_httbar_ll_MCstatBin108	

−2   −1   0   1   2

$(\hat{\theta}-\theta_0)/\Delta\theta$

−0.01   0   0.01

$\Delta\hat{r}$

Pull   ■ +1σ Impact   ■ -1σ Impact

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

181	CMS_httbar_ejets_MCstatBin95	
182	CMS_httbar_ejets_MCstatBin77	
183	CMS_httbar_mujets_MCstatBin119	
184	CMS_scale_j_13TeV_RelativeStatFSR	
185	CMS_httbar_mujets_MCstatBin13	
186	CMS_httbar_ll_MCstatBin12	
187	CMS_httbar_ejets_MCstatBin17	
188	CMS_httbar_mujets_MCstatBin78	
189	CMS_scale_j_13TeV_PileUpPtRef	
190	CMS_httbar_ejets_MCstatBin10	
191	CMS_httbar_ejets_MCstatBin90	
192	CMS_httbar_ejets_MCstatBin104	
193	CMS_httbar_ll_MCstatBin120	
194	CMS_httbar_ejets_MCstatBin94	
195	CMS_httbar_mujets_MCstatBin81	
196	CMS_httbar_ejets_MCstatBin13	
197	CMS_httbar_ejets_MCstatBin73	
198	CMS_httbar_mujets_MCstatBin29	
199	CMS_httbar_ejets_MCstatBin91	
200	CMS_httbar_mujets_MCstatBin5	
201	CMS_httbar_ll_MCstatBin34	
202	CMS_httbar_ejets_MCstatBin26	
203	CMS_httbar_ejets_MCstatBin45	
204	CMS_httbar_ejets_MCstatBin100	
205	CMS_httbar_mujets_MCstatBin73	
206	CMS_httbar_ejets_MCstatBin34	
207	CMS_httbar_ejets_MCstatBin96	
208	CMS_httbar_ll_MCstatBin14	
209	CMS_httbar_ejets_MCstatBin88	
210	CMS_httbar_mujets_MCstatBin112	

$(\hat{\theta}-\theta_0)/\Delta\theta$

$\Delta\hat{r}$

— Pull   ■ +1σ Impact   ■ -1σ Impact

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

211	CMS_httbar_ejets_MCstatBin92	
212	CMS_httbar_mujets_MCstatBin121	
213	CMS_httbar_ejets_MCstatBin23	
214	CMS_httbar_ll_MCstatBin29	
215	CMS_scale_j_13TeV_RelativeStatEC	
216	CMS_httbar_ejets_MCstatBin62	
217	CMS_httbar_mujets_MCstatBin111	
218	CMS_httbar_WNorm_13TeV	
219	CMS_httbar_ll_MCstatBin113	
220	CMS_httbar_ll_MCstatBin96	
221	CMS_httbar_ejets_MCstatBin59	
222	CMS_httbar_mujets_MCstatBin17	
223	CMS_httbar_ejets_MCstatBin109	
224	CMS_httbar_ejets_MCstatBin50	
225	CMS_httbar_ejets_MCstatBin113	
226	CMS_httbar_mujets_MCstatBin30	
227	CMS_httbar_ejets_MCstatBin99	
228	CMS_httbar_ejets_MCstatBin37	
229	CMS_httbar_ejets_MCstatBin64	
230	CMS_httbar_mujets_MCstatBin83	
231	CMS_httbar_ejets_MCstatBin93	
232	CMS_httbar_mujets_MCstatBin76	
233	CMS_httbar_ejets_MCstatBin56	
234	CMS_httbar_mujets_MCstatBin2	
235	CMS_scale_j_13TeV_RelativePtEC1	
236	CMS_httbar_ejets_MCstatBin66	
237	CMS_httbar_ll_MCstatBin26	
238	CMS_httbar_mujets_MCstatBin91	
239	CMS_httbar_ejets_MCstatBin30	
240	CMS_httbar_mujets_MCstatBin77	

$(\hat{\theta}-\theta_0)/\Delta\theta$

$\Delta\hat{r}$

— Pull ■ +1σ Impact ■ -1σ Impact

CMS *Internal* $\hat{r} = 1 \pm 0.565$

241	CMS_httbar_ll_MCstatBin51
242	CMS_httbar_ejets_MCstatBin101
243	CMS_httbar_ejets_MCstatBin72
244	CMS_httbar_ejets_MCstatBin31
245	CMS_httbar_ejets_MCstatBin2
246	CMS_httbar_mujets_MCstatBin82
247	CMS_httbar_ll_MCstatBin35
248	CMS_httbar_ejets_MCstatBin24
249	CMS_httbar_mujets_MCstatBin95
250	CMS_httbar_ejets_MCstatBin123
251	CMS_httbar_ll_MCstatBin48
252	CMS_httbar_ejets_MCstatBin49
253	CMS_httbar_ejets_MCstatBin68
254	CMS_httbar_mujets_MCstatBin105
255	CMS_eff_trigger_m
256	CMS_httbar_ll_MCstatBin32
257	CMS_httbar_ejets_MCstatBin89
258	CMS_httbar_ll_MCstatBin82
259	CMS_httbar_ejets_MCstatBin118
260	CMS_httbar_mujets_MCstatBin117
261	CMS_httbar_ll_MCstatBin75
262	CMS_httbar_ejets_MCstatBin15
263	CMS_httbar_ll_MCstatBin42
264	CMS_httbar_mujets_MCstatBin4
265	CMS_httbar_ll_MCstatBin55
266	CMS_httbar_ll_MCstatBin81
267	CMS_httbar_mujets_MCstatBin39
268	CMS_httbar_ll_MCstatBin40
269	CMS_httbar_ll_MCstatBin16
270	CMS_httbar_mujets_MCstatBin24

$(\hat{\theta}-\theta_0)/\Delta\theta$ $\Delta\hat{r}$

— Pull   ▊ +1σ Impact   ▊ -1σ Impact

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

301	CMS_httbar_ll_MCstatBin46	
302	CMS_httbar_mujets_MCstatBin63	
303	CMS_httbar_mujets_MCstatBin49	
304	CMS_httbar_ejets_MCstatBin83	
305	CMS_httbar_ll_MCstatBin44	
306	CMS_httbar_mujets_MCstatBin116	
307	CMS_httbar_ll_MCstatBin65	
308	CMS_httbar_mujets_MCstatBin113	
309	CMS_httbar_ll_MCstatBin88	
310	CMS_httbar_ll_MCstatBin30	
311	CMS_httbar_mujets_MCstatBin98	
312	CMS_httbar_ll_MCstatBin43	
313	CMS_httbar_ejets_MCstatBin61	
314	CMS_httbar_ll_MCstatBin71	
315	CMS_httbar_mujets_MCstatBin110	
316	CMS_httbar_ll_MCstatBin27	
317	CMS_httbar_tWChannelNorm_13TeV	
318	CMS_httbar_ll_MCstatBin53	
319	CMS_httbar_ll_MCstatBin21	
320	CMS_httbar_ll_MCstatBin20	
321	CMS_httbar_mujets_MCstatBin68	
322	CMS_scale_j_13TeV_PileUpPtBB	
323	CMS_httbar_ejets_MCstatBin48	
324	CMS_httbar_mujets_MCstatBin53	
325	CMS_httbar_ejets_MCstatBin116	
326	CMS_httbar_ll_MCstatBin66	
327	CMS_httbar_ll_MCstatBin17	
328	CMS_httbar_ll_MCstatBin38	
329	CMS_httbar_ejets_MCstatBin85	
330	CMS_eff_b_13TeV	

→ Pull ■ +1σ Impact ■ -1σ Impact

$(\hat{\theta}-\theta_0)/\Delta\theta$

$\Delta\hat{r}$

CMS *Internal* $\hat{r} = 1 \pm 0.565$

331	CMS_httbar_ll_MCstatBin112	
332	CMS_httbar_ll_MCstatBin83	
333	CMS_httbar_ejets_MCstatBin87	
334	CMS_httbar_ejets_MCstatBin78	
335	CMS_httbar_mujets_MCstatBin85	
336	CMS_httbar_ejets_MCstatBin106	
337	CMS_httbar_ejets_MCstatBin111	
338	CMS_httbar_ll_MCstatBin37	
339	CMS_httbar_ll_MCstatBin33	
340	CMS_httbar_ejets_MCstatBin40	
341	CMS_httbar_ejets_MCstatBin82	
342	CMS_httbar_mujets_MCstatBin123	
343	CMS_httbar_ll_MCstatBin111	
344	CMS_httbar_ejets_MCstatBin27	
345	CMS_httbar_ejets_MCstatBin124	
346	CMS_httbar_ejets_MCstatBin71	
347	CMS_httbar_ejets_MCstatBin65	
348	CMS_httbar_ejets_MCstatBin108	
349	CMS_httbar_ll_MCstatBin70	
350	CMS_httbar_ejets_MCstatBin36	
351	CMS_httbar_ll_MCstatBin68	
352	CMS_httbar_ejets_MCstatBin51	
353	CMS_httbar_mujets_MCstatBin71	
354	CMS_httbar_ll_MCstatBin86	
355	CMS_httbar_mujets_MCstatBin97	
356	CMS_httbar_ll_MCstatBin23	
357	CMS_httbar_ll_MCstatBin110	
358	CMS_httbar_mujets_MCstatBin88	
359	CMS_httbar_mujets_MCstatBin87	
360	CMS_httbar_ejets_MCstatBin97	

$(\hat{\theta} - \theta_0)/\Delta\theta$ $\Delta\hat{r}$

$\rightarrow$ Pull $\blacksquare$ +1σ Impact $\blacksquare$ -1σ Impact

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

		$(\hat{\theta}-\theta_0)/\Delta\theta$	$\Delta\hat{r}$
361	CMS_httbar_mujets_MCstatBin58		
362	CMS_httbar_ll_MCstatBin64		
363	CMS_httbar_ll_MCstatBin99		
364	CMS_httbar_ll_MCstatBin89		
365	CMS_httbar_mujets_MCstatBin79		
366	CMS_httbar_ll_MCstatBin56		
367	CMS_httbar_ejets_MCstatBin60		
368	CMS_httbar_ll_MCstatBin59		
369	CMS_httbar_ejets_MCstatBin74		
370	CMS_httbar_mujets_MCstatBin72		
371	CMS_httbar_ejets_MCstatBin105		
372	CMS_httbar_ll_MCstatBin115		
373	CMS_httbar_ll_MCstatBin60		
374	CMS_httbar_ll_MCstatBin119		
375	CMS_httbar_ll_MCstatBin54		
376	CMS_httbar_ll_MCstatBin41		
377	CMS_httbar_ejets_MCstatBin80		
378	CMS_httbar_ll_MCstatBin95		
379	CMS_httbar_ll_MCstatBin45		
380	CMS_httbar_mujets_MCstatBin74		
381	CMS_httbar_ll_MCstatBin69		
382	CMS_httbar_ll_MCstatBin58		
383	CMS_httbar_ll_MCstatBin57		
384	CMS_httbar_ejets_MCstatBin103		
385	CMS_httbar_ll_MCstatBin49		
386	CMS_httbar_ll_MCstatBin109		
387	CMS_httbar_mujets_MCstatBin122		
388	CMS_httbar_ejets_MCstatBin98		
389	CMS_httbar_ll_MCstatBin1		
390	CMS_httbar_ll_MCstatBin90		

→ Pull ■ +1σ Impact ■ -1σ Impact

CMS *Internal*

$\hat{r} = 1 \pm 0.565$

391	CMS_httbar_ll_MCstatBin117
392	CMS_eff_trigger_l
393	CMS_httbar_ll_MCstatBin19
394	CMS_httbar_mujets_MCstatBin34
395	CMS_httbar_ll_MCstatBin84
396	CMS_httbar_ll_MCstatBin15
397	CMS_httbar_ll_MCstatBin63
398	CMS_httbar_ll_MCstatBin18
399	CMS_httbar_ll_MCstatBin25
400	CMS_httbar_ll_MCstatBin39
401	CMS_httbar_ll_MCstatBin85
402	CMS_httbar_ll_MCstatBin91
403	CMS_httbar_TTVNorm_13TeV
404	CMS_httbar_ll_MCstatBin61
405	CMS_httbar_ejets_MCstatBin107
406	CMS_httbar_ll_MCstatBin118
407	CMS_httbar_ejets_MCstatBin121
408	CMS_httbar_ejets_MCstatBin52
409	CMS_eff_m
410	CMS_httbar_ll_MCstatBin87
411	CMS_httbar_ll_MCstatBin22
412	QCDscaleMERenorm_ggA-sgn
413	CMS_httbar_ll_MCstatBin62
414	CMS_httbar_VVNorm_13TeV
415	CMS_res_j_13TeV
416	CMS_scale_j_13TeV_AbsoluteMPFBias
417	CMS_httbar_sChannelNorm_13TeV
418	CMS_httbar_ll_MCstatBin114
419	CMS_httbar_ll_MCstatBin93
420	CMS_scale_j_13TeV_SinglePionECAL

$-2 \quad -1 \quad 0 \quad 1 \quad 2 \qquad -0.002 -0.001 \quad 0 \quad 0.001 \; 0.002$

$(\hat{\theta}-\theta_0)/\Delta\theta \qquad\qquad \Delta\hat{r}$

→ Pull ■ +1σ Impact ■ −1σ Impact

CMS *Internal* $\hat{r} = 1 \pm 0.565$

421 QCDscaleMEFactor_ggA-sgn

422 CMS_httbar_ll_MCstatBin92

$-2 \quad -1 \quad 0 \quad 1 \quad 2$ $\quad -0.2 \quad -0.1 \quad 0 \quad 0.1 \quad 0.2$ $\times 10$

$(\hat{\theta}-\theta_0)/\Delta\theta$ $\qquad\qquad\qquad \Delta\hat{r}$

→ Pull   ■ +1σ Impact   ■ -1σ Impact