

No $m(Z_1)$ constraint	3D: $\mathcal{L}(m_{4l}, \mathcal{D}_{\text{mass}}, \mathcal{D}_{\text{bkg}}^{\text{kin}})$	2D: $\mathcal{L}(m_{4l}, \mathcal{D}_{\text{mass}})$	1D: $\mathcal{L}(m_{4l})$
Expected m_{H} uncertainty change	+8.1%	+11.2%	+21%
Observed m_{H} (GeV)	125.28 ± 0.22	125.36 ± 0.24	125.39 ± 0.25
With $m(Z_1)$ constraint	3D: $\mathcal{L}(m'_{4l}, \mathcal{D}'_{\text{mass}}, \mathcal{D}_{\text{bkg}}^{\text{kin}})$	2D: $\mathcal{L}(m'_{4l}, \mathcal{D}'_{\text{mass}})$	1D: $\mathcal{L}(m'_{4l})$
Expected m_{H} uncertainty change	—	+3.2%	+10.7%
Observed m_{H} (GeV)	125.26 ± 0.21	125.30 ± 0.21	125.34 ± 0.23