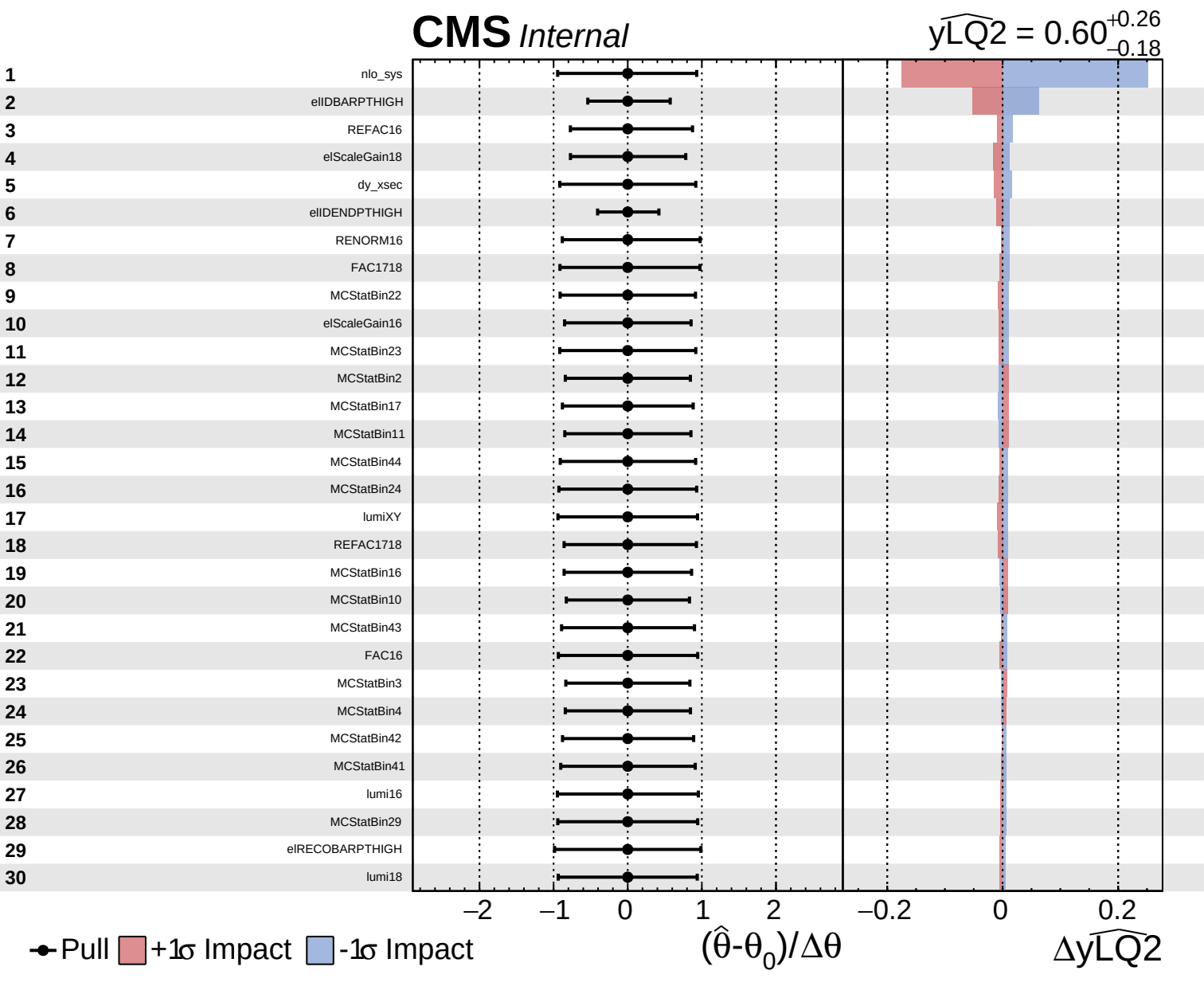
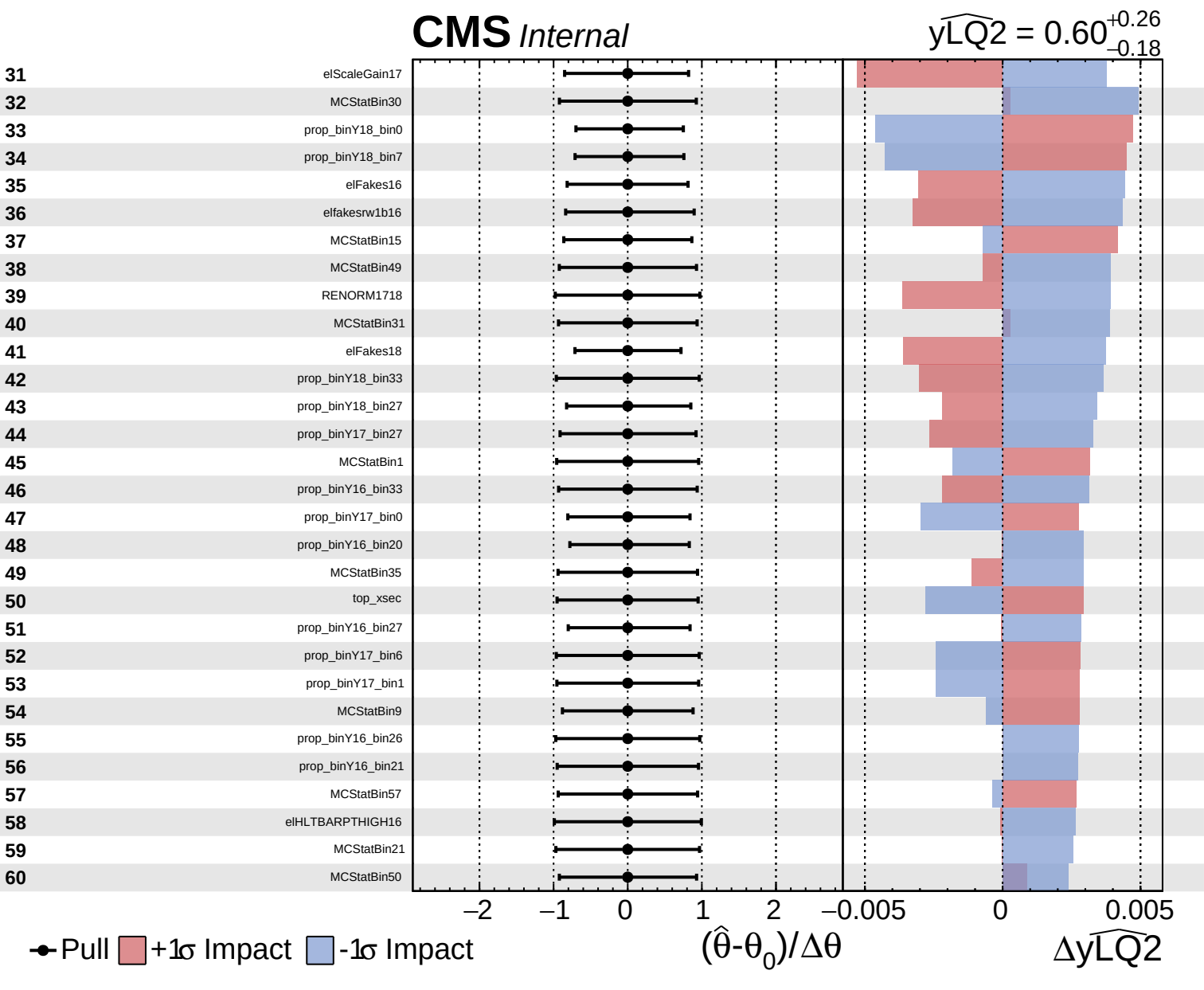
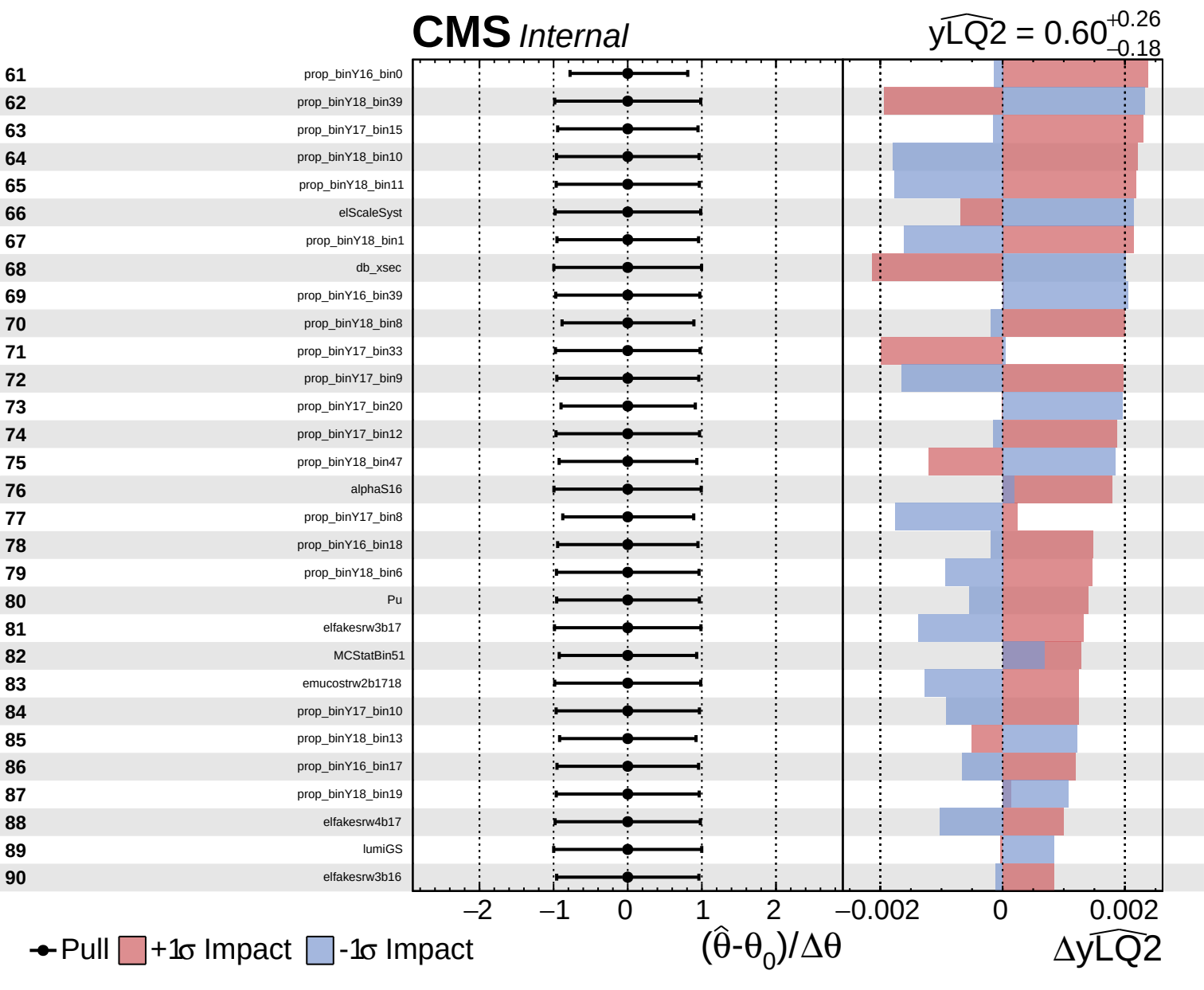
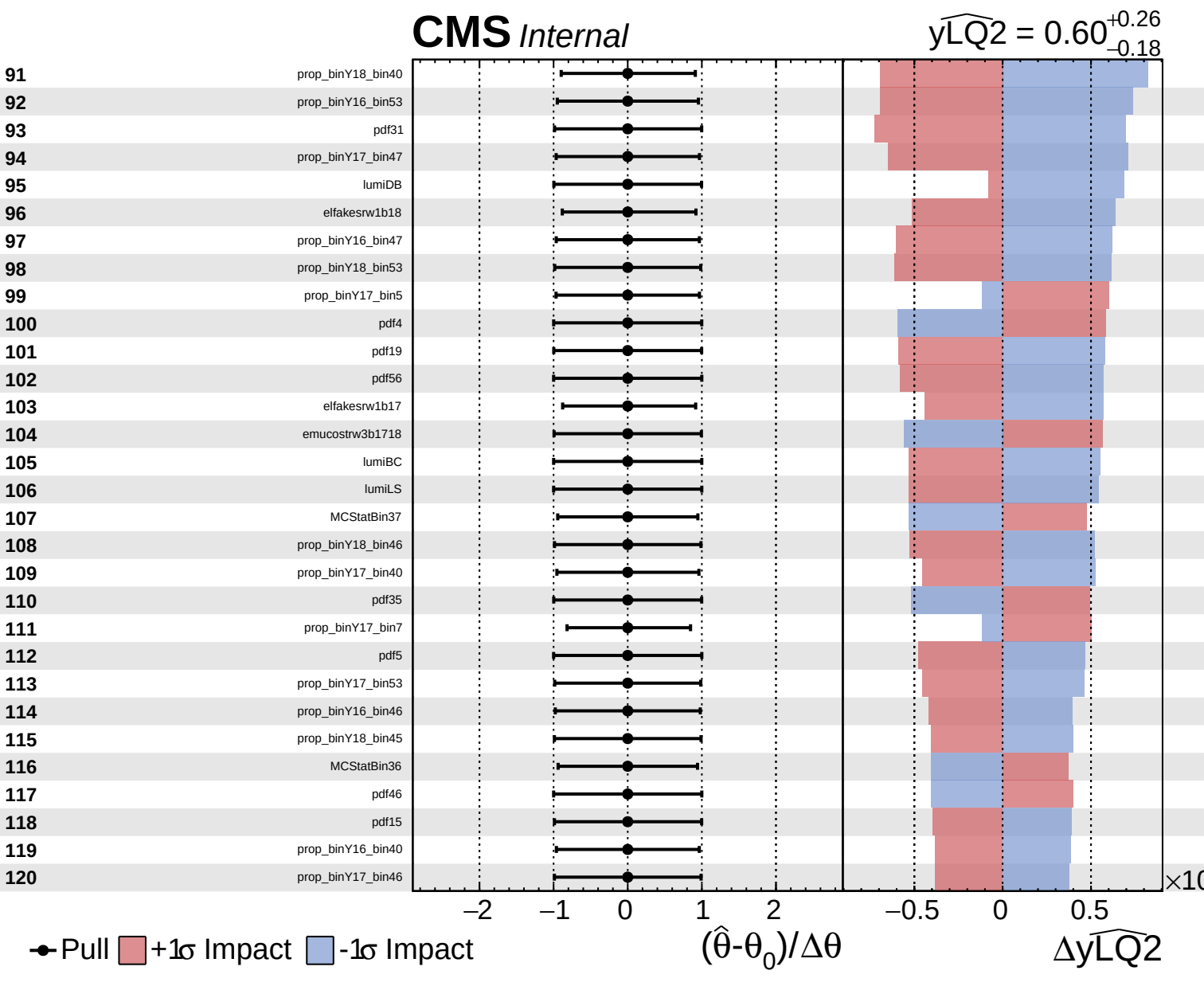
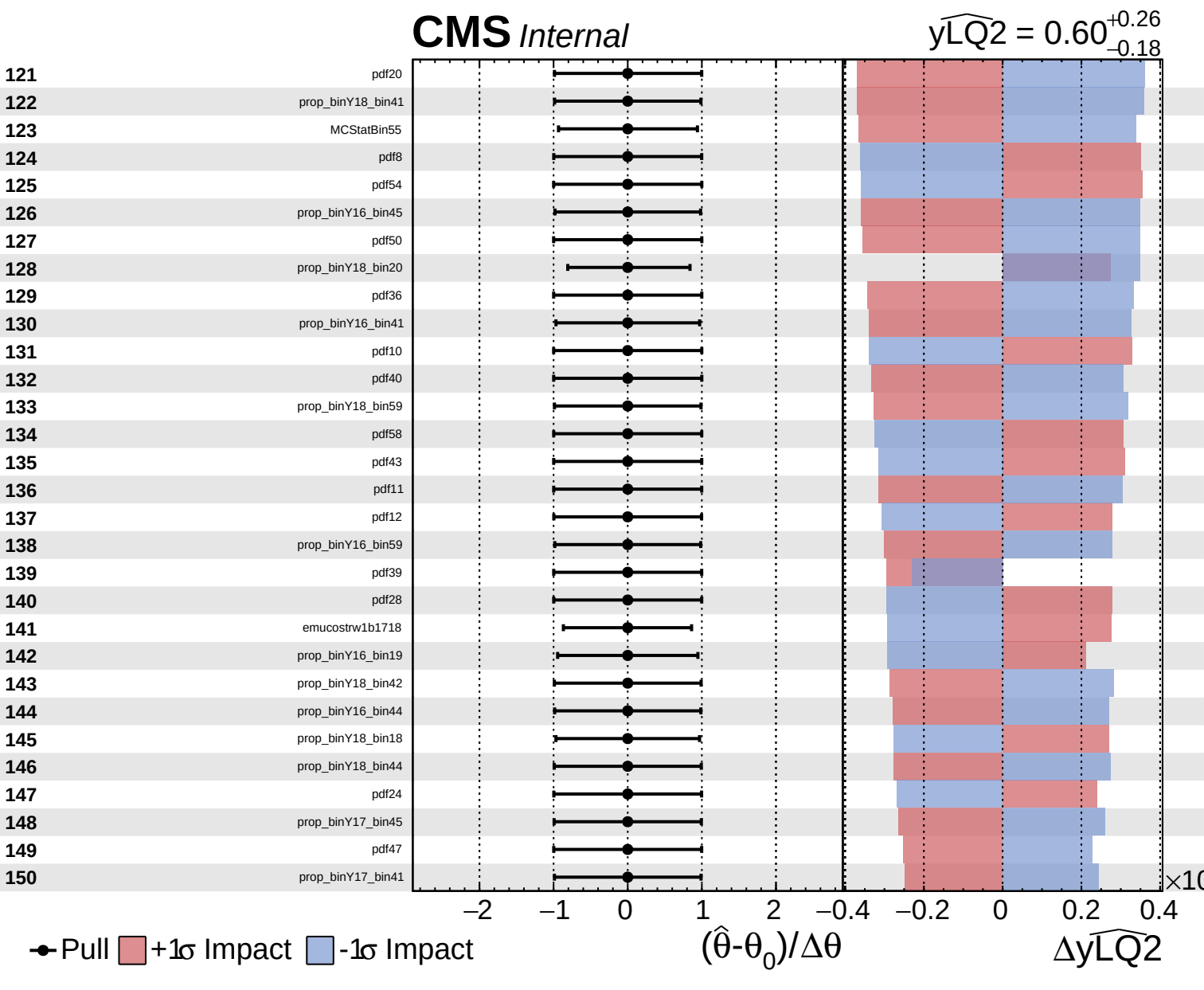
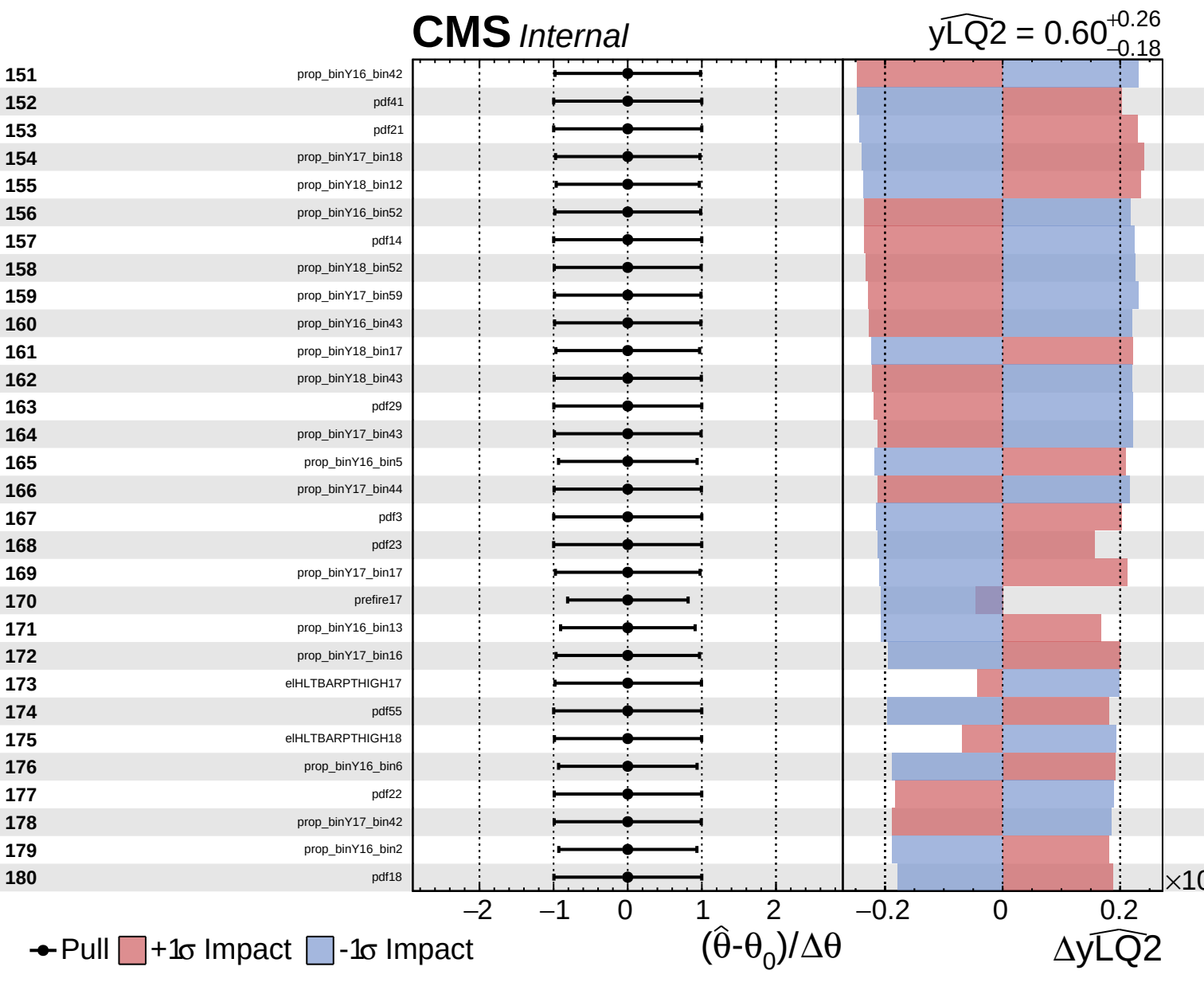

CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
1 nlo_sys
2 elIDBARPTHIGH
3 REFAC16
4 elScaleGain18
5 dy_xsec
6 elIDENDPTHIGH
7 RENORM16
8 FAC1718
9 MCStatBin22
10 elScaleGain16
11 MCStatBin23
12 MCStatBin2
13 MCStatBin17
14 MCStatBin11
15 MCStatBin44
16 MCStatBin24
17 lumiXY
18 REFAC1718
19 MCStatBin16
20 MCStatBin10
21 MCStatBin43
22 FAC16
23 MCStatBin3
24 MCStatBin4
25 MCStatBin42
26 MCStatBin41
27 lumi16
28 MCStatBin29
29 elRECOBARPTHIGH
30 lumi18
−2 −1 0 1 2
−0.2 0 0.2
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

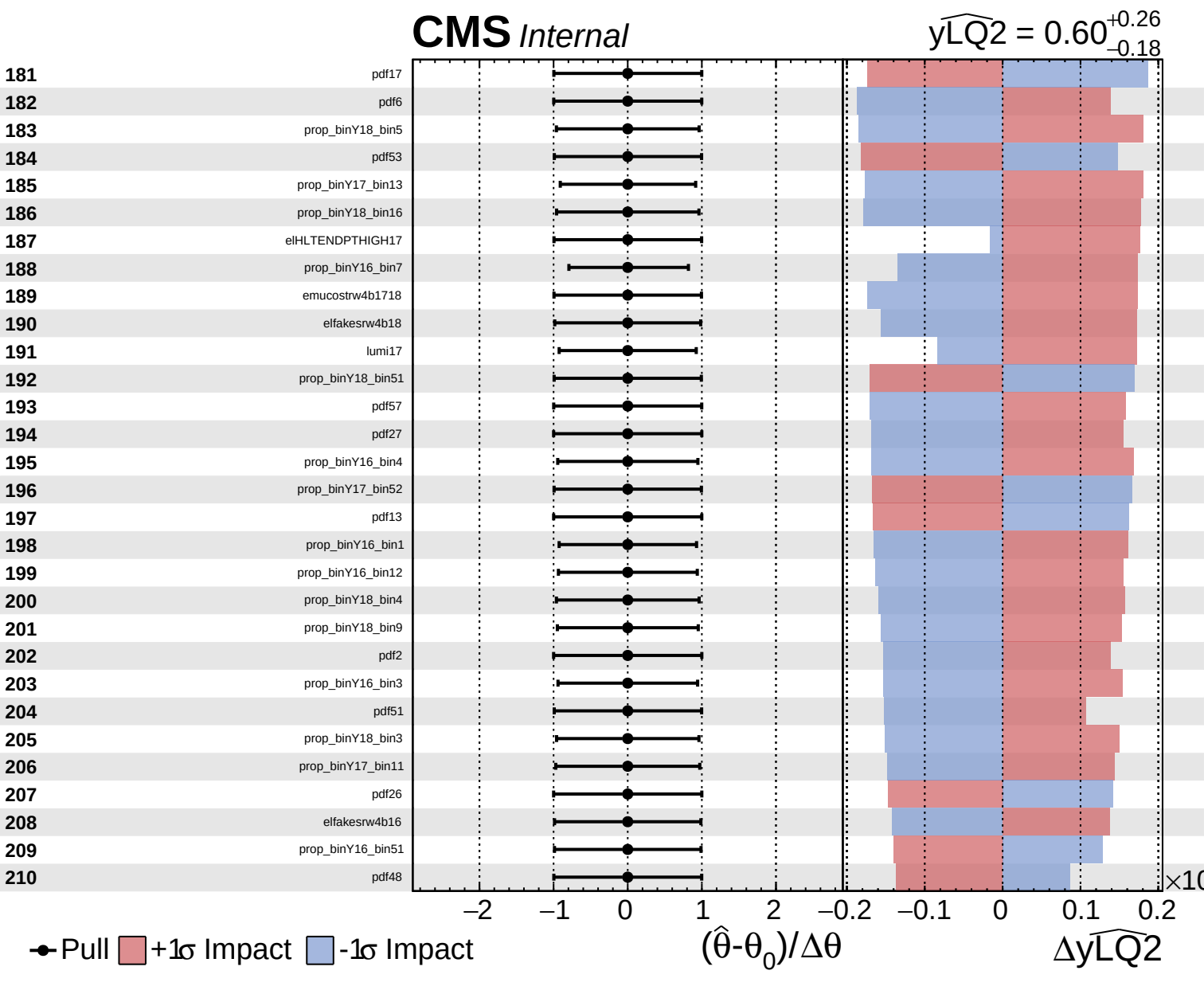

CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
31 elScaleGain17
32 MCStatBin30
33 prop_binY18_bin0
34 prop_binY18_bin7
35 elFakes16
36 elfakesrw1b16
37 MCStatBin15
38 MCStatBin49
39 RENORM1718
40 MCStatBin31
41 elFakes18
42 prop_binY18_bin33
43 prop_binY18_bin27
44 prop_binY17_bin27
45 MCStatBin1
46 prop_binY16_bin33
47 prop_binY17_bin0
48 prop_binY16_bin20
49 MCStatBin35
50 top_xsec
51 prop_binY16_bin27
52 prop_binY17_bin6
53 prop_binY17_bin1
54 MCStatBin9
55 prop_binY16_bin26
56 prop_binY16_bin21
57 MCStatBin57
58 elHLTBARPTHIGH16
59 MCStatBin21
60 MCStatBin50
−2 −1 0 1 2
−0.005 0 0.005
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

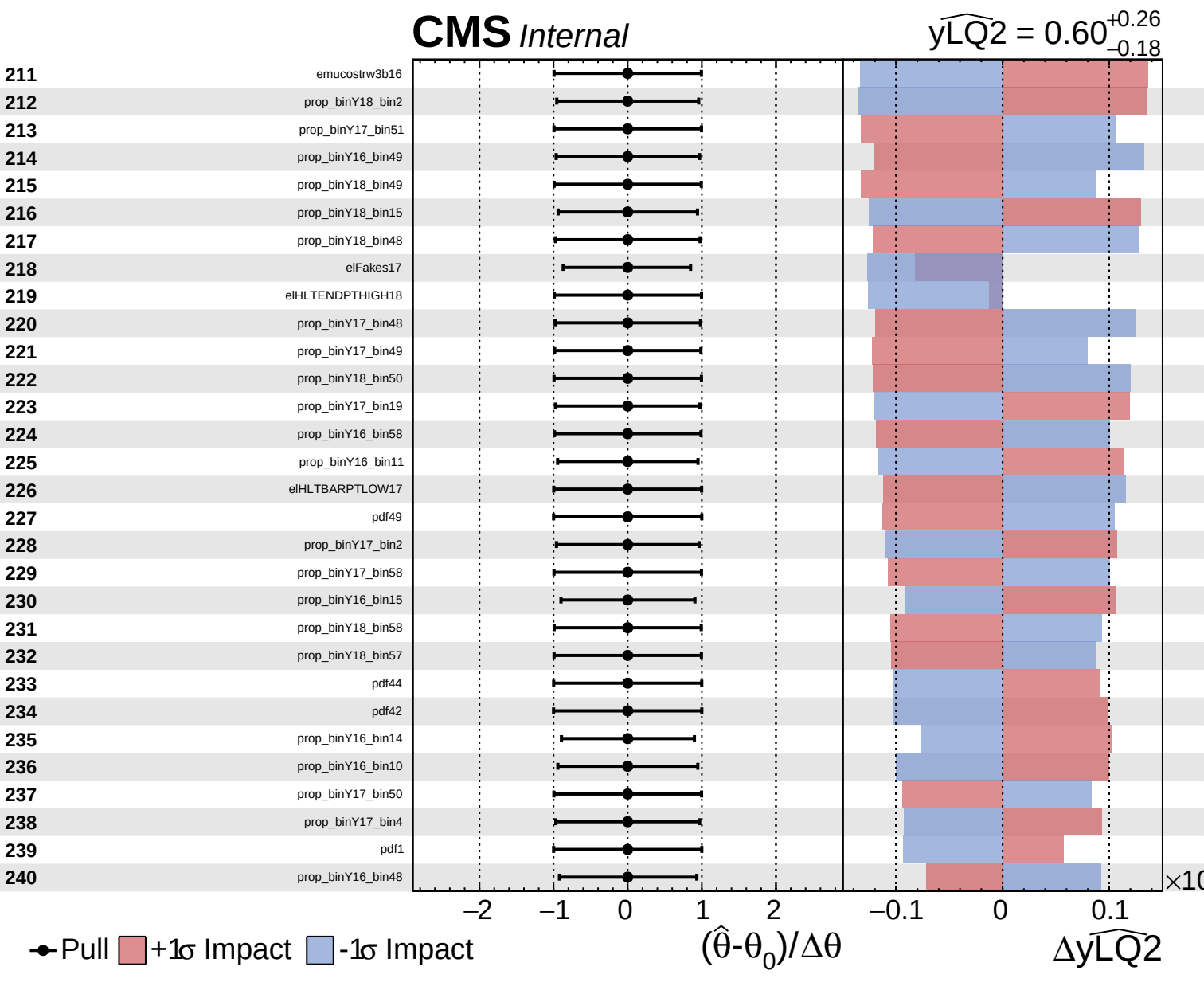

CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
61 prop_binY16_bin0
62 prop_binY18_bin39
63 prop_binY17_bin15
64 prop_binY18_bin10
65 prop_binY18_bin11
66 elScaleSyst
67 prop_binY18_bin1
68 db_xsec
69 prop_binY16_bin39
70 prop_binY18_bin8
71 prop_binY17_bin33
72 prop_binY17_bin9
73 prop_binY17_bin20
74 prop_binY17_bin12
75 prop_binY18_bin47
76 alphaS16
77 prop_binY17_bin8
78 prop_binY16_bin18
79 prop_binY18_bin6
80 Pu
81 elfakesrw3b17
82 MCStatBin51
83 emucostrw2b1718
84 prop_binY17_bin10
85 prop_binY18_bin13
86 prop_binY16_bin17
87 prop_binY18_bin19
88 elfakesrw4b17
89 lumiGS
90 elfakesrw3b16
−2
−1
0
1
2
−0.002
0
0.002
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

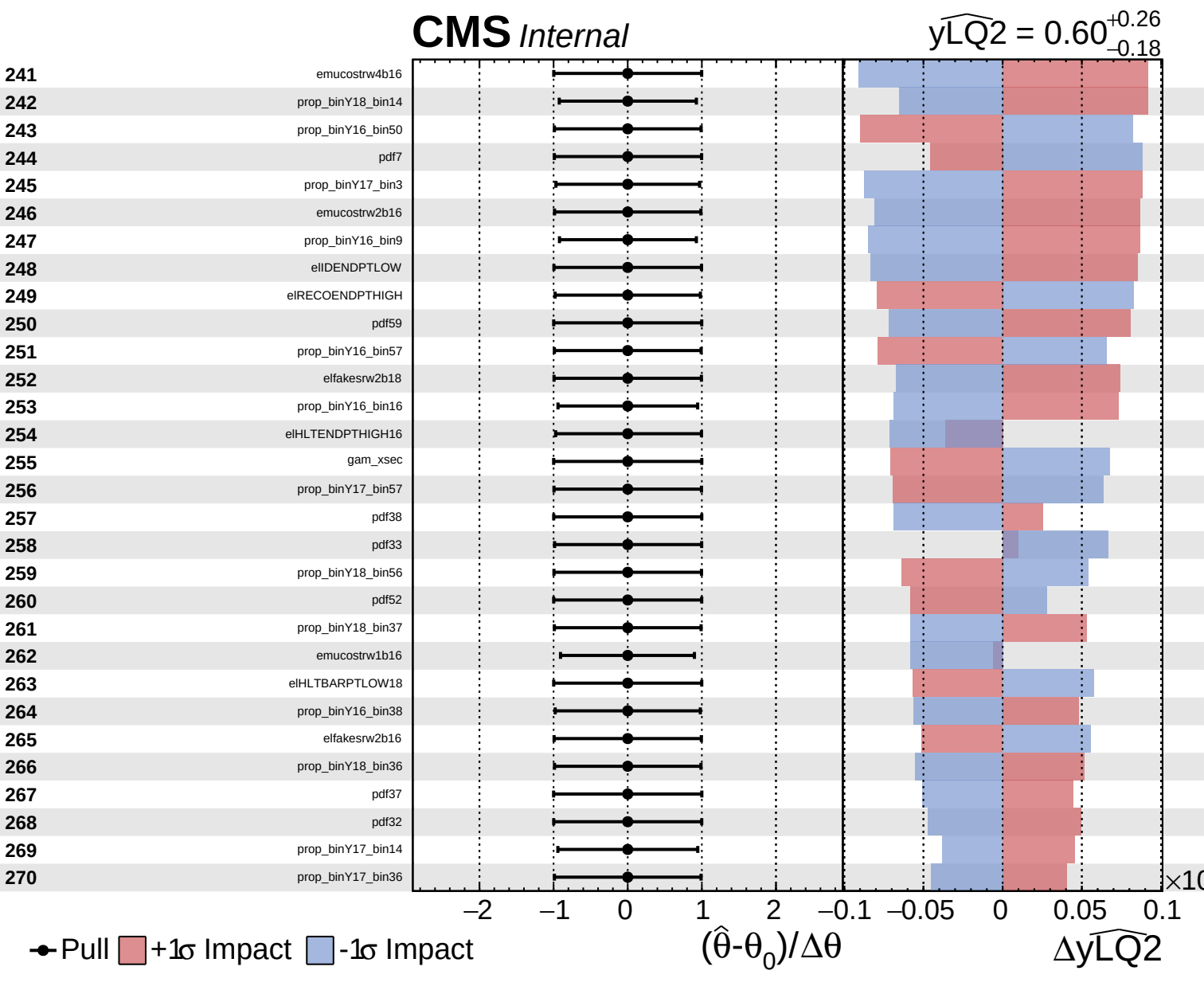

CMS Internal
ŷLQ2 = 0.60 +0.26 −0.18
91 prop_binY18_bin40
92 prop_binY16_bin53
93 pdf31
94 prop_binY17_bin47
95 lumiDB
96 elfakesrw1b18
97 prop_binY16_bin47
98 prop_binY18_bin53
99 prop_binY17_bin5
100 pdf4
101 pdf19
102 pdf56
103 elfakesrw1b17
104 emucostrw3b1718
105 lumiBC
106 lumiLS
107 MCStatBin37
108 prop_binY18_bin46
109 prop_binY17_bin40
110 pdf35
111 prop_binY17_bin7
112 pdf5
113 prop_binY17_bin53
114 prop_binY16_bin46
115 prop_binY18_bin45
116 MCStatBin36
117 pdf46
118 pdf15
119 prop_binY16_bin40
120 prop_binY17_bin46
×10
−2 −1 0 1 2
−0.5 0 0.5
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

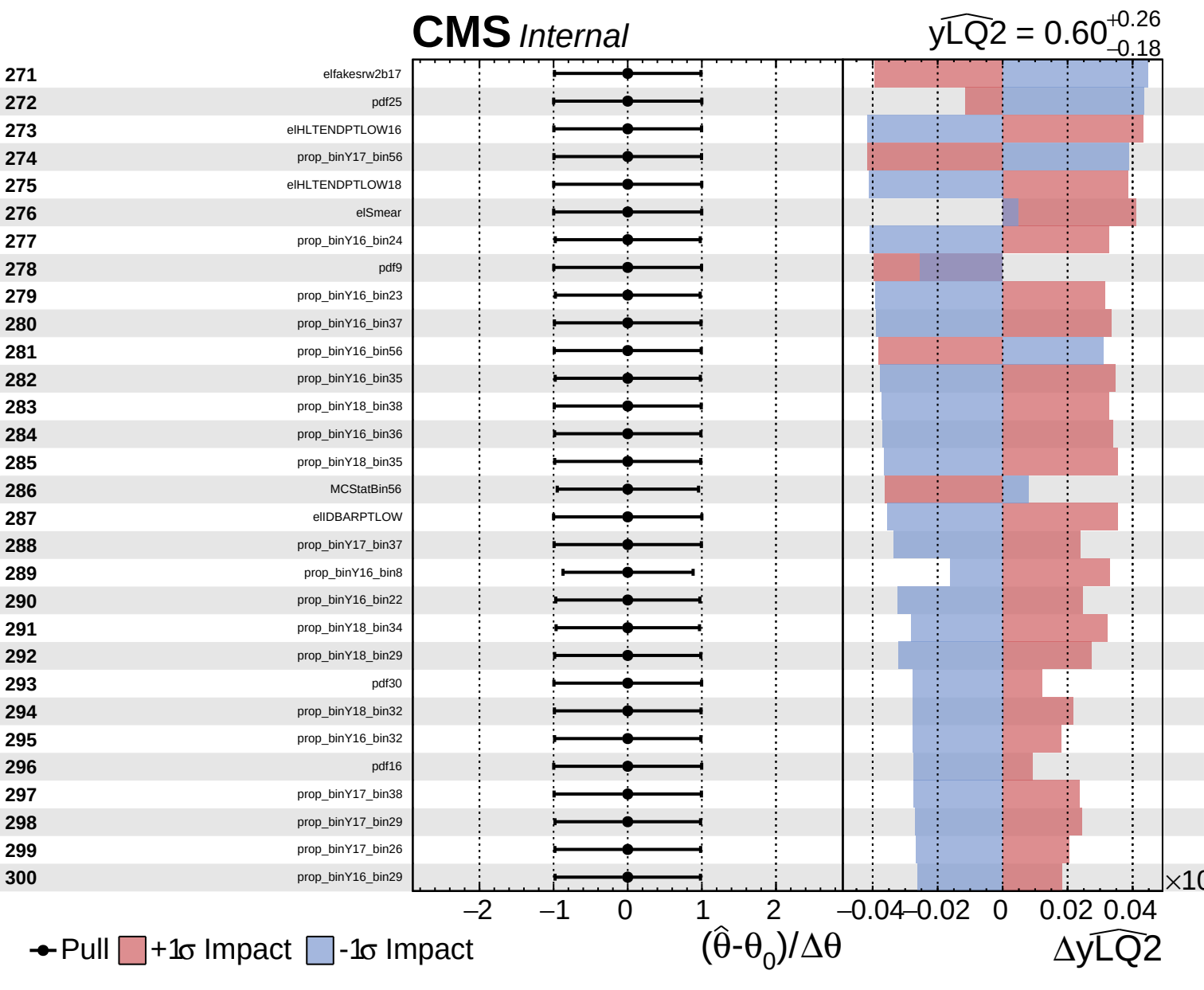

CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
121 pdf20
122 prop_binY18_bin41
123 MCStatBin55
124 pdf8
125 pdf54
126 prop_binY16_bin45
127 pdf50
128 prop_binY18_bin20
129 pdf36
130 prop_binY16_bin41
131 pdf10
132 pdf40
133 prop_binY18_bin59
134 pdf58
135 pdf43
136 pdf11
137 pdf12
138 prop_binY16_bin59
139 pdf39
140 pdf28
141 emucostrw1b1718
142 prop_binY16_bin19
143 prop_binY18_bin42
144 prop_binY16_bin44
145 prop_binY18_bin18
146 prop_binY18_bin44
147 pdf24
148 prop_binY17_bin45
149 pdf47
150 prop_binY17_bin41
×10
−2 −1 0 1 2
−0.4 −0.2 0 0.2 0.4
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

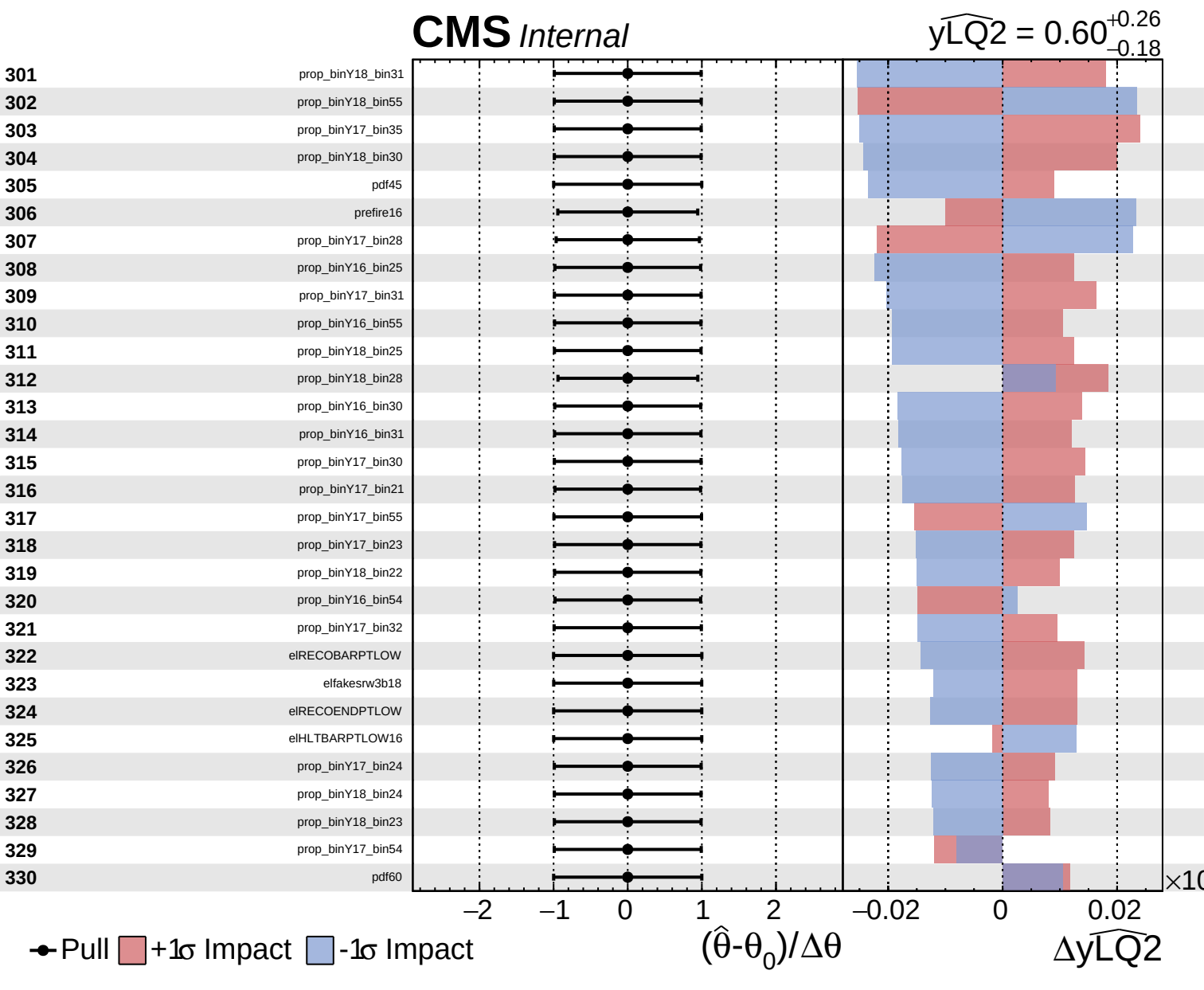

CMS Internal
ŷLQ2 = 0.60 +0.26 −0.18
151 prop_binY16_bin42
152 pdf41
153 pdf21
154 prop_binY17_bin18
155 prop_binY18_bin12
156 prop_binY16_bin52
157 pdf14
158 prop_binY18_bin52
159 prop_binY17_bin59
160 prop_binY16_bin43
161 prop_binY18_bin17
162 prop_binY18_bin43
163 pdf29
164 prop_binY17_bin43
165 prop_binY16_bin5
166 prop_binY17_bin44
167 pdf3
168 pdf23
169 prop_binY17_bin17
170 prefire17
171 prop_binY16_bin13
172 prop_binY17_bin16
173 elHLTBARPTHIGH17
174 pdf55
175 elHLTBARPTHIGH18
176 prop_binY16_bin6
177 pdf22
178 prop_binY17_bin42
179 prop_binY16_bin2
180 pdf18
−2 −1 0 1 2
−0.2 0 0.2
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

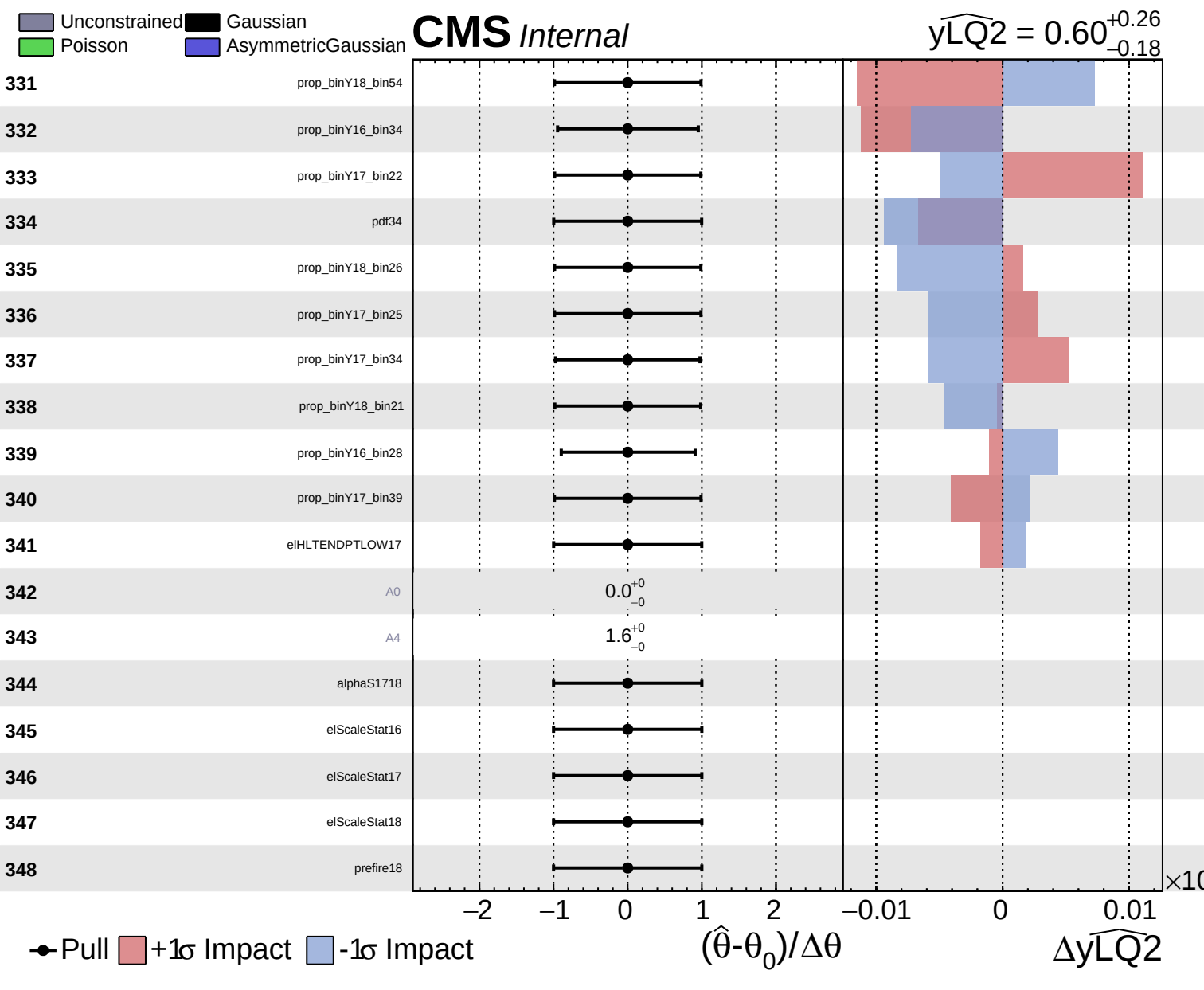

CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
181 pdf17
182 pdf6
183 prop_binY18_bin5
184 pdf53
185 prop_binY17_bin13
186 prop_binY18_bin16
187 elHLTENDPTHIGH17
188 prop_binY16_bin7
189 emucostrw4b1718
190 elfakesrw4b18
191 lumi17
192 prop_binY18_bin51
193 pdf57
194 pdf27
195 prop_binY16_bin4
196 prop_binY17_bin52
197 pdf13
198 prop_binY16_bin1
199 prop_binY16_bin12
200 prop_binY18_bin4
201 prop_binY18_bin9
202 pdf2
203 prop_binY16_bin3
204 pdf51
205 prop_binY18_bin3
206 prop_binY17_bin11
207 pdf26
208 elfakesrw4b16
209 prop_binY16_bin51
210 pdf48
×10
−2 −1 0 1 2
−0.2 −0.1 0 0.1 0.2
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
211 emucostrw3b16
212 prop_binY18_bin2
213 prop_binY17_bin51
214 prop_binY16_bin49
215 prop_binY18_bin49
216 prop_binY18_bin15
217 prop_binY18_bin48
218 elFakes17
219 elHLTENDPTHIGH18
220 prop_binY17_bin48
221 prop_binY17_bin49
222 prop_binY18_bin50
223 prop_binY17_bin19
224 prop_binY16_bin58
225 prop_binY16_bin11
226 elHLTBARPTLOW17
227 pdf49
228 prop_binY17_bin2
229 prop_binY17_bin58
230 prop_binY16_bin15
231 prop_binY18_bin58
232 prop_binY18_bin57
233 pdf44
234 pdf42
235 prop_binY16_bin14
236 prop_binY16_bin10
237 prop_binY17_bin50
238 prop_binY17_bin4
239 pdf1
240 prop_binY16_bin48
×10
−2 −1 0 1 2
−0.1 0 0.1
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
241 emucostrw4b16
242 prop_binY18_bin14
243 prop_binY16_bin50
244 pdf7
245 prop_binY17_bin3
246 emucostrw2b16
247 prop_binY16_bin9
248 elIDENDPTLOW
249 elRECOENDPTHIGH
250 pdf59
251 prop_binY16_bin57
252 elfakesrw2b18
253 prop_binY16_bin16
254 elHLTENDPTHIGH16
255 gam_xsec
256 prop_binY17_bin57
257 pdf38
258 pdf33
259 prop_binY18_bin56
260 pdf52
261 prop_binY18_bin37
262 emucostrw1b16
263 elHLTBARPTLOW18
264 prop_binY16_bin38
265 elfakesrw2b16
266 prop_binY18_bin36
267 pdf37
268 pdf32
269 prop_binY17_bin14
270 prop_binY17_bin36
−2 −1 0 1 2
−0.1 −0.05 0 0.05 0.1
×10
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
ŷLQ2 = 0.60 +0.26 −0.18
271 elfakesrw2b17
272 pdf25
273 elHLTENDPTLOW16
274 prop_binY17_bin56
275 elHLTENDPTLOW18
276 elSmear
277 prop_binY16_bin24
278 pdf9
279 prop_binY16_bin23
280 prop_binY16_bin37
281 prop_binY16_bin56
282 prop_binY16_bin35
283 prop_binY18_bin38
284 prop_binY16_bin36
285 prop_binY18_bin35
286 MCStatBin56
287 elIDBARPTLOW
288 prop_binY17_bin37
289 prop_binY16_bin8
290 prop_binY16_bin22
291 prop_binY18_bin34
292 prop_binY18_bin29
293 pdf30
294 prop_binY18_bin32
295 prop_binY16_bin32
296 pdf16
297 prop_binY17_bin38
298 prop_binY17_bin29
299 prop_binY17_bin26
300 prop_binY16_bin29
×10
−2 −1 0 1 2
−0.04 −0.02 0 0.02 0.04
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


CMS Internal
ŷLQ2 = 0.60 +0.26 −0.18
301 prop_binY18_bin31
302 prop_binY18_bin55
303 prop_binY17_bin35
304 prop_binY18_bin30
305 pdf45
306 prefire16
307 prop_binY17_bin28
308 prop_binY16_bin25
309 prop_binY17_bin31
310 prop_binY16_bin55
311 prop_binY18_bin25
312 prop_binY18_bin28
313 prop_binY16_bin30
314 prop_binY16_bin31
315 prop_binY17_bin30
316 prop_binY17_bin21
317 prop_binY17_bin55
318 prop_binY17_bin23
319 prop_binY18_bin22
320 prop_binY16_bin54
321 prop_binY17_bin32
322 elRECOBARPTLOW
323 elfakesrw3b18
324 elRECOENDPTLOW
325 elHLTBARPTLOW16
326 prop_binY17_bin24
327 prop_binY18_bin24
328 prop_binY18_bin23
329 prop_binY17_bin54
330 pdf60
−2
−1
0
1
2
−0.02
0
0.02
×10
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
$\widehat{yLQ2} = 0.60^{+0.26}_{-0.18}$
331 prop_binY18_bin54
332 prop_binY16_bin34
333 prop_binY17_bin22
334 pdf34
335 prop_binY18_bin26
336 prop_binY17_bin25
337 prop_binY17_bin34
338 prop_binY18_bin21
339 prop_binY16_bin28
340 prop_binY17_bin39
341 elHLTENDPTLOW17
342 A0 0.0^{+0}_{-0}
343 A4 1.6^{+0}_{-0}
344 alphaS1718
345 elScaleStat16
346 elScaleStat17
347 elScaleStat18
348 prefire18
−2 −1 0 1 2
−0.01 0 0.01
×10
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$