for Fig. 2. For comparison with the previous results, the leading eigenvalue is 0.72 ± 0.06.

III. CONCLUSION

We have analyzed the sensitivity of the low-lying spectra of the random two-body ensemble of interactions to variations of the Hamiltonian matrix elements; by using singular value decomposition, we find the dominant linear combinations, which would be important in any fit to experimental data. We found the SVD eigenvalues follow a pattern remarkably similar to that shown by semi-realistic/semi-phenomenological interactions such as USDB. We also analyzed the most dominant linear combinations of matrix elements by computing the overlap with monopole and contact interactions. Overall, both the TBRE and the empirical USDB had qualitatively similar results.

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