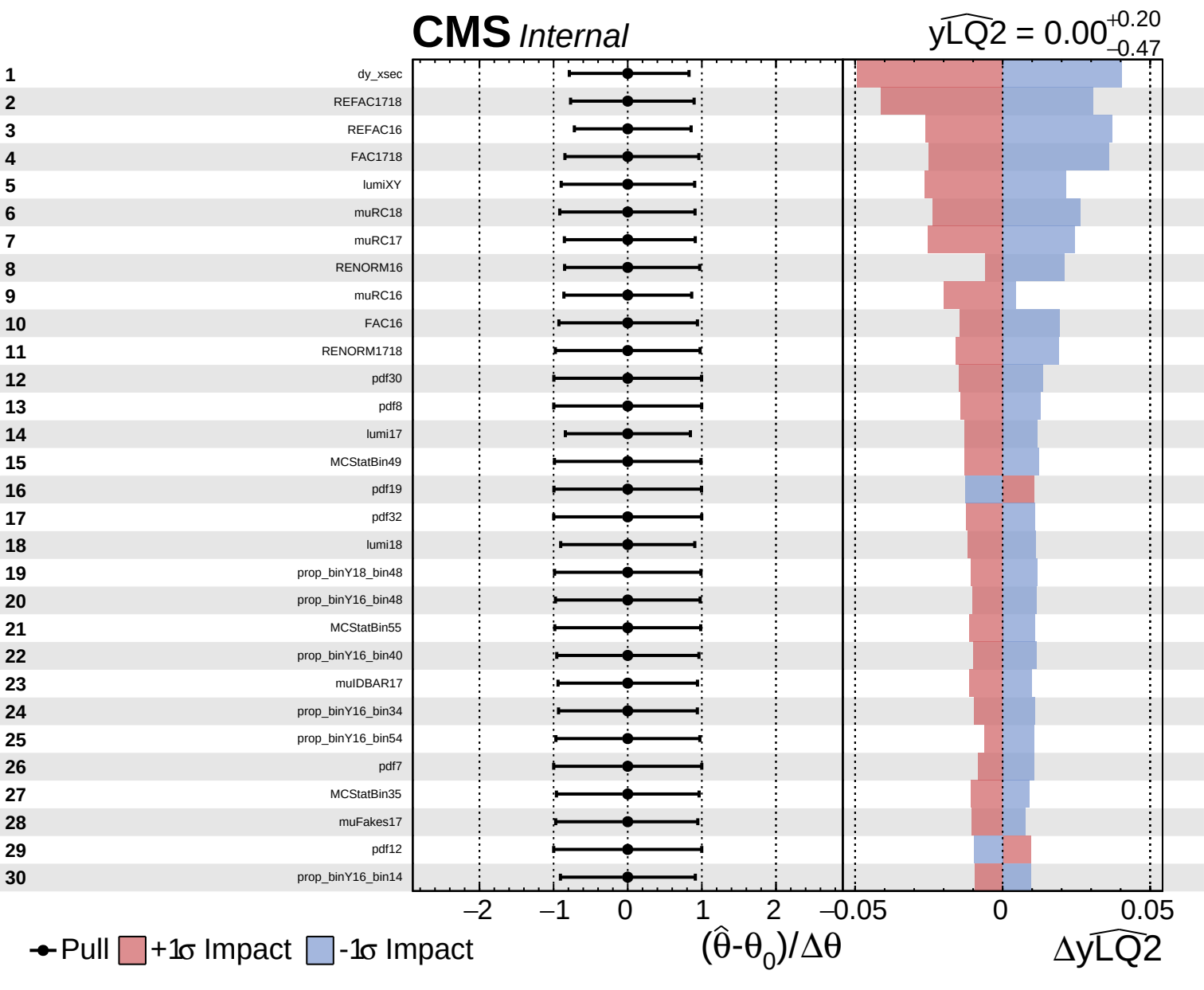
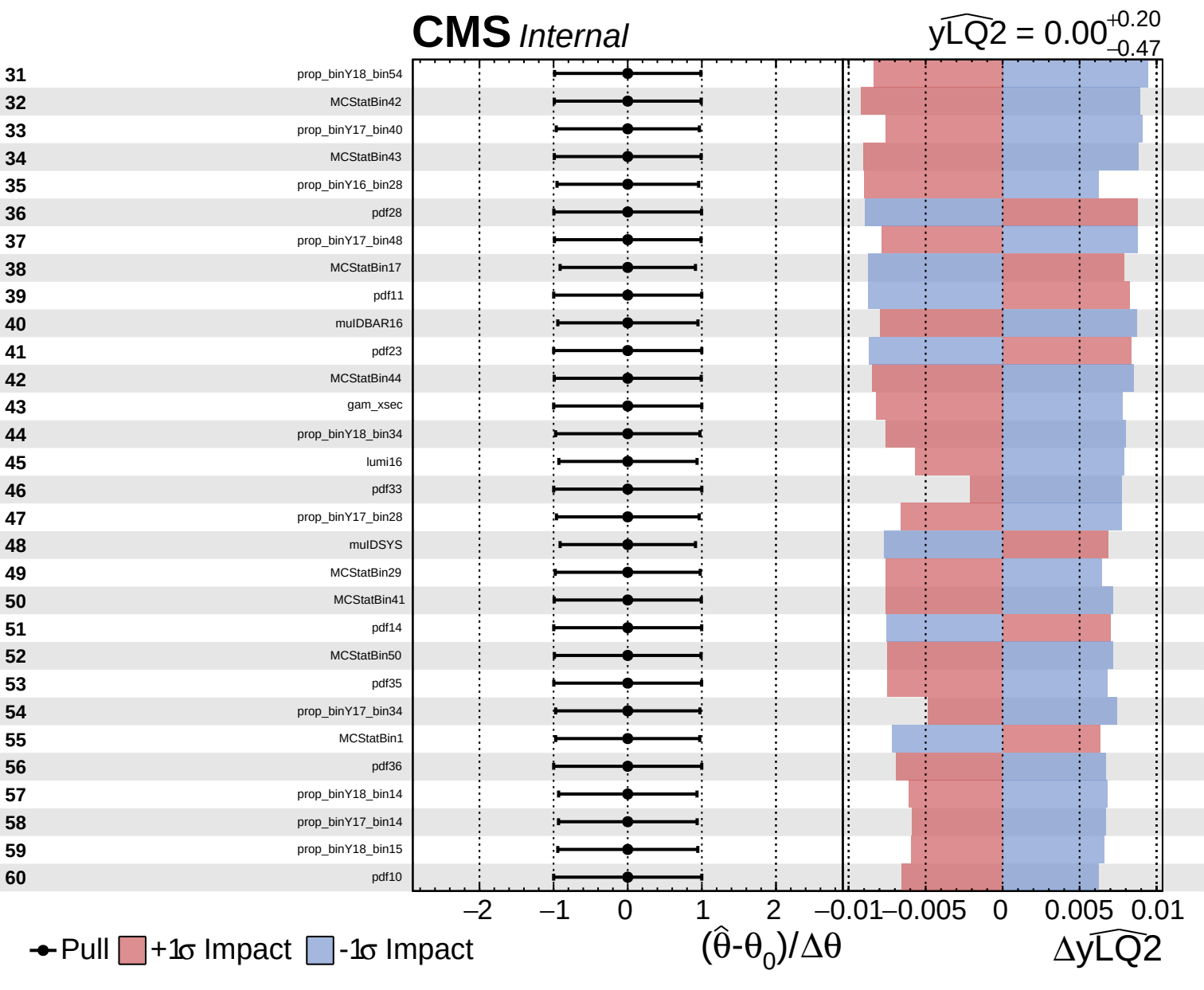
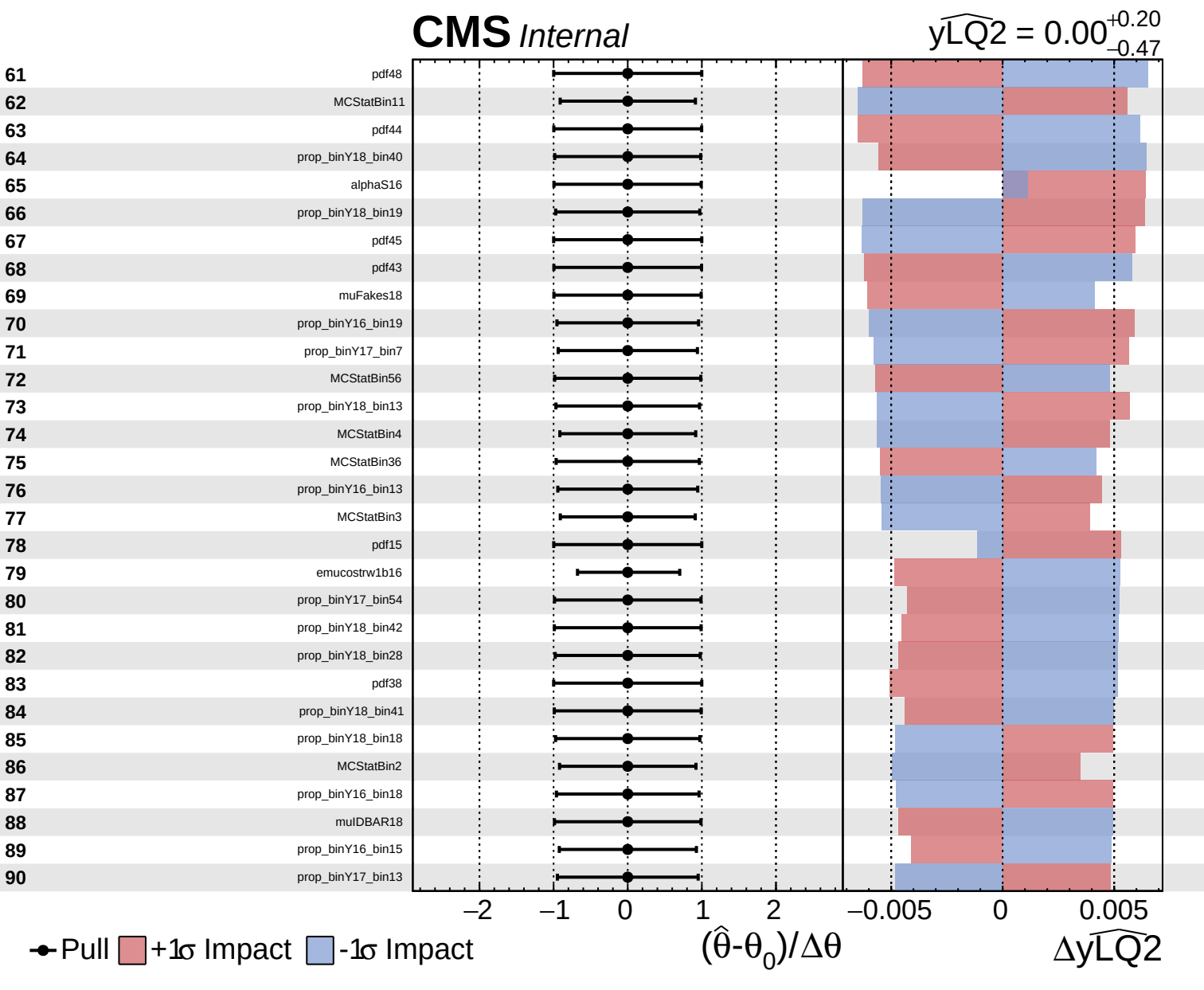
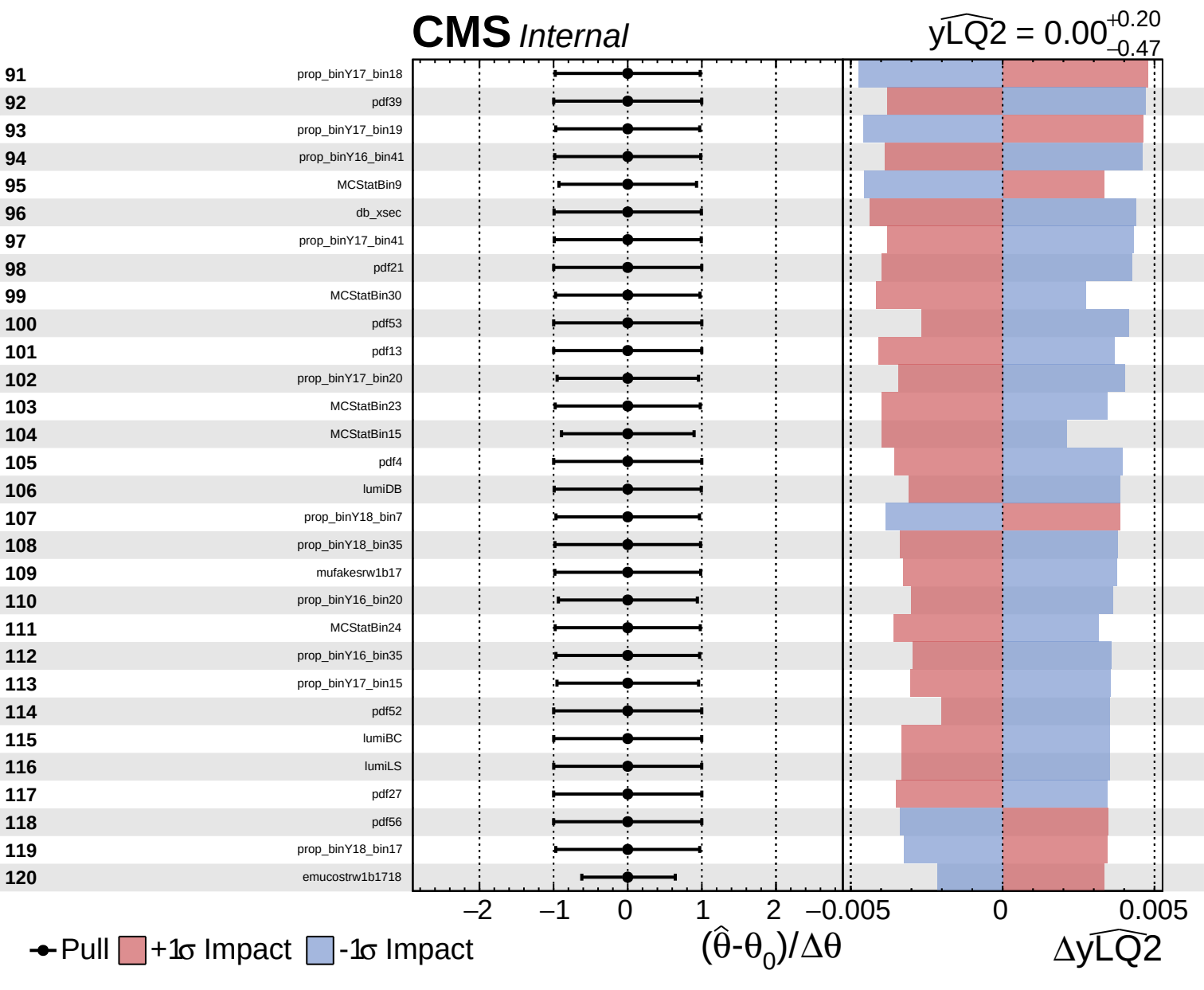
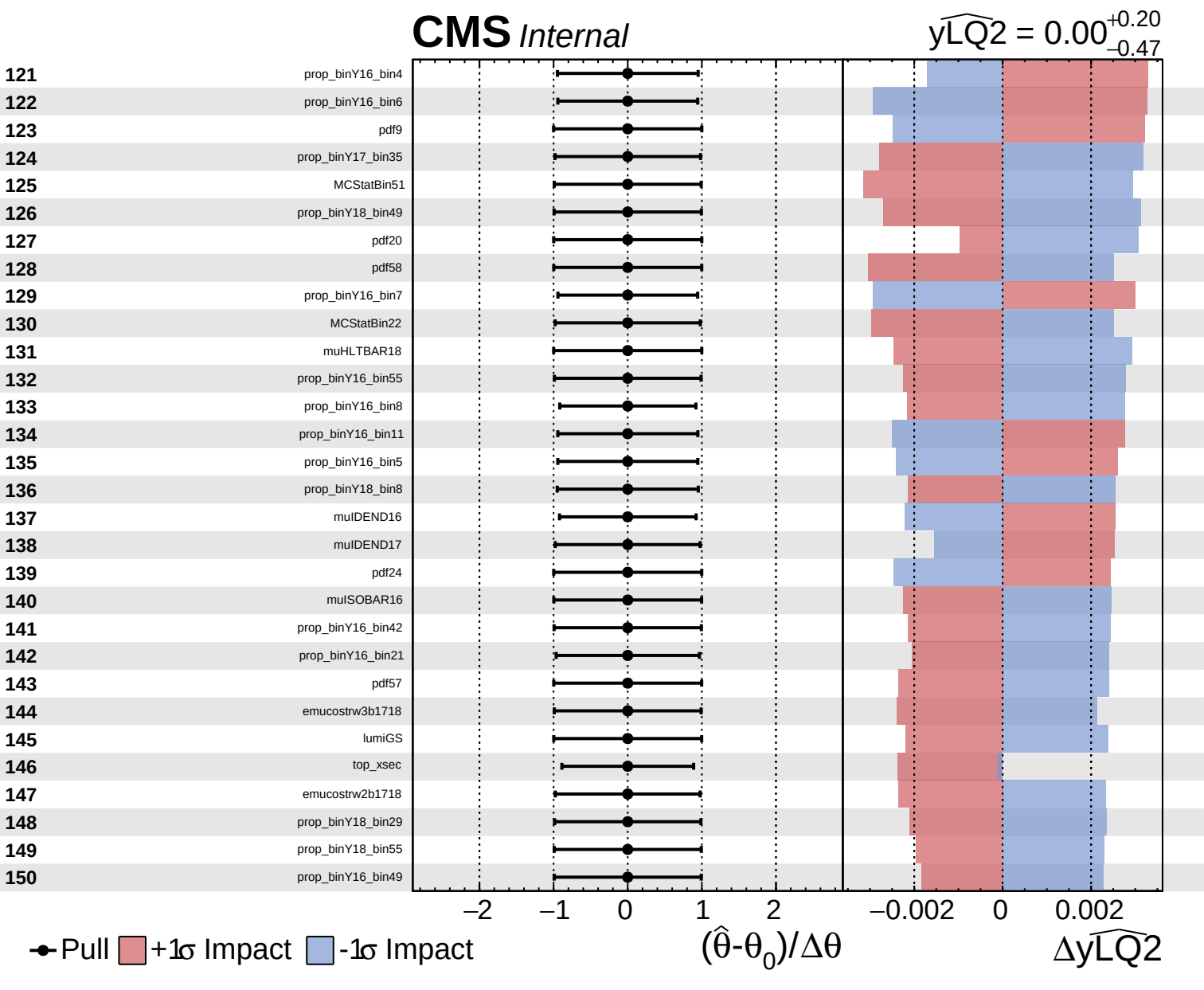
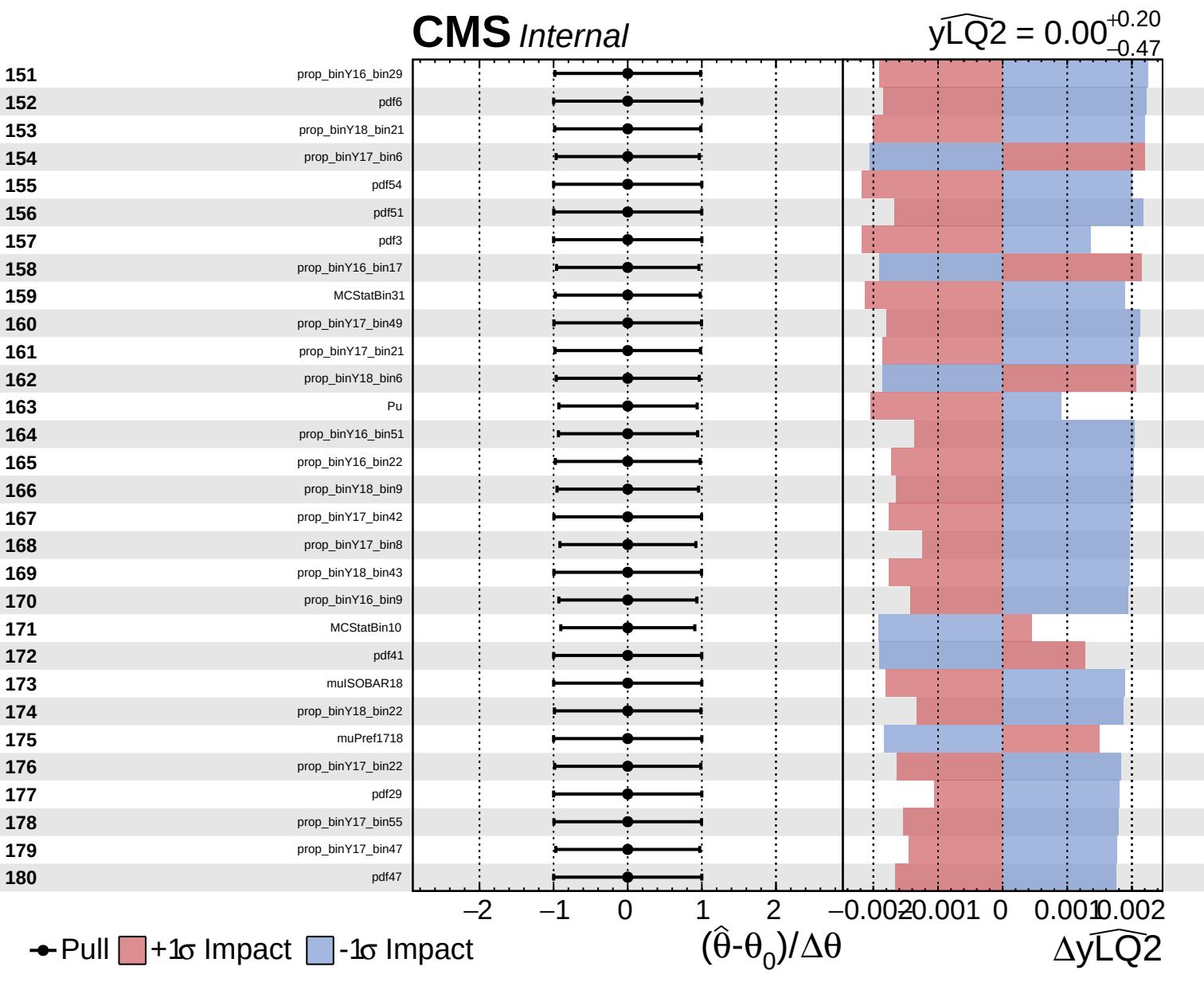

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.20}_{-0.47}$
1 dy_xsec
2 REFAC1718
3 REFAC16
4 FAC1718
5 lumiXY
6 muRC18
7 muRC17
8 RENORM16
9 muRC16
10 FAC16
11 RENORM1718
12 pdf30
13 pdf8
14 lumi17
15 MCStatBin49
16 pdf19
17 pdf32
18 lumi18
19 prop_binY18_bin48
20 prop_binY16_bin48
21 MCStatBin55
22 prop_binY16_bin40
23 muIDBAR17
24 prop_binY16_bin34
25 prop_binY16_bin54
26 pdf7
27 MCStatBin35
28 muFakes17
29 pdf12
30 prop_binY16_bin14
−2 −1 0 1 2
−0.05 0 0.05
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

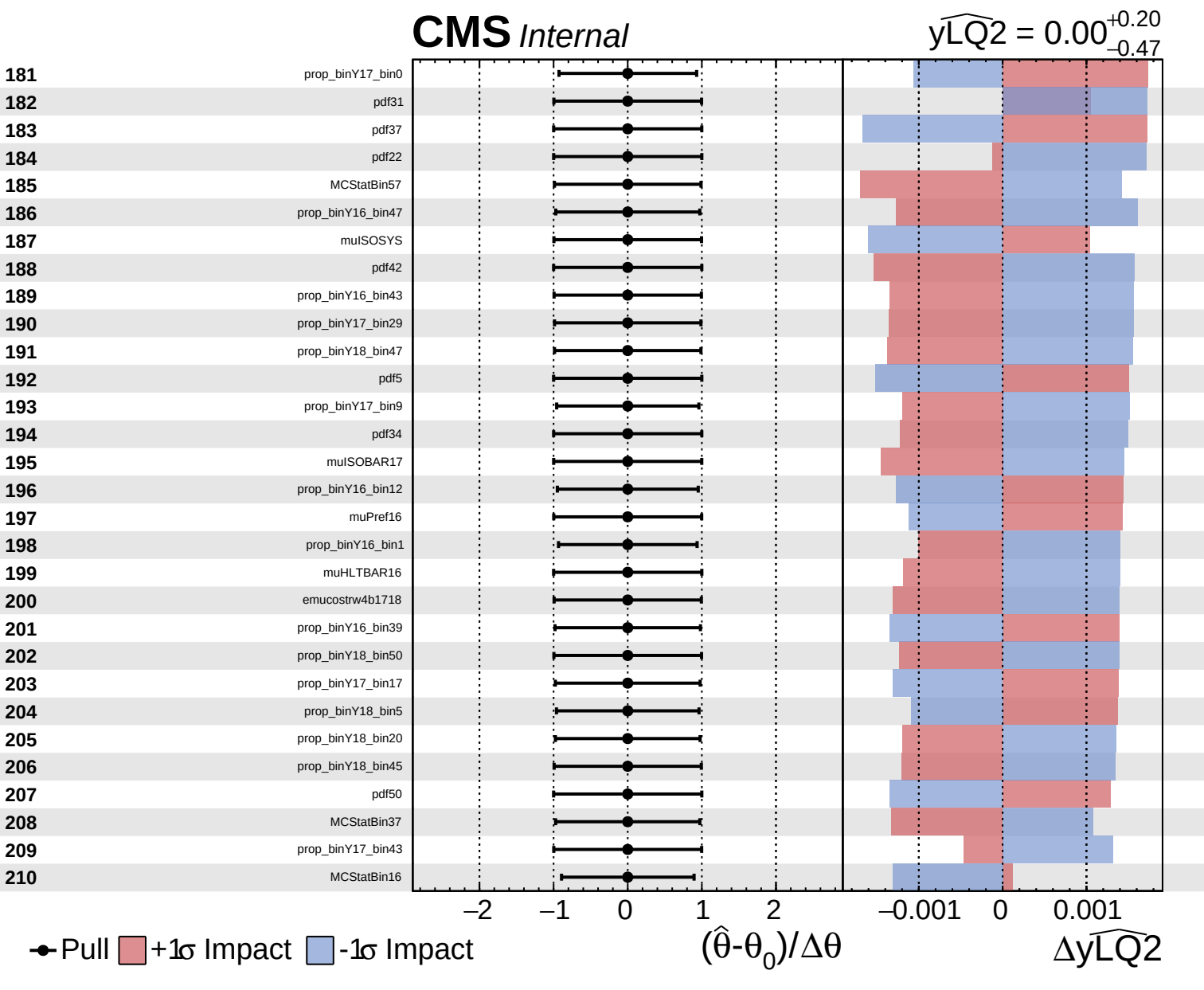

CMS Internal
ŷLQ2 = 0.00 +0.20 −0.47
31 prop_binY18_bin54
32 MCStatBin42
33 prop_binY17_bin40
34 MCStatBin43
35 prop_binY16_bin28
36 pdf28
37 prop_binY17_bin48
38 MCStatBin17
39 pdf11
40 muIDBAR16
41 pdf23
42 MCStatBin44
43 gam_xsec
44 prop_binY18_bin34
45 lumi16
46 pdf33
47 prop_binY17_bin28
48 muIDSYS
49 MCStatBin29
50 MCStatBin41
51 pdf14
52 MCStatBin50
53 pdf35
54 prop_binY17_bin34
55 MCStatBin1
56 pdf36
57 prop_binY18_bin14
58 prop_binY17_bin14
59 prop_binY18_bin15
60 pdf10
−2 −1 0 1 2
−0.01 −0.005 0 0.005 0.01
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

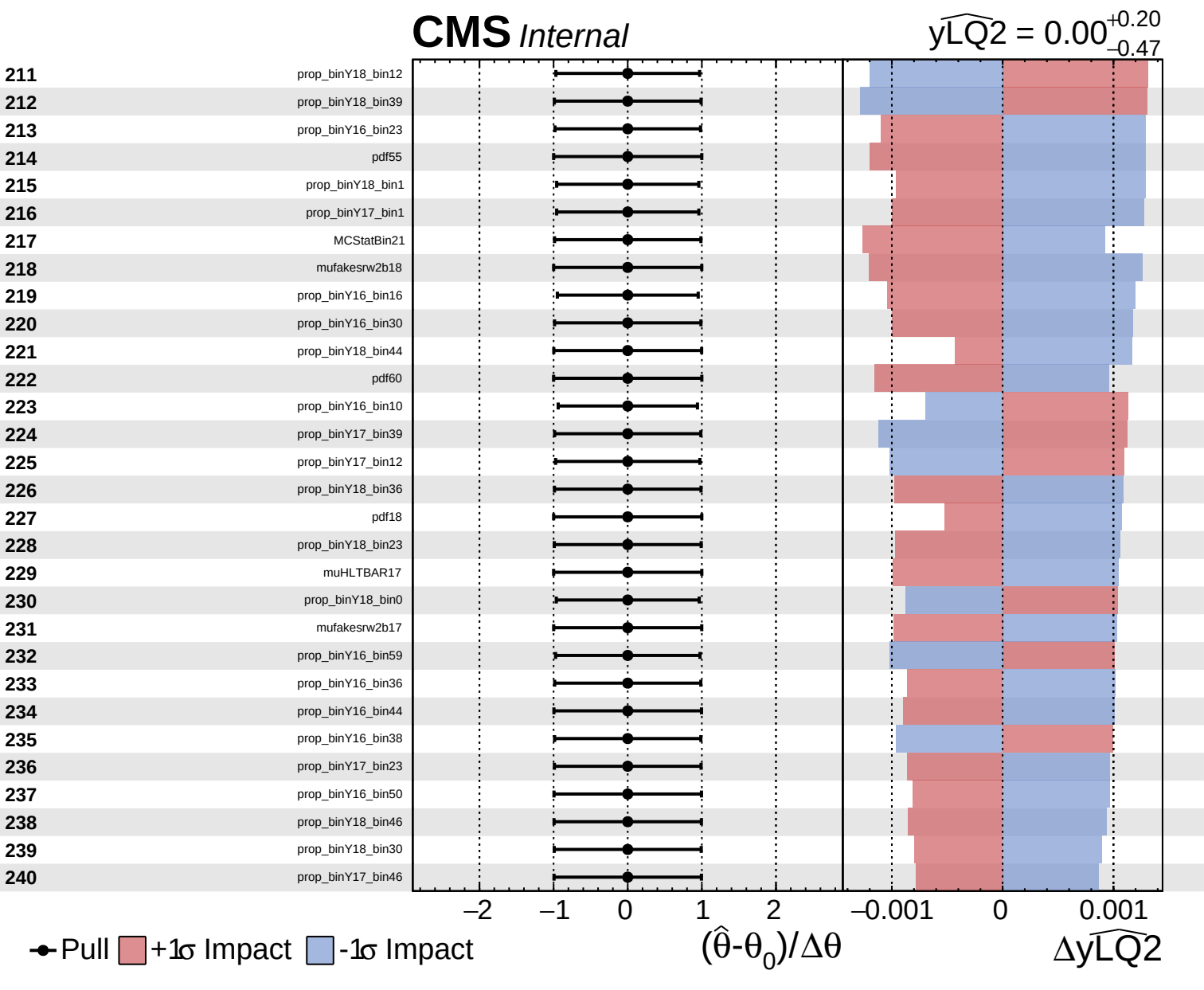

CMS Internal
ŷLQ2 = 0.00 +0.20 −0.47
61 pdf48
62 MCStatBin11
63 pdf44
64 prop_binY18_bin40
65 alphaS16
66 prop_binY18_bin19
67 pdf45
68 pdf43
69 muFakes18
70 prop_binY16_bin19
71 prop_binY17_bin7
72 MCStatBin56
73 prop_binY18_bin13
74 MCStatBin4
75 MCStatBin36
76 prop_binY16_bin13
77 MCStatBin3
78 pdf15
79 emucostrw1b16
80 prop_binY17_bin54
81 prop_binY18_bin42
82 prop_binY18_bin28
83 pdf38
84 prop_binY18_bin41
85 prop_binY18_bin18
86 MCStatBin2
87 prop_binY16_bin18
88 muIDBAR18
89 prop_binY16_bin15
90 prop_binY17_bin13
−2 −1 0 1 2
−0.005 0 0.005
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

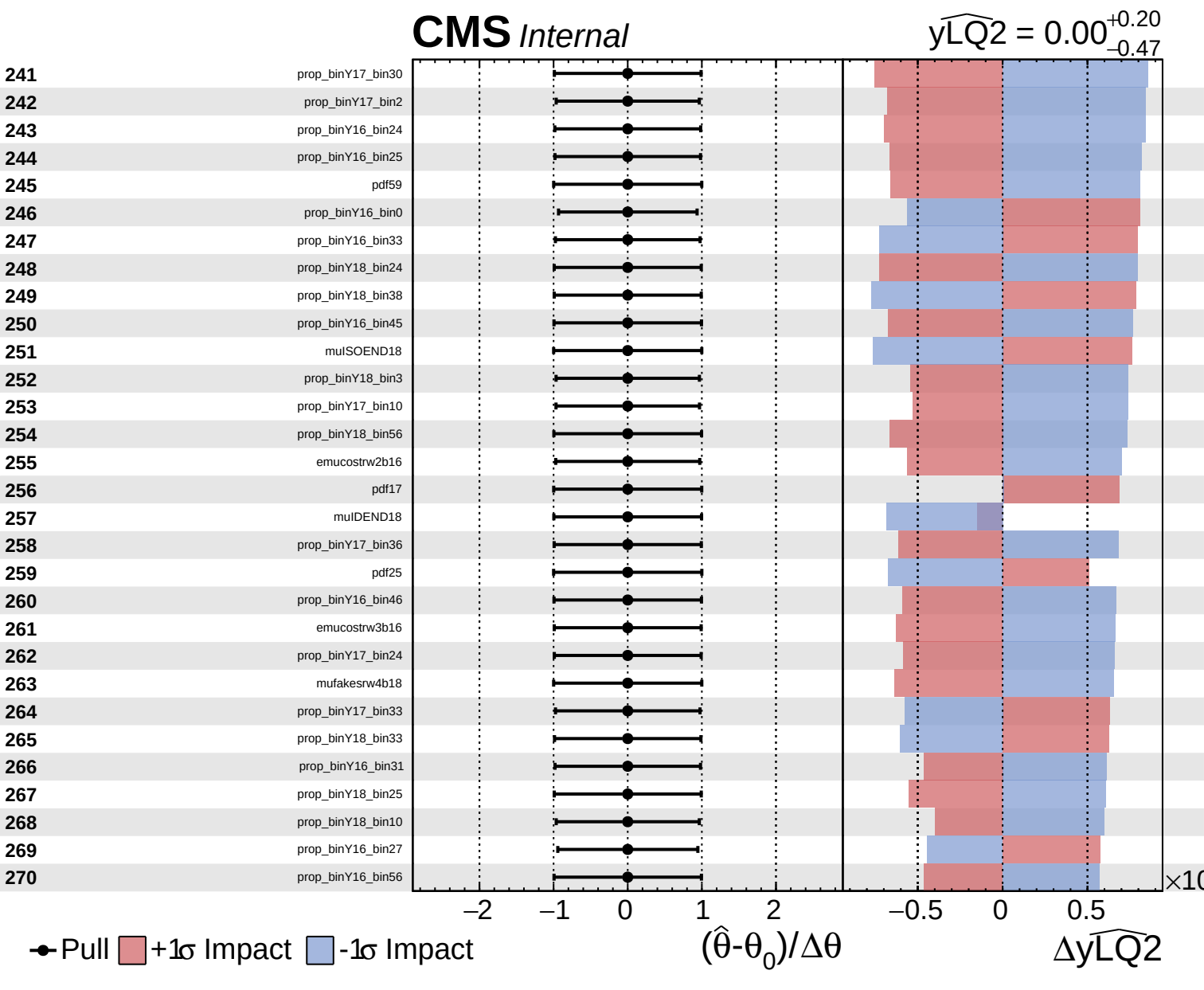

CMS Internal
ŷLQ2 = 0.00 +0.20 −0.47
91 prop_binY17_bin18
92 pdf39
93 prop_binY17_bin19
94 prop_binY16_bin41
95 MCStatBin9
96 db_xsec
97 prop_binY17_bin41
98 pdf21
99 MCStatBin30
100 pdf53
101 pdf13
102 prop_binY17_bin20
103 MCStatBin23
104 MCStatBin15
105 pdf4
106 lumiDB
107 prop_binY18_bin7
108 prop_binY18_bin35
109 mufakesrw1b17
110 prop_binY16_bin20
111 MCStatBin24
112 prop_binY16_bin35
113 prop_binY17_bin15
114 pdf52
115 lumiBC
116 lumiLS
117 pdf27
118 pdf56
119 prop_binY18_bin17
120 emucostrw1b1718
−2 −1 0 1 2
−0.005 0 0.005
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

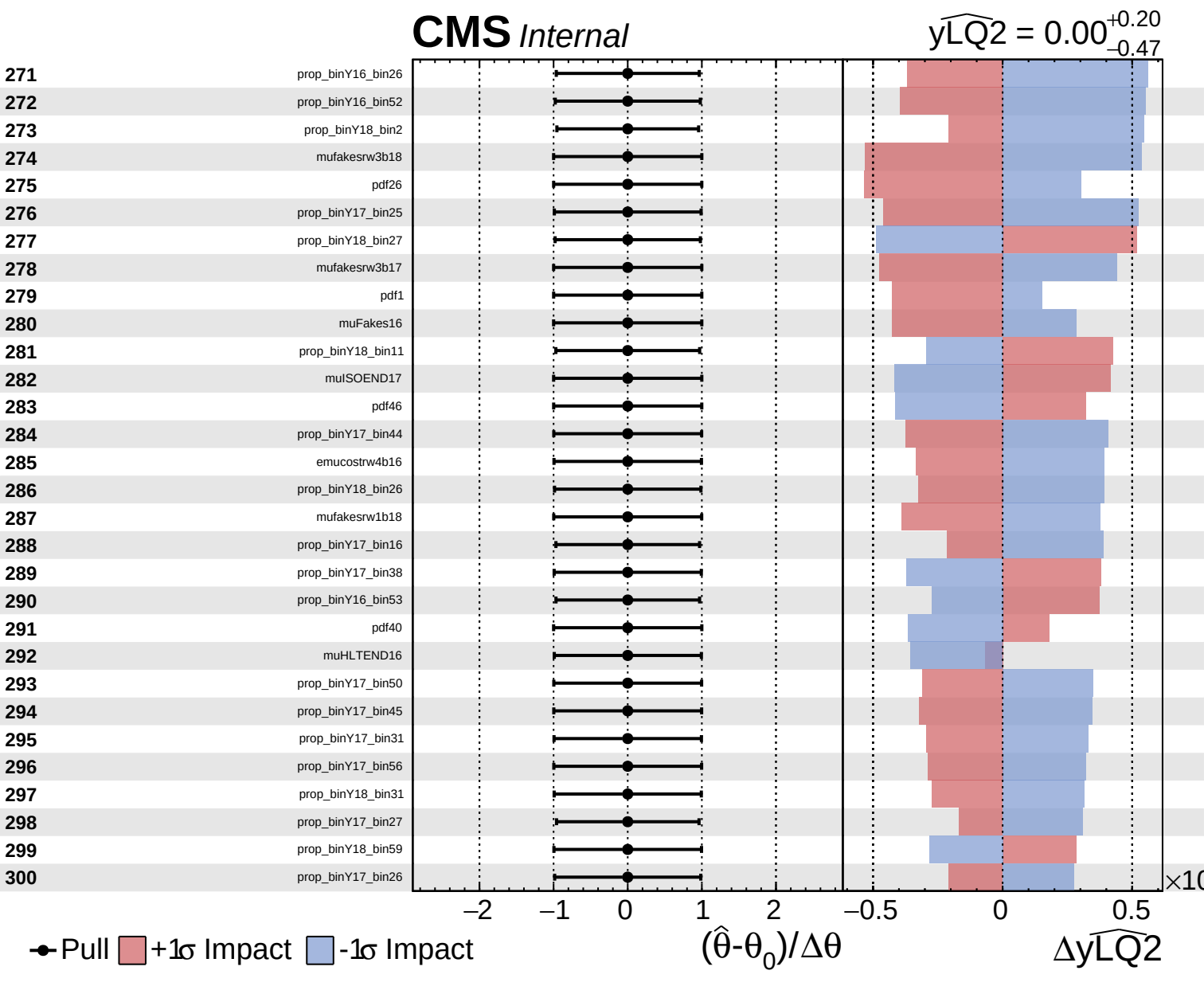

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.20}_{-0.47}$
121 prop_binY16_bin4
122 prop_binY16_bin6
123 pdf9
124 prop_binY17_bin35
125 MCStatBin51
126 prop_binY18_bin49
127 pdf20
128 pdf58
129 prop_binY16_bin7
130 MCStatBin22
131 muHLTBAR18
132 prop_binY16_bin55
133 prop_binY16_bin8
134 prop_binY16_bin11
135 prop_binY16_bin5
136 prop_binY18_bin8
137 muIDEND16
138 muIDEND17
139 pdf24
140 muISOBAR16
141 prop_binY16_bin42
142 prop_binY16_bin21
143 pdf57
144 emucostrw3b1718
145 lumiGS
146 top_xsec
147 emucostrw2b1718
148 prop_binY18_bin29
149 prop_binY18_bin55
150 prop_binY16_bin49
−2
−1
0
1
2
−0.002
0
0.002
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

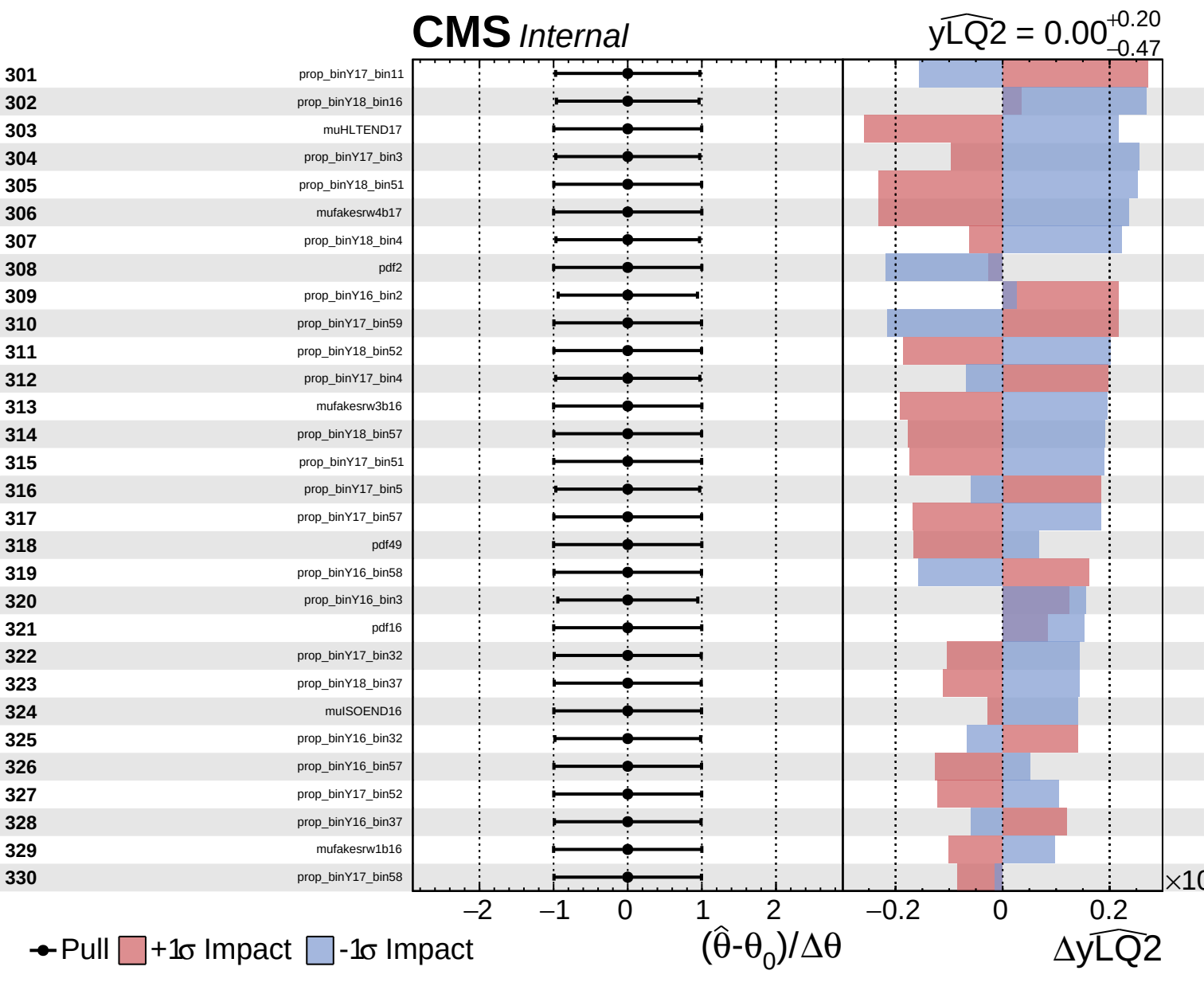

CMS Internal
ŷLQ2 = 0.00 +0.20 −0.47
151 prop_binY16_bin29
152 pdf6
153 prop_binY18_bin21
154 prop_binY17_bin6
155 pdf54
156 pdf51
157 pdf3
158 prop_binY16_bin17
159 MCStatBin31
160 prop_binY17_bin49
161 prop_binY17_bin21
162 prop_binY18_bin6
163 Pu
164 prop_binY16_bin51
165 prop_binY16_bin22
166 prop_binY18_bin9
167 prop_binY17_bin42
168 prop_binY17_bin8
169 prop_binY18_bin43
170 prop_binY16_bin9
171 MCStatBin10
172 pdf41
173 muISOBAR18
174 prop_binY18_bin22
175 muPref1718
176 prop_binY17_bin22
177 pdf29
178 prop_binY17_bin55
179 prop_binY17_bin47
180 pdf47
−2 −1 0 1 2
−0.002 −0.001 0 0.001 0.002
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

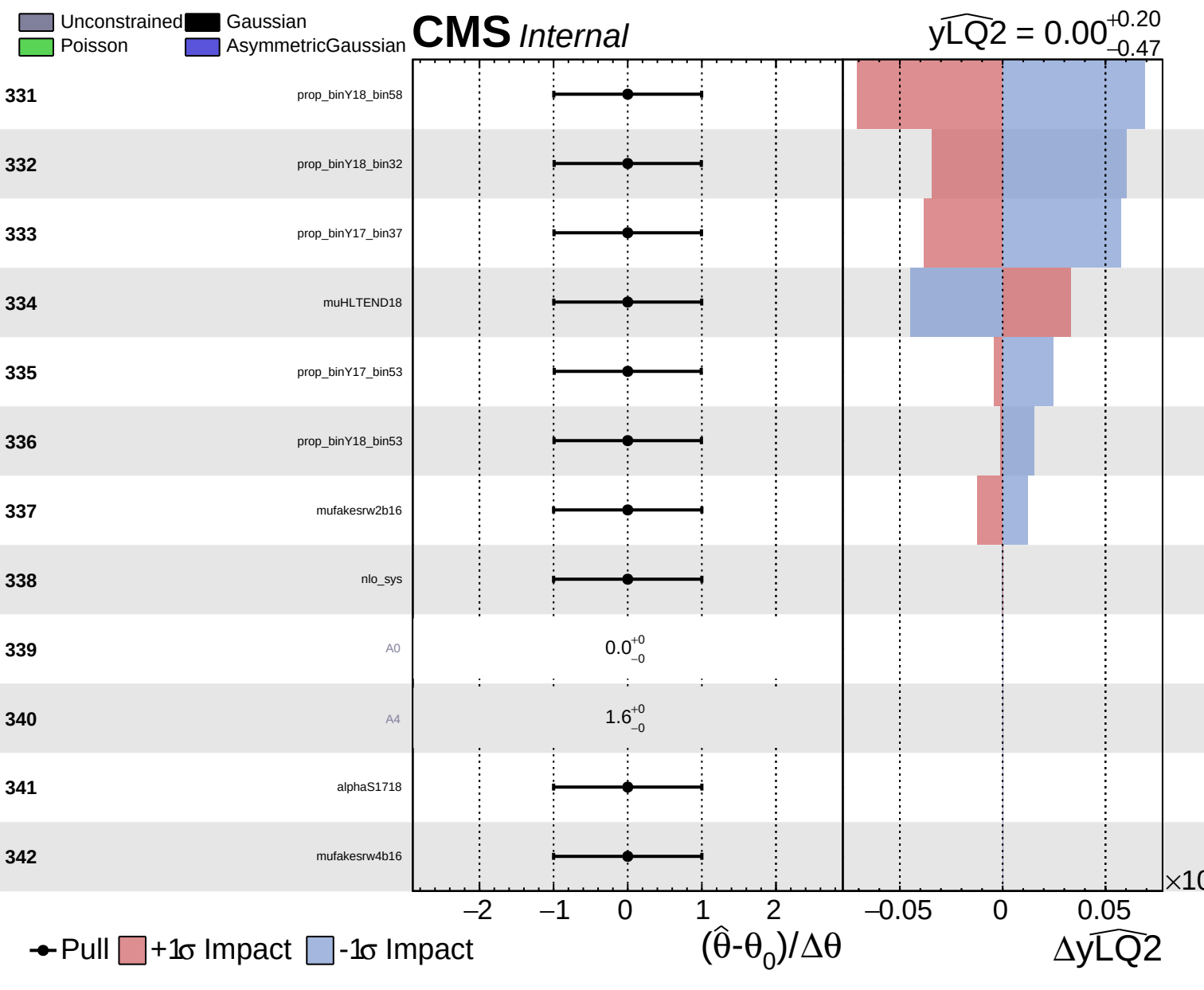

CMS Internal
yLQ2 = 0.00 +0.20 −0.47
181 prop_binY17_bin0
182 pdf31
183 pdf37
184 pdf22
185 MCStatBin57
186 prop_binY16_bin47
187 muISOSYS
188 pdf42
189 prop_binY16_bin43
190 prop_binY17_bin29
191 prop_binY18_bin47
192 pdf5
193 prop_binY17_bin9
194 pdf34
195 muISOBAR17
196 prop_binY16_bin12
197 muPref16
198 prop_binY16_bin1
199 muHLTBAR16
200 emucostrw4b1718
201 prop_binY16_bin39
202 prop_binY18_bin50
203 prop_binY17_bin17
204 prop_binY18_bin5
205 prop_binY18_bin20
206 prop_binY18_bin45
207 pdf50
208 MCStatBin37
209 prop_binY17_bin43
210 MCStatBin16
−2 −1 0 1 2
−0.001 0 0.001
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2


CMS Internal
$\widehat{yLQ2} = 0.00^{+0.20}_{-0.47}$
211 prop_binY18_bin12
212 prop_binY18_bin39
213 prop_binY16_bin23
214 pdf55
215 prop_binY18_bin1
216 prop_binY17_bin1
217 MCStatBin21
218 mufakesrw2b18
219 prop_binY16_bin16
220 prop_binY16_bin30
221 prop_binY18_bin44
222 pdf60
223 prop_binY16_bin10
224 prop_binY17_bin39
225 prop_binY17_bin12
226 prop_binY18_bin36
227 pdf18
228 prop_binY18_bin23
229 muHLTBAR17
230 prop_binY18_bin0
231 mufakesrw2b17
232 prop_binY16_bin59
233 prop_binY16_bin36
234 prop_binY16_bin44
235 prop_binY16_bin38
236 prop_binY17_bin23
237 prop_binY16_bin50
238 prop_binY18_bin46
239 prop_binY18_bin30
240 prop_binY17_bin46
−2 −1 0 1 2
−0.001 0 0.001
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
ŷLQ2 = 0.00 +0.20 −0.47
241 prop_binY17_bin30
242 prop_binY17_bin2
243 prop_binY16_bin24
244 prop_binY16_bin25
245 pdf59
246 prop_binY16_bin0
247 prop_binY16_bin33
248 prop_binY18_bin24
249 prop_binY18_bin38
250 prop_binY16_bin45
251 muISOEND18
252 prop_binY18_bin3
253 prop_binY17_bin10
254 prop_binY18_bin56
255 emucostrw2b16
256 pdf17
257 muIDEND18
258 prop_binY17_bin36
259 pdf25
260 prop_binY16_bin46
261 emucostrw3b16
262 prop_binY17_bin24
263 mufakesrw4b18
264 prop_binY17_bin33
265 prop_binY18_bin33
266 prop_binY16_bin31
267 prop_binY18_bin25
268 prop_binY18_bin10
269 prop_binY16_bin27
270 prop_binY16_bin56
×10
−2 −1 0 1 2
−0.5 0 0.5
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


CMS Internal
$\widehat{yLQ2} = 0.00^{+0.20}_{-0.47}$
271 prop_binY16_bin26
272 prop_binY16_bin52
273 prop_binY18_bin2
274 mufakesrw3b18
275 pdf26
276 prop_binY17_bin25
277 prop_binY18_bin27
278 mufakesrw3b17
279 pdf1
280 muFakes16
281 prop_binY18_bin11
282 muISOEND17
283 pdf46
284 prop_binY17_bin44
285 emucostrw4b16
286 prop_binY18_bin26
287 mufakesrw1b18
288 prop_binY17_bin16
289 prop_binY17_bin38
290 prop_binY16_bin53
291 pdf40
292 muHLTEND16
293 prop_binY17_bin50
294 prop_binY17_bin45
295 prop_binY17_bin31
296 prop_binY17_bin56
297 prop_binY18_bin31
298 prop_binY17_bin27
299 prop_binY18_bin59
300 prop_binY17_bin26
×10
−2 −1 0 1 2
−0.5 0 0.5
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
$\widehat{yLQ2} = 0.00^{+0.20}_{-0.47}$
301 prop_binY17_bin11
302 prop_binY18_bin16
303 muHLTEND17
304 prop_binY17_bin3
305 prop_binY18_bin51
306 mufakesrw4b17
307 prop_binY18_bin4
308 pdf2
309 prop_binY16_bin2
310 prop_binY17_bin59
311 prop_binY18_bin52
312 prop_binY17_bin4
313 mufakesrw3b16
314 prop_binY18_bin57
315 prop_binY17_bin51
316 prop_binY17_bin5
317 prop_binY17_bin57
318 pdf49
319 prop_binY16_bin58
320 prop_binY16_bin3
321 pdf16
322 prop_binY17_bin32
323 prop_binY18_bin37
324 muISOEND16
325 prop_binY16_bin32
326 prop_binY16_bin57
327 prop_binY17_bin52
328 prop_binY16_bin37
329 mufakesrw1b16
330 prop_binY17_bin58
×10
−2 −1 0 1 2
−0.2 0 0.2
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 0.00 +0.20 −0.47
331 prop_binY18_bin58
332 prop_binY18_bin32
333 prop_binY17_bin37
334 muHLTEND18
335 prop_binY17_bin53
336 prop_binY18_bin53
337 mufakesrw2b16
338 nlo_sys
339 A0
0.0 +0 −0
340 A4
1.6 +0 −0
341 alphaS1718
342 mufakesrw4b16
×10
−2 −1 0 1 2
−0.05 0 0.05
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2