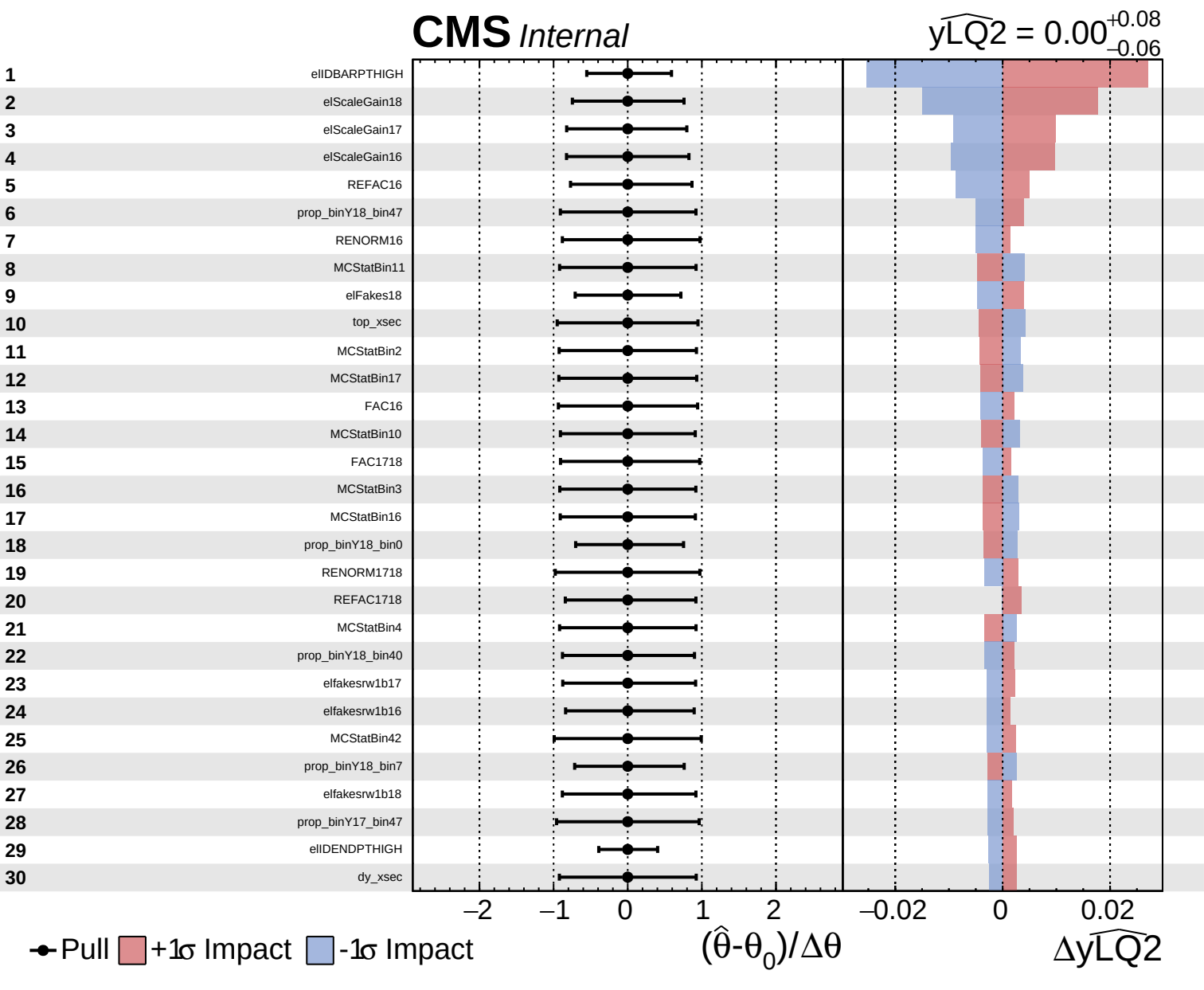
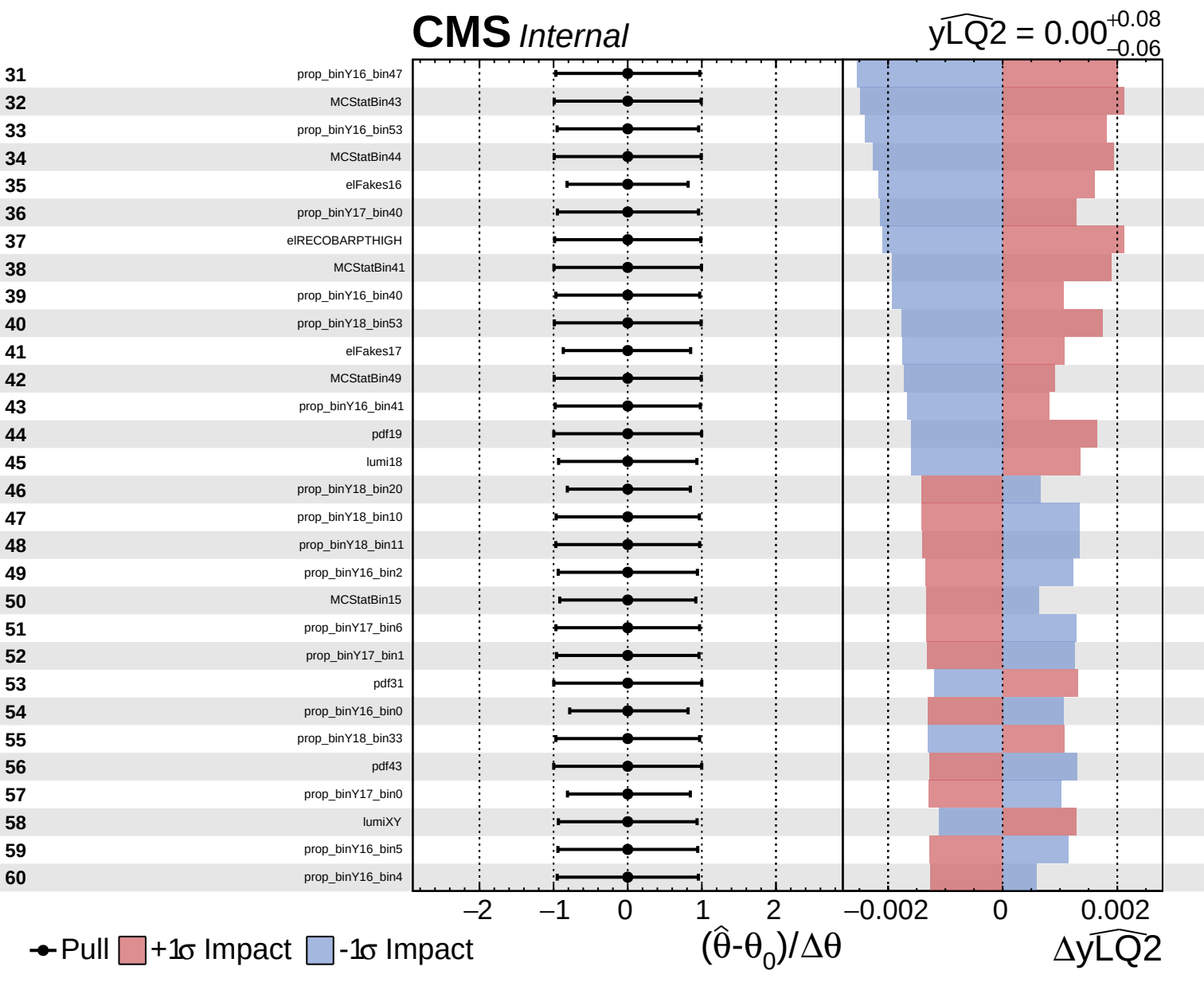
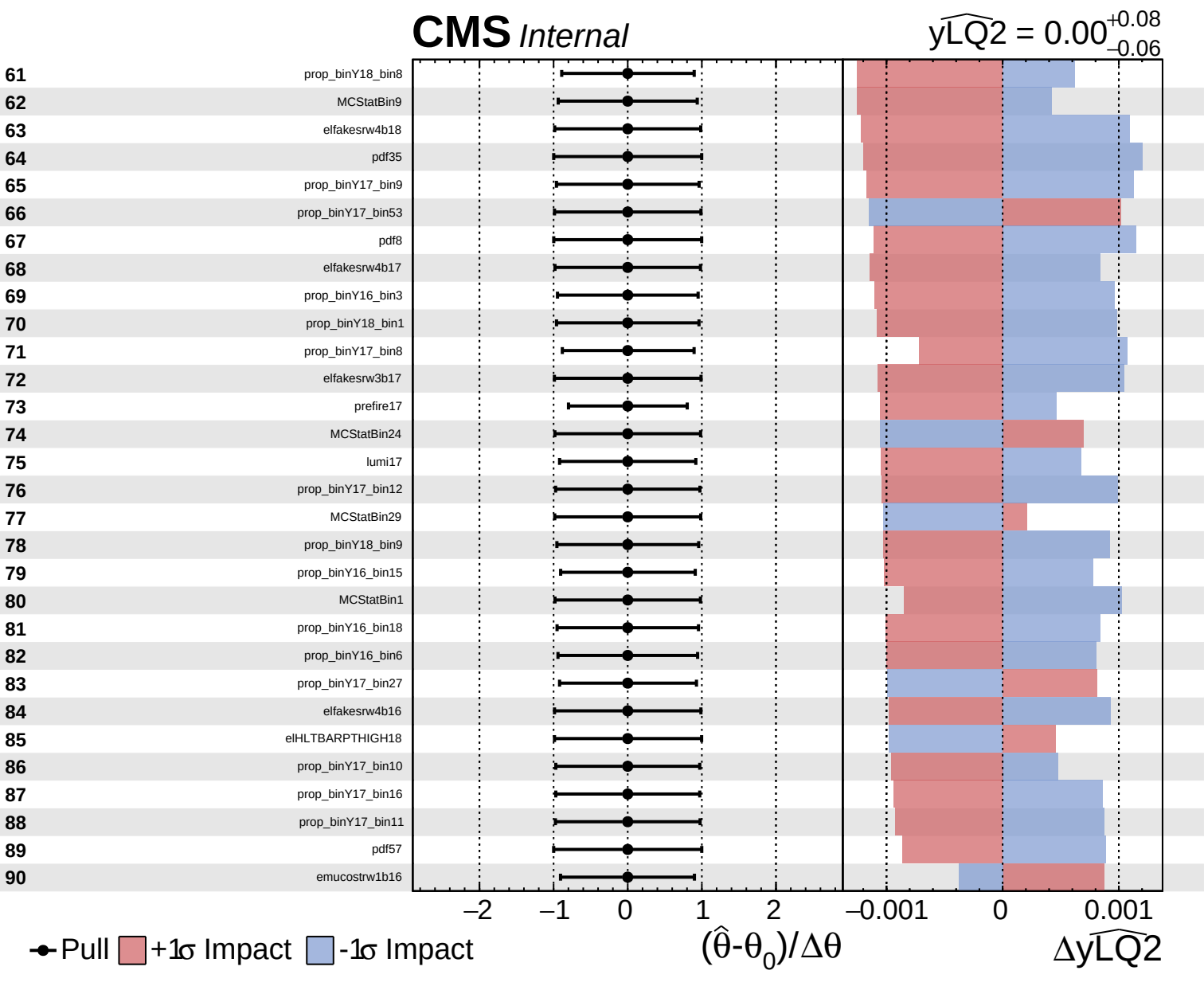
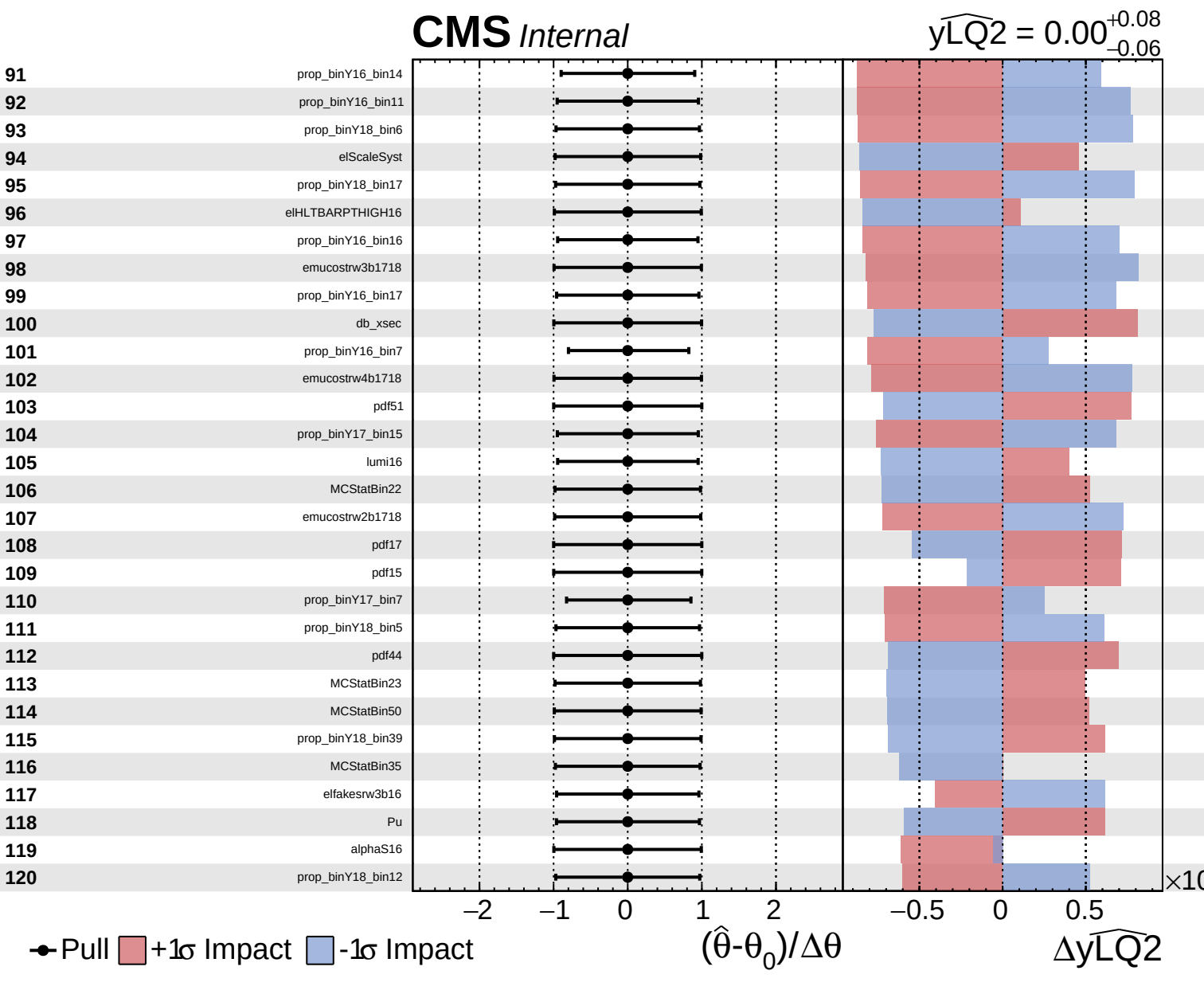
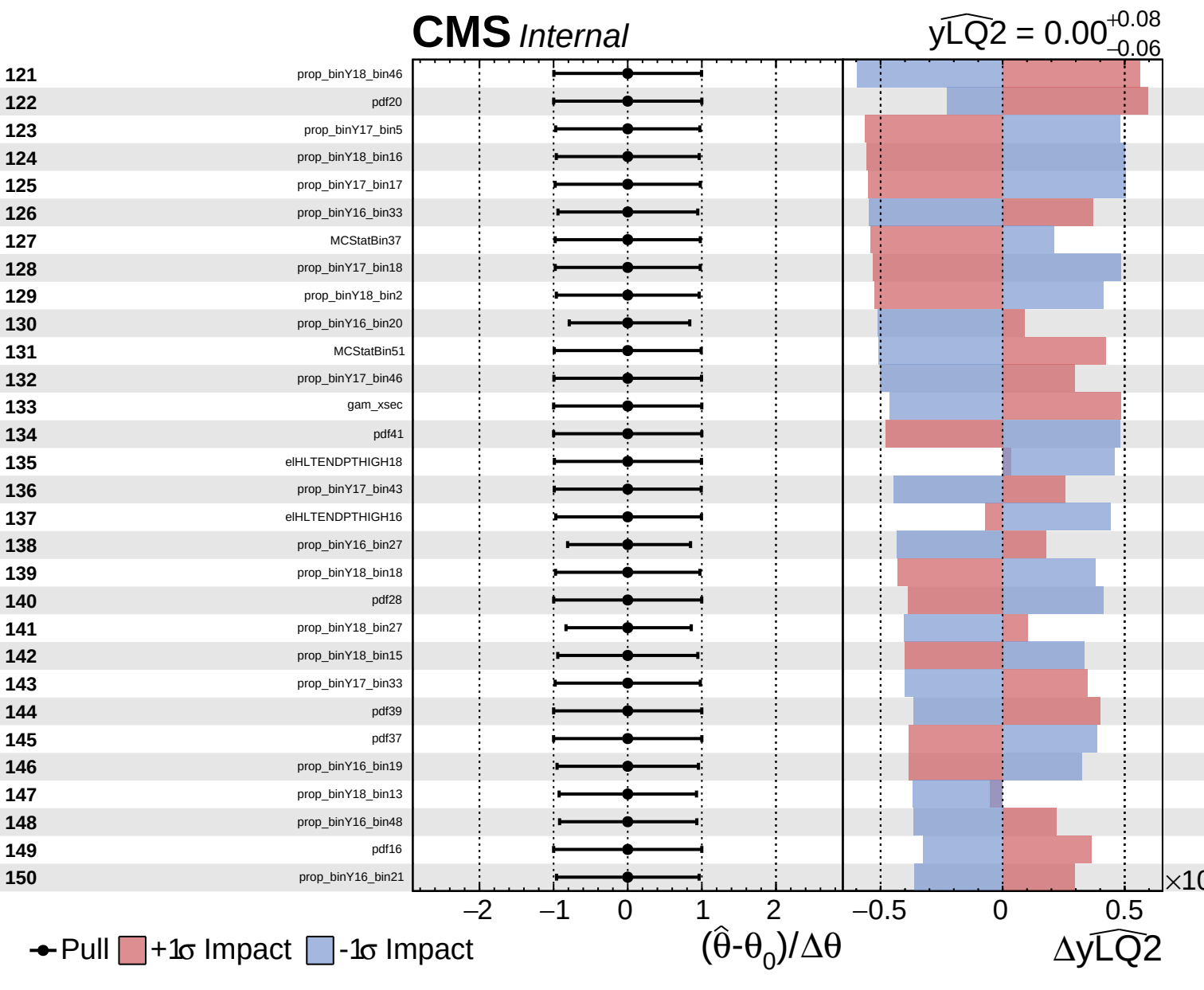
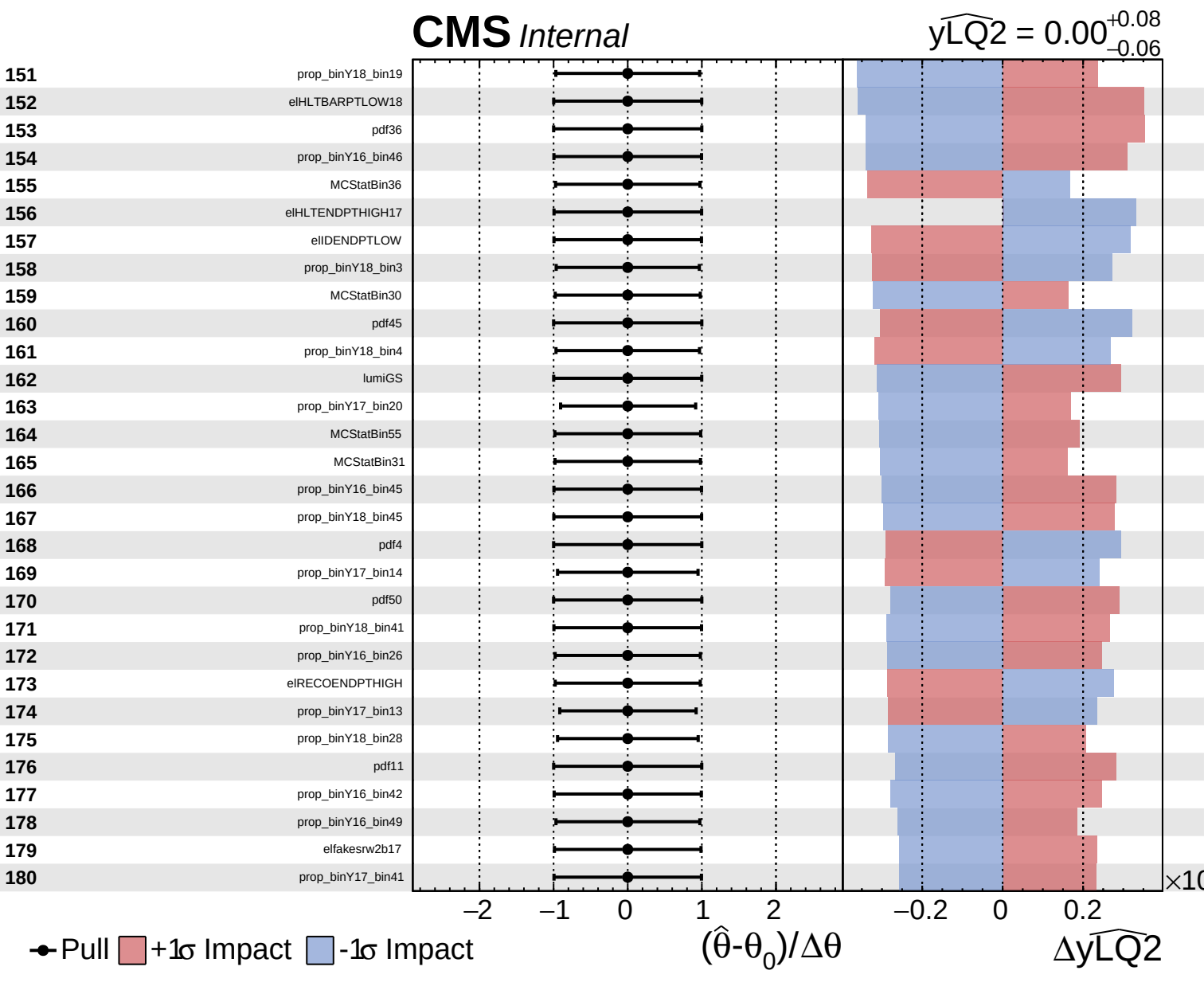

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
1 elIDBARPTHIGH
2 elScaleGain18
3 elScaleGain17
4 elScaleGain16
5 REFAC16
6 prop_binY18_bin47
7 RENORM16
8 MCStatBin11
9 elFakes18
10 top_xsec
11 MCStatBin2
12 MCStatBin17
13 FAC16
14 MCStatBin10
15 FAC1718
16 MCStatBin3
17 MCStatBin16
18 prop_binY18_bin0
19 RENORM1718
20 REFAC1718
21 MCStatBin4
22 prop_binY18_bin40
23 elfakesrw1b17
24 elfakesrw1b16
25 MCStatBin42
26 prop_binY18_bin7
27 elfakesrw1b18
28 prop_binY17_bin47
29 elIDENDPTHIGH
30 dy_xsec
–2 –1 0 1 2
–0.02 0 0.02
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

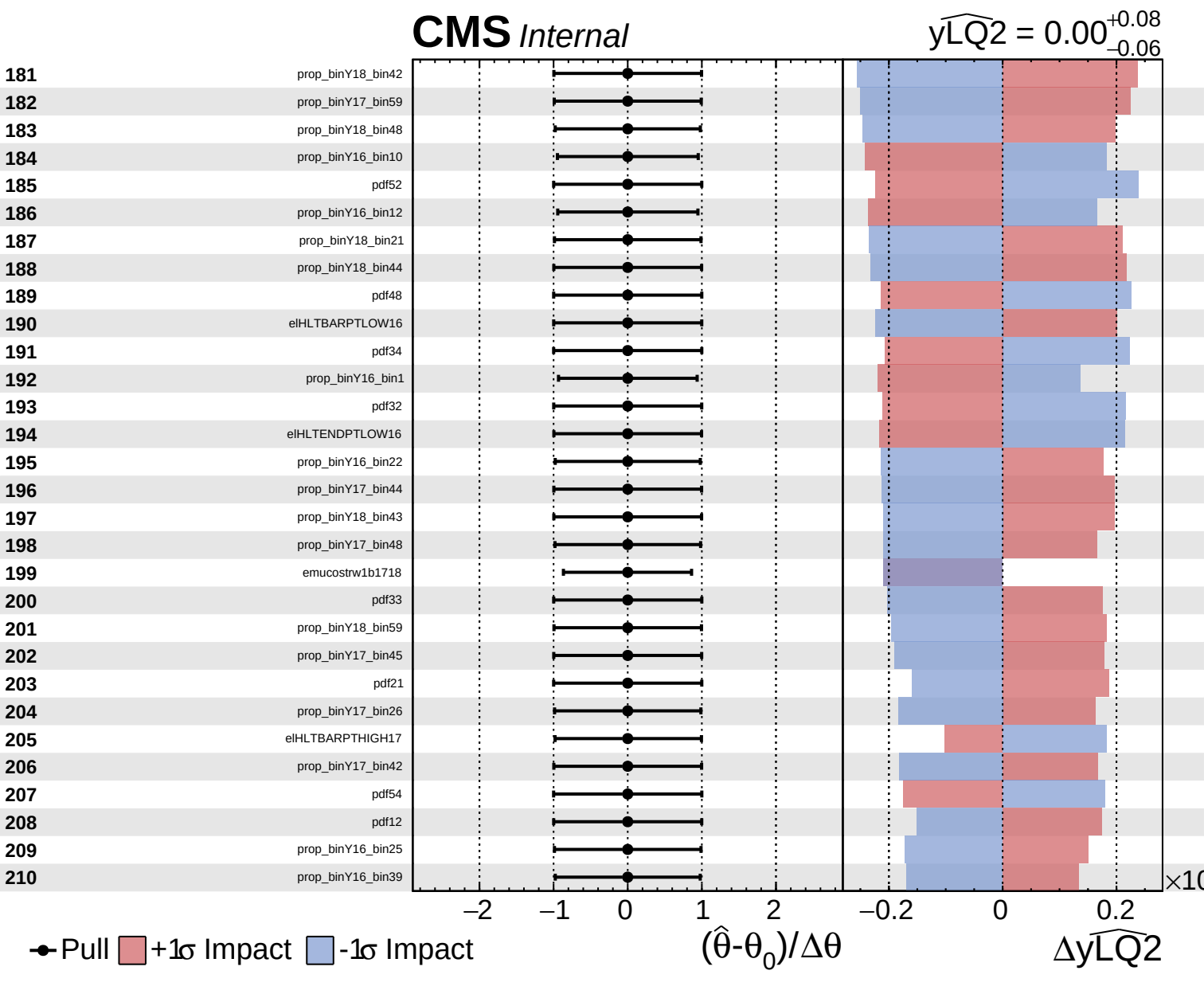

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
31 prop_binY16_bin47
32 MCStatBin43
33 prop_binY16_bin53
34 MCStatBin44
35 elFakes16
36 prop_binY17_bin40
37 elRECOBARPTHIGH
38 MCStatBin41
39 prop_binY16_bin40
40 prop_binY18_bin53
41 elFakes17
42 MCStatBin49
43 prop_binY16_bin41
44 pdf19
45 lumi18
46 prop_binY18_bin20
47 prop_binY18_bin10
48 prop_binY18_bin11
49 prop_binY16_bin2
50 MCStatBin15
51 prop_binY17_bin6
52 prop_binY17_bin1
53 pdf31
54 prop_binY16_bin0
55 prop_binY18_bin33
56 pdf43
57 prop_binY17_bin0
58 lumiXY
59 prop_binY16_bin5
60 prop_binY16_bin4
−2 −1 0 1 2
−0.002 0 0.002
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

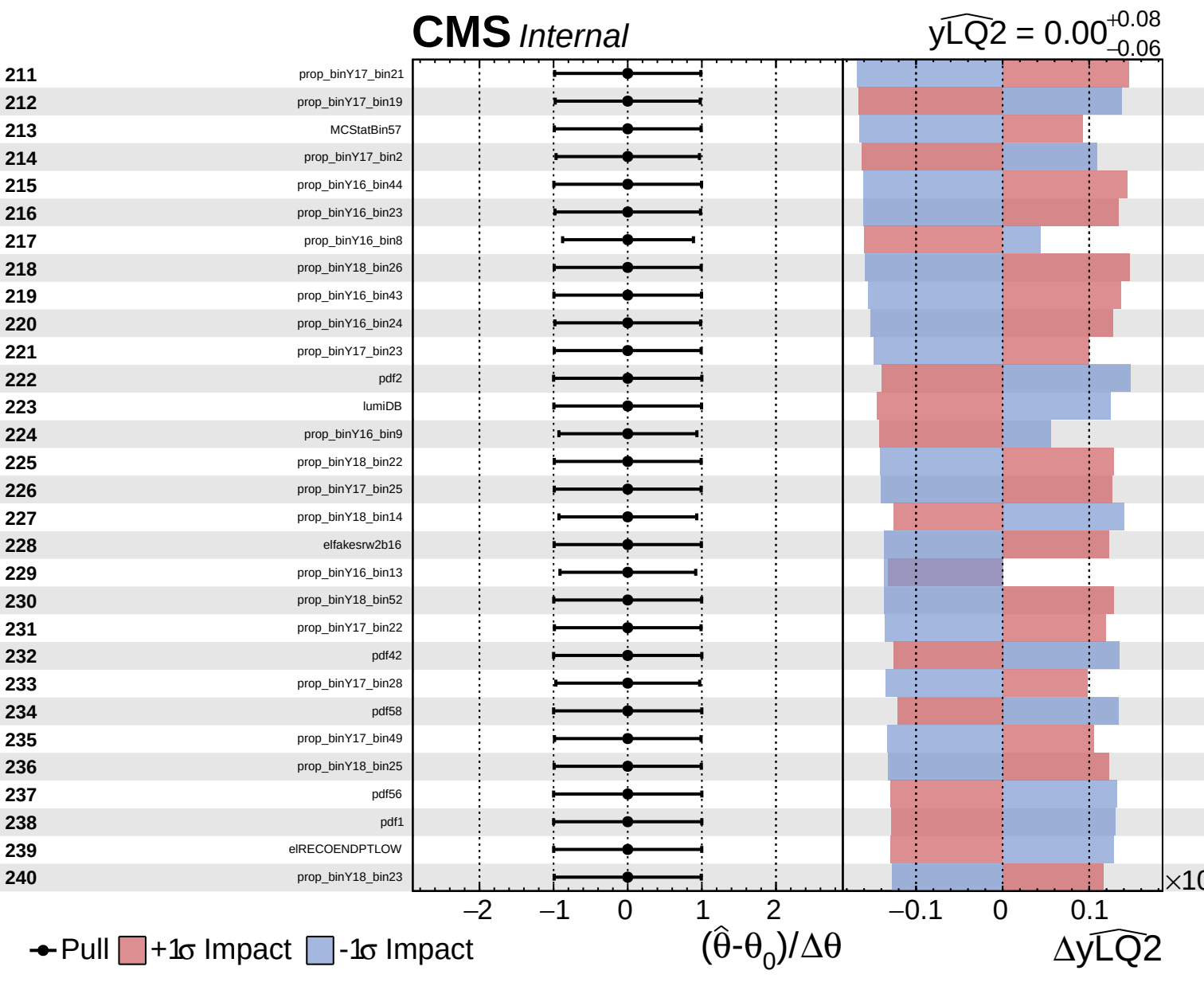

CMS Internal
ŷLQ2 = 0.00 +0.08 −0.06
61 prop_binY18_bin8
62 MCStatBin9
63 elfakesrw4b18
64 pdf35
65 prop_binY17_bin9
66 prop_binY17_bin53
67 pdf8
68 elfakesrw4b17
69 prop_binY16_bin3
70 prop_binY18_bin1
71 prop_binY17_bin8
72 elfakesrw3b17
73 prefire17
74 MCStatBin24
75 lumi17
76 prop_binY17_bin12
77 MCStatBin29
78 prop_binY18_bin9
79 prop_binY16_bin15
80 MCStatBin1
81 prop_binY16_bin18
82 prop_binY16_bin6
83 prop_binY17_bin27
84 elfakesrw4b16
85 elHLTBARPTHIGH18
86 prop_binY17_bin10
87 prop_binY17_bin16
88 prop_binY17_bin11
89 pdf57
90 emucostrw1b16
−2 −1 0 1 2
−0.001 0 0.001
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

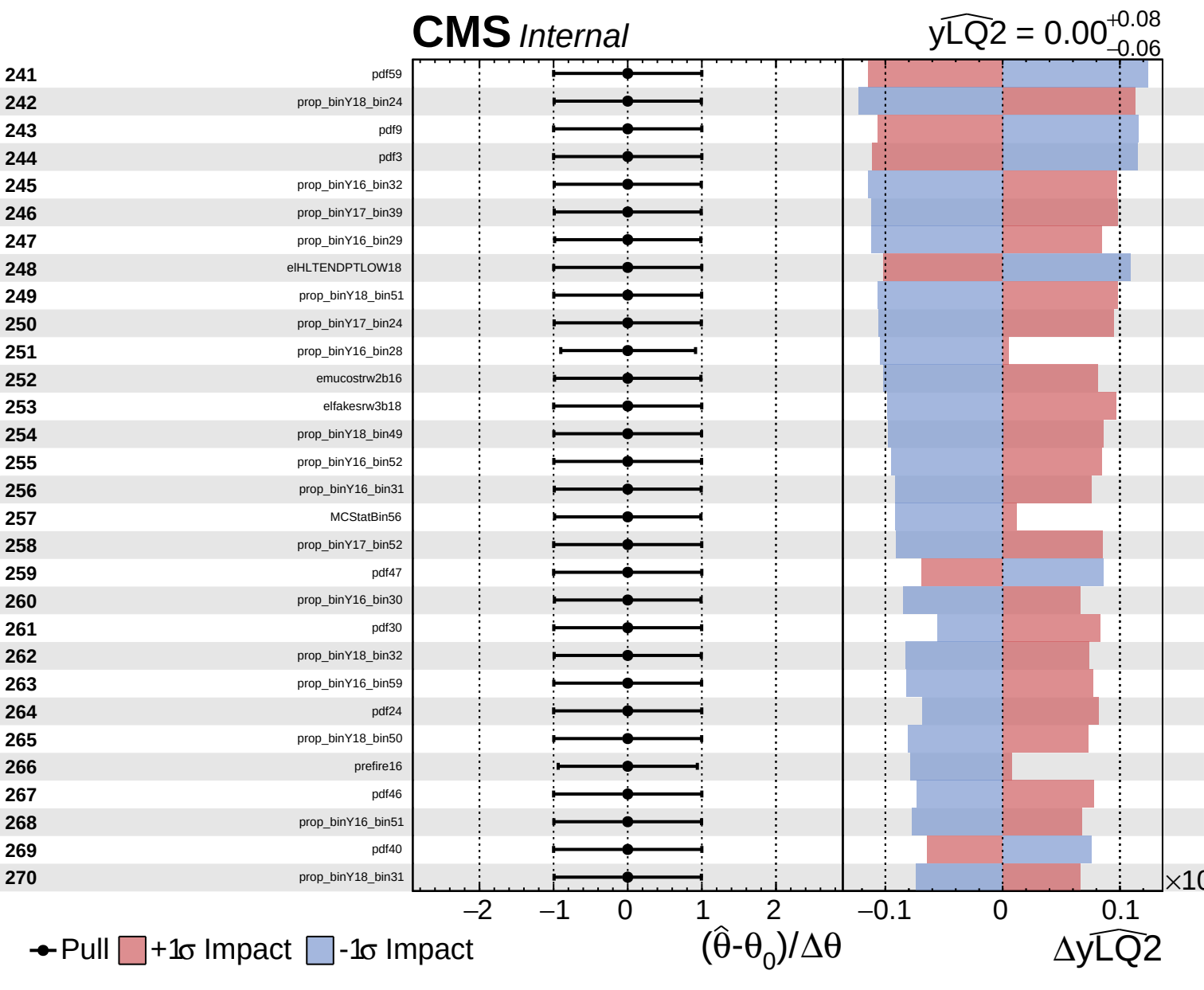

CMS Internal
ŷLQ2 = 0.00 +0.08 −0.06
91 prop_binY16_bin14
92 prop_binY16_bin11
93 prop_binY18_bin6
94 elScaleSyst
95 prop_binY18_bin17
96 elHLTBARPTHIGH16
97 prop_binY16_bin16
98 emucostrw3b1718
99 prop_binY16_bin17
100 db_xsec
101 prop_binY16_bin7
102 emucostrw4b1718
103 pdf51
104 prop_binY17_bin15
105 lumi16
106 MCStatBin22
107 emucostrw2b1718
108 pdf17
109 pdf15
110 prop_binY17_bin7
111 prop_binY18_bin5
112 pdf44
113 MCStatBin23
114 MCStatBin50
115 prop_binY18_bin39
116 MCStatBin35
117 elfakesrw3b16
118 Pu
119 alphaS16
120 prop_binY18_bin12
−2 −1 0 1 2
−0.5 0 0.5
×10
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2

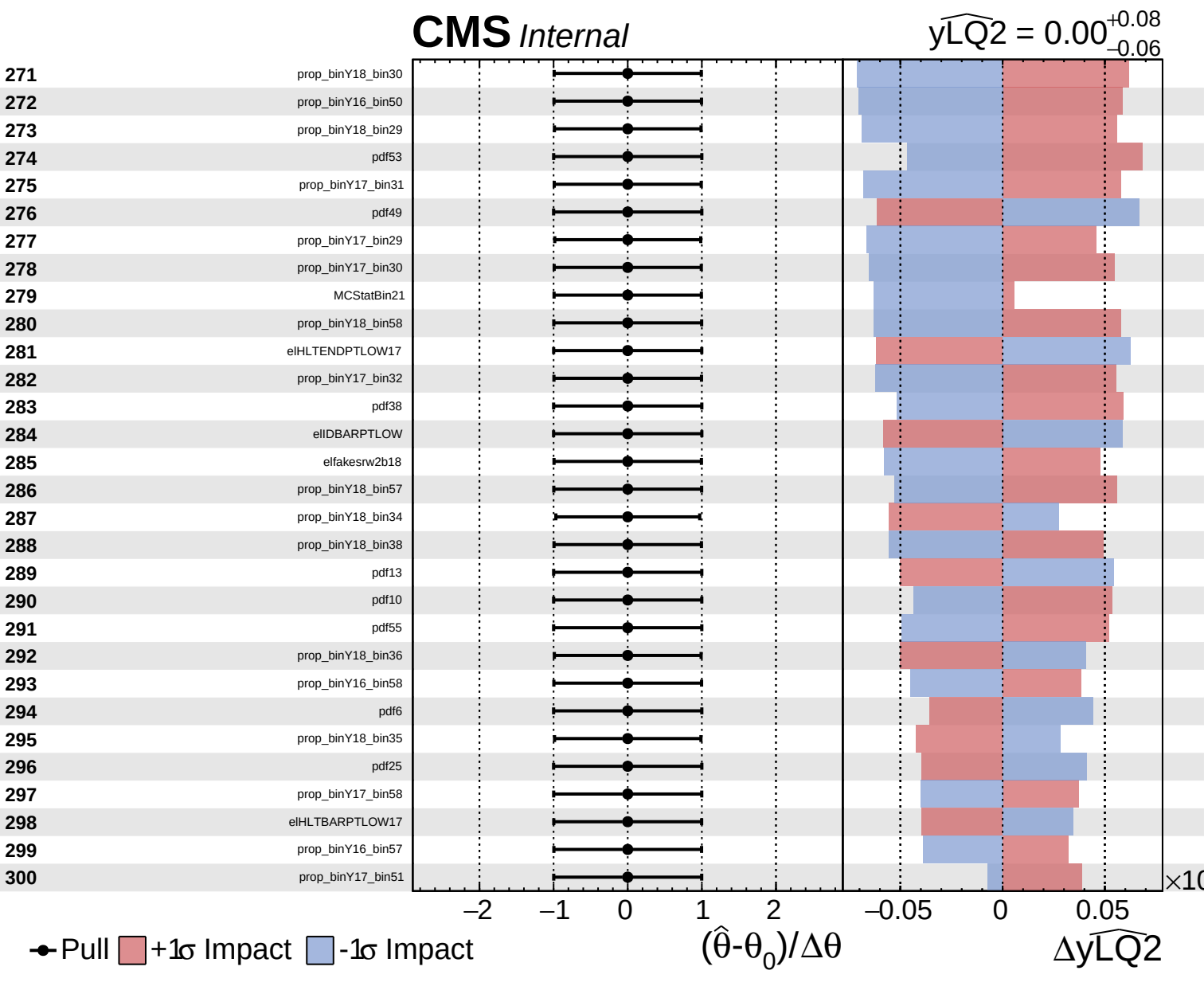

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
121 prop_binY18_bin46
122 pdf20
123 prop_binY17_bin5
124 prop_binY18_bin16
125 prop_binY17_bin17
126 prop_binY16_bin33
127 MCStatBin37
128 prop_binY17_bin18
129 prop_binY18_bin2
130 prop_binY16_bin20
131 MCStatBin51
132 prop_binY17_bin46
133 gam_xsec
134 pdf41
135 elHLTENDPTHIGH18
136 prop_binY17_bin43
137 elHLTENDPTHIGH16
138 prop_binY16_bin27
139 prop_binY18_bin18
140 pdf28
141 prop_binY18_bin27
142 prop_binY18_bin15
143 prop_binY17_bin33
144 pdf39
145 pdf37
146 prop_binY16_bin19
147 prop_binY18_bin13
148 prop_binY16_bin48
149 pdf16
150 prop_binY16_bin21
−2 −1 0 1 2
−0.5 0 0.5
×10
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

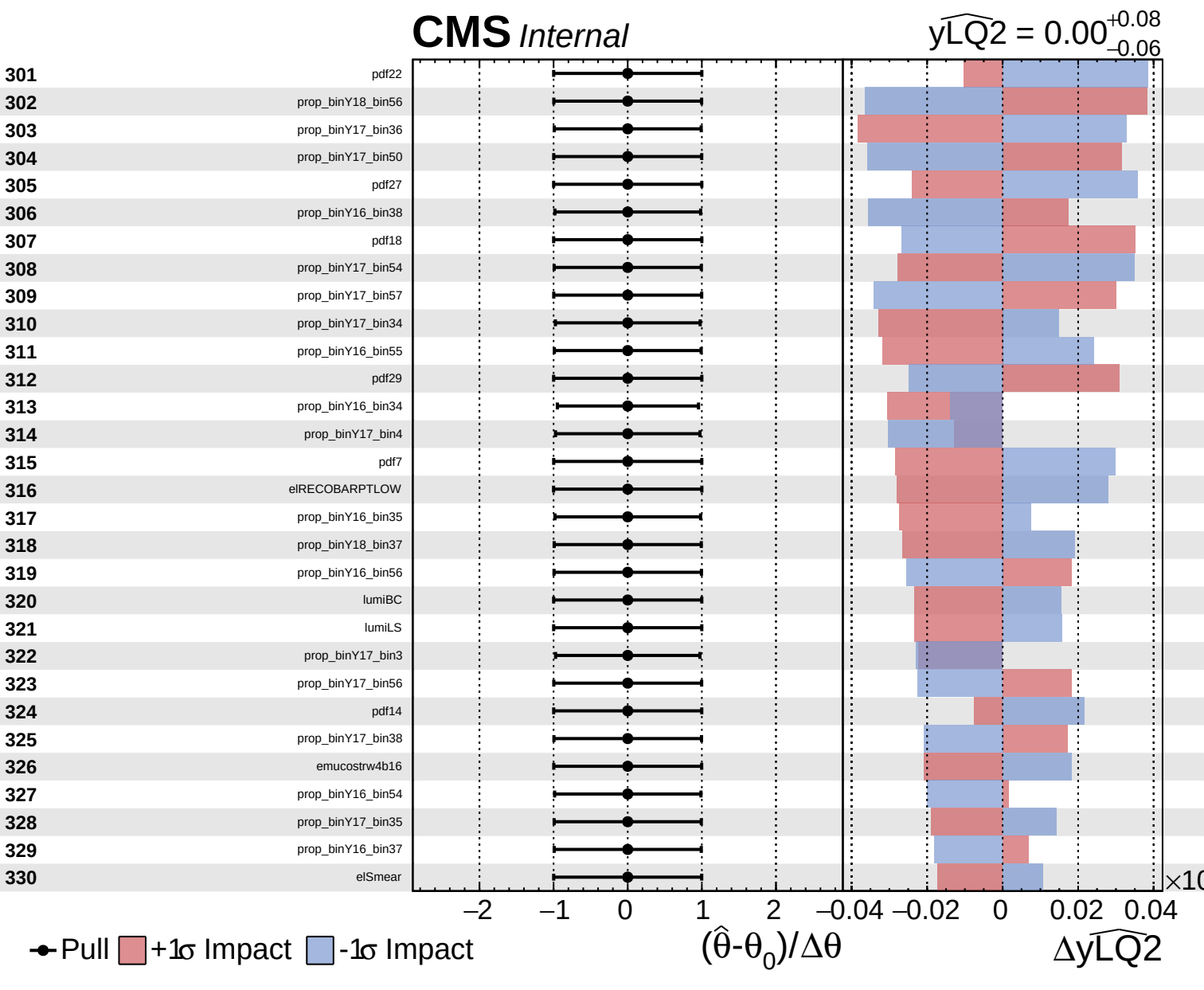

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
151 prop_binY18_bin19
152 elHLTBARPTLOW18
153 pdf36
154 prop_binY16_bin46
155 MCStatBin36
156 elHLTENDPTHIGH17
157 elIDENDPTLOW
158 prop_binY18_bin3
159 MCStatBin30
160 pdf45
161 prop_binY18_bin4
162 lumiGS
163 prop_binY17_bin20
164 MCStatBin55
165 MCStatBin31
166 prop_binY16_bin45
167 prop_binY18_bin45
168 pdf4
169 prop_binY17_bin14
170 pdf50
171 prop_binY18_bin41
172 prop_binY16_bin26
173 elRECOENDPTHIGH
174 prop_binY17_bin13
175 prop_binY18_bin28
176 pdf11
177 prop_binY16_bin42
178 prop_binY16_bin49
179 elfakesrw2b17
180 prop_binY17_bin41
−2 −1 0 1 2
−0.2 0 0.2
×10
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$

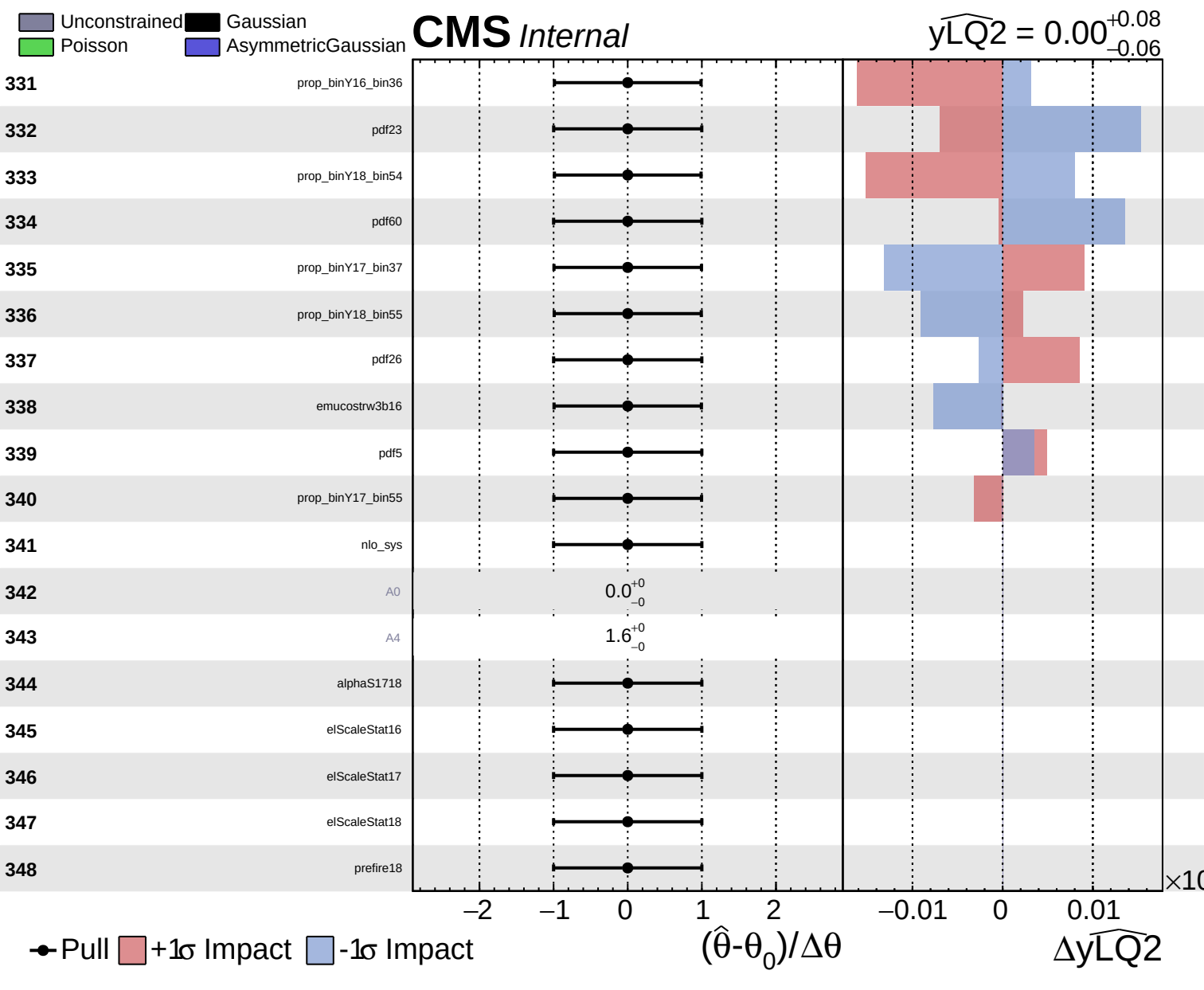

CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
181 prop_binY18_bin42
182 prop_binY17_bin59
183 prop_binY18_bin48
184 prop_binY16_bin10
185 pdf52
186 prop_binY16_bin12
187 prop_binY18_bin21
188 prop_binY18_bin44
189 pdf48
190 elHLTBARPTLOW16
191 pdf34
192 prop_binY16_bin1
193 pdf32
194 elHLTENDPTLOW16
195 prop_binY16_bin22
196 prop_binY17_bin44
197 prop_binY18_bin43
198 prop_binY17_bin48
199 emucostrw1b1718
200 pdf33
201 prop_binY18_bin59
202 prop_binY17_bin45
203 pdf21
204 prop_binY17_bin26
205 elHLTBARPTHIGH17
206 prop_binY17_bin42
207 pdf54
208 pdf12
209 prop_binY16_bin25
210 prop_binY16_bin39
−2 −1 0 1 2
−0.2 0 0.2
×10
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
211 prop_binY17_bin21
212 prop_binY17_bin19
213 MCStatBin57
214 prop_binY17_bin2
215 prop_binY16_bin44
216 prop_binY16_bin23
217 prop_binY16_bin8
218 prop_binY18_bin26
219 prop_binY16_bin43
220 prop_binY16_bin24
221 prop_binY17_bin23
222 pdf2
223 lumiDB
224 prop_binY16_bin9
225 prop_binY18_bin22
226 prop_binY17_bin25
227 prop_binY18_bin14
228 elfakesrw2b16
229 prop_binY16_bin13
230 prop_binY18_bin52
231 prop_binY17_bin22
232 pdf42
233 prop_binY17_bin28
234 pdf58
235 prop_binY17_bin49
236 prop_binY18_bin25
237 pdf56
238 pdf1
239 elRECOENDPTLOW
240 prop_binY18_bin23
−2 −1 0 1 2
−0.1 0 0.1
×10
Pull +1σ Impact -1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$


CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
241 pdf59
242 prop_binY18_bin24
243 pdf9
244 pdf3
245 prop_binY16_bin32
246 prop_binY17_bin39
247 prop_binY16_bin29
248 elHLTENDPTLOW18
249 prop_binY18_bin51
250 prop_binY17_bin24
251 prop_binY16_bin28
252 emucostrw2b16
253 elfakesrw3b18
254 prop_binY18_bin49
255 prop_binY16_bin52
256 prop_binY16_bin31
257 MCStatBin56
258 prop_binY17_bin52
259 pdf47
260 prop_binY16_bin30
261 pdf30
262 prop_binY18_bin32
263 prop_binY16_bin59
264 pdf24
265 prop_binY18_bin50
266 prefire16
267 pdf46
268 prop_binY16_bin51
269 pdf40
270 prop_binY18_bin31
×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
ŷLQ2 = 0.00 +0.08 −0.06
271 prop_binY18_bin30
272 prop_binY16_bin50
273 prop_binY18_bin29
274 pdf53
275 prop_binY17_bin31
276 pdf49
277 prop_binY17_bin29
278 prop_binY17_bin30
279 MCStatBin21
280 prop_binY18_bin58
281 elHLTENDPTLOW17
282 prop_binY17_bin32
283 pdf38
284 elIDBARPTLOW
285 elfakesrw2b18
286 prop_binY18_bin57
287 prop_binY18_bin34
288 prop_binY18_bin38
289 pdf13
290 pdf10
291 pdf55
292 prop_binY18_bin36
293 prop_binY16_bin58
294 pdf6
295 prop_binY18_bin35
296 pdf25
297 prop_binY17_bin58
298 elHLTBARPTLOW17
299 prop_binY16_bin57
300 prop_binY17_bin51
×10
−2 −1 0 1 2
−0.05 0 0.05
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


CMS Internal
ŷLQ2 = 0.00 +0.08 −0.06
301 pdf22
302 prop_binY18_bin56
303 prop_binY17_bin36
304 prop_binY17_bin50
305 pdf27
306 prop_binY16_bin38
307 pdf18
308 prop_binY17_bin54
309 prop_binY17_bin57
310 prop_binY17_bin34
311 prop_binY16_bin55
312 pdf29
313 prop_binY16_bin34
314 prop_binY17_bin4
315 pdf7
316 elRECOBARPTLOW
317 prop_binY16_bin35
318 prop_binY18_bin37
319 prop_binY16_bin56
320 lumiBC
321 lumiLS
322 prop_binY17_bin3
323 prop_binY17_bin56
324 pdf14
325 prop_binY17_bin38
326 emucostrw4b16
327 prop_binY16_bin54
328 prop_binY17_bin35
329 prop_binY16_bin37
330 elSmear
−2 −1 0 1 2
−0.04 −0.02 0 0.02 0.04
×10
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
$\widehat{yLQ2} = 0.00^{+0.08}_{-0.06}$
331 prop_binY16_bin36
332 pdf23
333 prop_binY18_bin54
334 pdf60
335 prop_binY17_bin37
336 prop_binY18_bin55
337 pdf26
338 emucostrw3b16
339 pdf5
340 prop_binY17_bin55
341 nlo_sys
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
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$