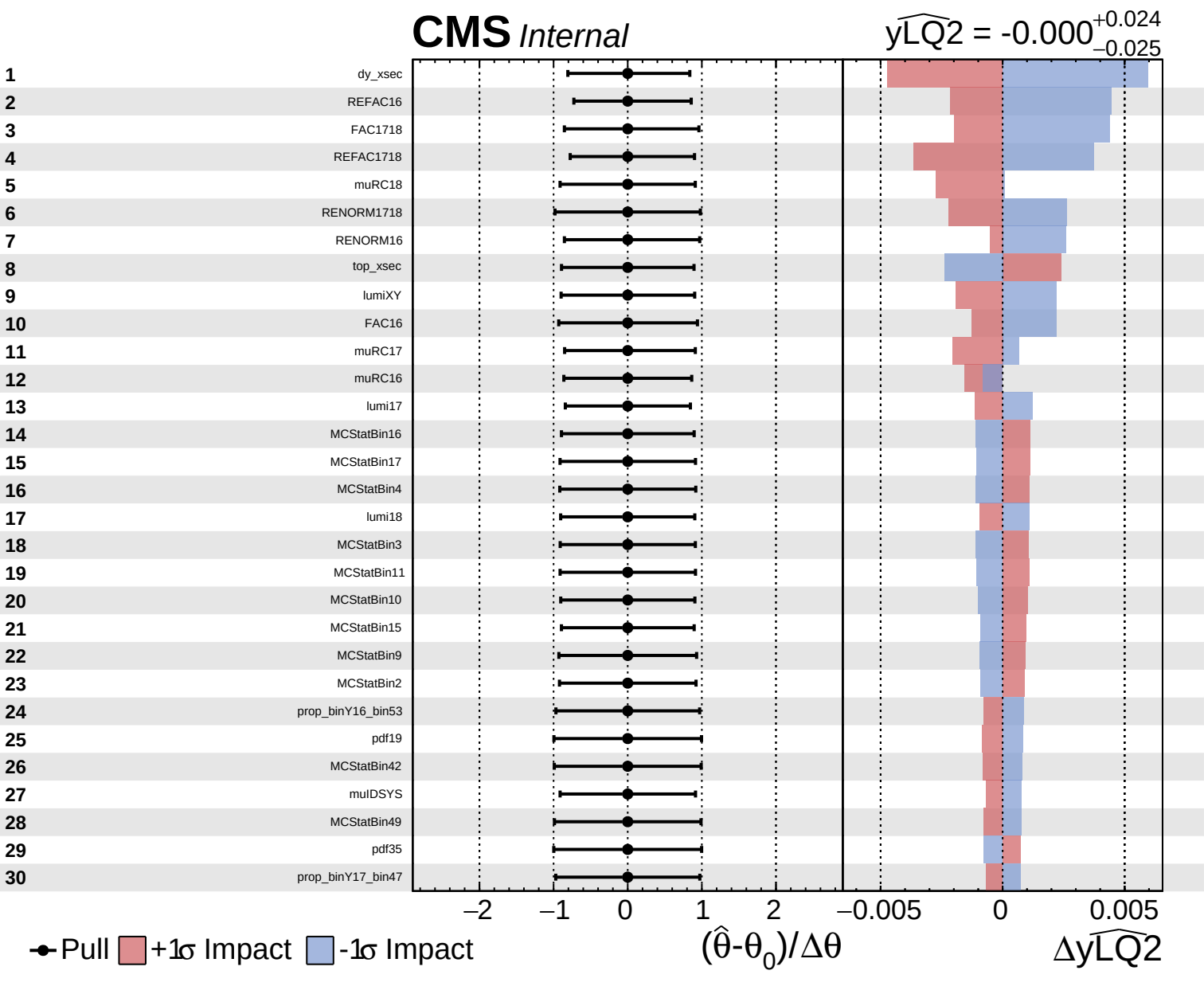
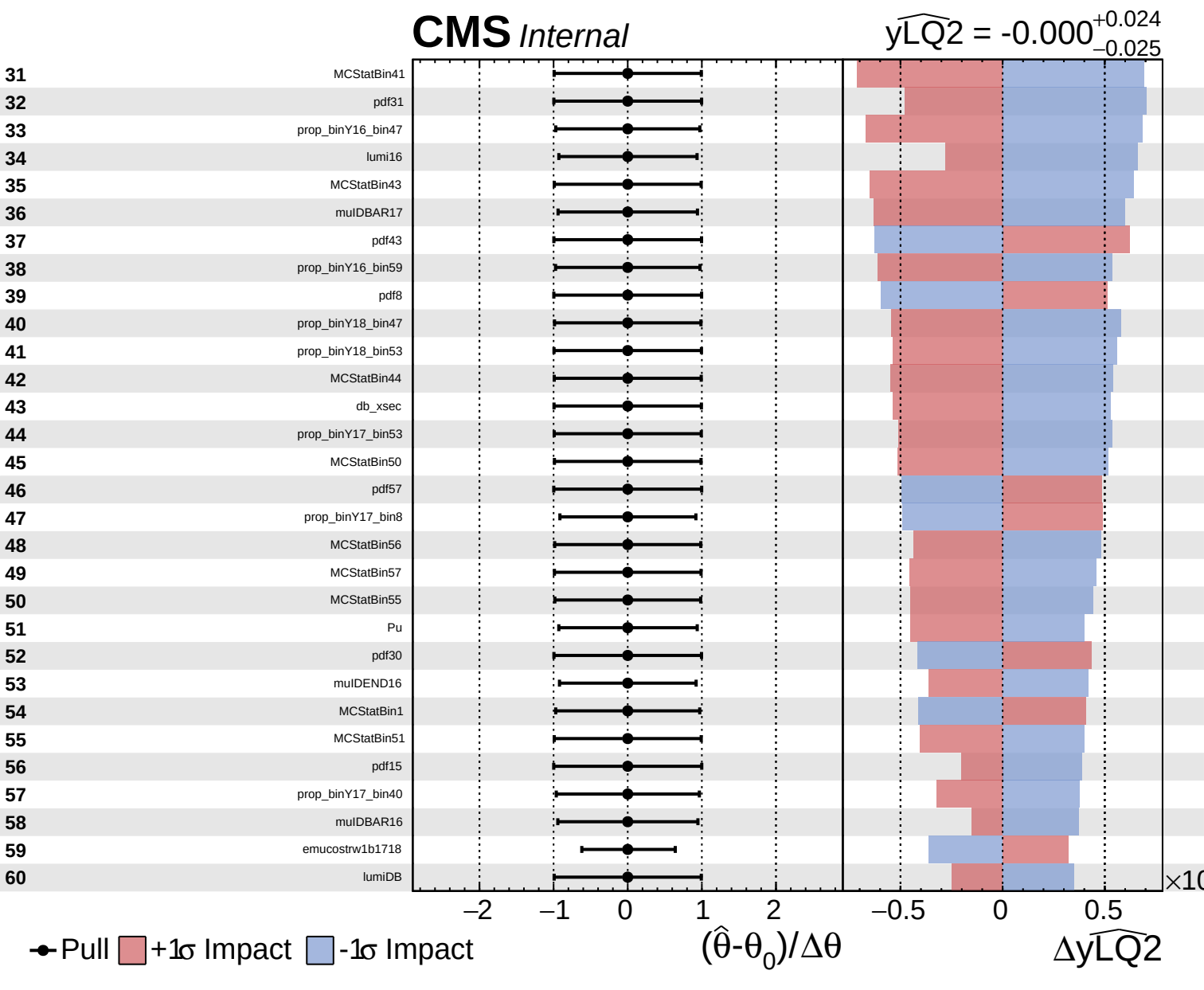
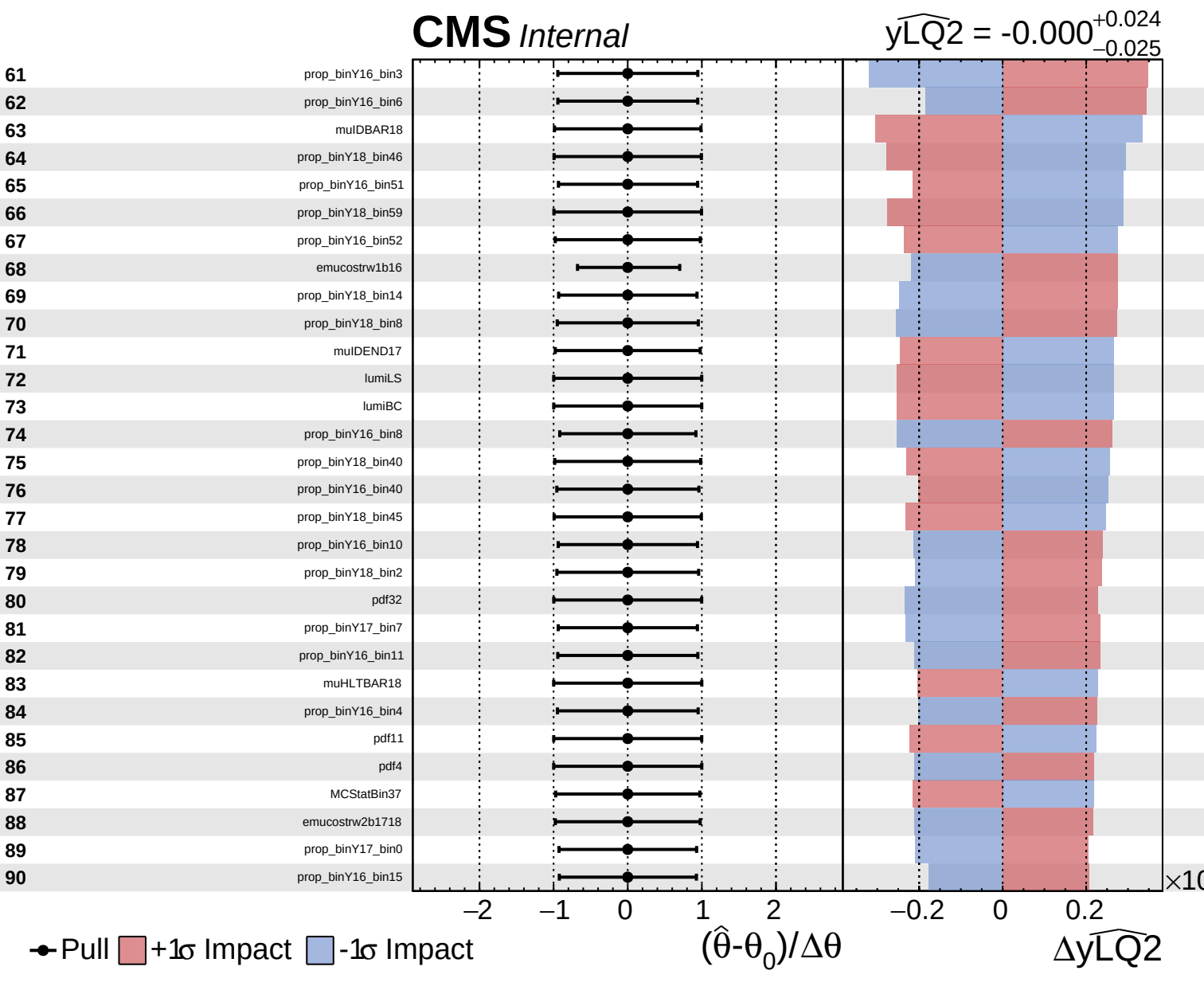
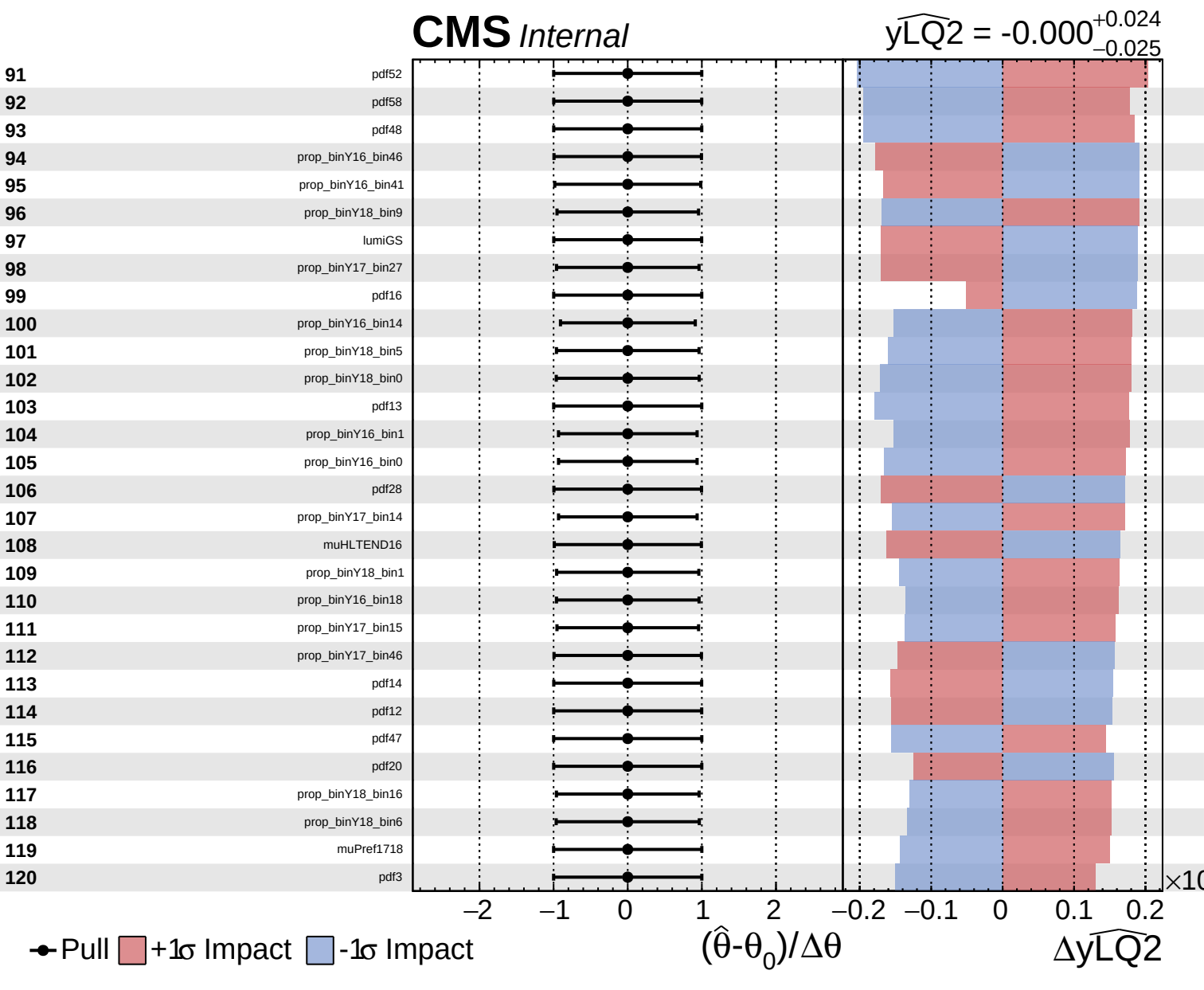
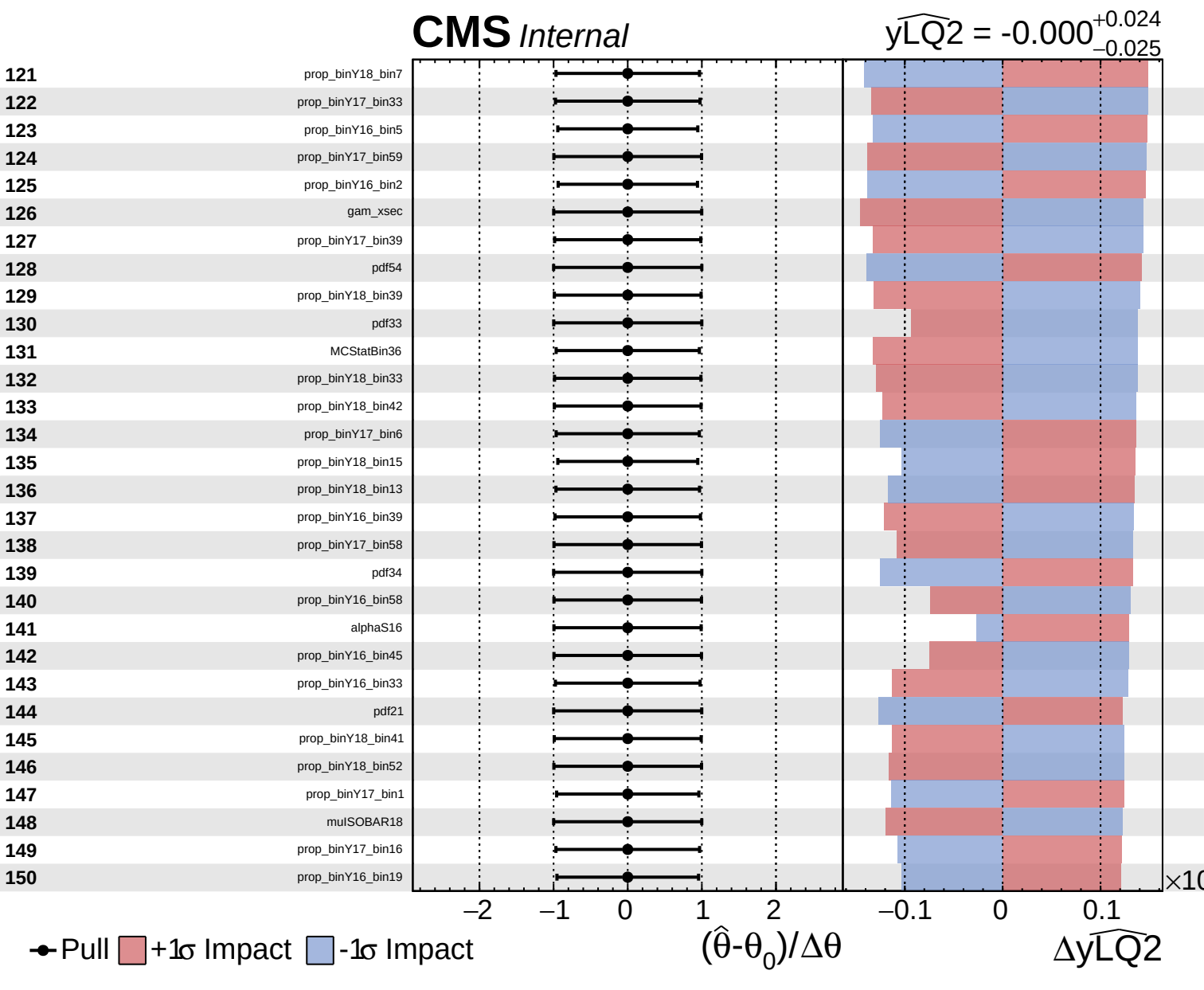
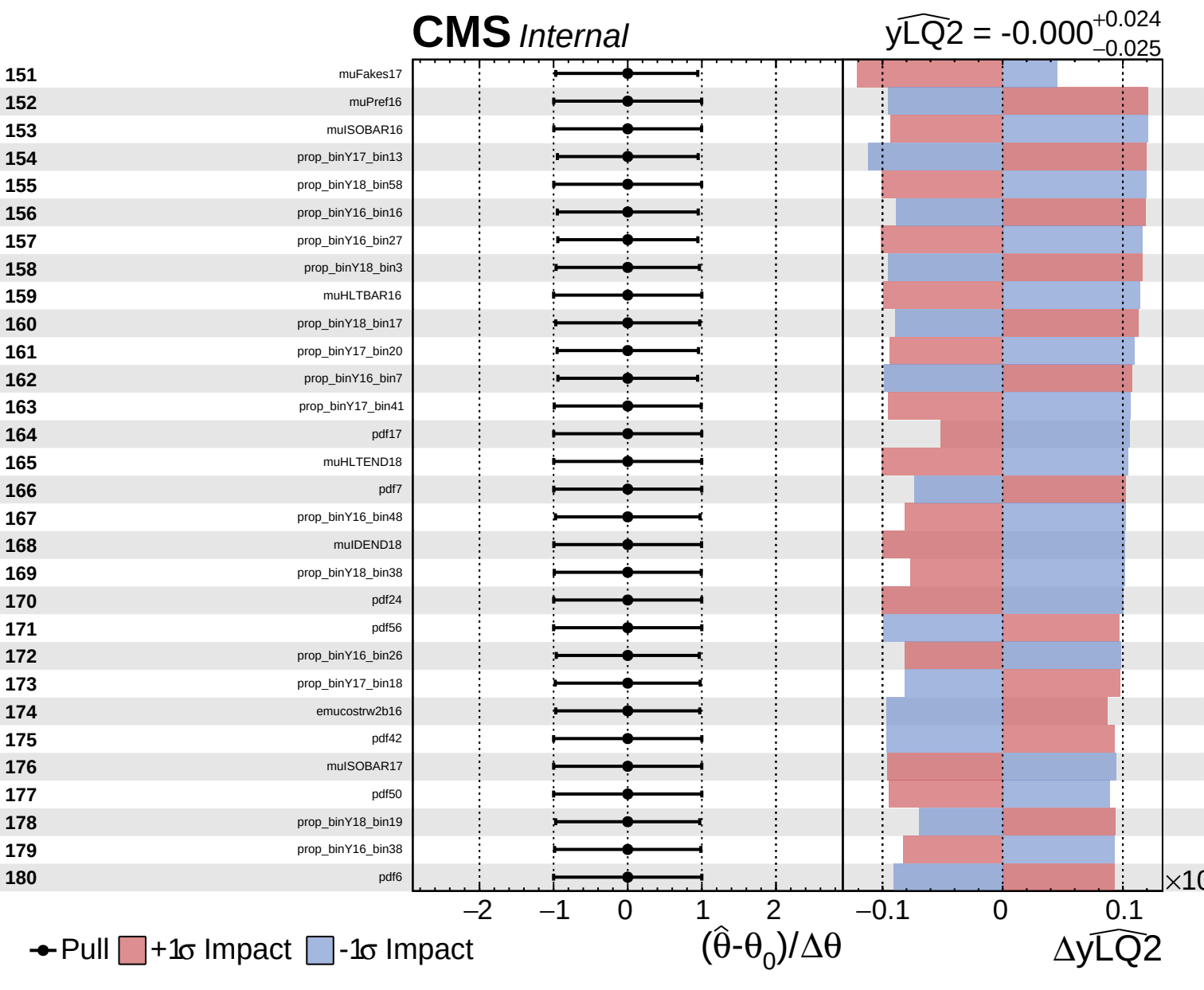

CMS Internal
yLQ2 = -0.000 +0.024 −0.025
1 dy_xsec
2 REFAC16
3 FAC1718
4 REFAC1718
5 muRC18
6 RENORM1718
7 RENORM16
8 top_xsec
9 lumiXY
10 FAC16
11 muRC17
12 muRC16
13 lumi17
14 MCStatBin16
15 MCStatBin17
16 MCStatBin4
17 lumi18
18 MCStatBin3
19 MCStatBin11
20 MCStatBin10
21 MCStatBin15
22 MCStatBin9
23 MCStatBin2
24 prop_binY16_bin53
25 pdf19
26 MCStatBin42
27 mulDSYS
28 MCStatBin49
29 pdf35
30 prop_binY17_bin47
−2 −1 0 1 2
−0.005 0 0.005
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2

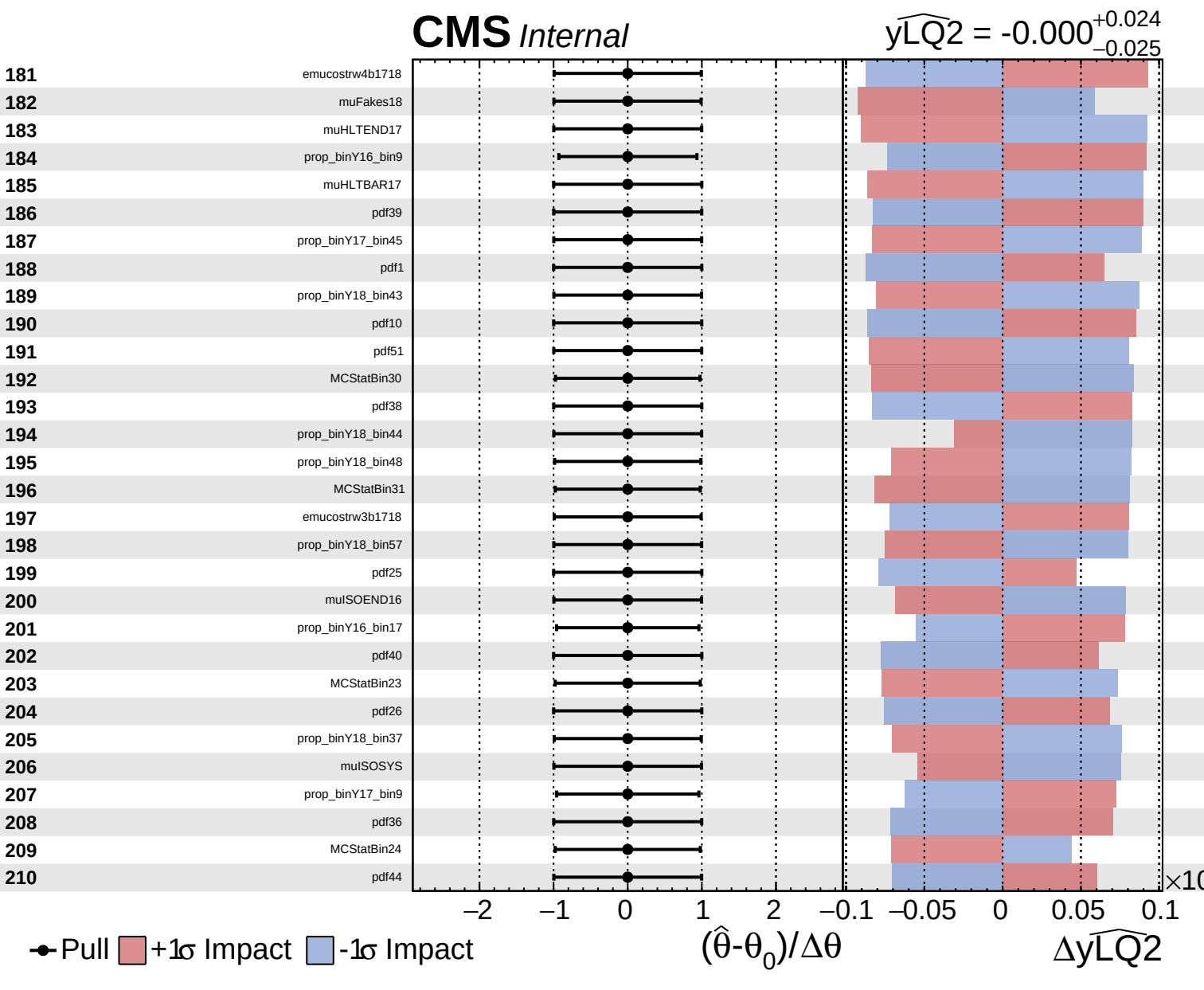

CMS Internal
yLQ2 = -0.000 +0.024 −0.025
31 MCStatBin41
32 pdf31
33 prop_binY16_bin47
34 lumi16
35 MCStatBin43
36 muIDBAR17
37 pdf43
38 prop_binY16_bin59
39 pdf8
40 prop_binY18_bin47
41 prop_binY18_bin53
42 MCStatBin44
43 db_xsec
44 prop_binY17_bin53
45 MCStatBin50
46 pdf57
47 prop_binY17_bin8
48 MCStatBin56
49 MCStatBin57
50 MCStatBin55
51 Pu
52 pdf30
53 muIDEND16
54 MCStatBin1
55 MCStatBin51
56 pdf15
57 prop_binY17_bin40
58 muIDBAR16
59 emucostrw1b1718
60 lumiDB
×10
−2 −1 0 1 2
−0.5 0 0.5
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2

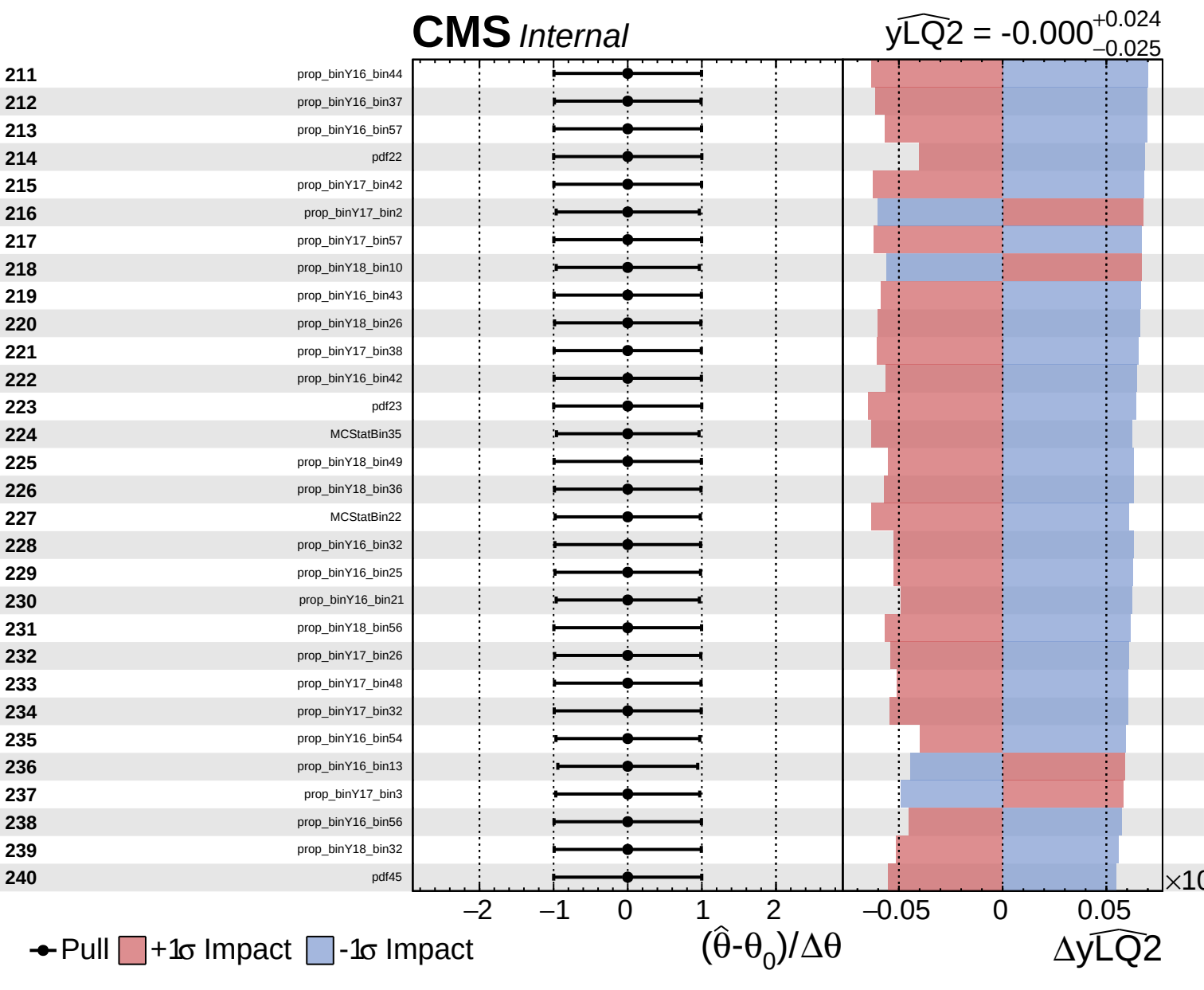

CMS Internal
yLQ2 = -0.000 +0.024 −0.025
61 prop_binY16_bin3
62 prop_binY16_bin6
63 muIDBAR18
64 prop_binY18_bin46
65 prop_binY16_bin51
66 prop_binY18_bin59
67 prop_binY16_bin52
68 emucostrw1b16
69 prop_binY18_bin14
70 prop_binY18_bin8
71 muIDEND17
72 lumiLS
73 lumiBC
74 prop_binY16_bin8
75 prop_binY18_bin40
76 prop_binY16_bin40
77 prop_binY18_bin45
78 prop_binY16_bin10
79 prop_binY18_bin2
80 pdf32
81 prop_binY17_bin7
82 prop_binY16_bin11
83 muHLTBAR18
84 prop_binY16_bin4
85 pdf11
86 pdf4
87 MCStatBin37
88 emucostrw2b1718
89 prop_binY17_bin0
90 prop_binY16_bin15
−2 −1 0 1 2
−0.2 0 0.2
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2

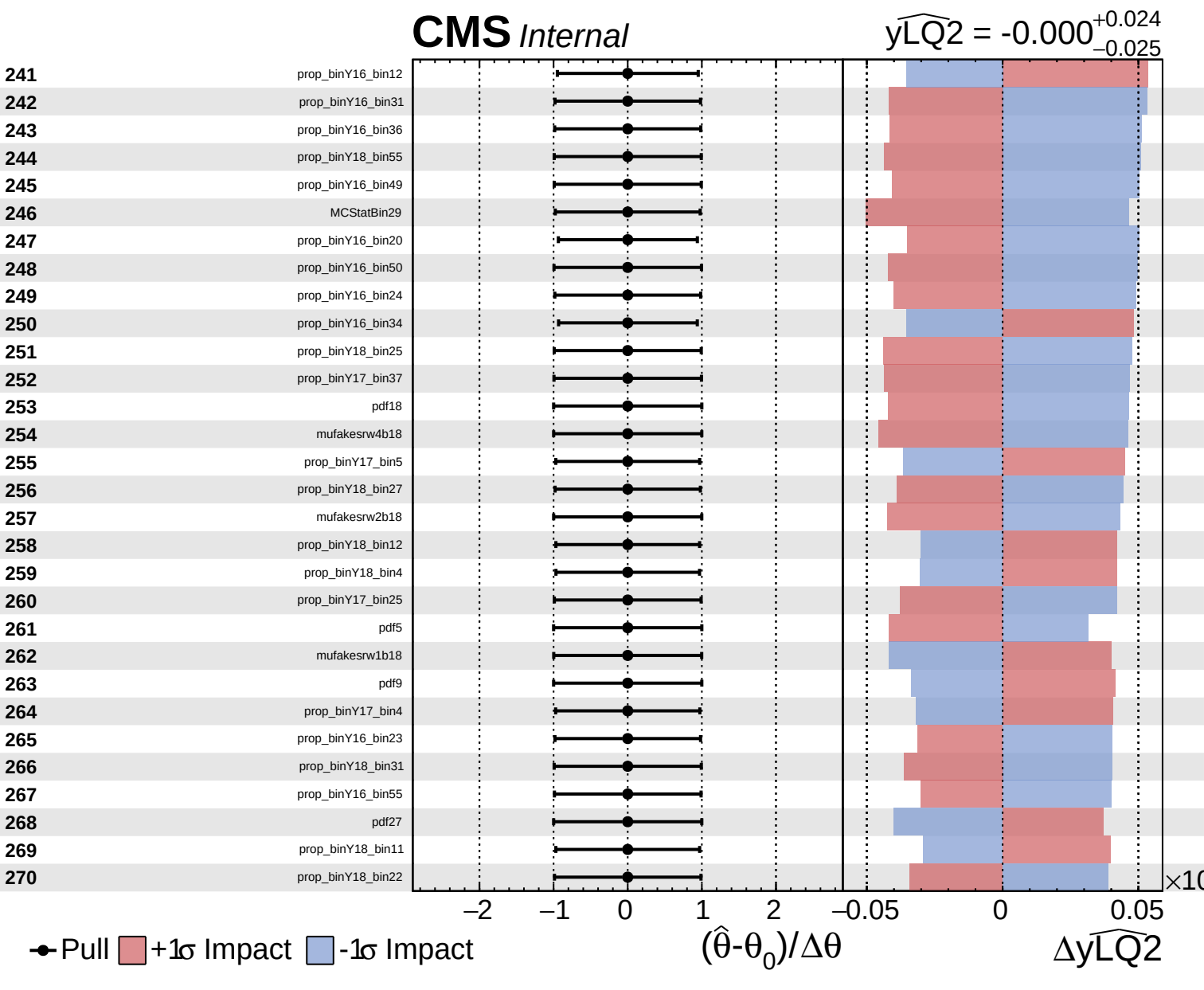

CMS Internal
yLQ2 = -0.000 +0.024 −0.025
91 pdf52
92 pdf58
93 pdf48
94 prop_binY16_bin46
95 prop_binY16_bin41
96 prop_binY18_bin9
97 lumiGS
98 prop_binY17_bin27
99 pdf16
100 prop_binY16_bin14
101 prop_binY18_bin5
102 prop_binY18_bin0
103 pdf13
104 prop_binY16_bin1
105 prop_binY16_bin0
106 pdf28
107 prop_binY17_bin14
108 muHLTEND16
109 prop_binY18_bin1
110 prop_binY16_bin18
111 prop_binY17_bin15
112 prop_binY17_bin46
113 pdf14
114 pdf12
115 pdf47
116 pdf20
117 prop_binY18_bin16
118 prop_binY18_bin6
119 muPref1718
120 pdf3
−2 −1 0 1 2
−0.2 −0.1 0 0.1 0.2
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2

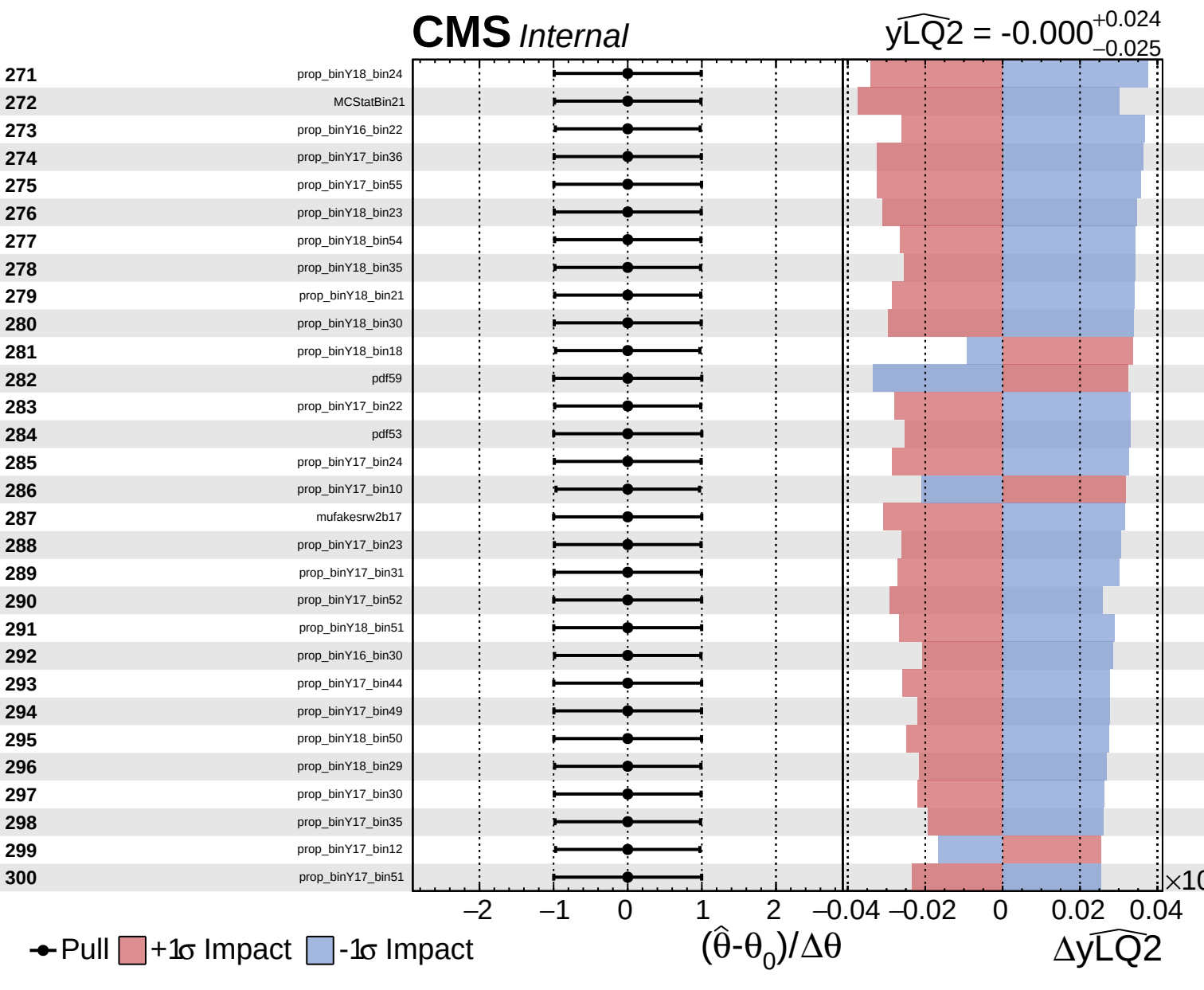

CMS Internal
yLQ2 = -0.000 +0.024 −0.025
121 prop_binY18_bin7
122 prop_binY17_bin33
123 prop_binY16_bin5
124 prop_binY17_bin59
125 prop_binY16_bin2
126 gam_xsec
127 prop_binY17_bin39
128 pdf54
129 prop_binY18_bin39
130 pdf33
131 MCStatBin36
132 prop_binY18_bin33
133 prop_binY18_bin42
134 prop_binY17_bin6
135 prop_binY18_bin15
136 prop_binY18_bin13
137 prop_binY16_bin39
138 prop_binY17_bin58
139 pdf34
140 prop_binY16_bin58
141 alphaS16
142 prop_binY16_bin45
143 prop_binY16_bin33
144 pdf21
145 prop_binY18_bin41
146 prop_binY18_bin52
147 prop_binY17_bin1
148 muISOBAR18
149 prop_binY17_bin16
150 prop_binY16_bin19
−2 −1 0 1 2
−0.1 0 0.1
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2

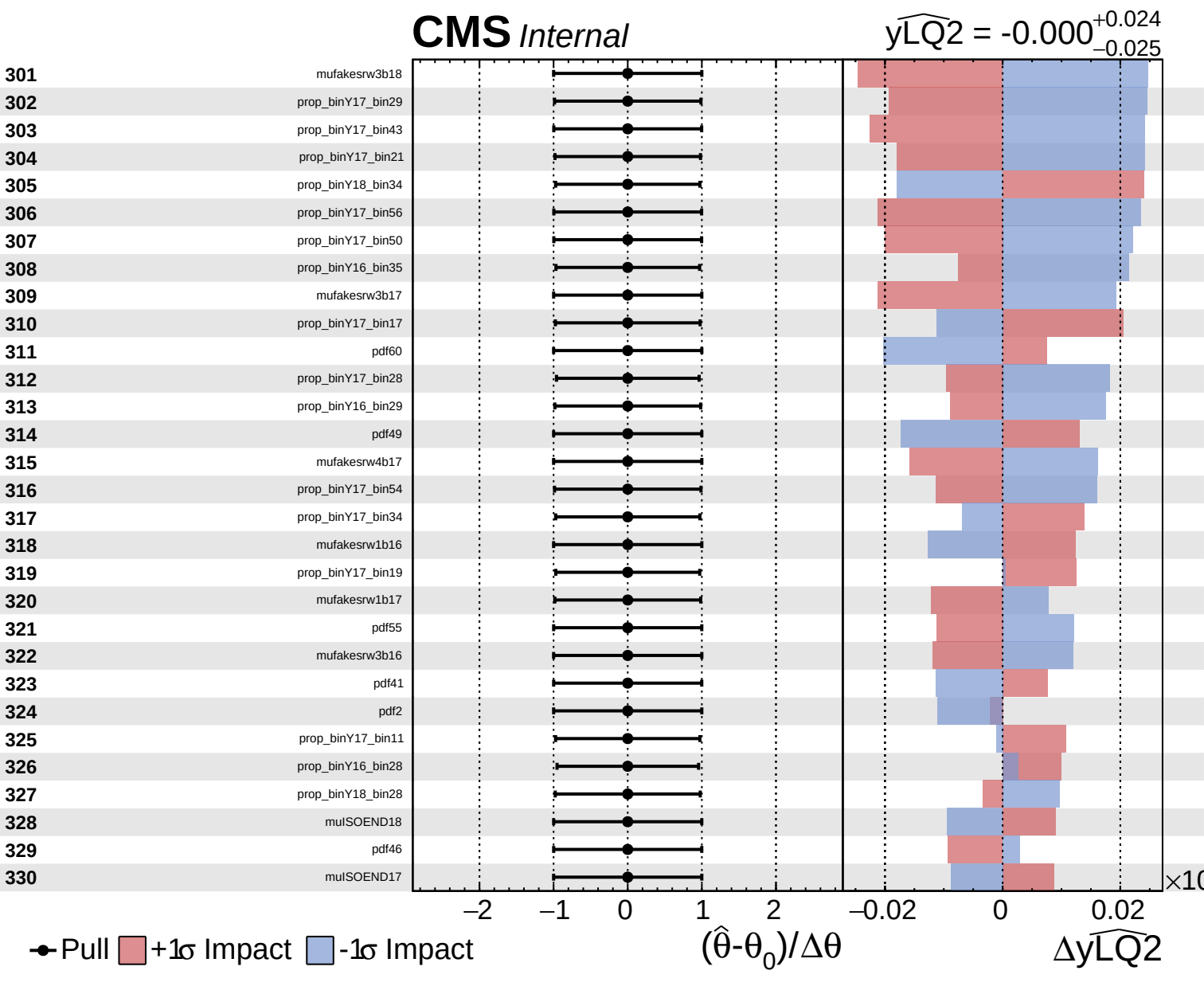

CMS Internal
yLQ2 = -0.000 +0.024 −0.025
151 muFakes17
152 muPref16
153 muISOBAR16
154 prop_binY17_bin13
155 prop_binY18_bin58
156 prop_binY16_bin16
157 prop_binY16_bin27
158 prop_binY18_bin3
159 muHLTBAR16
160 prop_binY18_bin17
161 prop_binY17_bin20
162 prop_binY16_bin7
163 prop_binY17_bin41
164 pdf17
165 muHLTEND18
166 pdf7
167 prop_binY16_bin48
168 muIDEND18
169 prop_binY18_bin38
170 pdf24
171 pdf56
172 prop_binY16_bin26
173 prop_binY17_bin18
174 emucostrw2b16
175 pdf42
176 muISOBAR17
177 pdf50
178 prop_binY18_bin19
179 prop_binY16_bin38
180 pdf6
−2 −1 0 1 2
−0.1 0 0.1
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2

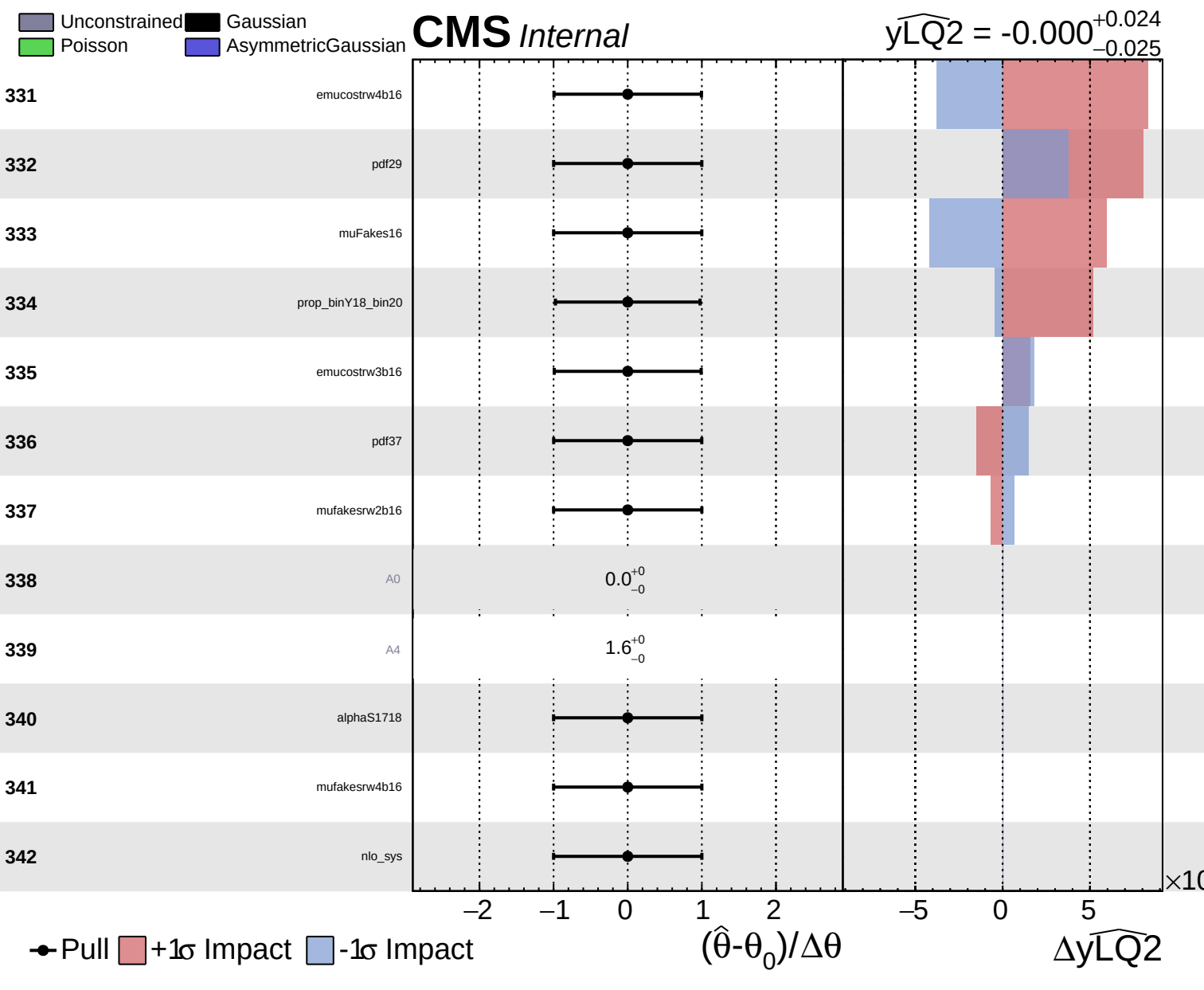

CMS Internal
ŷLQ2 = -0.000 +0.024 −0.025
181 emucostrw4b1718
182 muFakes18
183 muHLTEND17
184 prop_binY16_bin9
185 muHLTBAR17
186 pdf39
187 prop_binY17_bin45
188 pdf1
189 prop_binY18_bin43
190 pdf10
191 pdf51
192 MCStatBin30
193 pdf38
194 prop_binY18_bin44
195 prop_binY18_bin48
196 MCStatBin31
197 emucostrw3b1718
198 prop_binY18_bin57
199 pdf25
200 muISOEND16
201 prop_binY16_bin17
202 pdf40
203 MCStatBin23
204 pdf26
205 prop_binY18_bin37
206 muISOSYS
207 prop_binY17_bin9
208 pdf36
209 MCStatBin24
210 pdf44
×10
−2 −1 0 1 2
−0.1 −0.05 0 0.05 0.1
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


CMS Internal
ŷLQ2 = -0.000 +0.024 −0.025
211 prop_binY16_bin44
212 prop_binY16_bin37
213 prop_binY16_bin57
214 pdf22
215 prop_binY17_bin42
216 prop_binY17_bin2
217 prop_binY17_bin57
218 prop_binY18_bin10
219 prop_binY16_bin43
220 prop_binY18_bin26
221 prop_binY17_bin38
222 prop_binY16_bin42
223 pdf23
224 MCStatBin35
225 prop_binY18_bin49
226 prop_binY18_bin36
227 MCStatBin22
228 prop_binY16_bin32
229 prop_binY16_bin25
230 prop_binY16_bin21
231 prop_binY18_bin56
232 prop_binY17_bin26
233 prop_binY17_bin48
234 prop_binY17_bin32
235 prop_binY16_bin54
236 prop_binY16_bin13
237 prop_binY17_bin3
238 prop_binY16_bin56
239 prop_binY18_bin32
240 pdf45
−2 −1 0 1 2
−0.05 0 0.05
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


CMS Internal
yLQ2 = -0.000 +0.024 −0.025
241 prop_binY16_bin12
242 prop_binY16_bin31
243 prop_binY16_bin36
244 prop_binY18_bin55
245 prop_binY16_bin49
246 MCStatBin29
247 prop_binY16_bin20
248 prop_binY16_bin50
249 prop_binY16_bin24
250 prop_binY16_bin34
251 prop_binY18_bin25
252 prop_binY17_bin37
253 pdf18
254 mufakesrw4b18
255 prop_binY17_bin5
256 prop_binY18_bin27
257 mufakesrw2b18
258 prop_binY18_bin12
259 prop_binY18_bin4
260 prop_binY17_bin25
261 pdf5
262 mufakesrw1b18
263 pdf9
264 prop_binY17_bin4
265 prop_binY16_bin23
266 prop_binY18_bin31
267 prop_binY16_bin55
268 pdf27
269 prop_binY18_bin11
270 prop_binY18_bin22
×10
−2 −1 0 1 2
−0.05 0 0.05
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2


CMS Internal
yLQ2 = -0.000 +0.024 −0.025
271 prop_binY18_bin24
272 MCStatBin21
273 prop_binY16_bin22
274 prop_binY17_bin36
275 prop_binY17_bin55
276 prop_binY18_bin23
277 prop_binY18_bin54
278 prop_binY18_bin35
279 prop_binY18_bin21
280 prop_binY18_bin30
281 prop_binY18_bin18
282 pdf59
283 prop_binY17_bin22
284 pdf53
285 prop_binY17_bin24
286 prop_binY17_bin10
287 mufakesrw2b17
288 prop_binY17_bin23
289 prop_binY17_bin31
290 prop_binY17_bin52
291 prop_binY18_bin51
292 prop_binY16_bin30
293 prop_binY17_bin44
294 prop_binY17_bin49
295 prop_binY18_bin50
296 prop_binY18_bin29
297 prop_binY17_bin30
298 prop_binY17_bin35
299 prop_binY17_bin12
300 prop_binY17_bin51
×10
−2 −1 0 1 2
−0.04 −0.02 0 0.02 0.04
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2


CMS Internal
yLQ2 = -0.000 +0.024 −0.025
301 mufakesrw3b18
302 prop_binY17_bin29
303 prop_binY17_bin43
304 prop_binY17_bin21
305 prop_binY18_bin34
306 prop_binY17_bin56
307 prop_binY17_bin50
308 prop_binY16_bin35
309 mufakesrw3b17
310 prop_binY17_bin17
311 pdf60
312 prop_binY17_bin28
313 prop_binY16_bin29
314 pdf49
315 mufakesrw4b17
316 prop_binY17_bin54
317 prop_binY17_bin34
318 mufakesrw1b16
319 prop_binY17_bin19
320 mufakesrw1b17
321 pdf55
322 mufakesrw3b16
323 pdf41
324 pdf2
325 prop_binY17_bin11
326 prop_binY16_bin28
327 prop_binY18_bin28
328 muISOEND18
329 pdf46
330 muISOEND17
−2 −1 0 1 2
−0.02 0 0.02
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔyLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
yLQ2 = -0.000 +0.024 −0.025
331 emucostrw4b16
332 pdf29
333 muFakes16
334 prop_binY18_bin20
335 emucostrw3b16
336 pdf37
337 mufakesrw2b16
338 A0
0.0 +0 −0
339 A4
1.6 +0 −0
340 alphaS1718
341 mufakesrw4b16
342 nlo_sys
−2 −1 0 1 2
(θ̂-θ0)/Δθ
−5 0 5
ΔyLQ2
×10
Pull
+1σ Impact
-1σ Impact