Addressing the reviser concerns

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We have carefully addressed the referee's questions and concerns. The modifications we have performed, for each of the numbered requests, are as follow:

1. Abstract. Line 9. Added explicit reference to CMB. We have changed *expanding on existing algorithms* to *expanding on existing algorithms for CMB*.

2. Page 8. After Eq. 2.44. Added GPE2 reference.

3. Changed limits of Figure 6 and 7.

4. Last sentence of 3.3. Added *or computed exactly as in [41, 44].* In the second to last paragraph of Section 4, we added at the end *or exactly following Refs. [41, 44].*

5. In Section 3.3, before previous sentence, we changed *If accurate covariances bars* to *If accurate covariance matrix elements*.

6. In Section 3.4, before Eq. 3.8, I have mentioned the Gaussian approximation of the likelihood: *Assuming flat priors and a fiducial Gaussian likelihood approximation [21].*

7. Second paragraph of Section 3.4. Changed *for of two parameters* to *for the two parameters.*

8. At the end of the first paragraph of Section 3.4, after Eq. 3.8, I have added *Note that the low-ℓ non-gaussianities of real power spectra are not being taking into account with this approximation. They, however, have a lower statistical weight and will contribute less to the posterior distribution.*

Changes related to the CMB background:

1.

2. In Section 4, removed the statements about the higher complexity of LSS masks.

3. In the second paragraph of Section 4, we have added a comment on the effect of "real-wold" complications: *With these approximations, computationally speaking, the problem of estimating a covariance matrix is as complex as that of computing the power spectrum itself, and scales with the number of pixels in the map as $N_{\rm pix}^{3/2}$. We leave for future work the study of the impact of extra complications, as position-dependent noise, on their performance.*

Extra changes:

1. Changed Δx^2 to $\Delta^2 x$.

2. Before Eq. 2.12, added a comment on how the true power spectra must not change much over a bandpower. It says now *Let us denote a given bandpower by its index q. The number of bandpowers and their width are determined by the true underlying power spectra, which must not vary much within the bandpower.*

3. Introduction. Line 3. Updated the set of references for CMB.

4. Added HEALPix project url, reference and credits in the Acknowledgments.