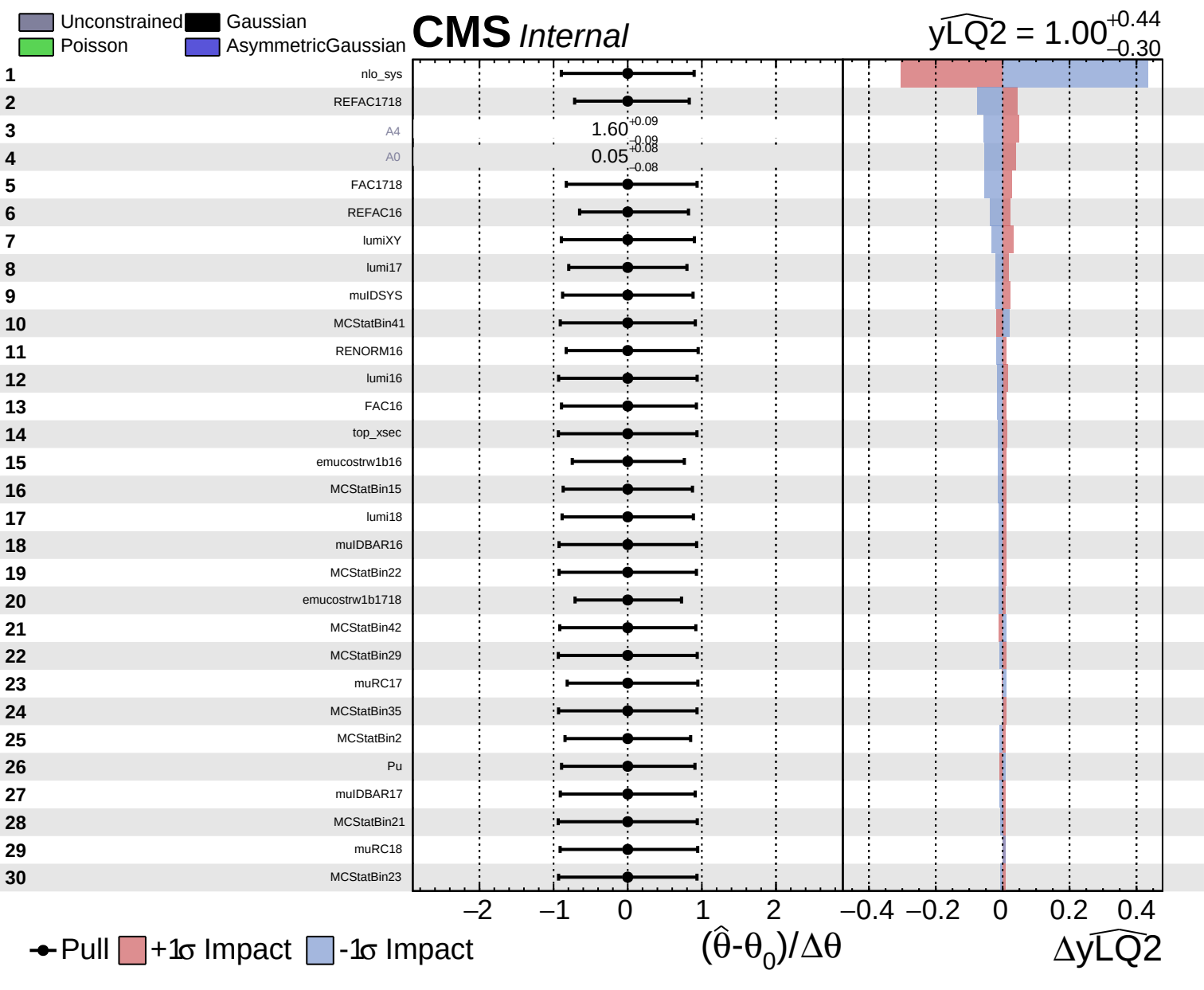
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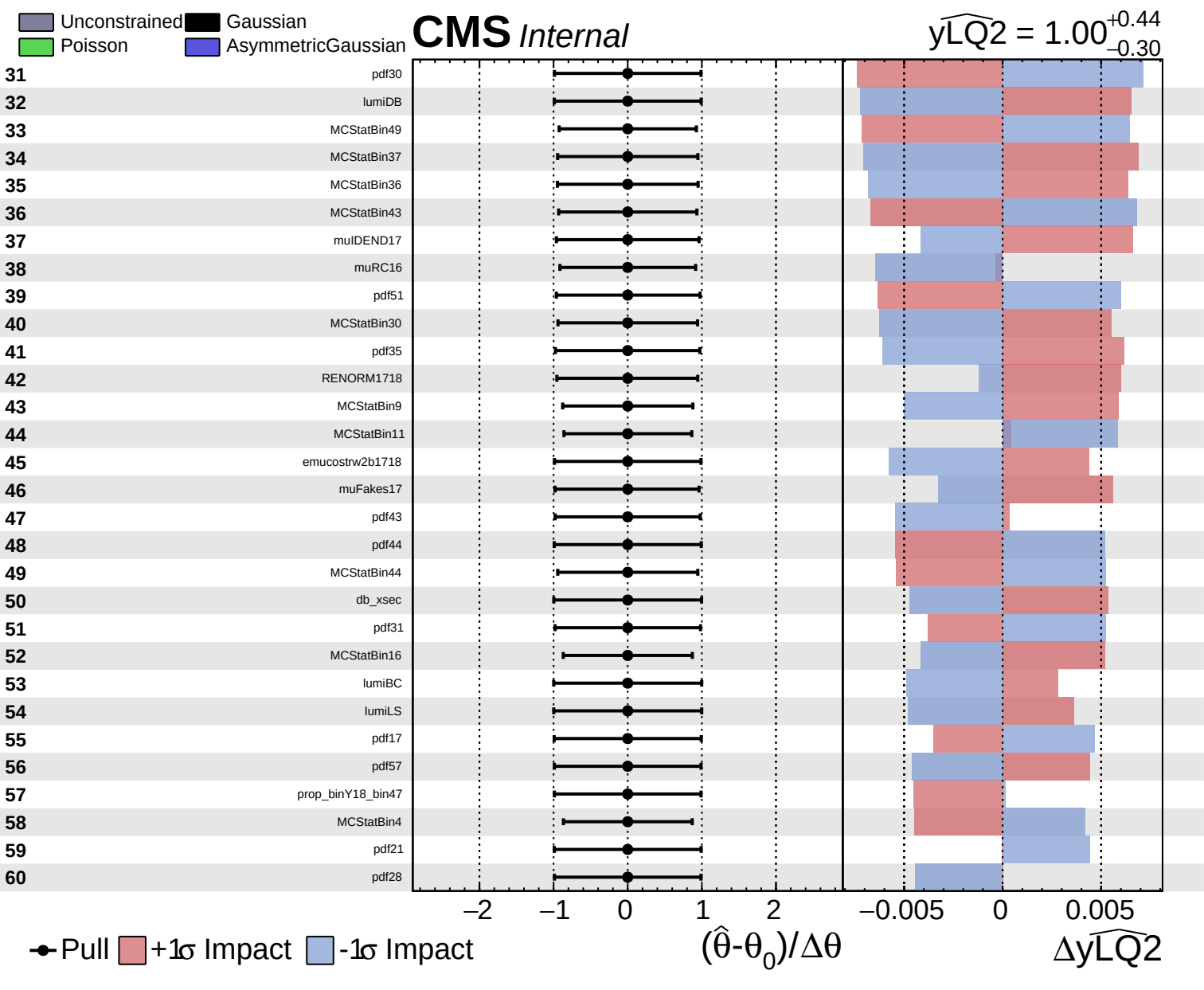
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
$\widehat{yLQ2} = 1.00^{+0.44}_{-0.30}$
1 nlo_sys
2 REFAC1718
3 A4
4 A0
5 FAC1718
6 REFAC16
7 lumiXY
8 lumi17
9 muIDSYS
10 MCStatBin41
11 RENORM16
12 lumi16
13 FAC16
14 top_xsec
15 emucostrw1b16
16 MCStatBin15
17 lumi18
18 muIDBAR16
19 MCStatBin22
20 emucostrw1b1718
21 MCStatBin42
22 MCStatBin29
23 muRC17
24 MCStatBin35
25 MCStatBin2
26 Pu
27 muIDBAR17
28 MCStatBin21
29 muRC18
30 MCStatBin23
$1.60^{+0.09}_{-0.09}$
$0.05^{+0.08}_{-0.08}$
−2 −1 0 1 2
−0.4 −0.2 0 0.2 0.4
Pull
+1σ Impact
-1σ Impact
$(\hat{\theta}-\theta_0)/\Delta\theta$
$\Delta\widehat{yLQ2}$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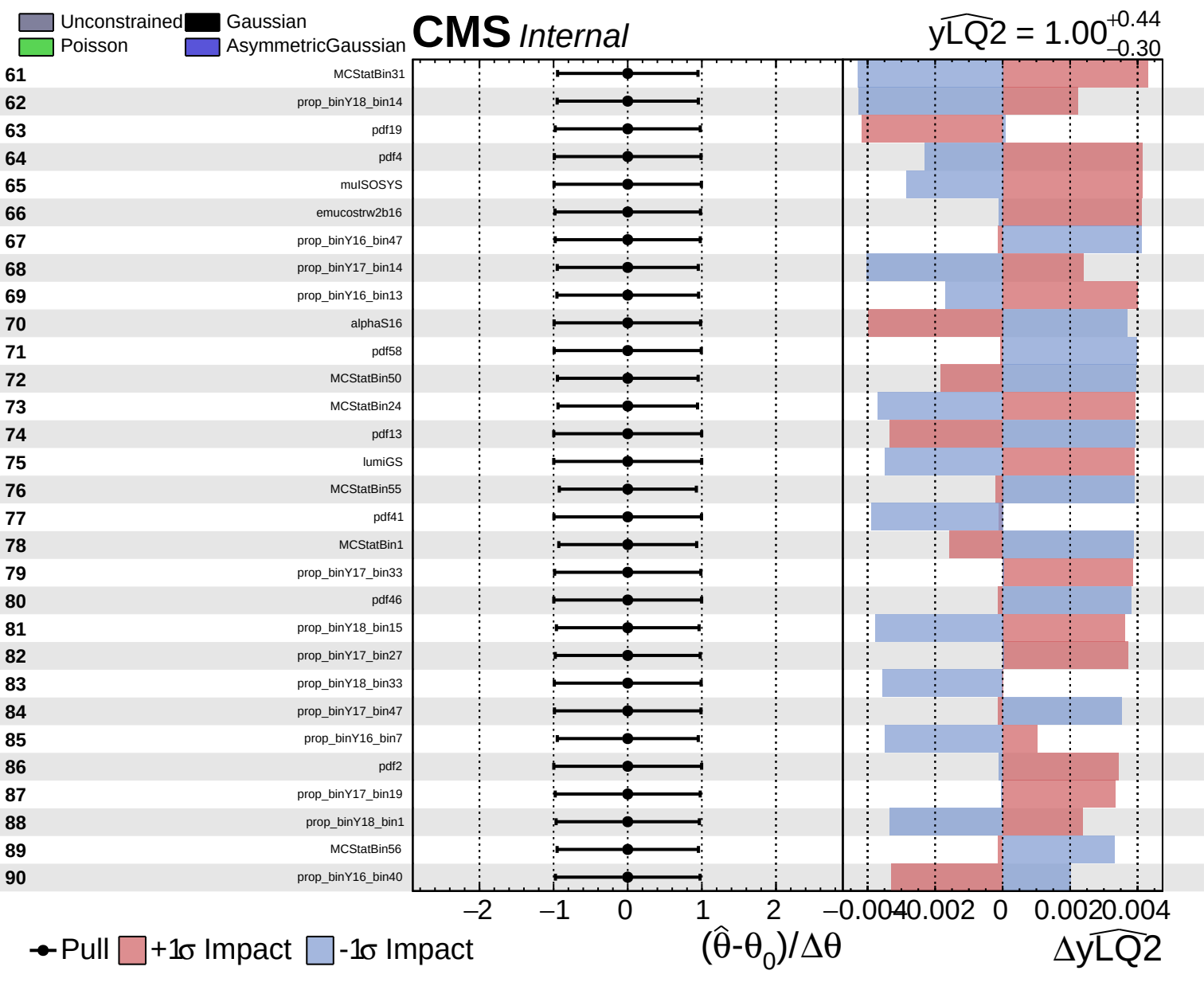
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
31 pdf30
32 lumiDB
33 MCStatBin49
34 MCStatBin37
35 MCStatBin36
36 MCStatBin43
37 muIDEND17
38 muRC16
39 pdf51
40 MCStatBin30
41 pdf35
42 RENORM1718
43 MCStatBin9
44 MCStatBin11
45 emucostrw2b1718
46 muFakes17
47 pdf43
48 pdf44
49 MCStatBin44
50 db_xsec
51 pdf31
52 MCStatBin16
53 lumiBC
54 lumiLS
55 pdf17
56 pdf57
57 prop_binY18_bin47
58 MCStatBin4
59 pdf21
60 pdf28
−2
−1
0
1
2
−0.005
0
0.005
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2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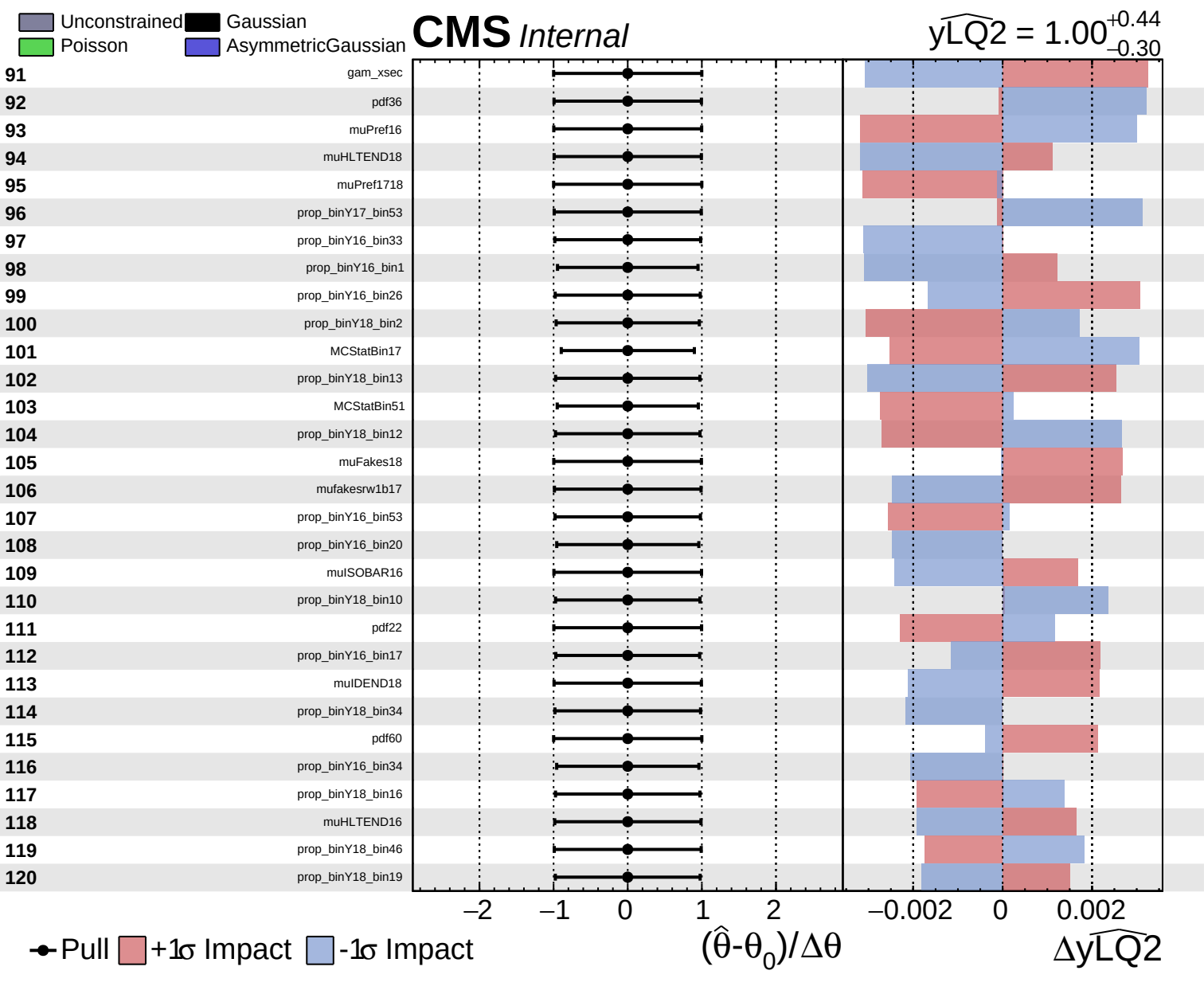
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
61 MCStatBin31
62 prop_binY18_bin14
63 pdf19
64 pdf4
65 muISOSYS
66 emucostrw2b16
67 prop_binY16_bin47
68 prop_binY17_bin14
69 prop_binY16_bin13
70 alphaS16
71 pdf58
72 MCStatBin50
73 MCStatBin24
74 pdf13
75 lumiGS
76 MCStatBin55
77 pdf41
78 MCStatBin1
79 prop_binY17_bin33
80 pdf46
81 prop_binY18_bin15
82 prop_binY17_bin27
83 prop_binY18_bin33
84 prop_binY17_bin47
85 prop_binY16_bin7
86 pdf2
87 prop_binY17_bin19
88 prop_binY18_bin1
89 MCStatBin56
90 prop_binY16_bin40
−2 −1 0 1 2
−0.004 −0.002 0 0.002 0.004
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2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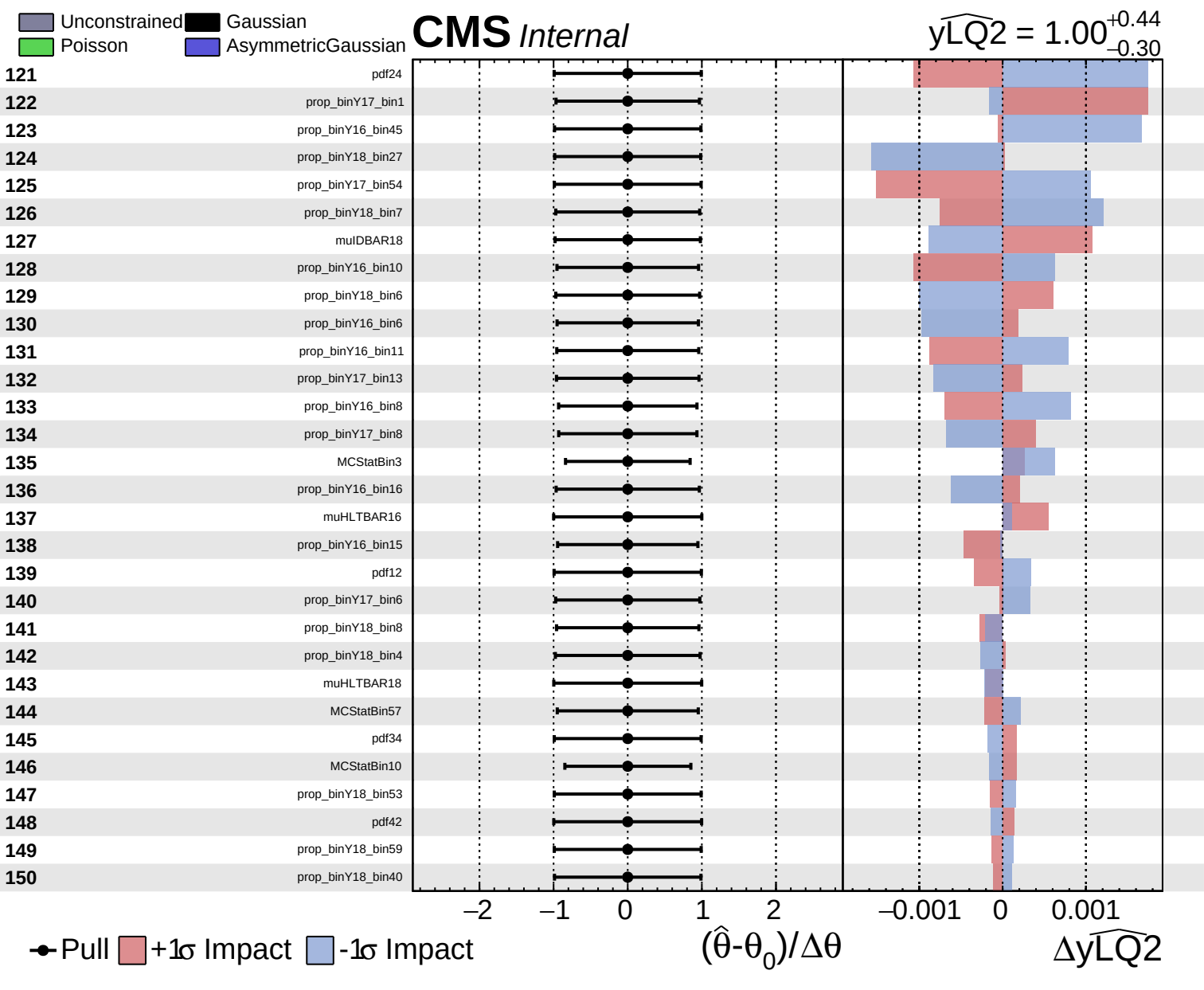
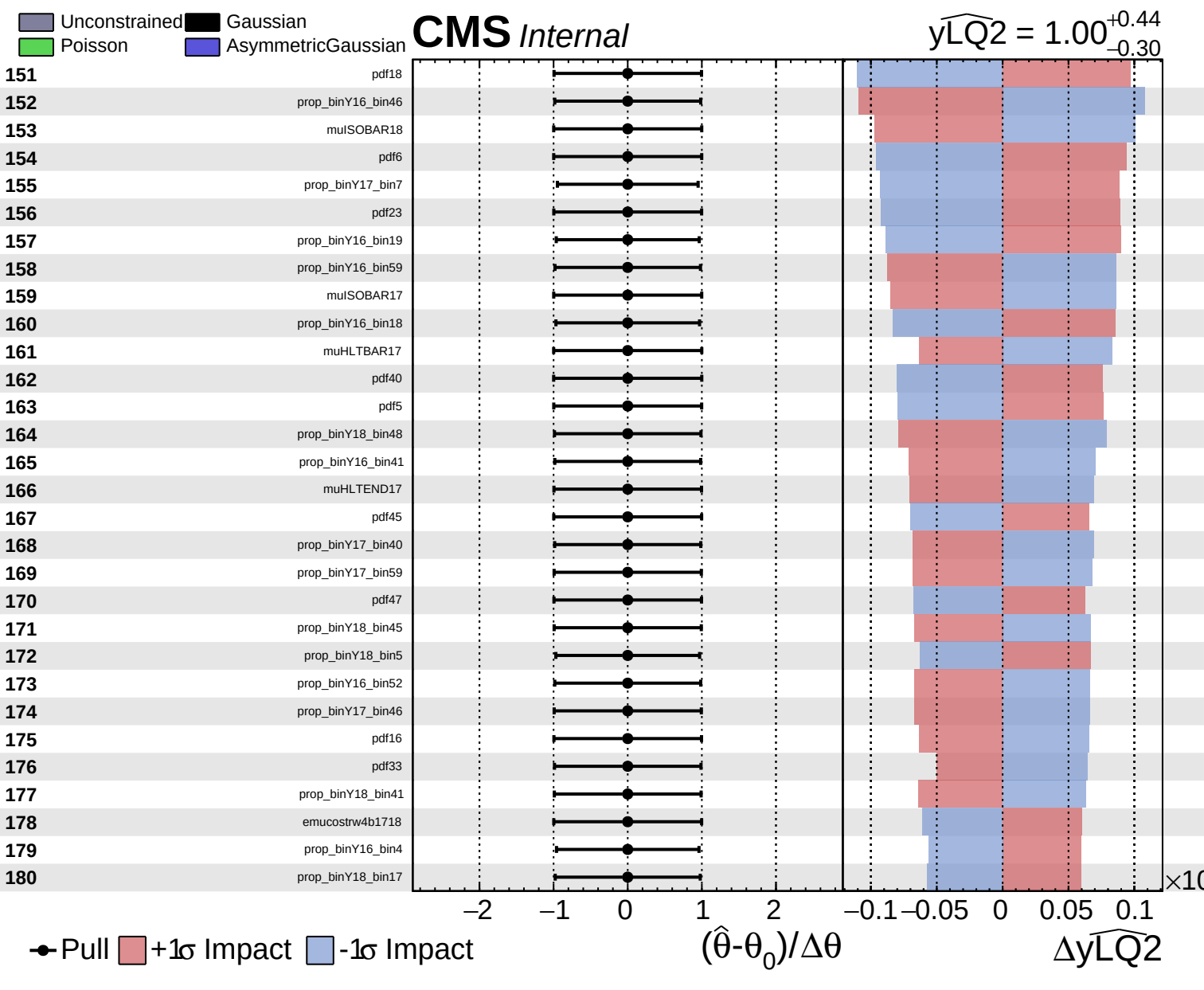
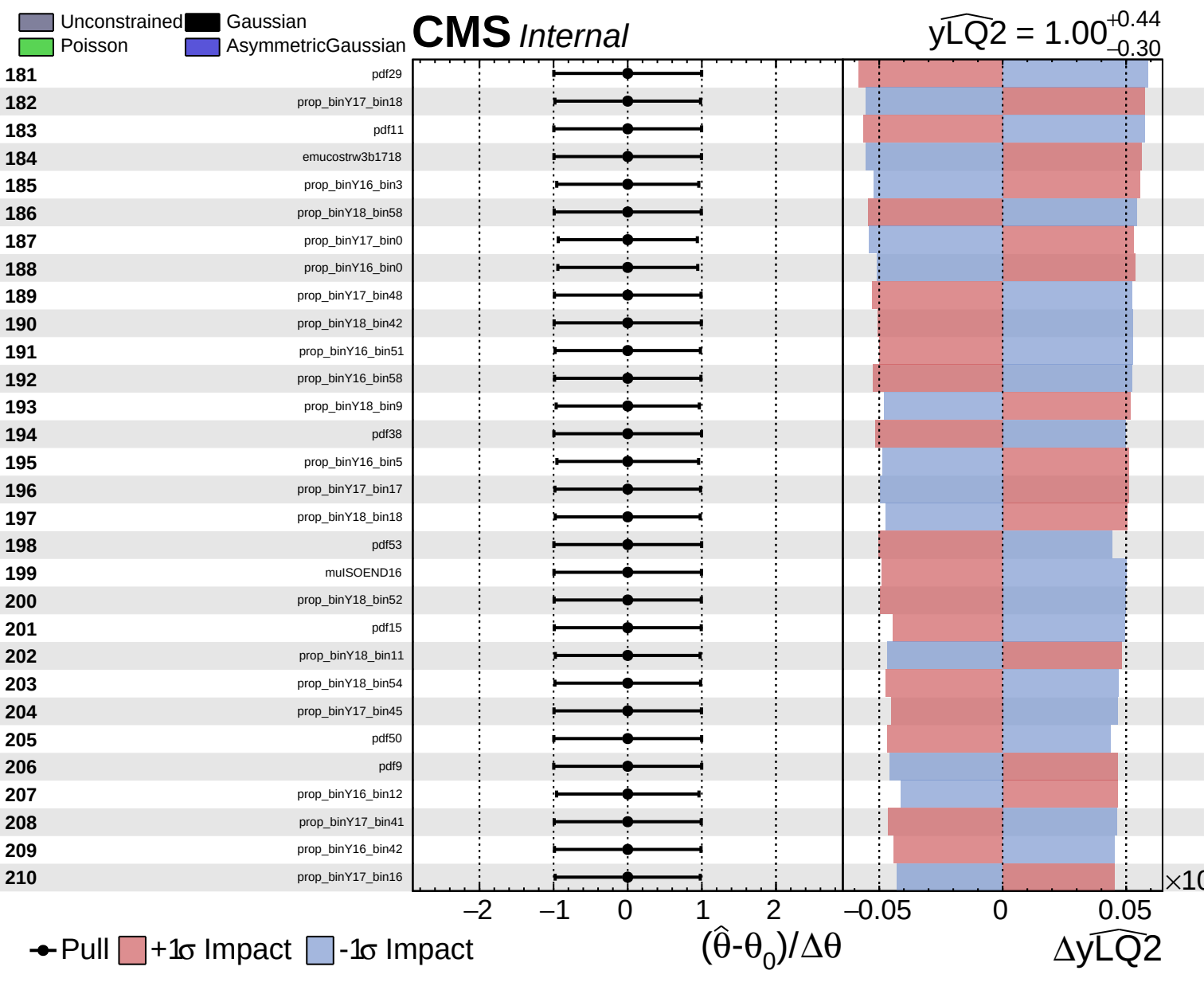
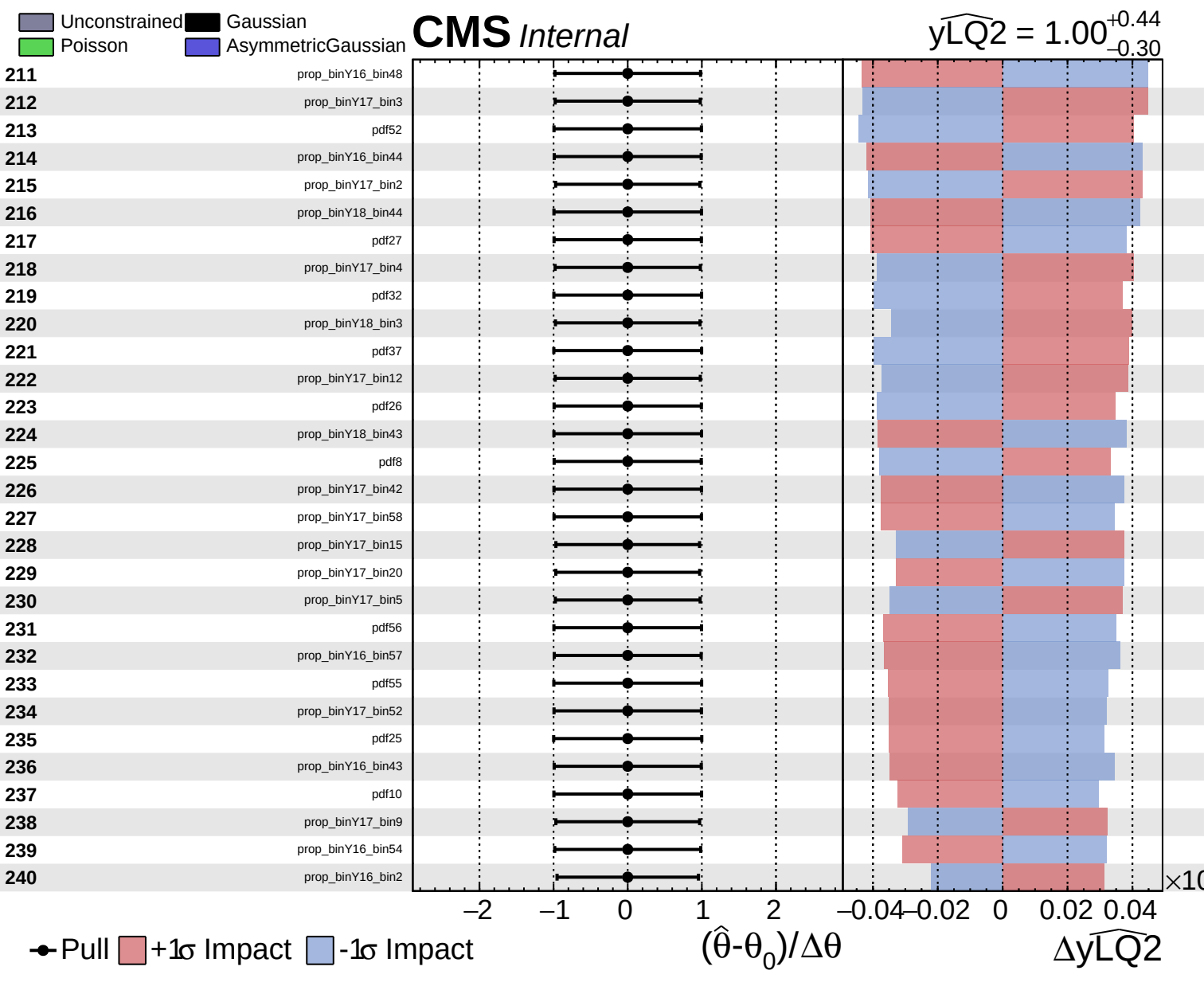
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
91 gam_xsec
92 pdf36
93 muPref16
94 muHLTEND18
95 muPref1718
96 prop_binY17_bin53
97 prop_binY16_bin33
98 prop_binY16_bin1
99 prop_binY16_bin26
100 prop_binY18_bin2
101 MCStatBin17
102 prop_binY18_bin13
103 MCStatBin51
104 prop_binY18_bin12
105 muFakes18
106 mufakesrw1b17
107 prop_binY16_bin53
108 prop_binY16_bin20
109 muISOBAR16
110 prop_binY18_bin10
111 pdf22
112 prop_binY16_bin17
113 muIDEND18
114 prop_binY18_bin34
115 pdf60
116 prop_binY16_bin34
117 prop_binY18_bin16
118 muHLTEND16
119 prop_binY18_bin46
120 prop_binY18_bin19
−2 −1 0 1 2
−0.002 0 0.002
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
121 pdf24
122 prop_binY17_bin1
123 prop_binY16_bin45
124 prop_binY18_bin27
125 prop_binY17_bin54
126 prop_binY18_bin7
127 muIDBAR18
128 prop_binY16_bin10
129 prop_binY18_bin6
130 prop_binY16_bin6
131 prop_binY16_bin11
132 prop_binY17_bin13
133 prop_binY16_bin8
134 prop_binY17_bin8
135 MCStatBin3
136 prop_binY16_bin16
137 muHLTBAR16
138 prop_binY16_bin15
139 pdf12
140 prop_binY17_bin6
141 prop_binY18_bin8
142 prop_binY18_bin4
143 muHLTBAR18
144 MCStatBin57
145 pdf34
146 MCStatBin10
147 prop_binY18_bin53
148 pdf42
149 prop_binY18_bin59
150 prop_binY18_bin40
−2
−1
0
1
2
−0.001
0
0.001
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
151 pdf18
152 prop_binY16_bin46
153 muISOBAR18
154 pdf6
155 prop_binY17_bin7
156 pdf23
157 prop_binY16_bin19
158 prop_binY16_bin59
159 muISOBAR17
160 prop_binY16_bin18
161 muHLTBAR17
162 pdf40
163 pdf5
164 prop_binY18_bin48
165 prop_binY16_bin41
166 muHLTEND17
167 pdf45
168 prop_binY17_bin40
169 prop_binY17_bin59
170 pdf47
171 prop_binY18_bin45
172 prop_binY18_bin5
173 prop_binY16_bin52
174 prop_binY17_bin46
175 pdf16
176 pdf33
177 prop_binY18_bin41
178 emucostrw4b1718
179 prop_binY16_bin4
180 prop_binY18_bin17
×10
−2 −1 0 1 2
−0.1 −0.05 0 0.05 0.1
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
181 pdf29
182 prop_binY17_bin18
183 pdf11
184 emucostrw3b1718
185 prop_binY16_bin3
186 prop_binY18_bin58
187 prop_binY17_bin0
188 prop_binY16_bin0
189 prop_binY17_bin48
190 prop_binY18_bin42
191 prop_binY16_bin51
192 prop_binY16_bin58
193 prop_binY18_bin9
194 pdf38
195 prop_binY16_bin5
196 prop_binY17_bin17
197 prop_binY18_bin18
198 pdf53
199 muISOEND16
200 prop_binY18_bin52
201 pdf15
202 prop_binY18_bin11
203 prop_binY18_bin54
204 prop_binY17_bin45
205 pdf50
206 pdf9
207 prop_binY16_bin12
208 prop_binY17_bin41
209 prop_binY16_bin42
210 prop_binY17_bin16
×10
−2
−1
0
1
2
−0.05
0
0.05
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2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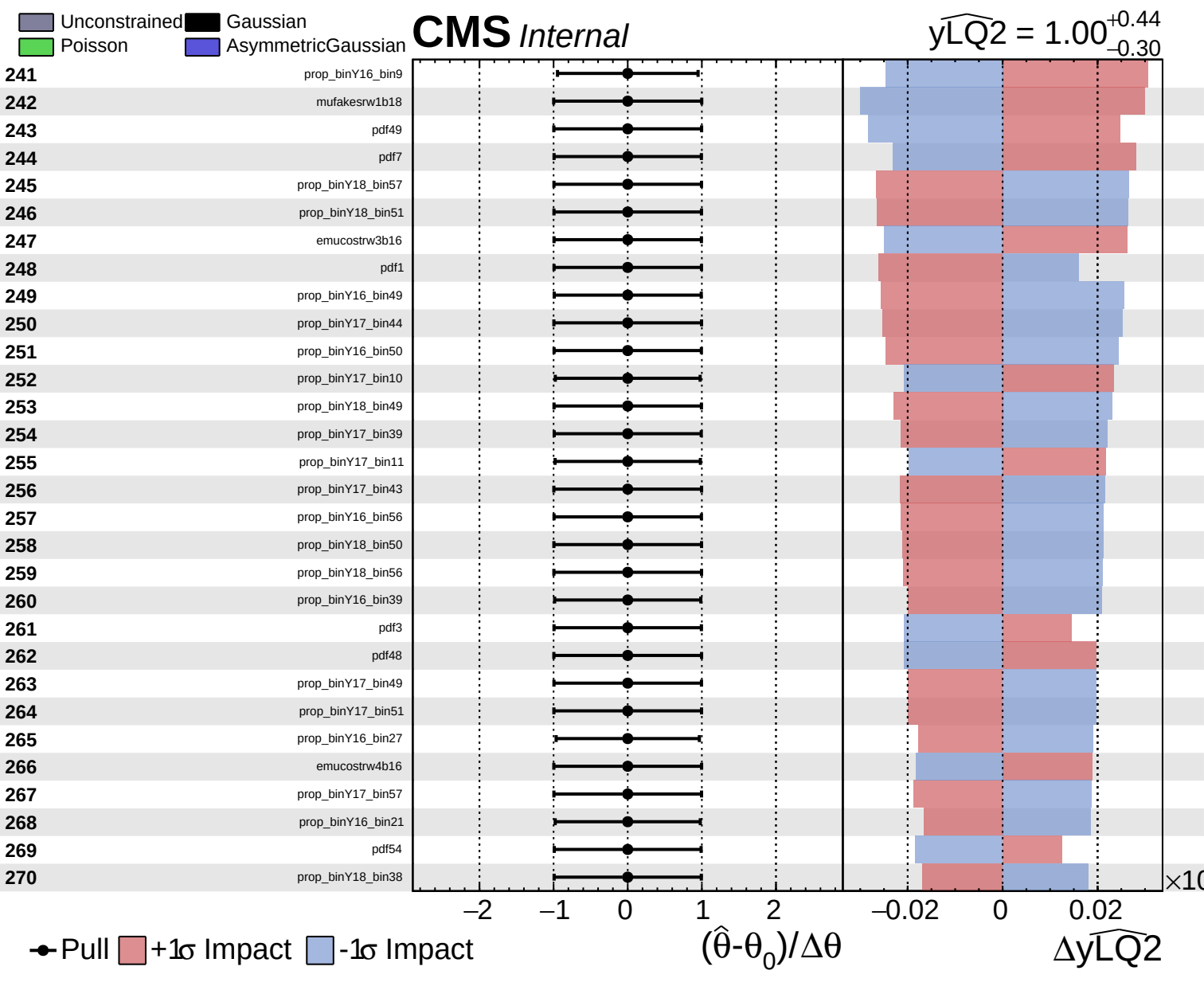
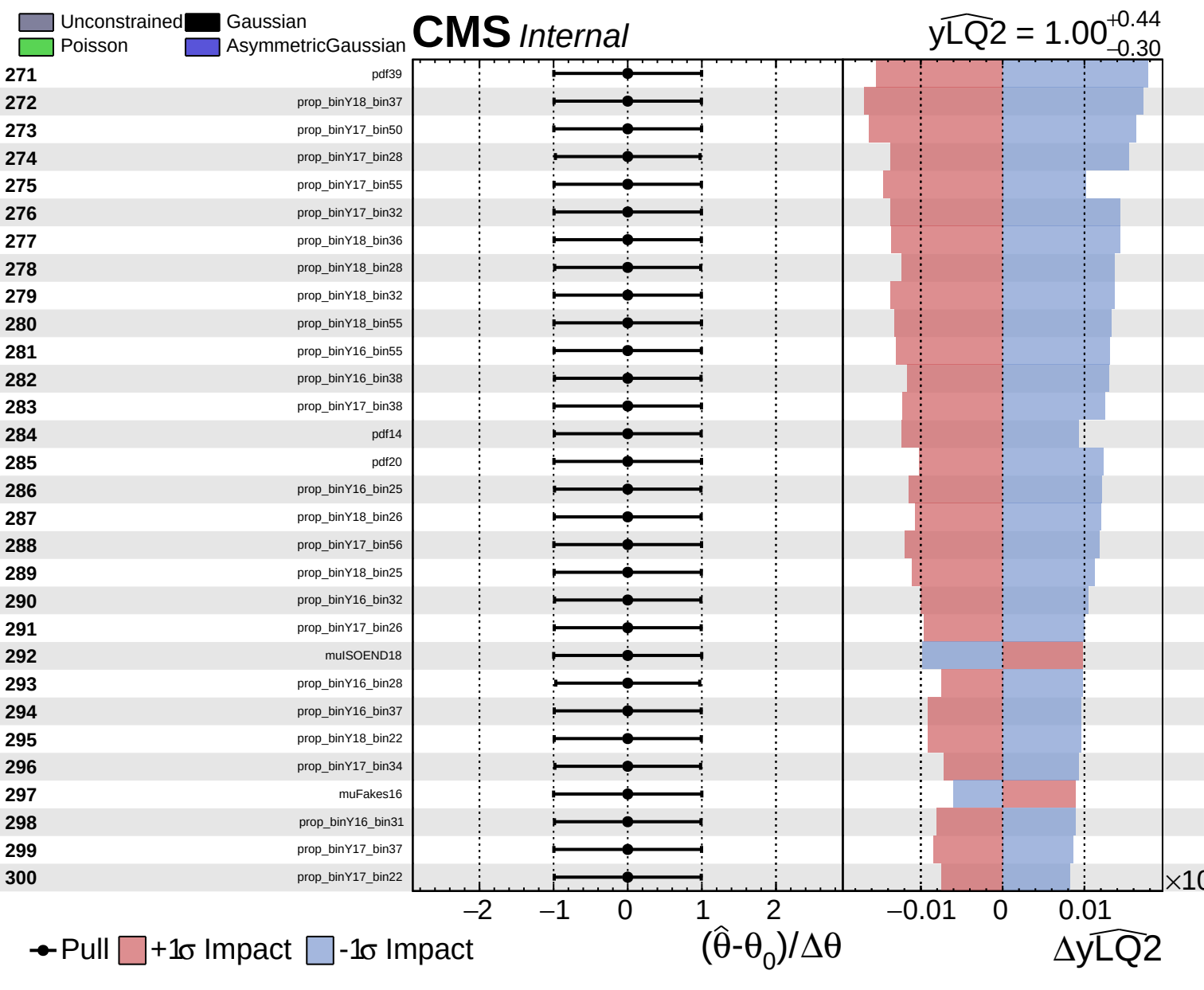
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
211 prop_binY16_bin48
212 prop_binY17_bin3
213 pdf52
214 prop_binY16_bin44
215 prop_binY17_bin2
216 prop_binY18_bin44
217 pdf27
218 prop_binY17_bin4
219 pdf32
220 prop_binY18_bin3
221 pdf37
222 prop_binY17_bin12
223 pdf26
224 prop_binY18_bin43
225 pdf8
226 prop_binY17_bin42
227 prop_binY17_bin58
228 prop_binY17_bin15
229 prop_binY17_bin20
230 prop_binY17_bin5
231 pdf56
232 prop_binY16_bin57
233 pdf55
234 prop_binY17_bin52
235 pdf25
236 prop_binY16_bin43
237 pdf10
238 prop_binY17_bin9
239 prop_binY16_bin54
240 prop_binY16_bin2
×10
−2 −1 0 1 2
−0.04 −0.02 0 0.02 0.04
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2


Unconstrained
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
241 prop_binY16_bin9
242 mufakesrw1b18
243 pdf49
244 pdf7
245 prop_binY18_bin57
246 prop_binY18_bin51
247 emucostrw3b16
248 pdf1
249 prop_binY16_bin49
250 prop_binY17_bin44
251 prop_binY16_bin50
252 prop_binY17_bin10
253 prop_binY18_bin49
254 prop_binY17_bin39
255 prop_binY17_bin11
256 prop_binY17_bin43
257 prop_binY16_bin56
258 prop_binY18_bin50
259 prop_binY18_bin56
260 prop_binY16_bin39
261 pdf3
262 pdf48
263 prop_binY17_bin49
264 prop_binY17_bin51
265 prop_binY16_bin27
266 emucostrw4b16
267 prop_binY17_bin57
268 prop_binY16_bin21
269 pdf54
270 prop_binY18_bin38
×10
−2
−1
0
1
2
−0.02
0
0.02
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2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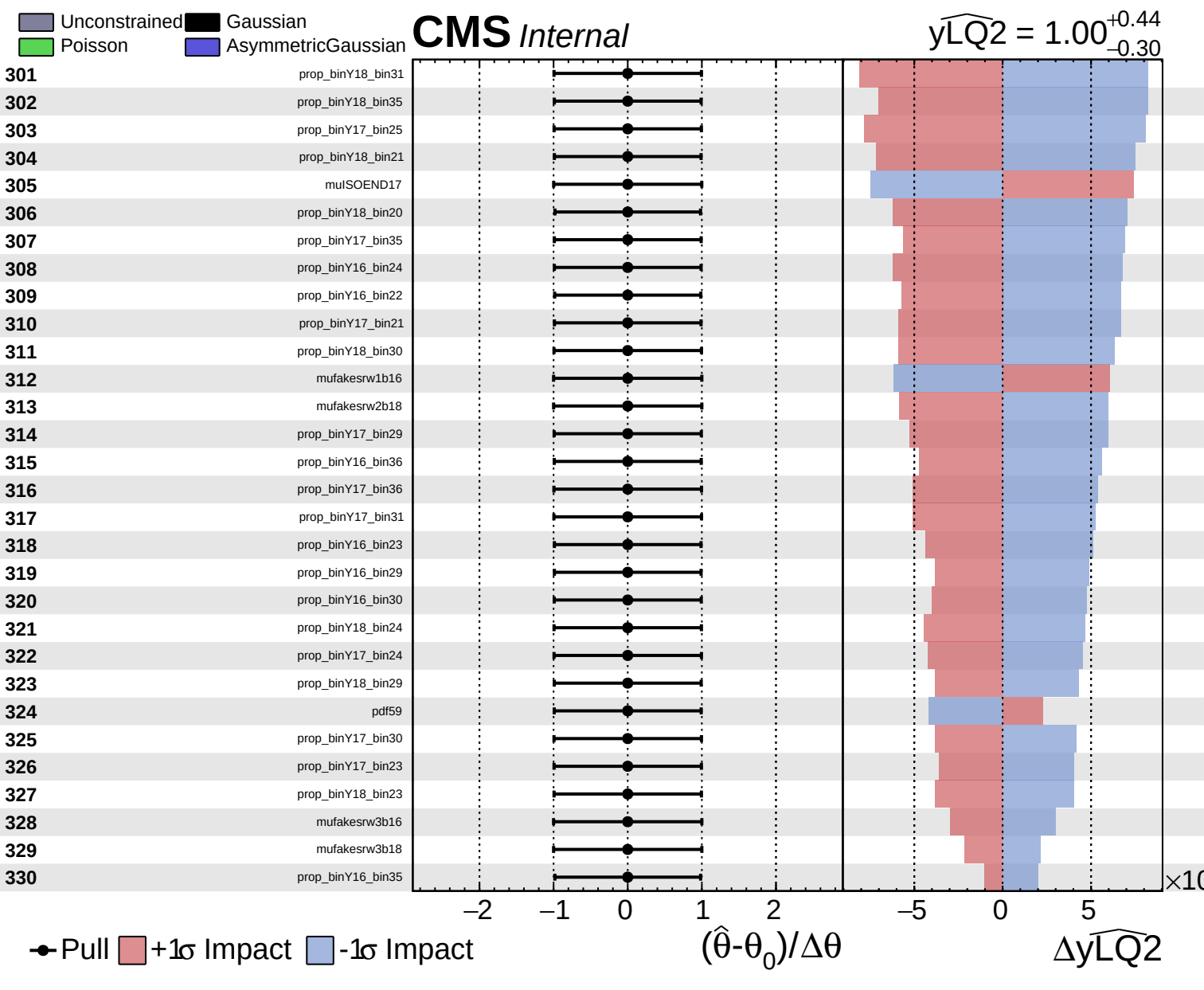
Gaussian
Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
271 pdf39
272 prop_binY18_bin37
273 prop_binY17_bin50
274 prop_binY17_bin28
275 prop_binY17_bin55
276 prop_binY17_bin32
277 prop_binY18_bin36
278 prop_binY18_bin28
279 prop_binY18_bin32
280 prop_binY18_bin55
281 prop_binY16_bin55
282 prop_binY16_bin38
283 prop_binY17_bin38
284 pdf14
285 pdf20
286 prop_binY16_bin25
287 prop_binY18_bin26
288 prop_binY17_bin56
289 prop_binY18_bin25
290 prop_binY16_bin32
291 prop_binY17_bin26
292 muISOEND18
293 prop_binY16_bin28
294 prop_binY16_bin37
295 prop_binY18_bin22
296 prop_binY17_bin34
297 muFakes16
298 prop_binY16_bin31
299 prop_binY17_bin37
300 prop_binY17_bin22
−2 −1 0 1 2
−0.01 0 0.01
×10
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2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Poisson
AsymmetricGaussian
CMS Internal
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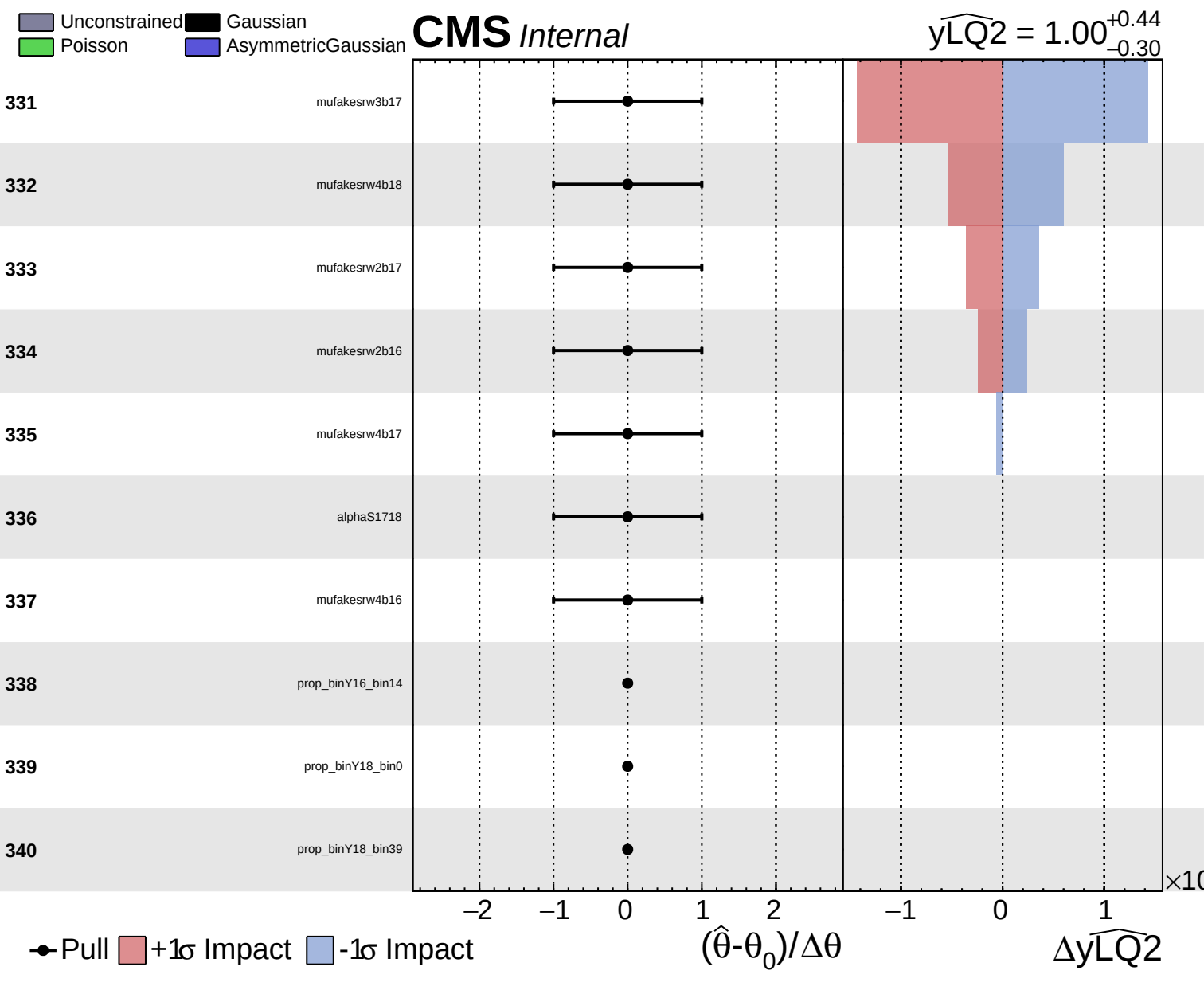
302 prop_binY18_bin35
303 prop_binY17_bin25
304 prop_binY18_bin21
305 mulSOEND17
306 prop_binY18_bin20
307 prop_binY17_bin35
308 prop_binY16_bin24
309 prop_binY16_bin22
310 prop_binY17_bin21
311 prop_binY18_bin30
312 mufakesrw1b16
313 mufakesrw2b18
314 prop_binY17_bin29
315 prop_binY16_bin36
316 prop_binY17_bin36
317 prop_binY17_bin31
318 prop_binY16_bin23
319 prop_binY16_bin29
320 prop_binY16_bin30
321 prop_binY18_bin24
322 prop_binY17_bin24
323 prop_binY18_bin29
324 pdf59
325 prop_binY17_bin30
326 prop_binY17_bin23
327 prop_binY18_bin23
328 mufakesrw3b16
329 mufakesrw3b18
330 prop_binY16_bin35
×10
−2 −1 0 1 2
−5 0 5
Pull +1σ Impact -1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2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Poisson
AsymmetricGaussian
CMS Internal
ŷLQ2 = 1.00 +0.44 −0.30
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332 mufakesrw4b18
333 mufakesrw2b17
334 mufakesrw2b16
335 mufakesrw4b17
336 alphaS1718
337 mufakesrw4b16
338 prop_binY16_bin14
339 prop_binY18_bin0
340 prop_binY18_bin39
−2 −1 0 1 2
−1 0 1
×10
Pull
+1σ Impact
-1σ Impact
(θ̂-θ0)/Δθ
ΔŷLQ2