

References

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Reply by Author to S.L. Baumgartner, W.G. Heller, and G.F. Koehler

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BAUMGARTNER and Heller are correct in that the model presented does not exactly fit the correlation functions. The exact and modeled functions agree closely on rms values and correlation distances, but fail to match as well only at longer shift distances. Thus, the basic character of the gravity uncertainties is represented properly. The importance of the mismatch at longer shift distances depends on the desired use of the model.

Koehler's recommendation to use the canonical variate decomposition approach is a good one. As presented, the state-space model employed a force fit matching only the rms values and slopes of the correlation functions at zero shift. Legitimate concern over this was expressed by all three commenters over the possible consequences. If the canonical variate decomposition approach works as claimed, it provides a means to find the best model approximation for a given number of states and shows how adding more states may improve the model.

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