

Summary of the alterations to the manuscript

§I INTRODUCTION

- In the second paragraph, replaced “(DES) Year 1 release” with “Year 1 (DESY1) release” and added a citation by T.M.C. Abbott et al. (2018);
- added a new fifth paragraph;
- in the last paragraph, replaced “useful” with “helpful”.

§II.A DES COSMIC SHEAR: DATA AND ANALYSIS

- In the third paragraph, replaced “constant efficiency” with “constant_efficiency”.
- in the last paragraph, replaced “The 68% CL constraints” with “The 68% confidence level (CL) constraints”.

§II.D TOMOGRAPHIC COMPRESSION

- Added ij indices to Eq. (5).

§III.A ELEMENT-BY-ELEMENT COMPARISON

- In the second paragraph, replaced “useful” with “practical”.

§III.B COMPRESSED MATRICES COMPARISON

- In the third paragraph:
 - replaced “show” with “shows”;
 - replaced “closer to 1, and the ratio of the diagonal elements goes up to only ≈ 2.3 ” with “closer to 1, with a fractional difference of up to 17%, as compared to 26% with the original matrices”.

§IV TOLERANCE OF THE COMPRESSED MATRICES

- In the third paragraph:
 - replaced “positive definite (PD), as such,” with “positive definite (PD). For this reason,”;
 - added “In

$$C_{\alpha\beta}^{\text{new}} = e^{(1+\delta)(\log C^{\text{old}})_{\alpha\beta}} , \quad (15)$$

the value of $C_{\alpha\beta}^{\text{new}}$ is not necessarily within $\delta\%$ of $C_{\alpha\beta}^{\text{old}}$ ”;

- replaced “matrix with elements several orders of magnitude higher than the original” with “matrix with some of its elements differing by several orders of magnitude from the original”.

§V CONCLUSION

- In the fifth paragraph, replaced “parameter inference since it has to be redone for every point in the parameter space. Recent work has been done by [8] to address this problem by using Gaussian Processes to generate the compressed theory” with “parameter inference if the projection to form the MOPED coefficients is done at each sampled point. For speed gains, a way to compute the theoretical MOPED coefficients rapidly needs to be found, e.g. using Gaussian Processes to generate the compressed theory [8]”;
- in the sixth paragraph, added “In this sense, one of our most important results is in the ability of using MOPED to compare different matrices.” as the last sentence.