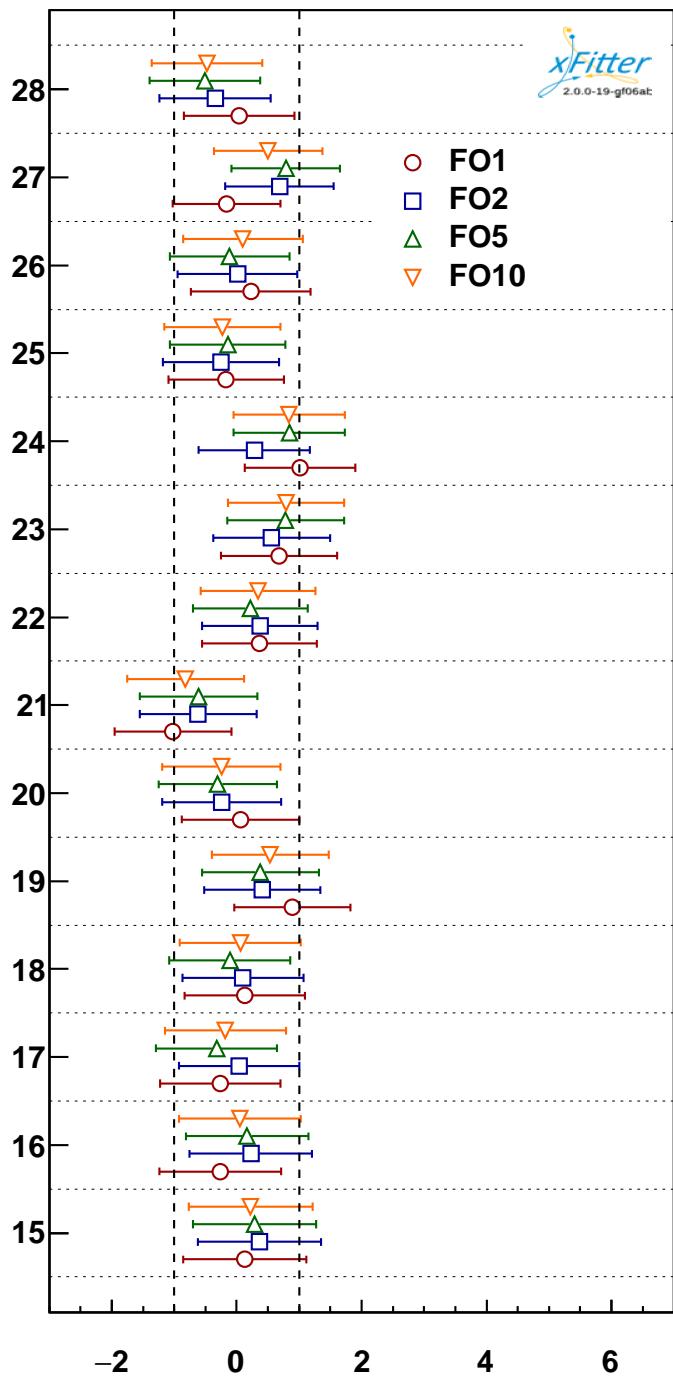
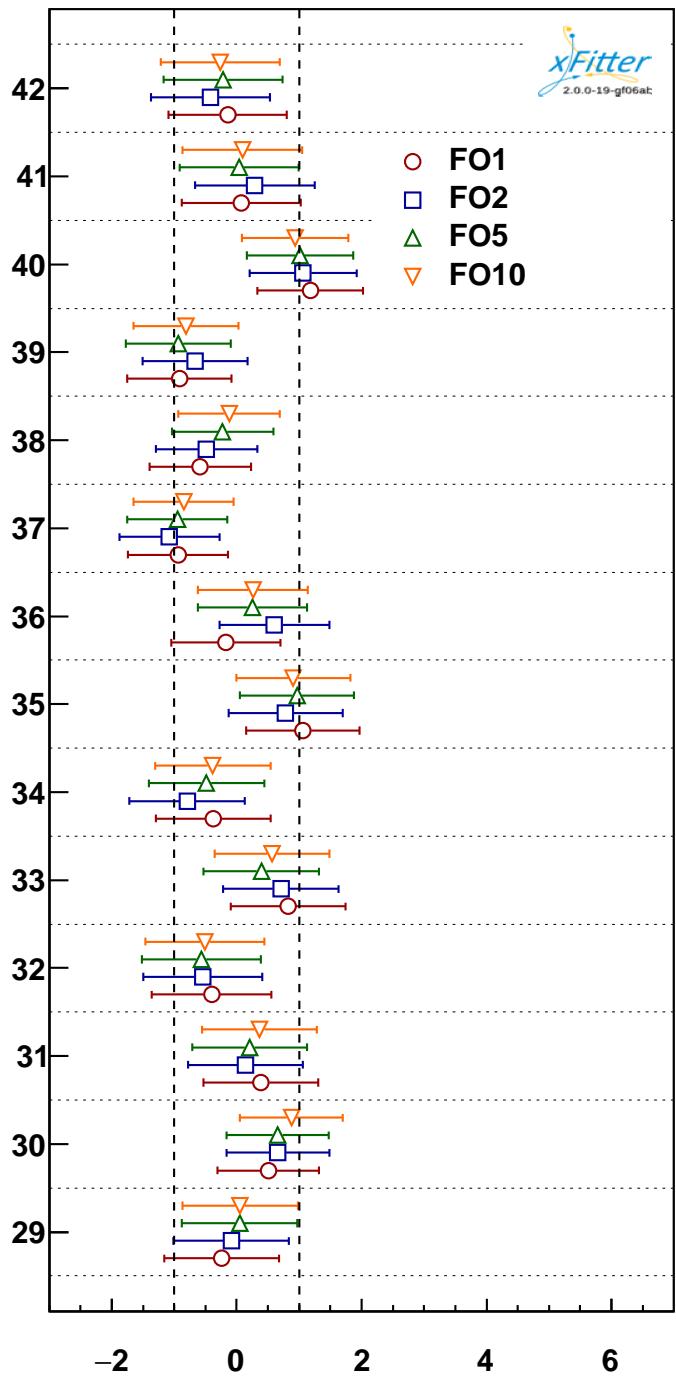


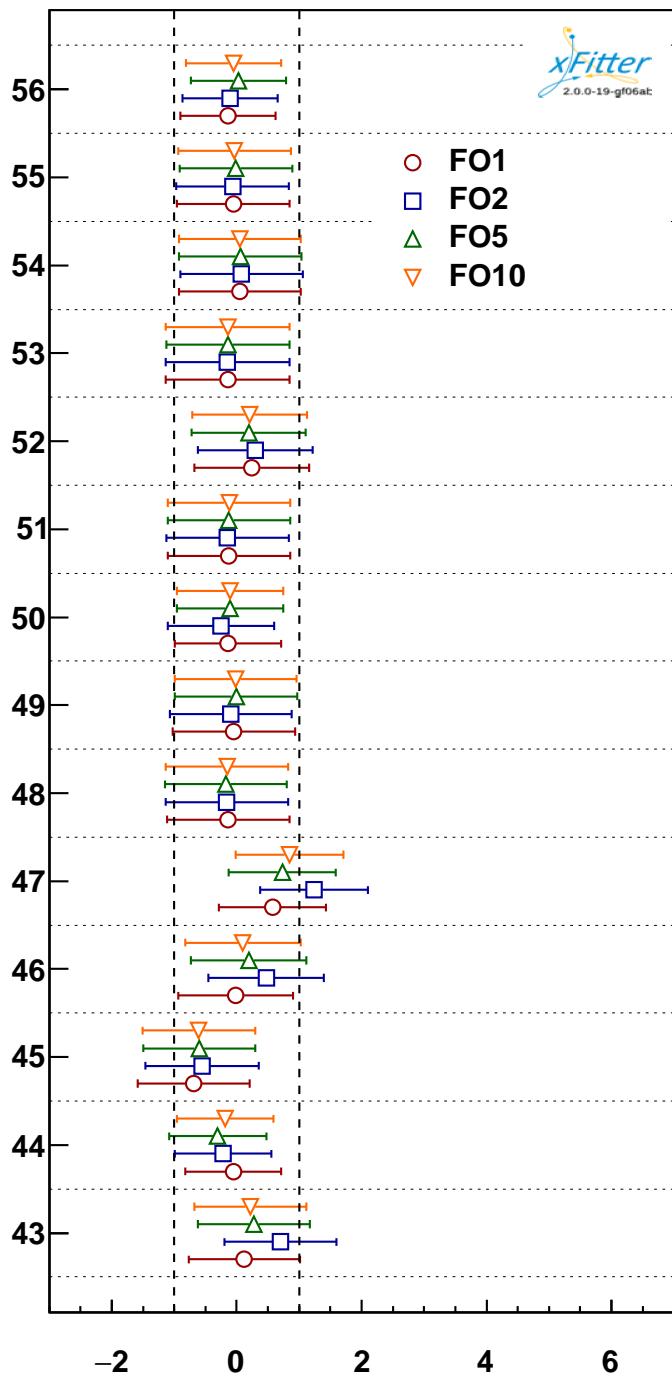
- 14 HERA_Charm_Source_09
- 13 HERA_Charm_Source_08
- 12 HERA_Charm_Source_07
- 11 HERA_Charm_Source_06
- 10 HERA_Charm_Source_05
- 9 HERA_Charm_Source_04
- 8 HERA_Charm_Source_03
- 7 HERA_Charm_Source_02
- 6 HERA_Charm_Source_01
- 5 HERA_Charm_Proced_02
- 4 HERA_Charm_Proced_01
- 3 CST
- 2 BFDp
- 1 BFD0



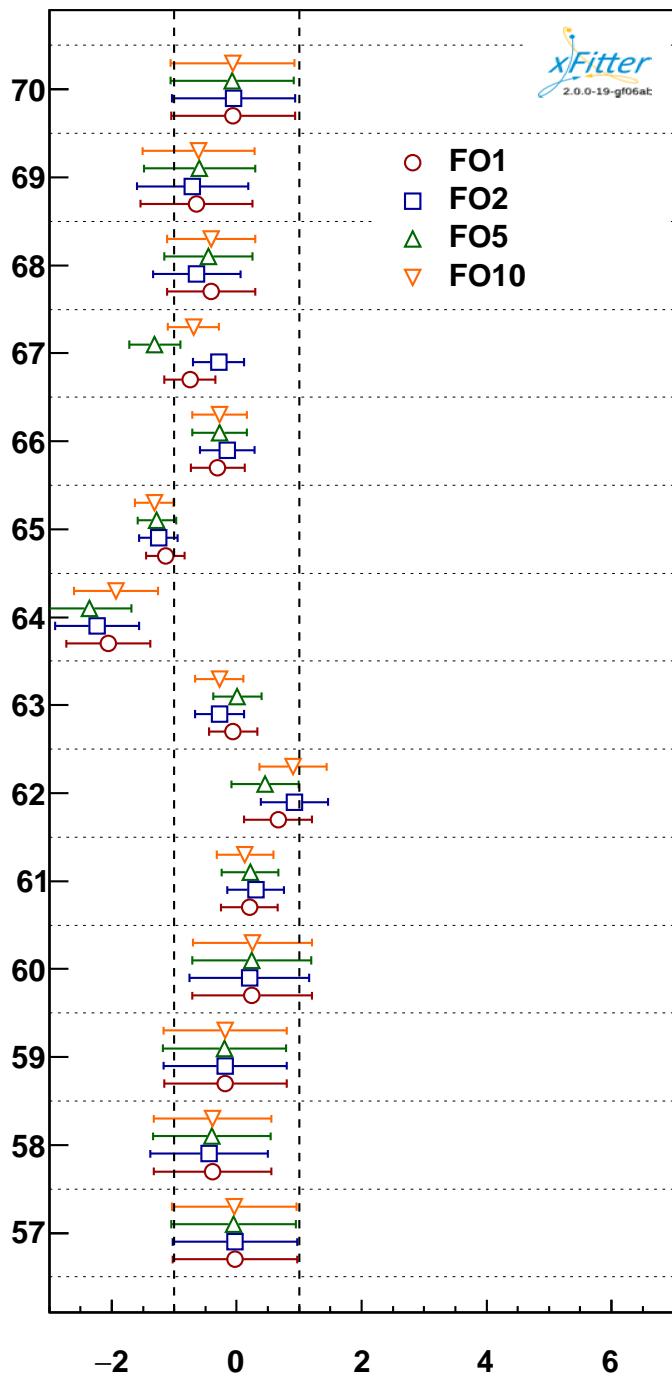
- 28 HERA_Charm_Source_23
- 27 HERA_Charm_Source_22
- 26 HERA_Charm_Source_21
- 25 HERA_Charm_Source_20
- 24 HERA_Charm_Source_19
- 23 HERA_Charm_Source_18
- 22 HERA_Charm_Source_17
- 21 HERA_Charm_Source_16
- 20 HERA_Charm_Source_15
- 19 HERA_Charm_Source_14
- 18 HERA_Charm_Source_13
- 17 HERA_Charm_Source_12
- 16 HERA_Charm_Source_11
- 15 HERA_Charm_Source_10



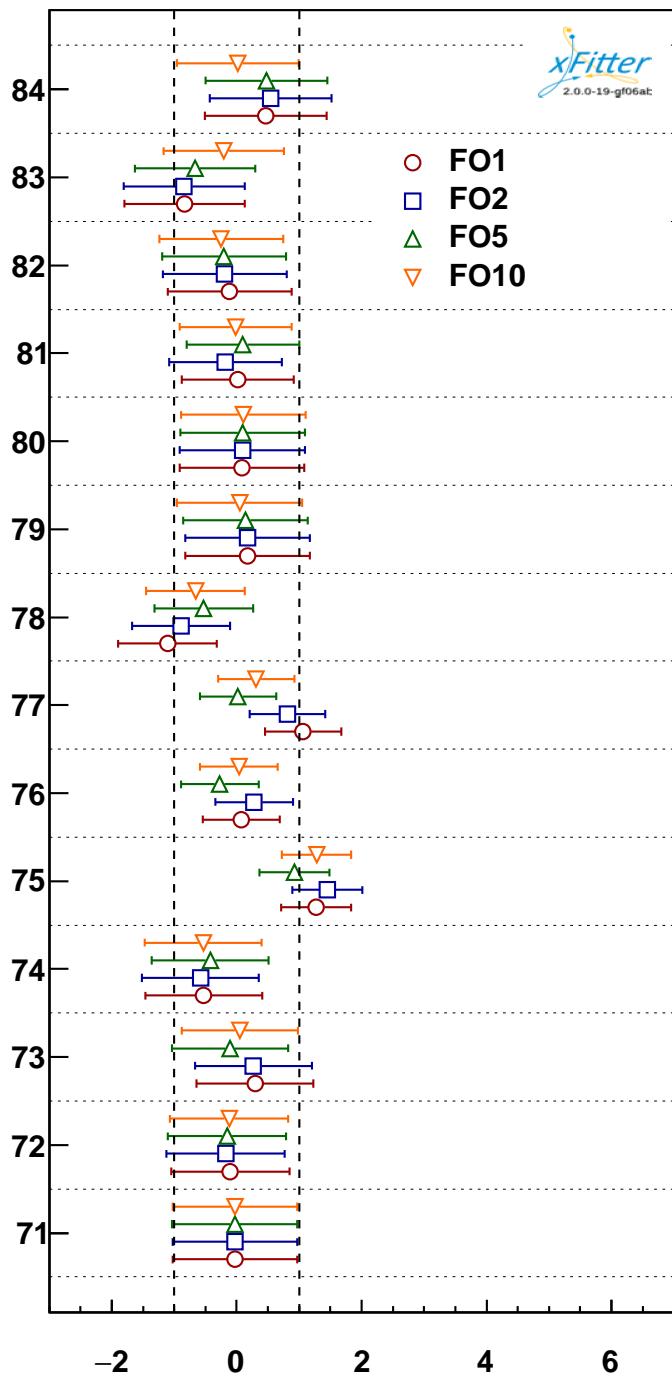
- 42 HERA_Charm_Source_37
- 41 HERA_Charm_Source_36
- 40 HERA_Charm_Source_35
- 39 HERA_Charm_Source_34
- 38 HERA_Charm_Source_33
- 37 HERA_Charm_Source_32
- 36 HERA_Charm_Source_31
- 35 HERA_Charm_Source_30
- 34 HERA_Charm_Source_29
- 33 HERA_Charm_Source_28
- 32 HERA_Charm_Source_27
- 31 HERA_Charm_Source_26
- 30 HERA_Charm_Source_25
- 29 HERA_Charm_Source_24



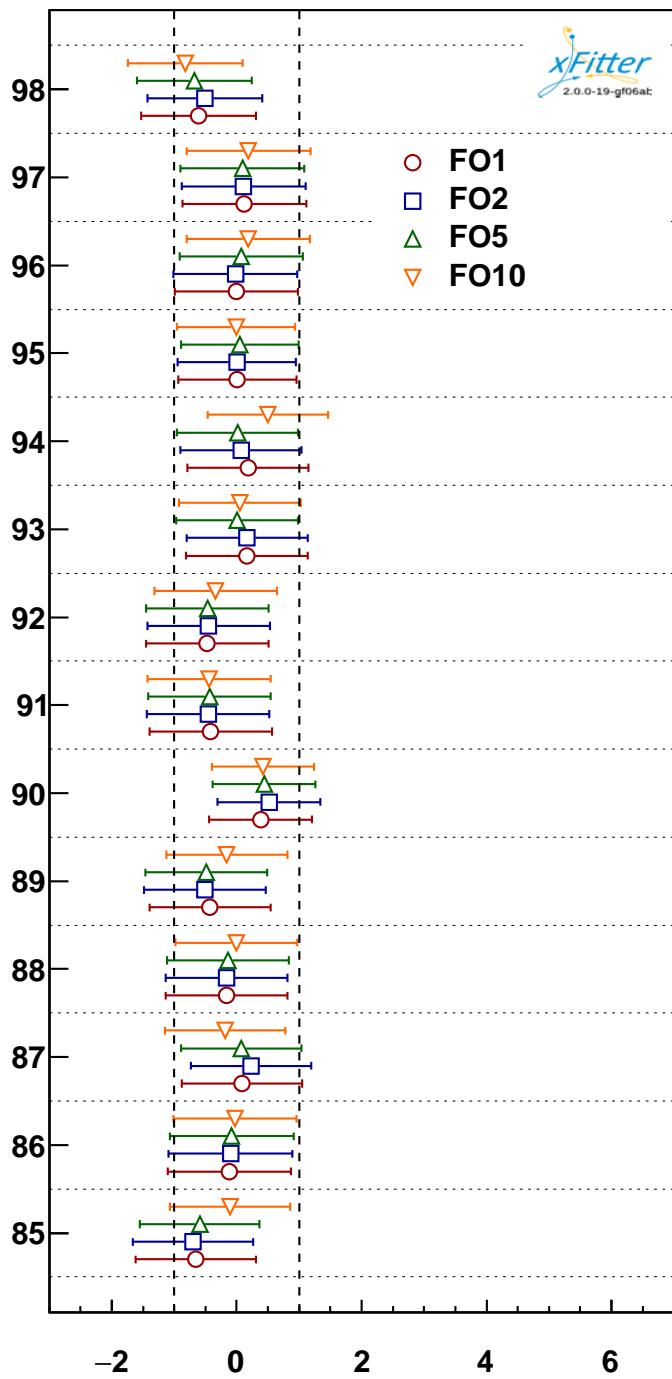
- 56 mulB
- 55 hadE
- 54 gp
- 53 fragc
- 52 fragb
- 51 etac
- 50 etab
- 49 dF2
- 48 cjc
- 47 HERA_Chang_Source_42
- 46 HERA_Chang_Source_41
- 45 HERA_Chang_Source_40
- 44 HERA_Chang_Source_39
- 43 HERA_Chang_Source_38



- 70 q2b
- 69 ptc
- 68 ptb
- 67 proc_tb24
- 66 proc_tb23
- 65 proc_tb22
- 64 proc_tb21
- 63 proc_nrl
- 62 proc_had
- 61 proc_gp
- 60 phiq
- 59 mulDs
- 58 mulDp
- 57 mulD0



- 84 sysHZComb1012
83 sysHZComb1011
82 sysHZComb1010
81 sysHZComb1009
80 sysHZComb1008
79 sysHZComb1007
78 sysHZComb1006
77 sysHZComb1005
76 sysHZComb1004
75 sysHZComb1003
74 sysHZComb1002
73 sysHZComb1001
72 res
71 q2c



98 sysHZComb1026

97 sysHZComb1025

96 sysHZComb1024

95 sysHZComb1023

94 sysHZComb1022

93 sysHZComb1021

92 sysHZComb1020

91 sysHZComb1019

90 sysHZComb1018

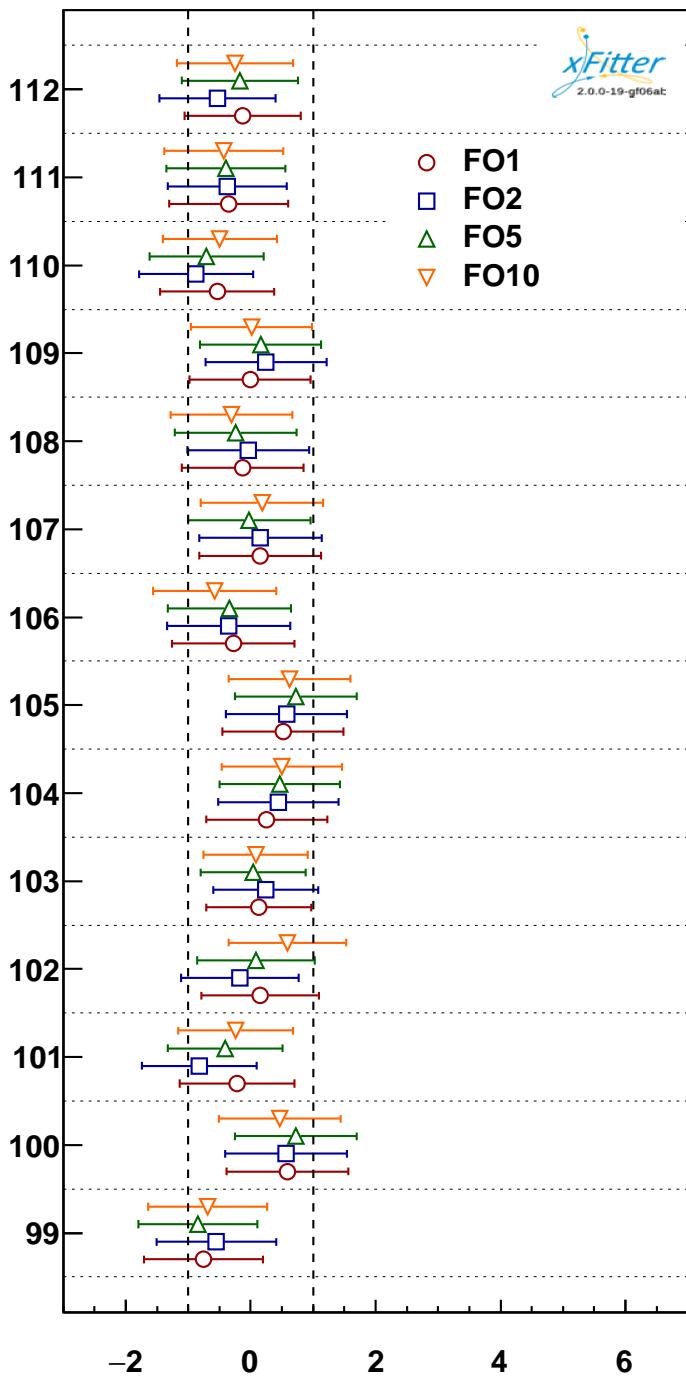
89 sysHZComb1017

88 sysHZComb1016

87 sysHZComb1015

86 sysHZComb1014

85 sysHZComb1013



112 sysHZComb1040

111 sysHZComb1039

110 sysHZComb1038

109 sysHZComb1037

108 sysHZComb1036

107 sysHZComb1035

106 sysHZComb1034

105 sysHZComb1033

104 sysHZComb1032

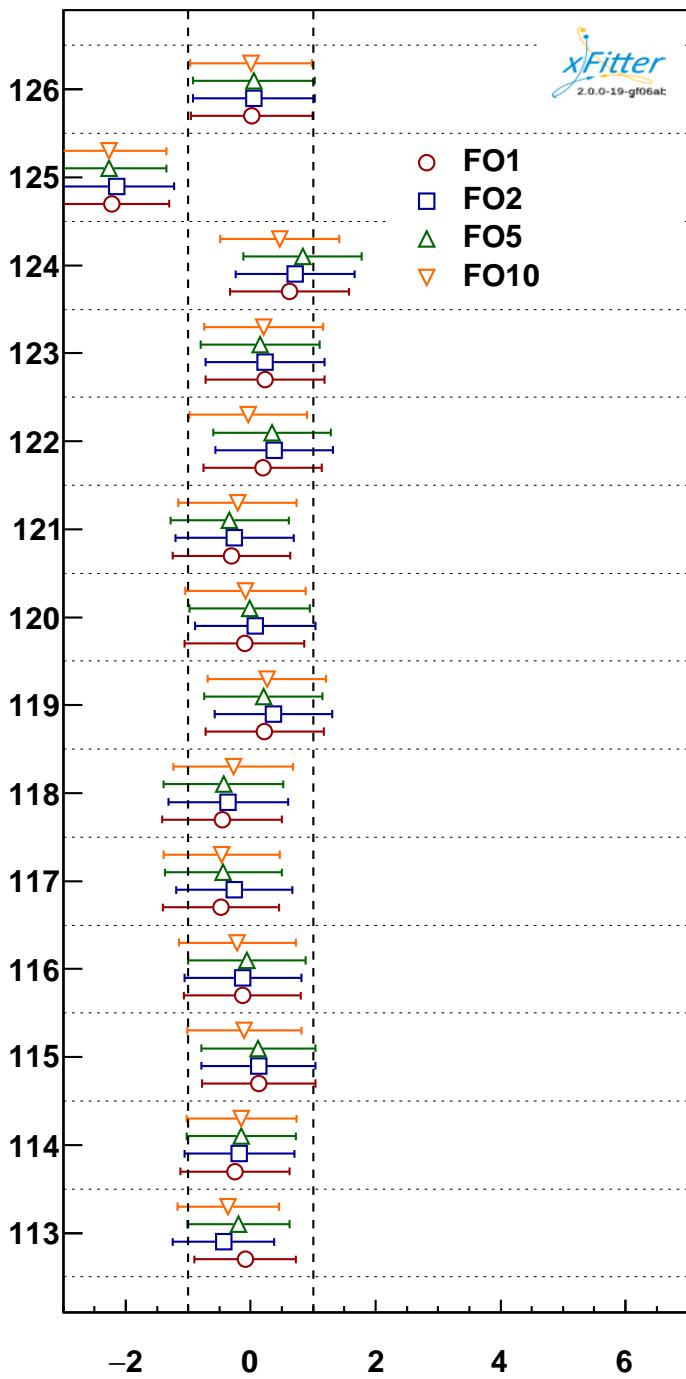
103 sysHZComb1031

102 sysHZComb1030

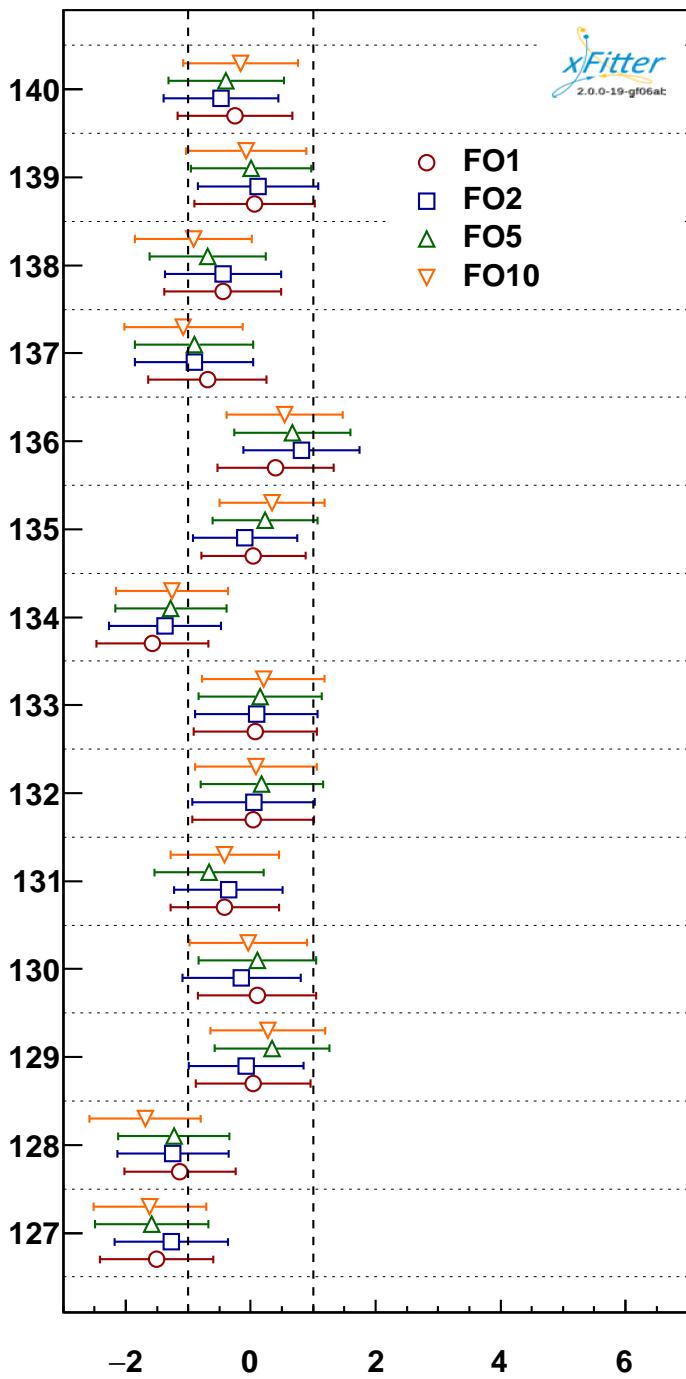
101 sysHZComb1029

100 sysHZComb1028

99 sysHZComb1027



- 126 sysHZComb1054
- 125 sysHZComb1053
- 124 sysHZComb1052
- 123 sysHZComb1051
- 122 sysHZComb1050
- 121 sysHZComb1049
- 120 sysHZComb1048
- 119 sysHZComb1047
- 118 sysHZComb1046
- 117 sysHZComb1045
- 116 sysHZComb1044
- 115 sysHZComb1043
- 114 sysHZComb1042
- 113 sysHZComb1041



140 sysHZComb1068

139 sysHZComb1067

138 sysHZComb1066

137 sysHZComb1065

136 sysHZComb1064

135 sysHZComb1063

134 sysHZComb1062

133 sysHZComb1061

132 sysHZComb1060

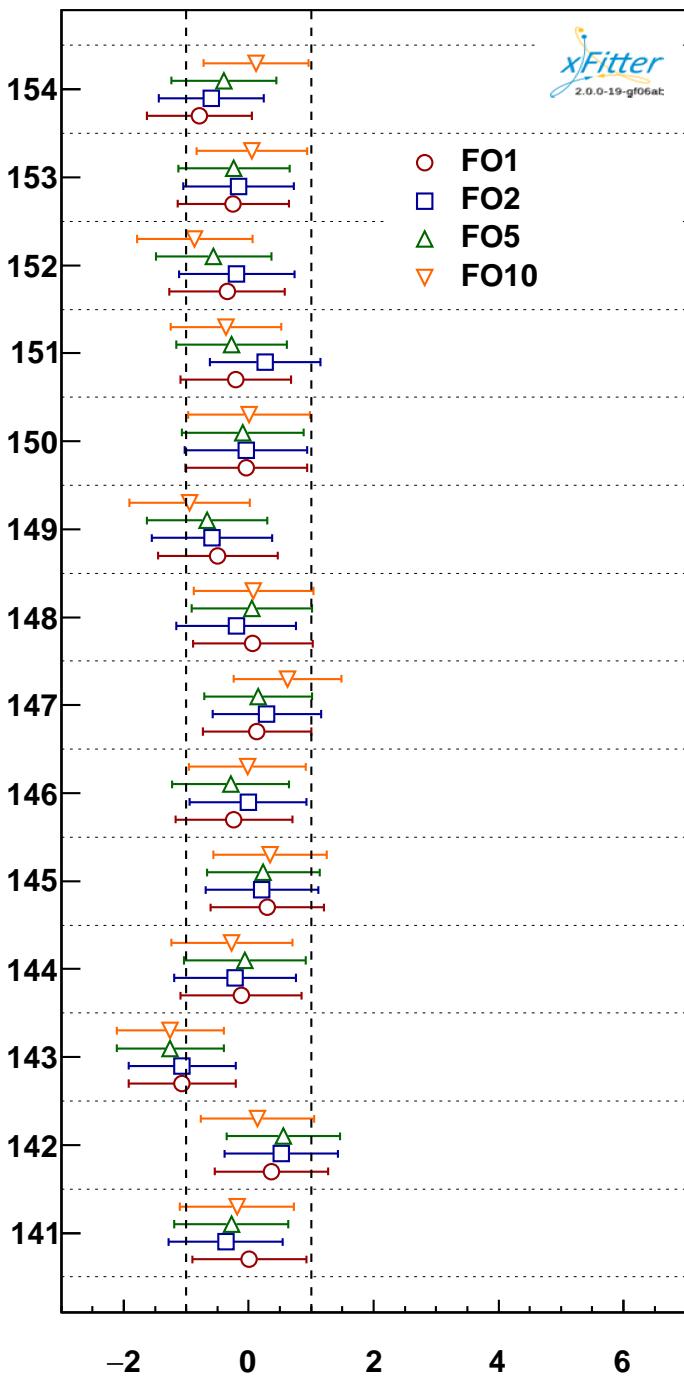
131 sysHZComb1059

130 sysHZComb1058

129 sysHZComb1057

128 sysHZComb1056

127 sysHZComb1055



154 sysHZComb1082

153 sysHZComb1081

152 sysHZComb1080

151 sysHZComb1079

150 sysHZComb1078

149 sysHZComb1077

148 sysHZComb1076

147 sysHZComb1075

146 sysHZComb1074

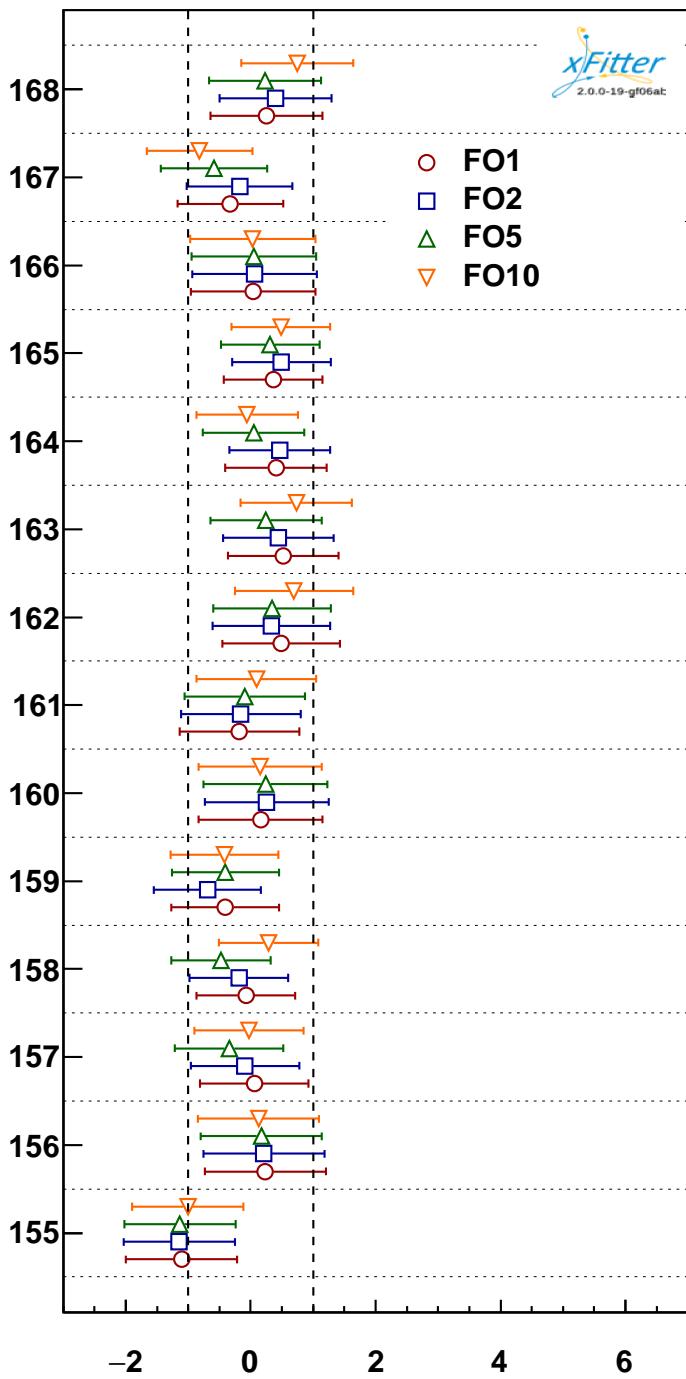
145 sysHZComb1073

144 sysHZComb1072

143 sysHZComb1071

142 sysHZComb1070

141 sysHZComb1069



168 sysHZComb1096

167 sysHZComb1095

166 sysHZComb1094

165 sysHZComb1093

164 sysHZComb1092

163 sysHZComb1091

162 sysHZComb1090

161 sysHZComb1089

160 sysHZComb1088

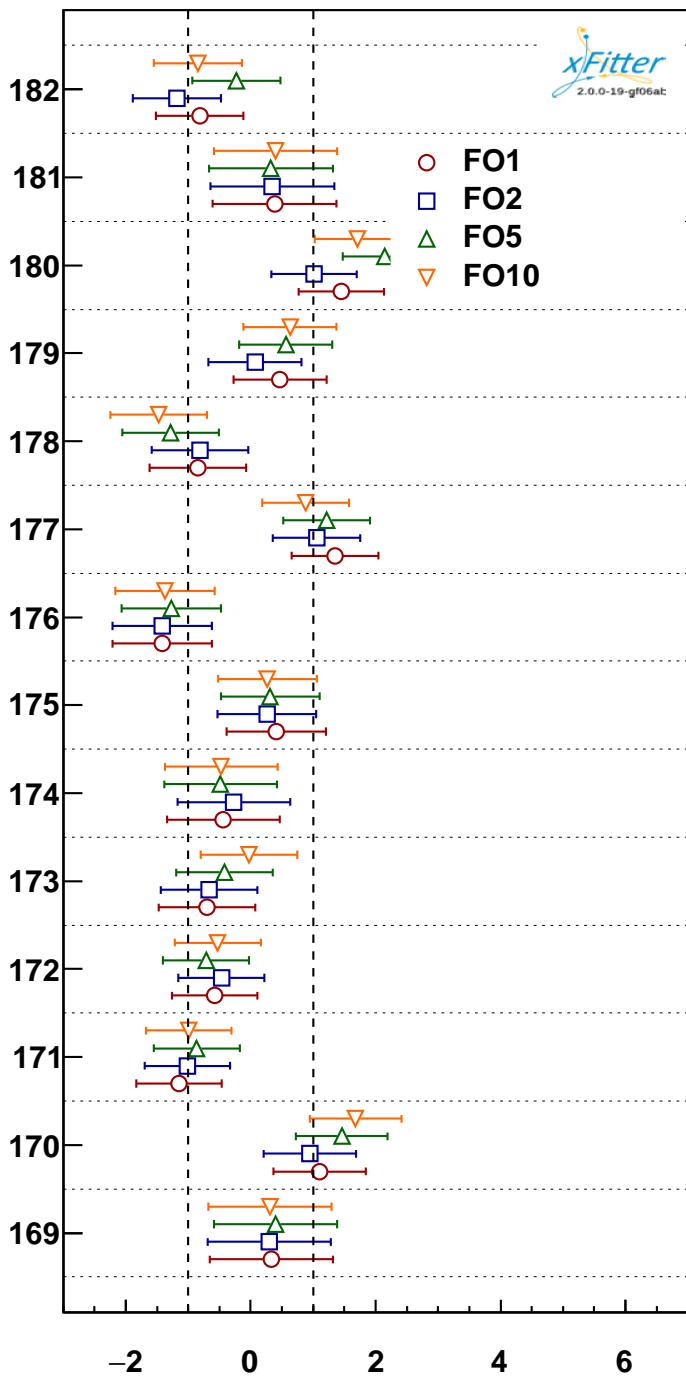
159 sysHZComb1087

158 sysHZComb1086

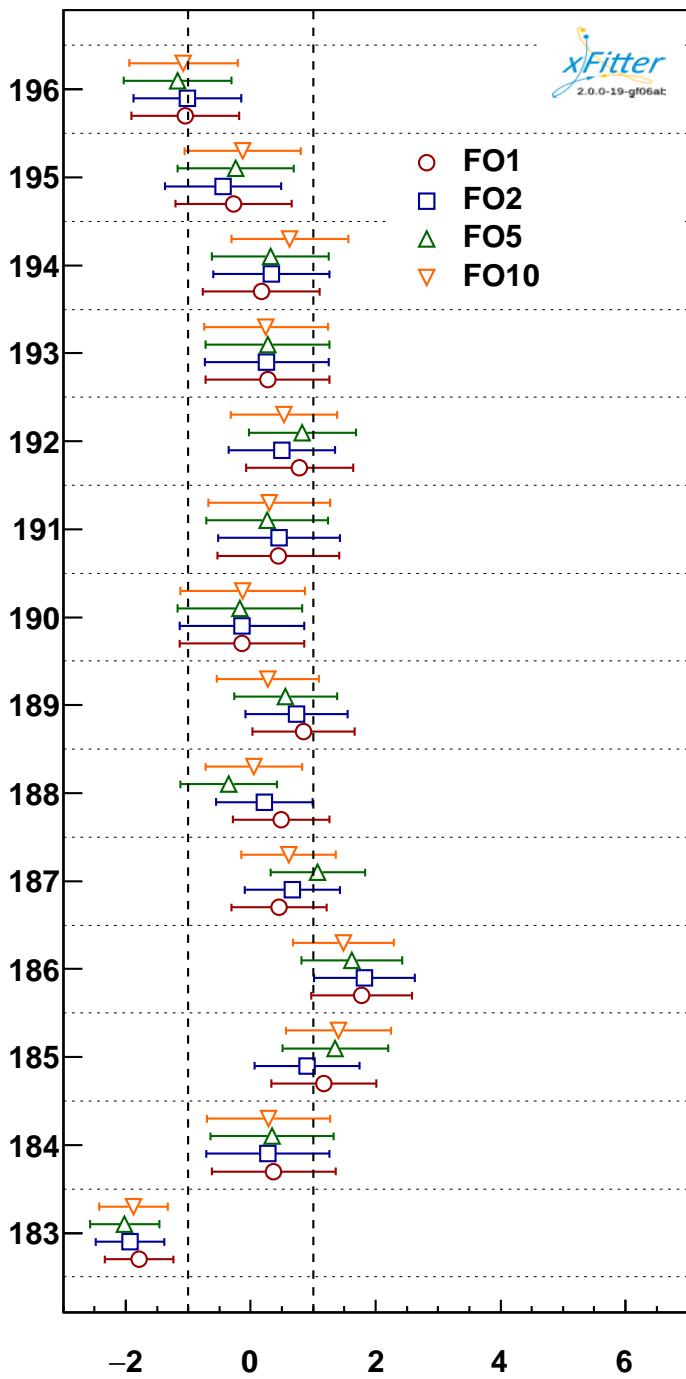
157 sysHZComb1085

156 sysHZComb1084

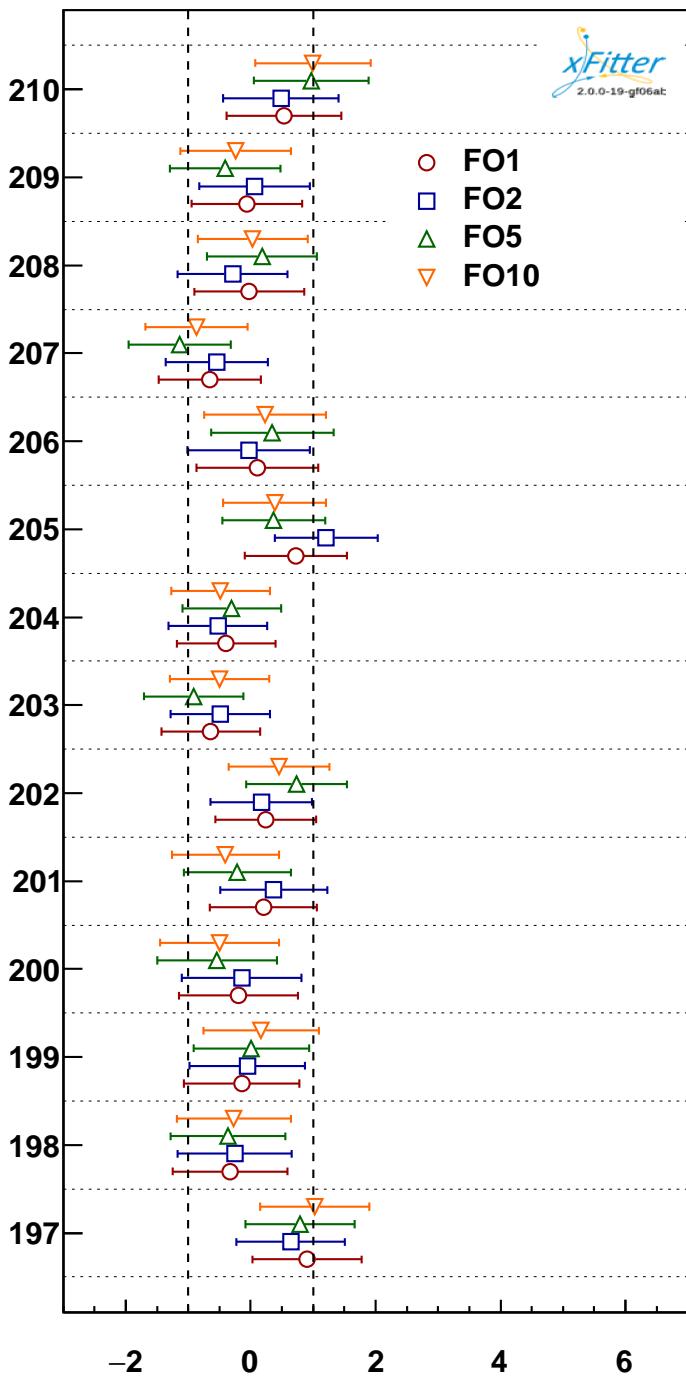
155 sysHZComb1083



182 sysHZComb1110
181 sysHZComb1109
180 sysHZComb1108
179 sysHZComb1107
178 sysHZComb1106
177 sysHZComb1105
176 sysHZComb1104
175 sysHZComb1103
174 sysHZComb1102
173 sysHZComb1101
172 sysHZComb1100
171 sysHZComb1099
170 sysHZComb1098
169 sysHZComb1097



- 196 sysHZComb1124
- 195 sysHZComb1123
- 194 sysHZComb1122
- 193 sysHZComb1121
- 192 sysHZComb1120
- 191 sysHZComb1119
- 190 sysHZComb1118
- 189 sysHZComb1117
- 188 sysHZComb1116
- 187 sysHZComb1115
- 186 sysHZComb1114
- 185 sysHZComb1113
- 184 sysHZComb1112
- 183 sysHZComb1111



210 sysHZComb1138

209 sysHZComb1137

208 sysHZComb1136

207 sysHZComb1135

206 sysHZComb1134

205 sysHZComb1133

204 sysHZComb1132

203 sysHZComb1131

202 sysHZComb1130

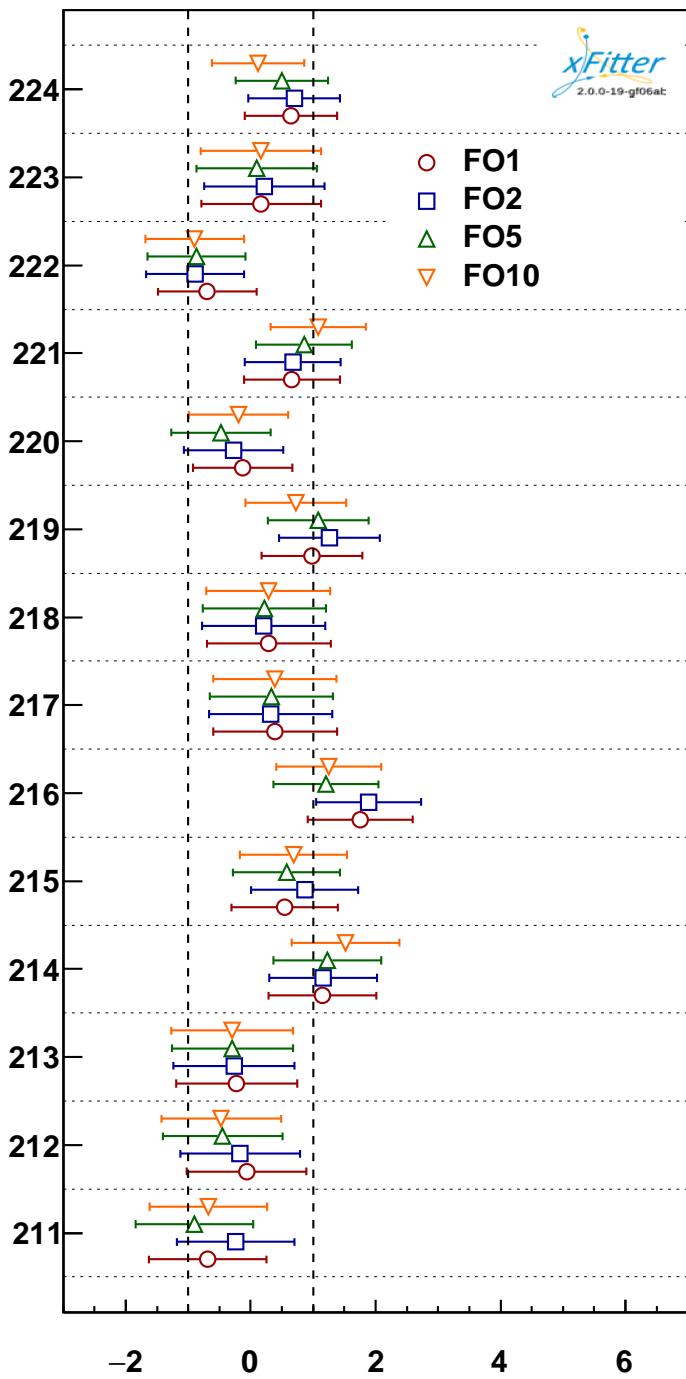
201 sysHZComb1129

200 sysHZComb1128

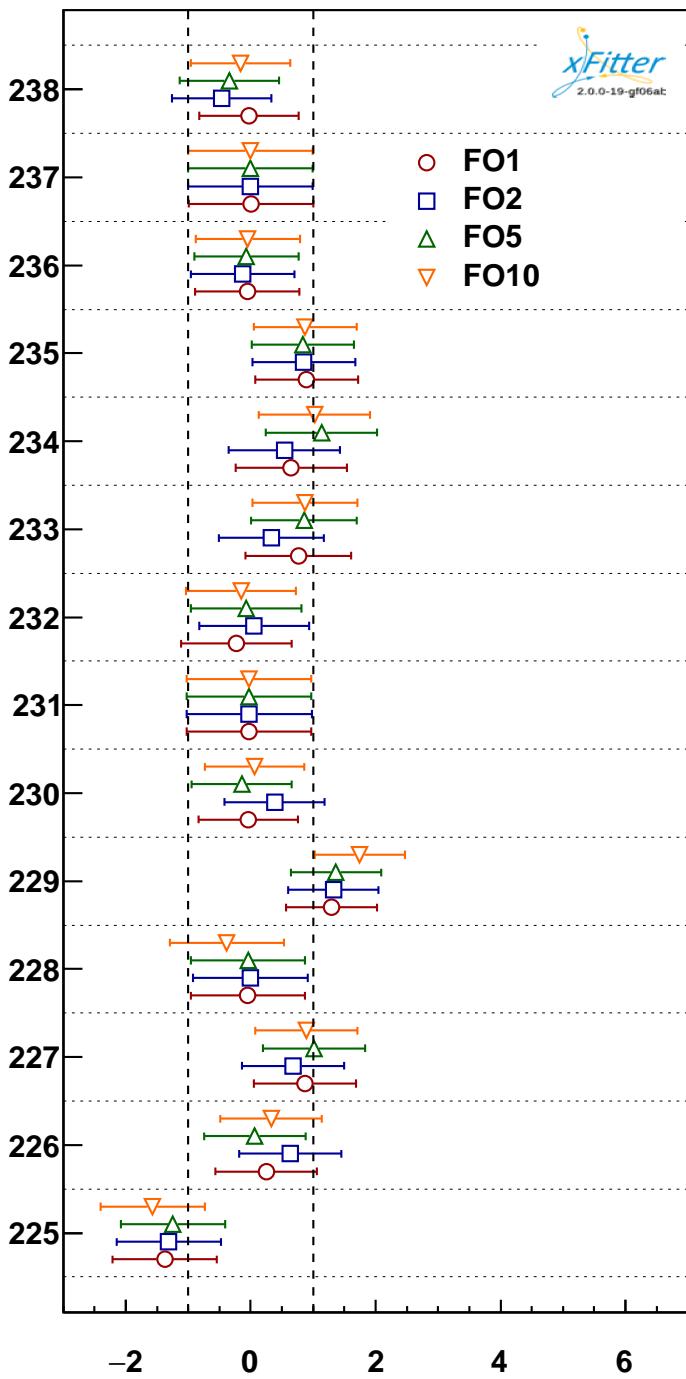
199 sysHZComb1127

198 sysHZComb1126

197 sysHZComb1125



- 224 sysHZComb1152
- 223 sysHZComb1151
- 222 sysHZComb1150
- 221 sysHZComb1149
- 220 sysHZComb1148
- 219 sysHZComb1147
- 218 sysHZComb1146
- 217 sysHZComb1145
- 216 sysHZComb1144
- 215 sysHZComb1143
- 214 sysHZComb1142
- 213 sysHZComb1141
- 212 sysHZComb1140
- 211 sysHZComb1139



238 zbv_MCmodelenjetb

237 xc

236 xb

235 uds

234 sysHZComb1162

233 sysHZComb1161

232 sysHZComb1160

231 sysHZComb1159

230 sysHZComb1158

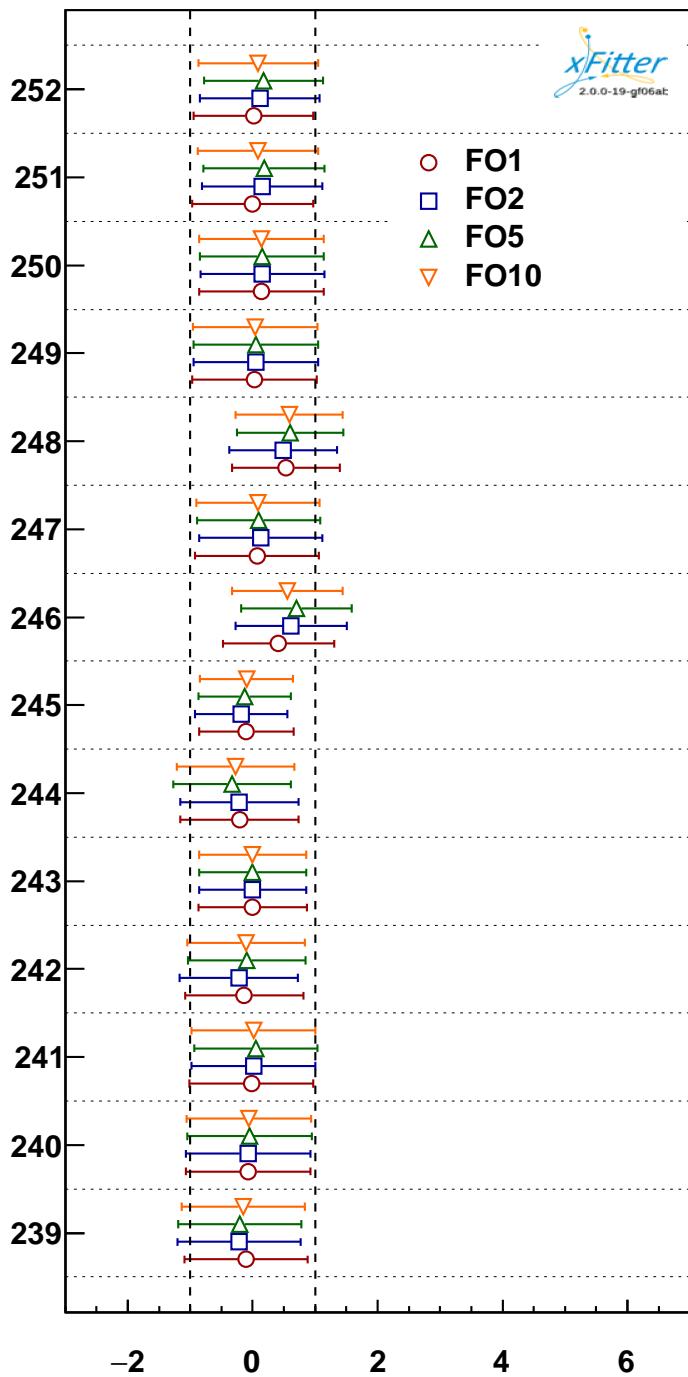
229 sysHZComb1157

228 sysHZComb1156

227 sysHZComb1155

226 sysHZComb1154

225 sysHZComb1153



- 252 zbv_trackingef
- 251 zbv_renfacscale
- 250 zbv_mbeauty
- 249 zbv_lumi
- 248 zbv_lfas
- 247 zbv_jetenscale
- 246 zbv_fragfrac
- 245 zbv_emscale
- 244 zbv_core
- 243 zbv_beauty
- 242 zbv_asvar
- 241 zbv_MCmodetab
- 240 zbv_MCmodelq2b
- 239 zbv_MCmodelenjetc

Dataset	FO1	FO2	FO5	FO10
Beauty cross section ZEUS Vertex	12 / 17	12 / 17	12 / 17	12 / 17
Charm cross section H1-ZEUS combined	46 / 47	60 / 47	46 / 47	50 / 47
HERA1+2 CCep	44 / 39	44 / 39	48 / 39	52 / 39
HERA1+2 CCem	53 / 42	48 / 42	51 / 42	50 / 42
HERA1+2 NCem	220 / 159	229 / 159	222 / 159	252 / 159
HERA1+2 NCep 820	65 / 70	70 / 70	60 / 70	68 / 70
HERA1+2 NCep 920	410 / 377	426 / 377	432 / 377	465 / 377
HERA1+2 NCep 460	221 / 204	217 / 204	228 / 204	226 / 204
HERA1+2 NCep 575	216 / 254	224 / 254	216 / 254	217 / 254
H1 F2 Beauty Vertex	3.1 / 12	3.2 / 12	2.8 / 12	2.9 / 12
Correlated χ^2	86	90	96	94
Log penalty χ^2	+4.7	-0.57	-7.17	-9.02
Total χ^2 / dof	1380 / 1207	1423 / 1207	1407 / 1207	1481 / 1207
χ^2 p-value	0.00	0.00	0.00	0.00

Parameter	FO1	FO2	FO5	FO10
'Bg'	0.080 ± 0.029	-0.106 ± 0.011	-0.101 ± 0.088	-0.183 ± 0.088
'Cg'	8.42 ± 0.38	12.55 ± 0.30	10.2 ± 1.0	7.81 ± 0.90
'Aprig'	0.74 ± 0.16	2.46 ± 0.16	3.44 ± 0.82	1.90 ± 0.43
'Bprig'	-0.134 ± 0.027	-0.2155 ± 0.0071	-0.154 ± 0.061	-0.240 ± 0.061
'Cprig'	25.00	25.00	25.00	25.00
'Buv'	0.718 ± 0.016	0.639 ± 0.014	0.721 ± 0.037	0.676 ± 0.041
'Cuv'	4.725 ± 0.060	5.121 ± 0.069	4.687 ± 0.077	4.774 ± 0.076
'Euv'	13.61 ± 0.99	23.5 ± 1.4	13.0 ± 2.0	16.6 ± 2.7
'Bdv'	0.830 ± 0.056	0.797 ± 0.046	0.913 ± 0.095	0.821 ± 0.091
'Cdv'	4.04 ± 0.26	4.78 ± 0.31	4.39 ± 0.37	4.03 ± 0.38
'CUbar'	7.75 ± 0.44	9.90 ± 0.32	8.38 ± 0.71	8.36 ± 0.63
'DUbar'	12.8 ± 1.6	45.7 ± 2.6	22.7 ± 3.8	21.5 ± 3.7
'ADbar'	0.1630 ± 0.0072	0.0936 ± 0.0036	0.1211 ± 0.0094	0.136 ± 0.011
'BDbar'	-0.1681 ± 0.0055	-0.2269 ± 0.0049	-0.2030 ± 0.0093	-0.1893 ± 0.0095
'CDbar'	4.62 ± 0.81	0.93 ± 0.12	5.2 ± 1.6	4.9 ± 1.5
'alphas'	0.1180	0.1180	0.1180	0.1180
'fs'	0.4000	0.4000	0.4000	0.4000
Fit status	not-a-fit	not-a-fit	converged	converged
Uncertainties	not-a-fit	not-a-fit	migrad-hesse	migrad-hesse