

## Annexe X

### Ajustement des paramètres de nuisance – $H \rightarrow \tau\tau$

Les paramètres de nuisance introduits au chapitre 4 sont ajustés par COMBINE, l'outil de combinaison statistique utilisé par la collaboration CMS basé sur ROOSTATS [1].

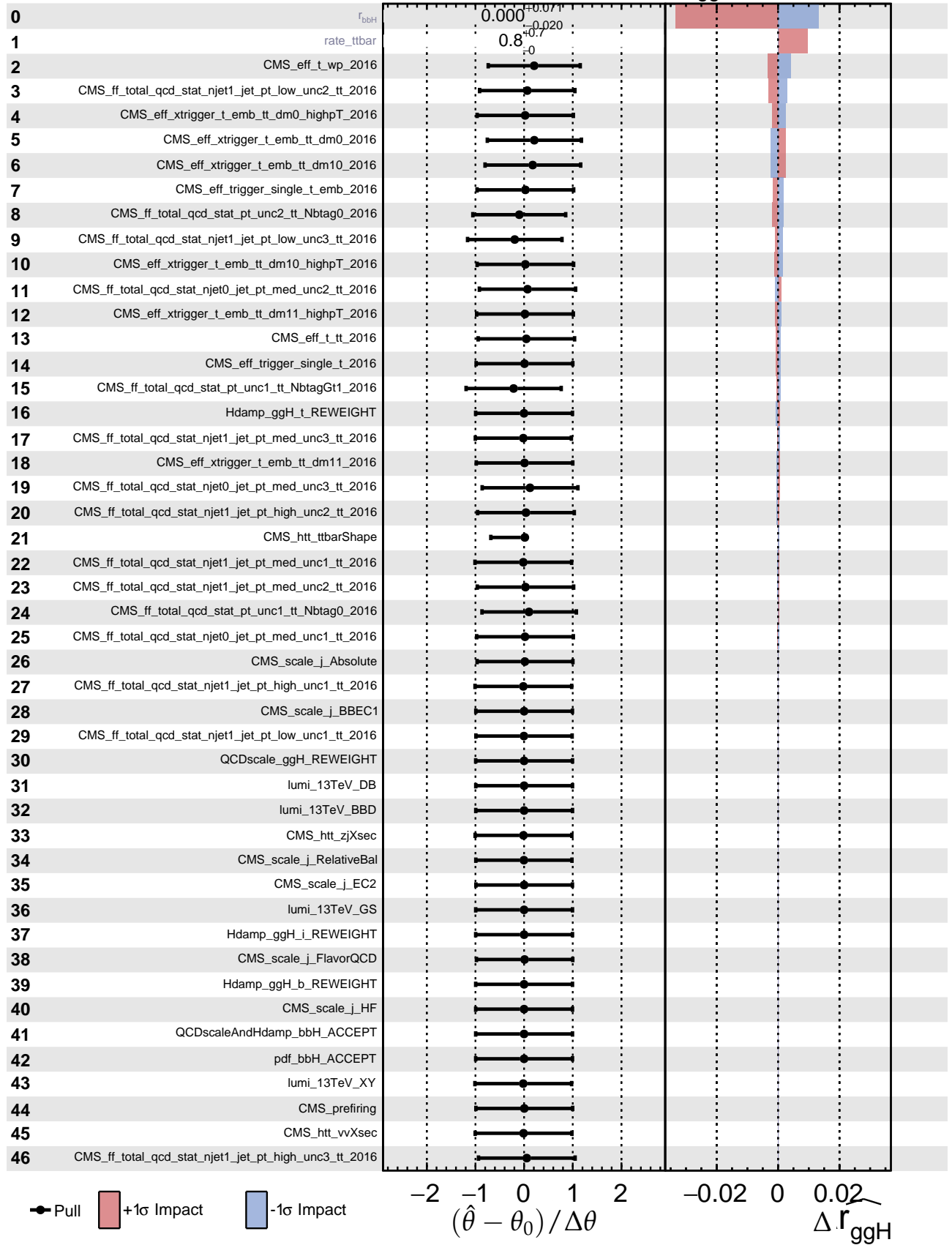
Dans cette annexe, les valeurs prises par ces paramètres après ajustement pour l'obtention des limites d'exclusion indépendantes du modèle  $\hat{\theta}$  (*pulls*) ainsi que l'incertitude sur cette valeur sont données en termes de nombre de déviations standard  $\Delta\theta$  par rapport à la valeur nominale  $\theta_0$ . Leur effet sur le paramètre d'intérêt, en l'occurrence le modificateur d'intensité du signal  $\mu = r_{ggH}$ , est donné par les bandes rouges et bleues. Elles correspondent respectivement aux effets corrélé et anti-corrélé du paramètre de nuisance sur  $\mu$  ( $\pm 1\sigma$  impact).

### Références

- [1] L. MONETA & coll. « The RooStats Project ». *13<sup>th</sup> International Workshop on Advanced Computing and Analysis Techniques in Physics Research (ACAT2010)*. 2010. URL : [http://pos.sissa.it/archive/conferences/093/057/ACAT2010\\_057.pdf](http://pos.sissa.it/archive/conferences/093/057/ACAT2010_057.pdf).

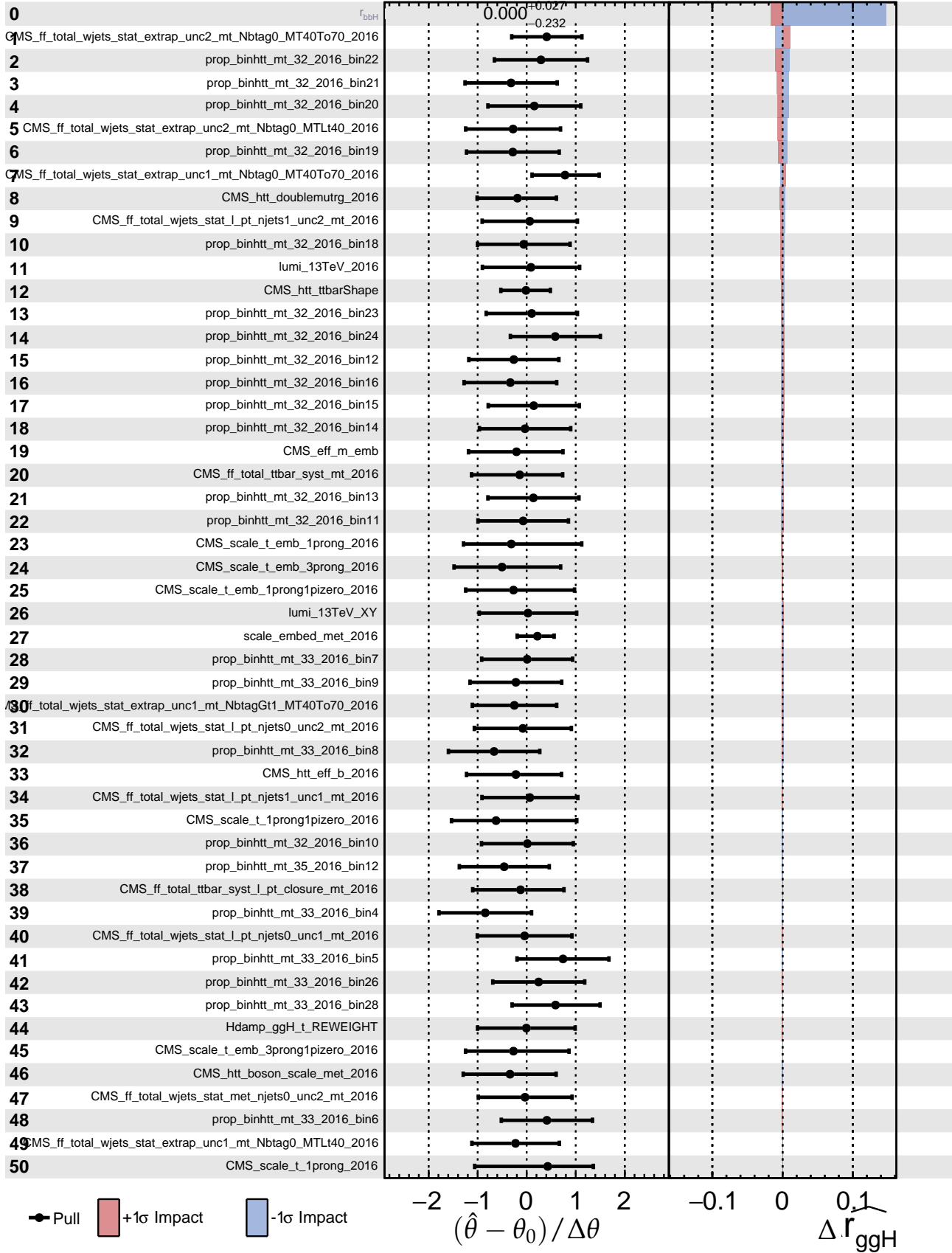
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$$\hat{r}_{\text{ggH}} = -0.00^{+0.05}_{-0.04}$$



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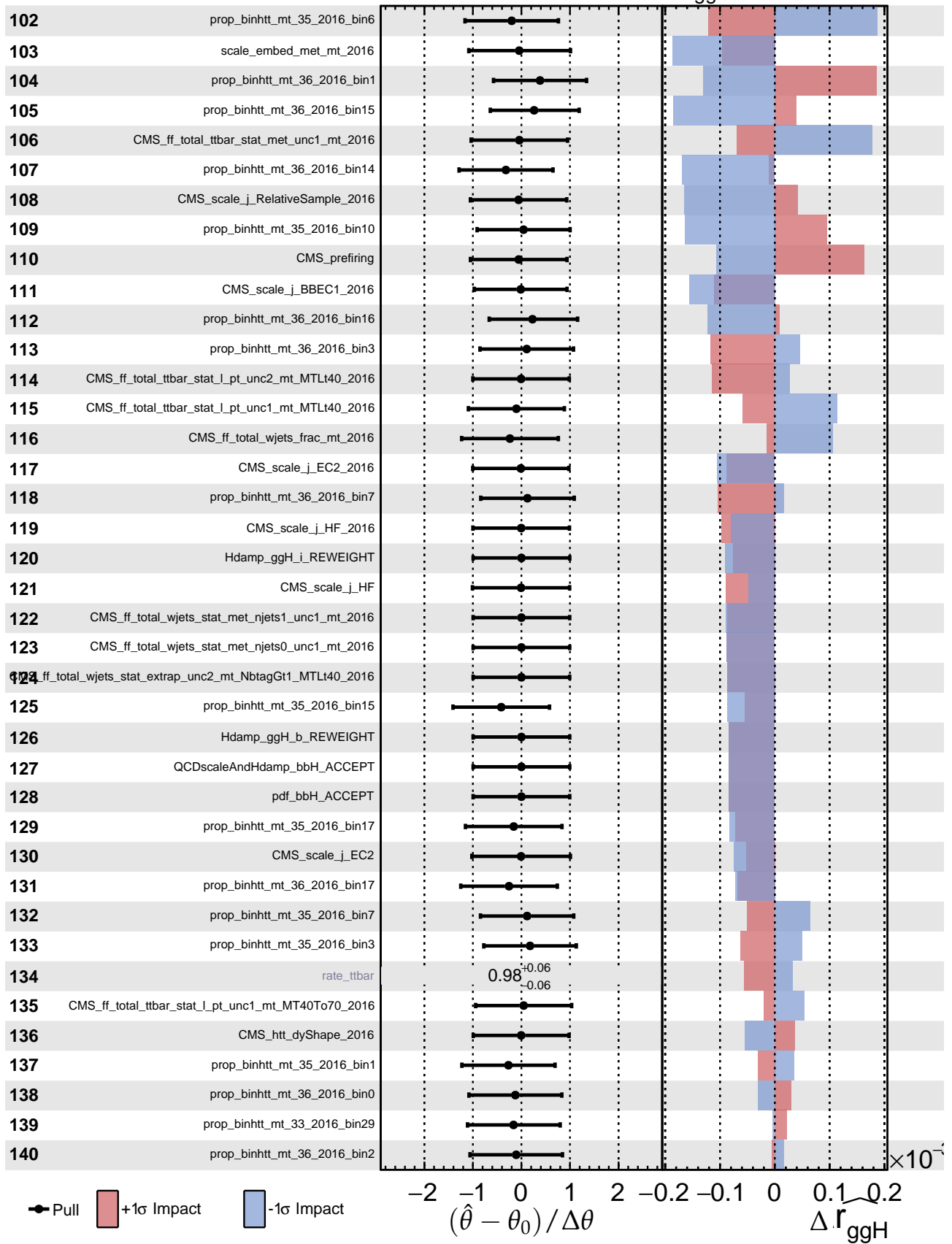
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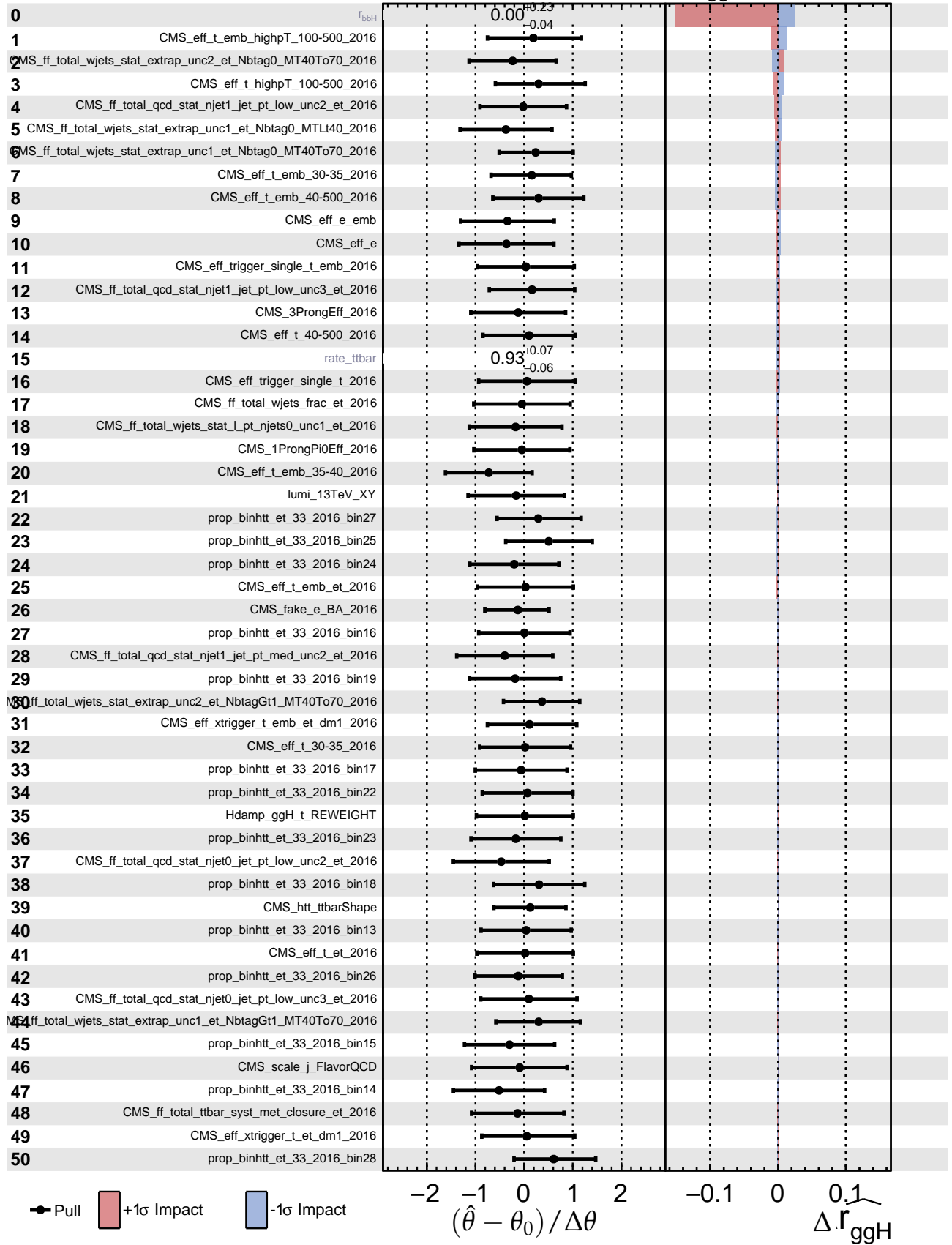
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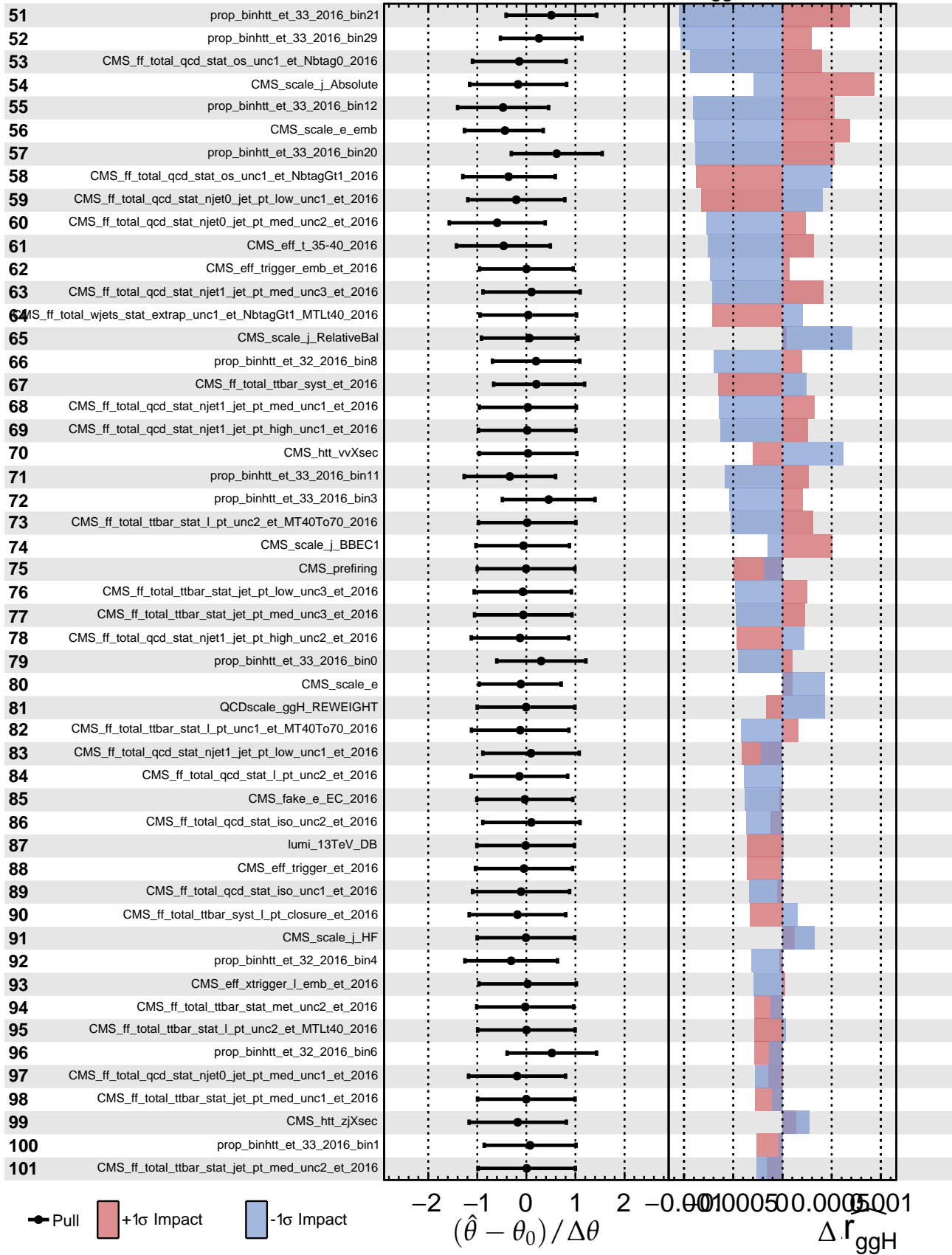
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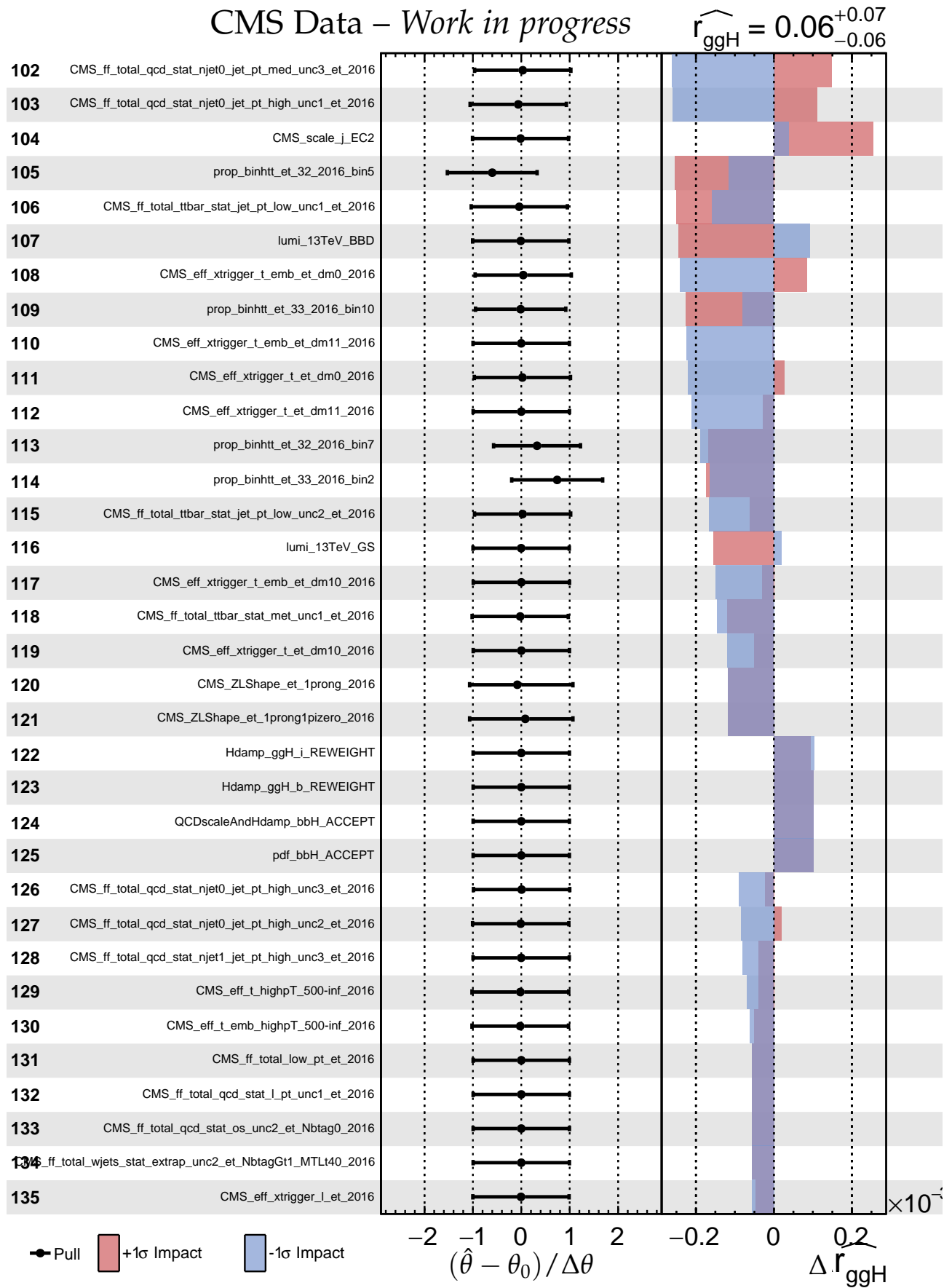
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$$\hat{r}_{\text{ggH}} = 0.06^{+0.07}_{-0.06}$$

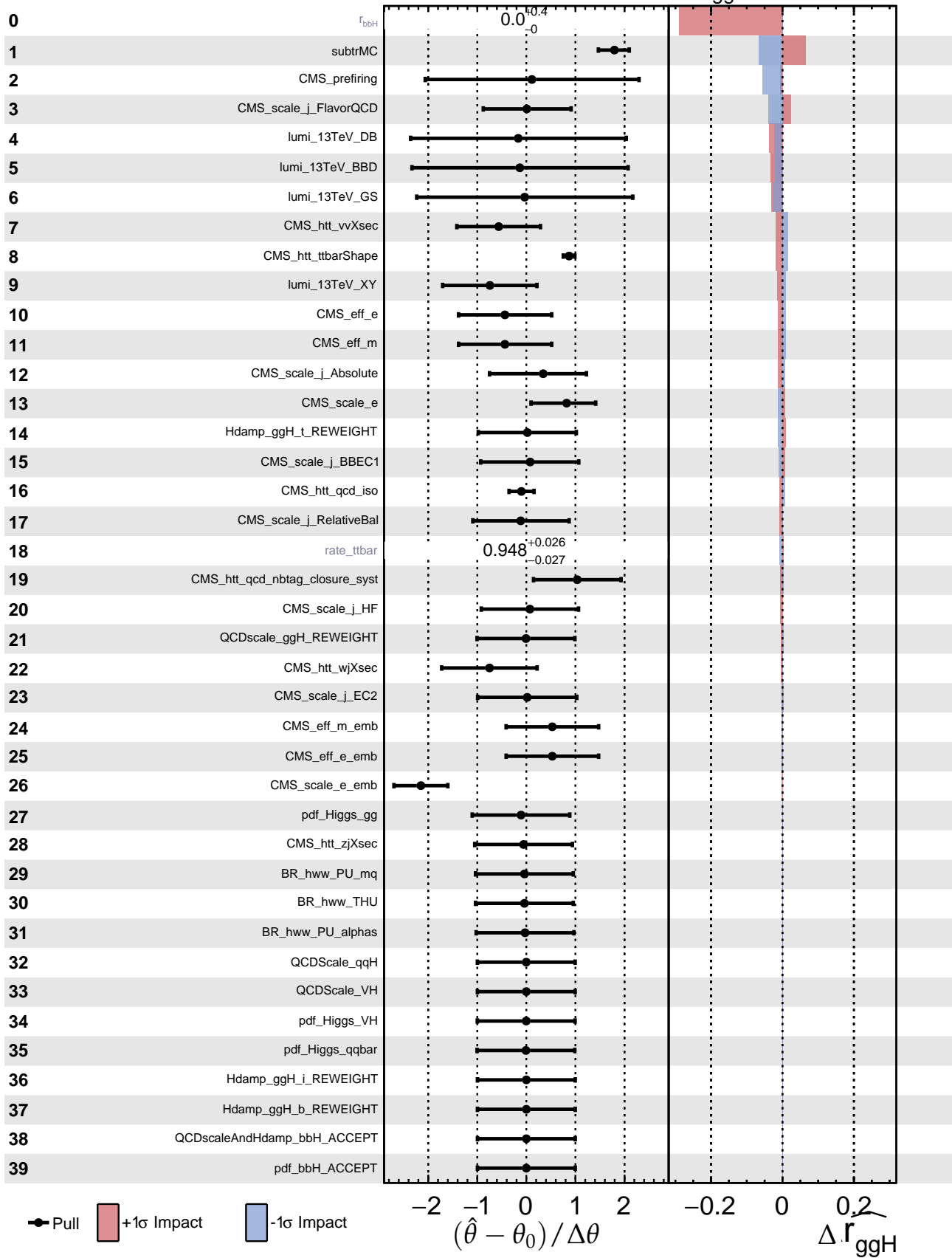






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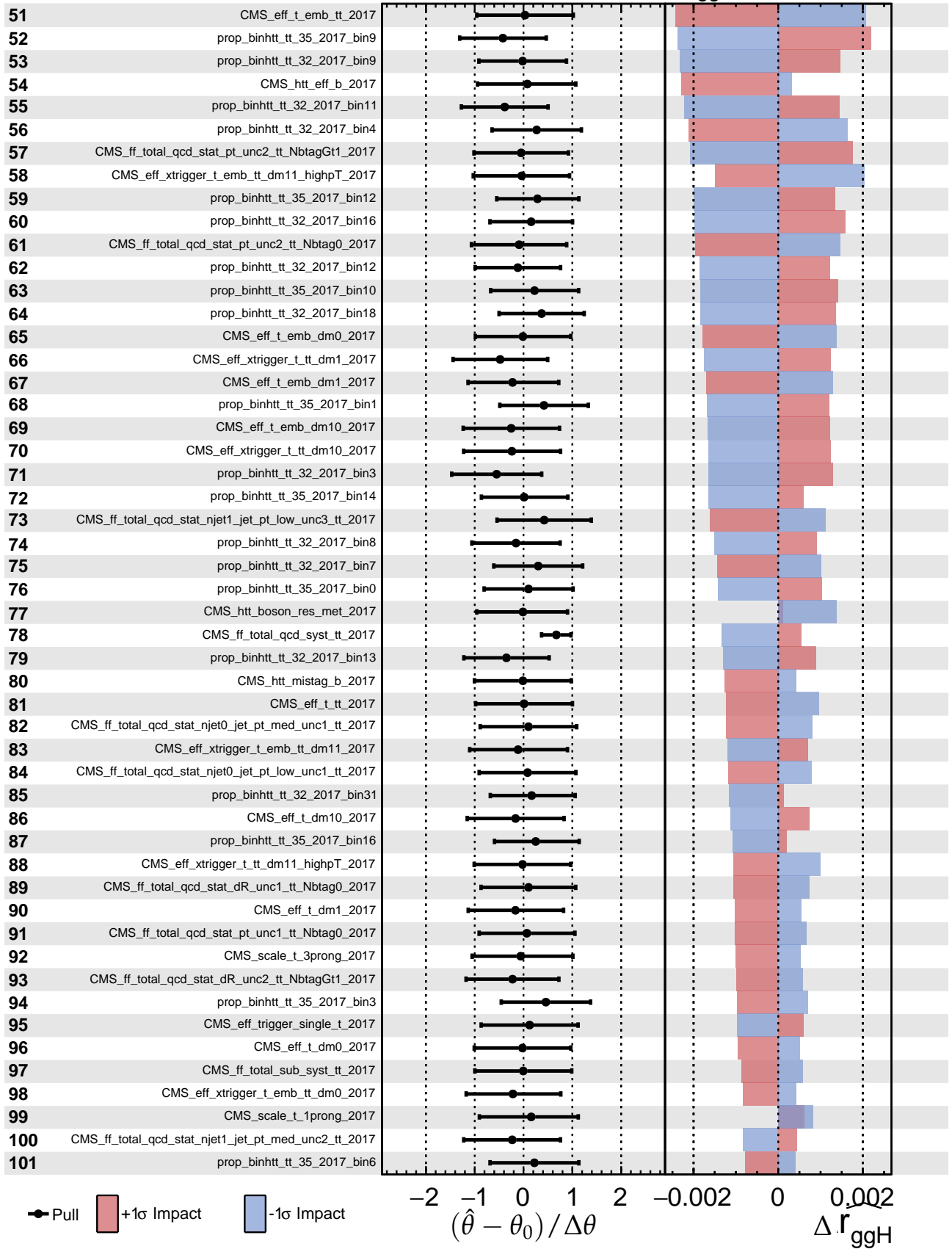
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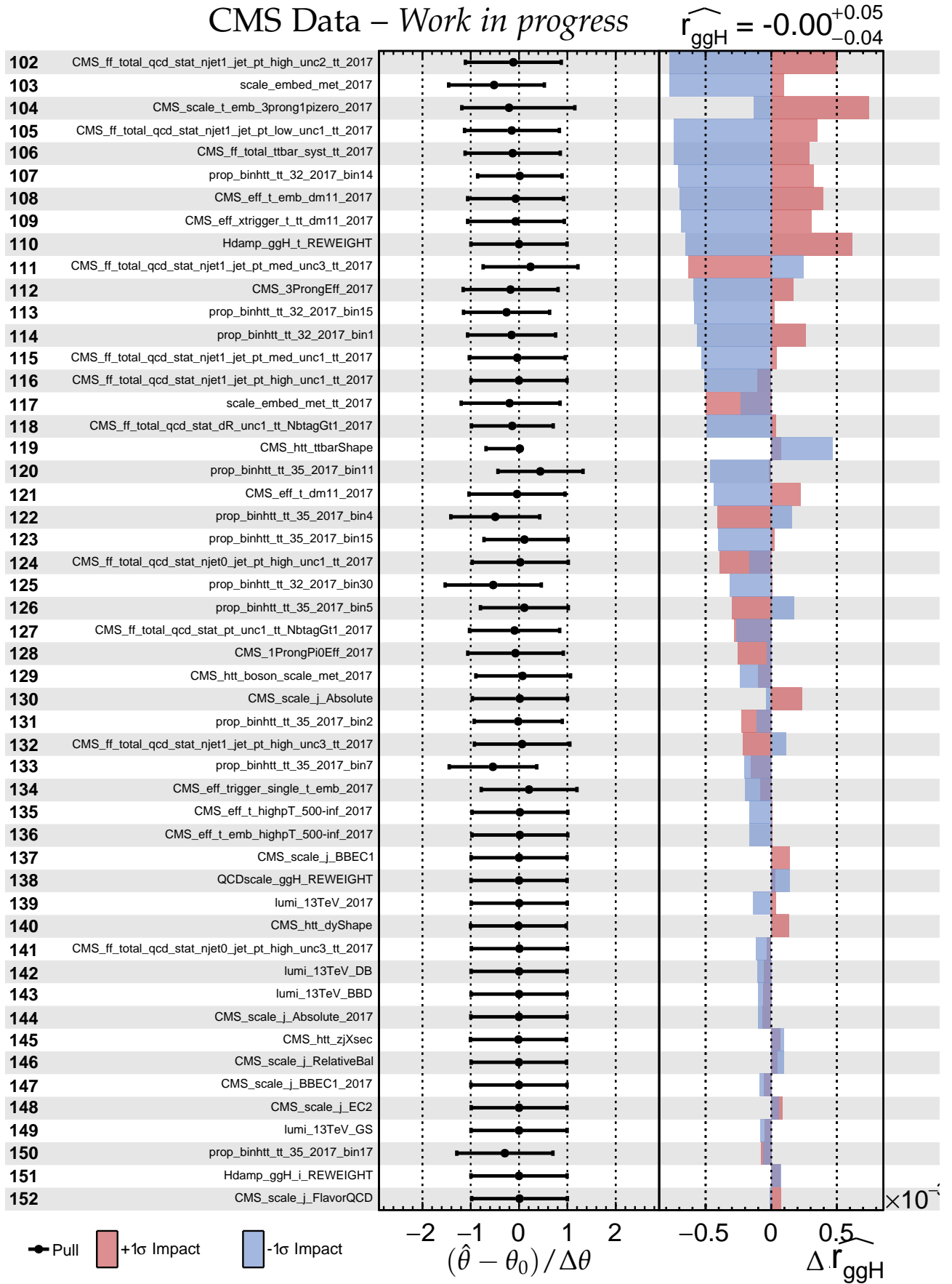




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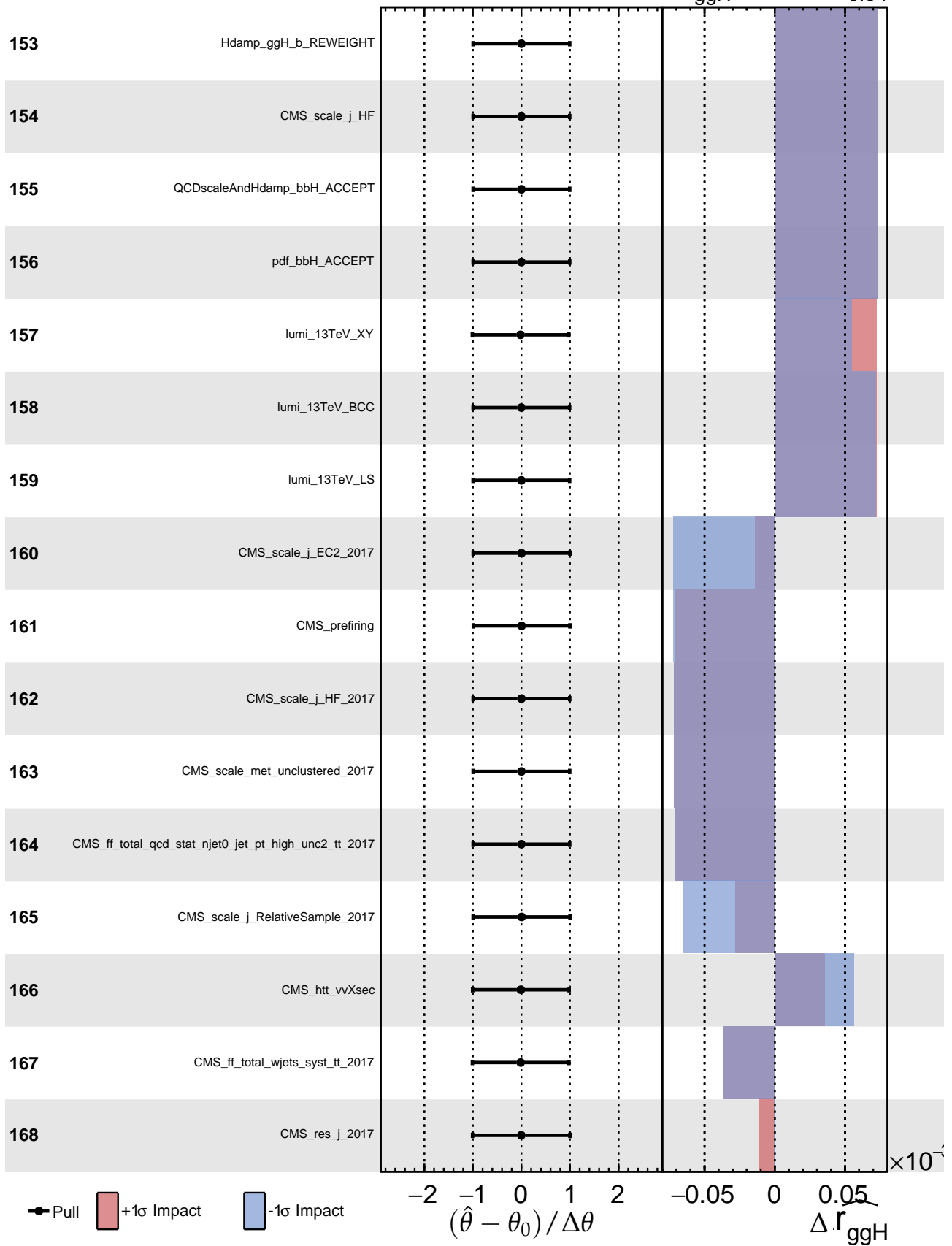
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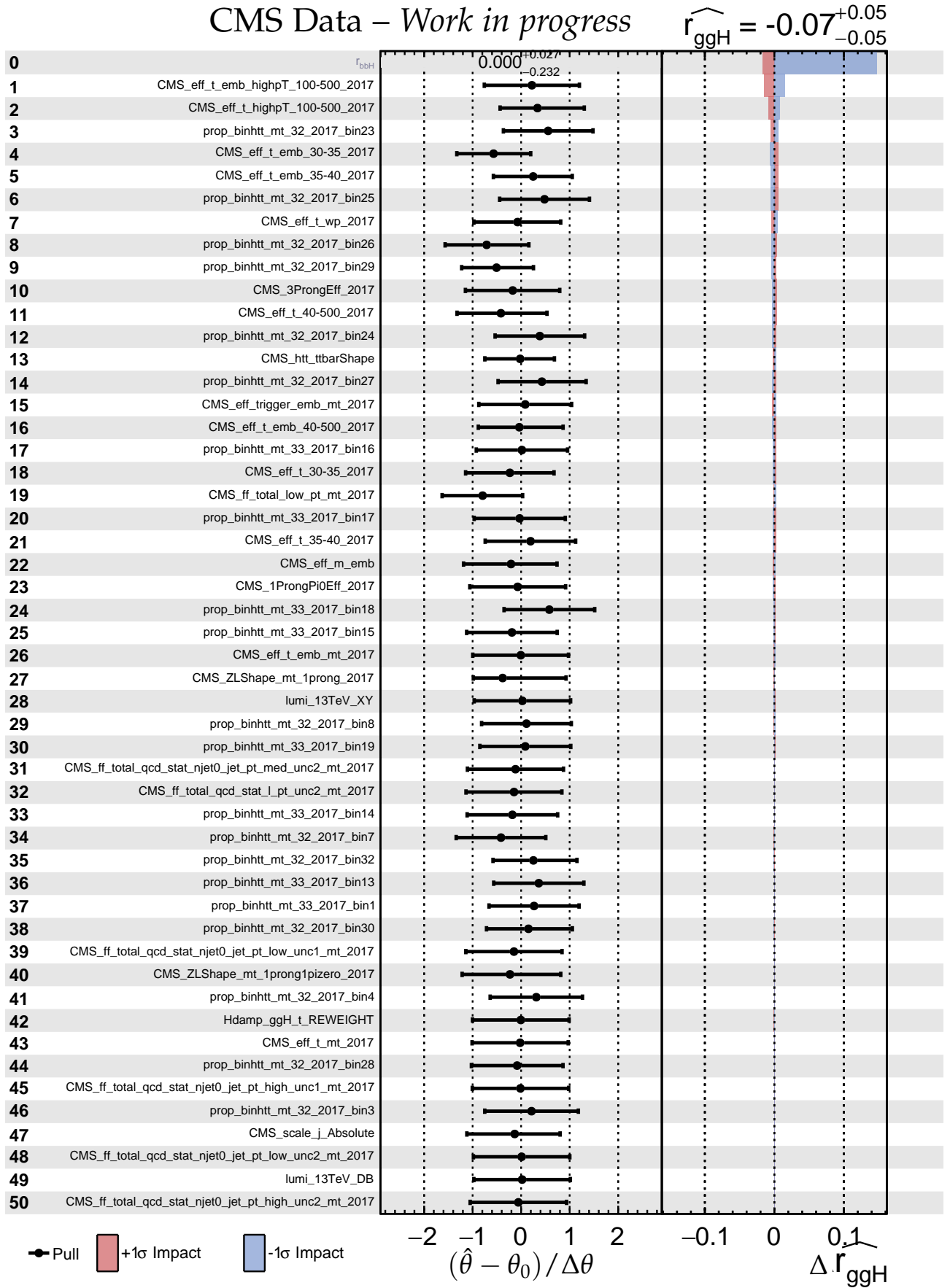




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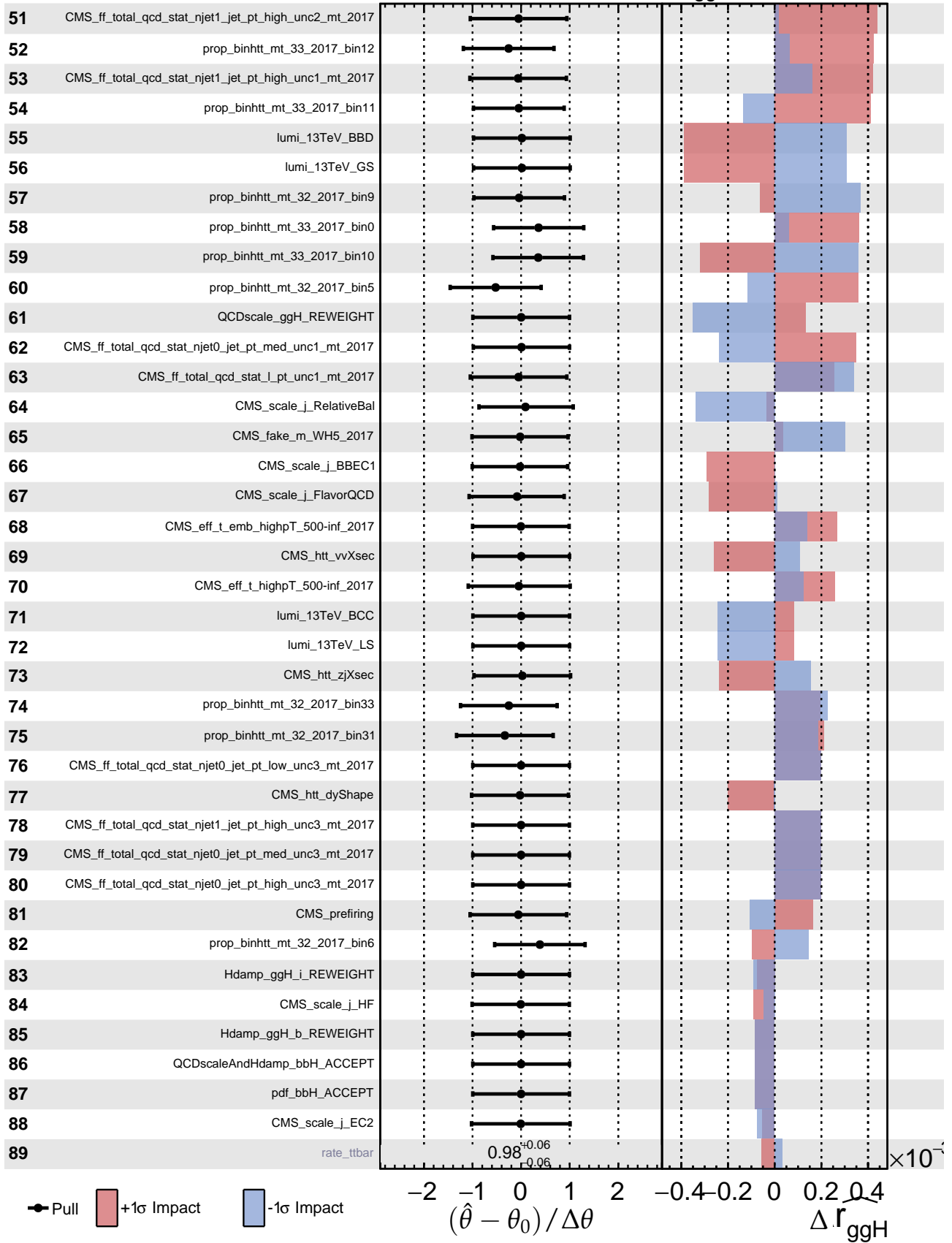
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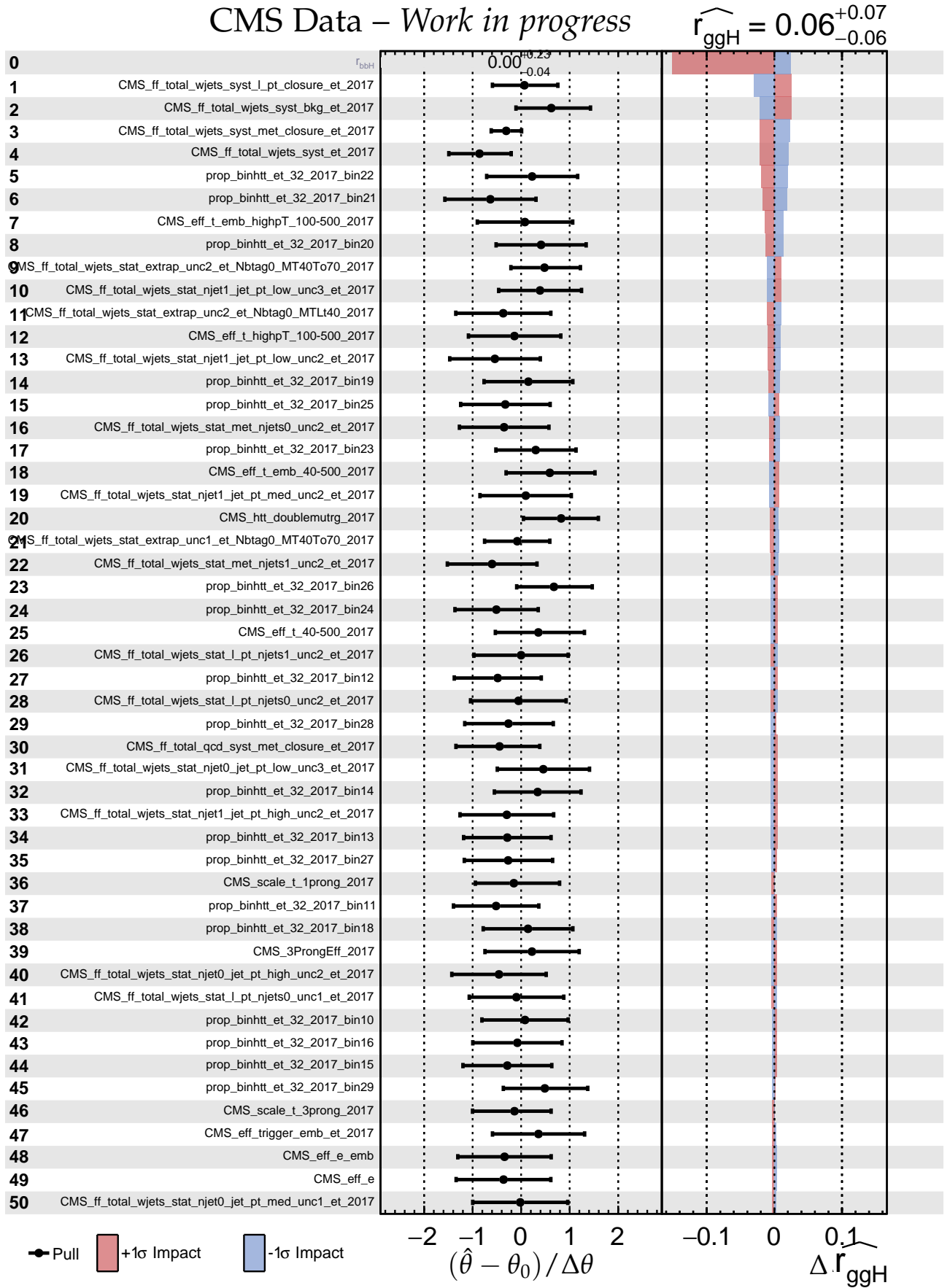




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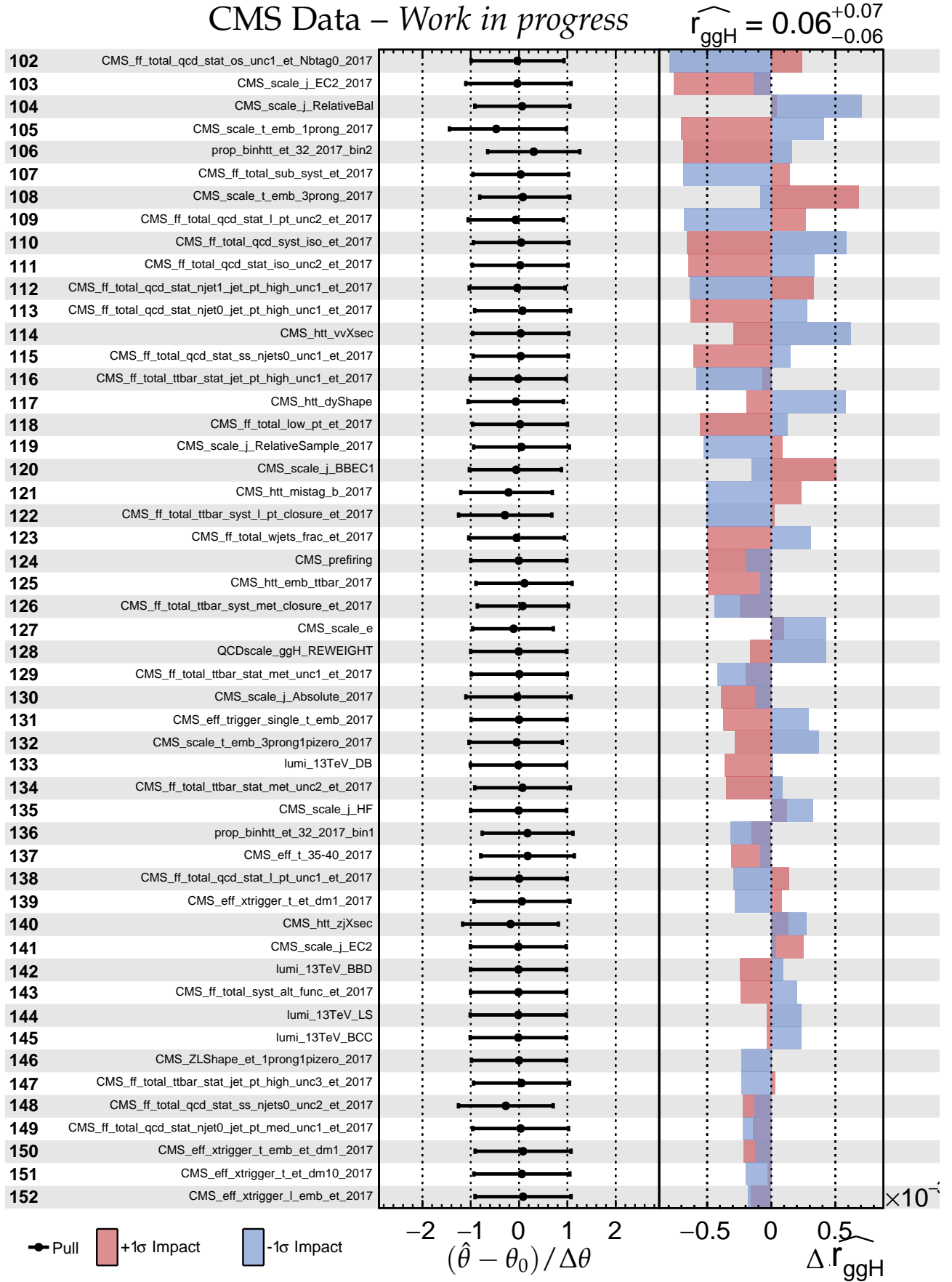




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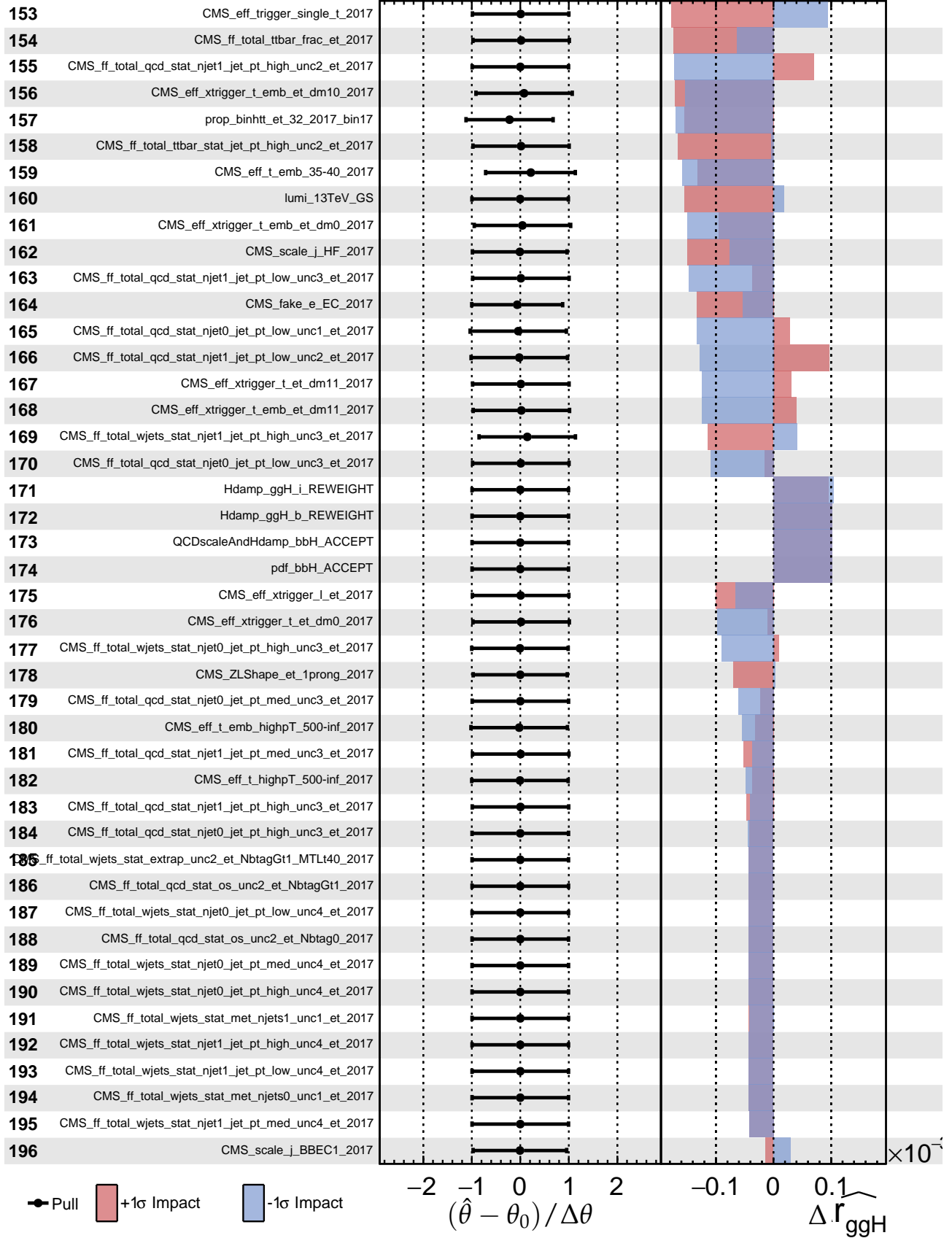
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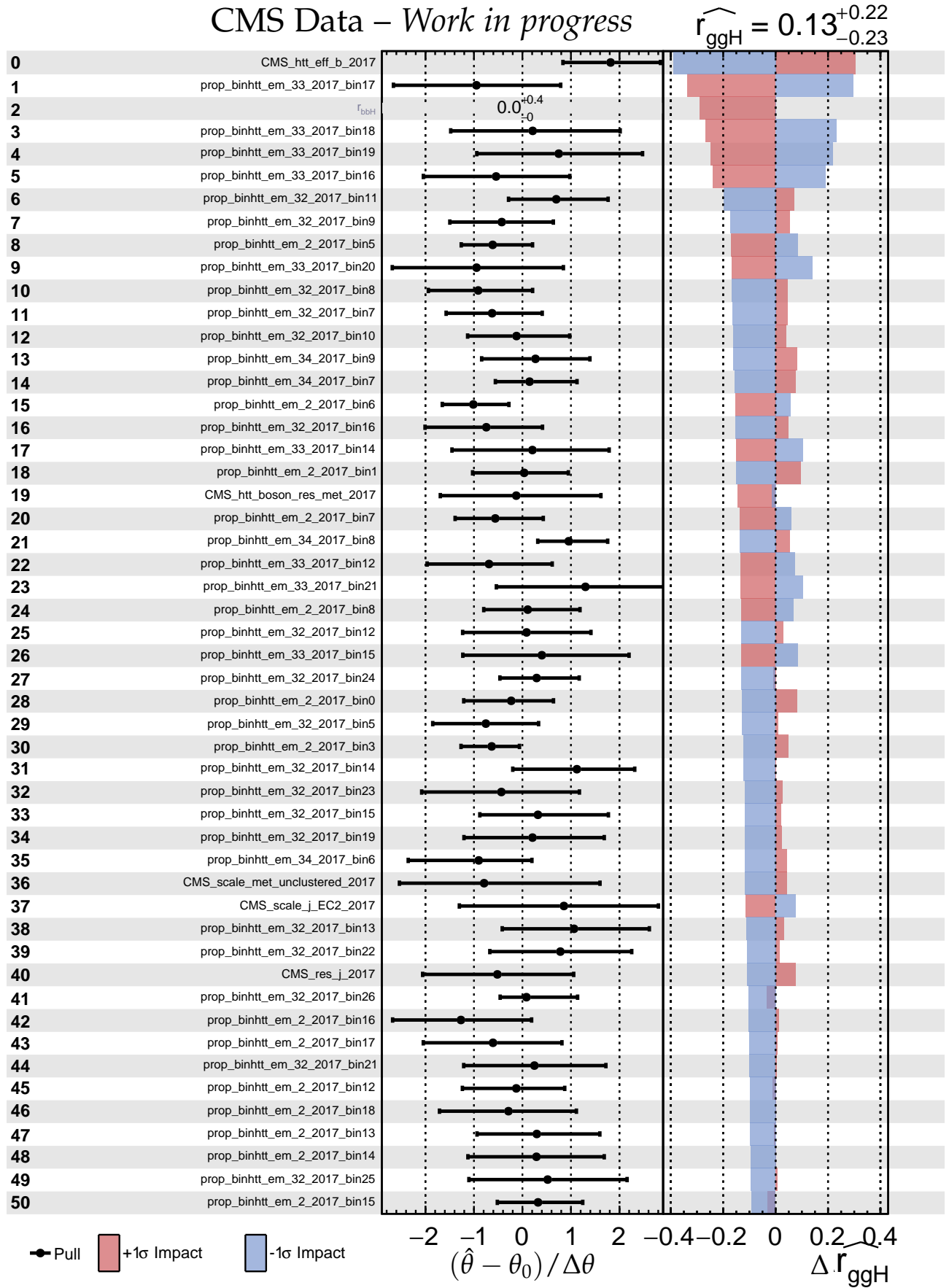




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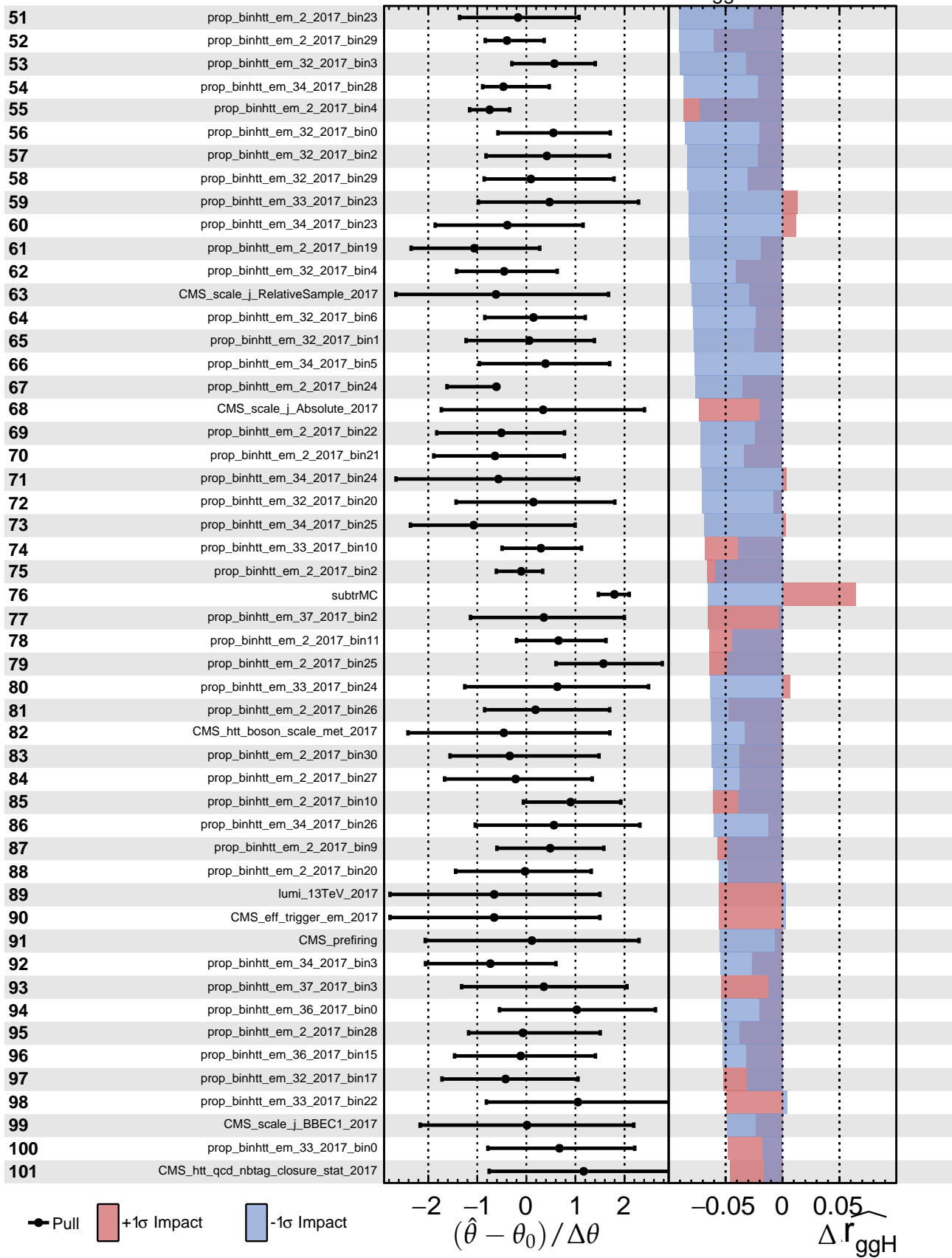
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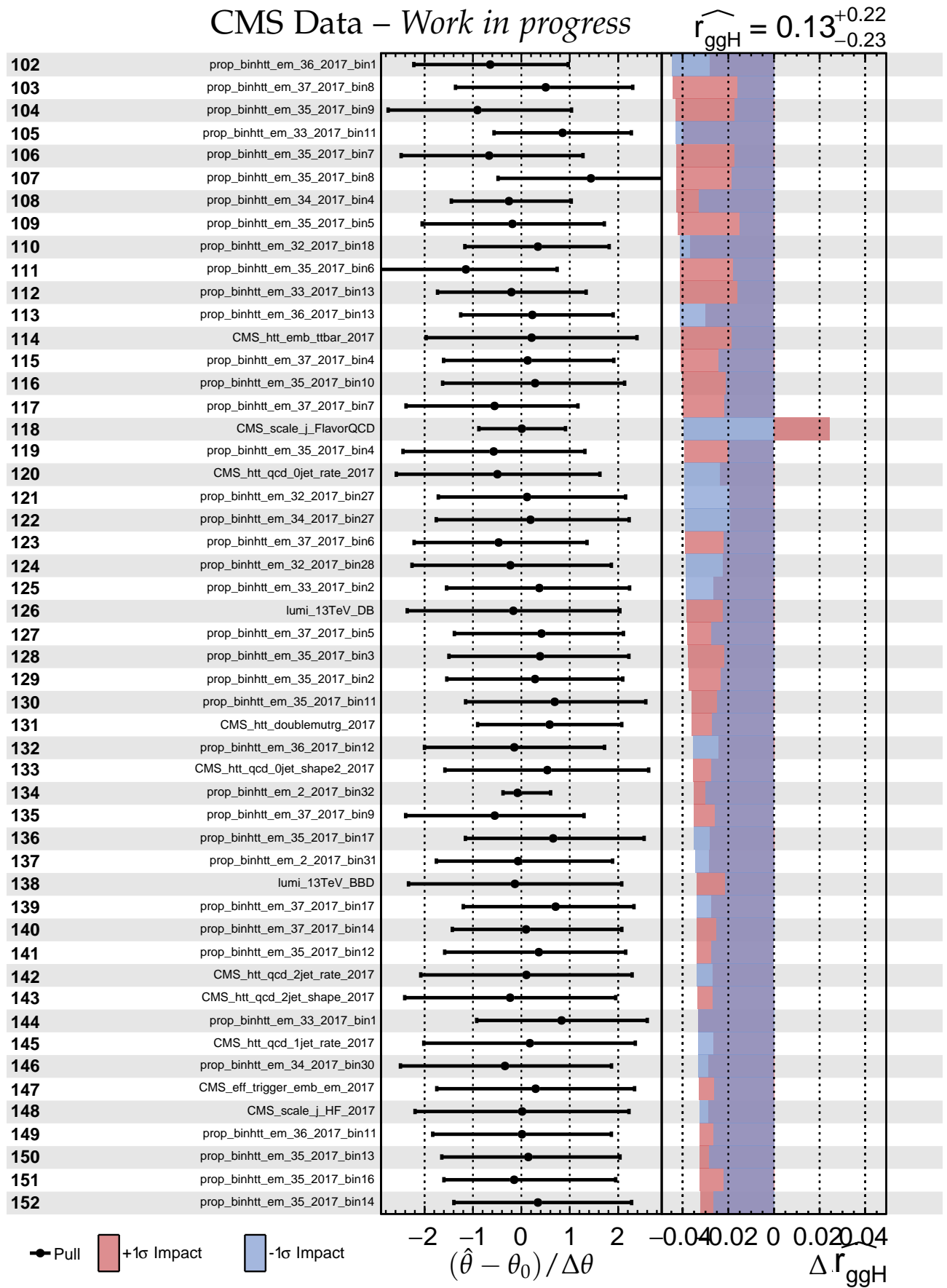




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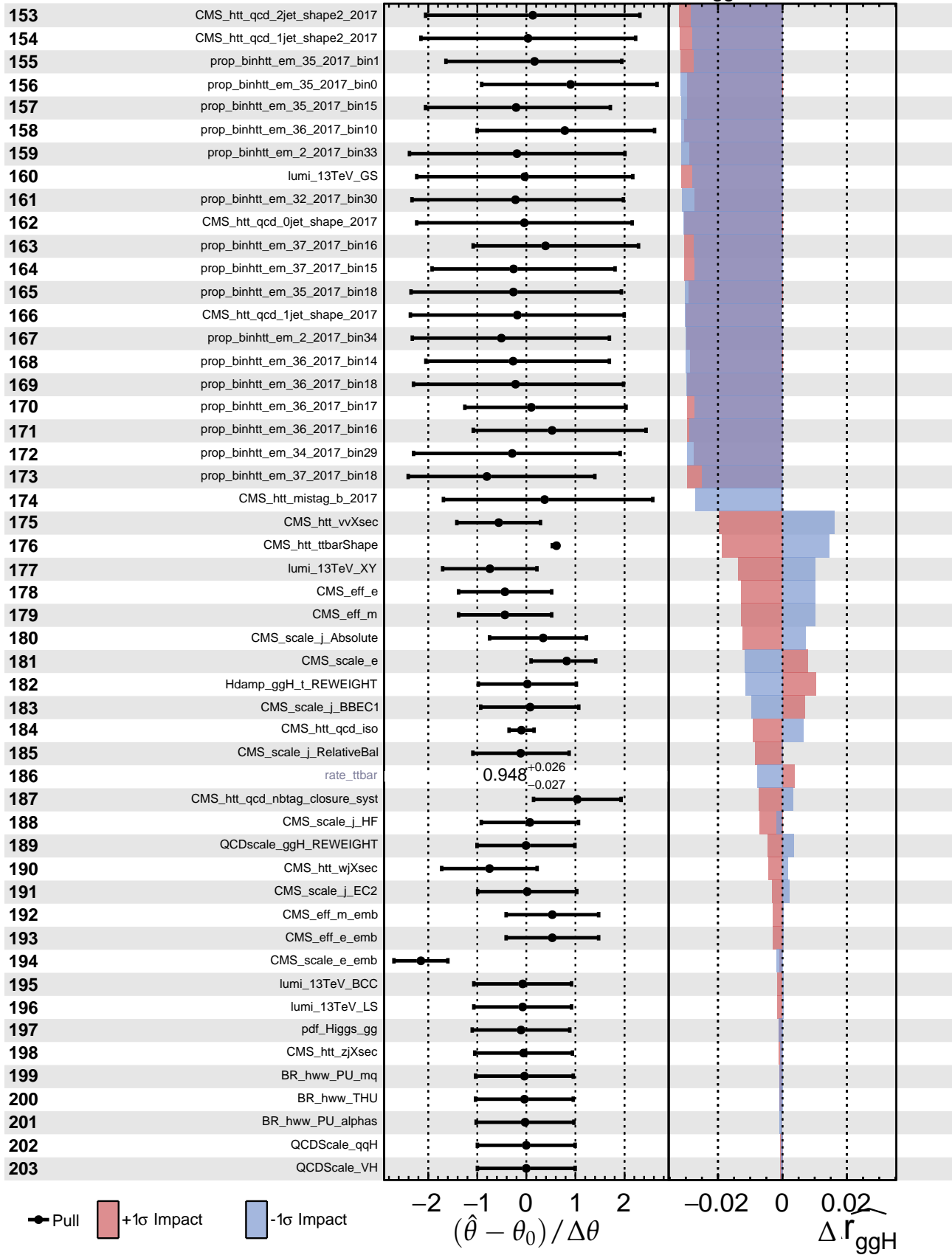
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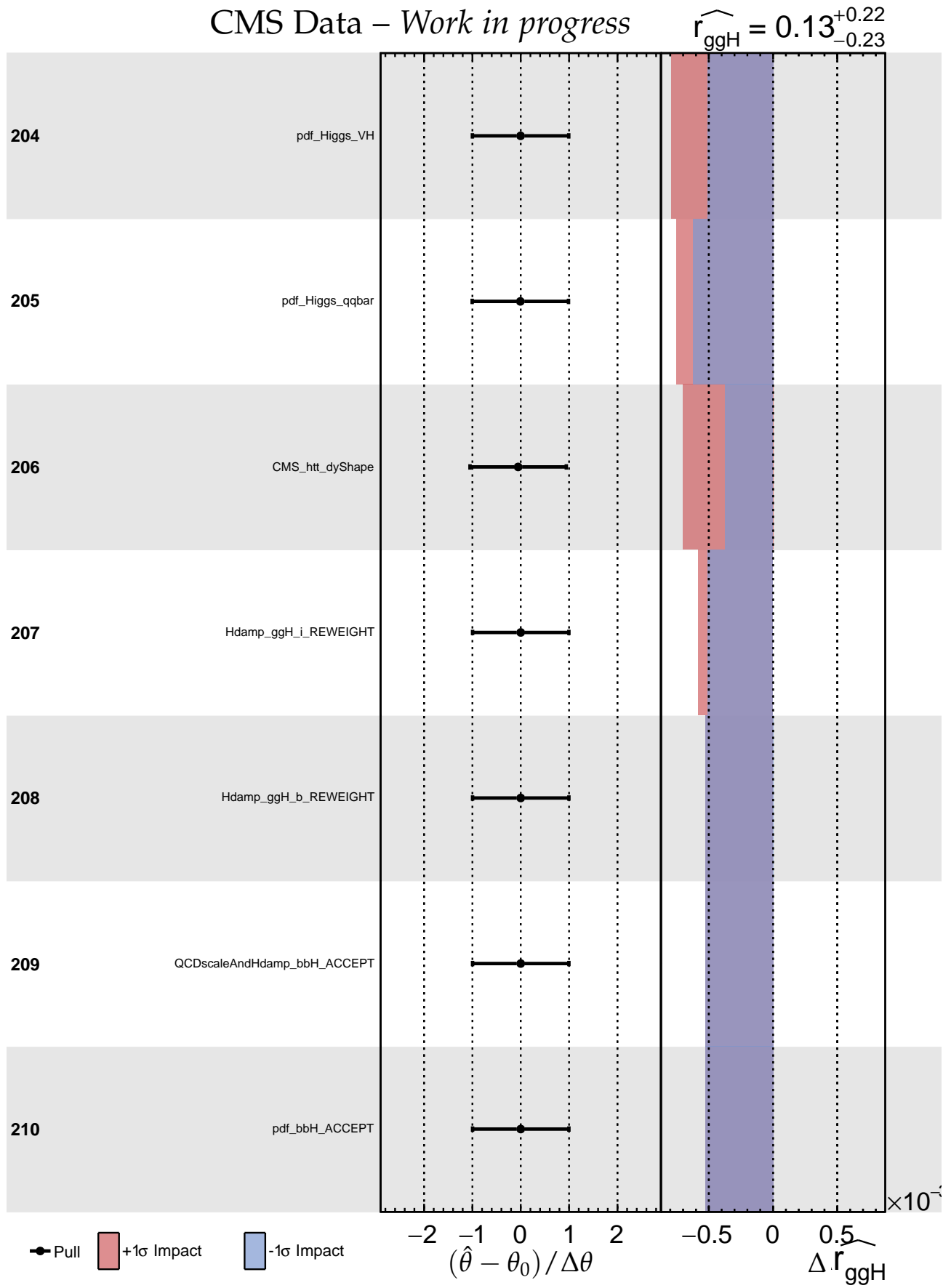




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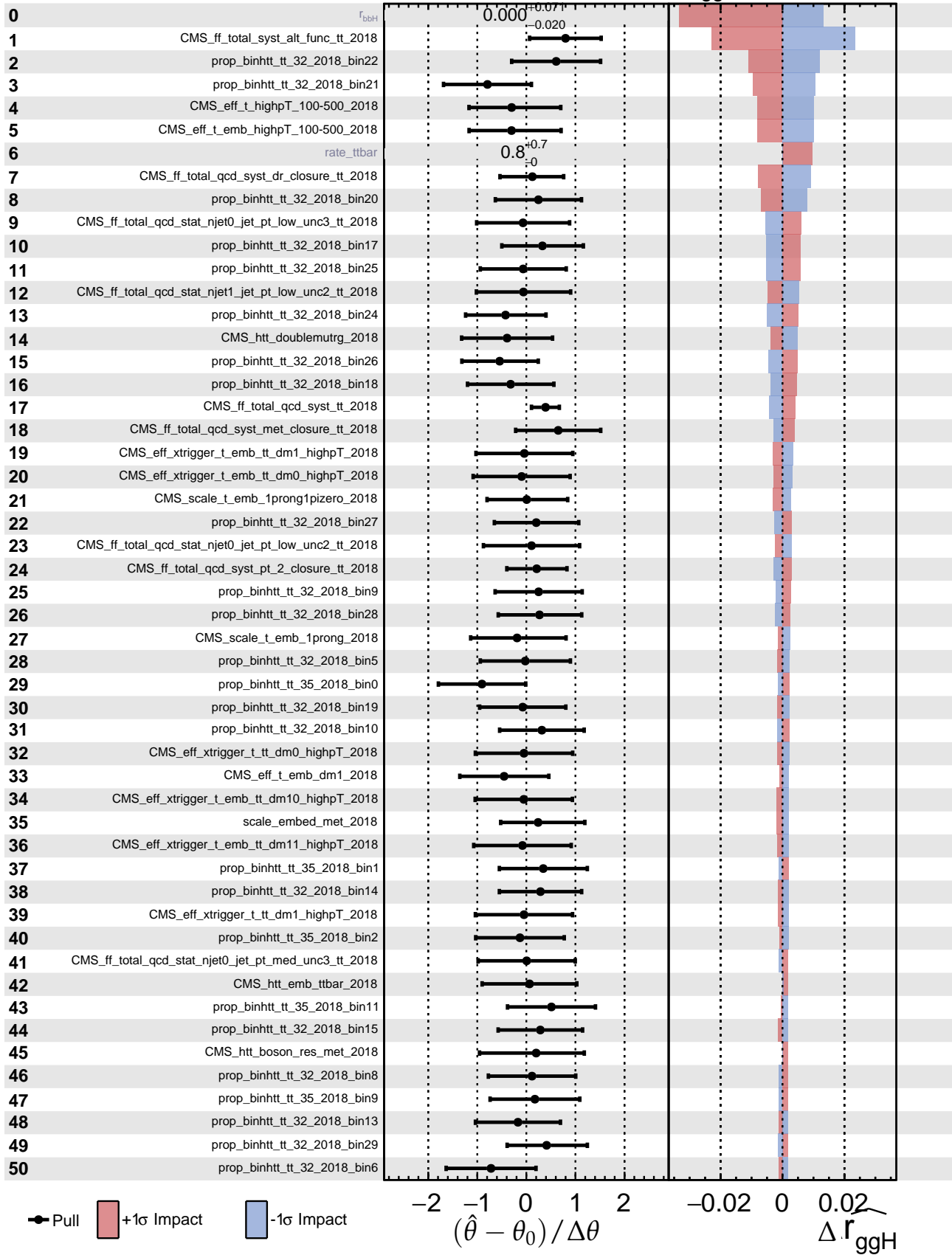


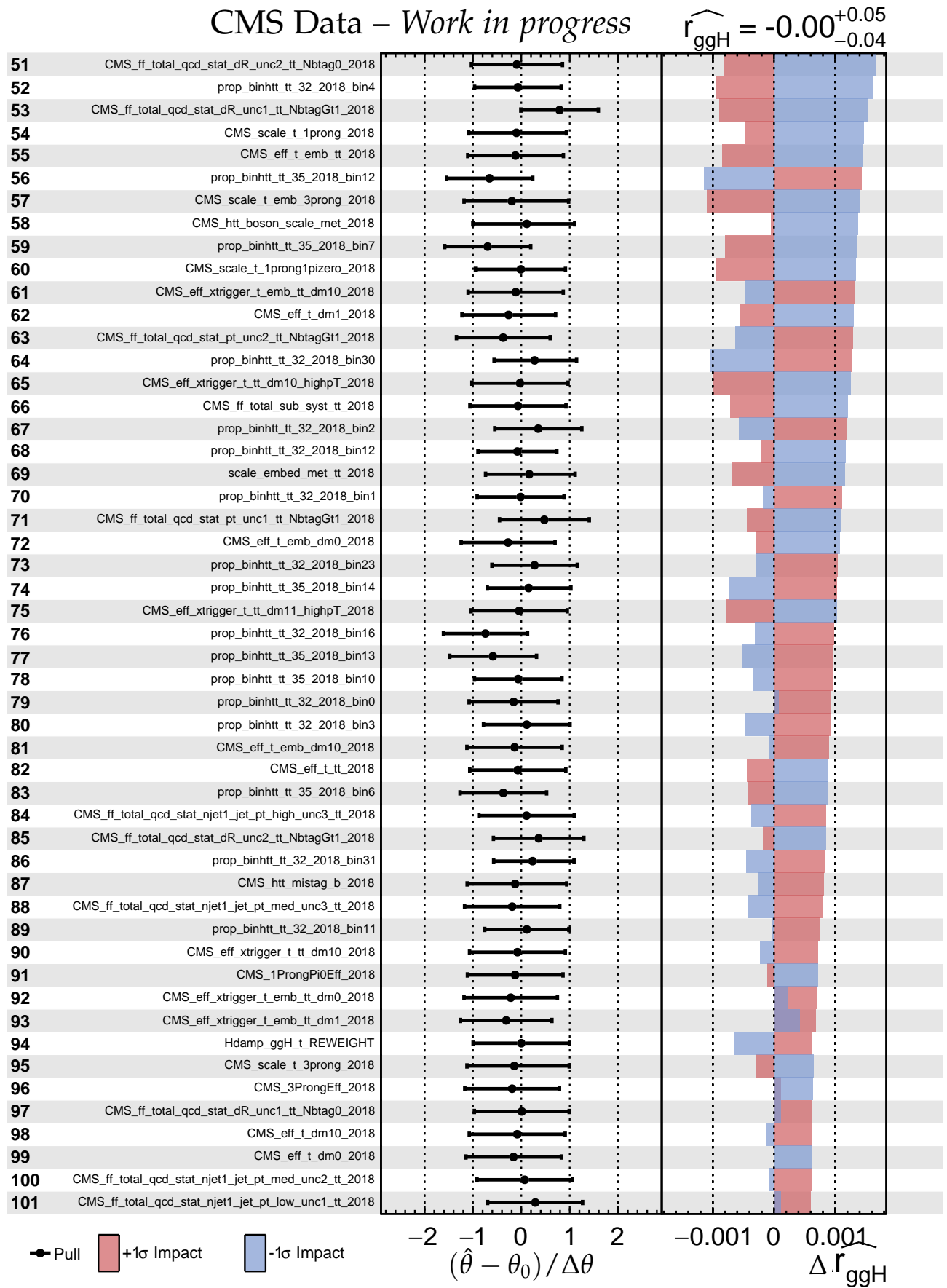




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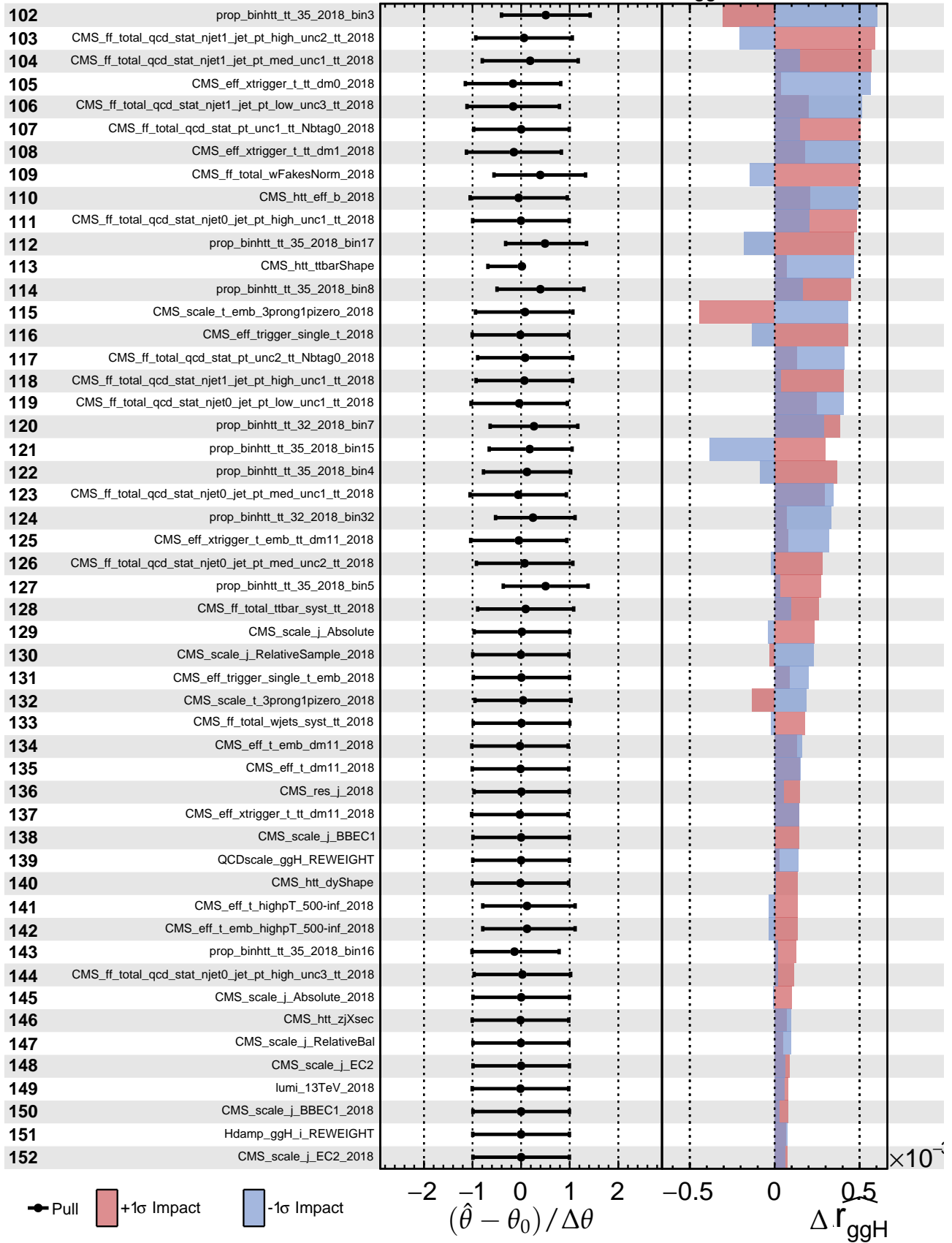
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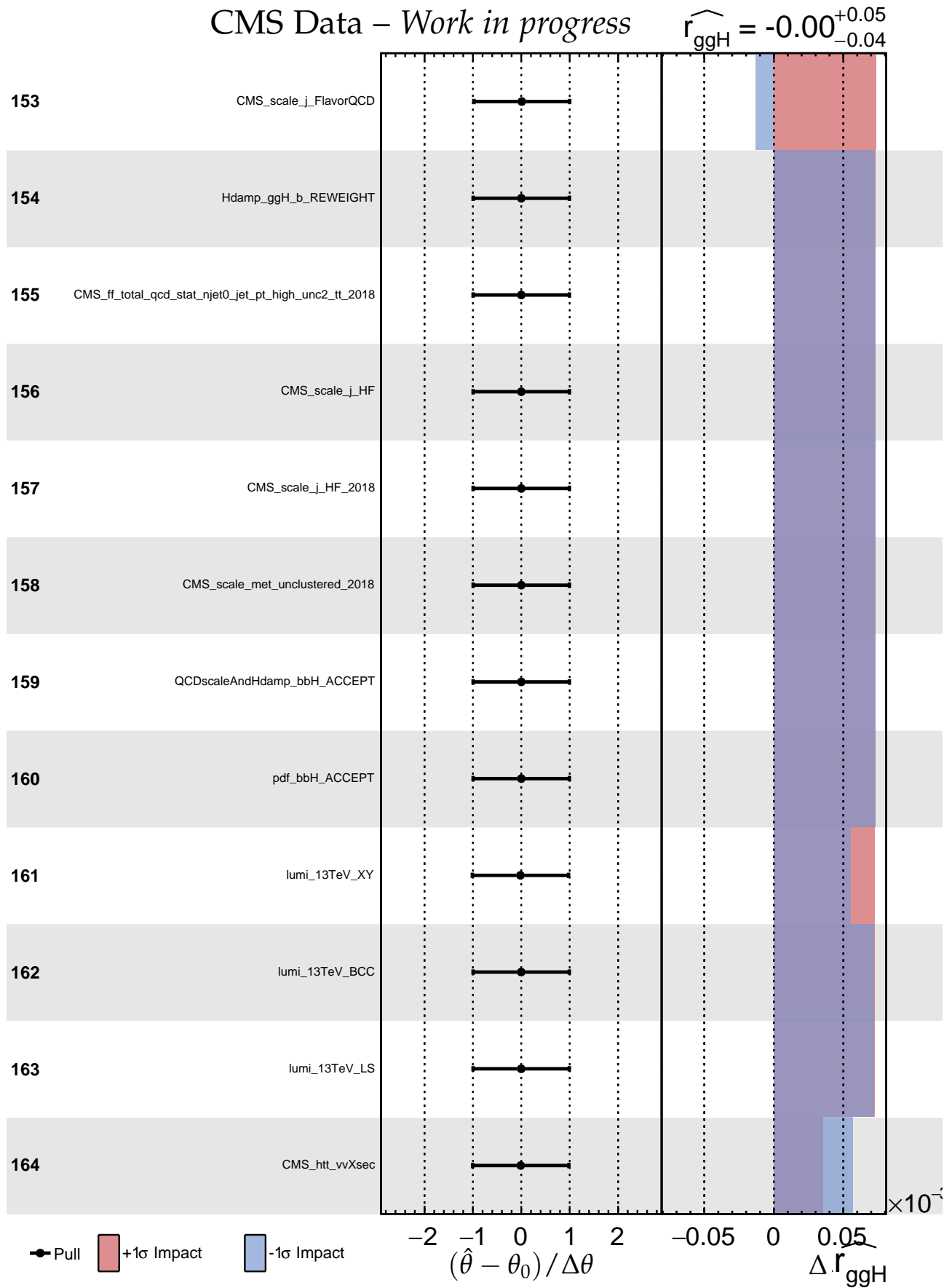




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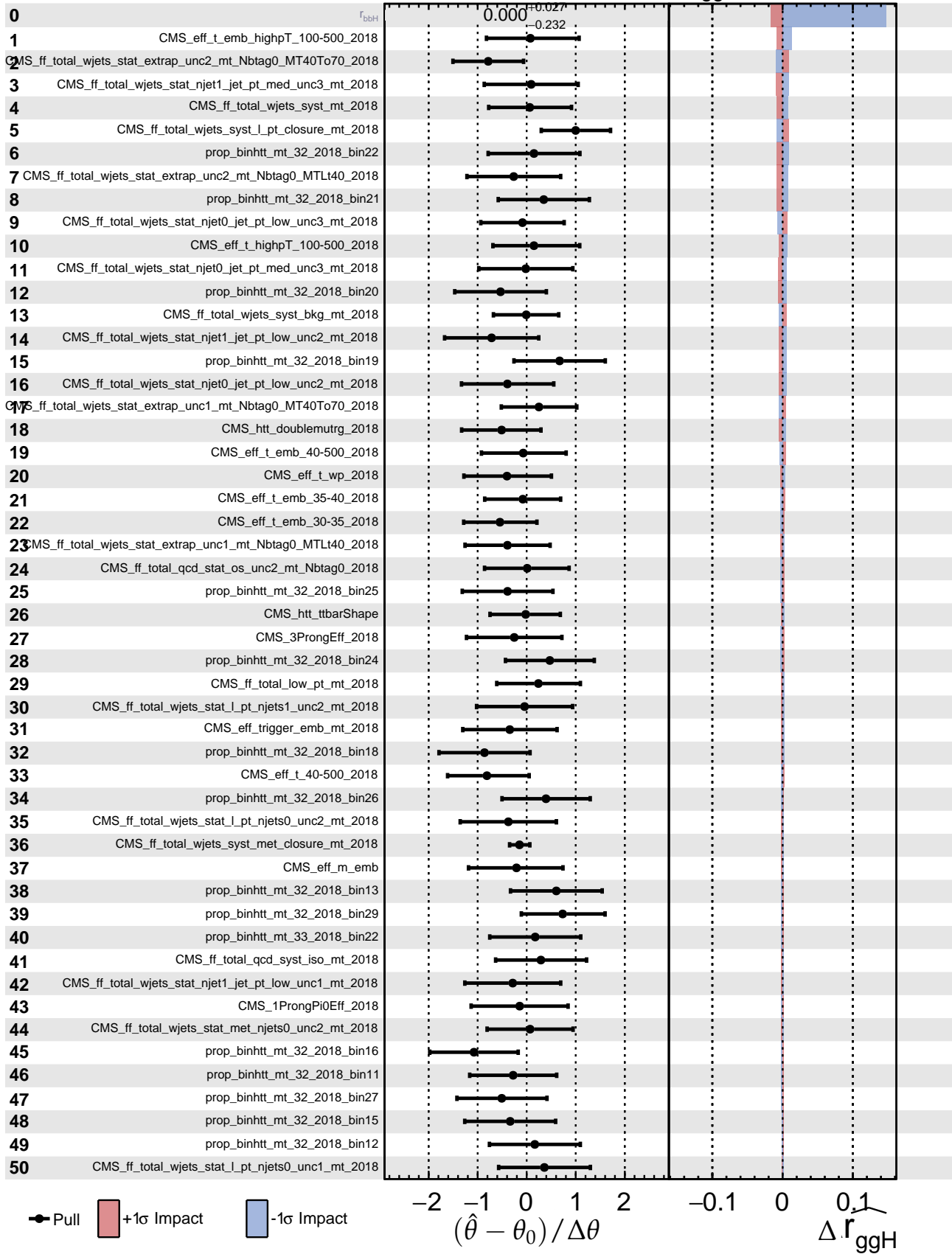
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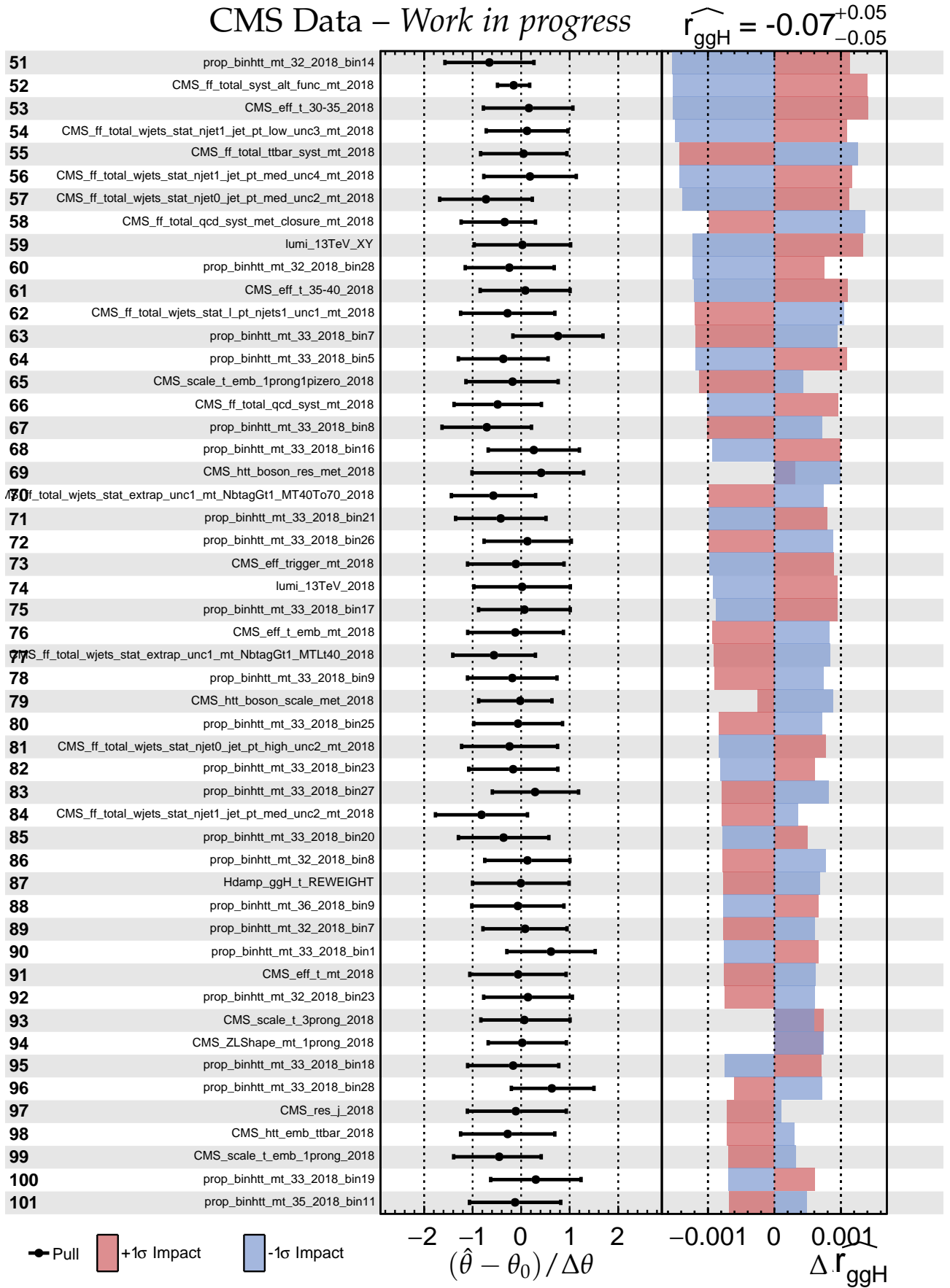




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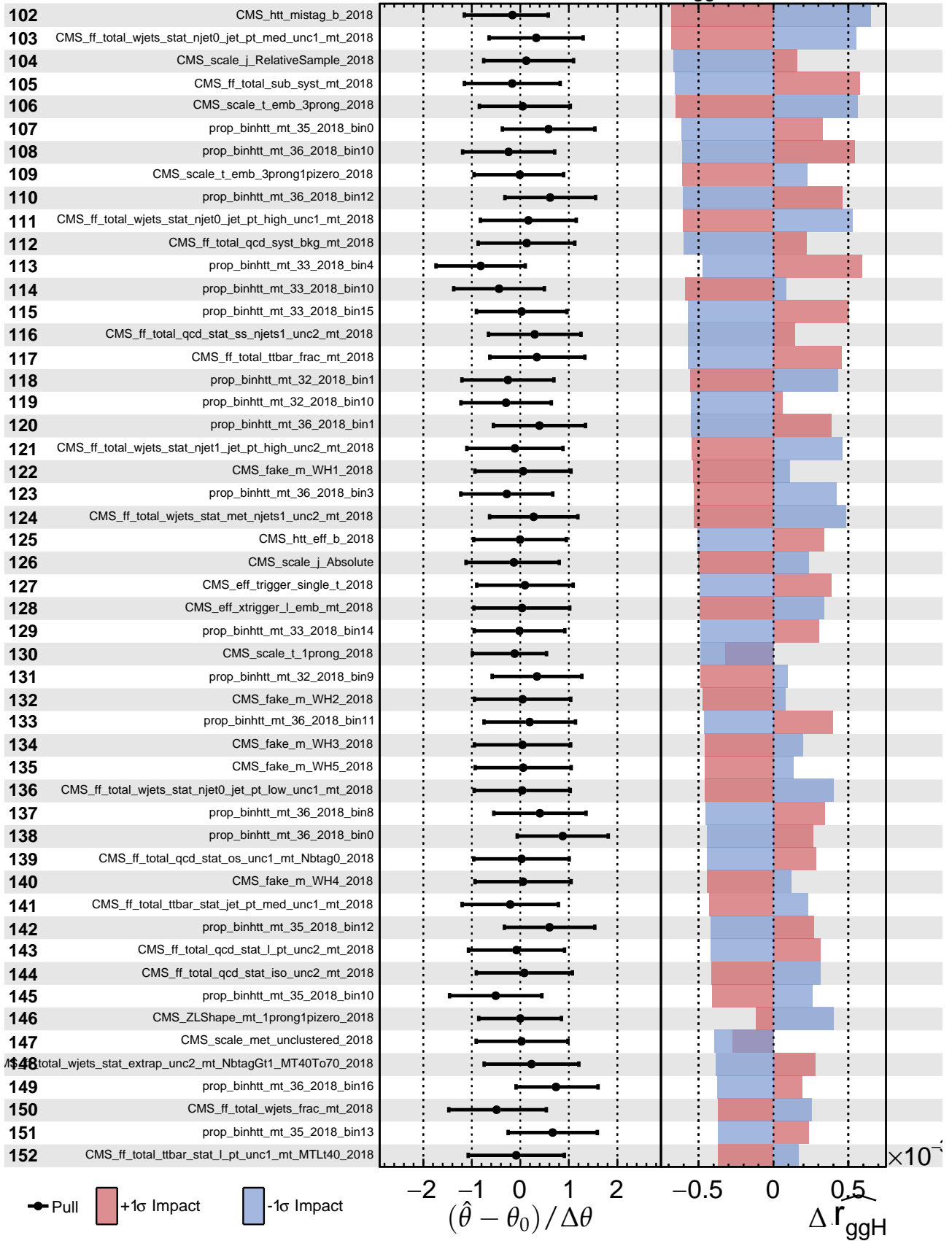
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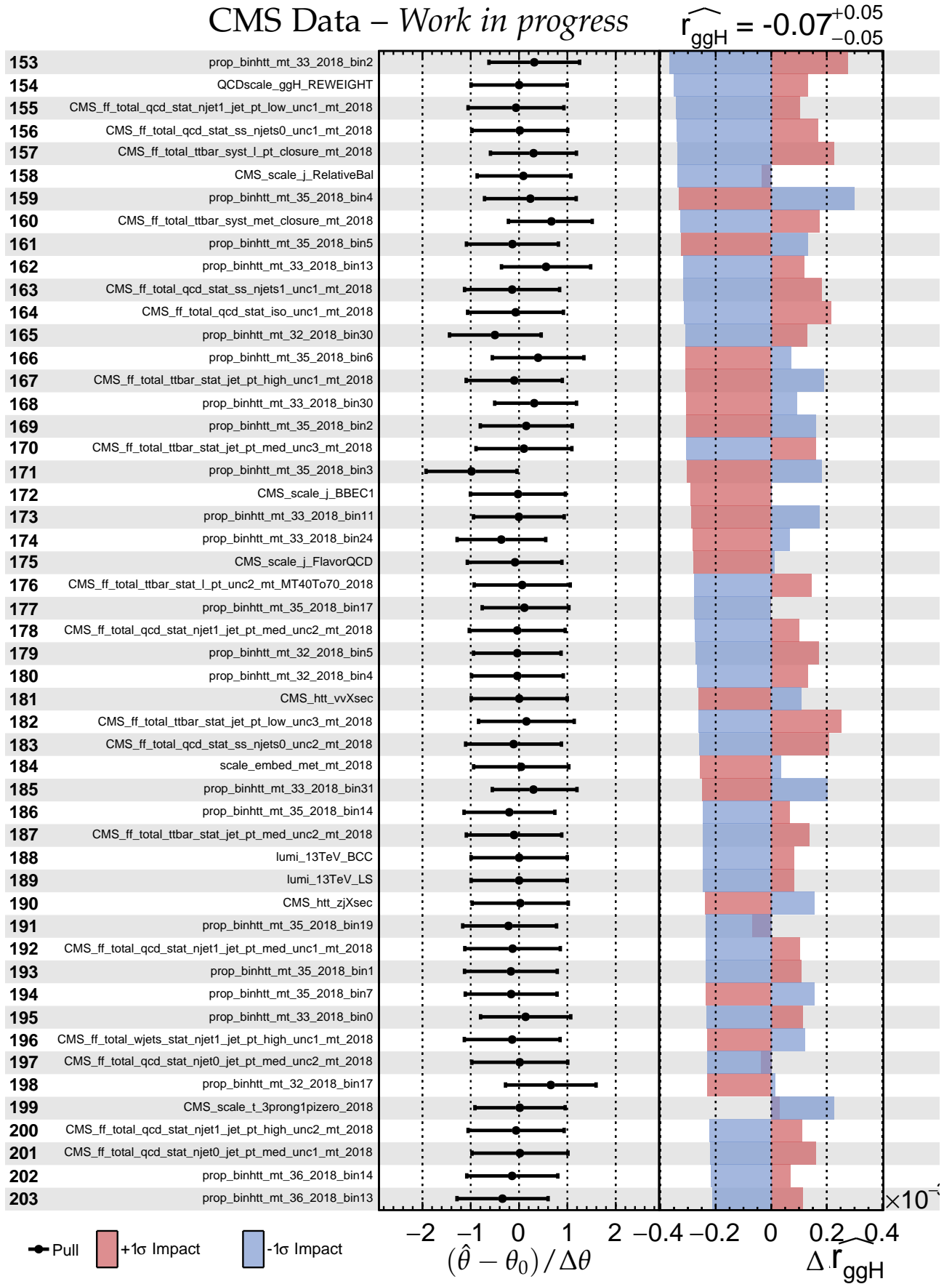




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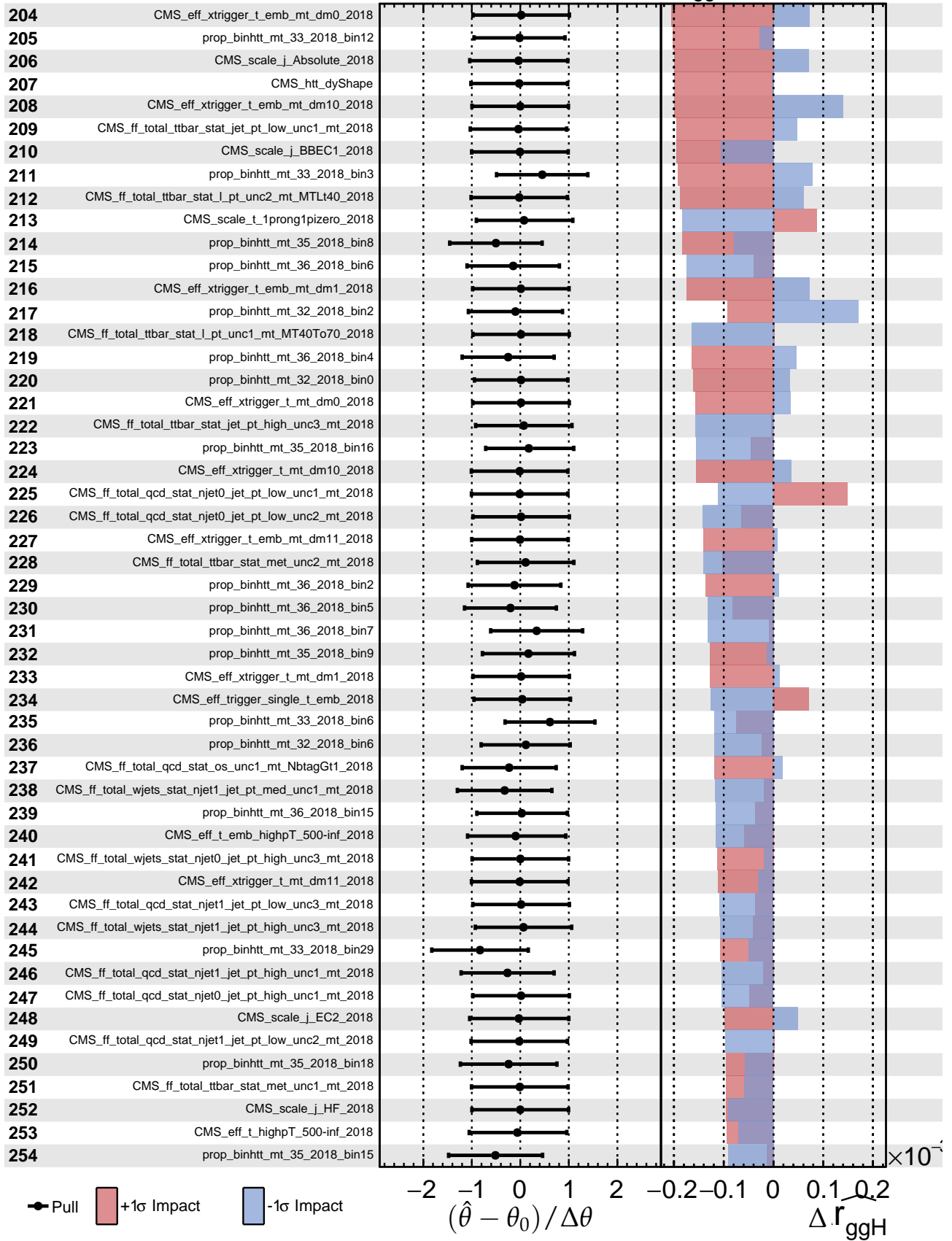


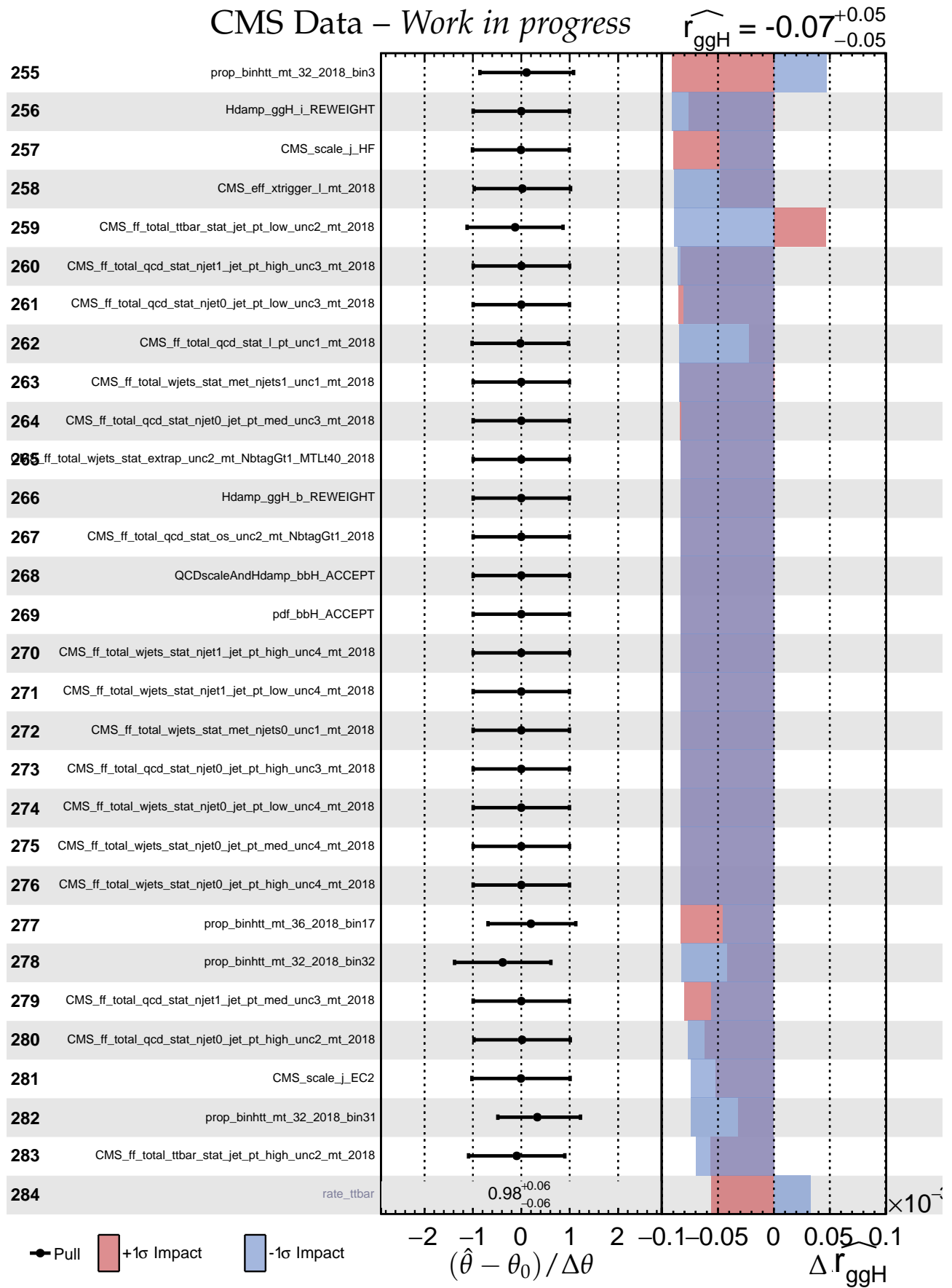




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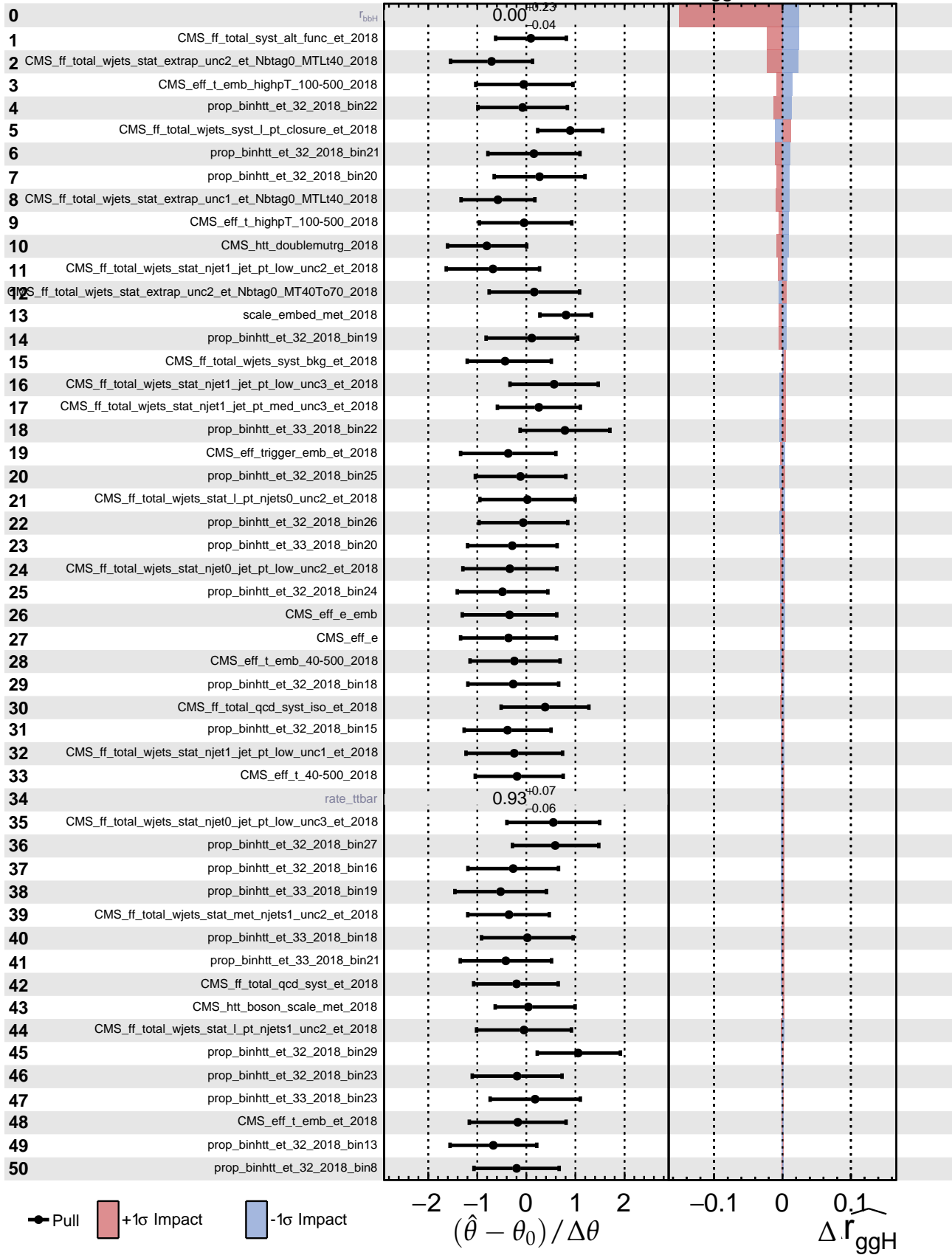
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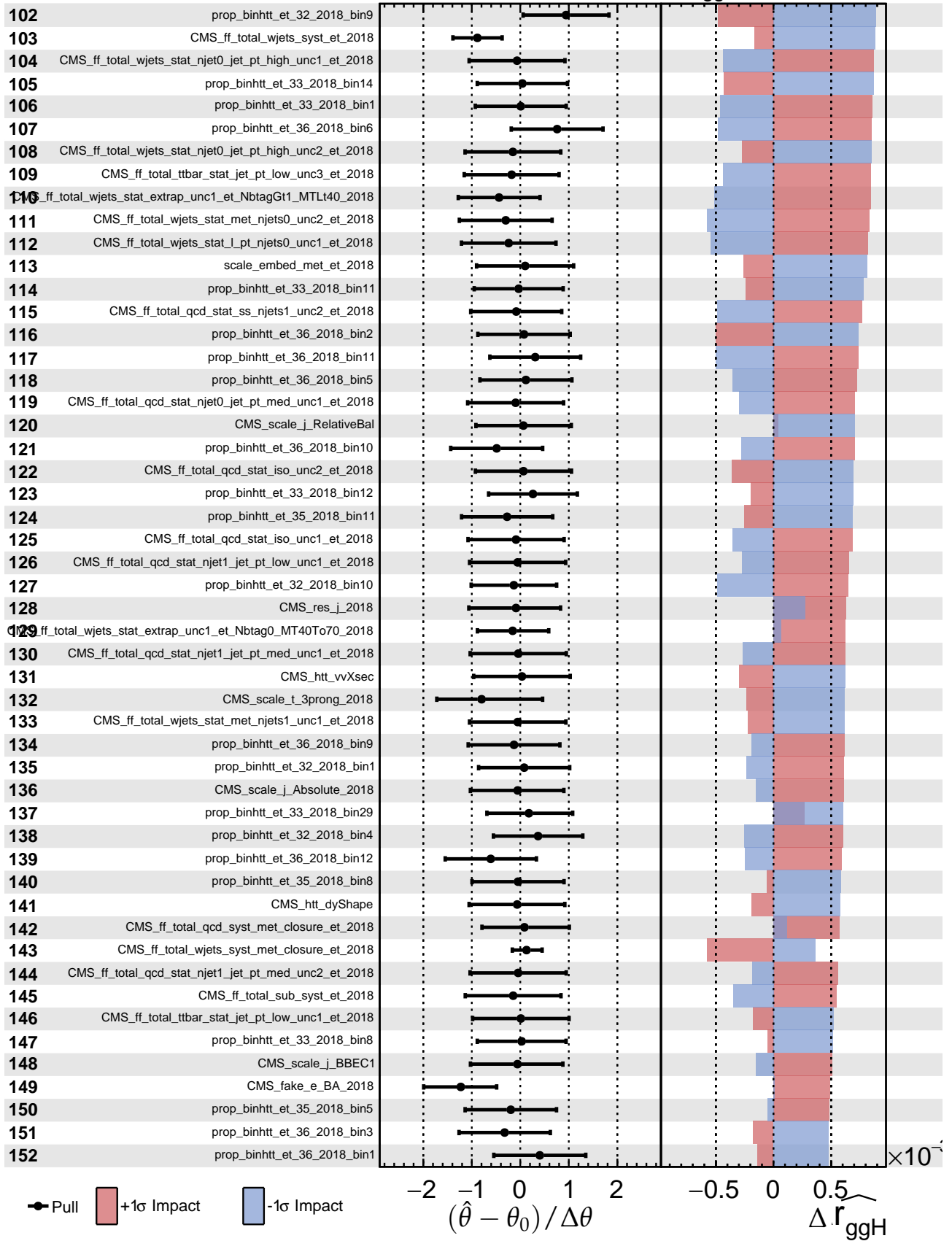
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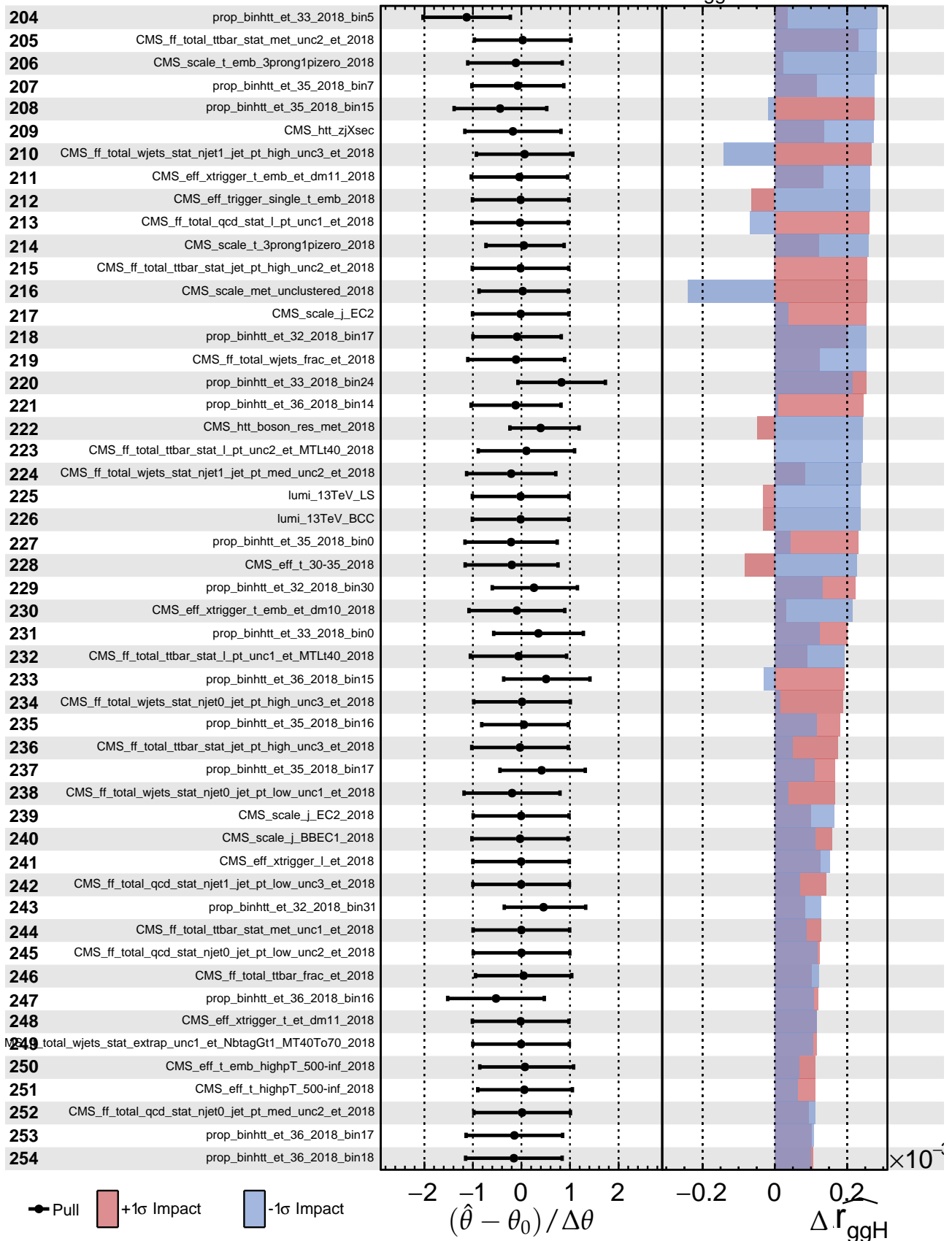
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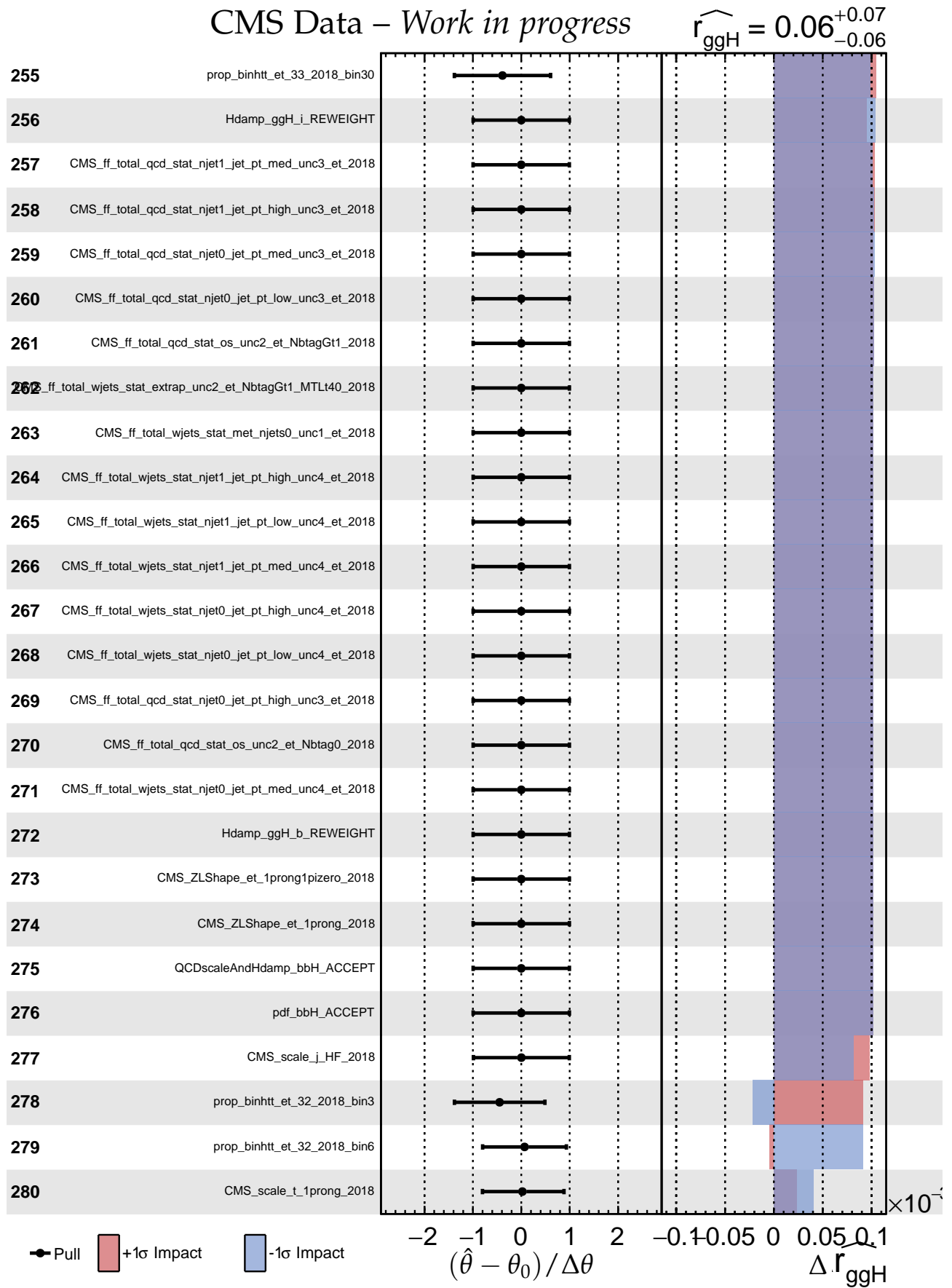




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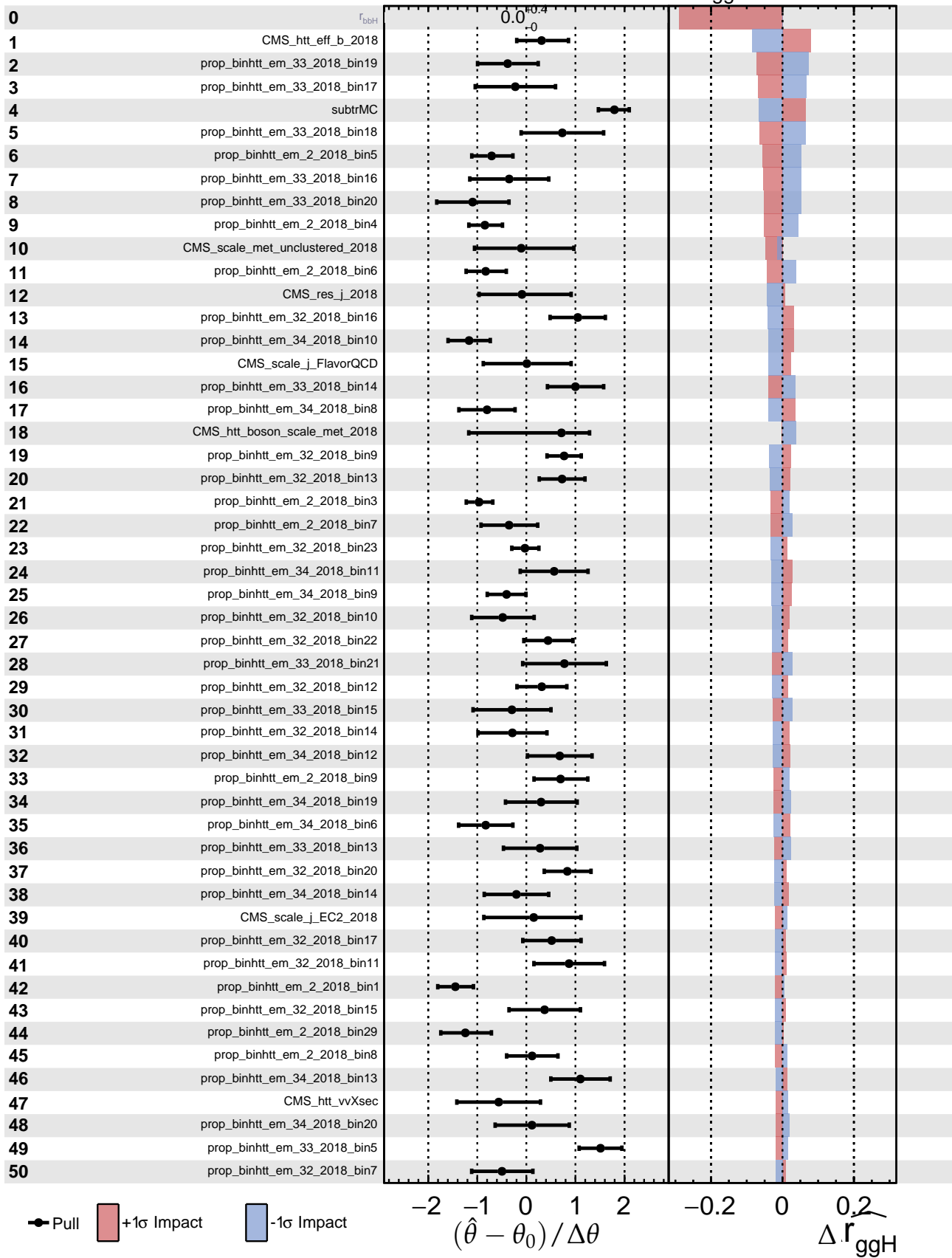


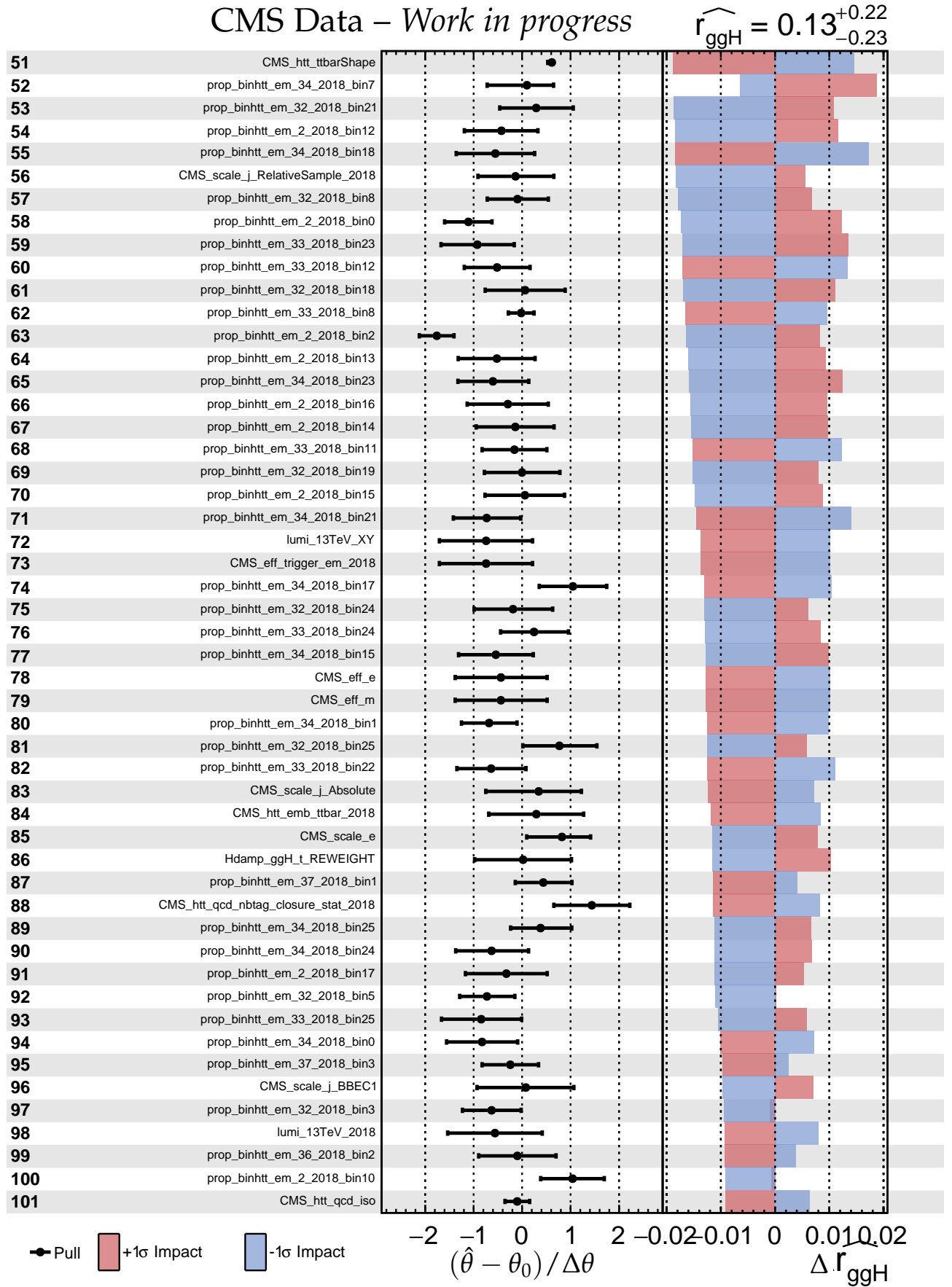




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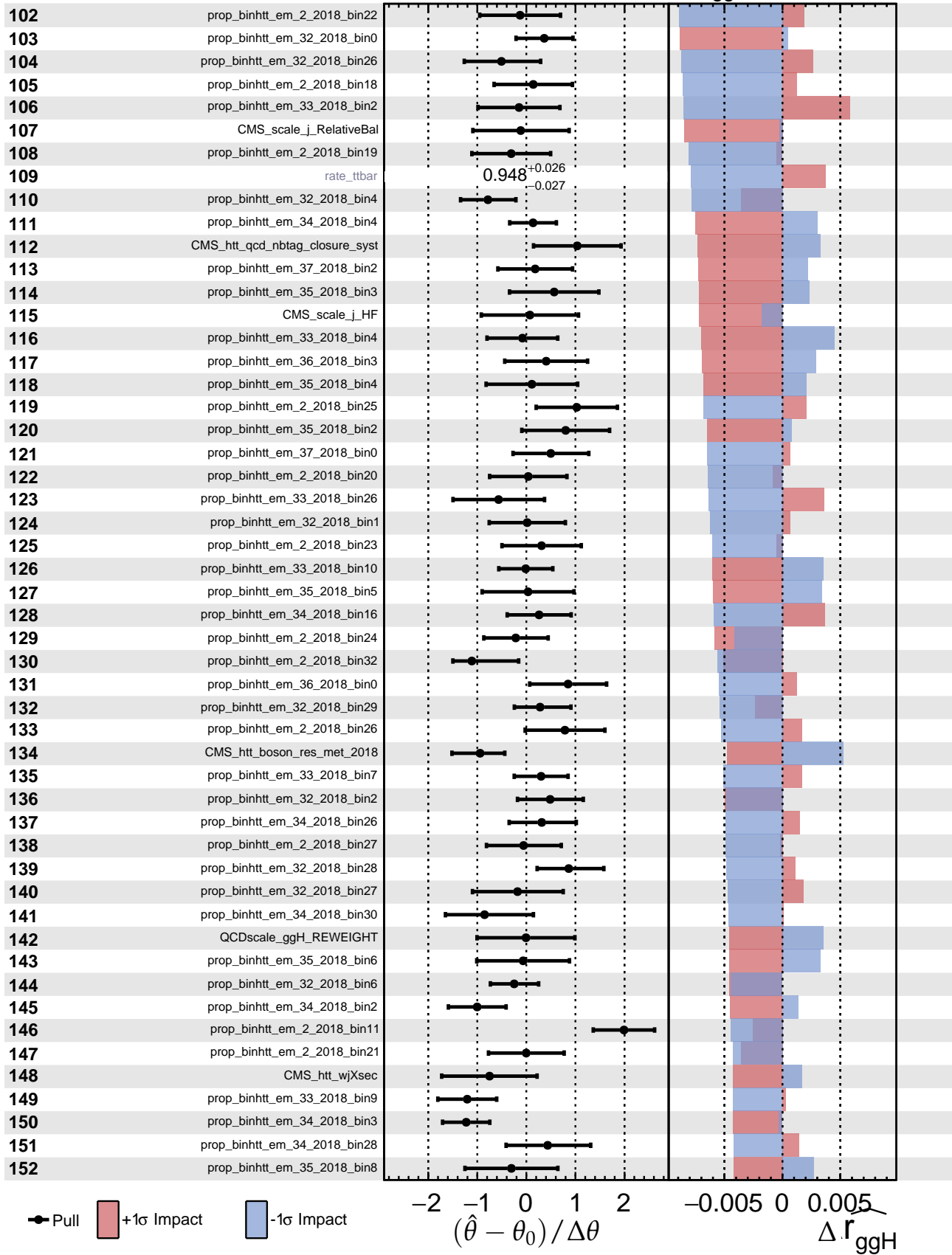
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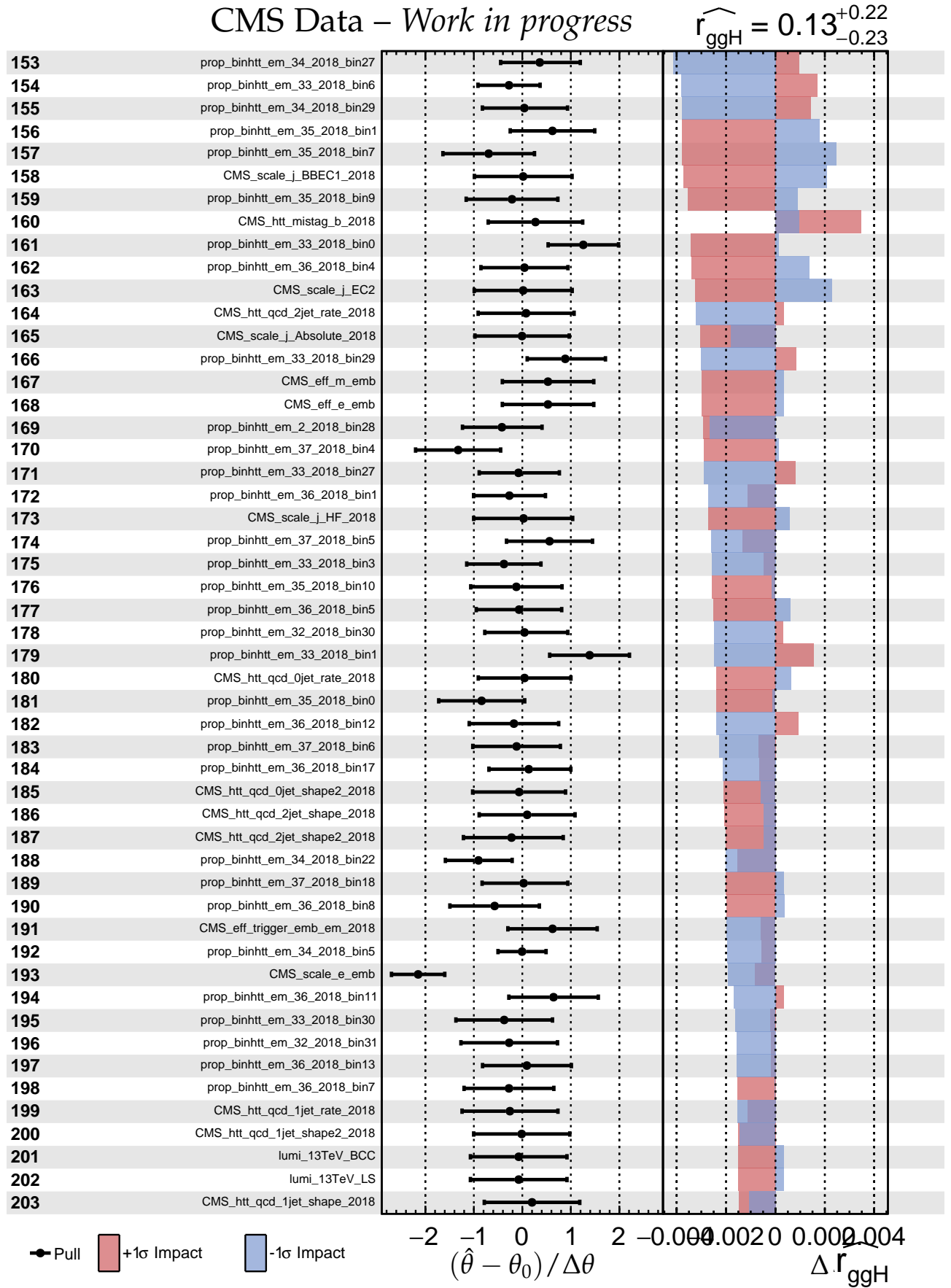




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CMS Data – *Work in progress*

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