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April 13, 2017

Dr. Leslie Sage
968 National Press Building
529 14th Street NW
Washington DC 20045-1938
United States

Dear Dr. Sage:

Please find enclosed a submission to be considered for a Nature Letter. We think these results are particularly exciting because they are the first time the spin measurements in the existing three likely gravitational wave events (GW150914, LVT151012, and GW151226) are analysed together to constrain the formation scenario of the observed population of merging binary black holes, a long-standing problem in gravitational wave astronomy. Additionally, the paper explains the origin of and corrects a misconception in the existing literature (particularly the Vitale, et. al (2017) paper referenced in our submission) that $\mathcal{O}(100)$ detections will be required to distinguish between different formation scenario in these objects.

Our submission has been formatted using the AASTeX LaTeX package. We estimate that the main body of the text, excluding the abstract, is ~ 1600 words long, with four figures, each single-panel, and is therefore within or very close to the Nature Letter limit. The abstract is ~ 240 words long (not counting references, which are “Harvard style” in the AASTeX package). The document contains five sections in an Appendix that we would like to be supplemental information to the Letter.

Sincerely,

Will M. Farr